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GPT Industrial Estate, Kemps Creek

Ecologically Sustainable Design and Greenhouse Gas Assessment

Addressee(s):	**The GPT Group**
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Quality Control

Study	Status	Prepared	Checked	Authorised
INTRODUCTION	Final	Northstar	GCG, MD	MD
THE PROPOSAL	Final	Northstar	GCG, MD	MD
LEGISLATION, REGULATION AND GUIDANCE	Final	Northstar	GCG, MD	MD
GREENHOUSE GAS ASSESSMENT METHODOLOGY	Final	Northstar	GCG, MD	MD
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Final Authority

This report must by regarded as draft until the above study components have been each marked as final, and the document has been signed and dated below.

Martin Doyle **27th April 2021**

Non-Technical Summary

The GPT Group has engaged Northstar Air Quality Pty Ltd to perform an Ecologically Sustainable Design and Greenhouse Gas assessment for the construction and operation of an industrial estate located at 754-770 and 784-786 Mamre Road, Kemps Creek, comprising five warehouses, an internal road network and associated carparking.

The study presents a quantification of greenhouse gas emissions and water usage and provides opportunities for reduction. A discussion of these impacts and the principles of Ecologically Sustainable Design are also included in this report.

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Units Used in the Report

All units presented in the report follow International System of Units (SI) conventions, unless derived from references using non-SI units. In this report, units formed by the division of SI and non-SI units are expressed as a negative exponent, and do not use the solidus (/) symbol. *For example*, 50 micrograms per cubic metre would be expressed as 50 $\mu g \cdot m^{-3}$ and not 50 $\mu g/m^3$.

Common Abbreviations

Abbreviation	Term
DPI&E	Department of Planning, Industry and Environment
EPA	Environmental Protection Authority
ESD	Ecologically Sustainable Development
m^{-2}	per square metre
m^{-3}	per cubic metre
mE	metres East
$month^{-1}$	per month
mS	metres South
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SSD	State Significant Development

Abbreviation	Term
WELS	Water Efficiency Labelling and Standards
WSUD	Water sensitive urban design

1. INTRODUCTION

The GPT Group (the Applicant) has engaged Northstar Air Quality Pty Ltd (Northstar) to perform an Ecologically Sustainable Design (ESD) and Greenhouse Gas (GHG) assessment for the construction and operation of an industrial estate comprising five (5) warehouses, an internal road network and associated carparking (the Proposal).

The Proposal will be located at 754-770 and 784-786 Mamre Road, Kemps Creek occupying Lot 59 and Lot 60 in Deposited Plan (DP) 259135 (the Proposal site). The Proposal site has an area of approximately 33.36 hectares (ha) and a total frontage of approximately 211 metres (m) to Mamre Road to the east.

The study presents a quantification of GHG emissions and water usage and provides opportunities for reduction. A discussion of these impacts and the principles of ESD are also included in this report.

The *Environmental Planning and Assessment Act* 1979 (EP&A Act) forms the statutory framework for planning approval and environmental assessment in NSW. The Development qualifies as State Significant Development (SSD) under *State Environmental Planning Policy (State and Regional Development) 2011*, in accordance with Section 4.36 of the EP&A Act.

1.1. Secretary's Environmental Assessment Requirements

NSW Department of Planning, Industry & Environment (DPIE), issued the Planning Secretary's Environmental Assessment Requirements (SEARs) for the Proposal in November 2020. **Table 1** below identifies the SEARs relevant to this study and the relevant sections of the report in which they have been addressed.

Table 1 Secretary's Environmental Assessment Requirements (SSD 10272349)

Issue	Requirement	Addressed
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.	Section 5.2 Section 5.3
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.	Section 5
Soils and water	including: .. - description of the measures to minimise water use ..	Section 5.4

A number of Government agencies were consulted during the preparation of the SEARs. No further requirements associated with ESD or GHG were provided.

1.2. Purpose of the Report

The purpose of this report is to identify opportunities for energy, water and GHG efficiency associated with the Proposal.

