200 Aldington Road Industrial Estate (Lot E)

Sustainability Report

Trustee for Stockland Fife Kemps Creek Trust

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Executive Summary

This Sustainability Report has been prepared to support the Environmental Impact Statement (EIS) as part of the Development Application SSD-85510213 & MOD-6, for Lot E within Kemps Creek Industrial Estate, located at Lot 200 DP 1285691, 106-228 Aldington Road, Kemps Creek within Penrith Local Government Area. Lot E is associated with one temperature controlled warehouse (Building 1 or Warehouse W4B) and one cold-shell warehouse buildings (Building 2 or Warehouse W4A).

This report addresses the project-specific Planning Secretary's Environmental Assessment Requirements (SEARs) Key Issues, specifically "Ecological Sustainable Development", by providing an assessment of development-appropriate measures to address in particular the following specific requirements:

- identification of how ESD principles (as defined in section 193 of the EP&A Regulation) are incorporated in the design and ongoing operation of the development
- demonstration of how the development will meet or exceed the relevant industry recognised building sustainability and environmental performance standards
- demonstration of how the development minimises greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources
- if Chapter 3 of State Environmental Planning Policy (Sustainable Buildings) 2022 applies:
    - demonstrate how the development has been designed to address the provisions set out in in Chapter 3.2(1)
    - provide a NABERS Embodied Emissions Material Form to disclose the amount of embodied emissions attributable to the development in accordance with section 35BA of the EP&A Regulation.

This report also addresses the requirements of the EPA's Recommended Secretary's Environmental Assessment:

- Provide estimate of greenhouse gas (GHG) emissions for the1 project by carrying out a Greenhouse Gas Assessment consistent with the most recent version of the EPA's Greenhouse Gas Assessment Guide for Large Emitters (GHG guide) that is available on the EPA's website. The GHG estimate is to confirm if the project is likely to result in 25,000 tonnes or more of scope 1 and 2 emissions (CO2-e), in any financial year during the operational life of the project. Input data and assumptions used to estimate GHG should be accompanied by supporting evidence.

The proposed development will be capable of achieving the following sustainability targets:

- Net Zero emissions by 2050.

The office components of the development will be capable of achieving:

- 5.5-star NABERS rating.
- 3-star NABERS water rating.

The development is unlikely to result in 25,000 tonnes or more of scope 1 and 2 emissions (CO2-e) in any financial year. This is based on the assumed electricity of the tenants' loads, which is outside of the influence of the project team.

The development of sustainability initiatives is a continuous and collaborative effort involving Fife Capital, Stockland, and the broader project team. These initiatives will be reviewed throughout the project's lifespan, with measurable outcomes identified to benefit both the environment and the community. The project is committed to assessing and implementing a net zero carbon strategy across its entire lifecycle, including:

- Phasing out fossil fuels in permanent building operations where feasible.
- Considering onsite renewable energy installations.
- Minimizing carbon emissions in construction.
- Integrating passive design principles and energy efficiency to enhance sustainability.

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1.0 Introduction

1.1 Planning Overview

The proposed development is located on Lot E within the 200 Aldington Road Industrial Estate. Development Consent SSD-10479 was granted by the Director of Industry Assessment on 5 May 2023 for a State Significant Concept Master plan and Stage 1 Development Application for the 200 Aldington Road Industrial Estate

1. A concept master plan to support development for the purposes of warehouse and distribution centre, general industry and ancillary offices. The concept master plan included:
   - 13 individual development lots supporting:
     - Envelopes for warehouse and distribution and industry with associated hardstand areas, and two lots for water management infrastructure purposes (each including a bio-retention basin); and
     - A total GFA of 340,540 sqm.
   - Roads, including:
     - Internal road layouts;
     - Southern road connection to Aldington Road;
     - Road connections to adjoining landholdings to the north and east.
   - Provision for 1,515 car parking spaces; and
   - Associated concept site landscaping.
2. Detailed consent for progressive delivery of site preparation, earthworks and infrastructure 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 existing vegetation;
   - Subdivision of the site into 15 individual lots;
   - Construction of a warehouse and distribution centre building on Lot F for the purposes of warehouse and distribution;
   - Bulk earthworks including ‘cut and fill’ to create level development platforms for the warehouse and distribution centre or general industries buildings, and site stabilisation works (if required);
   - Roadworks and access infrastructure, including an interim access road and a temporary junction with Aldington Road;
   - Stormwater works including stormwater basins, diversion of stormwater;
   - Utilities services including sewer and potable water reticulation; and
   - Road and boundary retaining walls.

SSD 10479 for the concept master plan and Stage 1 development has been the subject of four modification applications:

- MOD 1 – relating to minor civil, subdivision and building works which reflects refinement of design development undertaken since approval (approved 12 August 2024).
- MOD 2 – refinements and amendments the warehouse envelopes and the general layout of the approved Concept Plan and approved Stage 1 component of the approval to align with tenant specifications (approved 26 March 2025).
- MOD 3 – inclusion of road widening and upgrades to Aldington and Abbotts Road, and the upgrade of the Mamre Road and Abbotts Road intersection (approved 27 February 2025).
- MOD 4 - design amendments to Lot F and approved Warehouse W5 to support the functional requirements of the warehouse tenant (lodged and under review, approval expected July 2025).

– MOD 5 – amendments to the built form on Lot K and a boundary adjustment between Lots K and G, to support the proposed warehouse development under SSD-80264236.

