If a building becomes architecture, then it is art. Clearly, if a building is not functionally and technically in order, then it isn't architecture either – it's just a building.
Arne Jacobsen

Mechanical Engineering
Lighting Design
Sustainable Design
Electrical Engineering

Copenhagen
London
Sydney
Canberra
Hong Kong
New York

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SUSTAINABLE DESIGN

STEENSEN VARMING

Darlington Public School
Independent ESD Consultant Statement

Document Revision and Status

Date	Rev	Issue	Notes	Checked	Approved
24/11/23	01	ESD Statement of Compliance		NS	JP

Sydney November 24th, 2023
Ref. No. 207192

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1.0 Independent ESD Statement of Compliance

Steensen Varming was engaged as Independent ESD Consultant to undertake ESD verification of Darlington Public School (DPS), located on Golden Grove Street, Darlington, NSW.

The engagement is only relevant to state significant development projects in later stages of design or construction stage. As such, Darlington Public School (SSD 9914) has obtained approval from DPIE (Department of Planning, Industry and Environment) to meet condition E13 Ecologically Sustainable Development of SSD 9914 through an alternative ESD certification method, aligning with the ESD requirements in School Infrastructure New South Wales' (SINSW) Educational Facilities Standards and Guidelines (EFSG).
The alternative ESD certification pathway aims to demonstrate the project achieves the same level of ESD as a 4 Star Green Star benchmark, independently verified by the Independent ESD Consultant. The project is however not certified with Green Star.

The role of the Independent ESD Consultant is to verify the project has been delivered according to best practice sustainability design by reviewing the Contractor ESD Consultant's final documentation and confirm the design is in line with SINSW's ESD requirements.

The review was based on the following documentation submitted by the Head Contractor (AW Edwards) and the Contractor ESD Consultant (Introba):
- Sustainable Development Report
- ESD schedules
- Supporting documentary evidence

This report summarises the review of this documentation and constitutes the Independent ESD Statement of Compliance for Darlington Public School.

1.1 Alternative ESD Review Process

Preliminary ESD Schedules were completed by the Contractor ESD Consultant and submitted to the Independent ESD Consultant for review. A list of documentary evidence was then agreed between both parties, identifying the documentation that will be submitted to show ESD compliance.

The Contractor ESD Consultant then proceeded to complete the ESD schedules, including:
- Confirmation of implementation of ESFG requirement in project and noted departures from EFSG
- Alternative ESD certification process point score and confirmation of additional documentary evidence provided to meet point score requirements
- Confirmation that agreed documentary evidence has been collected
- A brief description of compliance against each requirement

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The Contractor ESD Consultant also provided:
- A Sustainable Development Report confirming that the project's design and construction complies with the ESD requirements as described in the completed ESD Schedules.
- Design Statements from the relevant consultants and contractors engaged by the Head Contractor confirming that their component of the project complies with the relevant ESD requirements.
- Supporting evidence documentation referenced in the ESD Schedules.

The Independent ESD Consultant reviewed the ESD Schedules and supporting evidence and provided comments to the Contractor ESD Consultant and Head Contractor on behalf of SINSW regarding compliance.

Once all outstanding issues were discussed and closed out, the ESD Schedules and supporting evidence were then updated as required by the Contractor ESD Consultant and issued to the Independent ESD Consultant for final review and inclusion in the ESD Statement of Compliance.

1.2 Summary of Documents Reviewed

The following documents were provided for the ESD compliance review.

- Sustainable Development Report by Contractor ESD Consultant (Introba, 23/11/2023)

Drawings, Schedules, Specifications, Design and Construction Reports, Design Certificates prepared by or on behalf of Head Contractor (AW Edwards), including from:
- Architectural
- Acoustics
- Civil
- Electrical
- Hydraulic
- Landscape
- Lighting
- Mechanical
- Security

1.3 Summary of Review Activities

The EFSG ESD Schedule and the ESD evidence documents provided by the Head Contractor (AW Edwards) and Contractor ESD Consultant (Introba) confirm that the design and construction of the project meets all the ESD requirements set out in the EFSG with no material departures, are complete and comply with the agreed ESD compliance reporting requirements for the project.

The EFSG ESD Schedule identifies some departures from the EFSG requirements in the ESFG Design Guides and notes the reason for departure.

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The Independent ESD Consultant (Steensen Varming) reviewed the referenced evidence documentation provided. No material deviations from the EFSG ESD Schedule were found.

1.4 Point Score Table

Steensen Varming has undertaken a review of the ESD performance of the project based on the information provided by the Contractor ESD Consultant and in accordance with the agreed alternative ESD certification method.

The methodology uses the Green Star Design & As-built rating tool to establish a benchmark against which the project response is compared. Using the alternative ESD certification process a minimum of 45 points is required. The breakdown of points achieved on the project based on the independent review is shown in the table below.

Category/Credit	Points Available	Points Achieved
Management	14	8
Indoor Environment Quality	17	10
Energy	22	4
Transport	10	6
Water	12	5
Materials	14	1
Land Use & Ecology	6	1
Emissions	5	1
Innovation	10	10
Total	**110**	**46**

1.5 Limitations

Steensen Varming's review is based on documentation and statements prepared by the Contractor ESD Consultant. Steensen Varming have not undertaken independent design calculations, analysis or modelling to confirm that the design complies with the EFSG, Building Code of Australia, Australian Standards or another relevant codes, regulations or client requirements.

Steensen Varming did not witness the construction or installation of any items listed in the EFSG schedule and was not present for any site inspections.

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1.6 Conclusion

An ESD performance benchmark for the design and construction of the project was established by comparing the EFSG ESD requirements to the credit compliance and points requirements of a 4 Star Green Star Design & As-Built v1.2 rating.

Based on this review the project's ESD performance meets the required benchmark using the alternative ESD certification method.

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1.7 Green Star Schedule

Crossover between SINSW requirements and Green Star - Design & As Built v1.3

Targeted Rating:		4 Star - Best Practice	4 Star - Best Practice
Points required for 4 Star Green Star rating		45	45
Points achievable from Green Star - Design & As Built v1.3		46	46
Safety Margin		1	1

Rating Achieved	4 Stars					SINSW's approach				checkpoint 2	Independent checkpoint 2
Green Star scheme											
Category/Credit	Code	Credit Criteria	Points Available	Aim	Compliance requirements	Points Targeted	Issues to demonstrate Green Star compliance	Equivalence to Green Star outcome	Consultant Responsible	SV/Integral/AWE 19/07/21	Is the project compliant at this stage? Y or N	Comments (22/7/22)
Management			**14**			**8**						
Green Star Accredited Professional (GSAP)	1.0	Accredited Professional	1	Recognises projects that engage a GSAP to support the Green Star certification process.	Appoint GSAP at all stages of the project, leading to certification	1	Green Star requires GSAP engagement from project inception. SINSW engages ESD consultant at SSDA stage typically	High				
Commissioning and Tuning	2.0	Environmental Performance Targets	Mandatory for this Credit	Recognises commissioning, handover and tuning initiatives for building services to operate at their full potential and as designed.	• Set environmental performance targets	-	Green Star requires targets to be project-specific. SINSW has targets that are general for each school type.	High				
	2.1	Services and Maintainability Review	1		Conduct a services and maintainability review during design and prior to construction and develop a 'Service and Maintainability Report'	1	Green Star requires a Services and Maintainability Review Report. SINSW documents this differently through a review and sign off process.	High				
	2.2	Building Commissioning	1		• Prepare commissioning plan and specification • Conduct air permeability testing	1	Green Star requires air permeability testing which is not conducted for SINSW projects as it is not appropriate for school building typology.	High				
	2.3	Building Systems Tuning	1		Commit to a tuning process for all nominated building systems including: • quarterly adjustments • measured first 12 months after occupation • review of manufacture warranties	1	Green Star requires a tuning plan is developed. SINSW uses AMUs to ensure optimum building performance following commissioning and handover.	High				
	2.4	Independent Commissioning Agent (ICA)	1		• Appoint an ICA from schematic design	-	Green Star requires engagement of an ICA from schematic phase.	Med				
Adaptation and Resilience	3.0	Implementation of a Climate Adaptation Plan	2	Recognises projects that are resilient to the impacts of a changing climate and natural disasters.	Engage a qualified professional to prepare a project-specific Climate Adaptation Plan (CAP) and implement recommendations into the design and construction.	-	Green Star requires different climate change scenarios are considered in the risk assessment studies. SINSW conducts extensive due diligence but rarely under climate changed scenarios.	Med				
Building Information	4.0	Building Information	1	Recognises projects that make available building information that facilitates understanding of building systems operation and maintenance requirements, and their environmental targets for optimised performance	• Provide operations and maintenance (O&M) information and log book to facilities management team and stakeholders, and • Provide building user information to all relevant stakeholders	1		High				
Commitment to Performance	5.1	Environmental Building Performance	1	Encourage building owners, building occupants and facilities management teams to set targets and monitor environmental performance.	Set, measure and report for at least 2 building performance metrics i.e. energy, water, waste and IEQ	1	Green Star requires targets to be project-specific. SINSW has targets that are general for each school type.	High				
	5.2	End of Life Waste Performance	1		Commitment to extend the life of the interior fitout or finishes to at least ten years.	-	This credit seems to be more relevant to building owner / tenant schemes.	High				
Metering and Monitoring	6.0	Metering	Mandatory for this Credit	Recognises the implementation of effective energy and water metering and monitoring systems	Install accessible meters to monitor building energy and water consumption. Meters must comply with the current National Measurement Regulations and NABERS rating protocol	-	Sub-metering as required in the credit is excessive for schools. Water is required to be submetered but not energy loads.	Low				
	6.1	Monitoring Systems	1		Auto monitoring system to capture, process and present data	0	The role of building manager does not exist in schools.	Med				
Responsible Building Practices	7.0	Environmental Management Plan (EMP)	Mandatory for this Credit	Rewards responsible construction practices that manage environmental impacts, enhance staff health and wellbeing, and improve sustainability knowledge on site	Develop and implement a best practice EMP	-		High				
	7.1	Formalised Environmental Management System	1		A responsible party for the site has a formalised approach to planning, implementing and auditing is in place during construction, to ensure conformance with the EMP	1		High				
	7.2	High Quality Staff Support	1		Promote mental and physical health of staff and train up in sustainability practices through on-site, off-site and/or online classes	0		Low				
Operational Waste	8A	Performance Pathway		Recognises projects that implement waste management plans that facilitate the re-use, upcycling, or conversion of waste into energy, and stewardship of items to reduce the quantity of outgoing waste.	Qualified waste auditor prepares and implements an Operational Waste Management Plan (OWMP) which is then reflected in design of building facilities	-		High				
	8B	Prescriptive Pathway	1		Project team to comply with the following: • separation of waste streams • dedicated waste storage area • access to waste storage areas must adhere to best practice	1		High				

Indoor Environment Quality			17			10						
Indoor Air Quality	9.1	Ventilation System Attributes	1	Recognises projects that provide high indoor air quality to occupants.	● Minimise outdoor air pollutants ● Design HVAC for ease of maintenance ● Clean prior to occupation ASHRAE Standard 62.1:2013 is referenced	0	Green Star requires access to both sides for maintenance which is typically difficult to achieve.	Low		AWE to check ductwork cleaning prior to occupation requirement is met in mechanical specifications or handover documents.		
	9.2	Provision of Outdoor Air	2		● 1 point - Outdoor air is provided at a rate 50% greater than min required by AS 1668.2:2012 or maintain CO_2 concentrations below 800ppm ● 2 points - Outdoor air is provided at a rate 100% greater than min required by AS 1668.2:2012 or maintain CO_2 concentrations below 700ppm ● Naturally ventilated spaces must meet the requirements of AS 1668.4-2012	0	Provision of outdoor air requirement is below Green Star requirements.	Med				
	9.3	Exhaust or Elimination of Pollutants	1		Sources of pollutants (printing, photocopying, cooking and vehicle) compliant with minimum emissions standards or be exhausted directly to outside	1		High				
Acoustic Comfort	10.1	Internal Noise Levels	1	Rewards projects that provide appropriate and comfortable acoustic conditions for occupants.	● Internal ambient noise levels no more than 5db(A) above lower figure in table 1 of AS/NZA 2107:2016 ● Compliance shall be demonstrated through measurement provided by a qualified acoustic consultant	1		High				
	10.2	Reverberation	1		● Reverberation time below max stated in table 1 of AS/NZS 2107:2016 ● Compliance shall be demonstrated through measurement	1		High				
	10.3	Acoustic Separation	1		Reduce noise transmission between enclosed spaces Rw of at least 35 for partitions with doors and at least 45 for partitions without a door	1		High				
Lighting Comfort	11.0	Minimum Lighting Comfort	Mandatory for this Credit	Recognises well-lit spaces that provide a high degree of comfort to users	Lights in the nominated area (all primary and secondary spaces) are Flicker-free lights and min Colour Rendering Index (CRI) of 80	-		High				
	11.1	General Illuminance and Glare Reduction	1		● Lighting levels and quality comply with the GBCA best practice guidelines and ● Glare is reduced	1		High				
	11.2	Surface Illuminance	1		Combination of lighting and surfaces improve uniformity of lighting	-		High				
	11.3	Localised Lighting Control	1		Occupants are be able to control the lighting in their immediate environment Example of immediate environment: ● open-plan office - light shone on the workstation ● residential unit - light hitting the work surface in the kitchen where food is prepared	-	This Green Star requirement is not relevant to classrooms but other spaces may have localised control.	Med				
Visual Comfort	12.0	Glare Reduction	Mandatory for this Credit	Recognises well-lit spaces that provide high levels of visual comfort to building occupants.	Reduce glare through a combination of blinds, screens, fixed devices, or other means	-		High	Note: This credit is targeted, but no pts are awarded (Prereq for 12.1 and 12.2) EC1-d			
	12.1	Daylight	2		● 1 point - 40% of the nominated area (all primary spaces) receives high levels of daylight ● 2 points - 60% of the nominated area (all primary spaces) receives high levels of daylight	1		High	EC1-c			
	12.2	Views	1		60% of the nominated area (all primary spaces) has a clear line of sight to a high quality internal or external view ● External View – A high quality external view must extend to the outside towards natural elements such as large bodies of vegetation, a body of water, frequent movement of (people, vehicles, or animals) or sky ● Internal View - A high quality internal view is defined as a view towards an area that is landscaped or contains a water feature, or an atrium	1		High				
Indoor Pollutants	13.1	Paints, Adhesives, Sealants and Carpets	1	Recognises projects that safeguard occupant health through the reduction of internal air pollutant levels.	● No paints, adhesives, sealants or carpets are used in the building; or ● 95% of all internal paints, adhesives, sealants and carpets meet total VOC limits	1	Too onerous to document	High				
	13.2	Engineered Wood Products	1		● No new engineered wood products are used in the building; or ● At least 95% of all engineered wood products meet formaldehyde emission limits	1	Too onerous to document	High				
Thermal Comfort	14.1	Thermal Comfort	1	Recognises projects that achieve high levels of thermal comfort.	80% of occupants satisfied - equivalent to PMV between -1 and +1	1		Med	EC1-m and -n	To be provided: ● Drawings ● Thermal comfort modelling report	Y	
	14.2	Advanced Thermal Comfort	1		90% of occupants satisfied - equivalent to PMV between -0.5 and +0.5	0		Med				

