

15-21 Britton Street - 28-54 Percival Road, Smithfield

Net Zero Statement

Lendlease

Job No: 1041383
Doc ref: RPT-SY-002
Revision: —
Revision date: 30 October 2024

Compliance Cover Letter

This Net Zero Statement has been prepared as part of the Development Application SSD-67368956, located at Lot 1 DP 597082 and Lot 34 DP 617521 on 15-21 Britton Street and 28-54 Percival Road, Smithfield.

This statement aims to detail how the development is aligned with the Net Zero Statement Technical Notes issued by the NSW Government and describes how the project will avoid dependence on fossil fuels and be capable of operating at net zero emissions by 2035.

Subject to further design development, the proposed development has made the following key considerations:

- Building Fabric Performance
- Building System Performance
- Renewable Energy Generation and Storage
- Limiting Fossil Fuel Usage
- Energy Efficient Design
- Benchmarking of Energy Consumption and Emissions

Development of sustainability initiatives is an ongoing and collaborative effort from Lendlease, Cundall and the wider project team. The initiatives will be reviewed over the lifetime of the project with potential measurable outcomes defined to provide positive outcomes for the environment and people. The project has strongly considered an ongoing assessment and commitment towards the implementation of a net zero carbon strategy throughout the full project lifecycle. This includes eliminating fossil fuels from permanent building operations where and if possible, due consideration towards installing onsite renewables, reducing upfront carbon in construction, incorporation of passive design principles and designing energy efficiency building services and controls.

30/10/2024

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Verified by

Signed by: Collins, David

David Collins

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Emissions Reductions Pathway

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 1: Climate Action Initiatives

Strategy	Initiatives incorporated or being considered
Eliminate fossil fuels	<ul style="list-style-type: none"> Avoiding of permanent natural gas connection wherever possible. Electric vehicle charging infrastructure (as per NCC requirements).
Reduce other emissions	<ul style="list-style-type: none"> Minimise waste and wastewater where possible. Minimise usage of high global warming potential (GWP) refrigerants where possible.
Onsite renewable energy	<ul style="list-style-type: none"> Onsite energy generation through rooftop solar PV, lowering peak energy demand and contributing to on-site energy for electric vehicles.
Reduce building operational carbon	<ul style="list-style-type: none"> Good passive design to minimise HVAC and lighting energy consumption. High performance building services equipment and controls strategy.
Minimise upfront carbon	<ul style="list-style-type: none"> Investigating reuse, repurposing, and recycling of existing buildings into the new development. Investigating low embodied carbon designs through materials minimisation and materials substitution opportunities. Consideration of materials with higher reuse/recyclable components where available. Investigate materials that sequester carbon, for example timber.
Climate Adaptation	<ul style="list-style-type: none"> Design with climate change impacts in mind, see Section 3.5 of the Sustainable Design Report for Climate Resilience Considerations.

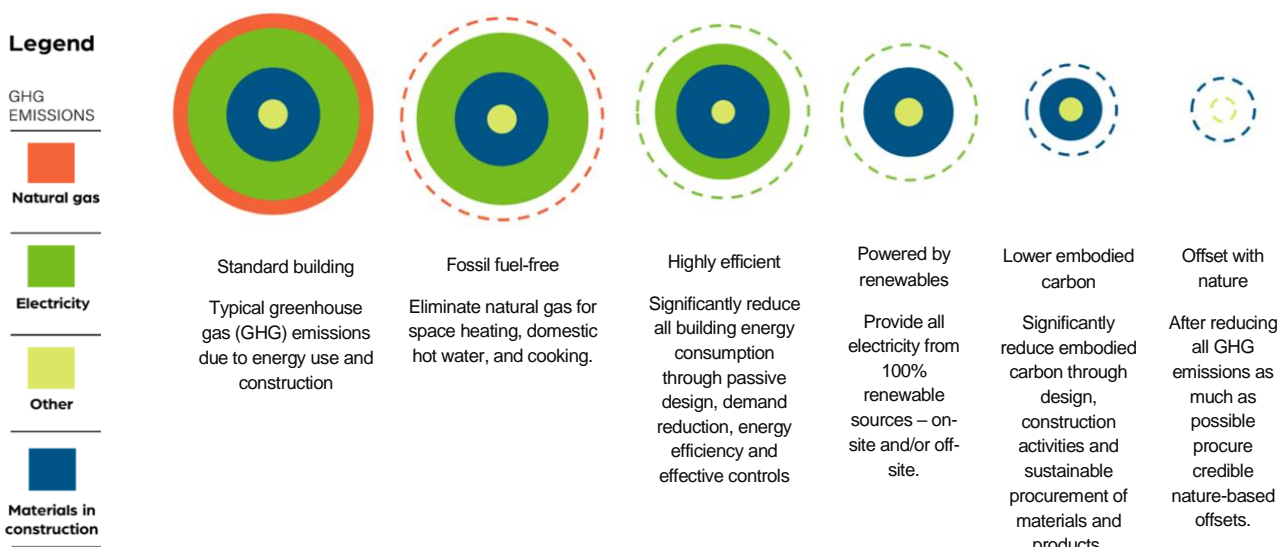


Figure 1: NSW Net Zero Emissions Pathway

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.

