

Planning Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979* Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD-24299707
Project Name	Talavera Road Data Centre Campus Expansion
Development	Construction and operation of an expansion to an existing data centre, comprising: • a five-storey building • ancillary office space and staff amenities • a back-up power system, including lithium-ion batteries • associated infrastructure, car parking, loading docks and landscaping
Location	17-23 Talavera Road, Macquarie Park (Lot 527 DP 752035) in the Ryde local government area
Applicant	Macquarie Data Centres c/□ GIDDIS Project Management
Date of Issue	12 August 2021
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation). In addition, the EIS must include: • a detailed description of the development, including: – an accurate history of the site, including development consents – the need and justification for the proposed development – alternatives considered including a description of feasible options within the development which may include a layout options analysis – likely staging of the development – likely interactions between the development and existing, approved and proposed operations on the site (including LDA2018/0322 and LDA2010/0671) and in the vicinity of the site – plans of any proposed building works – contributions required to offset the proposal – infrastructure upgrades or items required to facilitate the development, including measures to ensure these upgrades are appropriately maintained. • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments • consideration of issues discussed in the public authority responses to request for key issues (see Attachment 2) • a risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment • a detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: – a description of the existing environment, using sufficient baseline data – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes and – a description of the measures that would be implemented to avoid, minimise, mitigate and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage significant risks to the environment. • a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. The EIS must also be accompanied by:

	• high quality files of maps and figures of the subject site and proposal • a report from a qualified quantity surveyor providing a detailed calculation of the capital investment value (CIV) of the proposal (as defined in clause 3 of the Regulation), including details of all assumptions and components from which the CIV calculation is derived. The report must: – at a minimum, include warm shell fit-out of the entire development and a detailed breakdown of plant costs – be prepared on company letterhead – indicate the applicable GST component of the CIV • an estimate of the jobs that will be created by the development during the construction and operational phases of the proposed development (including details of the methodology used to determine the figures provided) • certification that the information provided is accurate at the date of preparation.
Key issues	The EIS must include an assessment of the potential impacts of the proposal (including cumulative impacts) and develop appropriate measures to avoid, mitigate, manage and/or offset these impacts. The EIS must address the following specific matters: • Statutory and Strategic Context – including: – justification for the proposal and the suitability of the site – detailed justification that the proposed land use is permissible with consent – a detailed description of the history of the site, including the relationship between the proposed development and LDA2018/0322, LDA2010/0671, and all other development consents and approved plans previously and/or currently applicable to the site – demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any inconsistencies. This includes, but is not limited to: ○ State Environmental Planning Policy (Infrastructure) 2007 ○ State Environmental Planning Policy (State and Regional Development) 2011 ○ State Environmental Planning Policy No 33 □ Hazardous and Offensive Development ○ State Environmental Planning Policy No 55 - Remediation of Land ○ Greater Sydney Region Plan: A Metropolis of Three Cities ○ Our Greater Sydney 2056: North District Plan ○ Future Transport Strategy 2056. • Suitability of the Site – including: – detailed justification that the site can accommodate the proposed development having regard to the scope of the operations of the existing facility and its environmental impacts and relevant mitigation measures – an analysis of site constraints. • Community and Stakeholder Engagement – a community and stakeholder participation strategy identifying key community members and other stakeholders, including: – details and justification for the proposed consultation approach(s) – clear evidence of how each stakeholder identified in the community and stakeholder participation strategy has been consulted – issues raised by the community and surrounding landowners and occupiers – clear details of how issues raised during consultation have been addressed and whether they have resulted in changes to the development – details of consultation regarding the design of the development and its relationship to existing on-site stormwater infrastructure and easements, including evidence of consultation with City of Ryde Council (Council) – details of the proposed approach to future community and stakeholder engagement based on the results of consultation. • Back-up power system – including: – detailed justification for the chosen back-up power system, including: ○ a comprehensive assessment of alternative, commercially available