The proposed development remains generally consistent with the approved concept masterplan in SSD-10479. Since approval of SSD-10479, further design development has occurred for Lot E to accommodate tenant specific requirements. The design development primarily relates to the minor reconfiguration of building envelopes, associated hardstand and manoeuvring areas to support the functional requirements of the warehouse tenant. Accordingly, a concurrent s4.55 modification application to amend the concept master plan is not required.

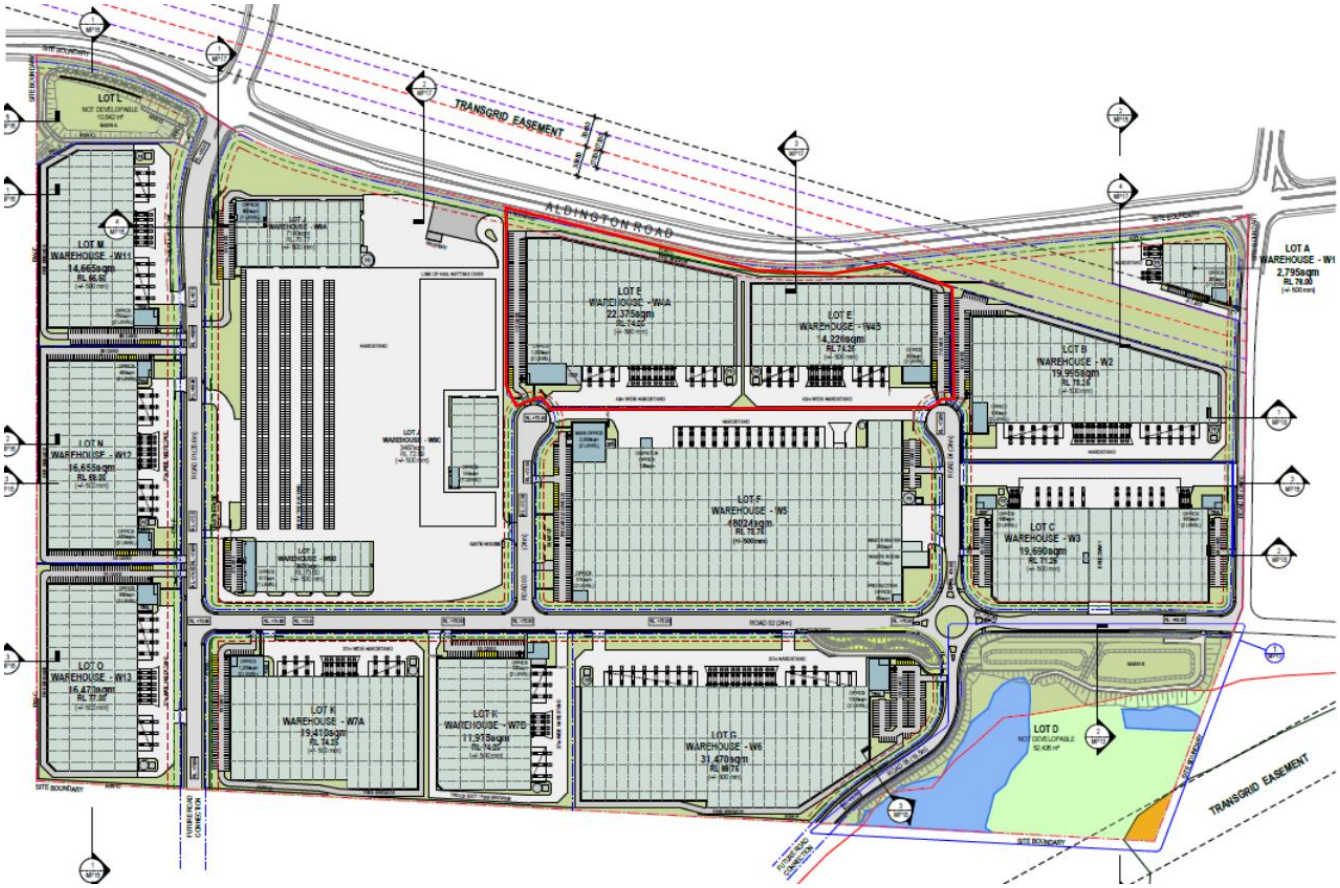


Figure 1: Approved concept master plan (Lot E shown in red outline)

1.2 Project Overview

The State Significant Development of Lot E seeks approval for the following development:

Construction and operation of one temperature controlled warehouse (Building 1 or Warehouse W4B) and one cold-shell warehouse buildings (Building 2 or Warehouse W4A). This includes:

- Building 1:
  - Warehouse gross floor area (GFA): 22,774m
  - Office GFA: 900m
  - Dock Office: 64m
  - Car spaces: 98 spaces
- Building 2:
  - Warehouse GFA: 18,198m2
  - Office GFA: 721m

  - Dock GFA: 81m
  - Car spaces: 74 spaces
- 172 car parking spaces and 30 loading/unloading spaces.
- Hours of operation, including 24/7 use.
- Consent for installation of signage.
- Landscaping embellishments.

