Fiveways Crows Nest ESD Report

391-423 Pacific Highway, Crows Nest, NSW 2065

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E-LAB Consulting

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Sustainability

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1 INTRODUCTION

1.1 EXECUTIVE SUMMARY

E-LAB Consulting has been commissioned by Deicorp to prepare this report in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the State Significant Development Application (SSD-66826207) for the proposed mixed use development at 391-423 Pacific Highway, 3-15 Falcon Street and 8 Alexander Street, Crows Nest.

This report presents a summary of the ESD strategies proposed and commitments made for the development. The developer is aiming to deliver an affordable, sustainable outcome for the project by demonstrating a strong commitment to sustainability in its design, construction, and operation.

As part of its commitment to sustainability, the development has committed to the following:

- Compliance with BASIX Energy, Water and Thermal Comfort Targets
  - 64% Energy
  - 49% Water
- Deicorp is capable of achieving a **4 Star Green Star equivalency level of performance – benchmarked to Green Star Buildings v1, 2022,**
- Exceeding compliance requirements for **NCC/BCA Section J 2022**, including a performance façade and shading devices
- **Onsite Renewables**, through an approximately 20kW Solar PV system installed to the roof.
- Provision of substantial **communal open space and biophilic design** for occupant amenity
- **Rainwater** capture and reuse for irrigation of commercial landscaping

The strategies and initiatives presented in this report demonstrate a strong commitment to sustainability in line with the North Sydney Council development guidelines and SEARS requirements and are to be further developed during subsequent stages of the project.

1.2 PROJECT OVERVIEW

The subject application seeks consent for the demolition and staged construction of mixed-use development at 391-423 Pacific Highway, 3-15 Falcon Street and 8 Alexander Street known as the Five Ways Triangle Site.

Development comprising of:

- Construction of 191 apartments, 8002 sqm of Commercial & Retail and associated basement parking.
- Infrastructure upgrades, landscaping, civil and stormwater works; and
- Lot consolation and Stratum Subdivision
- Replace existing signage with digital signage

The site is located at 391-423 Pacific Highway, 3-15 Falcon Street and 8 Alexander Street, Crows Nest, within the North Sydney Local Government Area (LGA). The site is known as "Fiveways Crows Nest".

The site is identified in the figure below.

Figure 1: Aerial photograph of site and locality (Gyde Planning Proposal, Dec 2021)

1.3 RESPONSE TO THE SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)

This report outlines how the development will address the SEARs as part of the Environmental Impact Statement. These are:

REQUIREMENT	RESPONSE
Identify how ESD principles (as defined in section 193 of the EP&A Regulation) are incorporated in the design and ongoing operation of the development.	Refer to Section 3.1 for the project's response to the principles of the EPA regulation.
Demonstrate how the development will meet or exceed the relevant industry recognised building sustainability and environmental performance standards.	Refer to Section 2.3 and the preliminary Green Star pathway demonstrating the development is benchmarked to a 4 Star Green Star Buildings level. Refer to the BASIX report by Windtech Consultants for details of the developments BASIX performance targets.
Demonstrate 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.	Refer to Section 3.2, 3.3 and 3.4 for details on energy, water and materials.

2 SUSTAINABILITY FRAMEWORKS

The proposed development's sustainability outcomes are influenced by the following key frameworks:

- North Sydney Development Control Plan 2013
- State Environmental Planning Policy - Sustainable Buildings (SEPP) 2023
- To have energy efficiency in the design and operation of development proposals. This is done by:
  - Promoting the use of energy efficient principles in the design of a facility; and
  - Ensuring the ongoing operations of the facility incorporates energy minimisation measures.

2.1 NORTH SYDNEY DEVELOPMENT CONTROL PLAN (DCP) 2013

The North Sydney DCP 2013 outlines the sustainable development objectives new developments in the North Sydney Council LGA must consider. In particular, Part 2.6 requires new mixed-use developments to meet the following objectives:

- To ensure that developments minimise their use of non-renewable energy resources.
- To ensure that buildings are designed such that the air conditioning plant meets performance requirements, while minimising energy usage.
- To encourage the use of energy efficient lighting.
- To minimise the use of potable water.
- To encourage the reuse of greywater, rainwater and stormwater.
- To encourage the use of materials which have a low environmental impact during their life cycle.
- To encourage the use of toxin free material to minimise the health impact of materials used indoors.
- To maximise the energy efficiency of buildings.