Energy			**22**			**4**						
Greenhouse Gas Emissions	15E.0	Conditional Requirement: Reference Building Pathway	Mandatory for this Credit and Certification	Encourages energy efficient buildings and the reduction of greenhouse gas (GHG) emissions associated with the use of energy in building operations.	Projects targeting: ● 4 Star - Proposed building must achieve 10% improvement on NCC Section J reference building. Equivalent to GBCA Benchmark Building ● 5 Star - Minimum points threshold = 3 points ● 6 Star - Minimum points threshold = 6 points	-		High				
	15E.1	Reference Building Pathway	20		Points awarded for emissions reduction: ● Building fabric relative to NCC Section J to Reference Building - 1 point for 5%, 2 point for 10%, 3 point for 15%, max. 4 point for 20% ● Proposed building relative to GBCA Benchmark Building - 1.6 point for 10%, 3.2 point for 20%, 4.8 point for 30%, 6.4 point for 40% etc.	3	SINSW projects able to achieve more points but 6 points is considered a conservative estimation.	High				
Peak Electricity Demand Reduction	16A	Prescriptive Pathway - On-site Energy Generation		Encourages the reduction of peak demand load on the electricity network infrastructure.	1 point - On-site electricity generation systems reduces the total peak electricity demand by at least 15%	-		High				
	16B	Performance Pathway - Reference Building	2		Project's predicted peak electricity demand has been reduced below that of a Reference Building: ● 1 point - 20% reduction ● 2 points - 30% reduction	1		High				
Transport			**10**			**6**						
Sustainable Transport	17A	Performance Pathway	10	Rewards projects that implement design and operational measures that reduce the carbon emissions arising from occupant travel to and from the project, when compared to a reference building. This also promotes the health and fitness of commuters, and the increased liveability of the location.	● The Travel Plan or Transport Plan must be developed by a suitably qualified transport professional ● Completion of the Sustainable Transport Calculator ● Most appropriate for suburban or regional projects	6	SINSW projects able to achieve more points but 6 points is considered a conservative estimation.	High				
Water			**12**			**5**						
Potable Water	18A	Performance Pathway	12	Encourages building design that minimises potable water consumption in operations.	Completion of the Green Star Potable Water Calculator that awards points based on water saving in comparison with a reference building	5	SINSW projects able to achieve more points but 5 points is considered a conservative estimation.	High				
Materials			**14**			**1**						
Life Cycle Assessment (LCA)	19A.1	Comparative Life Cycle Assessment (LCA)	6	Rewards projects that undertake conduct LCA and inform the design process or as-built outcome.	Whole building LCA is conducted and points are awarded based on reduction of environmental impact compared to reference building	N/A	This EFSG is not mandatory but a recommendation only and typically LCA is not done.	Low				
	19A.2	Additional Life Cycle Impact Reporting	4		LCA is used to inform improvements such as material selection and construction process improvement	N/A		Low				
Projects that choose to use the 'Life Cycle Assessment' credit may not use the 'Life Cycle Impacts' credit and vice-versa												
Life Cycle Impacts	19B.1	Concrete	3		Requires reduced use of Portland cement content, potable water and aggregates in concrete mixes.	-	This is a procurement decision that varies across projects.	N/A				
	19B.2	Steel	1		Requires reduced use of steel in building frame	-	This is a procurement decision that varies across projects.	N/A				
	19B.3	Building Reuse	4		Requires a percentage of the building façade or structure is retained.	-		N/A				
	19B.4	Structural Timber	3		Requires a percentage of the building structure is made of timber	-	This is a procurement decision that varies across projects.	N/A				
Responsible Building Materials	20.1	Structural and Reinforcing Steel	1	Rewards projects that include building materials that are responsibly sourced or have a sustainable supply chain.	Requires a percentage of the steel is sourced from a responsible steel maker	-	This is a procurement decision that varies across projects.	Low				
	20.2	Timber Products	1		95% (by cost) of all timber used is certified or reused	1		High				
	20.3	Permanent Formwork, Pipes, Flooring, Blinds and Cables	1		Requires that only sustainably produced PVC is used	-	This is a procurement decision that varies across projects.	Low				
Sustainable Products	21.0	Product Transparency and Sustainability	3	Encourages sustainability and transparency in product specification.	Requires a proportion of all materials used in the project to meet transparency and sustainability requirements.	-	This is a procurement decision that varies across projects.	Low				
Construction and Demolition Waste	22.0	Reporting Accuracy	Mandatory for this Credit	Rewards projects that reduce construction waste going to landfill by reusing or recycling building materials.	All waste contractors and waste processing facilities that provide waste management and reporting services must demonstrate compliance with *Green Star Construction and Demolition Waste Reporting Criteria*	-		Med				
	22A	Fixed Benchmark			90% of construction and demolition waste generated to be diverted from landfill or Less than 10kg/m^2 of GFA goes to landfill	-		Med				
	22B	Percentage Benchmark	1			0		Med		To be provided: ● Environmental Management Plan ● C&D waste report	Partial	Only 4 months of reporting provided, please provide for the duration of construction. Provide EMP.
Land Use & Ecology			**6**			**1**						
Ecological Value	23.0	Endangered, Threatened or Vulnerable Species	Mandatory for this Credit	Rewards projects that improve the ecological value of their site.	No critically endangered or vulnerable species or ecological communities were present on site at the date of site purchase or option contract	-		High				
	23.1	Ecological Value	3		Requires improving ecological value of the site	-		Med				
Sustainable Sites	24.0	Conditional Requirement	Mandatory for this Credit and Certification	Rewards projects that choose to develop sites that have limited ecological value, that reuse previously developed land, and that remediate contaminated land.	Site did not include old growth forest, prime agricultural land, wetland of high national importance or impact on matters of national significance	-		High				
	24.1	Reuse of Land	1		Requires that 75% of the site was previously developed land at the date of site purchase	-		High				

	24.2	Contamination and Hazardous Materials	1		Environmental site assessment concludes site is contaminated and is to be remediated prior to development	1		High				
Heat Island Effect	25.0	Heat Island Effect Reduction	1	Recognises projects that reduce the contribution of the project site to the 'heat island effect'.	75% of the total project site area comprises of elements to reduce heat island effect - vegetation, light colour roof, shading	0		Med		AWE to provide markup/calculation of areas showing compliance, together with roofing/landscape specifications.		
Emissions			**5**			**1**						
Stormwater	26.1	Stormwater Peak Discharge	1	Rewards projects that minimise peak storm water outflows from the site and reduce pollutants entering the public sewer infrastructure or other water bodies.	Post-development peak average recurrence interval (ARI) event discharge from site does not exceed pre-development	0		Med		AWE/Integral to check civil reports to show compliance.		
	26.2	Stormwater Pollution Targets	1		Additional point awarded for stormwater site discharge to meet GBCA pollution reduction targets	0		Med		AWE/Integral to check civil reports to show compliance.		
Light Pollution	27.0	Light Pollution to Neighbouring Bodies	Mandatory for this Credit	Rewards projects that minimise light pollution.	Requires that external luminaires meet Australian Standard to avoid light pollution to neighbouring development	-		Med				
	27.1	Light Pollution to Night Sky	1		Requires that external luminaires do not emit light pollution to the night sky above a given benchmark	0		Med		AWE to check whether external lighting modelling has been carried out, and meets the requirement.		
Microbial Control	28.0	Legionella Impacts from Cooling Systems	1	Minimise the impacts associated with harmful microbes in building cooling systems.	● Building naturally ventilated, or ● Has waterless heat rejection system, or ● Has water-based heat rejection systems that includes measures for Legionella control and Risk Management	1		High				
Refrigerant Impacts	29.0	Refrigerant Impacts	1	Encourages practices that minimise the environmental impacts of refrigeration and air conditioning equipment.	Requires use of refrigerants with low ozone depletion potential	-	This is a procurement decision that varies across projects.	Med				
Innovation			**10**			**10**						
Innovation Challenge	30D	Community Benefits	1	Encourages investment in infrastructure for use by the broader community, such as the incorporation of spaces that are publically accessible.	Requires a needs analysis of the surrounding community and a strategy for how the project will provide social/community benefits and consult with the broader community on the proposed plan.	1		High				
	30D	Integrating Healthy Environments	1	Supports high-performance, cost-effective and health-promoting project outcomes through an early analysis of the interrelationships among systems.	Requires an analysis of community health needs and to address those needs through implementation of adequate strategies	1		High				
	30D	RAP	1	Encourages organisations to take formalised steps to provide opportunities for Aboriginal and Torres Strait Islander peoples.	A reconciliation action plan endorsed by Reconciliation Australia is required	1		High				
	30D	Universal Design	1	Encourages projects to provide safe, equitable and dignified access for persons with disabilities.	Require to develop and implement an accessibility plan based on a needs analysis	1		High				
	30D	Amenity Space	1	Recognises the provision of high quality amenities for fitout occupants' use.	Require provision of high quality amenity space intended for use by staff or regular occupants suitable for their enjoyment. The size and qualities of the space are determined via a needs analysis.	1		High				
Global Sustainability	30E	Digital Infrastructure	1	Recognises projects that use digital infrastructure to create greater efficiencies in the connection of individuals with other people, goods, services, and information.	Require FTTP and Fixed wireless connectivity to be provided	1		High				
	30E	Green Cleaning	1	Rewards use of green cleaning services that prevent the use of contaminants that impact on indoor environment quality, occupant health and the natural environment.	The credit requires a green cleaning policy is developed and implemented	1		High				
Global Sustainability - Green Star - Communities v1.1	2.1	Site Planning and Layout	4	Recognises projects that undertake a design review process designed to facilitate sustainable urbanism.	Requires independent design review is undertaken against urban design themes to inform project design	4		High				
	2.2	Urban Design	4			4		High				
	3.1	Stakeholder Engagement Strategy	3	Recognises projects that develop and implement a comprehensive, project specific stakeholder engagement strategy early in the planning process.	The project has a Stakeholder Engagement Strategy prepared in accordance with specified requirements.	3		High				
	3.2	Strategy Implementation	3		The Stakeholder Engagement Strategy is being implemented and formal monitoring, evaluation and corrective action is	3		High				
	9.3	Healthy Places	1	Recognises projects designed and built in line with holistic active and healthy living principles.	Requires project to be designed to achieve five key principles around walkability, active and public transport, wayfinding, good public space design and social interaction.	-		High				
	12.1	Understanding Culture, Heritage, and Identity	1	Recognises projects that celebrate and incorporate the heritage, culture and historical context of the project site, supporting communities and places with the development of a sense of place and identity.	Requires that culture, heritage and identity of the project is investigated to inform the design and incorporate interpretation measures.	-		High				
	12.2	Enhancing Community Culture, Heritage, and Identity	2			-		High				
	14.1	Access to Fresh Food	1	Recognises projects where occupants have access to fresh food within walking distance	Requires access to fresh food in projects	1		High				
	14.2	Local Food Production	1		Requires the project has a strategy to integrate productive landscape within the landscape objectives for the project site.	1		High				
	15.0	Visibility	-	Recognises projects that take into consideration designing out crime principles.	Requires direct lines of sight to all public areas	-		High				
	15.1	Design for Safety	2		Requires incorporation of CPTED principles	2		High				

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1.8 EFSG ESD Schedule

Colour Scheme - Legend	
Approved EFSG Compliance	
Approved EFSG Departure	
Not Applicable to Project	

