Alternative Sustainability Verification Framework

William Clarke College, Kellyville

Project Number: MEL25009

Project Address: 10 Morris Grove, Kellyville NSW 2155

Prepared For: William Clarke College

Cover Image: courtesy of SINSW

Revision	Date	Description	Author/s	Reviewer
P1	7/03/2025	Preliminary	KNR	SA
0	9/04/2025	Final – For Submission	KNR	SA

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Table of Contents

Tables

Figures

1 Executive Summary Statement

The redevelopment of William Clarke College, Kellyville is guided by a comprehensive Ecologically Sustainable Development (ESD) Framework, ensuring that sustainability is embedded throughout the project. This framework aligns with the College's environmental values and meets the regulatory requirements established by the NSW Department of Planning, Industry and Environment (DPIE). Specifically, it responds to the Planning Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development (SSD-35715221) and addresses key sustainability conditions outlined in the development consent (Conditions C11 and F14, dated 20/10/2023).

To achieve the required sustainability outcomes, the project is implementing an alternative ESD certification process, which provides a structured pathway to demonstrate compliance without formal Green Star certification. This approach ensures that the development achieves a sustainability performance benchmarked to several sustainability frameworks and 5-Star Green Star Buildings v1.0 rating, meeting all regulatory and approval requirements while delivering long-term environmental, social, and economic benefits.

The Development Consent from DPIE issued 20/10/2023 states the following ESD requirements:

- **C11.** Prior to the commencement of any relevant construction, unless otherwise agreed by the Planning Secretary, the Applicant must demonstrate that ESD is being achieved by either:
    a) Registering for a minimum 5-star Green Star rating with the Green Building Council Australia and submit evidence of registration to the Certifier; or
    b) Seeking approval from the Planning Secretary for an alternative certification process.
- **F14.** Unless otherwise agreed by the Planning Secretary, within six months of commencement of operation, Green Star certification must be obtained demonstrating the development achieves a minimum 5-star Green Star Design & As Built rating. If required to be obtained, evidence of the certification must be provided to the Certifier and the Planning Secretary. If an alternative certification process has been agreed to by the Planning Secretary under Schedule 3 condition C11, evidence of compliance of implementation must be provided to the Planning Secretary and Certifier.

- It is noted that the consent conditions reference Green Star Design & As-Built (an older version of the rating tool), whereas the project's framework is based on Green Star Buildings v1.0, the latest version introduced by the Green Building Council of Australia (GBCA). Green Star Buildings v1.0 is an updated framework but remains consistent with the intent of the Design & As-Built tool v1.3. The minor discrepancy in terminology has no impact on meeting the condition – the project's sustainability performance – ESD framework is being benchmarked against the 5-Star level of Green Star Buildings v1.0, which is of a higher standard. The approach ensures the development will satisfy the condition's requirements despite using the updated rating criteria.

Alternative ESD Certification Process

This report presents the proposed alternative ESD certification approach, designed to fulfill DPIE requirements while ensuring that compliance is monitored and validated throughout the project's implementation. Instead of formal Green Star certification, the project follows an alternative ESD framework to ensure equivalent sustainability performance. The alternative ESD certification approach is summarised in Section 4 and includes the following key steps:

- Defining an ESD framework comparable to a relevant industry best practice sustainability frameworks and alignment with 5-star Green Star Buildings v1.0 rating.
- Post Planning approval, tracking Design and Construction Compliance with agreed sustainability initiatives against approved framework.
- Obtaining ESD Compliance Statements from consultants and contractors.
- Independent ESD review of all project documentation during design/construction phase.
- Submitting an ESD Compliance Report by independent ESD consultant
- Project tracking during construction phase
- Compilation of post construction compliance statements submitted by project team
- Independent ESD review of all project documentation during as built phase, and submit for final planning secretary approval

For the redevelopment of William Clarke College, an alternative certification process is being sought from the Planning Secretary under Condition C11(b).

An independent ESD consultant will oversee this process, providing an ESD Compliance Report. These deliverables, along with sample supporting evidence and ESD schedule (detailed in the Appendix), will need to be submitted to the Certifier and Planning Secretary to fulfill Conditions C11 and F14. This structured approach ensures that sustainability objectives are not only set but achieved and proven, thereby securing the necessary approvals while delivering a high-performance, resilient, and future-ready educational facility.

2 Introduction

William Clarke College is an independent Anglican school in Sydney's Northwest, located at 10 Morris Grove, Kellyville NSW 2155. The site is irregularly shaped and spans both the eastern and western sides of Morris Grove, with frontage to Green Road, Wrights Road, and Cormack Circuit.

The William Clarke College campus covers a total area of 96,360m² (9.636 ha) within a residential suburb. Over time, the campus has expanded, as reflected in the diverse range of buildings on-site. It comprises the Primary School, Secondary School, as well as various specialist and shared facilities.

William Clarke College Masterplan Overview

William Clarke College engaged PMDL Architecture & Design, in collaboration with specialist consultants, to develop a concept masterplan study and subsequently design **Stage 1** of the masterplan.

The key elements of the masterplan include:

- Construction of a new part three-storey, part four-storey teaching facility—the Bryson Building—to replace existing classrooms and accommodate increased student numbers
- A new Performing Arts Centre
- The Tech Workshop Building, located adjacent to the Branwhite Centre for STEAM
- New and upgraded Sports Facilities
- Reconfiguration of the existing car parks on Wrights Road and Morris Grove
- Relocation of the waste and recycling compound from Wrights Road to Morris Grove
- Associated landscaping works

Stage 1 Works

Stage 1 comprises:

- Detailed design and construction of the three-to-four-storey Bryson Building
- Relocation of the waste and recycling compound
- Amendments to internal vehicle circulation, car parking layouts, landscaping, and associated tree removal

Note: Condition C11(b) applies **only to Stage 1 works**, and the alternative framework currently being sought relates specifically to this stage.

Beyond Stage 1, the remaining projects are not listed in any particular order and may proceed through a range of planning approval pathways.

William Clarke College is undertaking a significant redevelopment of its campus in Kellyville, NSW, to enhance educational facilities and incorporate state-of-the-art sustainable design. The project includes new and upgraded buildings (such as a performing arts centre, sports facilities, reconfigured car park, and STEAM workshops) intended to serve the College's needs into the future. At the core of this redevelopment is a commitment to Ecologically Sustainable Development (ESD) – ensuring that environmental, social, and economic sustainability objectives are embedded from planning and design through construction and operation.

3 Sustainability Framework and Targets

This ESD Framework document has been prepared to guide the project's sustainability outcomes and to demonstrate compliance with regulatory sustainability requirements. The framework is tailored to meet the conditions of approval issued for the project and to reflect the College's own sustainability aspirations. This section establishes the foundation for the Sustainability Framework detailed in further sections. The framework has been developed in alignment with industry best practices for sustainable building design in educational settings, ensuring a comprehensive approach to environmental performance, resource efficiency, and long-term resilience.

It has been informed by leading sustainability references and tools, including:

- **Planning Secretary's Environmental Assessment Requirements (SEARs)** – which outline the specific sustainability and environmental considerations for the project's assessment and approval.
- **NSW DPIE Development Consent Conditions (20/10/2023)** – particularly Condition C11 and F14, which mandate either Green Star certification or an approved equivalent process (detailed in Section 2).
- **One Planet Living Principles** – a globally recognised sustainability framework of ten principles covering areas such as health, equity, nature, and zero carbon (see Section 3.1). This ensures a holistic approach that aligns with broader ecological and community goals.
- **United Nations Sustainable Development Goals (SDGs)** – the project's initiatives reflect relevant SDGs (e.g. Quality Education, Affordable and Clean Energy, Sustainable Cities and Communities, Climate Action), tying local building performance to global sustainability targets.
- **Government Architect NSW Environmental Design Guide for Schools** – providing best-practice guidance for creating sustainable, adaptive learning environments in the education sector.
- **Green Star Buildings v1.0** – the Green Building Council Australia's latest sustainability rating tool for buildings, which serves as the benchmark for this framework. The categories and criteria from Green Star Buildings are used as a measurement benchmark to ensure the project's performance is aligned to a 5-Star level of excellence and scored accordingly.

By integrating these references, the College's redevelopment is grounded in industry best practice and innovative sustainability strategies. The framework ensures that the design and construction not only comply with minimum requirements, but also deliver enhanced energy efficiency, reduced environmental impact, and improved health and wellbeing outcomes for building users. Sections 3 and 4 detail how the project's ESD framework is structured, how it aligns with approval requirements, and how each sustainability criterion will be verified and documented.

To ensure a holistic approach, the project's sustainability framework draws inspiration from the One Planet Living (OPL) principles and is cognisant of the UN Sustainable Development Goals (SDGs). Thus, by pursuing an ESD framework aligned with Green Star, the project inherently supports these broader frameworks. This alignment is noted to underscore that the College's approach is not taking a narrow view of compliance but rather embracing widely recognised sustainability objectives that benefit both people and the planet.