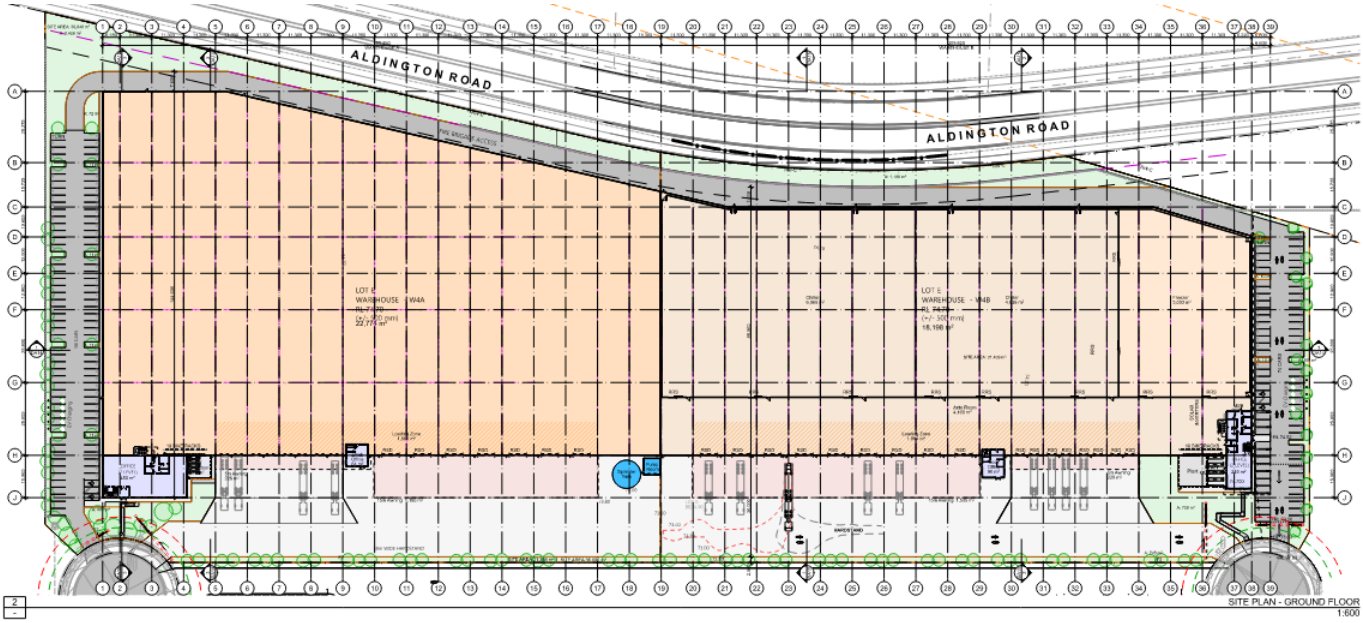


Figure 2: Proposed development plan

2.0 Sustainability Requirements

2.1 SEARs Requirements

This Sustainability Report has been prepared to form part of the Environmental Impact Statement (EIS) as part of the Development Application SSD-85510213 & MOD-6 for Lot E of the Kemps Creek Industrial Estate in response to Planning Secretary's Environmental Assessment Requirements.

The specific items that have been addressed include the following:

Table 1: SEARs Requirements

Key Issue	Description
Identification of how ESD principles (as defined in Section 193 of the EP&A Regulation) are incorporated in the design and ongoing operation of the development.	Generally, the sustainability features nominated in this report, specifically Section 3 Sustainability Strategy will be integrated into the development through the design, construction and operational phases, in response to Section 193 of the EP&A Regulations.
Demonstration of how the development will meet or exceed the relevant industry recognised building sustainability and environmental performance standards.	Recognised building sustainability and environmental performance are limited to compliance with the National Construction Code, specifically Section J and the requirements set out by the SEARs as described following.
Reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources.	Sections 3,1, 3,2 and 3.7 if this report responds to the goal of zero emissions by 2050 with a focus on energy, water and materials.
If Chapter 3 of State Environmental Planning Policy (Sustainable Buildings) 2022 applies: ▪ demonstrate how the development has been designed to address the provisions set out in in Chapter 3.2(1)	Chapter 3 of the SEPP 2022 applies to this development which will respond by minimising impacts through: ▪ the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials, ▪ a reduction in peak demand for electricity, including through the use of energy efficient technology, ▪ a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design, ▪ the generation and storage of renewable energy, ▪ the metering and monitoring of energy consumption, ▪ the minimisation of the consumption of potable water. The office areas of the building will undergo a NABERS Energy and Water rating, with a 5,5 star and 3.0 star target respectively. An 'Agreement to Rate' will be included within this submission.
If Chapter 3 of State Environmental Planning Policy (Sustainable Buildings) 2022 applies: ▪ provide a NABERS Embodied Emissions Material Form to disclose the amount of embodied emissions attributable to the development in accordance with section 35BA of the EP&A Regulation.	Chapter 3 of the SEPP 2022 applies to this development which will respond by providing the NABERS Embodied Emissions Material Form included within this submission, as developed by the project Quantity Surveyor.

Key Issue	Description
Provide estimate of greenhouse gas (GHG) emissions for the project by carrying out a Greenhouse Gas Assessment consistent with the most recent version of the EPA's Greenhouse Gas Assessment Guide for Large Emitters (GHG guide) that is available on the EPA's website. The GHG estimate is to confirm if the project is likely to result in 25,000 tonnes or more of scope 1 and 2 emissions (CO_2-e), in any financial year during the operational life of the project. Input data and assumptions used to estimate GHG should be accompanied by supporting evidence.	The developments predicted Greenhouse Gas Emissions have been predicted in Section 3.1 of this report. The predicted emissions are less than the nominated 25,000 tonnes of scope 1 and 2 emission (CO_2-e). This is based on the estimated electricity of the tenants processing loads (refrigeration), which is under development and subject to change.