2.2 STATE ENVIRONMENTAL PLANNING POLICY (SUSTAINABLE BUILDINGS) 2022

The NSW Government has introduced the State Environmental Planning Policy (Sustainable Buildings) 2022 to ensure new and renovated buildings are sustainable and resilient for future climate and bring NSW towards net zero emissions. As part of the SEPP the following is required to be addressed for this development as minimum:

COMPONENT	REQUIREMENT
Residential	BASIX Energy Target 60% BASIX Water Target 40% BASIX Thermal Comfort • Individual dwellings: Heating 34.4, Cooling 21.4, Total 38.0 • Average all dwellings: Heating 28.1, Cooling 20.2, Total 30.0 Embodied Emissions reporting via BASIX materials inputs The above requirements are covered in the BASIX report by Windtech Consultants dated 1 March 2024.
Non-residential (commercial office area <1000m2)	General Sustainability - reporting on general performance, including: ▪ 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 consumption of potable water, Embodied Emissions Reporting – disclose at development application and construction certificate the quantities of materials and associated emissions. Describe how embodied emissions are minimised (by re-used or recycled content and low emissions construction technologies).

Refer to the following table for the project responses to each SEPP requirement.

REQUIREMENT	RESPONSE
General Sustainability – reporting on general performance, including water conservation, waste minimization and use of renewable energy.	The report outlines the general sustainability principles and design responses that are included. Refer to Section 3.2 and the Green Star pathway to confirm the reporting of water and energy through metering and monitoring. Additionally, waste is aimed to be minimised and reported on for both operational and construction/demolition.
Embodied Emissions Reporting – disclose at development application and construction certificate the quantities of materials and associated emissions. Describe how embodied emissions are minimised (by re-used or recycled content	The development will declare materials for embodied emissions reporting through the BASIX tool and the Embodied Emissions Reporting Form. Once this benchmarking has occurred, the project team will investigate methods of reducing embodied emissions through materials selections during design development.

and low emissions construction technologies).	
The minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials.	Refer to Section 3.4 which outlines minimisation of waste.
A reduction in peak demand for electricity, including through the use of energy efficient technology.	Refer to Section 3.2 which discusses reduction in electricity and energy through efficient systems and monitoring.
A reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design.	Refer to Section 3.2 and 3.5 which outlines the design responses to reduce reliance on artificial lighting and mechanical systems to achieve visual and thermal comfort.
The generation and storage of renewable energy.	Refer to Section 3.2 which discusses the provision of a PV system and its associated generation and storage.
The metering and monitoring of energy consumption.	Refer to Section 3.2 which discusses energy metering and monitoring.
The minimisation of consumption of potable water.	Refer to Section 3.3 which discusses the efficient systems in place to minimise water use and the strategies in place to recycle and re-use water throughout the development.

2.3 GREEN STAR BUILDINGS V1

The development also aims to meet and exceed industry best practice sustainability requirements within its design as part of the sustainability commitments associated with construction and operation. The development will be **benchmarking against a 4 Star Green Star Buildings pathway**, by being capable of achieving ESD in the 7 categories identified in the Green Building Council of Australia's benchmarking tool.

A 4 Star Green Star buildings pathway has been developed for the Five Ways development. A summary of the points targeted is presented in the table below.

CATEGORY	POINTS AVAILABLE	4 STAR - POINTS TARGETED
Responsible	17	2
Healthy	14	5
Resilient	8	2
Positive	30	0
Places	8	7
People	9	1
Nature	14	2
Total	**100**	**20**
Min Req	**All preconditions + 15 points**	

3 PROJECT DESIGN RESPONSE

3.1 EPA PRINCIPLES

The proposed development will follow the golden standard in sustainability principals throughout the development. This includes the design, construction, and operational elements of the project. The key overarching principals are aligned with the definition of Ecologically Sustainable Development as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2021. These include:

The Precautionary Principle:

Philosophy: Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

Project Response: The project is committed to incorporating elements to minimise impacts on the environment, as outlined below in this section of this report. A commitment to improvement on minimum benchmarks demonstrates the development's commitment to sustainability.

The Principle of Inter-generational Equity:

Philosophy: The present generation should ensure that the health, diversity, and productivity of the environment is maintained or enhanced for the benefit of future generations.

Project Response: The project is committed to incorporating careful selections into the project design. The design team will address key elements such as energy, potable water, and material consumption to do what is within the project's control to allow each following generation to have an opportunity for ecological equality.

The Principle of the conservation of biological diversity and ecological integrity:

Philosophy: Conservation of biological diversity and ecological integrity should be a fundamental consideration

Project Response: The project is committed to planting native vegetation and using integrated landscaping to enhance the overall ecological and biodiversity of the site. Rainwater and stormwater will be carefully managed and controlled to minimise impacts on surroundings. Refer to the Stormwater Management Report by Mott Macdonald and the Landscape package by Land and Form.

Principles relating to improved valuation, pricing, and incentive mechanisms:

Philosophy: Environmental factors should be included in the valuation of assets and services. The users of goods and services should pay prices based on the full life cycle costs of providing goods and service.

Project Response: The project will target a construction waste diversion target of 90%, as well as developed specific project waste management strategies. These combine to ensure the project pays for the waste and damage it creates. Further, it is designed to be low-energy and low-water consumption, which provides an incentive for residents through lower utility bills.

The Principle of Waste Minimisation:

Philosophy: All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.