3.1 SEARS Response

Environmental Planning & Assessment (EP&A) Regulation 2021

The ESD principles that are to be incorporated into the proposed development must be aligned with Clause 193 – Environmental Planning & Assessment Regulation (2021).

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.

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.

Conservation of Biological Diversity and Ecological Integrity

Namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.

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; and

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.

3.2 One Planet Living Principles

One Planet Living, developed by BioRegional in collaboration with WWF, is a globally recognised sustainability framework designed to guide projects towards environmentally responsible and socially inclusive outcomes. It is structured around ten core principles that address key aspects of sustainable living, ensuring a comprehensive approach to ecological and economic resilience.

The ten principles of One Planet Living include:

1. Health and Well-being – Promoting physical and mental well-being through healthier living environments.
2. Equity and Local Economy – Supporting social inclusion and strengthening local economies.
3. Culture and Community – Encouraging cultural heritage preservation and fostering strong, connected communities.
4. Land and Nature – Enhancing biodiversity and protecting ecosystems.
5. Sustainable Water – Managing water resources efficiently to reduce waste and ensure long-term sustainability.
6. Local and Sustainable Food – Encouraging locally sourced, sustainable food production and consumption.
7. Travel and Transport – Reducing reliance on fossil fuels by promoting public transport, cycling, and walking.
8. Materials and Products – Utilising sustainable, responsibly sourced materials with low environmental impact.
9. Zero Waste – Minimising waste through resource efficiency, recycling, and circular economy principles.
10. Zero Carbon Energy – Reducing carbon emissions through energy-efficient design and renewable energy integration.

The One Planet Living framework has been adapted to establish a sustainability strategy for William Clarkes College redevelopment ESD framework. Unlike rigid certification systems, this approach provides flexibility in implementation, allowing sustainability measures to be tailored to the specific needs of the project. The framework ensures that environmental, social, and economic sustainability objectives are embedded throughout the school's design, construction, and operational phases.

By adopting this framework and aligning with the Green Star Buildings v1.0 rating system, the school aims to reduce its ecological footprint while fostering a healthy and engaging learning environment for students and staff. The integration of sustainability initiatives—such as energy-efficient buildings, water-sensitive urban design, and biodiversity conservation—reflects best practice standards in sustainable education infrastructure.

3.3 ESD framework alignment with Sustainable Development Goals (SDGs)

This ESD framework is designed to align with global sustainability principles and benchmarks itself against established best practices, including those reflected in Green Star Buildings v1.0. It incorporates key elements from international sustainability initiatives, such as the United Nations Sustainable Development Goals (SDGs), and resonates with the priorities set out by the World Green Building Council's Better Places for People program.

The framework emphasises the creation of built environments that are healthy, resilient, and contribute positively to both people and nature. It recognises the importance of addressing environmental, social, and economic outcomes holistically, ensuring that buildings and developments support long-term sustainability objectives.

Figure 1 : United Nations Sustainable Development Goals

A core aspect of this framework is its connection to the SDGs, with a focus on targets related to climate action, health and well-being, sustainable communities, and responsible resource management. By embedding these principles into its structure, the framework provides a pathway for developments to contribute meaningfully to global sustainability efforts.

Additionally, this approach integrates concepts that support the creation of equitable and resilient places where people can thrive. The framework draws on recognized sustainability categories—such as health, resilience, responsibility, and positive impact—to guide best practices in the built environment.

By referencing and benchmarking against Green Star Buildings v1.0 and similar sustainability rating systems, this framework ensures alignment with internationally recognised sustainability objectives while maintaining a distinct approach tailored to its specific context.

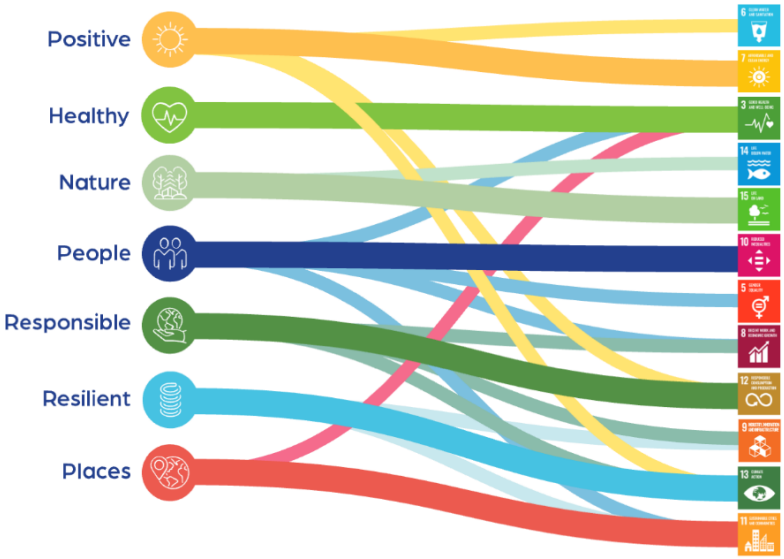

Figure 2 : Greenstar Buildings Alignment with United Nations Sustainable Development Goals

3.4 Environmental Design in Schools Manual

This document has been prepared by Government Architect NSW (GANSW), in collaboration with School Infrastructure NSW (SINSW).

Sustainable design in educational environments is fundamental to fostering resilient, adaptable, and high-performance learning spaces. This framework aligns with contemporary best practices and established sustainability principles, ensuring that educational facilities contribute to environmental stewardship, economic efficiency, and enhanced student well-being.

The ESD design approach follows the principles outlined in the Government Architect New South Wales Design Guide for Schools, and Environmental Design in Schools Manual emphasising sustainable, efficient, and durable design strategies. Further details on alignment are outlined in the next section

Figure 3 : Sustainability GANSW Guides and Manuals Overview

3.5 Benchmarking against rating system

Our Environmental Sustainable Design (ESD) framework is structured to align with globally recognised sustainability principles, drawing on best practices from industry-leading rating systems like Greenstar Buildings v1.0. It provides a structured approach to assessing and enhancing the sustainability performance of buildings throughout their lifecycle—from design and construction to long-term operation.

This framework is designed to reduce environmental impact, improve occupant health and well-being, and optimise energy and resource efficiency. It evaluates projects across key sustainability focus areas, including:

- **Energy & Carbon** – Encouraging net-zero carbon and energy-efficient operations
- **Health & Well-being** – Ensuring good indoor air quality, thermal comfort, and access to natural light
- **Resilience & Adaptation** – Designing for long-term durability and climate resilience
- **Resource Efficiency** – Promoting circular economy principles through waste reduction and responsible material selection
- **Biodiversity & Ecology** – Enhancing green spaces and protecting natural ecosystems

Benchmarking Against Best Practices

To ensure a robust and credible sustainability approach, the ESD framework references industry standards and methodologies, including key elements from recognised rating systems like Greenstar Buildings v1.0. An independent ESD consultant provides oversight and independent review to verify that sustainability targets are met.

While this project does not pursue a formal certification, the ESD framework is structured to reflect high-performance sustainability outcomes that align with industry benchmarks. It draws from best practice criteria and assessment methodologies to ensure the built environment contributes positively to environmental, social, and economic sustainability.

This approach enables a flexible yet rigorous sustainability strategy, ensuring measurable benefits without requiring certification under a specific rating tool.

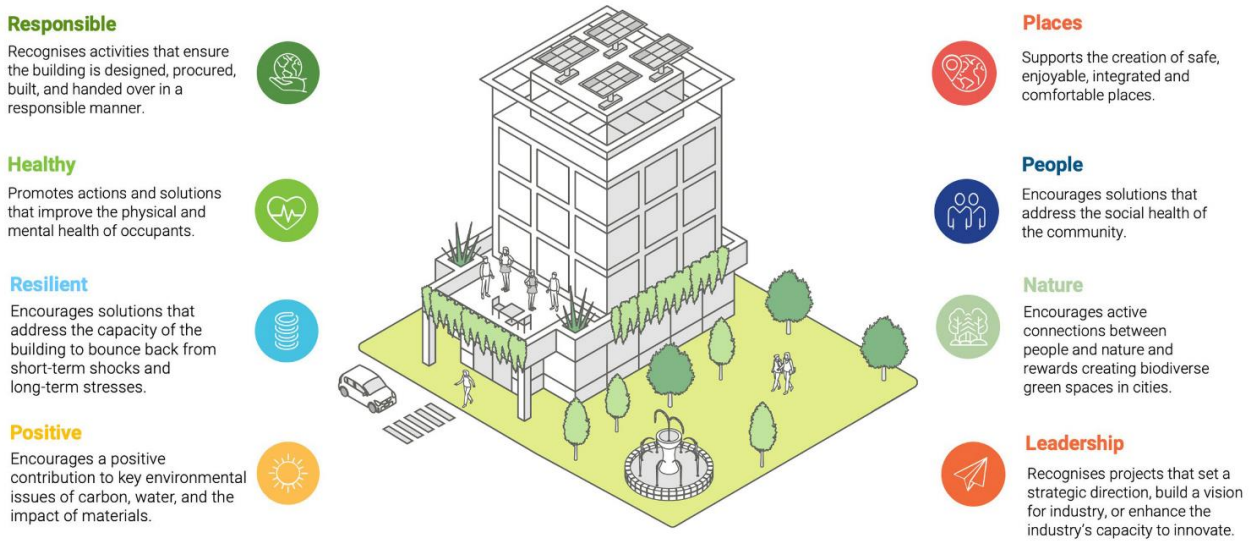

Figure 4 : Greenstar Buildings Categories Alignment for ESD framework

3.6 Alignment with SSDA Sustainability Initiatives

The proposed alternative Environmentally Sustainable Design (ESD) certification approach aligns with the Sustainability Framework established during the early design phase and submitted as part of the State Significant Development Application (SSDA) documentation in August 2022. This framework ensures a comprehensive integration of ESD initiatives into the school's design, targeting best-practice environmental performance and compliance with regulatory requirements.