The ESD and GHG assessment has been performed referencing the following documents:

- Australian Government Department of the Environment, Australian National Greenhouse Accounts, National Greenhouse Accounts Factors, October 2020 (DISER, 2020);
- The World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) GHG Protocol: A Corporate Accounting and Report Standard (WRI, 2004);
- ISO 14064-1:2006 (Greenhouse Gases – Part 1: Specification with guidance at the organisation level for quantification and reporting of GHG emissions and removal;
- ISO 14064-2:2006 (Greenhouse Gases – Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of GHG emission reductions or removal enhancements); and,
- ISO 14064-3:2006 (Greenhouse Gases – Part 3: Specification with guidance for the validation and verification of GHG assertions) guidelines (internationally accepted best practice).
- NSW Environmental Planning and Assessment Regulation 2000.

2. THE PROPOSAL

The following provides a brief description of the context, location, and scale of the Proposal, and a description of the processes and development activities on site.

2.1. Environmental Setting

The Proposal site is located at 754-770 and 784-786 Mamre Road, Kemps Creek in the Penrith Local Government Area (LGA). The Proposal site is approximately 27 kilometres (km) west of the Sydney Central Business District (CBD). A map showing the location of the Proposal site is provided in **Figure 1**.

The closest residential property is approximately 52 m from the Proposal site boundary to the west, on Mamre Road, Kemps Creek.

Figure 1 Proposal site location

Source: Northstar Air Quality

2.2. Overview and Purpose

The Proposal seeks to gain approval to construct and operate five new warehouses for distribution or general warehouse purposes and other manufacturing industries. The intended use of the warehouses located at the Proposal site is not yet determined.

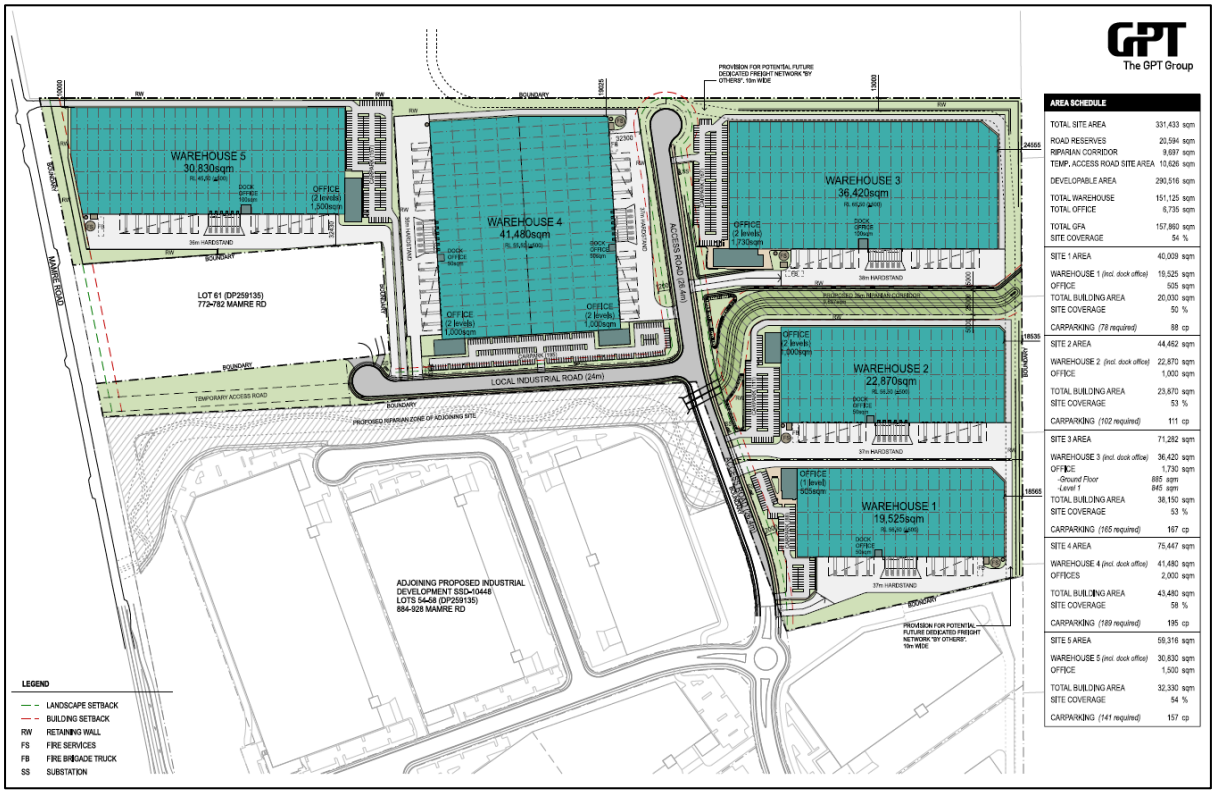
The overall scope of the proposed development is outlined as follows:

- Demolition of the existing structures and landscaping;
- Bulk earthworks;
- Construction of five warehouses and associated offices;
- Construction of internal road network and associated infrastructure;
- Construction of retaining walls; and,
- Car and van parking.

The Proposal site would be operational on a 24-hour, 7-day basis.

A layout of the Proposal site is provided in **Figure 2**.

Figure 2 Proposal site layout



Source: SBA 22/04/2021

3. LEGISLATION, REGULATION AND GUIDANCE

3.1. National Greenhouse and Energy Reporting Scheme

The National Greenhouse and Energy Reporting (NGER) scheme, established by the *NGER Act*, is a national framework for reporting and disseminating company information about greenhouse gas emissions, energy production, energy consumption and other information specified under NGER legislation.

The objectives of the NGER scheme are to:

- inform government policy;
- inform the Australian public;
- help meet Australia's international reporting obligations;
- assist Commonwealth, state and territory government programmes and activities; and,
- avoid duplication of similar reporting requirements in the states and territories.

Further information on the NGER scheme, specifically the definitions of various scopes and types of GHG emissions, which have also been adopted for the purposes of this assessment, is provided in **Section 4**.

3.2. NSW Greenhouse Gas Legislation

There is no specific GHG legislation administered within NSW. The NGER scheme is the applicable legislation within NSW.

The NSW Government is working to deliver economically efficient and environmentally effective policies and programs that do not duplicate initiatives of the Australian Government. They include:

- understanding NSW emissions;
- providing financial support through the Climate Change Fund;
- promoting energy efficiency (e.g. through the Energy Savings Scheme [ESS]); and,
- promoting soil carbon sequestration.

3.3. NSW Ecologically Sustainable Development Legislation

Schedule 3, Part 3, Clause 4 of the NSW Environmental Planning and Assessment Regulation 2000 outlines the require content of an EIS. In relation to ESD:

> *(4) The principles of ecologically sustainable development are as follows—*
>
> *(a) the precautionary principle, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to*

prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by—

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(ii) an assessment of the risk-weighted consequences of various options,

(b) inter-generational equity, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) conservation of biological diversity and ecological integrity, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) improved valuation, pricing and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as—

(i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

4. GREENHOUSE GAS ASSESSMENT METHODOLOGY

The Australian Government Department of Industry, Science, Energy and Resources (DISER) document, "National Greenhouse Accounts Factors" Workbook (NGA Factors) (DISER, 2020), defines two types of GHG emissions (see **Table 2**), namely 'direct' and 'indirect' emissions. This assessment considers both direct emissions and indirect emissions resulting from the operation of the Proposal.

Table 2 Greenhouse gas emission types

Emission Type	Definition
Direct	Produced from sources within the boundary of an organisation and as a result of that organisation's activities (e.g. consumption of fuel in on-site vehicles)
Indirect	Generated in the wider economy as a consequence of an organisation's activities (particularly from its demand for goods and services), but which are physically produced by the activities of another organisation (e.g. consumption of purchased electricity).

