Lane Cove Council
48 Longueville Road, Lane Cove NSW 2066 Tel: 02 9911 3555 Fax: 02 9911 3600

Patrick Copas
Senior Environmental Assessment Officer
Industry Developments,
Department of Planning and Environment

12 February 2021
Your Ref: SSD-13475973

Dear Mr Copas,

Mowbray Road Data Centre SSD-13475973

Thank you for the opportunity to comment as part of the request for the Planning Secretary's environmental assessment requirements (SEARS) for the construction of a 24-hour operation data centre at 706 Mowbray Road, Lane Cove North.

Executive Summary:

Council has reviewed the preliminary architectural plans, scoping report, and Capital Investment value estimate.

Council acknowledges that the addition of the Data Centre would be beneficial to the local economy. The proposed high-tech industry would provide employment opportunities to the Lane Cove North area. The use as a Data Centre is permitted within the IN2 zone.

Council requests that the applicant include the following information be submitted as part of the future Environmental Impact Statement (EIS).

- Height: The proposal includes a six-level building with a maximum height of 38m. This would significantly breach the 18m height control for the site under the Lane Cove LEP 2009.

  It is recommended the applicant submits a Clause 4.6 variation as part of a future Environmental Impact Statement (EIS) to justify the non-compliance.

  Council also recommends that the applicant include a comprehensive character statement as part of the future EIS. The character statement should detail the existing character of surrounding built structures, setbacks and envelopes along Mowbray Road. The character statement should provide a compelling argument and justify that the proposed development is sympathetic and in-keeping with the varied and transitioning character of the area.

- Traffic/Transport: The proposed parking would be lower than the minimum requirements in the Lane Cove DCP 2010. It is understood that the proposed usage as a Data Centre generates lower than normal parking rates than those required by regular industrial developments. It is recommended that a Traffic and Parking assessment be submitted as part of the proposed development documentation.

- Bushland: The site adjoins land zoned Environmental Conservation (E2). It is not known if any vegetation is proposed to be removed as part of the development. The future EIS documentation should include a Biodiversity Development Assessment Report, and Flora and Fauna Study.

The site is categorized as bushfire prone land. A Bushfire Impact Assessment will be required to be submitted for review by the Rural Fire Service (RFS).

The adjoining bushland is down slope from the site. It is recommended that the applicant consider how the proposed development will impact stormwater and overland flows and should incorporate Water Sensitive Design. A comprehensive stormwater and drainage plan, and details of any Onsite Stormwater Detention (OSD) should be submitted with the future development proposal.

- Landscaping: A comprehensive Landscaping Plan should be submitted with full species listing. Any trees removed should be replaced at a minimum ratio of 2:1. It is recommended that the applicant explore if any additional canopy trees can be planted at the Mowbray Road frontage to provide increased vegetative screening of the proposed building.

- Lane Cove Tunnel: The Lane Cove Tunnel runs below the site. It is understood that excavation is proposed to accommodate loading, water and fuel tank storage. Consultation should be undertaken with Transurban to confirm if any works are within the 'zone of influence' and what restrictions may apply.

- Childcare Centre: Directly west of the site is a childcare centre which has parking arrangements with 706 Mowbray Road. The applicant should communicate with the Child Care Centre and investigate how these parking arrangements will be addressed as a result of the redevelopment of the site.

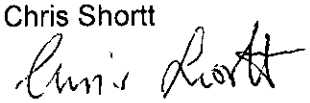
- Section 7.11 Development Contribution: A development contribution will be required to be paid to Lane Cove Council for the data centre development. The contribution amount will be calculated on the current rate per square metre of additional industrial and commercial floor space. The contribution requirement will be included as a recommended condition in Council's submission for the future development proposal.

- Lane Cove DCP 2010: Under clause 11 in the SEPP (State & Regional Development) 2011, the Lane Cove DCP does not strictly apply to the state significant development proposal. Regardless of the SEPP, Council requests that the EIS include a full assessment against the relevant sections of the DCP for review.

Council would request that the above assessment requirements be considered for inclusion in the SEARs for the subject development proposal at 706 Mowbray Road.