- technologies (solar power/large-scale batteries, hydrogen cells, etc)
 - demonstration of a commitment to continual improvement with respect to the design of the back-up power system and its associated emissions
- a detailed overview of the proposed back-up generator system (if chosen), including:
 - number and individual capacity of each generator (in terms of megawatts and megajoules per second)
 - maximum operating time during a power outage event
 - testing procedure (including whether testing will be carried out individually or in clusters), frequency and duration (including confirmation and, if necessary, justification of the need to test during the evening or night-time period).
- **Noise and vibration** – a quantitative noise and vibration impact assessment undertaken by a suitably qualified acoustic consultant in accordance with the relevant Environment Protection Authority guidelines and Australian Standards which includes:
 - the identification of impacts associated with construction, site emissions and traffic generation at noise affected sensitive receivers (including consideration of cumulative impacts from the existing data centre and surrounding developments), including the provision of operational noise contours and a detailed sleep disturbance assessment
 - details of noise monitoring survey, background noise levels, noise source inventory and 'worst case' noise emission scenarios
 - consideration of annoying characteristics of noise and prevailing meteorological conditions in the study area
 - adequate modelling of site operational noise and vibration sources such as cooling system fans and motors in proposed locations, energy back-up systems such as generator engines, and vehicle access, traverse, and manoeuvring paths
 - details and analysis of the effectiveness of proposed management and mitigation measures to adequately manage identified impacts, including a clear identification of residual noise and vibration following application of mitigation these measures and details of any proposed compliance monitoring programs.
- **Air quality** – including:
 - a quantitative assessment of the potential air quality, dust and odour impacts of the development, during construction and operation, in accordance with relevant Environment Protection Authority guidelines
 - The assessment must include:
 - scenarios for construction works, operations, and testing of the back-up power system or its considered alternatives and a justified worst-case scenario
 - assessment of emissions from the back-up power system against the standards of concentration outlined in the Protection of the Environment Operations (Clean Air) Regulation 2010 (including, but not limited to, polycyclic aromatic hydrocarbons (PAHs) and oxides of nitrogen (NOx) impacts)
 - assessment of criteria pollutants in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA, 2016)
 - details of proposed mitigation, management and monitoring measures (including for the back-up power system) required to ensure compliance with section 128 of the *Protection of the Environment Operations Act 1997*.
- **Traffic and transport** – including:
 - details of all traffic types and volumes likely to be generated during construction and operation of the development (light and heavy vehicles, public transport, pedestrian and cycle trips), including maps depicting the key access routes for each transport mode
 - an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic

- impacts at key intersections (Lane Cove Road/ Talavera Road and Talavera Road/ Khartoum Road intersections) using SIDRA or similar modelling
- details of the number of proposed car parking spaces and compliance with the appropriate parking standards/guidelines
- detailed plans of the internal road network, loading dock arrangements and proposed pedestrian and cyclist facilities (including end of trip facilities), in accordance with relevant Australian Standards
- details of any existing or proposed access points for the development, including any interactions with existing operations
- details of the largest vehicle anticipated to access and move within the site, including swept path analysis
- details of the proposed traffic mitigation, management and monitoring measures, including draft versions of any associated management plans.
- **Hazards and risk** – including:
 - a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and *Applying SEPP 33* (DoP, 2011), with a clear indication of class (and any subsidiary hazard), quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the development is “potentially hazardous” a Preliminary Hazard Analysis (PHA) must be prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 6 – Hazard Analysis* (DoP, 2011) and *Multi-Level Risk Assessment* (DoP, 2011)
 - details regarding the location and number of any back-up generators, back-up fuel storage tanks and lithium-ion or other battery chemistries (with details of peak discharge rate in MW) to be installed to service the development. For batteries and diesel storage, the EIS must also demonstrate the development would comply with the following standards:
 - AS/NZS 4681 - Storage and handling of Class 9 (miscellaneous) dangerous goods and articles
 - AS IEC 62619 - Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications
 - FM Global Property Loss Prevention Data Sheet 05-32 - Data Centres and Related Facilities
 - AS 1940 - Storage and handling of flammable and combustible liquids.
- **Infrastructure requirements** – including:
 - in consultation with relevant service providers:
 - an assessment of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site
 - identification of any infrastructure upgrades required on-site and off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained
 - development of an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development
 - in consultation with Council:
 - a detailed description of all existing easements and/or stormwater infrastructure affecting the site
 - an assessment of the impacts of the development upon Council’s existing and proposed on-site stormwater infrastructure, including a detailed description of how the development has been designed to avoid and/or minimise potential impacts.
- **Soils and water** – including:
 - an assessment of potential surface and groundwater impacts associated with the development, including potential impacts on nearby watercourses, riparian areas, groundwater, and groundwater-dependent communities
 - a detailed overview of the development’s anticipated water usage and intended water supply arrangements
 - details of all existing and proposed surface, stormwater and wastewater

