200 Aldington Road, Kemps Creek

Sustainability Report

Fife Capital and Stockland

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Executive Summary

The 200 Aldington development is a concept masterplan with an indicative total building area of 375,755m², comprising:

- 13 individual development lots for warehouse buildings with associated hardstand areas;
- 357,355m² of warehouse gross floor area (GFA);
- 18,200m² of ancillary office area (GFA);
- 200m² of café (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 a total of 50,930m² 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 2.0 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 5.0 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 6.0 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 3.0 Potable Water Minimisation

Contents

1.0 Project Overview

The 200 Aldington Road development is a concept masterplan with an indicative total building area of 375,755m², comprising:

- 357,355m² of warehouse gross floor area (GFA);
- 18,200m² of ancillary office area (GFA);
- 200m² of café (GFA);
- 13 individual development lots for warehouse buildings with associated hardstand areas;
- Internal road layouts and road connections to Aldington Road;
- Provision for 1700 car parking spaces; and
- Associated 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;
- Construction of a warehouse building with a total of 50,930m² of GFA, including:
  - 48,430m² of warehouse GFA;
  - 2,500m² of ancillary office GFA;
  - 231 car parking spaces; and
  - associated landscaping
- Bulk earthworks including 'cut and fill' to create flat development platforms for the warehouse buildings, and topsoiling and grassing / site stabilisation works;
- Roadworks, access infrastructure and associated landscaping;
- 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.

1.1 Planning SEARs Sustainability Requirements

The Planning Secretary's Environmental Assessment Requirements, SSD-10479, July 2929 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.

1.2 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.

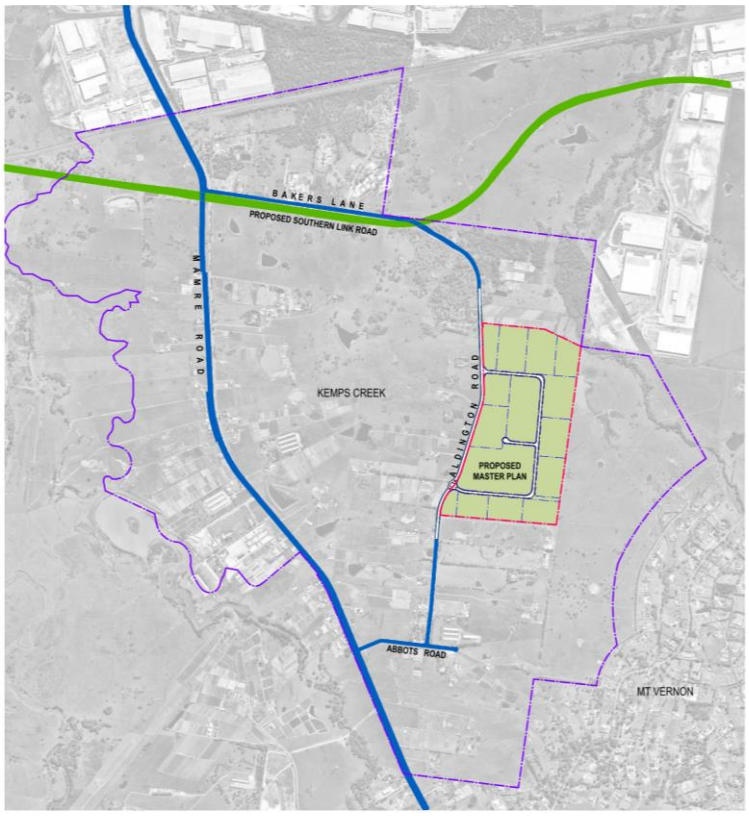

Figure 1: Proposed Masterplan within surrounding region (courtesy of SBA Architects)

2.0 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

3.0 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.
- 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)
  - Domestic hot water
  - 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
  - Alert facilities management and/or others when alarms are raised
  - A breakdown of information by building system
  - Load and consumption profiles at adjustable intervals down to 15 minutes
  - Automated report(s) to be emailed to facilities management

4.0 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
  - reuse of reclaimed mix water
  - reduced impact aggregates (crushed slag, manufactured sand etc)
- Utilise high quantities of 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

5.0 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.

6.0 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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