Sincere regards

Chris Shortt



Planner

Lane Cove Council

WILLOUGHBY
CITY COUNCIL
City of Diversity

PLANNING & INFRASTRUCTURE
Planning Unit

16 February 2021

Patrick Copas
Senior Environmental Assessment Officer
Industry Assessments
NSW Department of Planning, Industry & Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Dear Patrick,

REQUEST FOR SEARs – MOWBRAY ROAD DATA CENTRE – 706 MOWBRAY ROAD, LANE COVE NORTH

Thank you for the opportunity to comment on the draft Secretary's Environmental Assessment Requirements (SEARs) for a proposed data centre at 706 Mowbray Road West at Lane Cove North. It is noted that the site is located on IN2 Light Industrial zone land in Lane Cove LGA. It is also noted that the site is located on the border with Willoughby LGA and that the site is close to residential uses located to the north in Willoughby LGA.

Environmental considerations relevant to the proposed development have been identified pertaining to the following issues:

- Soil and Water;
- Noise and Vibration;
- Air Quality;
- Biodiversity;
- Waste;
- Traffic and Transport;
- Hazards and Risks;
- Energy Efficiency; - Heritage, including Aboriginal Cultural Heritage and Non-Aboriginal (European) Heritage;
- Visual Amenity and Site Design;
- Infrastructure and Services;
- Social Impacts; and,
- Economic Impacts.

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It is noted that the proposed data centre would contribute to economic development in the Sydney Metropolitan Region, ultimately providing for employment opportunities and an advanced data storage facility, to support the growth and development of IT infrastructure across the State.

It is also noted that the data centre would operate on a 24/7 basis over six (6) levels (including a basement level), comprising 14 data halls, 16 electrical substations, one (1) diesel fuel storage tank, plant and equipment. It would be constructed over a single construction phase, responding to the demand for data storage and racking requirements, resulting in a maximum building height of approximately 38 m, and approximately 24,689 m2 of Gross Floor Area (GFA) across the site.

Based on the preliminary architectural plans prepared by the proponent, it is anticipated that there would be approximately 1,800 tonnes (or 1,950 kL) of diesel fuel stored on-site. A Dangerous Goods Report will be prepared to assess any potential requirements for an Environmental Protection Licence (EPL) required for the proposal pertaining to diesel fuel storage.

The administration and support blocks contain key program elements such as the Facility Operations Centre (FOC), Security Operations Centre (SOC), Loading Dock, Staging, Storage and Open Office. The office components comprise approximately 2,837 m2 of GFA.

It is also understood that approximately 300 workers would be involved in the construction phase and when operational would employ in excess of 50 workers.

Council would support a thorough investigation of the proposal including all the relevant environmental impacts of the proposal as outlined above. As the site is also identified as bushfire prone a bushfire assessment will be undertaken as part of the environmental investigations.

In particular Council notes that the proposed building height of 38m (6 storeys) is a significant departure of the maximum height permitted in the IN2 Light Industrial zone of 18m. Issues of potential concern to Council include visual impact to nearby residential areas, as well as traffic, parking, lighting, privacy and acoustic impacts from the proposed development as the development is proposed to operate on a 24 hour/7 days a week basis. Potentially impacted residential areas to the north and north-west include both low density and medium density developments. It is also noted that there is an existing childcare centre in the industrial area immediately to the west of the site.

In addition, because of the surrounding land uses and the fact that the site is in a bushfire prone area, Council is concerned regarding the intended storage of fuel on

site and requests that alternative energy sources to diesel fuel be investigated, such as solar power and battery storage options.

The site adjoins Mowbray Road, which is zoned SP2 Infrastructure: Classified Road, which it may be subject to future road widening at any given time in the future. Additionally, the Lane Cove Tunnel (M2 Motorway) intersects the Site, requiring consultation with Transport for NSW (TfNSW) and Transurban to be undertaken as part of the Request for Secretary's Environmental Assessment Requirements. Key considerations for developing the Site in close proximity to key infrastructure should be established.

Council looks forward to commenting further on the proposal following completion of the detailed environmental investigations. Please contact Ian Shillington in the first instance on 9777 7620 or Ian.Shillington@Willoughby.nsw.gov.au if you require further information in relation to Council's comments.