The table below presents the State Environmental Planning Policy (SEPP) design quality principles, including relevant environmental design considerations, along with the corresponding Green Star Buildings v1.0 credits that address each principle as outlined in the Environmental Design in Schools Manual.

This report also details how the concept development aligns with and, in some cases, exceeds industry-recognised sustainability and environmental performance standards. Additionally, the design approach integrates environmental strategies from the Environmental Design in Schools Manual, leveraging synergies with Green Star Buildings v1.0 to enhance sustainability outcomes.

By adopting this framework and aligning with Green Star Buildings v1.0, the school aims to minimise its ecological footprint while fostering a healthy and engaging learning environment for students and staff. Key sustainability strategies—including energy-efficient buildings, water-sensitive urban design, and biodiversity conservation—reflect best-practice standards in sustainable education infrastructure, ensuring long-term benefits for both the school community and the environment.

Table 3-1 Table referenced from ESD report prepared by HDR (project ESD Consultant)

Design Guide for Schools	Targeted Green Star Credit Alignment
Context, built form and landscape	Movement and Place Contribute to Place Culture, Heritage, and Identity Inclusive Construction Practices Indigenous Inclusion Procurement and Workforce

Design Guide for Schools	Targeted Green Star Credit Alignment
	Design for Inclusion
Sustainable, efficient, and durable	Climate Change Resilience Heat Resilience Upfront Carbon Emissions Energy Use Water Use Life Cycle Impacts Waterway Protection Movement and Place
Accessible and inclusive	Design for Inclusion
Health and Safety	Clean Air Movement and Place
Amenity	Connect to nature Movement and Place Enjoyable Places Nature Connectivity Acoustic Comfort
Whole of life, flexible and adaptive	Climate Change Resilience Operations Resilience Community Resilience Heat Resilience Upfront Carbon Emissions Life Cycle Impacts
Aesthetics	Enjoyable Places Contribute to Place Nature Connectivity

4 Alternative ESD Framework

The redevelopment of William Clarke College, Kellyville located at 10 Morris Grove, Kellyville NSW 2155, aligns with the College's values and sustainability commitments under DPIE's Environmental Assessment Requirements (SSD-35715221) and the NSW Government Department of Planning, Industry and Environment (DPIE) Conditions dated 20/10/2023.

The Development Consent from DPIE issued 20/10/2023 states the following ESD requirements:

- **C11.** Prior to the commencement of any relevant construction, unless otherwise agreed by the Planning Secretary, the Applicant must demonstrate that ESD is being achieved by either:
    a) Registering for a minimum 5-star Green Star rating with the Green Building Council Australia and submit evidence of registration to the Certifier; or
    b) Seeking approval from the Planning Secretary for an alternative certification process.
- **F14.** Unless otherwise agreed by the Planning Secretary, within six months of commencement of operation, Green Star certification must be obtained demonstrating the development achieves a minimum 5-star Green Star Design & As Built rating. If required to be obtained, evidence of the certification must be provided to the Certifier and the Planning Secretary. If an alternative certification process has been agreed to by the Planning Secretary under Schedule 3 condition C11, evidence of compliance of implementation must be provided to the Planning Secretary and Certifier.

- It is noted that the consent conditions reference Green Star Design & As-Built (an older version of the rating tool), whereas the project's framework is based on Green Star Buildings v1.0, the latest version introduced by the Green Building Council of Australia (GBCA). Green Star Buildings v1.0 is an updated framework but remains consistent with the intent of the Design & As-Built tool v1.3. The minor discrepancy in terminology has no impact on meeting the condition – the project's sustainability performance – ESD framework is being benchmarked against the 5-Star level of Green Star Buildings v1.0, which is of a higher standard. The approach ensures the development will satisfy the condition's requirements despite using the updated rating criteria.

4.1 Alternative ESD Framework overview

The sustainability performance of this project is benchmarked against industry's best practices using a structured Environmental Sustainable Design (ESD) framework. While formal Green Star certification will not be pursued, the framework is informed by the methodologies and assessment criteria of Green Star Buildings v1.0, which serves as a widely recognised benchmark for sustainable buildings in Australia.

Green Star Buildings v1.0 evaluates sustainability performance across multiple categories, awarding points based on best-practice benchmarks. A 5-Star Green Star rating, representing "Australian Excellence," typically requires achieving 35–70 points (out of 100) while meeting all Minimum Expectations (MEs) (prerequisite criteria). This rating level has been used as a reference standard due to its alignment with best-practice sustainability principles, as outlined in the overarching Sustainability Framework.

For this project, an alternative ESD certification framework has been developed to demonstrate compliance with Condition C11 (b) without undergoing full GBCA certification. This framework establishes sustainability objectives and performance metrics aligned with a 5-Star Green Star Buildings v1.0 rating, ensuring that the project delivers high environmental and social sustainability outcomes.

The project targets a balanced selection of sustainability credits across all key categories, collectively reflecting a 5-Star level of performance. Table 4-1 summarises the ESD categories, the total available points in each category. A performance buffer has been incorporated above the minimum threshold to accommodate potential design adjustments and unforeseen implementation challenges.

This approach provides a structured yet flexible pathway to achieving sustainability excellence while maintaining alignment with leading industry standards.

William Clarke College redevelopment will be designed and constructed to an ESD framework aligned with several frameworks and Green Star Buildings v1.0, but the actual GBCA full certification, or any other certification will not be sought.

An alternative certification framework has been prepared by erbas™ for the William Clarke College redevelopment to demonstrate compliance with Condition C11 (b).

Table 4-1 Category Scoring – ESD Framework

Category	Points Available
Responsible	17
Healthy	14
Resilient	8
Positive	30
Places	8
People	9
Nature	14
Leadership	10
Total	**Maximum 100 claimable**

The project must achieve a minimum of 35 points, which will be verified according to the verification process outlined in Sections 4.2 and 5.3

As per the ESD pathway set by the project team, a minimum of 35 points must be achieved in accordance with the ESD framework. Targeted credits may change during construction, in which case the project team will substitute credits to maintain the minimum 35 points.

Green Star Trademark & Copyright Considerations

The term "Green Star equivalent" has frequently been used in Australia; however, this violates the trademark and copyright regulations set by the Green Building Council of Australia (GBCA). According to the March 2020 Green Star in Focus business case, the GBCA explicitly warns against using terms like "Green Star equivalence" or stating that a project has been "designed or built to a Green Star standard". These claims are considered misleading and inaccurate, as no official Green Star equivalency exists without formal certification.

Similarly, the Federal Government's Sustainable Procurement Guide (December 2020), published by the Department of Agriculture, Water, and the Environment, highlights the risks of using Green Star equivalence in project documentation. The guide clarifies that Green Star certification is administered by the GBCA and complies with ISO 9001:2015 for quality management. Any project that claims compliance without certification may be in breach of trademark rules and could be accused of greenwashing.

To ensure compliance, it is strongly advised that references to Green Star or Green Star equivalence are avoided in public documents, including planning approval submissions, when implementing the Alternative ESD Certification approach.

Hence, this report has been specifically prepared for this project to establish a framework based on multiple sustainability frameworks and Green Star, aimed at securing planning approval.

4.2 Verification and Compliance Methodology

The Alternative ESD Framework has been developed to align with DPIE requirements, ensuring that sustainability performance is systematically tracked and validated throughout the project's lifecycle. This framework references key sustainability principles drawn from established rating systems, including elements of the Green Star Buildings v1.0 framework, to guide best-practice environmental performance. However, it is an independent framework designed to reflect high sustainability standards without seeking formal Green Star certification or claiming equivalency.

By incorporating a structured compliance approach throughout design, construction, and post-occupancy phases, this methodology ensures that sustainability objectives are met transparently and consistently. The framework establishes clear benchmarks, performance metrics, and verification protocols, providing a robust pathway for achieving high-performance sustainability outcomes that align with best practices.