2.2 NSW Government Targets

The NSW Net Zero Plan has three sustainability pillars – People, Planet and Goverernance. The sustainability strategy for the development seeks to address all three pillars of the NSW Plan while also aligning with the relevant SDGs.

The project is committed to applying each of the above key themes and developed proposed initiatives where applicable. Development of the initiatives will be a collaborative effort with ongoing input from Fife Capital, Stockland and the wider project team. Where feasible the initiatives will be tracked over the lifetime of the project with measurable outcomes defined to provide positive outcomes for the environment and people.

The development and implementation of a net zero carbon strategy is being considered for the project. This includes eliminating fossil fuels in building operations, onsite renewables, reducing upfront carbon in construction, incorporation of passive design principles and designing energy efficiency building services and controls.

The NSW Government Department of Planning, Industry and Environment's *NSW Waste and Sustainable Materials Strategy 2041 Stage 1: 2021-2027,* published in June 2021, establishes waste targets for NSW including the following:

- Reduce total waste generated by 10% per person by 2030
- Have an 80% recovery rate from all waste streams by 2030
- Significantly increase the use of recycled content by governments and industry
- Halve the amount of organic waste sent to landfill by 2030

The requirements of the NSW government across these are summarised below:

Table 2: NSW Governments pillars and requirements

Strategy	Description
People	Describes how the development will consider people-centric design for both occupants and the wider community
Planet	Describes the mitigation and/or prevention of negative impacts on biodiversity and protection of local resources Describes implementation of strategy and initiatives aiming to mitigate and/or prevent the progression of climate change via the development
Governance	Explores how the development will consider rapid environmental and industrial changes Describes initiatives undertaken to minimise the environmental impact of the development during construction, use and end of life.
Waste and Sustainable Materials	Describes the responses the development will consider in line with the *Sustainable Materials Strategy 2041 Stage 1: 2021-2027* as above

2.3 State Environmental Planning Policy (Sustainable Buildings) 2022

State Environmental Planning Policy (SEPP) (Sustainable Buildings) 2022 aims to encourage the design and delivery of sustainable buildings by setting a consistent benchmark. Further aims include:

- to record accurate data about the sustainability of buildings, to enable improvements to be monitored,
- to monitor the embodied emissions of materials used in construction of buildings,
- to minimise the consumption of energy,
- to reduce greenhouse gas emissions,
- to minimise the consumption of mains-supplied potable water,
- to ensure good thermal performance of buildings.

Chapter 3 of the SEPP Sustainable Buildings 2022 stipulates key projects outcomes as follows.

Table 3: SEPP 2022 Key Project Outcomes

Key Issue	Description
Sustainability minimum requirements	The development is designed to enable the following: (a) the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials, (b) a reduction in peak demand for electricity, including through the use of energy efficient technology, (c) a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design, (d) the generation and storage of renewable energy, (e) the metering and monitoring of energy consumption, (f) the minimisation of the consumption of potable water.
Net zero emissions in New South Wales by 2050	The consent authority must consider whether the development minimises the use of on-site fossil fuels when considering approval.
NABERS Energy	5.5 star NABERS energy rating for the prescribed office areas (base building consumption included).
NABERS Water	3 star NABERS water rating for the prescribed office areas (base building and tenancy consumption included).

3.0 Sustainability Strategy

3.1 Climate Action

Carbon and greenhouse gas emissions (GHG) are fast becoming the primary quantification for climate change and sustainability. There are significant environmental and economic benefits to gain by adopting a net zero carbon / climate positive strategy for this development. As part of the environmental strategy the focus will be on the implementation of the following process:

Table 4: Climate Action Initiatives

Strategy	Initiatives incorporated or being considered
Eliminate fossil fuels	▪ Avoiding of permanent natural gas connection wherever possible. ▪ Electric vehicle charging infrastructure
Reduce other emissions	▪ Minimise waste and wastewater where possible ▪ Minimise usage of high global warming potential (GWP) refrigerants where possible
Onsite renewable energy	▪ Onsite energy generation through rooftop solar PV, lowering day-time peak energy demand and providing on-site energy for various uses including, lighting, air condition, processing loads and electric vehicles
Reduce building operational carbon	▪ Good passive design to minimise HVAC and lighting energy consumption ▪ High performance building services equipment and controls strategy
Minimise upfront carbon	▪ Investigating reuse, repurposing, and recycling of existing buildings into the new development ▪ Investigating low embodied carbon construction design and materials substitution opportunities ▪ Consideration of materials with higher reuse/recyclable components where available ▪ Preference for materials that sequester carbon, for example timber.

The NSW Government has established a target for net zero emissions by 2050, to be achieved while creating new jobs, cutting household costs, and attracting investment. The Department of Planning, Industry and Environment's *Net Zero Plan Stage 1: 2020-2030* sets out four net zero priorities describing how the NSW Government will deliver on these objectives over the next decade. The development will seek to consider the following initiatives.