Yours sincerely,

Ian Arnott
PLANNING MANAGER

DOC21/36644-4

Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2124
Email: patrick.copas@planning.nsw.gov.au

Attention: Patrick Copas, Senior Environmental Assessment Officer

Dear Patrick Copas

EPA Advice on SEARs for Proposed Data Centre (SSD-13475973) – 706 Mowbray Road, Lane Cove North

Thank you for requesting advice via Public Authority Consultation (PAE-13477214) for input by the NSW Environment Protection Authority (EPA) into the Secretary's Environmental Assessment Requirements (SEARs) for the Proposed Data Centre (SSD-13475973) at 706 Mowbray Road, Lane Cove North.

The EPA has reviewed the following documents:

- *Request for Secretary's Environmental Assessment Requirements – Proposed Data Centre – 706 Mowbray Road West, Lane Cove North* (version 3) – Willowtree Planning Pty Ltd – 20 January 2021 (the Report)

The EPA understands the proposal seeks consent for the demolition of an existing building on the site, followed by construction and operation of a data centre.

Scheduled Activity

The EPA has reviewed the Report and, based on the information provided, it is unclear whether the proposal will require an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* (the Act). The Report states that the requirement for an EPL will be considered following the preparation of the finalised design and ensuing Preliminary Risk Screening.

The EPA recommends the proponent consider whether an EPL will be required under the following:

I. Clause 9 of Schedule 1 of the POEO Act for chemical storage, petroleum products storage. If the proposal has a capacity for more than 2000 tonnes of diesel storage, an EPL would be required.
II. Clause 17 of Schedule 1 of the POEO Act for electricity generation for metropolitan electricity works (internal combustion engines). This does not apply for stand-by plant that is operated for less than 200 hours per year.

Electricity Generation

The EPA understands that the proposal will include the installation of back-up generators for emergency power purposes. The EPA requests further information be provided on the back-up generators, including:

a) number of back-up generators proposed;
b) individual capacity (in terms of megawatts and megajoules per second);
c) maximum operating time in an emergency situation;
d) testing procedure, frequency and duration;
e) confirmation that testing will be carried out individually or in clusters; and
f) justification of the need to test during the evening or at night.

The Environmental Impact Statement (EIS) should definitively state whether scheduled testing will exceed that 200-hour annual limit. If the testing time is definitively stated to be less than 200 hours per annum, then DPIE may want to consider adding a condition of consent reflecting this. Alternatively, if testing time could exceed 200 hours per year, then the proposed activity may meet the trigger for Clause 17, schedule 1 of the POEO Act. Please note that the EPA would consider 'operating' to include testing, if testing involves starting the generator. In addition, the definition of 'plant' in this scheduled activity includes all generators on the premises, not each individual generator.

Chemical Storage

The EPA understands that there is proposed to be one diesel storage area with multiple belly tanks. It is anticipated that 1,800 tonnes of diesel fuel will be stored on the premises.

The EPA requests clarification on the total volume of diesel proposed to be stored at the premises and the capacity of the tanks in which the diesel is to be stored. Under Clause 9 of the POEO Act, an activity requires a licence if there is a capacity to store more than 2,000 tonnes of petroleum products (which includes diesel).

Information on the location and design of chemical bunding and containments should also be included in the EIS. If diesel storage tanks are above ground, bunding requirements are set out in *AS 1940:2017 The storage and handling of flammable and combustible liquids.*

Noise

The Report states that a Noise and Vibration Impact Assessment (NVIA) will be undertaken as part of the EIS to assess whether the proposed development will exceed the relevant acoustic emissions criteria and to address the potential impacts regarding noise. The EPA understands that back-up electricity generators can produce significant noise, and in addition to utilising the generators during a power failure, they are also operated for routine maintenance.

The NIA should be prepared in accordance with the *Noise Policy for Industry (2017)*. The noise assessment should include all activities occurring at the premises, including the operation, and testing, of specific diesel generators that will be used for back-up electricity generation.

Air Quality

The EPA notes that an Air Quality Impact Assessment (AQIA) will be undertaken as part of the EIS to assess air quality impacts from the proposed development, with focus on emissions from the back-up generators.

The proponent should ensure that the AQIA adequately assesses the impacts from the proposed collective activities (including testing of the generators) and is prepared in accordance with *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2016)*.

