

200 Aldington Road Industrial Estate

Sustainability Report

Fife Kemps Creek

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Executive Summary

The 200 Aldington development is a concept masterplan with an indicative total building area of 347,955m², comprising:

- 13 individual development lots for warehouse buildings with associated hardstand areas;
- 330,950m² of warehouse gross floor area (GFA);
- 17,005m² of ancillary office area (GFA);
- Associated roads, parking, and landscaping

The initial concept includes for progressive delivery of site preparation, earthworks and infrastructure works, including:

- Demolition, clearing drainage, bulk earth works, roadworks, and stormwater systems;
- Construction of a warehouse building with approximately 51,000m² of GFA

There are a number of Secretary Environmental Assessment Requirements (SEARs) relating to sustainability, which have been summarised as follows with the response location nominated.

Department	Sustainability Consideration	Proposed Response
Planning SEARs	Greenhouse Gas and Energy Efficiency – including an assessment of the energy uses onsite and all reasonable and feasible measures that would be implemented onsite to minimise the development's greenhouse gas emissions.	Section 3.0 Energy and Greenhouse Gas Emissions
Planning SEARs	Ecologically Sustainable Development – including a description of how the development will incorporate the principles of ecologically sustainable development in the design, construction and operation of the development.	Whole report covers the initiatives that are being considered for the sustainable design, construction and operation of the development
NSW EPA	Provide a Stormwater Management Plan that outlines the general stormwater management measures for the proposal, including erosion and sediment controls, first flush systems, and the use of sustainability measures such as Water Sensitive Urban Design to create more resilient and adaptable urban environments.	Section 6.0 Provision of Healthy Environments
Penrith City Council	Sustainability / Urban Cooling – Given the focus on sustainability and urban cooling in the Penrith Local Strategic Planning Statement and the Western Sydney Aerotropolis Plan, further consideration should be given to how the proposed development would respond to this issue.	Section 7.0 Environmental Management
Sydney Water	The proponent should outline any sustainability initiatives that will minimise/reduce the demand for drinking water, including any alternative water supply and end uses of drinking and non-drinking water that may be proposed, and demonstrate water sensitive urban design (principles are used), and any water conservation measures that are likely to be proposed. This will allow Sydney Water to determine the impact of the proposed development on our existing services and required system capacity to service the development.	Section 4.0 Potable Water Minimisation

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1.0 Project Overview

This section provides a summary of the Project description as lodged (11 November 2020) and publicly exhibited and subsequent amendments to the project to address issues raised by the DPIE and in submissions from agencies, Penrith City Council and the public.

The section concludes with a description of the SSDA for which development consent is now sought.

1.1 Summary of project as lodged and publicly exhibited (October 2020)

As lodged and exhibited, the SSDA sought approval for the following development:

- A concept masterplan with an indicative total building area of 375,755 sqm, comprising:
 - 357,355 sqm of warehouse gross floor area (GFA)
 - 18,200 sqm of ancillary office GFA
 - 200 sqm of café GFA
 - 13 individual development lots for warehouse buildings with associated hardstand areas and two lots for drainage infrastructure purposes
 - Internal road layouts and road connections to Aldington Road
 - Provision for 1700 car parking spaces
 - Associated concept site landscaping.
- Detailed consent for progressive delivery of site preparation, earthworks and infrastructure works (i.e., Stage 1 works) on the site, including:
 - Demolition and clearing of all existing built form structures
 - Drainage and infill of existing farm dams and any ground dewatering
 - Clearing of all existing vegetation
 - Subdivision of the site into 15 individual lots
 - Construction of a warehouse building with a total of 50,930 sqm of GFA, including:
 - 48,430 sqm of warehouse GFA
 - 2,500 sqm of ancillary office GFA
 - 231 car parking spaces
 - Bulk earthworks including 'cut and fill' to create flat development platforms for the warehouse buildings, and site stabilisation works (if required)
 - Roadworks and access infrastructure
 - Stormwater and drainage works including stormwater basins, diversion of stormwater lines, gross pollutant traps and associated swale works
 - Sewer and potable water reticulation
 - Inter-allotment, road and boundary retaining walls.