	PROJECT:	Darlington PS						Independent checkpoint 1	Independent checkpoint 1	Independent checkpoint 2	Independent checkpoint 2	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3
ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://cfdd.det.nsw.edu.au/welcome	EFSG	Crossover with GreenStar	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Is the project compliant at this stage? Y or N	Comments (updated 10/1/22)	Is the project compliant at this stage? Y or N	Comments (22/7/22)	Is the project compliant at this stage? Y or N	Comments (27/3/23)	Meeting notes (18/4/23)	Comments (17/7/23)	Comments (20/9/23)
EC1-a	Energy & carbon	EC1: Energy efficiency	**Improvement over NCC** All new facilities must be designed and built so that energy consumption is predicted to be at least 10% lower than if build to minimum compliance with National Construction Code requirements. The energy consumption reduction must be achieved without including renewable energy generation in the calculation.	DG02.03	DAB c15E.0 GHG Emissions Reduction - Conditional Requirement	1. Energy modelling report / Predictive energy modelling and thermal comfort assessment. Report needs to show at least 10% improvement of building over minimum NCC requirements; and 2. As-built evidence that model is an accurate representation of the building, e.g. drawings; and 3. Specifications / calculations supporting modelling inputs, e.g. window energy rating scheme certificates, calculated R-values of walls, roofs, etc. 4. As an alternative to 2 and 3 above, a Statement by energy modeller confirming that the model accurately represents the building.	Rev 4 ID: EC1-a	N	AWE - Statement to be provided detailing our intent to meet energy efficiency targets. SV: From meeting 17/11/21, it was understood that JV3 model will be provided end of project to show % reductions. Confirm statement will include these results?		Is there any interim feedback? High risk item, as if 10% is not achieved difficult to make changes to Stage 1.	Y	Report notes 'draft for comment'. Please provide final report. We would expect the GHG emissions and energy % reductions to be the same, for an all electric building. Domestic water is noted as electric not gas, in other documentary evidence provided. What is the main reason for such large % reductions in the proposed building heating/cooling?	Can be issued as final. 50% better on envelope, 50% on HVAC. Gas as 'default' for modelling. JV3 only carried out as part of EFSG - not NCC.	Same report rebadged as final.	
EC1-b	Energy & carbon	EC1: Energy efficiency	**Energy conservation** Design and construct all school buildings within the parameters specified in the: - NSW Public Works Energy Manual for Buildings - Building Code of Australia (BCA) Section J for Energy Efficiency The NSW Public Energy Manual for Buildings provides an energy-saving strategy by identifying aspects of the building and services where reductions in operating and maintenance costs can be made through proper selection of: - Building fabric - Insulation materials - Shading and ventilation - Services and control It also requires the formulation of an energy impact statement.	DG05.02	DAB c15 GHG Emissions Reduction	1) Section J report 2) Energy impact statement	Rev 4 ID: EC1-b Section J report is completed; Services contractor to provide statement of compliance with NCC 2019	Y	The intent of this credit is energy conservation. Will an energy model be provided as per EC1-a? AWE - Energy model will not be provided for this condition as per agreed evidence to be provided.								
EC1-c	Energy & carbon	EC1: Energy efficiency	**Daylighting** - Designers must seek to maximise natural daylight in all learning and administration spaces to reduce energy usage through windows and skylights - Including daylight sensors in rooms to reduce light output or turn off light when sufficient daylight is provided within the space - When the space is large and perimeter lighting is adjacent to windows, perimeter lighting is on a separate zone to make maximum use of daylight	DG2.3.1 DG12	DAB c15 GHG Emissions Reduction	1. Daylight modelling report demonstrating how natural daylight has been maximised in all habitable spaces; and 2. As built drawings demonstrating that the model accurately represents the building (i.e. window size and location; skylights installed, etc.); and 3. Specifications supporting inputs used in modelling (e.g. skylights and glass specs)	Rev 4 ID: EC1-c Project team will follow prescriptive (non-modelled) approach to deliver high quality daylight.				Please provide evidence of daylight harvesting lighting control. Provide representative sample rooms (including classrooms), with prescriptive daylight analysis.	Y	JV3 report does not meet the intent or the evidence required for this credit.	Daylight modelling has been carried out per Greenstar, as part of JV3. Will be sent over by Introba.	Daylight modelling report provided. Lighting control layouts provided with presence detectors in rooms, with daylight sensor capability.	
EC1-d	Energy & carbon	EC1: Energy efficiency	**Shading devices** On exposed facades subject to direct sunlight, external window shading has been considered as part of the building design	DG2.3.1	DAB c15 GHG Emissions Reduction	1. As built drawings	Rev 4 ID: EC1-d The inclusion of shading also reduces building energy; **ESD Consultant proposes this credit + previous justify claiming one (1) point for GS D&AB Credit 15**			Y							
EC1-e	Energy & carbon	EC1: Energy efficiency	**Lighting energy conservation** Lighting system must have timed or sensor feedback functionality for energy conservation	DG2.3.2	DAB c15 GHG Emissions Reduction	1. As built electrical drawings / statement from head contractor	Rev 4 ID: EC1-e			Y	As-built lighting control drawings include motion sensors (MS1, MS2) in majority of rooms. MS1/MS2 product data sheets provided.					
EC1-f	Energy & carbon	EC1: Energy efficiency	**Energy efficient lighting** - LED lighting must be installed - The design of the lighting systems and the selection of fittings is to be undertaken based on a Whole of Life approach - System must support sustainable design principles including reducing energy consumption - Use light sources lamps and control gear with a long life	DG2.3.1 SG63.01	DAB c15 GHG Emissions Reduction	1. As built electrical drawings	Rev 4 ID: EC1-f **ESD Consultant proposes this credit + previous justify claiming one (1) point for GS D&AB Credit 15**			Y						
EC1-g	Energy & carbon	EC1: Energy efficiency	**Maximum illumination power densities** Section J part 6 of the National Construction Code provides tables that define the maximum illumination power density that is acceptable in various locations. This, and all other elements of Section J part 6 should be applied appropriately.	DG63.05.01	DAB c15 GHG Emissions Reduction	1) Lighting drawings 2) Lighting specifications / schedules 3) Lighting modelling report showing compliant power densities	Rev 4 ID: EC1-g	Partial	Provide NCC Section J 6 table demonstrating compliance power densities. Or statement from electrical/lighting designer that power densities are achieved.	Y	NCC S J6 table provided						
EC1-h	Energy & carbon	EC1: Energy efficiency	**Lighting control** The required communication protocol for the luminaires is DALI. The following systems for the control of luminaires fitted with DALI control gear are considered acceptable: - Diginet Rapix suite of products. - Clipsal C-bus suite of products - Philips Dynalite suite of products - KNX based systems Systems must be designed to be as simple as possible. This simplicity must extend from the topography to ease of use. It is a specific requirement that programming of any control system must be relatively simple and not limited to costly specialist consultants. Allowances should be made in system design specifications for user group training of control systems and for the programming of the system as part of the commissioning and hand over process. All equipment and manuals necessary to operate and maintain the system must be provided to the school and Asset Management.	DG63.06.01	DAB c15 GHG Emissions Reduction DAB c4 Building Information	1) Commissioning report 2) Confirmation from AMU that all relevant manuals have been handed over	Rev 4 ID: EC1-h		Partial	Lighting control drawings show Dali control zones, however lighting fixture data sheets do not highlight dimming. Please confirm Dali dimming is included. Are O&M manuals, with lighting control operation, available?	Y					
EC1-i	Energy & carbon	EC1: Energy efficiency	-Constant Light Output (CLO) systems consisting of dimming luminaires and light level sensors are highly recommended as they are effective in maintaining the required illuminance values. CLO systems ensure that the lit environment remains compliant at the lowest possible Watts per square metre for the reasonable operating life of the luminaires. Maintained illuminance values required for design compliance will result in areas being over-lit for a large proportion of their operating life without a CLO system. - Sensors can be fitted to each luminaire or by utilising sensors that control groups of luminaires. - Once in operation a CLO system delivers compliant light levels over the life of a system by reducing the light through dimming and ramping the levels up over the lifespan of the luminaire. These systems should be seamless and invisible in operation to users of the locations. - Daylight Harvesting can be delivered as a component of a CLO system and requires no additional hardware above and beyond that required for a CLO to operate. - Daylight harvesting is recommended in areas where there is a rapid transition from natural daylight to a dark environment, such as when entering a multi deck or underground car park from a street in full daylight, or in a classroom where daylight	DG63.06.02 DG63.06.03	DAB c15 GHG Emissions Reduction	1) Lighting drawings 2) Lighting modelling report showing compliant power densities	Mandatory Credit Revised to 'implemented' as CLO is included in classrooms	N		Partial	Lighting fixture data sheets do not highlight CLO dimming (assume on driver information). Please confirm CLO dimming is included.	Y					

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ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://cfsg.det.nsw.edu.au/welcome	EFSG	Crossover with GreenStar	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Independent checkpoint 1 Is the project compliant at this stage? Y or N	Independent checkpoint 1 Comments (updated 10/1/22)	Independent checkpoint 2 Is the project compliant at this stage? Y or N	Independent checkpoint 2 Comments (22/7/22)	Independent checkpoint 3 Is the project compliant at this stage? Y or N	Independent checkpoint 3 Comments (27/3/23)	Independent checkpoint 3 Meeting notes (18/4/23)	Independent checkpoint 3 Comments (17/7/23)	Independent checkpoint 3 Comments (20/9/23)
EC1-j	Energy & carbon	EC1: Energy efficiency	**Switching strategy** - Local switching should be provided where it is identified that the users can benefit from manual operation of the lighting and other lighting automation technology is considered cost prohibitive. The switching should be clearly marked and robust. - Achieve energy efficient switching in Schools by: The use of multiple switching groups Automatic control of these groups to operate as follows: Controlled luminaires are to automatically turn-off nominally 3 minutes after the bell sounds. Turn-off is to be in two steps other than in small rooms, one step after 3 minutes and the second group 2 minutes later (5 min). If the lighting is required for the next period, occupants of that room can prevent the lights turning off by pressing the ON switch/es after the bell sounds. The luminaires in each room can be turned off at any time by pressing the OFF switch/es. The off signal is to be capable of transmission at the end of normal school hours or at other selected times without the bells sounding, with the lighting turning off in two steps (other than in small rooms).	DG63.07 DG65.03.01	DAB c15 GHG Emissions Reduction	1) Electrical & lighting drawings showing switching groups and automatic controls	Rev 4 ID: EC1-j	Partial	Local switches and motion sensors provided to each room. Further information is required to understand how the lighting in spaces will be used. Overall lighting control strategy & dimming strategy not clear. Plans provide an indication of systems used but contol systems can't be understood from plans - Kerfoot File LSP Spec sheet?	Y	Lighting control group drawings and electrical specification for controls operation provided.					
EC1-k	Energy & carbon	EC1: Energy efficiency	**Energy efficient HVAC system** HVAC system must have timed or sensor feedback functionality for energy conservation Systems shall be designed to minimise energy consumption. System design / equipment selection is to be based on whole of life cost analysis. Specifically air conditioning equipment should: - support sustainable design principles including reducing energy consumption; and - be easily accessible and serviceable – easy to maintain with minimal impact on school operations / activities when maintenance is being performed. All new school buildings are to be designed to meet or exceed the requirements of building regulations for conditioned spaces	DG2.3.2 DG55 DG16.09	DAB c15 GHG Emissions Reduction	1. As built mechanical drawings / statement from head contractor; 2. Whole of life cost analysis demonstrating systems were selected based on WOL performance.	Rev 4 ID: EC1-k **ESD Consultant proposes this credit + previous justify claiming one (1) point for GS D&AB Credit 15**	Y	Mech Design Brief adresses HVAC controls for energy conservation & sensors.							
EC1-l	Energy & carbon	EC1: Energy efficiency	**Energy efficient appliances & equipment** Electrical equipment must be at least 0.5 stars above the market average star rating or comply with high efficiency standards specified in the GREP	DG2.3.3	DAB c15 GHG Emissions Reduction	1. Schedule of appliances and equipment with their star ratings or performance standards, signed by head contractor or architect. All appliances and equipment required in the GREP must be listed, incl air conditioning equipment, electric motors, transformers, etc.	Rev 4 ID: EC1-l AWE to coordinate between fjmt and Kerfoot	Partial	Some appliances in the FFE schedule are not showing the star rating or the rating is lower than the GREP	Partial	Architectural equipment schedule provided. Per GREP ratings: Compliant: fridge, washing machine Non-Compliant: Dishwasher, Dryer Mechanical/Electrical equipment not provided.	Y	No additional evidence provided.	AWE to provide mechanical equipment efficiencies. Other equipment will be noted as departure.	No additional evidence provided.	Dishswasher (non-compliant) & fridge (compliant) spec schedule provided. Contractor notes ducted FCUs do not fall under GREP, therefore only the split units for comms room are relevant. 9/10/23: comms room AC unit efficiencies provided. Updated dishwasher efficiency provided. 16/10/23: contractor notes that dishwashers and dryers on previous provided schedule are superceded.
EC1-m	Energy & carbon	EC1: Energy efficiency	**Heat loss/gain** Building/HVAC design must consider: - Climate/ micro-climate: This data must come from the current AIRAH handbook and where a specific area is not referenced in the handbook, the Bureau of Meteorology statistics must be utilised. - Orientation: exposure to sun(solar) and wind - Natural Ventilation and cross ventilation - Insulation, thermal capacity and time lag of building fabric. - Energy and Resources Cost: Initial and on-going, of heating and cooling. Reduced energy consumption provides future cost savings and a reduced carbon footprint. - Activities / Equipment that may produce excess heat. Energy modelling software must be used to determine heating and cooling loads as part of the Whole of Life analysis that must be undertaken. (i.e. Camel or Carnier).	DG04.01	DAB c15 GHG Emissions Reduction	1. Thermal modelling report 2. As built evidence demonstrating that model is an accurate representation of the building 3. Specifications/ calculations supporting modelling inputs	Rev 4 ID: EC1-m				Y				
EC1-n	Energy & carbon	EC1: Energy efficiency	**Passive design** The need for active cooling and heating shall be minimised by employing passive / sustainable design principles. Windows: The size and proportions of windows need to be carefully considered in the design to provide maximum efficiency and a balance between the ESD factors such as; maximising daylight in rooms but avoiding unnecessary solar heat gain and thermal loss etc. Roofing: The colour selected will have an impact on the thermal performance. Light colours will reflect more of the sun's heat and darker colours absorb more of the sun's heat, which will be transferred into the roof structure. Unless prevented by glare issues to surrounding development, light colours must be selected to reduce the thermal load from solar heating and contribute to heat island effect mitigation. Orientation (as close to True North as possible). With appropriate shading, this will provide a balanced approach to reducing summer heat ingress and encouraging solar warmth during winter. Appropriate glazing/ shading strategy (related to orientation and local environment), Depending on the climate, windows would be minimised on southern, eastern & western elevations with external shading on western and eastern facades). Use of thermal mass (to stabilise internal temperatures). Insulation: maximise insulation	DG55 DG06.02 DG27.12	DAB c15 GHG Emissions Reduction	1. Thermal modelling report 2. As built evidence demonstrating measures implemented to reduce need for active cooling / heating 3. Passive design report by Architect listing all passive design initiatives implemented	Rev 4 ID: EC1-n			Y	Passive design statement provided in P3-s, together with as-built drawings. EC1-a, when available, will further provide confidence this is achieved.					
EC1-o	Energy & carbon	EC1: Energy efficiency	**Ventilation strategy** A ventilation strategy must be developed to ensure that sufficient ventilation is provided to all spaces to meet the requirements of the BCA/NCC and associated standards. Specifically ventilation equipment must be designed from a whole-of-life perspective and: - Enable healthy learning environments with indoor air quality (IAQ) that supports learning and teaching (i.e. IAQ that is fit for purpose for schools) - Support sustainable design principles including reducing energy consumption - Be accessible and serviceable - easy to maintain with minimal impact on school use when maintenance is being performed	DG57.01	DAB c15 GHG Emissions Reduction	1) Cooling system strategy including WOL analysis - N/A 2) Concept plans - N/A 3) Construction drawings 4) Trade-based specification 5) As built drawings	Rev 4 ID: EC1-o	Partial	Provide as-built drawings showing accessibility.	Y						
EC1-p	Energy & carbon	EC1: Energy efficiency	**Natural ventilation** - Is required to all classrooms for comfort in summer and to maintain a healthy indoor environment. - Where cross ventilation may be restricted (i.e. where rooms are located on each side of a corridor, at least one whole wall of operable windows plus ceiling fans are required, to provide air movement. - Some windows need to be operable in driving rain and so must be protected with appropriately designed weather hoods, eaves overhang or other method of protection.	DG05.01	DAB c15 GHG Emissions Reduction	As built drawings demonstrating windows have been installed as required.	Rev 4 ID: EC1-p			Y	In classrooms: operable windows/doors on classrooms, with majority cross-vent. Upper floor includes operable roof windows, instead of cross-vent. Ceiling fans installed.					
EC1-q	Energy & carbon	EC1: Energy efficiency	**Mechanically assisted cross-ventilation** In two storey blocks where cross flow ventilation is not possible to the lower floor, mechanically assisted cross ventilation is to be provided to the lower floor learning spaces nominated in the EFSG. The ventilation system is to be sized to provide at least 7 air changes per hour. The system is to be thermostatically controlled to activate when room temperature exceeds 28 deg C and is to run continuously until the room temperature drops below 27 deg C. Additionally the system is not to be activated unless the outdoor temperature is lower than the indoor temperature and is to be immediately de-activated as soon as the outdoor temperature exceeds indoor air temperature. Provide programmable seven-day time clock and 0-2 hrs adjustable after-hour timer to control each mechanically assisted exhaust ventilation system.	DG57.18	DAB c15 GHG Emissions Reduction	As built mechanical drawings and specifications Extracts from commissioning report	Mandatory Credit This credit was not specifically targeted during the design phase, though operable windows are included. Project team does not the documentation requested as standard evidence. Flagged as a historical departure pre-construction			N - Agreed Departure	Departure's schedule does not referenced this credit. However, contractor ESD consultant advise this is an approved departure per SINSW.					

