

REPORT

Sustainable Development Plan

Upgrade to Dundas Public School Department of Education

CONFIDENTIAL

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VERIFICATION

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CHANGE LOG

REVISION	VERSION	COMMENT
2.0	Schematic Design	General updates to reflect design development
2.1	Schematic Design	Minor updates to reflect comments received
2.2	Schematic Design	Minor updates to reflect comments received
2.3	Schematic Design	Minor updates to reflect comments received



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1 PREAMBLE

1.1 PROPONENT

The NSW Department of Education (DoE) is the proponent and determining authority pursuant to Section 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

1.2 LANDOWNER

The Minister for Education and Early Learning is the landowner.

1.3 BACKGROUND INFORMATION

The project is seeking approval for a Development Without Consent (REF) application under Part 5 of the EP&A Act.

1.4 INTRODUCTION

This Sustainable Development Plan (this is equivalent to an ESD report) has been prepared to support a Review of Environmental Factors (REF) for the NSW Department of Education (DoE) for Milton Public School upgrade (the activity).

The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37 of the T&I SEPP.

This document has been prepared in accordance with the Guidelines for Division 5.1 assessments (the Guidelines) by the Department of Planning, Housing and Infrastructure (DPHI) as well as the Addendum Division 5.1 guidelines for schools. The purpose of this report is to identify all the sustainability initiatives that are proposed and under consideration for the activity.

1.5 SITE DESCRIPTION

Refer to Section 3 for details.

1.6 PROPOSED ACTIVITY DESCRIPTION

Refer to Section 3 for details.

1.7 MITIGATION MEASURES

It is noted that Sustainability (ESD) does not produce designs, we simply coordinate and input our requirements into the designs of other disciplines (i.e. sustainability items are expressed through the architectural, mechanical, electrical etc. design). Mitigation measures are detailed within the relevant discipline reports.

1.8 EVALUATION OF ENVIRONMENTAL IMPACTS

It is noted that Sustainability (ESD) does not produce designs, we simply coordinate and input our requirements into the designs of other disciplines (i.e. sustainability items are expressed through the architectural, mechanical, electrical etc. design). Evaluation of Environmental Impacts are detailed through relevant discipline reports.



2 EXECUTIVE SUMMARY

NDY has been engaged by Department of Education (DoE) to develop a Sustainable Development Plan (SDP) for the proposed Dundas Public School activity.

The principal objective of this report is to address the minimum requirements set out in the following:

- Clause 193 of Division 5 of the Environmental Planning and Assessment Regulation 2021
- SINSW Sustainable Development Practice Note
- SINSW Education Facilities Standard and Guideline (EFSG)
- Government Architect NSW (GANSW) Design Guide for Schools and Environmental Design in Schools Manual
- NSW Government Resource Efficiency Policy (GREP 2019)

The project will be designed and delivered in line with the standard SINSW sustainability brief, detailed in the SINSW Sustainable Development Practice Note, with key scope including:

- SINSW EFSG compliance
- NCC Section J compliance

Mitigation Measures

- SINSW Commissioning and Temporary Schools Program reviews process to assist in advising, monitoring, and verifying the commissioning and tuning of the nominated building systems throughout the design, tender, construction, commissioning and tuning phases.
- Provision of building information to facilitate operator and user understanding of all building systems, and their specific operation and maintenance requirements and/or environmental targets
- Specialist waste consultant to be engaged to develop an operational waste management plan (OWMP). OWMP principles to be incorporated into the design in future project stages, including separation of waste streams (e.g. paper, cardboard, glass, plastics, toner cartridges, batteries, organics etc.) to facilitate reuse, recycling, composting, and overall waste reduction.
- Waste management plans for demolition, construction and operation of the site. Minimum of 90% of construction and demolition waste to be diverted from landfill.
- Passive design principles have been incorporated in the design, including high-performance building envelope, effective shading and building orientation, and natural ventilation openings to support comfortable and low-energy indoor environment quality.
- Acoustic consultant engaged to advise design to support the building's function as training, teaching and multi-purpose spaces for students, staff and community use.
- Best-practice lighting will be provided to improve lighting comfort via flicker-free, high-quality lighting that accuracy addresses the perception of colour within the space.
- High levels of daylight and external views are provided to regularly occupied learning and administration
 areas, to support high levels of visual comfort for building occupants. Detailed daylight modelling to be
 undertaken in future project stages. Refer to Preliminary Daylight Modelling Assessment undertaken for the
 project.
- Internal air pollutants have been reduced via selection of materials with low or no volatile organic compound (VOC) levels and low formaldehyde concentrations, verified via on-site testing.
- Effective heating and cooling to improve thermal comfort, in accordance with EFSG guidelines.
- Highly energy efficient building, exceeding the minimum requirements of the NCC Section J. Energy to be undertaken to demonstrate a reduction in energy consumption in comparison to a NCC DtS compliant reference building, in line with the following targets:
 - Minimum 10% reduction, excluding any contribution from renewable energy (e.g. rooftop solar PV) in line with EFSG Section DG02.03
- Final improvement will be demonstrated via energy modelling in schematic design. Specific energy efficiency provisions will include:
 - Exceeding the minimum building envelope R-values of NCC Section J
 - Improving on the glazing performance requirements of NCC Section J
 - Effective shading devices which reduce solar heat gains to conditioned spaces
 - Energy-efficient lighting (typically LED) will be provided throughout, exceeding lighting power densities
 of the NCC Section J.



- High efficiency heating, ventilation and air conditioning systems with mixed-mode 'traffic light' controls system to reduce operational energy.
- All-electric building services
- New roof mounted solar photovoltaic (PV) system. It is noted that the Dundas Primary School works includes provision for a solar PV array, exact sizing to be confirmed in future versions of this report.
- High-efficiency water fixtures.
- Reduction in embodied carbon of materials, achieved through sustainable concrete and steel selection.
- Adoption of minimum targets energy efficiency of appliances (air conditioners, TVs, fridges, computers) to
 make energy efficiency one of the selection requirements. Major appliances to be at least 0.5 stars above
 the average rating at the time of purchase.
- To encourage active and public transport, bicycle parking for staff and students to be provided to the activity.
- The builder has policies and programs to support construction workers and provides staff support.
- The Head Contractor has procurement practices in place to support disadvantaged groups gain employment opportunities, including:
 - Procurement of all materials and labour will be in accordance with the NSW DoE Aboriginal
 Procurement Policy and NSW DoE Main Works 21 Preliminaries Section 4.4 'Aboriginal Participation'
 - A project-specific Aboriginal Participation Plan will be developed to monitor and report on the minimum Aboriginal participation requirements.
 - At least 1.5% of the building's total contract value has been directed to generate employment opportunities for disadvantaged and under-represented groups.
- Inclusive design principles are followed to ensure building users with diverse needs have ease of access and way finding throughout the building.
- Specified stormwater pollution reduction targets are met.
- Appropriate lighting design to reduce light pollution of external lights, including compliance with AS4282, AS/NZS 1158
- All heat-rejection systems to be waterless to eliminate risk of Legionella (no cooling towers)



3 PROJECT SUMMARY

3.1 PURPOSE OF THIS REPORT

The principal objective of this report is to detail the sustainability strategy of the proposed activity, in order to address the minimum requirements set out in the following:

- Clause 193 of Division 5 of the Environmental Planning and Assessment Regulation 2021
- SINSW Sustainable Development Practice Note
- SINSW Education Facilities Standard and Guidelines (EFSG)
- Government Architect NSW (GANSW) Design Guide for Schools and Environmental Design in Schools Manual
- NSW Government Resource Efficiency Policy (GREP) 2019

3.2 SITE DESCRIPTION

DPS is located at 85 Kissing Point Road, Dundas. The school site is bound by Kissing Point Road to the north and Calder Road to the south. Kenworthy Street is located parallel to the site to the east as is Saint Andrews Street to the west. The site has an area of 1.99 ha and comprises 1 allotment legally known as Lot 3 DP 610.

The site currently comprises an existing co-education primary (K-6) public school with 9 permanent buildings, 6 demountable structures (1 demountable includes 2 classrooms), interconnected covered walkways, play areas, on-grade parking, sports court and green spaces with mature trees.

