

GREEN STAR ESD REPORT

PROJECT NAME: 27 to 29 Tryon Rd

ADDRESS: 27 to 29 Tryon Rd
Lindfield NSW 2070

CLIENT: BridgeStone Projects

DOCUMENT CONTROL

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ISSUE: FINAL

REVISION: 2

DATE: 01/12/2025



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1 - Introduction

This Ecologically Sustainable Development (ESD) report accompanies a development application by Bridgestone Projects at 27 to 29 Tryon Road Lindfield in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 20/12/2024 and issued for the SSDA (SSD-78669234). Specifically, this report has been prepared to respond to the SEARs requirement issued below.

Table 1 – Summary of Approach to SEARs

SEARs Item	Description of SEARs Requirement	Section Reference
15. Ecological Sustainable Development (ESD)	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.	Section 4.1
	Where relevant, provide an assessment of the development against the standards for non-residential development set out in Chapter 3 of State Environmental Planning Policy (Sustainable Buildings) 2022.	Section 4.2

1.1 Project Overview

The site is located at 27 to 29 Tryon Road, Lindfield within the Ku-ring-gai local government area (LGA) and has an area of approximately 3011.27 sqm. The site is legally described as Lot 11 & 12 DP 1188210.

The site is within 300m of Lindfield Railway Station and is well-serviced by public amenities such as a supermarket, cafes and destination retail shops. Community facilities such as library, tennis courts, and active open space are easily accessible. The location of the site is illustrated below in fig 1.



Figure 1 – Aerial Photograph of the Site with Lindfield station to the left

1.2 Proposed Development

The project (referred to as the proposed development in this report) comprises the construction of a residential flat building, including the following key components:

- *Demolition of existing structures and site preparation / earthworks;*
- *Construction of 4 basement levels including 101 car parking spaces with vehicular access via Tryon Lane;*
- *Construction of a 9 storey residential flat building including 65 units comprising a mix of 2 and 3 bedroom apartments; and 14 affordable units;*
- *Communal open spaces on the ground floor and roof terrace; and*
- *Landscape works including tree replacement.*

2 – Relevant framework (SEARS)

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARS) dated 20 December 2024 issued for the SSDA (SSD-78775458). Specifically, this report has been prepared to respond to the SEARS requirement issued below. Table 1.

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2.1 EP & A (ESD) Principles

As part of addressing the SEARS, the project will be required to address Section 193 of the EP&A. Section 193 of the EP&A Regulation as at 2021 defines ecologically sustainable development (ESD) according to the following principles:

1. The principles of ecologically sustainable development are the following —
 - a) the precautionary principle,
 - b) inter-generational equity,
 - c) conservation of biological diversity and ecological integrity,
 - d) improved valuation, pricing, and incentive mechanisms.
2. The precautionary principle is 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.
3. In applying the precautionary principle, public and private decisions should be guided by —
 - a) careful evaluation to avoid, wherever practicable, serious, or irreversible damage to the environment, and
 - b) an assessment of the risk-weighted consequences of various options.
4. The principle of inter-generational equity is that the present generation should ensure the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.
5. The principle of the conservation of biological diversity and ecological integrity is that the conservation of biological diversity and ecological integrity should be a fundamental consideration.
6. The principle of improved valuation, pricing and incentive mechanisms is that environmental

factors should be included in the valuation of assets and services, such as —

- a) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance, or abatement, and
- b) the users of goods and services should pay prices based on the full life cycle of the costs of providing the goods and services, including the use of natural resources and assets and the ultimate disposal of waste, and
- c) established environmental goals 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.

2.2 Chapter 3 of SEPP 2022 (Standards for Non-residential development)

3.2 of chapter 3 Development consent for non-residential development

(1) In deciding whether to grant development consent to non-residential development, the consent authority must consider whether 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.

(2) Development consent must not be granted to non-residential development unless the consent authority is satisfied the embodied emissions attributable to the development have been quantified.

3 – Stakeholder Engagement Guidance

The following documents and design plans have been referenced in compilation of this report:

1. Green Star Design and As Built v1 r5 and related GBCA submission templates and FAQ's.
2. Documents including drawings, specifications and reports listed below provided by “Daniel Hovagimian” and received by Certified Energy on 19/08/2025 and 01/12/2025.