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ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://dtlgddstnsw.edu.au/welcome	EFSG	Crossover with GreenStar	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Is the project compliant at this stage? Y or N	Comments (updated 10/1/22)	Is the project compliant at this stage? Y or N	Comments (22/7/22)	Is the project compliant at this stage? Y or N	Comments (27/3/23)	Meeting notes (18/4/23)	Comments (17/7/23)	Comments (20/9/23)
EC1-r	Energy & carbon	EC1: Energy efficiency	**Ceiling void ventilation** Provide ventilation so as to remove hot air build-up in large enclosed roof spaces. Roof mounted turbo ventilators are an approved method. - The size and number of ventilators to be included will depend upon the volume and use of the individual rooms and the local climatic conditions to provide suitable air changes and room cross ventilation. - Provide a minimum of two roof ventilators to each Secondary General Learning Space or a Primary Home Base unless otherwise directed, or other number recommended by the manufacturer for the size of the space (whichever is the greater). - Ventilator throat diameter to be no less than 400mm.	DG05.02 DG37	DAB c15 GHG Emissions Reduction	As built mechanical drawings demonstrating ventilation has been installed as required.	Mandatory Credit This credit was not specifically targeted as there is no ceiling void in main spaces. Flagged as N/A	N/A										
EC1-s	Energy & carbon	EC1: Energy efficiency	**Roof ventilator control** Provide controls for the operation of the motorised dampers on the roof ventilators. Generally one switch is required for each space within the school where roof ventilators are installed	DG65.16	DAB c15 GHG Emissions Reduction	Mechanical / electrical drawings showing controls	Mandatory Credit This credit was not specifically targeted during the design phase, though operable windows are included. Project team does not the documentation requested as standard evidence. Flagged as a historical departure pre-construction .			N - Agreed Departure	Departure's schedule does not referenced this credit. However, contractor ESD consultant advise this is an approved departure per SINSW.						
EC1-t	Energy & carbon	EC1: Energy efficiency	School buildings can use wind powered roof ventilators with dampers to provide effective summer ventilation. Design to suit local ambient climatic conditions to ensure correct sizes, locations and numbers are provided for each particular application. Co-ordinate the locations of ventilators with the ceiling fans to achieve effective air movement. Fan assisted ventilators should also be considered on days of low wind Provide a wall mounted switch to open /close the damper.	DG57.14	DAB c15 GHG Emissions Reduction	As built mechanical drawings showing location of roof ventilators if installed	Mandatory Credit As above, project design documents include manually operable ventilators, but not automated ventilators Flagged as a historical departure pre-construction .			N - Agreed Departure	Departure's schedule does not referenced this credit. However, contractor ESD consultant advise this is an approved departure per SINSW.						
EC1-u	Energy & carbon	EC1: Energy efficiency	**Ventilation in sanitary spaces** - Greater air circulation than that required by building regulations is required, with sufficient natural ventilation or mechanical ventilation, to disperse odours and /or humidity. - Cross ventilation is to be used where possible. - Provide mechanical ventilation to all Disabled Toilets. - Operate the system by time control equipment (time switches or run-on timers as appropriate).	DG05.04 DG57.16	DAB c15 GHG Emissions Reduction	As built mechanical drawings demonstrating ventilation has been installed as required. - WAA	Rev 4 ID: EC1-u			Partial	Mechanical extract provied to sanitary spaces. Please highlight control operation of equipment.	Y					
EC1-v	Energy & carbon	EC1: Energy efficiency	**Ventilation in storage spaces** - Permanent air ventilation openings are to be provided (without compromising security), to prevent concentration of odours.	DG05.05	DAB c15 GHG Emissions Reduction	As built mechanical drawings demonstrating ventilation has been installed as required. - WAA	Rev 4 ID: EC1-v			Partial	Please highlight on drawings where this occurs.	Y	Please highlight storage spaces on drawings.	AWE to provide markup of storage spaces specifically.	Mechanical drawings provided, demonstrating mechanical ventilation to store rooms. Permanent ventilation openings not evident.	In general, stores have undercut doors or grilles.
EC1-w	Energy & carbon	EC1: Energy efficiency	**Ventilation in permanent learning spaces and libraries** Where feasible / practical: - Ceiling fans shall be installed where ceiling height is equal to or greater than 2,700mm. - Wall fans shall be installed where ceiling heights are less than 2,700mm	DG55	DAB c15 GHG Emissions Reduction	As built drawings demonstrating ceiling/wall fans have been installed as required. - Kerfoot	Rev 4 ID: EC1-w			Y	Power drawings provided do not provide evidence that fans are installed. However, electrical legend and lighting drawings provided elsewhere give sufficient evidence.						
EC1-x	Energy & carbon	EC1: Energy efficiency	**Indoor environment controls** - Both the thermal comfort and indoor air quality shall be controlled automatically within specified parameters. - Controls shall be simple and intuitive to use. - A prominent green light shall highlight to occupants when conditions are suited to opening windows and doors to utilise natural ventilation. - A prominent blue light shall highlight to occupants when the air conditioning is operating. - The lights shall be clearly labelled with traffic light labels as follows: + Green light – "External conditions are suited to opening windows and doors" + Blue light – "Air conditioning is operating. Windows and doors should be closed" - Temperature and CO2 sensors are to be installed within the space and be readily accessible for maintenance. - Sensors must be located so as to accurately record the actual room temperature and indoor air quality (CO2). - Controls shall be designed to minimise energy consumption – e.g.: by minimising over cooling and heating and automatically switching off when the space is unoccupied. - Controls shall be designed so that the system/s will shut down automatically if a room is unoccupied for greater than 10 minutes (except in specific cases such as designated computer rooms). - Controls shall be properly labelled and suitably located in the space (preferably near the light switch) and incorporate: + a key operated auto / manual / off switch; and + a push on / push off adjustable hour run timer. The run timer shall be adjustable from 1 to 4 hours and initially be set at 2 hours	DG55	DAB c15 GHG Emissions Reduction	1) As built evidence demonstrating controls have been installed as required. WAA 2) Commissioning report / statement by head contractor confirming controls have been set as required - AWE	Rev 4 ID: EC1-x			Y							
EC1-y	Energy & carbon	EC1: Energy efficiency	**Access for maintenance** All systems and equipment that is installed within a school is to be provided with suitable access to ensure that this equipment is safely and efficiently maintainable. In order to ensure that maintenance is available, on the completion of all buildings, drawings are to be provided showing the completed (As Built) building including all equipment and equipment access arrangements. **Communication services** DoE requires a 4 hour on-site training session for up to four persons on the use of the SCS. Training is to be accompanied by appropriate documentation and a video that demonstrates operation of the system and its components, including patching, cable management for voice, video and data of the SCS installed on site. Include explanation of detailed drawings left on site. The video / CD ROM may be generated from the on-site training for future use by DoE school staff. The Project Manager will, in consultation with the School Principal, nominate the timing of this session together with the number of attendees. Manuals are to be handed to the school during the training session. Include in copies of all cabling test reports and the (minimum) 20-year warranty certificate the manual. As built documentation and manufacturers warranty and test results are required **Building user's guide** Produce a Building User's Guide to enable the client to understand the building systems and operate systems to maximise efficiency. This must: - Clearly and concisely describe the operation of building and its services - Detail a reasonable maintenance program - Advise the user of the most suitable replacements for consumables	DG16.10 DG64.10 DG65.02	DAB c4 Building Information	1) As built drawings including all equipment access arrangements for maintenance 2) Training records 3) Operation manuals 4) Manufacturers warranties and cabling test reports 5) Building user's guide	Rev 4 ID: EC1-y			Partial	O&M manual pdf file is corrupted, please share again. Provide evidence of training on communications services.	Y	Provide evidence of training on communications services / SCS.	AWE to check. May be post-construction requirement ie not yet done.	No additional evidence provided.	O&Ms provided as building user's guide, as it covers elements required. Mechanical training record provided, contractor note training provided to all teams.
EC2-a	Energy & carbon	EC2: Scope 1 & 2 emissions	**Renewable energy** A grid connected solar PV system must be installed in line with DG66 requirements Where feasible, PV systems shall be installed to offset as much of the electricity consumed by the school as is practicable	DG2.3.4 DG55	DAB c15 GHG Emissions Reduction; DAB c16 Peak Electricity Demand Reduction	1) As installed drawings of PV system - Kerfoot 2) Energy modelling report showing renewable energy generation	Rev 4 ID: EC2-a			Partial	A large number of drawings have been provided. Please only provide drawings that relate to the credit, and highlight/bubble relevant areas. Drawings provided do not show as built PV system, or renewable energy generation.	Y				