1.2 Response to Submissions (March 2021)

Following the public exhibition of the Project, changes were undertaken in response to the issues raised during the public exhibition. This included a full assessment of the Project against the Draft Mamre Road Precinct Development Control Plan (draft MRP DCP) which was released subsequent to lodgement of the SSDA.

The key changes and additional information on the Project included:

- A revised riparian solution in the north east corner of the site which relocated the existing first order water course and re-established the riparian corridor with a 10-metre buffer on each side in accordance with the Natural Resources Access Regulator (NRAR) guidelines.
- An evidence-based case for the proposed location of the high order road south of the site's northern boundary which was seen to provide a more logical and feasible road network outcome (for both FKC and its northern neighbour) compared to that envisioned under the draft MRP DCP.
- Revised technical inputs for the flood assessment to address the submissions raised, including revised flood modelling which addresses post development conditions in the 2-, 20- and 100-year ARI events, and providing further commentary on the flooding impacts of surrounding and downstream land.
- An integrated water management solution which can effectively allow the progressive redevelopment of the site to occur while still recognising and meeting stormwater runoff targets set out in the draft and eventual final MRP DCP.
- A revised Visual Impact Assessment showing the impact of proposed landscaping mitigation over time.
- Rationale for minor departures from the draft MRP DCP in relation to building design and siting, pylon signage and retaining walls.

1.3 Request for Additional Information (April 2021)

Further changes to the Project (which are the subject of this RTS Report) are the result of further correspondence received by DPIE (dated 28 April 2021). The changes to the Project further align the proposed development with the relevant provisions of the draft MRP DCP (especially in relation to the proposed road network) and exclude prohibited components of development from the RE2 Private Recreation zone. The Summary of key changes to the project are:

- Concept Master Plan:
 - Reconfiguration of the internal road network and external road connections to be generally consistent with the draft Mamre Road Precinct DCP including:
 - Provision of a land reservation corridor along the northern boundary to facilitate half the required future DCP road and intersection with Aldington Road
 - Inclusion of the open space edge road in the north-east section of the site with connections through to the adjoining properties to the north and east
 - Intersections with Aldington Road; signalised south intersection and roundabout northern intersection
 - Amendments to road corridor widths.
 - Reconfiguration of Lot G to facilitate the open space edge road to the adjoining eastern property and to locate the proposed warehouse footprint wholly within the IN1 zone
 - Relocation of on-site detention basin within Lot D to be outside the RE2 Private Recreation zone in within the IN1 zone;
 - Retention of existing farm dams within the RE2 zoned area in the north-east corner of the site;
 - Consequential amendments to bulk earthwork pads, retaining walls, lot and future warehouse layout, car parking and landscaping.
- Stage 1 works:
 - Overall revisions to site preparation, earthworks and infrastructure consistent with the revised concept master plan.
 - Inclusion of an interim access road and temporary junction connecting to Aldington Road in the northern portion of the site to facilitate site access prior to the implementation of the northern boundary road.
 - Revision to the internal road network in line with the concept master plan revisions with the provision of temporary turning heads at the site boundary where those roads will connect to properties to the east and north in the future. The road levels at the boundary interface of the site will align with existing ground level (or as required to contain stormwater).