- management systems (including on-site detention and/or reuse), and an assessment of any associated water quality treatment options
- a description of the proposed measures to minimise water use and promote water sensitive urban design (WSUD)
- a topographic assessment and justification demonstrating that any proposed earthworks are responsive and contextually appropriate
- characterisation of the nature and extent of any contamination on the site and surrounding area
- a description of the proposed erosion and sediment controls during construction.
- **Flood risk** – including:
 - identification of any flood risk on-site having regard to adopted flood studies, the potential effects of climate change, and any relevant provisions of the *NSW Floodplain Development Manual* (DIPNR, 2005)
 - an assessment of the impacts of the development, including any changes to flood risk on-site or off-site (including the existing overland flow route), and detail design solutions and operational procedures to mitigate flood risk where required.
- **Urban design and visual** – including:
 - demonstration of how the development will achieve design excellence in accordance with any relevant EPI provisions and the objectives for good design in *Better Placed* (GANSW, 2017)
 - a detailed design analysis of the proposed development with reference to the building form, height, setbacks, bulk and scale in the context of the immediate locality, the wider area and the desired future character of the area, including views, vistas, open space and the public domain
 - a visual analysis of the development from key viewpoints, including photomontages or perspectives showing the proposed development
 - where the visual analysis has identified the potential for significant visual impact, preparation of a visual impact assessment that addresses the impacts of the development on the existing catchment
 - consideration of the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks (both existing and proposed)
 - an assessment of the solar orientation of the development and any potential overshadowing (this should be supported by shadow diagrams for all four seasons)
 - detailed plans showing suitable landscaping which incorporates endemic species
 - consideration of how the development would maximise opportunities for green infrastructure, consistent with *Greener Places* (GANSW, 2020)
 - an assessment of how the development complies with relevant accessibility requirements.
- **Ecologically sustainable development** – including:
 - a description of how the proposal will incorporate the principles of ecologically sustainable development in the design, construction and ongoing operation of the development
 - consideration of the use of green walls, green roofs and/or cool roofs in the design of the development
 - a description of the measures to be implemented to minimise consumption of resources, especially energy and water.
- **Greenhouse gas and energy efficiency** – including an assessment of the energy use of the proposal and all reasonable and feasible measures that would be implemented on site to minimise the proposal's greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050).
- **Biodiversity** – including an assessment of the proposal's biodiversity impacts in accordance with the *Biodiversity Conservation Act 2016*, including the preparation of a Biodiversity Development Assessment Report (BDAR) where required under the Act, except where a waiver for preparation of a BDAR has been granted.
- **Aboriginal cultural heritage** – including an Aboriginal Cultural Heritage