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ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://efsg.det.nsw.edu.au/welcome	ref SG	Crossover with Green Star	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Is the project compliant at this stage? Y or N	Comments (updated 10/1/22)	Is the project compliant at this stage? Y or N	Comments (22/7/22)	Is the project compliant at this stage? Y or N	Comments (27/3/23)	Meeting notes (18/4/23)	Comments (17/7/23)	Comments (20/9/23)
EC2-b	Energy & carbon	EC2: Scope 1 & 2 emissions	**Battery Energy Storage System** A battery energy storage system shall only be designed in consultation with SINSW Sustainability sustainability.enquiries@det.nsw.edu.au	DG66.8.3	DAB c15 GHG Emissions Reduction; DAB c16 Peak Electricity Demand Reduction	1) As installed drawings of battery storage system	Mandatory Credit Battery systems are not appropriate for this site for the following reasons: - Load profile of the energy consumption on site does not align with typical optimal battery usage; -Sufficient power supply available at LV to site; -Confined space on site for batteries.	N/A								
EC2-c	Energy & carbon	EC2: Scope 1 & 2 emissions	**Heaters** Electric heating must be preferred over gas heating. Where gas heating is considered, it must be approved by SINSW Sustainability Heating equipment must be designed from a whole-of life perspective and: - Support sustainable design principles including reducing energy consumption and carbon emissions - Be accessible and serviceable - easy to maintain with minimal impact on school use when maintenance is being performed	DG56	DAB c15 GHG Emissions Reduction	1) If reverse cycle air conditioning is installed, confirmation that gas heaters are not installed, OR 2) Evidence that the gas heaters installed are energy efficient	Rev 4 ID: EC2-c Project is pursuing VRF system which provides electric heating, not gas heating. Certifier to confirm if this qualifies for achieving this credit			Y							
EC2-d	Energy & carbon	EC2: Scope 1 & 2 emissions	**Water heaters** - Hot water and tempered water generation for schools must be carefully considered to ensure that a Whole of Life assessment is undertaken to minimise life cycle costs and carbon emissions - Environmentally friendly options such as solar heating (if vandal resistant) and heat pumps are preferred energy sources to minimise energy consumption.	DG53.09	DAB c15 GHG Emissions Reduction	1. WOL cost assessment for hot water systems 2. Hydraulic drawings/schematics showing installed DHW systems	Mandatory Credit There was a push for instant electric; gas was considered and rejected.			Partial	Closed with hydraulics information. FFE schedule includes gas cookers, so assume there is gas to the site?	Y	Design drawing for electric water storage heater provided at ground floor.				
EC3-a	Energy & carbon	EC3: Scope 3 emissions	Transport plan	N/A	DAB c17 Sustainable Transport		Was flagged as N/A in previous versions of ESFG workbook and was not pursued			N/A	Departure's schedule does not referenced this credit. However, contractor ESD consultant advise this is an approved departure per SINSW.						
EC3-b	Energy & carbon	EC3: Scope 3 emissions	**Bicycle storage** Provide 1 space for every 20 students to AS2890.3 standard	SG552 4.36	DAB c17 Sustainable Transport		Rev 4 ID: EC3-b	Y		Y						
W1-a	Water	W1: Water use efficiency	**Potable water conservation** WATER CONSERVATION STRATEGIES must be implemented on school sites, including: Manual Flush Urinal Systems: New and replacement urinals must use manual in lieu of automatic flushing mechanisms. A microwave-activated urinal flushing system may be used as an alternative. Water Conserving Taps. Use metal flow control valves and /or push down taps with pre set flow limits. All new water-using appliances must be at least 0.5 stars above the average Water Efficiency Labelling and Standards (WELS) star rating by product type, except toilets and urinals, which must be purchased at the average WELS star rating. Refer to DG53.02 for specific rating requirements. Harvest Rainwater: Where practical, harvest roof water and connect to a pumped rainwater supply system to authorities' requirements for landscaped areas and toilet flushing	DG53	DAB c18 Potable Water	1. Schedule of fixtures and fittings showing type of urinals and taps installed are as required	Previous revision of credit had different language. Project does include water conserving taps Rev 4 ID: W1-a and W2-a	Y	No urinals in project. Rain water harvesting is in project. WELS comply: - Taps - Toilets							
W1-b	Water	W1: Water use efficiency	**Fixture efficiency** All products must be rated to AS 6400 to the following minimum WELS ratings: - Tapware to 5 star flow rating requirements - Showers to have 3 star flow rating requirements - Water Closet Pans to 4 star flow rating requirements - Flow restrictors can be used to minimise water usage and wastage for staff amenities - Taps with timed flow can be used to minimise water usage and wastage in student amenities. In any case, all new water-using appliances must be at least 0.5 stars above the average WELS star rating by product type, except toilets and urinals, which must be purchased at the average WELS star rating. Where WELS rating is not available, use the alternative Watermark rating scheme.	DG53.02 DG2.4.1	DAB c18B.1 Potable Water - Sanitary Fixture Efficiency	1. Schedules of materials, fixtures, fittings and equipment with WELS/Watermark ratings, demonstrating compliance and identifying those with flow restrictors and timed flow.	Rev 4 ID: W1-b	Partial	WELS comply: - Taps - Toilets Note, WELS do not comply: - Shower (noted that shower quality is poor with EFSG recommended shower rating) - Dish washer - Washing machine	Y	Per architectural schedule 30/03/2022, WELS comply: - Taps - Showers - Water Closets					
W1-c	Water	W1: Water use efficiency	**Hydraulic services** Hydraulic services should: - Support sustainable design principles including reducing water consumption and waste production. - Appropriately treat any trade waste to ensure minimal environmental impact - Be accessible and serviceable - easy to maintain with minimal impact on school use when maintenance is being performed - Use products with a long life span – many hydraulic services are concealed so durability is essential	DG51.01	DAB c18 Potable Water	1) Hydraulic report showing sustainability initiatives implemented to reduce potable water consumption 2) As built drawings showing trade waste arrestors	Rev 4 ID: W1-c	Y									
W1-d	Water	W1: Water use efficiency	**Water sub-metering** In addition to the main water meter for the site provide sub meters for the following: - Mixed irrigation systems - Laboratory buildings - Amenities blocks - Canteens - Any other major water use on the site	DG53.04		1) As built hydraulic drawings	Mandatory Credit Project design documents did not include water submeters Flagged as a historical departure pre-construction .			N - Agreed Departure	Departure's schedule does not referenced this credit. However, contractor ESD consultant advise this is an approved departure per SINSW.					
W2-a	Water	W2 – Proportion of potable vs non-potable water	**Rainwater collection** It is DoE policy to include roof water harvesting and tank storage in new schools and to encourage it where practical in existing schools, to reduce the demand on drinking water supplies. Tank water can connect to drip irrigation systems for adjacent landscape/gardens with the major preference being for gravity fed supply to minimise ongoing maintenance.	DG53.14 DG2.4.2 DG53.01	DAB c18B.2 Rainwater Reuse	1) As built hydraulic drawings showing tank connection to end uses and capacity	Rev 4 ID: W2-a			Partial	Please provide asbuilt hydraulics drawings showing rainwater system.	Y	Please provide asbuilt drawings showing rainwater system.	AWE to provide drawings.	Civil stormwater drawing notes 30,000L rainwater tank, hydraulics drawings show pump distribution for irrigation. Design compliant. AWE to provide as-builts (noted in email 5/6).	Signed off drawings provided.
W2-b	Water	W2 – Proportion of potable vs non-potable water	**Fire system water reuse** Where schools are required to install a sprinkler system for fire safety, it is recommended to install a closed loop system must be installed to capture and reuse fire systems testing and maintenance water, or by using an alternative non-potable water source.	DG2.4.2	DAB c18B.5 Fire System Test Water	Fire engineering report	N/A - The school is not provided with a fire sprinkler system therefore W2-b is not applicable	N/A								
W2-c	Water	W2 – Proportion of potable vs non-potable water	**Ground water** Where ground water is available for use for irrigation purposes in drought affected locations, enquiries must be undertaken with the Department of Planning, Industry and Environment to determine the suitability of a ground water system.	DG53.03	DAB c18 Potable Water	1. Relevant due diligence report / investigation	Mandatory Credit no free groundwater was observed in the bores during drilling for the short time that they were left open" (Section 6.1). Additionally, WS+P does not believe that the benefits of utilising ground water to irrigate would outweigh the costs of installing/maintaining this system.	N/A								

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	PROJECT:	Darlington PS																
ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://cfsg.dpie.nsw.edu.au/welcome	EFSG	Crossover with Green Star	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Independent checkpoint 1 Is the project compliant at this stage? Y or N	Independent checkpoint 1 Comments (updated 10/1/22)	Independent checkpoint 2 Is the project compliant at this stage? Y or N	Independent checkpoint 2 Comments (22/7/22)	Independent checkpoint 3 Is the project compliant at this stage? Y or N	Independent checkpoint 3 Comments (27/3/23)	Independent checkpoint 3 Meeting notes (18/4/23)	Independent checkpoint 3 Comments (17/7/23)	Independent checkpoint 3 Comments (20/9/23)
W3-a	**Water**	W3 – Responsible water discharge	**Stormwater management** Must aim to minimise the transportation of toxicants to waterways and other offsite environments, and maintain the existing hydrological regimes. Due diligence for flooding must be done early to inform building and landscaping design	DG2.4.3	DAB c26 Stormwater	Stormwater modelling report showing stormwater pollution and flows. Civil / Hydraulic drawings showing management measures. Water sensitive urban design report (if WSUD was use4)	Rev 4 ID: W3-a					Y				
W3-b	**Water**	W3 – Responsible water discharge	**Trade waste** Arrestors for acid, grease, plaster and clay of adequate capacity must be installed to treat wastewater from science laboratories, kitchens, art rooms and canteens as required in DG52.	DG52	Not covered in Green Star	1) As built drawings showing trade waste arrestors or 2) Letter by Hydraulic Engineer confirming arrestor have been installed as required	Rev 4 ID: W3-b			Partial	Confirm kitchens and canteens in the project do not require arrestors per DG52.	N - Agreed Departure	No additional evidence provided.	AWE to provide statement as to why not required in canteen.	No additional evidence provided.	Departure noted and agreed by team Nov 2021: on the basis that there is no preparation of hot food, no grease arrestor is being
WM1-a	**Waste & materials**	WM1: Materials selection and use	**Life cycle assessment (environmental)** Environmental impacts of products and materials has been assessed and inform material selection	DG01.03	DAB c19A - Life cycle assessment	Life cycle assessment report	Measure was flagged as recommended, not mandatory; project team is considering implementation	N/A								
WM1-b	**Waste & materials**	WM1: Materials selection and use	**Whole of life costing (WOL)** Total cost of ownership (TCO) assessment / Analysis of direct and indirect costs and benefits / Life cycle costing analysis When calculating the whole of life cost for the different materials / building elements or systems, the following must be considered: - the total initial capital cost of the system/s – including design, project management, builder and building services works in connections etc. - resources (energy and where applicable water) consumption. - Maintenance. - the replacement of component parts. - disposal costs - ecological sustainable options - durability - vandalism - safety The whole of life cost shall be calculated over the estimated life of the asset/s.	DG01 All design guides for selection of materials and building systems	GSC c20 - Return on Investment	Life cycle costing report for relevant system	Measure was flagged as recommended, not mandatory; project team is considering implementation	N/A								
WM1-c	**Waste & materials**	WM1: Materials selection and use	**Sustainable materials** Construction materials must be selected based on the following: - Adequately and economically perform their intended functions, and also have lower adverse environmental impacts throughout their life cycle (refer to DG 3) - Contain reduced or no hazardous substances (e.g. low VOC) to ensure effective indoor environmental quality. Reduce the demand for rare or non-renewable resources. - Have low embodied energy and water. - Are made from or contain recycled materials or can be reused or recycled at the end of their useful life.	DG02.05	DAB c21 Sustainable Products	Environmental Product Declarations of products / materials used; Product certificates (like GECA, FSC, et3) Suppliers' declarations confirming recycled contents in products Bill of quantities	Measure was flagged as optional, not mandatory; Sustainable materials will be specified where possible.			N/A	Credit is N/A, as Optional credit. Please re-instate the mandatory/optional/recommended etc. column into this matrix.					
WM1-d	**Waste & materials**	WM1: Materials selection and use	**Sustainable timber** - No rainforest timbers, or timbers from high conservation forests, are to be used unless plantation grown. Use only recycled timber, engineered and glued timber composite products, or timber from plantations or from sustainably managed regrowth forests that is FSC, AFS or PEFC certified - All timber used is to be termite (white ant) resistant or treated to be termite resistant to the appropriate hazard level.	DG2.5.1 DG21.05.01	DAB c20.2 Responsible Building Materials - Timber	1. Evidence of chain of custody 2. Bill of quantities	Rev 4 ID: WM1-d	Y								
WM1-e	**Waste & materials**	WM1: Materials selection and use	**Built for disassembly** Consider the use of building materials which are able to be disassembled for re-use, in conjunction with considerations for the addition and removal of accommodation over time.	DG02.07			Mandatory Credit EFSG notes 'consider' disassembly; disassembly was considered however project design is not overly conducive to disassembly. Flagged as a historical departure pre-construction .			N - Agreed Departure	Departure's schedule does not referenced this credit. However, contractor ESD consultant advise this is an approved departure per SINSW.					
WM1-f	**Waste & materials**	WM1: Materials selection and use	**Concrete** - Use materials complying with AS based on the Whole of Life approach to materials selection. - Do not use breccia or dolerite in concrete mixes. - Fly ash is a manufacturing bi-product that can be used as a cement replacement but should limited to a maximum of 20% by weight of cement content.	DG21.02	DAB c19B.1	Structural specifications and drawings Structural Engineer's report showing %cement replacement	Mandatory Credit Structural Engineer indicated this was not achievable based on budget. Flagged as a historical departure pre-construction .			N - Agreed Departure	Departure's schedule does not referenced this credit. However, contractor ESD consultant advise this is an approved departure per SINSW.					
WM2-a	**Waste & materials**	WM2 – Resource efficient school operations	**Operational waste** A waste storage area must be included in all new school sites. The provision of space must include source separation including bin stations and appropriate signage of waste and receptacles for multiple waste streams, including: - Organics - Comingled containers - Paper & cardboard - Container deposit scheme - Soft plastic - General waste Designers must refer to AS 4123.7 Mobile waste containers - Colours, markings, and designation requirements for further guidance on bin colour, waste stream and waste type. Safe methods for vehicle access and the transfer of waste must also be considered. For new and refurbished schools, an operational waste management plan (OWMP) must be developed to establish operational waste targets, identify opportunities for reuse and recycling in the operation of the facilities and make adequate provision for the facilities to accommodate for the OWMP. The OWMP must address all requirements from DG 2.7.2	DG02.07	DAB c8 Operational Waste	Operational waste management plan Operational waste reports showing diversion rates	Rev 4 ID: WM2-a	Y	Generally ok, OWMP provided. Please inlcude soft pastic within the recyclable bins. Awe - Plans updated to include soft plastics. Drawing Extract filed.	Y						
WM2-b	**Waste & materials**	WM2 – Resource efficient school operations	**Building flexibility** Position structural members considering the future flexibility of the structure. Avoid ad hoc placing of columns internally, giving preference to uniformity in layout. Design all internal walls as non-load bearing to enable future flexibility.	DG21.1.16	Not covered in Green Star	As built drawings or statement by relevant professional	Mandatory Credit Future proofing review did occur in the design stage for the expansion of the building; The building is a concrete framed structure, all internal walls are non-loadbearing and accordingly can be reasonably readily moved or removed.	Y								
WM3-a	**Waste & materials**	WM3 – Responsible management of waste	**Construction waste** Consider opportunities for re-use and recycling of materials in the construction phase	DG02.07	DAB c22 Construction and Demolition Waste	Construction waste reports showing percentage of waste re-used and recycled (diverted from landfill)	Rev 4 ID: WM3-a	Partial	Clear waste reporting document. Please resubmit when construction is finalized to check final percentage.	Partial	Only 4 months of reporting provided, please provide for the duration of construction.	Y			Reports up to May 2023 provided	
WM3-b	**Waste & materials**	WM3 – Responsible management of waste	**Operational waste** A waste storage area must be included in all new school sites, with the provision of space for the separation of waste and receptacles for multiple waste streams, including: - general rubbish, - co-mingled recycling, - paper and cardboard, - secure waste, and - green waste.	DG02.07	DAB c8 Operational Waste	As-built drawings showing location of waste storage area	Rev 4 ID: WM3-b	Y	Generally ok, please inlcude soft pastic within the recyclable bins. AWE - Soft plastics included within 'plastics' column. Email confirmation filed.	Y						
P1-a	**Place**	P1 – Green infrastructure	**Environmental conservation education** The design of the facilities provide unique and valuable environmental conservation learning opportunities and effective environmental modelling to the wider community.	DG02.06		Statement / Report by qualified ecologist	Mandatory Credit Noting there was no ecologist on site in design stage; rely on, landscape architect design statement	N	Evidence provided is a landscape accesibility certificate which doesn't clarify how this credit has been achieved.	Y	Architect design certificate noting compliance with DG90.6, which includes 'Educational Landscape'.					