Note: Adapted from NGA Factors Workbook (DISER, 2020)

4.1. Emission Scopes

The NGA Factors (DISER, 2020) identifies two 'scopes' of emissions for GHG accounting and reporting purposes as shown in **Table 3** below.

Table 3 Greenhouse gas emission scopes

Emission Scope	Definition
Scope 1	Direct (or point-source) emission factors give the kilograms of carbon dioxide equivalent (CO_2-e) emitted per unit of activity at the point of emission release (i.e. fuel use, energy use, manufacturing process activity, mining activity, on-site waste disposal, etc.). These factors are used to calculate Scope 1 emissions.
Scope 2	Indirect emission factors are used to calculate Scope 2 emissions from the generation of the electricity purchased and consumed by an organisation as kilograms of CO_2-e per unit of electricity consumed. Scope 2 emissions are physically produced by the burning of fuels (coal, natural gas, etc.) at the power station.

Note: Adapted from NGA Factors Workbook (DISER, 2020)

A third scope of emissions, Scope 3 Emissions, are also recognised in some GHG assessments. The Greenhouse Gas Protocol (GHG Protocol) (WRI, 2004) defines Scope 3 emissions as "other indirect GHG emissions":

> *"Scope 3 is an optional reporting category that allows for the treatment of all other indirect emissions. Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. Some examples of Scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services."*

Scope 3 emissions have not been considered within this assessment but are entirely optional.

4.2. Emission Source Identification

The geographical boundary set for this GHG assessment covers the Proposal and does not include the transport of materials to and from the site (as defined above). Emissions associated with Proposal construction and all associated mobile plant and equipment, are not included in this assessment. This is because their usage is not quantifiable at the current time. The ongoing energy efficiency of the Proposal's operation has been considered the main focus of this assessment.

The GHG emission sources associated with the operation of the Proposal have been identified through the review of the proposed broad activities as described in **Section 2**. The individual tenants of each of the warehouses/industrial facilities is not yet fully determined, and information relating to the consumption of electricity has been provided by the Applicant.

The activities/operations being performed, as part of the Proposal, which have the potential to result in emissions of GHG, are presented in **Table 4** below.

Table 4 Greenhouse gas emission sources

Proposal Component	Scope	Emission Source Description
Consumption of purchased electricity	2	Emissions associated with the generation of electricity from fossil fuel combustion

A minor quantity of scope 1 emissions, associated with the consumption of unleaded fuel, diesel fuel or natural gas, would be anticipated during the operation of the warehouses. At this stage of development, that quantity is not able to be quantified exactly. Fuel would also be combusted in vehicles servicing the Proposal (i.e. heavy good vehicles etc.). This assessment however, has examined the energy efficiency of the Proposal Site rather than the transportation of goods and materials.

4.3. Emissions Estimation

Emissions of GHG from the source identified in **Table 4** have been calculated using activity data for the source per annum (i.e. per kilowatt-hour (kWh) of electricity) and the relevant emission factor for each source.

The assumptions relating to activity data are outlined in **Table 5** below. This value represents the operation of all warehouses and offices within the Proposal Site. This has been based on data provided by the Applicant (converted from volt-amps (VA) per m^2 to $kWh \cdot m^{-2}$ using a power factor of 0.8) which indicates that the operations at the Proposal site may result in the consumption of 119.1 $kWh \cdot m^{-2}$ of floor space per year, averaged across the warehouses and an average of 700.8 $kWh \cdot m^{-2}$ of floor space across the offices.

The total floor space covering all warehouses at the Proposal site is 151 125 m^2 and the total floor space of office areas is 6 735 m^2.