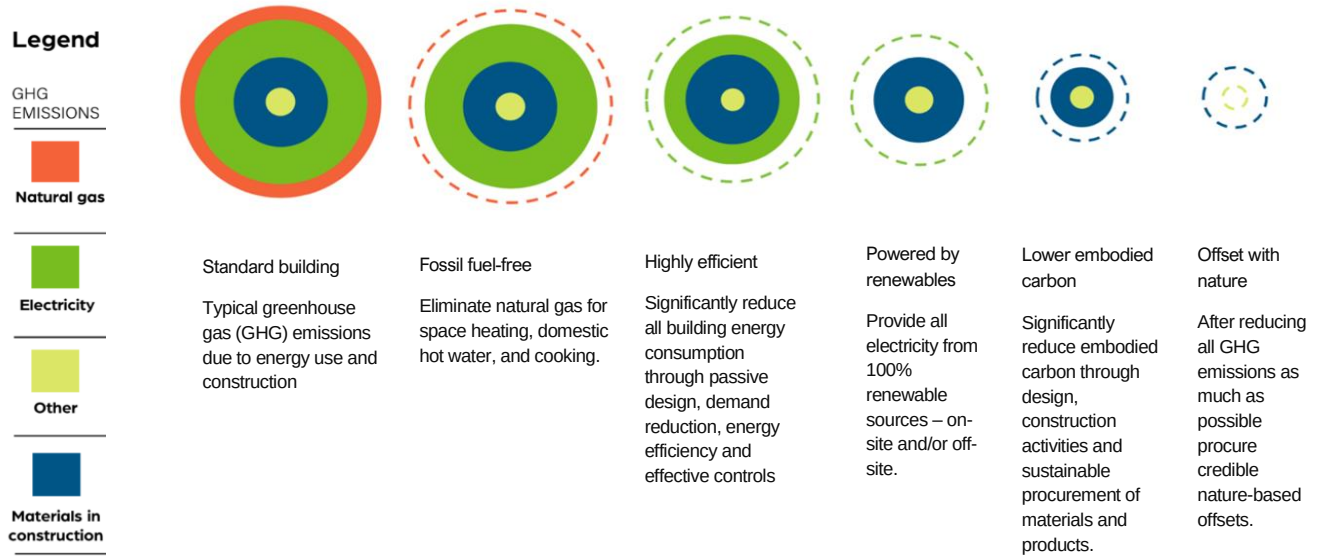


Figure 3: NSW Net Zero Emissions Pathway

The developments design includes the following key attributes as a component of the strategy to minimise the proposal's greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050).

- Primarily an all-electric building, with a limitation on on-site fossil fuels usage.
- Energy efficient, capable of achieving a 5.5 star NABERS Energy rating for the office areas base building equipment. Achieved through passive design to reduce loads, efficient and flexible HVAC, good controls, energy efficient lighting and minimisation of energy intensive equipment.
- Inclusion of a roof mounted solar PV system. The system has the ability to be increased in capacity into the future.
- The ability to include a battery system to enable additional day time load to be stored in the system for usage overnight.
- Reduction in embodied carbon with consideration of lower carbon concrete and efficient steel design.

The final step to achieve net zero emissions, between now and 2050, include:

- Purchase of renewable energy (GreenPower) for any residual electricity needs beyond the on-site energy generation. To be considered inline with the tenants needs.
- A change to the HVAC system to have zero or very low Global Warming Potential (GWP) refrigerants, or if not technically possible, purchase of carbon off-sets for the refrigerants.

Table 5: Net Zero Priorities and Responses

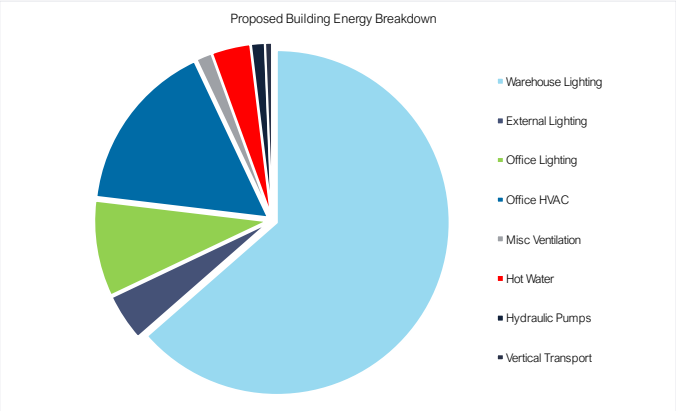
Priority	Initiatives incorporated or being considered
Drive uptake of proven emissions reduction technologies	▪ The facility aims to support the installation of renewable energy with focus on reducing energy consumption. ▪ Reduction of fossil fuel use through internal processes where possible ▪ Reduction in waste emissions where possible ▪ Support electric vehicle implementation through infrastructure
Empower consumers and businesses to make sustainable choices	▪ The development will demonstrate leadership in sustainability and be an example of how industrial facilities can be powered by clean energy on-site. ▪ The development is also focusing on supply chains, and materials to reduce embodied emissions. ▪ Implementation of a Metering and Monitoring Plan to ensure lower emissions operation
Invest in the next wave of emissions reduction innovation	▪ The development will consider the latest technology in sizing and implementation of solar PV systems to reduce emissions ▪ Sustainable practice via design improvements, materials substitutions, and possible construction improvements to reduce up-front emissions
Ensure the NSW government leads by example	▪ As per responses above.