Project Response: The project will target a construction waste diversion target of 90%, as well as developed specific project waste management strategies. Construction materials are chosen to be low impact in their manufacture, including best practice PVC and FSC/PeFC timber throughout where possible. This impacts waste both created by the site, as well as upstream and downstream waste categories.

The above principles are addressed by 5 key themes, being **Sea, Land, Water, Air and People**. These 5 key themes are centred around reducing harm as far as practicable across the practice of buildings and infrastructure, both in their construction and operation.

3.2 ENERGY

The only path to a low carbon economy and achieving a “2°C world”, where the average global temperature is kept to less than 2°C above pre-industrial levels, is through comprehensive and complete consideration of how the development consumes resources, including energy, water, and material efficiency.

The energy efficiency strategy generally follows the energy efficiency pyramid of design in Figure 2. In the first instance demand for greenhouse gases should be reduced. Consideration should be to remove the need for energy to be consumed where possible. Beyond this, energy can be more efficient, through efficient lighting, mechanical systems, and appropriate services.

Once the system has reduced all available energy-consuming elements and made the remaining systems as efficient as possible, renewable energy sources will be considered. PV will be installed at a rate that maximises the coverage of the non-trafficable roof area provided this does not interfere with the reflectivity in relation to the Sydney Airport. Only after all the above steps have been completed should offsets be used to close the gap and achieve neutrality.

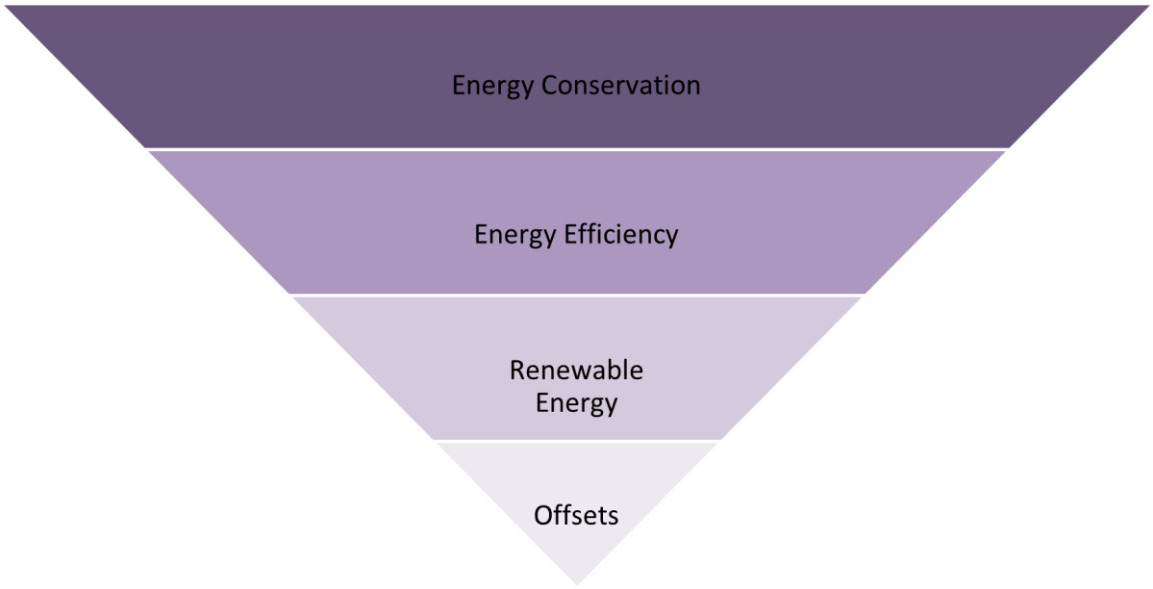
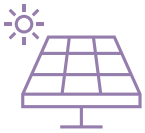


Figure 2. Energy efficiency pyramid: pathway to carbon neutrality.

To achieve the above, the following initiatives are proposed:



Renewable Energy – The roof area provides an excellent opportunity for installation of a solar photovoltaic system. The sizeable system will generate renewable electricity to offset grid use and minimise stress on the grid at peak times. PV will be installed at a rate that maximises the coverage of the non-trafficable roof area, which is approximately 300sqm. This will be able to accommodate the 20 kW PV system. The development will also potentially look into providing onsite battery storage to further reduce reliance on the grid. This will allow the site to store generated energy throughout the day.

Efficient Lighting Systems – High efficiency LED lighting throughout, including in common areas with efficiency controls to meet the requirements of NCC 2022 Section J. Controls will include motion sensors, time clocks and zoned switching.

Controls, Energy Metering and Monitoring – Energy meters and monitoring systems will be provided to comply with NCC 2022 Section J Part J8 requirements. Preference for natural ventilation and comfort through adaptive cooling and shading.

Facade – high performance façade systems and shading systems will reduce load on the HVAC system.