	Assessment Report prepared in accordance with relevant guidelines, identifying, describing and assessing any impacts for any Aboriginal cultural heritage values on the site. • Non-Aboriginal cultural heritage – including an assessment of potential impacts on non-Aboriginal cultural heritage items and values on the site and/or in the surrounding area. • Socio-economic – including: – an analysis of any potential economic impacts of the development, including a discussion of any potential economic benefits to the local and broader community. • Waste – including: – details of the quantities and classification of all waste streams to be generated on site during construction and operation – details of waste storage, handling and disposal during construction and operation – details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the <i>NSW Waste Avoidance and Resource Recovery Strategy 2014-2021</i>. • Planning agreement/development contributions – including: – demonstration that satisfactory arrangements have been or would be made to provide, or contribute to the provision of, necessary local and regional infrastructure required to support the development, in accordance with the relevant Council Plan/s.
Consultation	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: • City of Ryde Council • Environment Protection Authority • the Department's Environment, Energy and Science Group • the Department's Water Group • Transport for NSW • Ausgrid • Sydney Water • Heritage NSW • Metropolitan Local Aboriginal Land Council • surrounding local landowners, businesses and stakeholders • any other public transport, utilities or community service providers. 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.
SEARs Expiry	If you do not lodge a Development Application and EIS for the development within two (2) years of the issue date of these SEARs, your SEARs will expire. If an extension to these SEARs will be required, please consult with the Planning Secretary four (4) months prior to the expiry date.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.

ATTACHMENT 1

Technical and Policy Guidelines

The following guidelines may assist in the preparation of the environmental impact statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:

<http://www.planning.nsw.gov.au>
<http://www.shop.nsw.gov.au/index.jsp>
<http://www.australia.gov.au/publications>
<http://www.epa.nsw.gov.au/>
<http://www.environment.nsw.gov.au/>
<http://www.dpi.nsw.gov.au/>

Plans and Documents

The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. 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 (m²) and north point
 - the existing levels of the land in relation to buildings and roads
 - location and height of existing structures on the site
 - location and height of adjacent buildings and private open space
 - all levels to be to Australian Height Datum (AHD).
2. Locality/context plan drawn at an appropriate scale should be submitted indicating:
 - significant local features such as 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:
 - detailed plans, sections and elevations of the existing building, which clearly show all proposed buildings
 - detailed plans of proposed access driveways, internal roads, carparking and services infrastructure.
4. Schedule of materials, colours and additions. finishes.

Documents to be Submitted

Documents to submit include:

- one (1) electronic copy of all the documents and plans for review prior to exhibition
 - other copies as determined by the Department once the development application is lodged.
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Policies, Guidelines & Plans	
Aspect	Policy / Methodology
State Significant Development Guidelines	
	State Significant Assessment Guidelines (DPIE, 2021)
	Undertaking Engagement Guide – Guidance for State Significant Projects (DPIE, 2021)
	Cumulative Impact Assessment Guidelines for State Significant Projects (DPIE, 2021)
Traffic, Transport and Access	
	Roads Act 1993
	State Environmental Planning Policy (Infrastructure) 2007
	Guide to Traffic Generating Development (RTA, 2002 as updated)
	Road Design Guide (RMS, 2015-2017)
	Guide to Traffic Management – Pt 12: Traffic Impacts of Development (Austroads, 2020)
	Guidelines for Planning and Assessment of Road Freight Access in Industrial Areas (Austroads, 2014)
	NSW Planning Guidelines for Walking and Cycling (DIPNR, 2004)
	Bicycle Parking Facilities: Guidelines for Design and Installation (AS 2890.3:2015)
	Integrated Public Transport Service Planning Guidelines: Sydney Metropolitan Area (TfNSW, 2013)
	Future Transport Strategy 2056 (TfNSW, 2018)
	Greater Sydney Services and Infrastructure Plan (TfNSW, 2018)
	NSW Freight & Ports Plan 2018-2023 (TfNSW, 2018)
Soils and Water	
Erosion and Sediment	Managing Urban Stormwater: Soils & Construction (Landcom, 2004)
	Soil and Landscape Issues in Environmental Impact Assessment (DLWC, 2000)
	Wind Erosion – 2nd Edition (DIPNR, 2003)
Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC, 2000)
	NSW State Groundwater Policy Framework Document (DLWC, 1997)
	NSW Aquifer Interference Policy (NOW, 2012)
	Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (NOW, 2011)
	Storing and Handling Liquids: Environmental Protection (DECC, 2007)
Stormwater	Managing Urban Stormwater: Strategic Framework. Draft (EPA, 1996)
	Managing Urban Stormwater: Council Handbook. Draft (EPA, 1997)
	Managing Urban Stormwater: Treatment Techniques (DEC, 2006)
	Managing Urban Stormwater: Source Control. Draft (EPA, 1998)
	Managing Urban Stormwater: Harvesting and Reuse (DEC, 2006)
Wastewater	National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC, 1997)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems - Use of Reclaimed Water (ARMCANZ/ANZECC, 2000)
	National Water Quality Management Strategy – Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) (EPHC, NRMCC &