Majority of the buildings are 1 storey with only one 2-storey building being Building A (Admin/staff hub and amenities building). Buildings are clustered to the north of the site, with the southern part comprising of a large play area/informal sports oval and a sports court.



FIGURE 1: AERIAL IMAGE OF THE SITE



The school is located within climate zone 6 - mild temperate conditions, which is associated with:

- High diurnal ranges inland and four distinct seasons
- Summer and Winter that can exceed human comfort range, while spring and autumn are ideal for human comfort
- Mild to cool winters with low humidity
- Hot to very hot summers, with moderate humidity

3.3 PROPOSED ACTIVITY DESCRIPTION

The proposed activity involves upgrades to the existing DPS, including the following:

- Creation of 6 new teaching spaces and 2 learning commons in a single-story building
- Installation of covered walkways connecting the new building to the existing school network
- Landscaping and external works around the new building and eastern entry
- Upgrades to site infrastructure and services to support the new building.

The intent of the activity is to increase the number of permanent teaching spaces (PTS) from 9 to 15 and students from 331 to 391.

Refer to Figure 2 - Schematic Site Plan for an overview of the proposed activity.

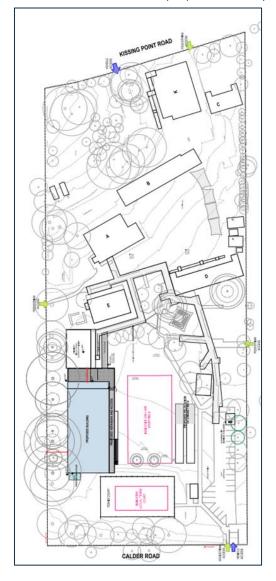


FIGURE 2 - SCHEMATIC SITE PLAN



3.4 INFORMATION SOURCES

The following information sources have been used in the preparation of this report:

- Clause 193 of Division 5 of the Environmental Planning and Assessment Regulation 2021
- NSW Department of Education School Infrastructure documents:
 - Sustainable Development Practice Note
 - Education Facilities Standard and Guidelines (EFSG) Design Guide
 - GANSW Design Guide for Schools
 - GANSW Environmental Design in Schools Manual
 - DFMA Guidelines
- NSW Government Resource Efficiency Policy (GREP) 2019
- National Construction Code (NCC) 2022 Section J
- Architectural drawings prepared by Fulton Trotter Architects
- Discussions and feedback with the design team.



4 SUSTAINABILITY PRINCIPLES

The following section of the report details how the proposed activity responds to the relevant sustainability principles as defined in Clause 193 of Division 5 of the Environmental Planning and Assessment Regulation 2021.

4.1 THE PRECAUTIONARY PRINCIPLE

The design has been reviewed against holistic sustainability principles to ensure a robust sustainability outcome is delivered. The sustainability initiatives proposed for the new Dundas Primary School activity aims to reduce the environmental impacts typically associated with buildings during the construction and ongoing operation of the building.

Sustainability measures have been incorporated, spanning across the project's design, construction and operations, based around the core principles of:

- Efficient use of resources (energy, water and materials)
- Enhancing indoor environment quality and occupant comfort
- Minimising ecological impacts.

The head contractor will implement an Environmental Management Plan (EMP) ensuring there will also be a systematic approach to environmental considerations throughout construction.

A climate change risk assessment has been undertaken to assess the anticipated impacts of climate change and implement design strategies to mitigate these impacts. Refer to Section 7 for details.

4.2 INTER-GENERATIONAL EQUITY

Student and staff health has been considered through the incorporation of indoor environmental quality design features such as daylight and glare analysis for natural lighting, best-practice lighting design, indoor air quality, thermal comfort assessment, acoustic design, and responsible material selection to reduce internal pollutants and resource depletion for future generations.

In relation to cultural diversity, the project will aim to incorporate the NSW Department of Education organisational Reconciliation Action Plan and use it as an opportunity to further embrace the objectives, including:

- Procurement of all materials and labour will be in accordance with the NSW DoE Aboriginal Procurement Policy and NSW DoE Main Works 21 Preliminaries Section 4.4 'Aboriginal Participation'
- A project-specific Aboriginal Participation Plan will be developed to monitor and report on the minimum Aboriginal participation requirements.