3.3 WATER CONSUMPTION & WSUD

To achieve responsible water consumption and water sensitive urban design, best practice water-saving initiatives will need to be implemented throughout the project. The following initiatives will be explored to achieve the potable water targets:

Sanitary Fixtures – By implementing low-flow water fixtures, the consumption will be significantly reduced. All sanitary fixtures are to be provided with the minimum WELS ratings identified below:

Taps – 6 Star WELS

Toilets – 4 Star WELS

Urinals – 6 Star WELS (0.8 L per flush)

Showers – 3 Star WELS (<7.5 L/min)

Refer to the BASIX report by Windtech for further details on residential water consumption measures.

Landscape Irrigation – Efficient irrigation systems will be considered, including underground surface drip systems, moisture sensors, and the use of native plants in the landscaping plan. Native plants have evolved to thrive in the Australian environment and are typically more resilient than their exotic counterparts. They typically require less water and are more likely to survive the predicted increase in extreme drought conditions due to climate change. Native vegetation also stores a significant amount of carbon, helping to mitigate climate change. The project is targeting an 70% native planting palette.

Recycled water and rainwater – the development will supply most of the irrigation needs from a minimum 20kL on-site rainwater tank. Rainwater will be captured from the roof of the buildings to reduce potable water demand.

WSUD – the development will include 85m3 of onsite detention to reduce post development discharge from the site. 10 x 690 storm filter cartridges and 3 x Ocean Guard will be installed to manage stormwater quality from the development, achieving reductions of 82.7% TSS, 72.4% TP, 50.9% TN and 95.3% GP. Refer to the Stormwater Management Report by Mott Macdonald for further information.

The development's design is deliberately working to reduce potable water consumption by in the first instance reducing water use, then offsetting it through rainwater tanks. The rainwater tanks are designed to meet as much of the site irrigation needs as possible.

3.4 MATERIALS

In line with the principals of sustainability outlined in the EPA, the project will have a significant focus on materiality. The scope of consideration includes the following action items within the project response:

- **Construction Waste** – Less than 5kg of construction and demolition waste per square meter of GFA is going to landfill. This diverts and ensures reuse or recycling of a high portion of site waste.
- **Low VOC and Low Formaldehyde Materials** – paints, adhesives, sealants, floor coverings, carpets and engineered wood will be selected appropriately to provide a healthier and low-impact environment. Such efforts provide a cleaner and better environment for all.
- **Best-Practice PVC** – cables, pipes, flooring, and blinds will be selected and specified to be Best Practice PVC. This ensures upstream performance will be met and has significant benefit for the overall environment during the construction process.
- **FSC/PeFC Timber throughout** – where possible, timber, including virgin and engineered timber through construction and fitout elements under the builder's control will be specified as FSC/PeFC. This ensures the timber provided to site is of the highest standard and sourced from sustainable sources.
- **Waste Management Plan** – Development of an ongoing Waste Management Plan so waste can be sorted, separated, and recycled. This will assist ongoing diversion from landfill for the development. Inclusion of sufficient bins and appropriate separation systems to ensure waste is minimised and effective recycling.

3.5 COMFORT AND QUALITY

To ensure the best quality for users and visitors inside the space, the development will commit to the following key initiatives:

- **Visual Comfort** – Maximising high-quality light into the living spaces, with views to the sky and nature where possible
- **Biophilic design -** Generous open spaces vegetated corridors and selective tree-planting to enhance the beauty of the site. Creation of a Green Heart to the development with an emphasis on tree Canopy , natural materials and sustainability.
- **Acoustic Excellence** – Designing the building layout to be protected from noise from external sources. Delicate material selection, acoustic attenuation, and designing the shape of the building and openings accordingly achieves the performance.
- **Thermal Comfort** – Appropriate mix of vernacular design, overhangs, adaptive comfort and high levels of insulation in the roof and facades
- **Lighting Comfort** – Use of high colour rendering index (CRI > 80) LED lighting throughout the entire development. Low-glare lighting with baffles or louvres to limit UGR.
- **Generous Natural Planting –** Greenery through natural planting throughout the development assists in a connection to nature for users and passers-by. It also has a cooling effect, reducing the Urban Heat Island burden on the project.

The above combine to ensure the development is responsible, efficient, beautiful, and in the best interest of not just the developers, but the residents, community, and society as a whole.

3.6 URBAN HEAT ISLAND MITIGATION

The site experiences the urban heat island much hotter than Sydney's baseline, so reducing heat at the local scale is critical.

The site's baseline heatwave temperature experiences peaks approximately 7.93°C above the baseline, as defined by the NSW government for Urban Heat Island Effect (https://geo.seed.nsw.gov.au/Public_Viewer).