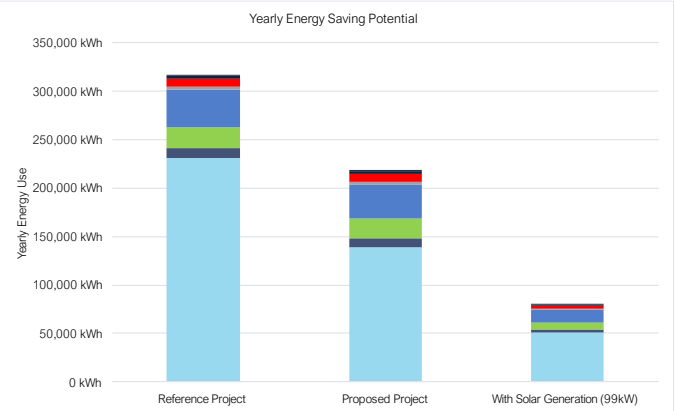
To demonstrate the potential energy savings for a development of this nature, a benchmark has been done based on the supplied design stage architectural drawings and our assumed tenant operations. The estimated energy performance of the development has been developed based on energy benchmarking of similar typical warehouse/industrial buildings that implemented the energy saving measures anticipated to be feasible for this development.

The potential implementation of renewable solar energy where it is recommended that the warehouse roof is fitted with a 99kW solar system to help offset energy use and reduce the peak demand of the site. The rooftop is being designed to cater for full solar rollout into the future.

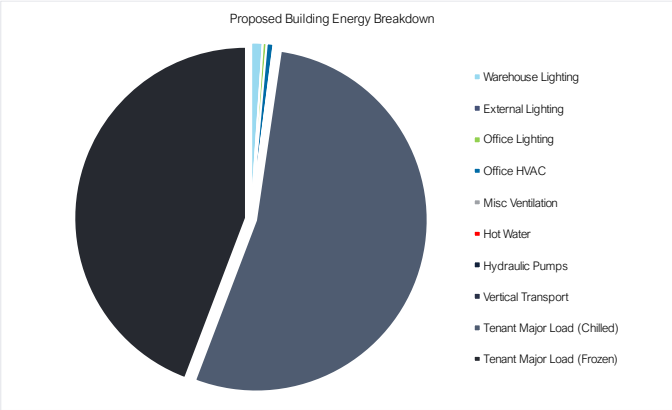
The proposed building breakdown of energy consumption is shown following, with the potential savings to a reference building thereafter.

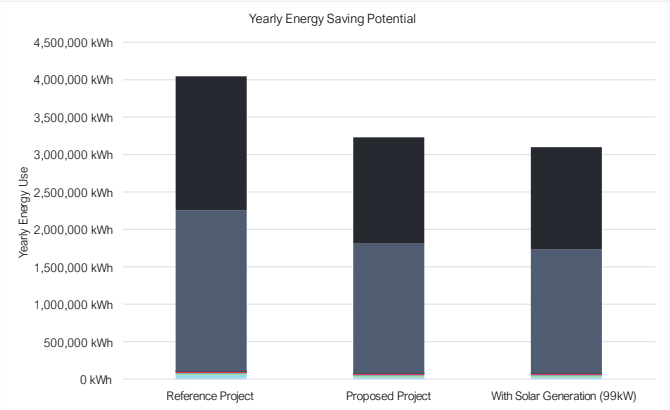
3.1.1 Warehouse 4A – Ambient Warehouse



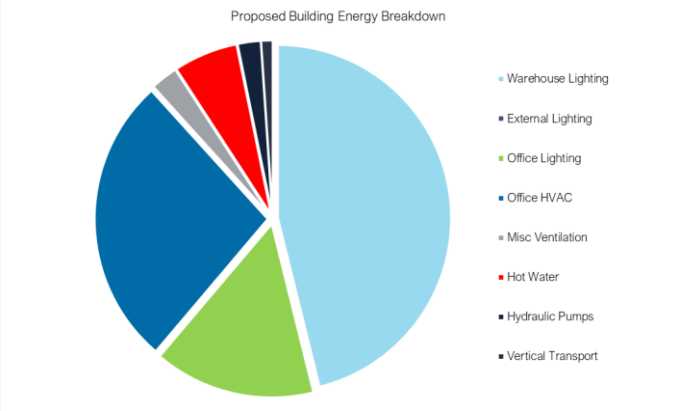


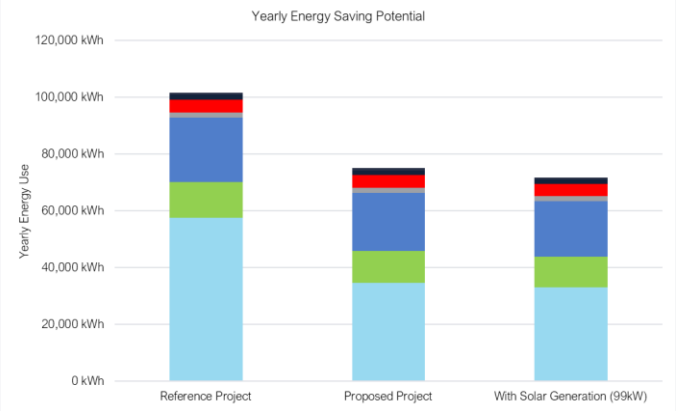
3.1.2 Warehouse 4B – Cold Storage





Also shown without tenant major loads.





3.2 Responsible Material Use

A circular economy keeps resources and materials in use for as long as possible at their highest value. It maximises their usability and then recovers, regenerates and/or repurposes the materials wholistically. For proposed development, there is a strong focus on waste minimisation in design, construction, operation, and end-of life.