A fundamental component of this framework is the verification process applied to each sustainability criterion. To satisfy the Planning Secretary and Certifier that the project's sustainability commitments have been met—without reliance on third-party Green Star certification—the following multi-tiered verification strategy will be implemented:

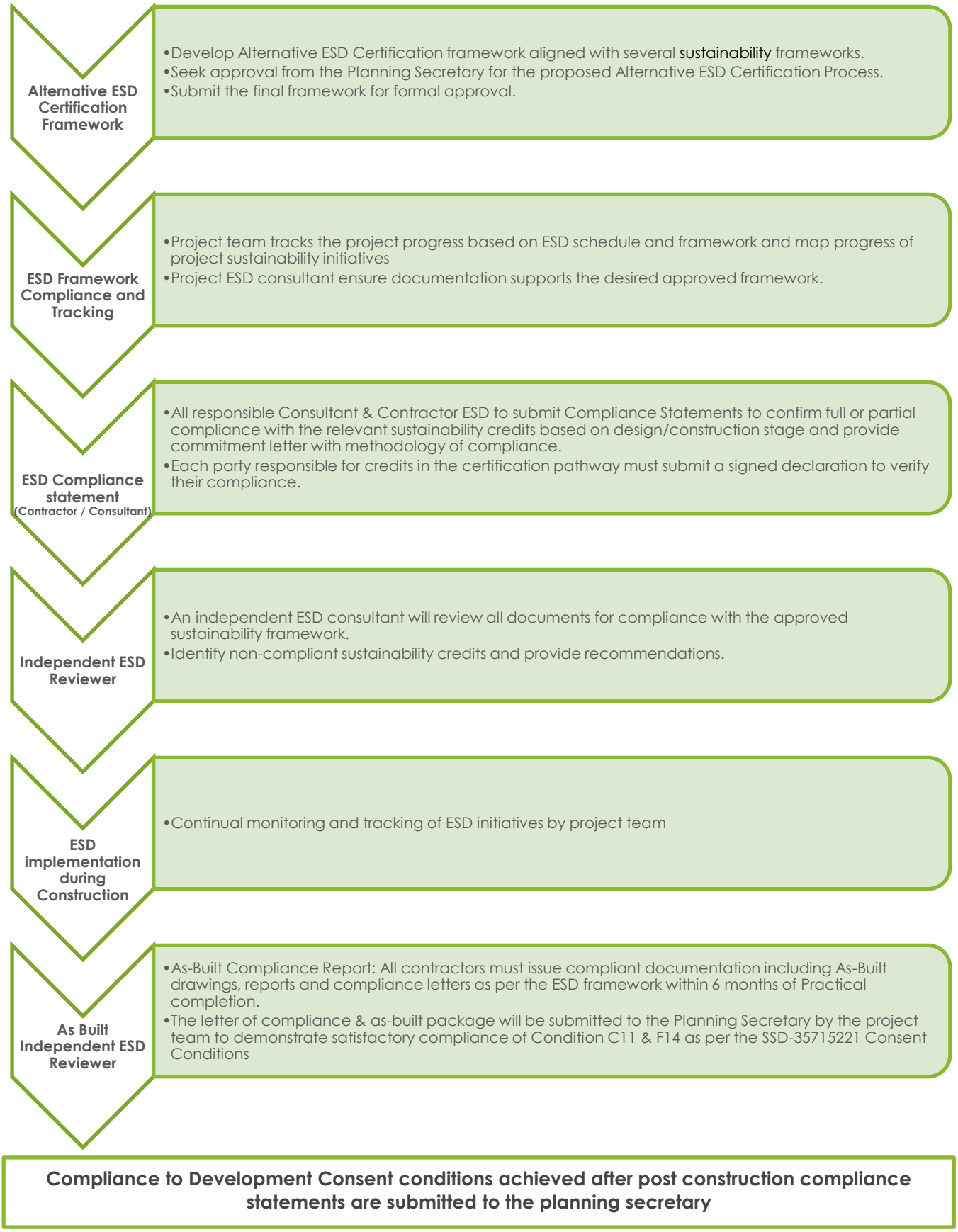

Figure 5: Alternative ESD Certification Approach Methodology

DPIE Stages and Compliance

The table below outlines the Department of Planning, Industry and Environment (DPIE) Environmentally Sustainable Design (ESD) requirements at various project stages—Prior to Construction of any relevant construction, During Construction, and Post-Construction—along with the corresponding actions planned to ensure compliance.

Table 4-2 DPIE Environmentally Sustainable Design requirements

DPIE ESD Requirement	Response
Prior to Construction of any relevant construction C11(b) Seeking approval from the Planning Secretary for an alternative certification process.	Submission of this report – Presenting the Alternative ESD Certification Framework for approval from the Planning Secretary.
Planning Approval	The project team will ensure the design & construction documents align with the proposed framework and verification process upon receiving approval.
During Construction	The project team will continually review design elements against the approved framework to ensure adherence to sustainability initiatives. The project team must periodically provide compliance evidence to the client through the construction phase. An independent ESD consultant will verify that the project meets ESD principles, supported by compliance statements and commitment letters. The consultant will also review the project's progress against the approval framework, serving as a health check.
Post Construction F14 - As proceeding with an alternative certification process - Evidence of compliance of implementation to be provided to the Planning Secretary and Certifier.	As-Built Compliance Report: All contractors must issue compliant documentation including As-Built drawings, reports and compliance letters as per the ESD framework within 6 months of Practical completion. Independent Verification – The client will ensure an independent ESD consultant reviews the as-built submission package and provides a certification to demonstrate successful implementation of the sustainability targets. An independent ESD consultant will verify that the project meets ESD principles, supported by compliance statements and as built documentation. The independent consultant will prepare and submit the compliance letter. The letter of compliance & as-built package will be submitted to the Planning Secretary by the project team to demonstrate satisfactory compliance of Condition C11 & F14 as per the SSD-35715221 Consent Conditions.

This structured approach ensures that the project not only complies with DPIE's ESD requirements but also maintains a clear and documented pathway for achieving and demonstrating sustainability objectives throughout the project's lifecycle. The verification method for each credit is outlined in Section 5.3 of this report.

The alternative ESD certification approach is summarised in **Error! Reference source not found.**Figure 5 and includes the following key steps:

DPIE Requirement: Condition C11(b) – Seeking Approval for an Alternative ESD Certification Process

Compliance Action:

- Submission of this Alternative ESD Certification Framework Report to the Planning Secretary for approval.
- Post approval, preparation of an ESD Compliance Letter by an independent ESD consultant, confirming that the project aligns with sustainability principles. This includes:
    - Review of documentation of ESD strategies and commitments.
    - Compliance statements / commitment letters from key project stakeholders.
    - Formal confirmation in the form of ESD compliance letter that verifies sustainability initiatives meet DPIE and project-specific performance benchmarks.

Pre-Construction Stage

1) **Submission of Alternative ESD Certification Framework (Prior to Construction of any relevant construction)**

    - **Action:** Seek approval from the Planning Secretary for the proposed Alternative ESD Certification Process.
    - **Response:** Submission of this report presenting the Alternative ESD Certification Framework for **approval.**

2) **Planning Approval & Design Compliance**

    - **Action:** Ensure all design and construction documents align with the approved ESD framework and verification process.
    - **Response:** The project team will integrate sustainability principles throughout the design and documentation process.

3) **Ongoing ESD Monitoring & Compliance During Construction**

    - **Action:** Continual review of design and construction elements to ensure adherence to the ESD framework.
    - **Response:**
        - Periodic compliance evidence to be submitted by the project team to the client.
        - Regular tracking and monitoring of sustainability initiatives.
        - A compliance tracking system will be maintained to ensure sustainability commitments are met throughout construction.
        - The project team will regularly review and monitor design and construction elements to ensure alignment with the approved ESD framework as per the ESD schedule and verification method

4) **ESD Compliance Verification (Independent Review & Commitment Statements)**

    - **Action:** Independent ESD consultant to verify compliance with sustainability principles as per approved framework serving as a health check.

- **Response:**
    - Consultants and contractors submit compliance statements confirming adherence to sustainability commitments.
    - Independent ESD consultant reviews and submits the ESD review Letter.

5) Post-Construction ESD Compliance & As-Built Documentation

- **Action:** Demonstrate successful implementation of sustainability targets.
  DPIE Requirement: Condition F14 – Demonstrating ESD Compliance Within Six Months of Operation
- **Response:**
    - **As-Built Compliance Report:** Contractors submit compliant documentation, including As-Built drawings, completed ESD framework verification tracker/schedule and compliance reports, within six months of Practical Completion.
    - **Independent Verification:** The client ensures an independent ESD consultant reviews the as-built submission and issues certification.

      An independent ESD consultant will verify that the project meets ESD principles, supported by compliance statements and as built documentation. The independent consultant will prepare and submit the compliance letter.
    - **Final Submission:** The project team submits the compliance letter and as-built package to the Planning Secretary to demonstrate compliance with Condition **C11 & F14** as per SSD-35715221 Consent Conditions.