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	PROJECT:	Darlington PS						Independent checkpoint 1	Independent checkpoint 1	Independent checkpoint 2	Independent checkpoint 2	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3
ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://cfsg.det.nsw.edu.au/welcome	EFSG	Crossover with Green Star	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Is the project compliant at this stage? Y or N	Comments (updated 10/1/22)	Is the project compliant at this stage? Y or N	Comments (22/7/22)	Is the project compliant at this stage? Y or N	Comments (27/3/23)	Meeting notes (18/4/23)	Comments (17/7/23)	Comments (20/9/23)
P1-b	Place	P1 – Green infrastructure	**Productive landscape** Consider including opportunities for development of community garden within the site and relationships with community groups for this to occur.	DG02.06	GSCc14.2 Local Food Production	Site plan demonstrating location and size of community garden	Rev 4 ID: P1-b	Y								
P1-c	Place	P1 – Green infrastructure	**Drinking water catchment protection** For developments within drinking water catchment areas, a water cycle management study is to be included with the Development Application for Education Facility developments involving: - Agriculture facilities - Biosolids and effluent re-use schemes - Sewerage systems or works (including package sewerage treatment plants) - Stormwater or works involving the disposal of untreated runoff	DG51.07	GSCc24 Integrated Water Cycle	1. Water cycle management study 2. Evidence that recommendations in the study have been followed / implemented	Mandatory Credit N/A - The site is not within drinking water catchment; Refer to Civil Concept Design Report for proposed water quality and water quantity control measures.	Y									
P2-a	Place	P2 – Community & heritage connections	**Site investigations for place making / community connections** The following detailed reports/ surveys/ information should be considered in developing the business case: - Local environment/ character - Climate and microclimate - Heritage significance / impact - Appraisal of physical and visual factors affecting site development - Available transport/ road infrastructure servicing the site - Geo-technical and Soil reports will be required for each site to investigate the suitability of the topsoil and anticipated sub-grade materials for horticultural purposes. - Testing for toxic residues must be undertaken in all areas identified as being a possible risk - i.e. filled or dumped ground.	DG03.02	GSCc12 Culture, Heritage and Identity DAB 24.2 Contamination and Hazardous Materials	1) Relevant reports/surveys developed (these ideally include recommendations for further development stages) 2) Evidence demonstrating recommendations / best practice solutions have been implemented/addressed.	REV 4 id: P2-a Credit met through targeted connection to indigenous history during design; documentation to provide history of engagement with local community	Y	Documentation provided covers culture heritage and identity. Pending site investigation reports & surveys AWE - Hazardous building materials assessment and management plan filed as requested.	Y							
P2-b	Place	P2 – Community & heritage connections	**Sense of place** The following design principles to every landscape zone of the school. - A healthy and safe landscape - A sense of place - A sustainable landscape - A low maintenance landscape	DG90.04	Not covered in Green Star	1) Landscape design report 2) Landscape drawings	REV 4 id: P2-b	Y								
P2-c	Place	P2 – Community & heritage connections	**Community use of facilities** Some school facilities are used out of hours for activities such as weekend church groups, sport events and public meetings. Liaise with the Project Director to gain an understanding of any shared use, or community use arrangements that are being considered for the site. New schools should be designed so that direct access to the open play space, fields , hall and gym can be achieved without the public gaining access to the buildings.	DG16.08	DAB c30B Community Benefits	1. Confirmation by the Architect that direct access has been provided to open space and any other facilities that could be shared with the community. 2) A list of community engagement activities undertaken to develop a community benefits strategy. 3) Plans clearly outlining how the outcomes from the community benefits strategy have been implemented in the project 4) Joint-use or lease agreements where already in place	REV 4 id: P2-c	Y	Community use has been included in the design. School will have to confirm if community access will be allowed.							
P2-d	Place	P2 – Community & heritage connections	Reconciliation action plan	N/A	DAB c30D Reconciliation Action Plan	1) DoE's Reconciliation Action Plan 2) Evidence of the project's relationship with the RAP, e.g. actions implemented in line with RAP, etc.	This was flagged as "N/A" in the previous V4 ESFG workbook			N/A	P2-a evidence contributes to intent of this credit. Please re-instate the mandatory/optional/recommended/N/A etc. column into this matrix.					
P3-a	Place	P3 – Welcoming learning spaces	**Daylighting** Maximise natural daylight in all habitable spaces to improve indoor amenity and create a pleasant environment.	DG2.3.1	DAB c12 Visual Comfort	1. Daylight modelling report demonstrating how natural daylight has been maximised in all habitable spaces; and 2. As built drawings demonstrating that the model accurately represents the building (i.e. window size and location; skylights installed, etc.); and 3. Specifications supporting inputs used in modelling (e.g. skylights and glass specs)	REV 4 id: P3-a				Provide sample rooms (including classrooms), with prescriptive daylight analysis.	Y	No additional evidence provided.	same as previous daylighting credit - daylight modelling now completed and will be provided.	Daylight modelling report provided.	
P3-b	Place	P3 – Welcoming learning spaces	**Daylight glare control** Discomforting glare and brightness contrasts must be avoided. Designers must seek to: - Exclude direct sunlight from all learning spaces, libraries, administrative offices and staff studies for the period of 9.00am to 3.30pm including Eastern Daylight Saving Time between 21st September to 21st March (equinoxes). - Exclude direct sunlight from desk level in all learning spaces between 9am and 3:30pm. Sun exclusion and glare control can be achieved by the use of elements such as; Sun shades, eave extensions, vertical blades and the like. Glare must only be controlled by blinds as a last resort. Designers must prepare sun diagrams in the design phase as a minimum requirement.	DG12 DG07.01	DAB c12.0 Glare Reduction	1. Daylight glare modelling report / sun diagrams showing direct sunlight has been excluded as required. 2. Drawings supporting inputs of model, showing location of blinds and any other glare control device	REV 4 id: P3-b	Y	How come this is noted as a departure? Appears compliant. Confirm there is no North façade and East façade is completely shaded/covered. Provide general layouts/elevations showing louvres. AWE - Evidence showing east and north façade coverage filed.	Y	In additions, installation of blinds blocking glare noted in sun study, is accepted in design issues register.					
P3-c	Place	P3 – Welcoming learning spaces	**Lighting comfort** - Consider the furniture layouts to determine the orientation of luminaires. Especially when positioning luminaires in Materials Technology spaces to ensure adequate illumination on machines and work surfaces; - avoid potential stroboscopic effects and avoid shadows from ductwork - Mount luminaires as high as possible, but generally no higher than 4000mm AFFL (excluding Gymnasiums and Halls), to improve luminance uniformity and reduce direct glare in the direction of normal view - The standard lamp colour temperature is 4,000°K, except in certain toilet areas where the Design Guide requires the use of blue colours - Compliance with the uniformity requirements of the applicable standard should be demonstrated by the presentation of the output from lighting design software. - Unified Glare Rating (UGR) must be calculated using design software and compliant with the maximum recommended in AS/NZS 1680.1:2006	DG63.03 DG63.03.05	DAB c11 Lighting Comfort	1) Lighting drawings 2) Architectural drawings 3) Lighting specifications / schedules 4) Product data sheets 5) Isolux plot drawings 6) Lighting modelling report showing compliant uniformity and UGRs	REV 4 id: P3-c			Partial	Isolux drawings/calcs provided only for storage rooms and external areas. Would expect similar checks to be done for typical classroom. Provide statement of compliance/summary for UGR calcs, showing compliance to AS 1680.	Y	Isolux drawings/calcs provided only for storage rooms and external areas. Would expect similar checks to be done for typical classroom. Please highlight within O&M manual which section complies to this credit.	AWE to check - should have been done.	Preliminary lighting calculations provided.	