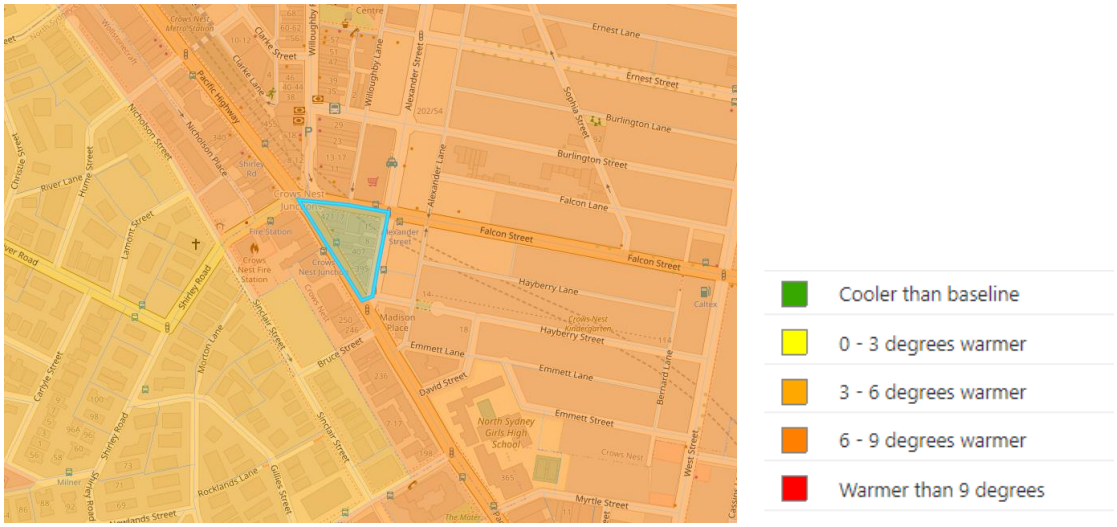


Figure 3. Urban heat island effect at the site. (Source: SEED Database)

To minimise the urban heat island effect and provide a more comfortable environment for occupants, the development has incorporated the following initiatives:

- Approximately 690m^2 of podium garden space
- Increased tree canopy from existing site condition by 40%
- Light coloured roof with solar PV panels
- Introduction of architectural treatments to foster façade shading.

Figure 4: Public domain plan, Source: Land and Form

Figure 5: Podium Plan, Source: Land and Form

3.7 SECTION J

The proposed commercial and retail areas of the development will be subject to compliance with Section J under the NCC 2022 code. This code places strict environmental performance requirements on the building envelope and services within the building.

The project will demonstrate compliance via verification method J1V3 – verification using a reference building (energy modelling). The design of the building fabric will need to demonstrate compliance with this clause through dynamic modelling of the building against a reference case.

3.8 SUSTAINABLE TRANSPORT

The development will provide easy access to bus stops and the upcoming Crows Nest metro station**.** From here, there is easy access to Sydney's extensive public transport network. The development will seek to minimise reliance on private vehicle use, including, dedicated parking space for car share vehicles, EOT facilities for occupants deciding to travel via bicycle use, etc.

The development is located within close proximity to amenities such as:

- Grocery stores including Woolworths and Coles
- Abundant dining and café options
- Banks
- Newsagents and post office
- Childcare
- Medical centres, chemists and hospitals
- Local parks and green spaces
- Etc

The proximity to essential amenities will significantly reduce residents and staff reliance on private vehicle use.

4 CONCLUSION

This report provides an outline of the proposed development's Ecologically Sustainable Design initiatives and commitments. The ESD strategies proposed will assist the development in achieving high levels of sustainability and environmental performance. These strategies include:

- Compliance with BASIX Energy, Water and Thermal Comfort Targets
  - 64% Energy
  - 49% Water
- Capable of achieving a 4 Star Green Star equivalency level of performance – benchmarked to Green Star Buildings v1, 2022,
- Commitment to meeting the new requirements of SEPP 2023;
- Significant on-site energy generation through a major solar PV array on the roof to reduce operational energy and GHG emissions associated with the site;
- Water Sensitive Urban Design Principals being upheld;
- Exceeding compliance requirements for NCC/BCA Section J 2022, including a performance façade and shading devices
- Provision of substantial communal open space and biophilic design for occupant amenity
- Following a range of sustainability initiatives across the site spanning energy efficiency, thermal performance, indoor environment quality, waste management, and comfort.

The strategies and initiatives presented in this report demonstrate a strong commitment to sustainability which meet and exceed expectations for the development. Further opportunities for optimisation of the building's performance will be developed during subsequent stages of the project.