Table 2: Net Zero Priorities and Responses

Priority	Initiatives incorporated or being considered
Drive uptake of proven emissions reduction technologies	<ul style="list-style-type: none"> ▪ The facility aims to support the installation of renewable energy with focus on reducing energy consumption. ▪ Reduction of fossil fuel use through direct on-site initiatives including the removal of natural gas fuels and minimisation of other on-site fossil fuels. ▪ Reduction in waste emissions where possible. ▪ Support electric vehicle implementation through infrastructure provisions.
Empower consumers and businesses to make sustainable choices	<ul style="list-style-type: none"> ▪ The development will demonstrate leadership in sustainability and be an example of how industrial facilities can be partially powered by clean energy from on-site and off-site sources. ▪ The development is also focusing on supply chains, and materials to reduce embodied emissions. ▪ Implementation of a Metering and Monitoring Plan to support lower emissions operation.
Invest in the next wave of emissions reduction innovation	<ul style="list-style-type: none"> ▪ The development will consider the 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	<ul style="list-style-type: none"> ▪ As per responses above.

Energy Consumption Benchmarking

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. Benchmarking is based on similar typical warehouse buildings that implemented the energy saving measures anticipated to be feasible for this development. Also presented is the potential implementation of renewable solar energy based on nominal sizing, to help offset energy use and reduce the peak demand of the site.

For a typical industrial warehouse development, the main demand for energy comes from the requirement for warehouse and external hardstand lighting, where it is typical that over 50% of the site's energy demand can be contributed to these lights. Therefore, it is suggested that low wattage LED lighting with sensor controls is installed to mitigate this demand.

Figure 3 depicts the potential for savings over a typical warehouse development through energy saving measures. It is noted that the energy benchmarking at this stage does not consider the process load. Further energy modelling will be conducted during detailed design to assess the required demand when mechanical design has progressed.

It is noted that benchmarking outcomes are heavily influenced by types of tenant and hours of business for each space. As such, it is the intention of Lendlease to work with tenants towards reducing operational energy consumption.

According to current benchmarking, the development is expected to reduce operational energy of base building systems (non-tenant energy) by 40-50% and across the development and achieve a rate of <12kWh/year/sqm.