Table 5 Calculated activity data

Development	Proposal Component	Assumptions	Activity	Units
Proposal	Consumption of purchased electricity for warehouses	Average of 119.1 $kWh \cdot m^{-2} \cdot year^{-1}$ (based on information provided by the Applicant)	18 004 428	kWh
Proposal	Consumption of purchased electricity for office areas	Average of 700.8 $kWh \cdot m^{-2} \cdot year^{-1}$ (based on information provided by the Applicant)	4 719 888	kWh
		Total	22 724 316	kWh

4.4. Emission Factors

Emissions factors used for the assessment of GHG emissions associated with the operation of the Proposal have been sourced from the NGA Factors (DISER, 2020) (refer to **Table 6**).

Table 6 Greenhouse gas emission factors

Emission Scope	Emission Source	Emission Factor
Scope 2	Electricity (NSW)	0.81 kg CO_2-e$\cdot kWh^{-1}$

5. ESD ASSESSMENT

This section addresses the key issue of Ecologically Sustainable Development (ESD). It also presents the ESD requirements to support the EIS.

The Proposal site includes an area of approximately 33.36 ha. The warehouse areas are presented in **Table 7** and **Figure 2**. The total office area will be 6 735 m^{-2} which represents 5 % of the total warehouse area. Further information relating to the Proposal layout is presented in **Section 2**.

Table 7 Proposed Industrial Development

Warehouse	Area (m^{-2})
1	19 525
2	22 870
3	36 420
4	41 480
5	30 830

5.1. Sustainable Design Strategies

Frasers Property has recently gained SSD approval for the construction and operation of a warehouse, logistics and industrial hub at 657-769 Mamre Road, Kemps Creek, near to the Proposal site. Given its proximity to the Proposal site, the ESD Report for that development (Frasers, 2019) has been reviewed and referenced where relevant.

Table 8 presents a summary of the proposed Sustainable Design Strategies. It indicates opportunities to achieve ESD with areas for consideration and recommendations.

Table 8 Summary of Sustainable Design Strategies

Subject	Recommendations
Transport	To reduce the reliance on private vehicles and relieve any traffic pressures on nearby roads and local communities, the following approaches should be investigated: • Secure bicycle parking facilities. • Extension of existing bus routes or the provision of a regular bus service from the Project to nearby public transport facilities. • Promote car-pooling/car-sharing initiatives.
Materials	Endeavour to use material with minimal carbon dioxide equivalent (CO_2-e) emissions and embodied energy during the construction and operation of the Project.
	All timber products used at the site should be procured from certified sustainably harvested resources. No timber should be specified from rainforest or old growth forest.
	Use insulation and refrigerants with zero ozone depleting potential.

Subject	Recommendations
	Use of all paints, carpets, adhesives and sealants that have low volatile organic compounds (VOCs) during the construction and operation phase.
	Use low emission Formaldehyde composite wood products during the development of the Project.
	Promote the use of regional or local manufacturers.
Water	Develop a stormwater management plan that incorporates water sensitive urban design (WSUD) such as: • Infiltration trenches and bio retention basins. • Bioswales. • Rain gardens. • Gross pollutant traps. • Rainwater tanks. These initiatives reduce the quantity and quality of storm water runoff, protect waterways and ecosystems, minimise drainage infrastructure costs and enhance liveability.
	Implement rainwater harvesting techniques to minimise potable water use by using rainwater collected from warehouse and/or office roofs for non-potable uses such as toilet flushing and irrigation. If implemented during the construction stage, rainwater harvesting could be used to mitigate dust generation.
	Adopt a landscaping plan that promotes the use of plants that are drought resistant and have low water requirements.
	Use water efficient fixtures with high Water Efficiency Labelling and Standards (WELS) rating.
	Timely maintenance of fixtures and fittings.
Management	Adopt an independent consultant to provide tuning and maintenance for fire, mechanical, electric and hydraulic services to ensure all aspects are running to their design specification as efficient as possible.
	These strategies are recommended to be implemented via a Site Management Plan or equivalent.
Indoor Environment Quality	Consider a design to optimise occupant satisfaction in accessibility, usability, air quality and public space utility by adopting a high level of indoor environmental quality. This can be achieved by: • Optimising natural light in work environment through clear roof sheeting in the warehouse. • Optimising fresh air ventilation by increase outdoor air into conditioned spaces. • Optimising thermal comfort through passive solar design such as insulation, air conditioning, glazing, curtains, external louvers/eves, high performance glass and a reflective roof or 'cool roof'. • Minimising internal noise transference between warehouse tenants by: – Using noise absorbent fillers to reduce any reverberation. – Installing walls with a high acoustic transmission loss value. – Using door seals. • Installing eco-certified workstations within the office space.
Noise	Consider a warehouse wall and roofing design that limits internal noise transmission to nearby neighbourhood residences. This can be accomplished by using: • Concrete walls. • Double sheeted zincalume roofing with insulation. • Door seals.