2.1 Architectural drawings and specifications issued by PTW architects.

A100010 – Development Data Sheet 1, Rev E Received 12/11/2025.

A200050 – Site Plan, Rev E Dated 28/11/2025.

B1B0710 – Basement 04 Plan, Rev E Dated 28/11/2025.

B1B0810 – Basement 03 Plan, Rev E Dated 28/11/2025.

B1B0910 – Basement 02 Plan, Rev E Dated 28/11/2025.

B1B1010 – Basement 01 Plan, Rev E Dated 28/11/2025.

B1GRD10 – Ground Floor Plan, Rev E Dated 28/11/2025.

B1L0110 – Level 01 Floor Plan, Rev D Dated 28/11/2025.

B1L0210 – Level 02 Floor Plan, Rev E Dated 28/11/2025.

B1L0310 – Level 03 Floor Plan Rev D Dated 28/11/2025.

B1L0410 – Typical Floor Plan (Lev 04 – Lev 06), Rev D Dated 28/11/2025.

B1L0710 – Level 07 Floor Plan, Rev E Dated 28/11/2025.

B1L0810 – Level 08 Floor Plan, Rev E Dated 28/11/2025.

B1ROF010 – Roof Plan, Rev E Dated 28/11/2025.

3. Email correspondence with and information received from the Senior Development Manager “Daniel Hovagimian” of the Proposed Development.

4 – Project Response

4.1 Response to ESD Principles

- **The Precautionary Principle:** The proposed development does not pose any serious threat to the environment, nor any irreversible damage to the environment. Construction of the project does not involve any land clearing and the site does not contain old growth forest, prime agricultural land, wetlands, or aspects considered to be ‘Matters of National Environmental Significance’. Additionally, the proposed development will provide biodiversity enhancement through significant areas of landscaping containing a high proportion of indigenous plant species, improved nature connectivity and land restoration activities. Waterway pollution will be minimised through stormwater management techniques and 90% of construction and demolition waste will be diverted from landfill.

- **Inter-generational Equity:** The proposed development will deliver on inter-generational equity by not consuming more resources than are required to sufficiently operate the building. The project will be designed to achieve a 10% improvement on the National Construction Code 2020 energy efficiency requirements. Inter-generational equity will be pursued further through the achievement of climate resilience, operational resilience, healthy internal environment for occupants, indigenous design and inclusion, contribution to the surrounding urban context and responsible construction facilitated by the projects equivalent of 4 Star Green Star Buildings rating.

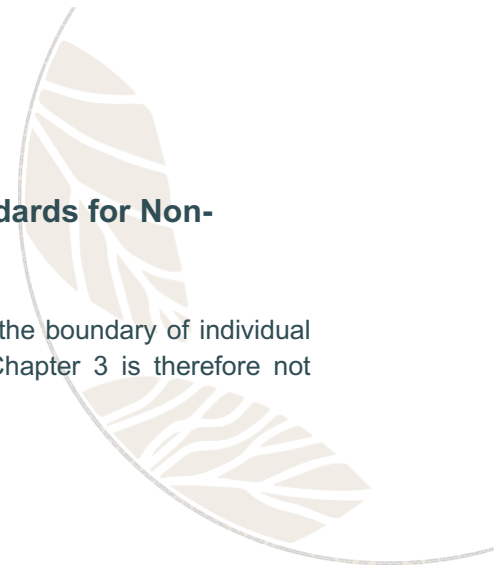
- **Conservation of Biological Diversity and Ecological Integrity:** The proposed development minimises the consumption of energy and water resources whilst reducing waste. The ESD principles incorporated into the proposed development facilitates the conservation of energy and water resources through energy and water efficiency measures.

Energy consumption will be designed to achieve a minimum 10% improvement above National Construction Code requirements. The reduction in water use will be established through high WELS rated water fixtures and fittings, unless otherwise required for clinical purposes. Waste generated during the construction and operational phases will be diverted from landfill to be recycled. An Environmental Management System (EMS) will be established and adhered to throughout construction. Operational waste streams will be separated to maximise recycled waste. Reducing energy, water and waste ensures that the health, diversity and productivity of the environment is maintained for the benefit of future generations.