Appendix A **Preliminary Green Star Pathway**

Fiveways Crows Nest

Rev 1 | 27/10/2023

Summary

Climate Positive Pathway targeted	No	**Targeted Green Star rating**	4 Star
Minimum expectations met	Yes	**Core points targeted**	19
Credit Achievement points targeted	19	**Leadership points targeted**	1
Exceptional Performance points targeted	0	**Total points targeted**	20

	Credit	Minimum Expectation	Credit Achievement	Exceptional Performance	Minimum Expectation met	Points Targeted	Detailed Credit Requirements
	Responsible		**11**	**6**	**Yes**	**2**	
1	Industry Development		1			**1**	**Credit Achievement** • The building owner or developer appoints a Green Star Accredited Professional. • The building owner or developer discloses the cost of sustainable building practices to the GBCA. • The building owner or developer markets the building's sustainability achievements.
2	Responsible Construction	•			**Y**		**Minimum Expectation** • The builder or head contractor has an environmental management system in place to manage its environmental impacts on site. • The builder or head contractor has an environmental management plan to cover the scope of construction activities. • The builder diverts at least 80% of construction and demolition waste from landfill. • The head contractor provides training on the sustainability targets of the building.
			1			**1**	**Credit Achievement** In addition to the Minimum Expectation: • 90% of construction and demolition waste is diverted from landfill, and waste contractors and facilities comply with the Green Star Construction and Demolition Waste Reporting Criteria.
3	Verification and Handover	•			**Y**		**Minimum Expectation** • The building is set up for optimum ongoing management due to its appropriate metering and monitoring systems. • The building has set environmental performance targets, designed and tested for airtightness, been commissioned, and will be tuned. • The project team create and deliver operations and maintenance information to the facilities management team at the time of handover. Information is available to building users on how to best use the building.
			1				**Credit Achievement** In addition to the Minimum Expectation: • An independent level of verification is provided to the commissioning and tuning activities through the involvement of an independent commissioning agent. or • The project uses a soft landings approach that involves the future facilities management team. For large projects (Building Services Value > $20m), both must occur.
4	Operational Waste	•			**Y**		**Minimum Expectation** • The building is designed for the collection of separate waste streams. • The building provides a dedicated and adequately sized waste storage area. • The building ensures safe and efficient access to waste storage areas for both occupants and waste collection contractors.
5	Responsible Procurement		1				**Credit Achievement** • The building's design and construction procurement processes follow ISO 20400 Sustainable Procurement – Guidance. • At least one identified supply chain risk and opportunity is addressed.
			3				**Credit Achievement** • 80% of all structural components (by cost) meet a Responsible Products Value of at least 10.

6	Responsible Structure			2			**Exceptional Performance** In addition to the Credit Achievement: • 10% of all products in the structure (by cost) meet a Responsible Products Value of at least 15. or • 30% of all products in the structure (by cost) have an average Responsible Products Value of at least 12.
7	Responsible Envelope		2				**Credit Achievement** • 60% of all building envelope components (by cost) meet a Responsible Products Value of at least 10.
				2			**Exceptional Performance** In addition to the Credit Achievement: • 10% of all products in building envelope (by cost) meet a Responsible Products Value of at least 15. or • 25% of all products in the building envelope (by cost) have an average Responsible Products Value of at least 12.
8	Responsible Systems		1				**Credit Achievement** • 20% of all active building systems (by cost) meet a Responsible Products Value of at least 6.
				1			**Exceptional Performance** In addition to the Credit Achievement: • 5% of all active building systems (by cost) meet a Responsible Products Value of at least 11. or • 15% of all active building systems (by cost) have an average Responsible Products Value of at least 8.
9	Responsible Finishes		1				**Credit Achievement** 60% of all internal building finishes (by cost) meet a Responsible Products Value of at least 7.
				1			**Exceptional Performance** In addition to the Credit Achievement: • 10% of all internal building finishes (by cost) meet a Responsible Products Value of at least 12. or • 20% of all internal building finishes (by cost) have an average Responsible Products Value of at least 9.
	Healthy		**11**	**3**	**Yes**	**5**	
10	Clean Air	•			**Y**		**Minimum Expectation** • Levels of indoor pollutants are maintained at acceptable levels. • A high level of fresh air is provided (50% above AS1668.2:2012) • Pollutants entering the building are minimised
			2				**Credit Achievement** In addition to the Minimum Expectation: • The building's ventilation systems allow for easy maintenance. • High levels of outdoor air are provided (100% above AS1668.2:2012)
11	Light Quality	•			**Y**		**Minimum Expectation** • Lighting within the building meets minimum comfort requirements. • Good lighting levels suitable for the typical tasks in each space are available. • The building provides adequate levels of daylight
			2			**2**	**Credit Achievement** In addition to the Minimum Expectation: • The building provides best practice artificial lighting. or • The building provides best practice access to daylight (40% receive high levels of daylight)
				2			**Exceptional Performance** In conjunction with the Credit Achievement: • The building provides best practice artificial lighting. • The building provides best practice access to daylight.
		•			**Y**		**Minimum Expectation** • An Acoustic Comfort Strategy is prepared to describe how the building and acoustic design aims to deliver acoustic comfort to the building occupants.