The air quality assessment must include:

- Generator specifications, including final number, individual and total engine electrical capacity, fuel rate and emission rates/concentrations and parameters
- Justification for the proposed back-up power source and any alternatives considered
- Scenarios which assess construction works, realistic operations, regular back-up generator testing and a justified worst-case scenario of all generators in operation
- An assessment of emission concentrations from the back-up generators for, but not limited to polycyclic aromatic hydrocarbons (PAHs), particulates, CO, SO_2, VOCs and oxides of nitrogen (NOx)
- An assessment of impacts for criteria pollutants and a discussion and evaluation of the probabilities/likelihood of exceedances for the worst-case scenario
- Details of generator engine performance, any mitigation, management and monitoring measures (including for back-up generators) required to ensure compliance with section 128 of the Act.

Further Correspondence

If you have any questions about this request, please contact Kieran Henry on 02 8837 6000 or via email at kieran.henry@epa.nsw.gov.au

Yours sincerely

2 January 2021

ELIZABETH WATSON
Unit Head Regulatory Operations Metro – West

5 February 2021

TfNSW Reference: SYD21/00089/01 (A36124269)
DPIE Reference: SSD-13475973

Team Leader
Industry Assessments
Department of Planning, Industry and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Patrick Copas

Dear Sir/Madam,

REQUEST FOR SEARS - MOWBRAY ROAD DATA CENTRE AT 706 MOWBRAY ROAD WEST, LANE COVE NORTH

Reference is made to the Department of Planning, Industry and Environment (DPIE) email dated 21 January 2021 requesting Transport for NSW (TfNSW) to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the Secretary's Environmental Assessment Requirements (SEARs).

TfNSW requires the following issues to be included in the transport and traffic impact assessment of the proposed development:

1. Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required).

   The key intersection to be examined/modelled include but shall not be limited to:

   - Epping Road / Mowbray Road

2. Assessment of all relevant vehicular traffic routes and intersections for access to / from the subject properties, including:

   - identify the design vehicle for the demolition and construction of the site (including subsequent stages);
   - swept path analysis of the worst performing vehicle; and
   - demonstrate that all queuing and staging of vehicles would occur within the site during demolition and construction phases

3. Current traffic counts for all of the traffic routes and intersections and the anticipated additional vehicular traffic generated from both the construction and operational stages of the project should be provided.

4. The distribution on the road network of the trips generated by the proposed development. It is requested that the predicted traffic flows are shown diagrammatically to a level of detail sufficient for easy interpretation.

5. Consideration of the traffic impacts on existing and proposed intersections, and the capacity of the local and classified road network to safely and efficiently cater for the additional vehicular traffic generated by the proposed development during both the construction and operational stages. The traffic impact shall also include the cumulative traffic impact of other proposed developments in the area.

6. Identify the necessary road network infrastructure upgrades that are required to maintain existing levels of service on both the local and classified road network for the development. In this regard, preliminary concept drawings shall be submitted with the EIS for any identified road infrastructure upgrades. However, it should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of Transport for NSW and Council.

7. Traffic analysis of any major / relevant intersections impacted, using SIDRA or similar traffic model, including:

    - Current traffic counts and 10 year traffic growth projections from completion development
    - With and without development scenarios
    - 95th percentile back of queue lengths
    - Delays and level of service on all legs for the relevant intersections
    - Electronic data for Transport for NSW review.

8. Details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace travel plan) and the provision of facilities to increase the non-car mode share for travel to and from the site.

9. It is recommended that the applicant to develop a Green Travel Plan (GTP) that encourages sustainable transport use to the site, for submission to Transport for NSW for endorsement prior to the issue of an occupancy certificate for the site. The GTP should identify and determine a course for the delivery of mode share targets and strategies that encourage the use of sustainable transport options and that reduce the dependence on and proportion of single-occupant car journeys to the site, based on credible data

10. Appropriate provision, design and location of on-site bicycle parking, and how bicycle provision will be integrated with the existing bicycle network.

11. Any other impacts on the regional and state road network including consideration of pedestrian, cyclist and public transport facilities and provision for service vehicles.

12. Details of the proposed accesses and the parking provisions associated with the proposed development including compliance with the requirements of the relevant Australian Standards (ie: turn paths, sight distance requirements, aisle width, etc.).