- **Improved Valuation, Pricing, and Incentive Mechanisms.** The proposed development is designed to minimise pollution and waste through responsible construction practices that divert construction and demolition waste from landfill, responsible management of operational waste and stormwater pollution and run-off is minimised. Major components of the project design have been driven by whole-of-life cycle cost decisions including structural design and building services design.

4.2 Response to Section 3.2 of Chapter 3, SEPP 2022 (Standards for Non-residential development)

The proposal is not a mixed-use development, all common areas outside the boundary of individual apartments are to the exclusive use of the residences. Section 3.2 of Chapter 3 is therefore not applicable to the proposal.



4.3 Meeting or exceeding other relevant Industry Standards

4.3.1 National Construction Code, Part J Energy Efficiency

The National Construction Code Section J Energy Efficiency is the minimum mandatory energy efficiency requirement for all non-residential buildings in Australia. The code allows for the performance requirements to be met through either compliance with the “Deemed to Satisfy” solution or a “Performance Solution”.

The project is located within Climate Zone 5 – Mild temperate, and as such will require a balanced design to address both heating and cooling requirements of the development.

The project is proposing to meet the NCC requirement through the following:

- Section J, part J4 total system R-value, total system U-value and SHGC requirements for wall-glazing constructions and display windows, inclusive of thermal bridging effects
- Section J, part J6D5-6, part J6D8-9, part J6D10, part J6D11 and part J6D13 requirements for fan systems, pump systems, refrigerant chillers, and heat rejection equipment.
- Section J, part J7 requirements for artificial lighting systems

4.3.2 Green Star Rating Scheme

Green Star is a voluntary scheme administered by the national, not-for-profit organisation, Green Building Council of Australia (GBCA). The Green Star suite of tools provides an environmental sustainability rating of a building’s performance. The tools are performance based and assess the environmental attributes of new and refurbished buildings in every state across Australia. The Green Star rating system is scaled to a star level from 0 to 6 stars.

The project will achieve a 10% reduction in energy use in addition to compliance with the NCC Section J.

The project will not be targeting an official Green Star certification, rather it will follow the aims of specific credits to achieve the equivalency of a 4-star Green Star. The alignment of Green Star principles will be peer reviewed by a third party to ensure compliance with the targeted star rating

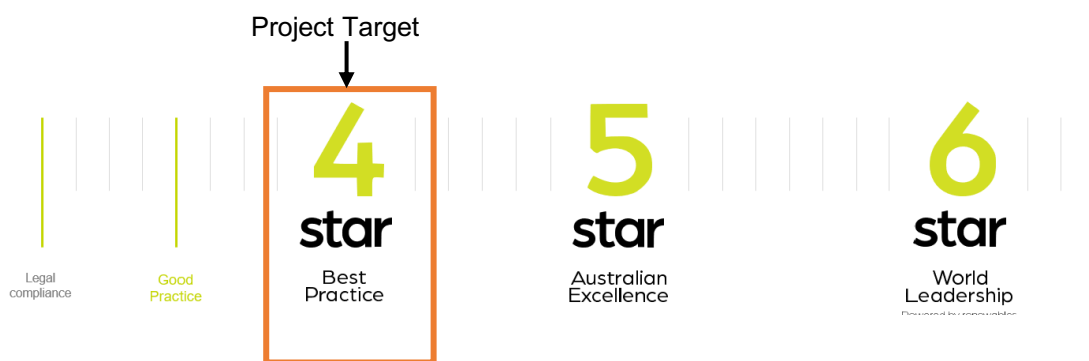


Figure 3 – Green Star Rating Scale

An equivalent 4-star Green Star Design & As Built v1 r5 Pathway (See Appendix A – 27 to 29 Tryon Rd Lindfield Green Star Building Pathway) has been developed by the project team which outlines the relevant initiatives considered to the project. The pathway reflects the requirement of a minimum 20 points to be achieved. Typically, buffer points are allocated to ensure a targeted performance is maintained as emerging design and construction constraints may prevent points from being achieved. This represents a pathway that will be tested and refined as the project progresses through its design and construction phases.