By implementing a structured, transparent, and rigorous compliance approach, the Alternative ESD Certification Process ensures that the redevelopment of William Branwhite Clarke – Secondary College meets DPIE's sustainability expectations. The proposed alternative ESD certification approach also aligns with and supports the Sustainability Framework that was established for the project as outlined in Sections 3.1 to 3.6.

5 Appendices

- Appendix A – ESD compliance statements (sample templates)
- Appendix B – ESD Compliance Report (sample)
- Appendix C – Alternative ESD Framework Verification

5.1 Appendix A – ESD Compliance Statement (sample templates)

A similar letter of compliance to be provide with a completed ESD framework verification tracker/schedule

Head Contractor Declaration

Contractor's letterhead

To: [Recipient Name]

Date: [Insert Date]

ESD Compliance Confirmation

This statement serves to confirm that **[Insert Contractor Name]** has fulfilled the sustainability commitments outlined in the **William Clarke College Project ESD Pathway**, including:

1. The thermal performance of the building fabric surpasses the baseline requirements specified in **NCC 2019 Section J1** by __%.
2. The project has secured a minimum of 35 points, aligning with the approved ESD certification process, as detailed in the enclosed approved **ESD Framework**.

The following sustainability requirements were not delivered:

- [Specify any deviations or exclusions here]

Signature

<Name>

<Position>

Consultant / Subcontractor Conformance Declaration

(this letter of conformance is to be provided by each responsible stakeholder)

[Contractor's / Subcontractor's Letterhead]

To: [Recipient Name]

Date: [Insert Date]

This letter serves as confirmation of compliance with the requirements outlines in the Greenstar tracker and as per the approved framework for the and confirm that [Insert Contractor Name] has fulfilled the sustainability requirements specified in the William Clarke College Project ESD Framework, including compliance with the following credits:

Credit Name	Requirements	Design Integration	Supporting Documentation
[Insert]	*[Briefly describe the credit requirement].*	*[Describe how the design meets this requirement. Mention design strategies, specifications, or solutions implemented, e.g., energy efficiency measures, low-VOC materials, renewable energy integration, etc.]*	*[List supporting evidence, such as drawings, specifications, calculations, or modelling reports provided].*

We confirm that detailed evidence referenced in the ESD Compliance Report, which demonstrates compliance with the above, is available upon request.

The following sustainability requirements were not delivered:

- [Specify any deviations or exclusions here]

Signature

<Name>

<Position>

5.2 Appendix B – ESD Contractor Compliance Report (sample)

The contractor is responsible for preparing a report summarising how each Green Star credit in the Sustainability pathway was achieved. The following following template will be completed for each credit and samples are provided below.

Responsible Construction	
***Aim**: To ensure construction activities are carried out in an environmentally responsible manner, minimising negative environmental and social impacts while maximising sustainability outcomes.*	
Credit Criteria • *Implementation of an Environmental Management System (EMS) aligned with ISO 14001.* • *Development and adherence to a project-specific Environmental Management Plan (EMP).* • *Diversion of at least 80% of construction and demolition waste from landfills.* • *Mandatory sustainability training for 95% of site personnel.*	
Response • *A certified EMS has been implemented, and an external auditor has confirmed compliance with ISO 14001.* • *The project specific EMP has been developed, addressing demolition, excavation, and construction activities to mitigate environmental risks.* • *Waste contractors with Green Star-compliant reporting have been engaged, ensuring all waste management and diversion targets are met.* • *Sustainability training sessions have been conducted, covering Green Star certification requirements, environmental benefits, and site worker responsibilities.*	
Design Evidence • *Independently certified EMS report and audit confirmation.* • *EMP document demonstrating alignment with NSW Environmental Management System Guidelines.* • *Waste tracking and verification reports, confirming 80%+ waste diversion.* • *Sustainability training attendance records and training content.*	
Construction Evidence • *Contractor ISO 14001 certification issued before construction commencement.* • *Monthly and cumulative waste reports from contractors demonstrating compliance.* • *Attendance records showing that at least 95% of site workers completed sustainability training.*	
Points Available	*2*
Points Achieved	*2*

Responsible Resource Management	
***Aim**: To ensure responsible management of operational waste streams by implementing effective collection, storage, and disposal strategies.*	
Credit Criteria • *Development and implementation of an Operational Waste Management Plan (OWMP).* • *Provision of dedicated waste storage areas with clearly marked collection points.* • *Sign-off from a waste specialist or contractor verifying compliance.*	
Response • *A site-specific OWMP has been prepared, outlining waste collection, recycling, and disposal strategies.* • *Dedicated waste storage areas have been designated, with bins labelled for various waste streams.* • *A licensed waste contractor has been engaged, and compliance reports confirm adherence to Green Star requirements.*	
Design Evidence • *OWMP document detailing collection processes and storage requirements.* • *Architectural drawings highlighting waste storage locations.* • *Confirmation of waste collection agreements with licensed contractors.*	
Construction Evidence • *Waste collection reports verifying appropriate segregation and disposal.* • *Compliance verification statement from the waste contractor.* • *Photographic evidence of dedicated waste storage areas.*	
Points Available	*1*
Points Achieved	*1*