12	Acoustic Comfort		2			**2**	**Credit Achievement** In addition to the Minimum Expectation: • The building achieves maximum internal noise levels. and/or • The building achieves minimum internal noise levels. and/or • The building provides acoustic separation. and/or • The building minimises impact noise transfer. and/or • The building is designed with reverberation control.
13	Exposure to Toxins	•			**Y**		**Minimum Expectation** • The building's paints adhesives, sealants, and carpets are low in TVOC or non-toxic. • The building's engineered wood products are low in TVOC or non-toxic. • Occupants are not exposed to banned or highly toxic materials in the building
			2				**Credit Achievement** In addition to the Minimum Expectation: • On-site tests verify the building has low Volatile Organic Compounds (VOC) and formaldehyde levels.
14	Amenity and Comfort		2				**Credit Achievement** • The building has dedicated amenity rooms to act as a parent room, relaxation room, or an exercise room.
15	Connection to Nature		1			**1**	**Credit Achievement** • The building provides views. • The building includes indoor plants and incorporates nature-inspired design. or • 5% of the building's floor area or site area (whichever is greater) is allocated to nature in which occupants can directly engage with.
				1			**Exceptional Performance** In conjunction with the Credit Achievement: • The building provides views. • The building includes indoor plants and incorporates nature-inspired design. • 5% of the building's floor area/ or site area (whichever is greater) is allocated to nature in which occupants can directly engage with.

	Resilient		**8**	**0**	**Yes**	**2**	
16	Climate Change Resilience	•			**Y**		**Minimum Expectation** • The project team completes the climate change pre-screening checklist. The project team communicates the building's exposure to climate change risks to the applicant.
			1			**1**	**Credit Achievement** In addition to the Minimum Expectation: • The project team develops a project-specific climate change risk and adaptation assessment for the building. • Extreme and high risks are addressed
17	Operations Resilience		2				**Credit Achievement** • The project team undertakes a comprehensive review of the acute shocks and chronic stresses likely to influence future building operations. • The building's design and future operational plan addresses any high or extreme system-level interdependency risks. • The building's design maintains a level of survivability and design purpose in a blackout.
18	Community Resilience		1				**Credit Achievement** • The project team undertakes a needs analysis of the community, identifies shocks and stresses that impact the building's ability to service the community, and develops responses to manage these.
19	Heat Resilience		1			**1**	**Credit Achievement** • At least 75% of the whole site area comprises of one or a combination of strategies that reduce the heat island effect.

20	Grid Resilience		3				**Credit Achievement** • The building provides active generation and storage systems. and/or • The building has the infrastructure to deliver an appropriate demand response strategy. and/or • The building has reduced its electricity consumption through passive design.
	Positive		**16**	**14**	**Yes**	**0**	
21	Upfront Carbon Emissions	•			**Y**		**Minimum Expectation** • The building's upfront carbon emissions are at least 10% less than those of a reference building.
			3				**Credit Achievement – Climate Positive Pathway –** In conjunction with the Minimum Expectation: • The building's upfront carbon emissions are at least 20% less than those of a reference building. • Demolition works are offset.
				3			**Exceptional Performance** In conjunction with the Credit Achievement: • The building's upfront carbon emissions are at least 40% less than those of a reference building.
22	Energy Use	•			**Y**		**Minimum Expectation** • The building's energy use is at least 10% less than a reference building. or • The building's energy use is modelled to perform at a 5.5 Star NABERS Energy rating
			3				**Credit Achievement – Climate Positive Pathway –** In conjunction with the Minimum Expectation: • The building's energy use is at least 20% less than a reference building. or • The building's energy use is modelled to perform at a 5.5 Star NABERS Energy with 25% modelling margin
				3			**Exceptional Performance** In conjunction with the Credit Achievement: • The building's energy use is at least 30% less than a reference building. or • The building's energy use is modelled to perform at a 6 Star NABERS Energy rating
23	Energy Source	•			**Y**		**Minimum Expectation** • The building provides a Zero Carbon Action Plan.
			3				**Credit Achievement** In conjunction with the Minimum Expectation: • 100% of the building's electricity comes from renewable electricity.
				3			**Exceptional Performance – Climate Positive Pathway –** In conjunction with the Credit Achievement: • 100% of the building's energy comes from renewables.
24	Other Carbon Emissions		2				**Credit Achievement – Climate Positive Pathway –** • The building owner eliminates emissions from refrigerants. or • The building owner offsets emissions from refrigerants.
				2			**Exceptional Performance** In addition to the Credit Achievement: • All other emissions not captured in the Positive category are eliminated or offset.
25	Water Use	•			**Y**		**Minimum Expectation** • The building installs efficient water fixtures. or • The building uses 15% (10% for Class 2 and Class 3 buildings) less potable water compared to a reference building.
			3				**Credit Achievement** In conjunction with the Minimum Expectation: • The building uses 45% (40% for Class 2 and Class 3 buildings) less potable water compared to a reference building. • The building has infrastructure for recycled water connection.