5 – Conclusion

This report details responses to the Department of Planning, Housing and Infrastructure's SEARs for the preparation of an Ecological Sustainable Development (ESD) for the proposed redevelopment.

The report demonstrates that a myriad of ESD initiatives can be incorporated within the current project design.

Further, the project team has developed an equivalent 5 star Green Star Design & As-Built v1.3 pathway (See Appendix A – 27 to 29 Tryon Rd Lindfield Green Star Design & As Built v 1 r5) outlining the relevant initiatives considered to the project. This represent a preliminary pathway that will be tested and refined as the project progresses through its design and construction phases.



6 – Appendix

6.1 – Appendix A – 27 to 29 Tryon Rd Lindfield Green Star Building Pathway





Submission planner

Summary

Climate Positive Pathway

Registering from / certified	2026 onwards	Desired Green Star rating	4 Star
Green Star rating			
Core points targeted	20	Minimum expectations met	No
Leadership points targeted	0	Green Star rating targeted	4 Star
Total points targeted	20	Climate Positive Pathway met	No

The Climate Positive Pathway is required for the desired rating

The Climate Positive Pathway is required for the targeted rating

Credit	Minimum Expectation	Credit Achievement	Exceptional Performance	Total points available	Targeted performance level	Total points targeted	Comments
Responsible				17			
1 Industry Development		1		1		0	
2 Responsible Construction	+	1		1	Minimum Expectation	-	
3 Verification and Handover	+	1		1	Minimum Expectation	-	
4 Operational Waste	+	2		0	Minimum Expectation	-	
5 Responsible Procurement		1		1	Credit Achievement	1	
6 Responsible Structure		3	2	5	Credit Achievement	3	
7 Responsible Envelope		2	2	4	Credit Achievement	2	
8 Responsible Systems		1	1	2	Credit Achievement	1	
9 Responsible Finishes		1	1	2	Credit Achievement	0	
					Total	7	
Healthy				14			
10 Clean Air	+	2		2	Minimum Expectation	-	
11 Light Quality	+	2	2	4	Credit Achievement	2	
12 Acoustic Comfort	+	2		2	Credit Achievement	2	
13 Exposure to Toxins	+	2		2	Minimum Expectation	-	
14 Amenity and Comfort		2		2	Credit Achievement	2	
15 Connection to Nature		1	1	2	Credit Achievement	1	
					Total	7	
Resilient				8			
16 Climate Change Resilience	+	1		1		0	
17 Operations Resilience		2		2	Credit Achievement	2	
18 Community Resilience		1		1	Credit Achievement	1	
19 Heat Resilience		1		1	Credit Achievement	1	
20 Grid Resilience		3		3		0	
					Total	4	
Positive				30			
21 Upfront Carbon Emissions	+	3	3	6	Minimum Expectation	-	
22 Energy Use	+	3	3	6	Minimum Expectation	-	
23 Energy Source	+	3	3	6	Minimum Expectation	-	
24 Other Carbon Emissions	+	2	2	4	Minimum Expectation	-	
25 Water Use	+	3	3	6	Minimum Expectation	-	
26 Life Cycle Impacts		2		2		0	
					Total	0	
Places				8			
27 Movement and Place	+	3		3	Minimum Expectation	-	
28 Enjoyable Places		2		2	Credit Achievement	2	
29 Contribution to Place		2		2		0	
30 Culture, Heritage and Identity		1		1		0	
					Total	2	
People				9			
31 Inclusive Construction Practices	+	1		1	Minimum Expectation	-	
32 Indigenous Inclusion		2		2		0	
33 Procurement and Workforce Inclusion		2	1	3		0	
34 Design for Inclusion		2	1	3		0	
					Total	0	
Nature				14			
35 Impacts to Nature	+	2		2	Minimum Expectation	-	
36 Biodiversity Enhancement		2	2	4		0	
37 Nature Connectivity		2		2		0	
38 Nature Stewardship		2		2		0	
39 Waterway Protection		2	2	4		0	
					Total	0	
Leadership				0			
40 Market Transformation				0		0	
41 Leadership Challenges				0		0	
					Total	0	