5.3 Appendix C – Alternative ESD Framework Verification

Alternative ESD Verification and Compliance schedule

Project name: William Clarkes College Redevelopment

Date/revision: xxxxxxx

Credit	ESD Pathway Commitment (Design Initiative)	Recommended evidence to demonstrate compliance	Points Available	RESPONSIBILITY			Documentation Status	Complaint at Pre-construction Review? Y/P/N	Can Achieve Compliance Post Construction? Y/P/N	Contractor's ESD consultant comments	Actual Evidence This evidence needs to show that the requirement from column C has been met	INDEPENDANT SUSTAINABILITY VERIFICATION REVIEW		
				Client	Design / Project Team	Contractor						Design Check Is the project compliant? Y/P/N	As Built Check Is the project compliant? Y/P/N	Independent ESD Consultant comments
Responsible Construction – Environmental management during construction	Builder to operate under a certified Environmental Management System (ISO 14001).	**ISO 14001** certification certificate for contractor and/or EMS audit report.	1			Y	Outstanding	P	Y					
	Project-specific Environmental Management Plan (EMP) covering waste, erosion, noise, etc.	Approved **Construction Environmental Management Plan (CEMP)**.				Y	Outstanding	P	Y					
	Ongoing site audits for compliance with EMP (waste diversion, pollution control).	**Waste management records** showing ≥80% construction/demolition waste diverted from landfill.				Y	Outstanding	P	Y					
	Training logs and /toolbox talk records to ensure 95%+ of site workforce received sustainability training.	**Training attendance records** and training material (toolbox talks, induction) demonstrating ≥95% site personnel training receive training.				Y	Outstanding	P	Y					
		ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review				Y	Outstanding	P	Y					
Verification and Handover – Comprehensive metering, commissioning and building handover for performance	– Engagement of independent commissioning agent to oversee building services commissioning (HVAC, lighting, etc.).	**Commissioning agent report** verifying all systems tested and balanced as per design. For design review, Commissioning plan will be provided.	1			Y	Outstanding	P	Y					
	Commissioning and Tuning - The project team must set environmental targets, perform a service and maintainability review and design for air tightness prior to construction; Commission the building, engage building tuning service provider and test airtightness during construction; tune the building over the next 12 month after practical completion.	**Handover documentation** including Building User Guide, Maintenance Manuals, and a tuning schedule.				Y	Outstanding	P	Y					
	Building Information, The project team must provide operations and building maintenance information for all nominated systems to the designated representative and must develop a building logbook.	**Training records** for facilities management staff on building systems and sustainability features.		Y		Y	Outstanding	P	Y					
	Metering and Monitoring - The building must have accessible energy and water metering for all common uses, major uses, and major sources. The meters must be connected to monitoring system capable of capturing and processing the data produced by the meters.	**Plan drawings and Schematic drawings** showing the location of all energy and water meters in the project and associated energy and water uses.					Outstanding	P	Y					
		ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review			Y	Y	Outstanding	P	Y					
Operational Waste Management – Facilities and planning for ongoing waste minimisation	MANDATORY REQUIREMENT - Development of an Operational Waste Management Plan (OWMP) for the school (recycling, organics, general waste streams).	**Operational Waste Management Plan** document with site plans referencing.	•			Y	Outstanding	P	Y					
	MANDATORY REQUIREMENT - Collection of Waste Streams, The building must provide bins or storage containers to building occupants to enable them to separate their waste. The bins must be labelled and easy to access, and evenly distributed throughout the building.	**Architectural plans** highlighting waste storage room/areas and bin provisions.			Y		Outstanding	P	Y					
	MANDATORY REQUIREMENT - Dedicated Waste Storage Area, A dedicated waste storage area, for the storage and collection of the applicable waste streams must be provided.	**Service contract or letter** from waste collection contractor confirming service for separated waste streams.			Y		Outstanding	P	Y					
	MANDATORY REQUIREMENT - Sign-off by Waste Specialist and/or Contractor, The waste Specialist and/or contractor must sign-off on the designs to confirm they are adequately sized and located for the safe and convenient storage and collection of the waste streams identified.	**Photographic evidence** of built waste storage area with labeled bins (post-construction).				Y	Outstanding	P	Y					
		ESD Compliance Letter that all items were designed and / completed per framework requirements depending on stage of submission for review		Y		Y	Outstanding	P	Y					
Responsible Structure – Encouragement of of reponsible practices for structural systems production	Optimise structural design to reduce environmental impact and select products within recognised responsible initiatives. 50% of all structural components (by cost) meet a Responsible Products Value of at least 10.	**Statement** from contract manager confirming total cost of the structure	5			Y	Outstanding	P	Y					
		Responsible Products Value Calculator - evidence that the targeted percentage has been met for the building structure e.g. spreadsheet calculation			Y	Y	Outstanding	P	Y					
		Material specifications for structural concrete and steel compliant with recognised certifications			Y		Outstanding	P	Y					
		ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review			Y	Y	Outstanding	P	Y					
Responsible Finishes –Encouragement of of reponsible practices for finishes materials production	Optimise finishes to reduce environmental impact and select products within recognised responsible initiatives	**Materials schedule** highlighting all finishes with confirmation of low-VOC content (paints, sealants compliance certificates meeting Green Star thresholds)	2			Y	Outstanding	P	Y					
	Specification of interior finishes (paints, adhesives, floor coverings, joinery) that are low in volatile organic compounds (VOCs) and free of toxic additives (formaldehyde, PVC where possible).	**Product certificates** (GreenGuard, GreenTag, FloorScore, etc.) for flooring, adhesives, composite wood (showing no/low formaldehyde).			Y	Y	Outstanding	P	Y					
	Preference for finishes with eco-certifications or recycled content (e.g. recycled carpet tiles)	**Contractor's finish compliance report** verifying all installed finishes meet the specified criteria (to be included in the As-Built ESD report).			Y	Y	Outstanding	P	Y					
	• 40% of all internal building finishes (by cost) meet a Responsible Products Value of at least 7. In conjunction with the Credit Achievement: • 10% of all internal building finishes (by cost) meet a Responsible Products Value of at least 12 or • 60% of all internal building finishes (by cost) meet a Responsible Products Value of at least 7.	**ESD Compliance Letter** that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review			Y	Y	Outstanding	P	Y					
Clean Air (Indoor Air Quality) – Ensure adequate fresh air and pollutant control	MANDATORY REQUIREMENT - Levels of indoor pollutants are maintained at acceptable levels.	**Mechanical ventilation report** or calculations showing 50% increase in fresh air provision above AS 1668.2:2012 / provision of C02 sensors compliant to maintain carbon dioxide (CO2) levels at or less than 800ppm with performance based approach.	•		Y		Outstanding	Y	Y					
	MANDATORY REQUIREMENT - A high level of outdoor air is provided.	**Marked up Mechanical drawings** for each ventilated space, and demonstrate minimum separate distances between pollution sources and outdoor air intakes compliance with Appendix F of ASHRAE 62.1:2013.			Y	Y	Outstanding	Y	Y					
	MANDATORY REQUIREMENT - Pollutants entering the building are minimised.	**Extracts from the Environmental Management Plan** that specify ventilation cleaning and outline: 1. Standard adopted for ductwork cleaning 2. how ductwork has been cleaned in accordance with the standard. Where no ductwork exists in the building, provide evidence.				Y	Outstanding	Y	Y					
		HVAC commissioning records confirming ventilation systems meet design intent for air exchange rates / commissioning plan				Y	Outstanding	P	Y					
		ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review				Y	Outstanding	P	Y					
Light Quality – Access to daylight and quality electric lighting	Lighting within the building meets minimum comfort requirements.	**Lighting design submittals**: demonstrating that installed lighting meet have a minimum Colour Rendering Index (CRI) 85 or higher, in all internal and external applications. **Isolux plot drawings of installed lighting**, maintained Illuminance values must achieve a uniformity of no less than that specified in Table 3.2 of AS/NZS 1680.1:2006, with a maintenance factor method as defined in AS/NZS 1680.4	2		Y	Y	Outstanding	P	Y					
	Good lighting levels suitable for the typical tasks in each space are available.	**Daylight simulation report** indicating the percentage of floor area achieving target daylight levels of 40% compliance (e.g. daylight autonomy or daylight factor) and confirming glare control measures.			Y		Outstanding	P	Y					
	The building provides adequate levels of daylight.	**Glare control details** (drawings or specs for shading devices, blinds). Lighting product data sheets of the as installed lighting showing Bare light sources are fitted with baffles, louvers, translucent diffusers, ceiling design, or other means that obscures the direct light source from all viewing angles of occupants, including occupants looking directly upwards. Alternatively, Lighting product Manufacturer's data sheets for LED luminaires showing the Unified Glare Rating (UGR), as estimated from the manufacturers data sheets for a standard room, must not exceed the maximum values listed in Table 8.2 of AS/NZS 1680.1:2006.				Y	Outstanding	P	Y					