13. Proposed number of car parking spaces and compliance with the appropriate parking codes.

14. Details of light and heavy vehicle movements (including vehicle type and likely arrival and departure times).

15. Details of service vehicle movements (including vehicle type and likely arrival and departure times).

16. It is noted the Lane Cove Tunnel traverses the site underground. The proponent is to consult with Transurban regarding the proposed development and comply with their requirements.

17. TfNSW recommends that the Environmental Impact Statement (EIS) should refer to the following guidelines with regard to the traffic and transport impacts of the proposed development:

    - Road and Related Facilities within the Department of Planning EIS Guidelines, and,
    - Section 2 Traffic Impact Studies of Roads and Maritime's NSW's Guide to Traffic Generating Developments 2002.

If you have any further questions, Ms Zhaleh Alamouti would be pleased to take your call on 8849 2331 or please email development.sydney@rms.nsw.gov.au. I hope this has been of assistance.

Yours sincerely

Pahee Rathan
Senior Land Use Assessment Coordinator

Our ref: DOC21/46421
Senders ref: SSD-13475973

Mr Patrick Copas
Planning and Assessment Group
Department of Planning, Industry and Environment
4PSQ, Level 17, 12 Darcy Street
PARRAMATTA NSW 2150

Dear Mr Copas

Subject: EES comments on Request for SEARs – Lane Cove North Data Centre – 706 Mowbray Road, Lane Cove North - SSD-13475973

Thank you for your email of 22 January 2021 requesting advice in relation to the Request for Secretary's Environmental Assessment Requirements (SEARs) for this State Significant Development.

The Environment, Energy and Science Group (EES) has reviewed the Scoping Report and provides the following comments and recommendations in Attachment A.

Biodiversity
EES recommends the proponent addresses the attached standard EES biodiversity requirements. Please note in relation to point (4) of the standard EES biodiversity environmental assessment requirements in Attachment A, the minimum information and spatial data requirements are in Tables 24 and 25 of the Biodiversity Assessment Method (BAM), more broadly in the revised BAM 2020. Other requirements, such as those relating to the BAM Calculator and Biodiversity Offsets and Agreements Management System (BOAMS), are detailed in various guidelines, practice notes, updates and other advices issued by EES to BAM accredited assessors – see https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/accredited-assessors/assessor-resources.

The Scoping Report indicates the proposed development will include demolition of the existing Light Industrial building. As demolition of the existing building on the site is proposed, the BDAR must, amongst other things, include information on the potential impacts on microbats. Several microchiropteran bat species, some threatened, are capable of roosting in a variety of natural and constructed sites, so it is possible that they might utilise the built features on this site. A search for evidence of microbat roosts should be undertaken using appropriate methods, such as those described on page 9 of the *'Species credit' threatened bats and their habitats NSW survey guide for the Biodiversity Assessment Method* (OEH 2018).

Attention should be given to inspecting cracks or seams in the roofs and a handheld bat detector of ultrasonic calls can assist in alerting the searcher to the presence of bats. Searches must be undertaken by someone with appropriate experience, as described on page 5 of that guide. If bats or signs of bats are observed, the bats may need to be captured to identify species and breeding status using traps, nets or other methods. The information provided should include photographs of any holes, cracks or crevices that were searched; any associated observations about bats and/or signs of bats; and any results from a bat call detector.

Flooding

The EIS should include a Flood Assessment to determine the presence or otherwise of mainstream and/or overland flooding at or near the site. Under the NSW Government's Flood Prone Land Policy, the principles of the Floodplain Development Manual (2005) applies to land affected by mainstream and/or overland flooding. Therefore, details of flooding should be included for the proposed site and adjacent areas for the full range of events up to the probable maximum flood (PMF) to ensure consistency with Section 9.1 Direction 4.3 of the Environmental Planning and Assessment Act 1979.

Please note a copy of the standard EES flooding environmental assessment requirements are included in Attachment A and must be considered by the proponent.

Landscaping

The Scoping Report notes 20% of the site is to include landscaping and it will comprise a mix of native and endemic plant species, shrubs, trees and grasses (section 3.2.6). EES recommends the SEARs for the proposal includes the following in relation to landscaping, particularly as the site adjoins E2 – Environmental Conservation zone land:

- All landscaping/planting at the site uses a diversity of local provenance native species from the relevant native vegetation community (or communities) that occur, or once occurred on the site rather than use exotic species or non-local native species.