Table 6: Circular Economy Initiatives

Strategy	Initiatives incorporated or being considered
Responsible Procurement	▪ Investigating reuse, repurposing, and recycling of existing buildings into the new development ▪ Investigate opportunities to implement responsible procurement plan to guide selection of products, materials, and consumables ▪ Explore supply chain partnerships for sustainable materials
Use responsible products	▪ Early design team engagement to identify opportunities for dematerialisation in design and construction ▪ Selection recycled or reused products, or products that can be reused/recycled at the end of life ▪ Consider components prefabricated and designed for disassembly and reuse including second and third life uses ▪ Design for durability and robustness to reduce waste to landfill caused by damage
Specify sustainably certified products	▪ Specify products that have certifications or evidence of sustainability such as: – Reused products – Third-party certified – Renewable – Non-toxic – Free of modern slavery impacts
Maximise local procurement	▪ Explore locally sourced products, materials, and labor
Operational waste	▪ Facilitate adequate separation of waste streams such as landfill, recyclables, and electronic waste, during operation.

3.3 People and Community

People and community are a key driver for design strategy. The development looks to create opportunity to engage the wider community for input and ongoing discussion regarding development.

Table 7: People and Community Initiatives

Strategy	Initiatives incorporated or being considered
Provide excellent indoor environment quality	▪ High performance façade and services design to maximise visual, acoustic, and thermal comfort for occupants ▪ Non-toxic finishes ▪ Biophilic design including natural light and views such as the incorporation of Green Walls and Roofs ▪ Occupant-controlled daylight and natural ventilation for occupied areas
Provide accessible amenity spaces with fresh air, daylights, shade, dining area, views, and landscaping	▪ Design to promote activity, including end-of-trip facilities and perimeter green belt/walkway ▪ Mental and physical health programs ▪ Healthy food options catering for variety of dietary requirements
Inclusive design	▪ Design for a diverse range of needs
Zero modern slavery in the supply chain	▪ Select products/materials and labour with transparent, ethical supply chains ▪ Develop Modern Slavery Statement supported by Senior Management
Respect and develop local community during construction and operation	▪ Connection to Country and Culture ▪ Rigorous community engagement and reporting ▪ Partnerships with local educational institutions to develop soil health and carbon projects ▪ Partnership with social enterprise to run on-site demonstration greenhouse ▪ Regular public information days/tours/education sessions
No negative impact on local air quality or noise quality	▪ Operate in line with approved Environmental Management Plans. ▪ Give preference to contractors with certified ISO 14001 Environmental Management Systems

3.4 Biodiversity and Nature

The development of the site will strive to minimise negative impacts on biodiversity. This includes focusing on the existing biodiversity within the region as well as protecting water bodies and incorporating greenery within spaces.

Table 8: Biodiversity and Nature Initiatives

Strategy	Initiatives incorporated or being considered
Minimise stormwater pollution and peak runoff through water sensitive urban design (WSUD)	▪ Consideration of water sensitive urban design using natural processes such as infiltration ▪ Utilise district recycled water systems
Improve biodiversity on site compared to pre-development conditions	▪ Onsite landscaping with indigenous, low water use, drought resistant plant species, with consideration of implications for the airport ▪ Landscaping Designed for Country
Consideration of Green Walls and External Roofs	▪ Incorporate green feature walls in common spaces such as lobbies and lunchrooms ▪ Utilise otherwise unused surfaces for green areas that naturally provide shading ▪ Allow for irrigation and airflow in feature walls and spaces to support implementation

3.5 Resilience

Resilience takes into consideration the capacity of individuals, communities, institutions, business, and systems to survive, adapt and grow no matter what kinds of chronic stresses and acute shocks they experience. Adaptation is the process of building more resilient communities, institutions, businesses, and systems to a given (anticipated) set of shocks and stresses. Resilience is the ability to minimise the deviation from the ideal or the ability to restore operation back to its ideals.

Table 9: Resilience considerations

Strategy	Initiatives incorporated or being considered
Climate change risk resilience	▪ Explore strategies to mitigate risks associated with an increase in extreme climate events related to rising temperatures, increased severity of rainfall events, floods, and bushfires ▪ Evaluate flood zones and areas impacted by extreme rainfall events and locate all critical equipment and services above Probable Maximum Flood (PMF) levels ▪ Evaluate infrastructure's ability to handle rising temperatures ▪ Identify options to reduce reliance on mains water and energy utilities through district wide recycled water use and energy generation.

3.6 Waste and Sustainable Materials

As per the NSW Government Department of Planning, Industry and Environment's *NSW Waste and Sustainable Materials Strategy 2041 Stage 1: 2021-2027,* published in June 2021, initiatives to meet or exceed these targets are listed below.

Table 10: Waste and Sustainable Materials Priorities and Responses

Priority	Initiatives incorporated or being considered
Reduce total waste generated by 10% per person by 2030	▪ Increase education and awareness programs about the importance of reducing waste ▪ Implement measures to reduce single-use plastics, such as banning plastic bags and straws ▪ Encourage the use of reusable products, such as bags, containers, and water bottles
Have an 80% recovery rate from all waste streams by 2030	▪ Provide adequate waste streams to accommodate the recycling of most materials
Significantly increase the use of recycled content by governments and industry	▪ Lead by example by creating a demand for construction materials
Halve the amount of organic waste sent to landfill by 2030	▪ Support sustainable agriculture, if possible, to reduce organic waste from landscaping

3.7 Sustainability Measures and Initiatives

Measures considered to reduce the use resources especially water and energy for the development have been listed below.