1.4 Description of Project, as amended, for which development consent is now sought:

The amended SSDA seeks approval for the following development:

- A concept masterplan with an indicative total building area of 347,955 sqm comprising:
 - 330,950 sqm of warehouse gross floor area (GFA)
 - 17,005 sqm of ancillary office GFA
 - 13 individual development lots for warehouse buildings with associated hardstand areas and two lots for drainage infrastructure purposes (each including a bio-retention basin)
 - Roads, including:
 - Internal road layouts
 - Southern road connection to Aldington Road
 - Northern boundary road (half road corridor) connecting to Aldington Road
 - Road connections to adjoining landholdings to the north and east
 - Provision for 1549 car parking spaces and
 - Associated concept site landscaping

Detailed consent for progressive delivery of site preparation, earthworks and infrastructure works (i.e., Stage 1 works) on the site, including:

- Demolition and clearing of all existing built form structures
- Drainage and infill of existing farm dams and any ground dewatering
- Clearing of all existing vegetation
- Subdivision of the site into 15 individual lots
- Construction of a warehouse building with a total of 50,930 sqm of GFA, including:
 - 48,430 sqm of warehouse GFA
 - 2,500 sqm of ancillary office GFA and
 - 219 car parking spaces
- Bulk earthworks including 'cut and fill' to create flat development platforms for the warehouse buildings, and site stabilisation works (if required)
- Roadworks and access infrastructure, including an interim access road and temporary junction with Aldington Road
- Stormwater and drainage works including stormwater basins, diversion of stormwater lines, gross pollutant traps and associated swale works
- Sewer and potable water reticulation and
- Inter-allotment, road and boundary retaining walls

This report addresses the amended project for which development consent is now sought. It is a stand-alone report and supersedes the previous reports and supplementary information prepared for the original development application and subsequent response to submissions.

2.0 Sustainability Requirements

2.1 Planning SEARs Sustainability Requirements

The Planning Secretary's Environmental Assessment Requirements, SSD-10479, July 2020 requires the following sustainability related General Requirements be addressed:

Department	Sustainability Consideration
Planning SEARs	Greenhouse Gas and Energy Efficiency – including an assessment of the energy uses onsite and all reasonable and feasible measures that would be implemented onsite to minimise the development's greenhouse gas emissions.
Planning SEARs	Ecologically Sustainable Development – including a description of how the development will incorporate the principles of ecologically sustainable development in the design, construction and operation of the development.

2.2 Other Sustainability Requirements

Sustainability consideration have been requested by various other entities, as follows:

Department	Sustainability Consideration
NSW EPA	Provide a Stormwater Management Plan that outlines the general stormwater management measures for the proposal, including erosion and sediment controls, first flush systems, and the use of sustainability measures such as Water Sensitive Urban Design to create more resilient and adaptable urban environments.
Penrith City Council	Sustainability / Urban Cooling – Given the focus on sustainability and urban cooling in the Penrith Local Strategic Planning Statement and the Western Sydney Aerotropolis Plan, further consideration should be given to how the proposed development would respond to this issue.
Sydney Water	The proponent should outline any sustainability initiatives that will minimise/reduce the demand for drinking water, including any alternative water supply and end uses of drinking and non-drinking water that may be proposed, and demonstrate water sensitive urban design (principles are used), and any water conservation measures that are likely to be proposed. This will allow Sydney Water to determine the impact of the proposed development on our existing services and required system capacity to service the development.

3.0 Energy and Greenhouse Gas Emissions

The development will consider the broader impact of greenhouse gas emissions and climate change and will provide a resilient development by considering the changing climate over the next 40 years to provide a resilient development with the following key considerations:

- Flood levels
- Peak rainfall
- Average annual rainfall and drought frequency
- Average ambient temperatures
- Peak ambient temperatures
- Wind ratings
- Storm severity and frequency

The development will consider the implementation of the following measures to improve energy efficiency and reduce greenhouse gas emissions:

- A fossil fuel free estate with only electricity used for typical base building applications. The only use for gas or diesel fuel will be for a special tenant demand for these energy sources
- All warehouse spaces are to include for a minimum 10% of roof area with translucent sheeting
- LED lighting with the following smart lighting controls as suitable to the application:
 - Time clicks
 - Motion sensors
 - Daylight sensors
- Energy monitoring systems to allow for the following end use data to be captured:
 - Total building consumption
 - Total tenant consumption
 - Office lighting consumption
 - Office small power consumption
 - Office HVAC consumption
 - Warehouse lighting consumption
 - Warehouse small power consumption
 - Photovoltaic generation