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ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://cdsg.dpie.nsw.gov.au/welcome	EFSG	Crossover with Green Star	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Is the project compliant at this stage? Y or N	Comments (updated 10/1/22)	Is the project compliant at this stage? Y or N	Comments (22/7/22)	Is the project compliant at this stage? Y or N	Comments (27/3/23)	Meeting notes (18/4/23)	Comments (17/7/23)	Comments (20/9/23)
P3-d	Place	P3 – Welcoming learning spaces	**Lighting modelling** Lighting designs should be carried out utilising industry standard lighting design software such as AGI32, Dialux or Relux. Modelling must provide output that clearly demonstrates that the proposed design is compliant with the standards including but not limited to the following parameters: - Maintained illuminance values (average, maximum and minimum) on horizontal surfaces such as floors or working planes as required, broken down to identify the parameters defined in AS/NZS1680.4 or AS/NZS1158 as applicable - Maintained illuminance values (average, maximum and minimum) on vertical surfaces such as walls, shelves or racks as required, broken down to identify the parameters defined in AS/NZS1680.4 or AS/NZS1158 as applicable - Unified Glare Rating (UGR) as defined by AS/NZS1680; - Uniformity as defined by the applicable standard for indoor or outdoor illumination; - Lighting power density in System Watts/m2	DG63.03.02	DAB c11.1 General Illuminance and Glare Reduction	Lighting modelling report confirming compliance with required standards and parameters	Mandatory Credit REV 4 id: P3-c			Partial	Lighting modelling report or statement should accompany Isolux drawings/calcs, clearly demonstrating compliance with AS 1680.	Y	Isolux drawings/calcs provided only for storage rooms and external areas. Would expect similar checks to be done for typical classroom. Lighting modelling report or statement should accompany Isolux drawings/calcs, clearly demonstrating compliance with AS 1680.	AWE to check - should have been done.	Preliminary lighting calculations provided.	
P3-e	Place	P3 – Welcoming learning spaces	**External access lighting** External Access Lighting shall be provided to illuminate building entrances, footpaths, sheltered walkways, roadways and car park. External Access Lighting must: - Be minimal and designed to prevent glare to pedestrians, nearby residents and to motorists. Evidence of compliance with AS4282, AS/NZS 1158 and other applicable Australian Standards must be provided by the designer. - Be located so as to link various sources of illumination such as street lighting (for carpark and roadways) and internal security lighting (for footpaths, walkways and entrances). - Illuminate building entry doors. - Highlight 'accident-prone' areas such as changes in level, stairs and ramps. - Provide vertical illumination.	DG63.08.01	DAB c27.0 Light Pollution to Neighbouring Bodies	1) As built drawings indicating the location of all external luminaires 2) Letter by lighting designer describing glare prevention measures	REV 4 id: P3-e			Partial	Is there external lighting on the West façade building entrances? Design certificate provided with confirmation of compliance to AS 4282.	Y	No additional evidence provided.	AWE to provide statement confirmation.	Design Compliance Certificate provided confirms compliance with AS 4282.	
P3-f	Place	P3 – Welcoming learning spaces	**Thermal comfort** The inclusion of active cooling within school facilities is directed by the Department's Air Cooling policy: 2.1 Schools with a long term average mean maximum January temperature of 33 oC and above: Generally, air conditioning is to be provided to all school buildings. 2.2 Schools with a long term average mean maximum January temperature of below 33oC: Air conditioning is to be installed in all permanent learning spaces and libraries forming part of each projects scope. - Thermal modelling is undertaken to demonstrate that learning spaces and libraries have been designed to achieve a predicted mean vote (PMV) of +/- 0.5 for 95% of occupied hours	DG06.03 DGS5.01 DGS5.02	DAB c14 Thermal Comfort	1) Mechanical drawings showing HVAC systems installed, or 2) Confirmation from sub-contractors that services have been installed and commissioned as required; and 3) Modelling report showing required PMV is achieved. Modelling report to be done in line with methodology described in Draft thermal comfort and indoor air quality interim performance brief for DGS5	REV 4 id: P3-f	Y	Thermal modelling hase been undertaken to demonstrate that learning spaces and libraries have been designed to achieve a predicted mean vote (PMV) of +/- 0.5 for 95% of occupied hours							
P3-g	Place	P3 – Welcoming learning spaces	**Background noise levels** - HVAC systems shall be designed in accordance with the recommended internal noise levels noted in table 1 of DGS5.02. The noise levels are the result from the cumulative contribution of traffic noise (via the façade) PLUS the building air-conditioning /ventilation systems. The noise measurement and documentation must be provided by a qualified acoustic consultant and in accordance with AS/NZS 2107. Noise measurement must account for all internal and external noise including noise arising from building services equipment, noise emission from outdoor sources such as traffic, and (where known) noise from industrial process. Occupancy noise is excluded. Compliance shall be demonstrated through measurement, and the measurements shall be conducted in at least 10% of the spaces in the nominated area. The selection of representative spaces must be justified and must consider how the spaces are considered to be the most conservative with respect to both internal, and external noise sources. The range of measurement locations shall be representative of all spaces available within the nominated area. All relevant building systems must be in operation at the time of measurement. Projects less than 500m2 Gross Floor Area (GFA) must account for measurements conducted in at least 95% of spaces within the nominated area. - Enclosed circulation areas should be acoustically absorptive	DGS5.02 DG08.06	DAB c10.1 Internal Noise Levels	1. Road, rail, aircraft, industrial and rain noise assessment as per DG11.02 2. Report by qualified acoustics consultant demonstrating noise measurements are compliant.	REV 4 id: P3-g	Partial	Evidene of noise measurement in 10% of spaces to be provided.			Y	No additional evidence provided.	Mace to check if in scope.	No additional evidence provided.	Pulse White Noise Acoustics report provided, showing compliance through on-site noise measurements
P3-h	Place	P3 – Welcoming learning spaces	**Room-to-room noise control** The following elements have prescriptive acoustic performance or construction requirements: - Operable walls (between general learning areas, all schools): Rw 45 - Entry doors to occupied teaching, music, drama and sports spaces: Solid core, minimum 35 mm thick with acoustic weather (where external) seals on all rebated closing faces. Gap at floor to be minimized. - Internal glazed sections in walls and vision panels in or adjacent to internal doors: minimum 10.38 mm laminated glass. In some situations acoustic windows may be needed for satisfactory noise separation. - Construction separating wastewater pipework from occupied spaces: Rw 40 - Where adjacent to an occupied space (and not serving that space), hydraulic supply pipework and wastewater pipework shall be separated from the adjacent occupied space. Construction between the adjacent spaces in this instance shall be a 'staggered stud' arrangement or otherwise discontinuous.	DG11.05	DAB c10.3 Acoustic Separation	1. Detailed drawings including the acoustic design specification of openable walls, entry doors, internal glazed sections, etc. OR 2. Statement by a qualified acoustics consultant confirming compliance	REV 4 id: P3-h	Y								
P3-i	Place	Welcoming learning spaces	Generally noise emission to the environment from mechanical services noise sources (such as air conditioners) are the subject of a development consent conditions. In NSW the development consent conditions will refer to the Industrial Noise Policy (INP) or	DG11.04	Not covered in Green Star		REV 4 id: P3-i	Y	Pulse report notes that external noise emission has not been assessed (at that stage). Mechanical design statement	Y	Compliance assessment to SSDA conditions for external noise from mechanical plant provided.						
P3-j	Place	P3 – Welcoming learning spaces	**Acoustic post-occupancy evaluation** Post Occupancy evaluations are often undertaken to assess the performance of recently completed or existing facilities. Where a Post Occupancy Evaluation is to be undertaken it should be conducted by the project team or acoustic engineer and should be undertaken of selected acoustic parameters only. Evaluation may include: - Internal noise levels, - Room acoustics, - Noise emission, - Room-to-room acoustics performance	DG11.07	GSP c13 Internal Noise Levels	1. Commitment by SI to conduct acoustic post-occupancy evaluation	Optional Credit AWE to engage Pulse White Acoustics to undertake post-occupancy evaluation of certain areas.			Partial	Post-occupancy evaluation required.	Y	Evidence provided does not match credit. Credit is 'optional' in EFSG. Please confirm with SI whether acoustic post occupancy evaluation will be undertaken. Please include 'EFSG type' column in this schedule, to clearly identify which EFSG credits are mandatory/optional etc.	Mace to check if scope.	No additional evidence provided.	Pulse White Noise Acoustics report provided, showing compliance through on-site noise measurements
P3-k	Place	P3 – Welcoming learning spaces	**Low VOC-emitting materials** All surface coatings, and other volatile organic compound (VOC) emitting products including adhesives, sealants, carpets, carpet tiles, and carpet underlays, must be made from low-VOC emission materials. Paints must meet the limits stipulated in the Australian Paint Approval Scheme's (APAS) VOC limits for low VOC paints. Adhesives and sealants must not exceed the maximum VOC limits stipulated in Table 13.1.1B of the Green Star – Design & As Built v1.3 tool. Carpets must not exceed the total VOC limits stipulated in Table 13.1.2B of the Green Star – Design & As Built v1.3 tool.	DG2.5.2	DAB c13 Indoor Pollutants	Product specifications, certificates, safety datasheets that demonstrate low-VOC contents Bill of quantities	REV 4 id: P3-k				EC1-P does not relate	Y	Provide product specifications, certificates, safety datasheets that demonstrate low-VOC contents in materials installed/applied.	AWE to provide datasheets for items in bill of quantities.	Datasheets and BOQ for paint with low VOC content provided. Paints comply to VOC limits. Sealants do not comply to VOC limits in GS. Datasheets with VOC content not provided for floorings.	Datasheets with VOC content not provided for floorings. Concrete sealant and carpet adhesive provided which complies. 16/10/23: carpet + adhesive VOC information provided - complies.
P3-l	Place	P3 – Welcoming learning spaces	**Low formaldehyde-emitting materials** Only low formaldehyde-emitting engineered wood products should be used, such as those that meet the Australian Standards for formaldehyde emission limit E1 (NICNAS classification) or lower.	DG2.5.2	DAB c13 Indoor Pollutants	Product specifications, certificates, safety datasheets that demonstrate low-formaldehyde contents Bill of quantities	REV 4 id: P3-l				Documents provided do not relate	Y	Provide product specifications, certificates, safety datasheets that demonstrate low formaldehyde contents in materials installed.	AWE to provide datasheets for items in bill of quantities.	Documents provided do not relate.	9/10/23:contractor confirm no engineered wood in project.

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	PROJECT:	Darlington PS						Independent checkpoint 1	Independent checkpoint 1	Independent checkpoint 2	Independent checkpoint 2	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3
ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://efsg.det.nsw.edu.au/welcome	EFSG	Crossover with Green Star	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Is the project compliant at this stage? Y or N	Comments (updated 10/1/22)	Is the project compliant at this stage? Y or N	Comments (22/7/22)	Is the project compliant at this stage? Y or N	Comments (27/3/23)	Meeting notes (18/4/23)	Comments (17/7/23)	Comments (20/9/23)
P3-m	**Place**	P3 – Welcoming learning spaces	**Ventilation in printing rooms** The ventilation system is to be designed to serve the whole room and is not intended to provide localised exhaust at equipment. - Discharge air from the ventilation unit to the outside of the building via a vermin proofed louvre. - Draw make-up air from inside the building through wall or door grilles. - Locate the inlet/s and exhaust to achieve good airflow across the room in plan and elevation to pick up all machine emissions. -Ensure the airflow doesn't draw equipment emissions across operator's face. -Note that the room door in many schools may be left open in normal daily operation. Allow for this when locating the exhaust fan so that cross ventilation is achieved with make-up air drawn through the door opening.	DG57.07	DAB c9.3 Exhaust or Elimination of Pollutants	1. Mechanical drawings and specifications showing compliant printing room ventilation	REV 4 id: P3-m	Partial	Location of print room/printers not evident on the mechanical drawing provided. Please clarify where printers are installed.	Y						
P3-n	**Place**	P3 – Welcoming learning spaces	**Chemical store ventilation** - Provide mechanical exhaust system with high and low level exhaust points to all chemical stores, with a minimum of 15 air changes per hour flow rate. - Discharge air according to the requirements of BCA. The discharge outlet is to be fitted with bird wire mesh. - Provide make up air to all chemical stores, (to replace exhausted air) through openings in an external wall, fitted with weatherproof louvres. All grilles and louvres are to be fitted with vandal proof bars and be fitted with vermin mesh. - For security and fire rating reasons do not use windows/doors or door grilles for air intake. - The chemical stores ventilation systems are to run continuously.	DG57.09	Not covered in Green Star		N/A - there are no chemical store room	N/A								
P3-o	**Place**	P3 – Welcoming learning spaces	**Pesticide free environments** Schools must be designed, constructed and maintained, without using chemicals for termite and other pest control. No chemical pesticides and termicide to be used. Preventive treatments to be by physical means and careful design to minimise risk	DG2.5.3	Not covered in Green Star	Statement by head contractor that no pesticides or termites have been used.	REV 4 id: P3-o					Y	Please provide statement from AWE that no pesticide/termicide is used.	AWE/Introba to provide statement.		Statement provided that termite protection is not required.
P3-p	**Place**	P3 – Welcoming learning spaces	Green cleaning	N/A	GSP c6 Green Cleaning	1) WEB Clean School User Guide 2) Green Cleaning specifications	Flagged as N/A We understand that SINSW have implemented a standardised cleaning contract across all schools. We would be unable to dictate how this is implemented as this is a post construction activity.	N/A								
P3-q	**Place**	P3 – Welcoming learning	**Fly free indoors** Fly screening must be provided in all schools to the doors, windows and other openings in food preparation, biology, and non-water-closet toilet spaces or where	DG31.01	Not covered in Green Star	As-built drawings showing fly screening has been provided as required	REV 4 id: P3-q			Y	Kitchen and canteen with no door/window to external.					
P3-r	**Place**	P3 – Welcoming learning spaces	**Indoor CO2 levels** For mechanically ventilated spaces: 1. Outdoor air ventilation rates are in accordance with requirements of AS 1668.2. 2. Mechanical ventilation systems shall be linked to CO2 sensors to provide demand-controlled ventilation within each space to ensure that CO2 levels are maintained below the required CO2 threshold. 3. Mechanical ventilation systems shall be designed to provide adequate access for maintenance and cleaning. 4. Ventilation systems are designed to maintain an average daily CO2 concentration as per the latest NCC code, and so that the maximum concentration does not exceed 1,500ppm for more than 20 consecutive minutes in each day. 5. The required outdoor air ventilation rates and CO2 concentrations shall be maintained without the need for any human intervention e.g. the opening of windows or external louvres. 6. Ventilation systems shall be designed minimise the entry of outdoor pollutants through ensuring that the ventilation system design is in accordance with the relevant parts of AS 1668.2. and ASHRAE Standard 62.1. 7. Where local sources of pollutants are present e.g. photocopiers, minimum exhaust ventilation flow rates should be provided in accordance with AS1668.2: Table B1.	DG55.02	DAB c9 Indoor Air Quality	Mechanical drawings and specifications Extracts from commissioning report	REV 4 id: P3-r	Y								
P3-s	**Place**	P3 – Welcoming learning spaces	**Ecological conservation** Schools sites must conserve for future generations, the biological diversity of genetic materials, species and ecosystems on that site and consider the surrounding natural environment. The design of the facilities must provide unique and valuable environmental conservation learning opportunities and effective environmental modelling to the wider community. Schools must model best practice design, material use, systems and operational methodology, demonstrating human's connections to nature and the operation of natural cycles of sun, wind, rain and the four seasons. Schools must connect with nature and incorporate biophilic design principles. Open space must allow for exploration, and biodiversity and earth education to enhance the site's outdoor learning potential. New and refurbished schools must: Preserve or re-establish native flora (unless it poses a safety risk or cannot be designed around) and create new landscapes through liaising with local government authorities, Landcare and environmental groups, and the use of native low water use plants. Consider opportunities for development of community garden within the site and relationships with community groups for this to occur. Adequate due diligence must be conducted where biodiversity or high ecological value is identified on the site. For more details see DG90 Landscape Design	DG02.06	DAB c23 Ecological Value GSC c29 Ecological Value (incl Biodiversity Enhancement)	1) Biodiversity or ecological assessment / local flora and fauna survey 2) Biodiversity management plan describing measures for the conservation and protection of threatened species or communities, biodiversity enhancement, tree protection, etc. 3) Evidence demonstrating measures have been implemented to protect and enhance endangered species / ecological communities identified; to preserve or re-establish native flora; etc.	Mandatory Credit Project team note: the previous (v4) ESFG guide had differing language. The key point is the reference to DG90 Landscape Design, which is from the EFSG. fjmt to provide a design statement confirming compliance with these principles. Rev 4 ID: P3-S			Y						
P3-t	**Place**	P3 – Welcoming learning spaces	**Accessibility** -All new facilities must meet current DTS provisions of the NCC and the associated standards. Generally AS 1428.1 is the minimum design standard for access and mobility. However, it is DoE's policy that any enhanced requirements noted in AS 1428.2 be incorporated in any new design. -Additionally, DoE have enhanced circulation requirements as noted in DG / CIRCULATION - Provide hearing augmentation system for areas that have amplification, generally within Gymnasium, libraries, movement studios and Communal Halls, provide a system to assist the aurally challenged to hear music and speech within the main auditorium and on the stage - Provide the International Symbol for Deafness to indicate that an assistive hearing device is installed.	DG19.01 DG65.14	DAB 30D Universal design	1) Accessibility plan 2) As-built drawings or other evidence demonstrating that minimum and enhanced accessibility requirements have been provided for walkways, corridors, ramps, etc. 3) Photographic or other evidence of signage installed	REV 4 id: P3-t			Partial	Has an accessibility plan or access review by a specialised consultant been carried out? Or accessibility compliance statement produced for occupation certificate? Please highlight on drawings hearing augmentation systems or provide other evidence.	Y	No additional evidence provided.	End of stage 2 still to be completed (Mid May) - will be provided for stage 1 and then 2 at as-built. Mace confirm hearing augmentation included in communal hall. AWE to provide drawing/photos.	No additional evidence provided.	Accessibility compliance statement provided. 16/10/23: hearing augmentation compliance certificate provided
P3-u	**Place**	P3 – Welcoming learning spaces	**Weather protection** Circulation areas provided between administrative, staff and all student spaces (except Agriculture), should be protected from sun, rain and unfavourable winds.	DG08.05	Not covered in Green Star	As built drawings showing circulation areas are protected as required	REV 4 id: P3-u			Y						