Table 11: Sustainability Measures and Initiatives

Strategy	Initiatives incorporated or being considered
Reduce energy use and GHG emissions during construction and operation.	▪ The development is considering an onsite solar photovoltaic system that will provide clean renewable energy for the facility in operation. This is also in alignment with the Government's 2050 net zero goals. ▪ Low carbon construction materials will be considered where feasible to reduce the embodied carbon impacts of the development. ▪ Steps towards efficient lighting has been made by consideration of efficient luminaires, reduced illumination power density, translucent sheeting to warehouse roof to provide high levels of daylight, and lighting controls such as photosensors and occupancy sensors to improve energy efficiency. ▪ Electric Vehicle Charging Stations are being considered for implementation to encourage environmentally friendly transport
Incorporate passive design measures to minimise energy consumption.	▪ A fabric assessment of the proposed building will be performed in accordance with the National Construction Code such that requirements for building envelope performance can inform energy efficiency outcomes. ▪ Sufficiently insulated conditioned spaces with consideration of zoned lighting and HVAC with controls to avoid energy consumption associated with unnecessary lighting and space conditioning.
Non-potable water from alternative sources	▪ Utilise district recycled water systems ▪ Integrate stormwater filtration systems (natural and artificial) to meet the water quality thresholds ▪ Metering and monitoring of major water uses
National Construction Code – Section J	▪ A fabric and glazing assessment of the proposed building will be performed in accordance with the National Construction Code such that requirements for building envelope performance can inform passive design and energy efficiency outcomes.
Green Star – Sustainability Rating	▪ The project will consider the application of the new Green Star Buildings v1 sustainability rating tool to guide best-practice outcomes for this development.

4.0 NABERS Analysis

4.1 NABERS Energy

The following outlines the details of the proposed NABERS Energy rating.

Table 12: NABERS Energy Reverse Calculator Inputs

NABERS Metric	Input / Output – Warehouse 4A	Input / Output – Warehouse 4B
Rating Type	Energy	Energy
Building Type	Office Applicable to the office components only	Office Applicable to the office components only
Scope of Rating	Base building	Base building
Target Rating	5.5 Stars	5.5 Stars
Commitment Type	Commitment to Rate	Commitment to Rate
Postcode	2176	2176
Building Area	~964m² (Office areas only)	~802m² (Office areas only)
Hours per Week	60 hours expected	60 hours expected
Energy Sources	100% electricity	100% electricity
Maximum Electricity Consumption	66,000 kWh /year	63,000 kWh /year
Maximum Emissions (Scope 1 & 2)	48,000 kg $CO_{2\text{-}e}$ /year	45,200 kg $CO_{2\text{-}e}$ /year
Maximum Emissions (Scope 1, 2 & 3)	45,000 kg $CO_{2\text{-}e}$ /year	51,500 kg $CO_{2\text{-}e}$ /year

The project is confident that the targeted maximum energy consumption can be achieved in operation, design responses to ensure this is possible has been listed throughout this report, including:

- Passive design to reduce HVAC loads.
- Efficient and flexible HVAC system to match demand and energy consumption requirements.
- Efficient lighting with smart controls.
- Large solar PV system, feeding the office energy demands.
- Metering and monitoring to ensure operational performance.

4.2 NABERS Water

The following outlines the details of the proposed NABERS Water rating.

Table 13 NABERS Water Reverse Calculator Inputs

NABERS Metric	Input / Output – Warehouse 4A	Input / Output – Warehouse 4B
Rating Type	Water	Water
Building Type	Office Applicable to the office components only	Office Applicable to the office components only
Scope of Rating	Whole Building	Whole Building
Target Rating	3 Stars	3 Stars
Postcode	2176	2176
Building Area	~964m² (Office areas only)	~802m² (Office areas only)
Hours per Week	60 hours expected	60 hours expected
Maximum Water Consumption	258 kL /year	215 kL /year

The project is confident that the targeted maximum water consumption can be achieved in operation, with the following conditioned:

- Positive ruling on the use of NABERS Water for a project of this nature, particularly in relation to irrigation and wash-down water consumption.
- Consideration of the rating to include recycled water as the development will be connected to a district wide recycled water scheme which does not allow on-site rainwater capture and reuse.
- Any tenant specific water consumption requirements, due to the type of development, and their potential impacts on the NABERS rating.

Design responses to ensure this is possible has been listed throughout this report, including:

- Water efficient toilets, taps and showers.
- Landscaping selected to be low in water demand.
- Efficient irrigation system with drip under-mulch type system.
- Connection to external recycle water system.
- Metering and monitoring to ensure operational performance.

5.0 Conclusions

To conclude, this report has presented key sustainability initiatives that Lot E of the Kemps Creek Industrial Estate is assessing and implementing to address the industry-specific Planning Secretary's Environmental Assessment Requirements (SEARs) as specified within application SSD-85510213 & MOD-6 which are the following:

- A description of how the development responds to the provisions of Section 3.2 of State Environmental Planning Policy (Sustainable Buildings) 2022
- A description of how the principles of ecologically sustainable development would be incorporated into the design, construction and ongoing operation of the development
- A description of the measures to be implemented to minimise consumption of resources, especially energy and water
- 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).

The ESD initiatives being considered for the proposed development demonstrate that the proposed development will meet or exceed the required SEARs, industry standards and the sustainability pillars set by the NSW Government's Net Zero Plan.

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