Alternative ESD Verification and Compliance schedule

Project name: William Clarkes College Redevelopment

Date/revision: xxxxxxx

	Credit	ESD Pathway Commitment (Design Initiative)	Recommended evidence to demonstrate compliance	Points Available	RESPONSIBILITY			Documentation Status	Complaint at Pre-construction Review? Y/P/N	Can Achieve Compliance Post Construction? Y/P/N	Contractor's ESD consultant comments	Actual Evidence This evidence needs to show that the requirement from column C has been met	INDEPENDANT SUSTAINABILITY VERIFICATION REVIEW		
					Client	Design / Project Team	Contractor						Design Check Is the project compliant? Y/P/N	As Built Check Is the project compliant? Y/P/N	Independent ESD Consultant comments
HEALTHY			**Lighting commissioning results** or measurements in representative spaces / commissioning plan				Y	Outstanding	P	Y					
			ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review				Y	Outstanding	P	Y					
	Acoustic Comfort – Low noise and good acoustics for learning environments	An Acoustic Comfort Strategy is prepared to describe how the building and acoustic design aims to deliver acoustic comfort to the building occupants	**Acoustic report** outlining required performance (RT60, noise criteria) and proposed constructions to achieve them. The Report must address the following requirements as per AS/NZS 2107:2016: - Quiet enjoyment space - Functional use of space - Control of intrusive or high-levels of noise - Privacy - Noise Transfer - Speech Intelligibility	2		Y		Outstanding	P	Y					
		Acoustic design to meet any three of the following requirements: • 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.	**Specification extracts** for acoustic materials (ceiling tiles NRC, wall absorptive panels, etc.).			Y		Outstanding	P	Y					
			Extracts from Commissioning Report/ Acoustic Testing Report detailing relevant measured noise levels and target noise levels, and that system has been commissioned and operates as intended by the design.				Y	Outstanding	P	Y					
			ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review				Y	Outstanding	P	Y					
	Exposure to Toxins – Minimal exposure to harmful materials	– Materials selection to eliminate or minimise toxins: e.g. no lead or asbestos, low formaldehyde composite woods, avoidance of ozone-depleting substances in insulation.	**Material Tracker** - Filled in at each stage by the head contractor with continual updates provided to the GSAP	2		Y	Y	Outstanding	P	Y					
		– All paints, adhesives, sealants, and flooring meet Green Star low-VOC limits; all engineered wood products meet low formaldehyde (E0 or Super E0) standards.	**Product certificates/safety data sheets** that demonstrate emissions levels and that it is tested under a recognised product certification scheme or recognised standard			Y	Y	Outstanding	P	Y					
		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.	**Invoices and proof of purchase** and **Bill of Quantities** to demonstrate costs of compliant materials				Y	Outstanding	P	Y					
		– Verification of submittals against these criteria prior to installation.	**Onsite testing Summary Report** outlining: - the TVOC concentration levels from the tested areas. - the formaldehyde concentration levels from the tested areas. -Testing was done in compliance with requirements and standards				Y	Outstanding	P	Y					
			ESD consultant / Contractor sign-off in report that all interior fit-out materials comply with the toxin-free criteria. - ESD Compliance Letter			Y	Y	Outstanding	P	Y					
	Amenity and Comfort – Dedictaed Amenity Rooms	• The building has an amenity room (parent room, relaxation, meditation, prayer or exercise room). The room is at least 1m2 per every 10 staff or occupants and is no smaller than 10m2. In addition, the room(s) must meet the following: • Credit Achievement for the Light Quality credit • Credit Achievement for the Acoustic Comfort credit • The 'Equal access to the building' criterion of the Design for Inclusion credit.	**A narrative describing the various rooms.**	2		Y		Outstanding	P	Y					
			As built drawings showing the location and size of the rooms.			Y		Outstanding	P	Y					
			Evidence that the rooms comply with the Light Quality and Acoustic Comfort credits.			Y		Outstanding	P	Y					
			Evidence that the room complies with the 'Equal access to the building' criterion of the Design for inclusion credit.			Y	Y	Outstanding	P	Y					
			ESD Compliance Letter summarising compliant areas and stating how they meet the requirements				Y	Outstanding	P	Y					
	Biophilic Design (Connection to Nature) – Connection to natural environment for occupants	Integration of biophilic elements: views to outdoors/nature from classrooms, indoor plants or green walls, natural material finishes that create a connection to nature.	– **Floor plans or interior design drawings** highlighting areas with direct outdoor views and any indoor planting/green features.	1		Y		Outstanding	P	Y					
		Landscape design providing outdoor learning and recreation spaces with vegetation accessible to students.	– **Landscape plan** illustrating greenery visible from building interiors (e.g. tree positions relative to windows, courtyard gardens).			Y		Outstanding	P	Y					
		• The building provides views and at least 60% of regularly occupied areas must have a clear line of sight to a high quality internal or external view. • 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.	**Marked up drawings** showing the location of plants in the space, including calculations showing total soil surface area			Y	Y	Outstanding	P	Y					
			Photographic evidence after construction of implemented biophilic features (e.g. planted courtyards, green walls, natural material use in interiors).				Y	Outstanding	P	Y					
			ESD Compliance Letter summarising % compliant areas and stating how the allocated areas are made accessible with the necessary infrastructure to allow the activity to occur. It must also summrise how the biophilic elements are integrated and the calcualtions for compliant areas			Y	Y	Outstanding	P	Y					
RESILIENT	**Climate Change Resilience** – Design for future climate and weather extremes	Climate risk assessment workshop conducted (considering future temperature increases, extreme weather events, bushfire risk, flooding, etc.) and identification of high risks to the project.	**Climate risk assessment report** (and pre screening checklist) listing risks	0		Y		Outstanding	P	Y					
		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.	**Signoff** to complete the checklist provided in the OneDrive link to show as evidence and get it signed off by project leadership and share with wider			Y		Outstanding	P	Y					
		Implementation of adaptation measures: e.g. increased roof drainage capacity for intense storms, fire-resistant materials in bushfire-prone context, extra passive cooling strategies for heat waves.	**Statement from ESD consultant** and Contractor confirming that all measures have been informed to stakeholders - ESD Compliance Letter			Y	Y	Outstanding	P	Y					
	Heat Resilience (Urban Heat Island Mitigation) – Minimising urban heat island effect	– Coordination with local emergency services or council on making the facility available if needed, including provision of backup water/power in those areas.	**Roofing material specifications** indicating Solar Reflectance Index (SRI) values meeting high-reflectivity criteria.	1		Y		Outstanding	P	Y					
		– Inclusion of ample green cover: trees, grass, landscaped areas to provide shade and evaporative cooling on site.	**Site plan** indicating vegetative cover (percentage of site with landscaping) and any shading calculations for paved areas.			Y		Outstanding	P	Y					
		– Minimization of dark hardscapes and consideration of cool materials technology (cool pavement coatings, etc.).	**Urban heat island mitigation report** or calculation demonstrating reduction in heat absorption			Y		Outstanding	P	Y					
			As-built photos showing reflective roof and shaded areas from landscaping.				Y	Outstanding	P	Y					
			ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review				Y	Outstanding	P	Y					
	Upfront Carbon Emissions – Reducing embodied carbon of construction materials	Whole-building upfront carbon analysis (part of LCA) focusing on major materials (concrete, steel, glass) to quantify embodied GHG emissions.	**Embodied carbon report** (could be part of LCA) highlighting total upfront carbon (kg CO_2e) for the project vs a baseline and percent reduction achieved.	3		Y		Outstanding	P	Y					
		Strategies to reduce upfront carbon: high recycled content steel, low-cement concrete mixes, use of locally sourced materials to cut transport emissions.	**Material procurement records** showing use of lower-carbon options (e.g. mix designs from concrete supplier with %cement replacement, certification of recycled content steel).				Y	Outstanding	P	Y					
		Comparison of calculated upfront carbon to a reference case; target achievement of at least 40% reduction.	**Contractor letter** confirming implementation of specified low-carbon material intakes.				Y	Outstanding	P	Y					
			ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review				Y	Outstanding	P	Y					
	Operational Energy Use – Energy efficiency to reduce consumption	Detailed energy modeling (e.g. building simulation per NABERS Energy or Section J J1V2 protocol) to predict annual energy use of the new buildings.	**Energy model report** summarising proposed design vs reference case energy consumption, demonstrating the targeted improvement (% kWh reduction).	6		Y		Outstanding	P	Y					
		Design exceeding National Construction Code (NCC) Section J requirements by incorporating high-efficiency HVAC, LED lighting with controls (sensors, daylight dimming), efficient building fabric, etc.	**Building envelope specifications** (U-values, SHGC) and equipment schedules (HVAC COP/EER, lighting power densities) matching those used in the model to ensure consistency.			Y	Y	Outstanding	P	Y					
		Targeting a percentage improvement (e.g. 30% less energy than code-compliant reference).	**NCC Section J Compliance Report** showing full compliance or exceedance of energy provisions - J1V2			Y		Outstanding	P	Y					
			Post-construction: **Equipment commissioning sheets** verifying installed performance (e.g. HVAC test results).				Y	Outstanding	P	Y					
			ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review				Y	Outstanding	P	Y					