Universal design principles will be implemented to provide safe, equitable and dignified access for persons with disabilities. Conservation of Biodiversity and Ecological integrity

The proposed design considers design strategies to minimise the urban heat island effect, such as the use of light-coloured external finishes. High quality access to external views will be considered to increase student engagement with the natural environment.

Construction and operational environmental management systems and plans will be detailed and implemented by the head contractor.

4.3 IMPROVED VALUATION, PRICING, AND INCENTIVE MECHANISMS

Total cost of operation will be reduced through sustainable considerations to reduce energy, water and waste requirements, taking into consideration whole-of-life costing. The project will ensure sustainable principles are extended to include value for money, fit for purpose, long term reliability/resilience and flexibility. Designing with the long-term operation of the building in mind will create further buy-in and cooperation from the operating stakeholders. Strategies to reduce operational waste have been considered such as the development of an operational waste management plan and separation of waste streams.



5 SUSTAINABILITY FRAMEWORKS & LEGISLATION

Relevant sustainability frameworks and legislation applicable to the proposed activity are detailed in the following sub-sections.

5.1 NCC SECTION J

The National Construction Code (NCC) is produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government with the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently. Section J of the NCC Volume 1 sets out the minimum energy efficiency requirements for all commercial buildings in Australia.

The activity will achieve compliance with NCC 2022 (as required) Section J either through Deemed-to-Satisfy (DTS) Provisions, or a Performance Solution J1V2, J1V3 or similar.

5.2 EDUCATIONAL FACILITY STANDARDS AND GUIDELINES (EFSG)

The Educational Facilities Standards and Guidelines (EFSG) are intended to assist those responsible for the management, planning, design, construction and maintenance of new and refurbished school facilities. The EFSG is a suite of information compiled into Design Guides to aid in the planning, design and use of NSW Department of Education school facilities.

The guides aim to provide functional and durable facilities within a systematic whole of life, value for money framework that takes into account enhancement of learning and teaching, planning and development, sustainability and facilities management.

5.3 NSW GOVERNMENT RESOURCE EFFICIENCY POLICY (GREP)

The aim of the NSW Government Resource Efficiency Policy (GREP) is to reduce the NSW Government's operating costs and lead by example in increasing the efficiency of its resource use.

The policy intends to drive resource efficiency by NSW Government agencies in four main areas – energy, water, waste and air emissions from government operations. The policy describes measures to achieve set targets and minimum standards.

5.4 GOVERNMENT ARCHITECT NSW ENVIRONMENTAL DESIGN GUIDE FOR SCHOOLS

The Government Architect NSW (GANSW) released an Environmental Design in Schools Manual which illustrates a set of design principles as guidelines to follow for new activity and expansion of schools. The design principles from the GANSW Design Guide for Schools include:

- Context, Built Form and Landscape
- Sustainable, Efficient and Durable
- Accessible and Inclusive
- Health & Safety
- Amenity
- Whole of Life, Flexible and Adaptive
- Aesthetics

5.5 ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2021

Environmental Planning and Assessment Regulation 2021 is a planning tool that captures NSW legislation relating to planning.

5.6 SUSTAINABLE DEVELOPMENT PRACTICE NOTE

The SINSW Sustainable Development Practice Note outlines the framework for the integration of sustainable development principles in the planning, design, tender and construction phases for all School Infrastructure



projects. This framework is closely aligned to NSW Government policy positions and the United Nations Sustainable Development Goals.



6 SUSTAINABLE DESIGN

The proposed activity aims to go beyond minimum building requirements and provide a progressive sustainability outcome for the community. The sustainability principles adopted for the project will contribute to the conservation of resources and future resilience, across the whole life cycle of the project; from construction, through to the operational phase.

The sustainability initiatives will be verified through the SINSW ESD Schedule v9. This verification applies to the new building only.