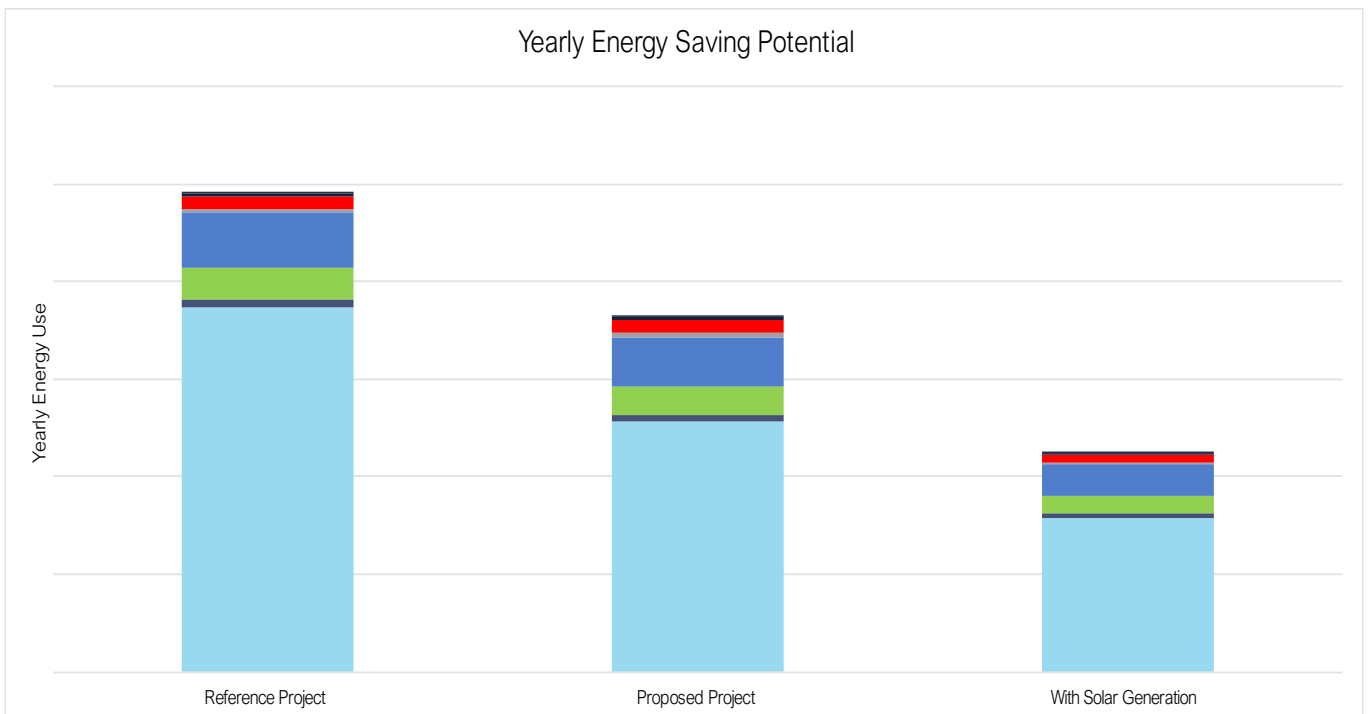
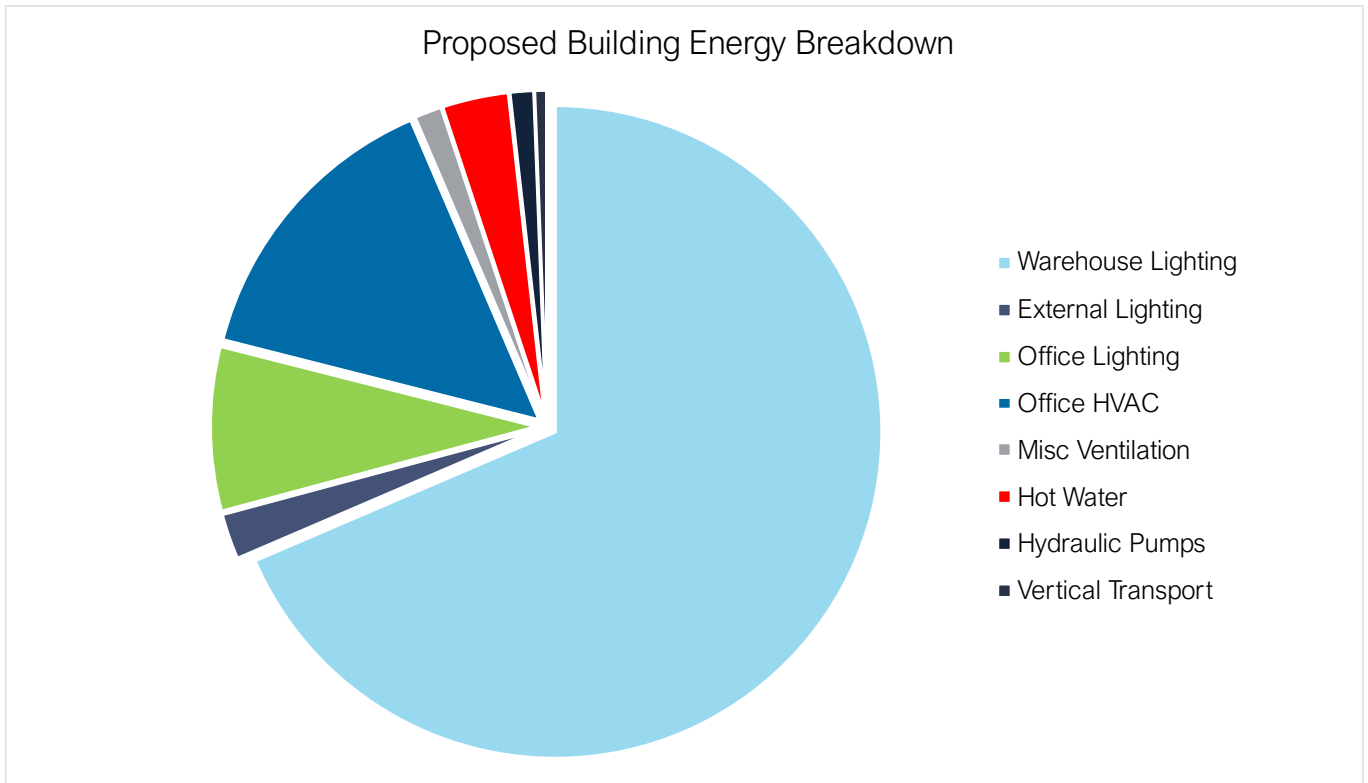


Figure 3: Yearly energy saving potential for the benchmarked space

Further Sustainability Measures and Initiatives

The following initiatives are also being considered for implementation.

Strategy	Initiatives incorporated or being considered
Reduce energy use and GHG emissions during construction and operation.	<ul style="list-style-type: none"> ▪ The development is considering onsite solar photovoltaic system(s) 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 for all internal, external and signage fixtures, 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.	<ul style="list-style-type: none"> ▪ 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.
National Construction Code – Section J	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ The project will consider the application of the new Green Star Buildings v1 sustainability rating tool to achieve a minimum of 4-Stars to guide best-practice outcomes for this development.