The energy monitoring system will consider the inclusion of the following features:

- Collect data from all meters
- Alert when data is missing due to failures
- Record energy and water consumption
- Reports with user adjustable intervals
- Alarms when the energy or water consumption increases beyond certain parameters
- Alert facilities management and/or others when alarms are raised
- A breakdown of information by building system
- Load and consumption profiles at adjustable intervals
- Automated reports emailed to facilities management

- Photovoltaic system(s) to feed renewable electricity to users which may include the café, street lighting and other ancillary energy demands
- Photovoltaic systems for buildings
- Spatial allowance to allow for the future implementation of a battery storage system that can reduce the peak load of each industrial building

4.0 Potable Water Minimisation

The development will consider the implementation of the following measures to reduce potable water consumption:

- Fixtures and fittings with the following minimum WELS rating:
 - Taps: 5-Star WELS
 - Urinals: 6-Star WELS
 - Toilets: 4-Star WELS
 - Showers: 3-Star WELS (>4.5 but <6.0 l/min)
- Office air conditioning systems including waterless heat rejection
- Landscaping to include drought tolerant species
- Industrial buildings to include rainwater tank(s) connected to roof space to provide rainwater to landscape irrigation in the absence of a regional purple pipe raw water network.
- Water monitoring system to allow for the following end use data to be captured:
 - Total building consumption
 - Total tenant consumption
 - Offices including potable amenities and kitchenettes
 - Dock-office and warehouse
 - Washdown systems (if included)
 - Potable makeup to rainwater tank.
 - Rainwater to irrigation

The water monitoring system may include the following features:

- Collect data from all meters
- Alert when data is missing due to failures
- Record energy and water consumption
- Reports with user adjustable intervals
- Alarms when the energy or water consumption increases beyond certain parameters
- A breakdown of information by building system

5.0 Materials Impact

The development will consider the implementation of the following measures to reduce the impact of the building materials on the environment:

- All concrete in the development of the estate to include for:
 - reduced use of Portland cement to minimise the embodied carbon impact of the concrete
 - reuse of reclaimed mix water
 - reduced impact aggregates (crushed slag, manufactured sand etc)
- Utilise recycled crushed concrete, crushed brick, glass fines, Reclaimed Asphalt Pavement (RAP) and crumbed rubber products in asphalt
- Timber used in the construction of the development from sustainable sources or recycled
- PVC used in the construction of the development which meets the requirements of the "Best Practice Guidelines for PVC in the Built Environment"
- Stormwater pipe and systems to be from products with a high recycled content
- Steel roofing and cladding to have an Environmental Performance Declaration (EPD)
- Tenant to be responsible for providing a recycling & waste storage facility suitable for their operations

6.0 Provision of Healthy Environments

The development will consider the implementation of the following measures to provide a healthy environment for workers:

- Provision of a suitable number of bicycle racks, showers and changing facilities to encourage exercise before, during and after work hours
- Provisions of internal accessible stairs for any multi-storey offices
- Paints, sealants, adhesives, and furniture to be selected to have low Volatile Organic Compound (VOC) emissions
- Composite timbers (plywood, particleboard, chipboard etc) to be selected to have low formaldehyde emissions
- All office spaces are to be provide with fresh air supply at more than the minimum code requirements.

7.0 Environmental Management

The development will consider the implementation of the following measures to manage impact of the surrounding environment:

- Head contractors with ISO14001 certification and an Environmental Management Plan (EMP) for the construction works
- Head contractor implementation of a waste management plan
- Urban heat island effects will be reduced by maximising landscaping areas
- Overland water flow in rain events treated with Gross Pollutant Traps (GPTs) before being directed to two onsite bio-retention basins which will be designed to one-in-one-hundred-year flows.

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