Subject	Recommendations
Energy Efficiency	Investigate the possible viability of the following energy sources to reduce bought electricity: • Solar water heating with gas boost. • Solar panels (photovoltaics) or future proofing building for future installation.
	Adopt the use of the air conditioning design features to minimise the associated purchased electricity.
	Adopt the use of energy efficient appliances and equipment used within the office and warehouse space.
Waste	Ensure the bulk earthworks on-site balance cut and fill where possible.
	Construction contractor develops and implements a Waste Management Plan.
Land Use and Ecology Impact	Use indigenous planting appropriate to the area.
	Design external lighting to avoid releasing light into the night sky or beyond the site boundary.
	Adopt the use of water sensitive urban design (WSUD) described above.
	Employ specialist advice to develop an independent ecological report to identify any protected local flora and fauna.

Source: (Frasers, 2019)

5.1.1. Green Star

It is recommended that the Applicant examine the potential for the development to be approved under Green Star Design, as defined by the Green Building Council of Australia.

Green Star is a voluntary sustainability rating system for buildings in Australia. It was launched in 2003 by the Green Building Council of Australia.

The Green Star rating system assesses the sustainability of projects at all stages of the built environment life cycle. Ratings can be achieved at the planning phase for communities, during the design, construction or fit out phase of buildings, or during the ongoing operational phase.

The system considers, assesses and rates buildings, fit-outs and communities against a range of environmental impact categories, and aims to encourage leadership in environmentally sustainable design and construction, showcase innovation in sustainable building practices, and consider occupant health, productivity and operational cost savings.

Green Star certification is a formal process in which an independent assessment panel reviews documentary evidence that a project meets Green Star benchmarks within each credit. The assessment panel awards points, with a Green Star rating determined by comparing the overall score with the rating scale. The rating system is based on six stars.

Green Star rating tools for building, fit-out and community design and construction reward projects that achieve best practice or above, which means ratings of 1, 2 or 3 are not awarded. Ongoing performance of a building can be rated at any of the 6 stars ratings.

5.2. Greenhouse Gas Assessment

5.2.1. Quantification of Greenhouse Gas Emissions

Based on the activity data for the operation of the Proposal and the emission factor outlined in **Section 4**, annual GHG emissions have been calculated and are presented in **Table 9** below.

Indirect (Scope 2) emissions associated with the Proposal are anticipated to be 18 406 t CO_2-e per annum.

Table 9 Calculated proposal GHG emissions

Emission Scope	Emission Source	GHG Emissions (t CO_2-e per annum)
Scope 2	Purchased electricity consumption	18 406

5.2.2. Greenhouse Gas Emissions in Context

A comparison of the calculated GHG emissions associated with the Proposal against Australian (DISER, 2020) and NSW (DISER, 2020) total emissions in 2018 is presented in **Table 10** below.

These data indicate that the operation of the Proposal, in its entirety, would contribute 0.014 % of NSW total GHG emissions and 0.003 % of Australian total GHG emissions in 2018.

Table 10 Proposal GHG emissions in context

Emissions (t CO_2-e per annum)		
Proposal	NSW (2018)	Australia (2018)
	Total 131 700 000	Total 537 400 000
18 725	0.014 %	0.003 %

The GHG assessment indicates that during Proposal operation, emissions are likely to be small and contribute 0.014 % of the NSW 2018 total emission of GHG.