- A Landscape Plan for the site is to be prepared by a suitably qualified bush regenerator and include details on:
  - the plant species to be used
  - trees removed are replaced at a ratio greater than 1:1 for trees that are not covered by a biodiversity offset strategy
  - the pot size of trees to be planted - advanced sized trees should be used to increase urban tree canopy cover
  - the area/space required to allow planted trees to grow to maturity
  - plant maintenance regime.

Building Design

The climate change projections developed for the Sydney Metropolitan area are used to inform the building design and asset life of the project: https://climatechange.environment.nsw.gov.au/Climate-projections-for-NSW/Climate-projections-for-your-region/Metro-Sydney-Climate-Change-Downloads.

If you have any questions about this advice, please do not hesitate to contact Janne Grose, Senior Conservation Planning Officer via email at janne.grose@environment.nsw.gov.au or on 8837 6017

Yours sincerely

S. Harrison

03/02/21

Susan Harrison
Senior Team Leader Planning
Greater Sydney Branch
Environment, Energy and Science

Attachment A – EES Group Standard Environmental Assessment Requirements

Biodiversity
1. Biodiversity impacts related to the proposed development are to be assessed in accordance with Section 7.9 of the Biodiversity Conservation Act 2017 the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), *Biodiversity Conservation Regulation 2017* (s6.8) and Biodiversity Assessment Method, including an assessment of the impacts of the proposal (including an assessment of impacts prescribed by the regulations). 2. The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method. 3. The BDAR must include details of the measures proposed to address the offset obligation as follows; • The total number and classes of biodiversity credits required to be retired for the development/project; • The number and classes of like-for-like biodiversity credits proposed to be retired; • The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules; • Any proposal to fund a biodiversity conservation action; • Any proposal to conduct ecological rehabilitation (if a mining project); • Any proposal to make a payment to the Biodiversity Conservation Fund. If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits. **4.** The BDAR must be submitted with all spatial data associated with the survey and assessment as per the BAM **5.** The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the *Biodiversity Conservation Act 2016*.

Water and soils
6. The EIS must map the following features relevant to water and soils including: a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map). b. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method). c. Wetlands as described in s4.2 of the Biodiversity Assessment Method. d. Groundwater. e. Groundwater dependent ecosystems f. Proposed intake and discharge locations
7. The EIS must describe background conditions for any water resource likely to be affected by the development, including: a. Existing surface and groundwater. b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations. c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters. d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government. e. Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions http://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-for-considering-waterway-health-outcomes-in-strategic-land-use-planning
8. The EIS must assess the impacts of the development on water quality, including: a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction. b. Identification of proposed monitoring of water quality. c. Consistency with any relevant certified Coastal Management Program (or Coastal Zone Management Plan).

9. The EIS must assess the impact of the development on hydrology, including:
    a. Water balance including quantity, quality and source.
    b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.
    c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.
    d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).
    e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water.
    f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options.
    g. Identification of proposed monitoring of hydrological attributes.

Flooding and coastal hazards

10. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:
    a. Flood prone land.
    b. Flood planning area, the area below the flood planning level.
    c. Hydraulic categorisation (floodways and flood storage areas)
    d. Flood Hazard.
11. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event.
12. The EIS must model the effect of the proposed development (including fill) on the flood behaviour under the following scenarios:
    a. Current flood behaviour for a range of design events as identified in 14 above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
13. Modelling in the EIS must consider and document:
    a. Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies.
    b. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood.
    c. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazard categories and hydraulic categories
    d. Relevant provisions of the NSW Floodplain Development Manual 2005.

14. The EIS must assess the impacts on the proposed development on flood behaviour, including:
    a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
    b. Consistency with Council floodplain risk management plans.
    c. Consistency with any Rural Floodplain Management Plans.
    d. Compatibility with the flood hazard of the land.
    e. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
    f. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
    g. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses.
    h. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council.
    i. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council.
    j. Emergency management, evacuation and access, and contingency measures for the development considering the full range or flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the NSW SES
    k. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

(END OF SUBMISSION)