				3			**Exceptional Performance** In conjunction with the Credit Achievement: • The building uses 75% (60% for Class 2 and Class 3 buildings) less potable water compared to a reference building
26	Life Cycle Impacts		2				**Credit Achievement** • The project demonstrates a 30% reduction in life cycle impacts when compared to standard practice.
	Places		**8**	**0**	**Yes**	**7**	
27	Movement and Place	•			**Y**		**Minimum Expectation** • The building includes showers and changing facilities for building occupants. • The facilities are accessible, inclusive, and located in a safe and protected space.
			3			**3**	**Credit Achievement** In addition to the Minimum Expectation: • The building's access prioritises cycling and includes bicycle parking facilities. • A Sustainable Transport Plan has been prepared and implemented. • The building has EV charging capabilities. • Transport options that reduce the need for private fossil fuel powered vehicles are prioritised. • The building's design and location encourage walking.
28	Enjoyable Places		2			**2**	**Credit Achievement** • The building delivers memorable, beautiful, vibrant communal or public places where people want to gather and participate in the community. • The spaces are inclusive, safe, flexible, and enjoyable.
29	Contribution to Place		2			**2**	**Credit Achievement** • The building's design contributes to the livability of the wider urban context and enhances the public realm. or • Independent reviews are held during the development of the design.
30	Culture, Heritage and Identity		1				**Credit Achievement** • The building's design reflects and celebrates local demographics and identities, the history of the place, and any hidden or minority entities. or • This outcome was arrived through meaningful engagement with community groups early in the design process.
	People		**7**	**2**	**Yes**	**1**	
31	Inclusive Construction Practices	•			**Y**		**Minimum Expectation** • During the building's construction, the head contractor provides gender inclusive facilities and protective equipment. The head contractor also installs policies on-site to increase awareness and reduces instances of discrimination, racism, and bullying.
			1			**1**	**Credit Achievement** In addition to the Minimum Expectation: • Policies and programs implemented are relevant to construction workers on site. • The head contractor provides high quality staff support on-site to reduce at least five key physical and mental health impacts. • The effectiveness of the interventions is evaluated.
32	Indigenous Inclusion		2				**Credit Achievement** • The project team plays an active role in the organisational Reconciliation Action Plan. or • The building's design and construction incorporates design elements using the Indigenous design and planning strategies and principles
			2				**Credit Achievement** • The project implements a social procurement plan. • At least 2% of the building's total contract value has been directed to generate employment opportunities for disadvantaged and under-represented groups.

33	Procurement and Workforce Inclusion			1			**Exceptional Performance** In conjunction with the Credit Achievement: • The project implements a social procurement plan. • At least 4% of the building's total contract value has been directed to generate employment opportunities for disadvantaged and under-represented groups.
34	Design for Inclusion		2				**Credit Achievement** • The building is designed and constructed to be inclusive to a diverse range of people with different needs.
				1			**Exceptional Performance** In addition to the Credit Achievement: • Engagement with target groups has informed the inclusive design.
	Nature		**10**	**4**	**Yes**	**2**	
35	Impacts to Nature	•			**Y**		**Minimum Expectation** • The building was not built on, or significantly impacted, a site with a high ecological value. • The building's light pollution has been minimised. • There is ongoing monitoring, reporting, and management of the site's wetland ecosystem.
			2				**Credit Achievement** In addition to the Minimum Expectation: • The building's design and construction conserves existing natural soil, hydrological flows, and vegetation elements. • If deemed necessary by an Ecologist, at least 50% of existing site with high biodiversity value is retained.
36	Biodiversity Enhancement		2			**2**	**Credit Achievement** • The building's site includes an appropriate landscape area (15% of site area) • The landscaping includes a diversity of species and prioritises the use of climate-resilientand indigenous plants. • The project team develops a site-specific Biodiversity Management Plan and provides it to the building owner or building owner representative.
				2			**Exceptional Performance** In addition to the Credit Achievement: • A greater area of landscaping is provided (30% of site area) • The landscaping includes critically endangered and/or endangered plant species native to the bioregion.
37	Nature Connectivity		2				**Credit Achievement** • The site must be built to encourage species connectivity through the site, and to adjacent sites. If the project sits within a blue or green grid strategy it must contribute to the goals of the strategy.
38	Nature Stewardship		2				**Credit Achievement** • Areas of restoration or protection are provided. • Restoration or protection activities are beyond the development's boundary. • The building owner, as part of the project's development, undertakes activities that protects or restores biodiversity at scale. • These actions occur beyond legislated requirements
39	Waterway Protection		2				**Credit Achievement** • The project demonstrates a reduction in average annual stormwater discharge (ML/yr) of 40% across the whole site. • Specified pollution reduction targets are met (TSS 85%, GP 90%, TN 45%, TP 65%)
				2			**Exceptional Performance** In conjunction with the Credit Achievement: • The project demonstrates a reduction in average annual stormwater discharge (ML/yr) of 80% across the whole site. • Specified pollution reduction targets are met (TSS 90%, GP 95%, TN 60%, TP 70%)
	Leadership					**1**	
40	Market Transformation						
41	Leadership Challenges					**1**	