5.3. Energy Efficiency

The main sources of energy use in a typical distribution warehouse include:

- Mechanical ventilation of warehouse and storage areas;
- Air conditioning of office area;
- Internal and external lighting; and
- Office and warehouse equipment

Considering the results of the GHG assessment as presented in **Section 5.2**, **Table 11** outlines a range of measures which may be implemented to reduce energy consumption, and also reduce GHG emissions associated with the Proposal.

Table 11 Summary of Energy Efficiency Measures

Project Aspect	Recommendations
Ventilation	Use natural ventilation in warehouses to reduce mechanical ventilation costs.
Solar Design	Incorporate passive solar design principles that reduce the air conditioning of office space and mechanical ventilation of warehouse space. This can be accomplished by using: • Limited glass on east and west facing office walls. • Enhanced glazing. • High solar performance tinted glass. • Block-out curtains on the interior of office windows. • External louvers/eves on east and west facing office windows. • Plant deciduous trees on east and west facing office walls to disperse direct sunlight during summer and promote sunlight in winter. • Use a highly reflective roof or 'cool roof' to decrease internal thermal fluctuations. • Wall insulation for office space.
Energy Sources	Investigate the viability of the following energy sources to reduce bought electricity: • Solar water heating with gas boost. • Solar panels (photovoltaics) or future proofing building for future installation.
Air Conditioning Design	Adopt the use of the following air conditioning design features to minimise the associated bought electricity. This can be achieved through implementing: • Mixed mode air conditioning to any office space with openable windows where sensors determine if windows are open. • Energy sub metering that is linked to tracking and monitoring systems to allow for self- assessment, problem solving and ongoing improvements during operations. • Independent units being installed in board rooms and server rooms to deal with differing loads and operating hours within the office building. • Separate operating systems for separate areas with different occupancy periods. • Ensure temperature sensors are located in areas that avoid direct solar gain or heat transfer through walls. • Adequately insulated pipework and ductwork to avoid further loads on air conditioning.

Project Aspect	Recommendations
	• Regular tuning and maintenance of the system to allow the system to function as per its original energy efficient intent.
Lighting	Use LED lighting strategies with advanced controls systems to dim or turn off lights when not in use.
	Optimise natural light in warehouse by using clear roof sheeting to reduce lighting costs.
Appliances and Equipment	Adopt the use of energy efficient appliances and equipment used within the office and warehouse space.

Source: (Frasers, 2019)

5.4. Water Demand and Reduction Measures

The water demand was provided by the Applicant as 55 kilolitres (kL) per day across all five warehouses and associated offices.

Rainwater harvesting techniques will be implemented to minimise potable water use by using rainwater collected from warehouse and/or office roofs for non-potable uses such as toilet flushing and irrigation.

Bathrooms will be fitted with water saving devices such as water efficient urinals, dual-flush toilets, and motion-detecting faucets which can all reduce water usage. As a minimum the WELS star ratings for the fittings would be:

- 4-star WC
- 6-star urinals
- 6-star tapware
- 3-star showers

In relation to outdoor water use, irrigation systems which detect soil moisture content will be used, and native, drought resistant plants will be used for landscaping.

6. CONCLUSION

This report has addressed the ESD requirements to support the EIS.

Principles to reduce energy demand, lower greenhouse gas emissions and minimise water consumption have been presented, as required by the SEARs.

7. REFERENCES

DISER. (2020). *National Greenhouse Accounts Factors, Australian National Greenhouse Accounts.*

DISER. (2020). *State and Territory Greenhouse Gas Inventories 2018, Australia's National Greenhouse Accounts, May 2020.*

DISER. (2020). *The Australian Government Submission to the United Nations Framework Convention on Climate Change, Australian National Greenhouse Accounts, National Inventory Report 2018, May 2020.*

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