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	PROJECT:	Darlington PS						Independent checkpoint 1	Independent checkpoint 1	Independent checkpoint 2	Independent checkpoint 2	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3	Independent checkpoint 3
ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://dpie.nsw.gov.au/welcome	EFSG	Crossover with Green Star	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Is the project compliant at this stage? Y or N	Comments (updated 10/1/22)	Is the project compliant at this stage? Y or N	Comments (22/7/22)	Is the project compliant at this stage? Y or N	Comments (27/3/23)	Meeting notes (18/4/23)	Comments (17/7/23)	Comments (20/9/23)
P3-v	Place	P3 – Welcoming learning spaces	**Open play space** Open play space must be provided for students to access during recess, lunch breaks and for outdoor learning. Open play space can be comprised of - Paved and grassed areas - Rooftops and terraces - Covered outdoor areas The designated open play space must be easily monitored and managed by school staff. Where a joint use agreement can be negotiated with a local council or land owner, the required play space can be located off-site, providing the facilities are - In close proximity to the school - Easily accessible - Safe and secure Designs must aim to achieve a minimum of 10m2 per student. Where this figure is not achievable the proposed m2 per student of the completed project must not be less than the existing m2 per student currently on the site.	DG10.03	Not covered in Green Star	Plan view drawings showing provision of open space	REV 4 id: P3-v	Y	Was there a school previously on this site? The calcs show pre-school open play area less than 10m2 per student. This is a small area however, majority is compliant.								
P3-w	Place	P3 – Welcoming learning spaces	**Staff room**	N/A	GSI c Amenity Space	1) Extracts from the EFSG requirements for staff rooms 2) Evidence of staff room delivered accordingly	REV 4 id: P3-w	Y									
P3-x	Place	P3 – Welcoming learning spaces	**Healthy canteen policy**	N/A	DAB c30D Integrating Healthy Environments	1) Research report behind Healthy Canteen Policy 2) Evidence that policy initiative has been incorporated into the school under assessment.	This was flagged as "N/A" in the previous V4 ESFG workbook, however project will probably comply as this is a DoE operational policy	N/A									
P3-y	Place	P3 – Welcoming learning spaces	**Safety by design** - The Work Health and Safety Act and the Department of Education principles of student safety and welfare mandate the avoidance of accidents through careful design of facilities - The designer must ensure, so far as is reasonably practicable, that the plant, substance or structure is designed to minimise risks to the health and safety of all parties who will work on a site connected with its design as well as the end users of the facility. - An important part of the Safety by Design principle is recording the risk assessments that are conducted during the design and providing to the client, owners, any users/occupiers of the facilities and those who will be building or maintaining the facilities, details of risks and hazards identified. - The design of facilities should not only be inherently safe but visually and pragmatically safe and not tempt students or the general public into unsafe practice. Examples: Glazing: The safety of occupants is paramount where glass is being used, especially in areas subject to human impact. All glazing types and thickness are to comply with the relevant AS a minimum. Hot water: To minimise scalding risk all hand basins, showers and the kitchen sink in practical activities areas serving IO/IS classes, require "warm" rather than "hot" water provided at a specified temperature, by mixing hot and cold water through a Thermostatic Mixing Valve. (Note: Tempering Valves are not permitted in schools) Drinking water tanks: Ensure rainwater is not collected from areas containing lead materials. All coating materials used inside the reservoir must be suitable for drinking water and guaranteed against liner leakage for a period of 20 years. A filtering and UV system to be provided where drinking water tanks are present.	DG14.02 DG31.03 DG53.11 DG53.16 DG53.17	Not covered in Green Star	1. Safety risk assessments 2. Short report identifying safety by design principles incorporated / Sign off by head contractor confirming all mandatory requirements in DG14 have been addressed. - AWE 3. Manufacturer's certificate to AS/NZS 4020 for tanks	REV 4 id: P3-y	Partial	Provide item 2., as all items in Risk Register are noted as 'open'. Provide item 3. or detail around the rainwater harvesting tank/filtration system.	Partial	No additional documentation provided for item 2. Item 3 explanation given is adequate.	Y	No additional evidence provided.	Stage 1 to be provided. Stage 2 provided at as built.		Final safety in design risk register provided.
P3-z	Place	P3 – Welcoming learning spaces	**Microbial control** As a measure to prevent legionella, heated water to hand basins, showers etc. shall be stored at temperature above 65 C. Thermostatic mixing valves are to be used for tempered water generation at each point of use. Valves need to comply with microbe disinfection requirements - "Code of Practice for Thermostatic Mixing Valves NSW" as approved by the NSW Health Department.	DG51.09 DG53.11	DAB c28 Microbial Control	1. Letter by hydraulic engineer confirming hot water is stored above 65 deg and that valves comply with code of practice.	REV 4 id: P3-z	Y									
P3-aa	Place	P3 – Welcoming learning spaces	**Security** Safety in Design and Crime Prevention Through Environmental Design (CPTED) principles are to be implemented in project planning stage. Advice on the electronic surveillance systems can be sought early in the design phase. CCTV systems are required in several locations where indicated in the Rooms and Spaces Technical Data table, including: - Secondary clinic - Primary sick bay - Library	DG14.10 DG65.08 DG65.10	GSC c15 Safe Places	1) Crime risk assessment or equivalent 2) Evidence of designing out crime principles implemented 3) Security services plans, schedules and forms by School Security Unit (SSU) 4) SSU specification and evidence of input on project specification	REV 4 id: P3-aa	Y	Provide as-built evidence of CCTV installations. FJMT report does not specify these locations.	Y							
P3-ab	Place	P3 – Welcoming learning spaces	**Hazardous materials** Where a new school is to be developed a Hazardous materials study is to be conducted, including: - Asbestos Containing Materials (ACM) - Synthetic Mineral Fibres (SMF) - Polychlorinated Biphenyl's (PCB) - Lead Paint - Ozone Depleting Substances Any existing structures and all parts of the site should be examined in order to determine the presence of hazardous materials before commencement of any renovation or demolition. Inspection should be conducted by organisations with the National Association of Testing Authorities (NATA) accreditation complying with the requirements of AS/NZS ISO.IEC 17020 for the inspection of hazardous materials (HazMat) including asbestos. Hazardous Materials inspection reports should be produced in accordance with the requirements of the various Safe Work Australia "Codes of Practice" for the management and control of hazardous substances. Where hazardous materials are found a Hazardous Materials Management Plan should be prepared	DG48.01	DAB 24.2 Contamination and Hazardous Materials	1. Hazardous materials study / site inspection report / survey 2. Management plans for hazardous materials identified 3. Remediation strategies implemented 4. Environmental auditor certificates / clearance certificates	REV 4 id: P3-ab	Partial	Hazardous Material assessment and Management Plan acceptable. Provide clearance certificates when available.	Y							
P3-ac	Place	P3 – Welcoming learning spaces	**Digital infrastructure** New buildings and refurbishments are required to provide a common wireless solution compatible across the school, providing a consistent user experience and support mechanism. This involves the replacement of existing legacy wireless equipment, such as wireless access points and site switches	DG64.12.02	GSC c22.2 Digital Infrastructure	1) Contracts describing the network infrastructure specification and operational requirements	REV 4 id: P3-ac					Y	No additional evidence provided.	AWE to check with Kerfoot.		10/10/23: aruba wireless access points datasheets provided, confirmed by contractor as used on project.
P3-ad	Place	P3 – Welcoming learning spaces	**Sustainability benchmarking** Ecologically Sustainable Development principles must be included in any new school buildings to a level that the building could be benchmarked to achieve a 5 Star Green Star rating if located in Sydney, Newcastle, or Wollongong metropolitan areas or a 4 star Green Star rating if located elsewhere in NSW. Benchmarking must be undertaken against the Green Star credits using the edition of the Green Star scorecard current at the time of the assessment. The filled out scorecard must demonstrate the project can achieve enough points for the required rating. Formal Green Star certification is not mandatory	DG02.09	All credits	1) Green Star scorecard demonstrated the final design is benchmarked to the required rating (by a Green Star Accredited Professional)	New credit in v8			N/A	Credit is N/A, as was not applicable in v2.						

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ID	Theme	Indicator	Sustainability initiatives / requirements from the EFSG This is an extract only from the relevant EFSG. For full requirements refer to https://efsg.det.nsw.edu.au/welcome	EFSG	Crossover with Green Star	Standard evidence to demonstrate compliance	Contractor's ESD consultant comments Updated 03-August-2021	Independent checkpoint 1 Is the project compliant at this stage? Y or N	Independent checkpoint 1 Comments (updated 10/1/22)	Independent checkpoint 2 Is the project compliant at this stage? Y or N	Independent checkpoint 2 Comments (22/7/22)	Independent checkpoint 3 Is the project compliant at this stage? Y or N	Independent checkpoint 3 Comments (27/3/23)	Independent checkpoint 3 Meeting notes (18/4/23)	Independent checkpoint 3 Comments (17/7/23)	Independent checkpoint 3 Comments (20/9/23)
R1-a	**Resilience**	R1 – Preparation for shocks	**Site investigations for resilience** The following detailed reports/ surveys/ information should be considered in developing the business case: - Slope, drainage and erosion issues including flood risks (if any) - Geotechnical and soil conditions - Airborne pollutants - Bushfire risks - Appraisal of available services infrastructure - Climate change risk assessment must be undertaken considering at least two different climate change scenarios An environmental risk report will be required for developments proposed within sensitive natural environments or sites subject to natural risks (i.e. flood prone sites, bush fire areas).	DG03.02	DAB c3 Adaptation and Resilience	1) Detailed reports or surveys developed 2) Environmental risk report 3) Evidence demonstrating recommendations have been implemented and risks addressed through design responses.	Flood risk assessments, including storm water run off has been assessed on site and the design has responded to this					Y	Provide EIS (Environmental Impact Statement) as noted in SEARS.	AWE to provide EIS. SV to check if 'SEARS report' sufficient.	EIS report provided. From EIS, Appendix X 'SEARS ESD report' (by Integral) to be further provided.	Response to SEARS/CSIRO projected impacts of climate change provided.
R1-b	**Resilience**	R1 – Preparation for shocks	**Bushfire protection** Development applications on bush fire prone land must be accompanied by a Bush Fire Assessment Report demonstrating compliance with the aim and objectives of Planning for Bush Fire Protection and the specific objectives and performance criteria for the land use proposed. Local Authorities and the Rural Fire Service can provide advice on the design of buildings in bush fire prone areas. The Building Code of Australia and AS3959 "Construction of buildings in bushfire-prone areas" set out the requirements for buildings which are within close proximity to a defined bush fire zone. Mandatory landscape management strategies: - Keep the amount of fuel (leaves, twigs, logs, dead grass) in the vicinity of buildings to a minimum. - Ensure trees are located at away from buildings to avoid branches overhanging and leaves collecting on roofs. - Do not plant shrubs against buildings. - The crowns of trees planted on the hazard side of the development should not be contiguous. - Plant fire resistant trees and shrubs on the hazard side of the development to reduce the potential impact of wind, fire intensity, radiant heat, and rate of spread as well as intercepting burning embers. - Avoid combustible fencing materials. - Provide irrigation and garden sprinklers to water areas near the buildings (subject to water authority approval).	DG13.01	DAB c3 Adaptation and Resilience	1) Bush fire assessment report 2) Statement by Architect / fire consultant outlining building strategies implemented in line with BCA and AS3959. 3) Bush fire management plan outlining management strategies implemented 4) Landscape plans detailing bush fire management measures implemented	N/A - not in a bushfire zone	Y								
R2-a	**Resilience**	R2 – Preparation for stresses	**Climate change adaptation** Sites and school communities must be able to withstand natural and urban hazards and adaptively respond to climate change over time, especially for projects involving vulnerable communities e.g. climate generating exacerbated flood, storm surge, inundation, heatwaves, bush fires, extreme storm and other weather events. School facilities must be able to withstand natural hazards and adapt to shocks and stresses to avoid social and economic costs of interrupted operation and repairing or replacing damaged assets. To achieve this, increasing resilience to natural hazards must be considered in the business case development so that associated costs are budgeted. An initial assessment of natural hazards and project vulnerability must be carried out, in consultation with resilience experts, to inform the business case and identify hazards where further analysis is required. Where significant risks are identified in the initial assessment, a comprehensive climate change risk assessment must be undertaken. Any high or extreme risks identified must be addressed through design measures.	DG02.08	DAB c3 Adaptation and Resilience	1) Climate risk assessment, and 2) Climate adaptation plan 3) Emergency management plan	Mandatory Credit The credit language states "Where significant risks are identified in the initial assessment, a comprehensive climate change risk assessment must be undertaken. Any high or extreme risks identified must be addressed through design measures" There were not any high or extreme risks that were flagged and shared with the current design team. Rev 4 ID: R2-A					Y	Provide climate risk assessment / documentation, responding to SEARS requirement 23. ESD 'provide a statement reggarding how the design of the future development is responsive to the CSIRO projected impacts of climate change'	No 'high risk' identified, therefore no additional info needed by SEARS. Introba/SV to check.		Response to SEARS/CSIRO projected impacts of climate change provided.