	AHMC, 2006)
	National Water Quality Management Strategy – Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) (EPHC, NRMMC & AHMC, 2009)
Contamination	State Environmental Planning Policy No. 55 – Remediation of Land
	Managing Land Contamination Planning Guidelines, SEPP 55 – Remediation of Land (DUAP & EPA, 1998)
Hazards and Risk	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (DoP, 2011)
	Assessment Guideline: Multi-level Risk Assessment (Planning and Infrastructure, 2011)
	Storage and handling of Class 9 (miscellaneous) dangerous goods and articles (AS/NZS 4681-2000)
	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications (IEC 62619:2017)
	Storage and handling of flammable and combustible liquids (AS 1940:2017)
	Property Loss Prevention Data Sheet 05-32 - Data Centres and Related Facilities (FM Global, 2020)
Biodiversity	
	<i>Biodiversity Conservation Act 2016</i>
	Biodiversity Assessment Method (EES, 2020)
Heritage	
	<i>Heritage Act 1977</i>
Non-Aboriginal Heritage	NSW Heritage Manual (HO and DUAP, 1996)
	The Burra Charter (ICOMOS Australia, 2013)
	Statements of Heritage Impact (HO and DUAP, 2002)
Aboriginal Heritage	Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)
	Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011)
	Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010)
Noise and Vibration	
	Acoustics - Description and measurement of environmental noise (AS1055:2018)
	Noise Policy for Industry (EPA, 2017)
	NSW Road Noise Policy (DECCW, 2011)
	Noise Criteria Guideline (RMS, 2015)
	Noise Mitigation Guideline (RMS, 2015)
	Interim Construction Noise Guideline (DECC, 2009)
	Assessing Vibration: A Technical Guide (DEC, 2006)
	Noise Guide for Local Government (EPA, 2013)
Air Quality	
Air Quality	Protection of the Environment Operations (Clean Air) Regulation 2010
	Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (DEC, 2007)
	Approved Methods for the Modelling and Assessment of Air Pollutants in New

Greenhouse Gas	South Wales (EPA, 2016)
	AGO Factors and Methods Workbook (AGO, 2018)
	Guidelines for Energy Savings Action Plans (DEUS, 2005)
	National Greenhouse and Energy Reporting Scheme Measurement, Technical Guidelines for the estimation of emissions by facilities in Australia (Department of the Environment and Energy (DoEE), 2017)
	National Greenhouse Accounts Factors (DoEE, 2019)
Urban Design and Visual	
	Control of Obtrusive Effects of Outdoor Lighting (AS 2482)
	Better Placed (Government Architect NSW, 2017)
	Greener Places (Government Architect NSW, 2020)
Social	
	Social Impact Assessment Guideline (DPIE, 2021)
Waste	
	NSW Waste and Sustainable Material Strategy 2041 (EPA, 2021)
	NSW Plastics Action Plan (EPA, 2021)
	NSW Energy from Waste Policy Statement (EPA, 2021)
	The National Waste Policy: Less Waste More Resources 2009
	Waste Classification Guidelines (EPA, 2014)
	Environmental guidelines: Composting and Related Organics Processing Facilities (DEC, 2004)
	Environmental guidelines: Use and Disposal of Biosolid Products (EPA, 1997)
	Composts, soil conditioners and mulches (Standards Australia, AS 4454)
	Standards for Managing Construction Waste in NSW (EPA, 2018)

ATTACHMENT 2
Government Authority Advice