Alternative ESD Verification and Compliance schedule

Project name: William Clarkes College Redevelopment

Date/revision: xxxxxxx

	Credit	ESD Pathway Commitment (Design Initiative)	Recommended evidence to demonstrate compliance	Points Available	RESPONSIBILITY: Client	RESPONSIBILITY: Design / Project Team	RESPONSIBILITY: Contractor	Documentation Status	Complaint at Pre-construction Review? Y/P/N	Can Achieve Compliance Post Construction? Y/P/N	Contractor's ESD consultant comments	Actual Evidence (This evidence needs to show that the requirement from column C has been met)	INDEPENDANT SUSTAINABILITY VERIFICATION REVIEW: Design Check Is the project compliant? Y/P/N	INDEPENDANT SUSTAINABILITY VERIFICATION REVIEW: As Built Check Is the project compliant? Y/P/N	INDEPENDANT SUSTAINABILITY VERIFICATION REVIEW: Independent ESD Consultant comments
POSITIVE	**Energy Source (Renewable Energy)** – Use of low-carbon and renewable energy sources	Zero carbon action plan to be prepared - Quantify the building's scope 1 (including refrigerants) and 2 emissions between now and 2050 without any interventions, quantify the building scope 1 (including refrigerants) and 2 emissions in 2050 once all interventions have occurred and describe the changes the building is required to undertake to be climate positive as the distinct parts of the building's systems reach end of life	**Electrical design** including solar PV system details (array size, output) and expected contribution to annual energy (% of demand).	•		Y	Y	Outstanding	P	Y					
			Zero carbon action plan quantifying scope of emissions and how they will become cliamte positive												
		MANDATORY REQUIREMENT - Installation of on-site renewable energy generation (solar photovoltaic panels) sized to contribute significantly to the building's energy demand.	**Contract or agreement** for GreenPower or a power purchase agreement, if used, indicating the development will source a portion or all of its electricity from renewable sources.		Y			Outstanding	P	Y					
		MANDATORY REQUIREMENT - Purchase of GreenPower (certified renewable grid electricity) for any remaining grid electricity use to achieve net-zero carbon operation for a period or at occupancy.	**As-built photo or verification** of PV installation capacity.				Y	Outstanding	P	Y					
			Utility account setup documents showing GreenPower election (if applicable, post-occupancy).		Y				P						
			ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review		Y		Y	Outstanding	P	Y					
	Water Use – Reducing potable water consumption	MANDATORY REQUIREMENT - Implementation of water-efficient fixtures and fittings (taps, toilets, showerheads) with at least WELS 5-star or equivalent ratings. - Taps 5 star;Urinals 5 star ;Toilets 4 star; Showers 3 star; Clothes washing machine 4 star; Dishwashers 5 star	**WELS Certificates**	•		Y	Y	Outstanding	P	Y					
		MANDATORY REQUIREMENT - Rainwater harvesting system to collect roof water for reuse (e.g. in toilet flushing, irrigation of landscape). - If WELS requirements cant be met	**Plumbing fixture schedule** with flow rates/flush volumes meeting high efficiency standards.			Y	Y	Outstanding	P	Y					
		MANDATORY REQUIREMENT - Calculations of expected potable water reduction compared to a reference building (targeting e.g. ≥ 30% reduction). - If WELS requirements cant be met	**Rainwater tank details**: size, collection area, and connected uses (toilets, gardens), and commissioning report for the pump/system.			Y	Y	Outstanding	P	Y					
			Irrigation plan (if any) indicating water-efficient irrigation or use of non-potable sources.			Y	Y	Outstanding	P						
			ESD Compliance Letter that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review			Y	Y	Outstanding	P	Y					
	Life Cycle Impacts – Comprehensive reduction of life-cycle environmental impacts	– Conduct a whole-of-building Life Cycle Assessment (LCA) covering multiple impact categories (energy, water, materials, emissions) to identify and implement design improvements.	**Whole-building LCA report** (could be the aggregate of structure, envelope, and other components) showing the total impact of the building across its life cycle and quantifying improvements made (in % terms) over a baseline design.	2		Y	Y	Outstanding	P	Y					
		– Optimize design based on LCA results (e.g. material selection, longevity, recyclability) to reduce overall environmental footprint.	**Summary in ESD report** of key design decisions influenced by LCA (e.g. choosing option A over B for lower impact).			Y	Y	Outstanding	P	Y					
		– External peer review of LCA to validate results if seeking excellence.	– If applicable, **peer review statement** or verification letter for the LCA confirming it meets Green Star LCA credit requirements.			Y	Y	Outstanding	P	Y					
PLACES	**Movement and Place** – Sustainable transport and connectivity	• The building includes showers and changing facilities for building occupants. • The facilities are accessible, inclusive, and located in a safe and protected space.	**Marked up as-built drawings** showing the provision and location of changing facilities, and that they are in a safe and protected location, and drawings showing the number of showers and lockers	•		Y		Outstanding	P	Y					
			Sustainable transport Plan including a site-specific transport assessment			Y	Y	Outstanding	P	Y					
		Site design prioritises pedestrians and cyclists: inclusion of safe walkways, bicycle paths, and connectivity to public transport.	Manual calculations showing proximity to amenities			Y		Outstanding	P	Y					
		Provision of ample bicycle parking and end-of-trip facilities (secure bike storage, showers/change rooms for staff and students who cycle).	**ESD Compliance Letter** that all items for this credit were designed and / completed per framework requirements depending on stage of submission for review					Outstanding	P	Y					
PEOPLE	**Inclusive Construction Practices** – Equity and inclusion in construction phase	Mandatory Requirement - 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.	**Contractor's Inclusion Policy** or Diversity Plan submitted before construction.	1			Y	Outstanding	P	Y					
		In addition to the Mandatiry requirement • 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.	**Training register and letter of confirmation** showing training of 95% of all contractors and subcontractors present on site for at least 3 days in drug awareness, alcohol awareness, mental health, and diversity/racism/bullying policies above				Y	Outstanding	P	Y					
			Training certificates for cultural awareness or anti-discrimination training conducted with site staff.				Y	Outstanding	P	Y					
			Extracts from Training Policy/ Report from third party provider or similar detailing the process to manage training, and track workers trained				Y	Outstanding	P	Y					
			Final contractor report summarising outcomes in workforce inclusion and Evaluation report of the effectiveness of the training(to be included in As-Built ESD Report).				Y	Outstanding	P	Y					
	Indigenous Inclusion – Engagement and inclusion of indigenous communities	Reconciliation Action Plan, Where an organisational RAP has already been developed and endorsed, the project is required to adapt this to the project under certification. The project must provide an outcomes document detailing specific engagement, implementation and actions that have positively influenced the outcomes of the project.	**Extract from the Reconciliation Australia website** demonstrating that the project's RAP is endorsed by Reconciliation Australia	2	Y			Outstanding	P	Y					
			Reconciliation Action Plan (RAP), outlining: - any design elements that were informed by consultation undertaken with the local Aboriginal and Torres Strait Islander communities or nominated representatives. - Where an organisational RAP that has already been developed and endorsed was adapted for this project, provide the outcomes document detailing specific engagement, implementation and actions that have positively influenced the outcomes of the project.		Y			Outstanding	P	Y					
		Inclusion of Indigenous Design, the project team must demonstrate that the Australian Indigenous Design Charter guiding principles are incorporated in the design of the building	**Extract from indigenous engagement strategy** outlining: - how the project has been designed to acknowledge and recognise the indigenous culture of the site. - how engagement occurred from concept design and will continue through to operational handover.		Y			Outstanding	P	Y					
			Marked up as-built drawings or photographic evidence of incorporated designs			Y	Y	Outstanding	P	Y					
			Report outlining comparison against the four principles from the Australian Indigenous Design Charter - Indigenous Led - Community Specific - Impact of Design - Shared Knowledge (collaboration, co-creation, procurement)		Y			Outstanding	P	Y					
			- **Engagement log** detailing meetings or communications with Indigenous groups and any outcomes (e.g. design changes, cultural ceremonies).		Y			Outstanding	P	Y					
	Design for Inclusion – Accessible and inclusive design for all users	The building is designed and constructed to be inclusive to a diverse range of people with different needs.	**Accessibility design review report** from a certified accessibility consultant or Universal Design expert, confirming the design provides enhanced inclusive features beyond basic compliance.	2		Y		Outstanding	P	Y					
		– Going beyond minimum accessibility codes (DDA compliance) to adopt Universal Design principles. This includes features like step-free access everywhere, adult changing facilities for persons with severe disabilities, tactile signage, hearing augmentation in halls, etc.	**Drawings/specs** indicating inclusive design elements (locations of hearing loops, height of counters, types of playground equipment, etc.).			Y		Outstanding	P	Y					
		– Engagement with disability advocates or specialists in design phase to review plans for inclusivity.	**Photographic evidence** post-construction of installed inclusive features (e.g. adult change room, ramps, Braille signage).				Y	Outstanding	P	Y					
	Impacts to Nature – Minimizing ecological impact of development	– Ecological assessment of the site prior to works, identifying any existing flora/fauna values (e.g. mature trees, habitats) and measures to protect or relocate them.	**Evidence that 80% of the site has been retained:** – Narrative from Ecologist – As built drawings	2	Y	Y	Y	Outstanding	P	Y					
			Extracts from the Development Application		Y			Outstanding	P	Y					
			Ecological assessment report			Y		Outstanding	P	Y					
		– Site clearance minimized; any removed vegetation offset by replanting native species either on-site or off-site.	**Zoning Plans**			Y		Outstanding	P	Y					
		– Erosion and sediment controls in place during construction to prevent harm to surrounding land and waterways.	**Marked up as-Built drawings** indicating the location of all external luminaires and showing the aiming point and mounting orientation of all external luminaires				Y	Outstanding	P	Y					
			Extracts from commissioning reports showing that systems have been commissioned and operates as intended by the design.				Y	Outstanding	P	Y					

Alternative ESD Verification and Compliance schedule

Project name: William Clarkes College Redevelopment

Date/revision: xxxxxxx

	Credit	ESD Pathway Commitment (Design Initiative)	Recommended evidence to demonstrate compliance	Points Available	RESPONSIBILITY			Documentation Status	Complaint at Pre-construction Review? Y/P/N	Can Achieve Compliance Post Construction? Y/P/N	Contractor's ESD consultant comments	Actual Evidence This evidence needs to show that the requirement from column C has been met	INDEPENDANT SUSTAINABILITY VERIFICATION REVIEW		
					Client	Design / Project Team	Contractor						Design Check Is the project compliant? Y/P/N	As Built Check Is the project compliant? Y/P/N	Independent ESD Consultant comments
NATURE		• 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.	**Site Specific Wetland Management Plan**, outlining: - ongoing quarterly monitoring - Annual reporting - Management of the wetland ecosystems for a minimum of five years - Demonstrate that the plan was exhibited to the public on the applicant's website or the local council's offices or library for a minimum of 24 months.				Y	Outstanding	P	Y					
	Biodiversity Enhancement – Improving habitat and biodiversity on site	– Landscape design favoring endemic/native plant species to create or enhance habitat (aiming for a net gain in biodiversity).	– **Landscape plan and planting schedule** highlighting native species (with a percentage of natives vs exotics) and any specific habitat installations.	2				Outstanding	P	Y					
		– Inclusion of habitat features such as bird nesting boxes, pollinator gardens, water features for wildlife.	– **Biodiversity strategy memo** quantifying expected habitat value increase (for example, a simple biodiversity metric pre- vs post-development).					Outstanding	P	Y					
		– No invasive species in plant selections; maintenance plan for landscaping that supports biodiversity (no excessive use of chemicals).	– **Photographs** post-landscaping showing key biodiversity features (mature trees retained, new habitat elements installed).					Outstanding	P	Y					
	Waterway Protection – Protecting downstream waterways from pollution and flow impacts	– Implementation of Water Sensitive Urban Design (WSUD) features to treat stormwater runoff (raingardens, bioretention swales, gross pollutant traps) before water leaves the site.	– **Civil drainage plan** including WSUD features and stormwater detention calculations.	2				Outstanding	P	Y					
		– Detention or retention systems to prevent post-development stormwater flows from exceeding pre-development flows (mitigating flood risk downstream).	– **Stormwater quality modeling report** (e.g. MUSIC model) showing pollutant load reduction (targets like 80% reduction in Total Suspended Solids, 45% in Total Nitrogen/Phosphorus per NSW guidelines).					Outstanding	P	Y					
		– Monitoring of water quality leaving the site during construction (e.g. turbidity) and post-occupancy if required.	– **Erosion and sediment control plan** (construction phase) and evidence of its implementation (photos, logs).					Outstanding	P	Y					
			– **Commissioning report for WSUD** features (confirming plants in raingarden established, filters installed, etc.).					Outstanding	P	Y					

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