This section of the report outlines the initiatives incorporated into the proposed activity in line with the EFSG requirements. Under each sub-category, the initiatives already incorporated into the design, and additional opportunities identified for further investigation have been outlined. These will be refined through further investigation in design development.

Refer to Appendix 10.1 for the ESD Schedule outlining specific initiatives incorporated for the project.

The ESD initiatives and associated relevant design details will be incorporated into project contract documentation, noting that relevant details are still under development and will be further developed during later design stages. The head contractor will ultimately be responsible for ensuring compliance with all targeted EFSG ESD items.

6.1 RESPONSIBLE

6.1.1 GENERAL PRINCIPLES

Responsible project development principles outline design and construction practices which support the activity and integration of building performances and responsible construction practices. These practices and processes include;

- Guidance from sustainability professionals
- Responsible construction practices
- Commitments to performance (e.g. reducing building and operational waste).
- Pre-commissioning, commissioning and tuning
- Building information to facilitate operator and user understanding
- Metering and monitoring

6.1.2 PROPOSED INITIATIVES

The following initiatives are currently included in the preliminary sustainability strategy, in order to ensure that the project minimises its environmental impact through construction and operational management:

- SINSW Commissioning and Temporary Schools Program reviews process to assist in advising, monitoring, and verifying the commissioning and tuning of the nominated building systems throughout the design, tender, construction, commissioning and tuning phases.
- Provision of building information to facilitate operator and user understanding of all building systems, and their specific operation and maintenance requirements and/or environmental targets
- Specialist waste consultant to be engaged to develop an operational waste management plan (OWMP).
 OWMP principles to be incorporated into the design in future project stages, including separation of waste streams (e.g. paper, cardboard, glass, plastics, toner cartridges, batteries, organics etc.) to facilitate reuse, recycling, composting, and overall waste reduction.
- Waste management plans for demolition, construction and operation of the site. Minimum of 90% of construction and demolition waste to be diverted from landfill.

6.2 HEALTHY

6.2.1 GENERAL PRINCIPLES

Healthy, comfortable learning environments are vital for students and staff, particularly when they may require spaces that facilitate focus and engagement for a considerable amount of time. General principles include:

High indoor air quality



- Acoustic comfort with noise levels suitable to the activities within each space
- Good lighting design and control that is suitable to the space and free from glare
- High levels of daylight amenity and views for visual interest
- Reduce harmful exposure to toxins from building materials and finishes
- Thermal comfort

6.2.2 PROPOSED INITIATIVES

The following initiatives are currently included in the preliminary sustainability strategy:

- Passive design principles have been incorporated in the design, including high-performance building envelope, effective shading and building orientation, and natural ventilation openings to support comfortable and low-energy indoor environment quality.
- Acoustic consultant engaged to advise design to support the building's function as training, teaching and multi-purpose spaces for students, staff and community use.
- Best-practice lighting will be provided to improve lighting comfort via flicker-free, high-quality lighting that accuracy addresses the perception of colour within the space.
- High levels of daylight and external views are provided to regularly occupied learning and administration areas, to support high levels of visual comfort for building occupants. Detailed daylight modelling to be undertaken in future project stages. Refer to Preliminary Daylight Modelling Assessment undertaken for the project.
- Internal air pollutants have been reduced via selection of materials with low or no volatile organic compound (VOC) levels and low formaldehyde concentrations, verified via on-site testing.
- Effective heating and cooling to improve thermal comfort, in accordance with EFSG guidelines.

6.3 POSITIVE

6.3.1 GENERAL PRINCIPLES

Through a range of performance measures buildings can; improve their energy efficiency which will reduce Greenhouse Gas emissions from grid-based energy; reduce their potable water demand making them more drought tolerant; and, reduce their embodied carbon through sustainable materials selection. General principles include:

- Selection of materials with low embodied carbon
- Energy efficient buildings
- No direct fossil fuel use on site (natural gas or diesel)
- Offsetting of residual carbon emissions
- Reducing potable water consumption, such as through the use of high efficiency water fixtures, water harvesting systems and reuse, and water-efficient landscape and irrigation design.
- Installation of a solar PV system capable of generating the new energy consumed by the proposed building.

6.3.2 PROPOSED INITIATIVES

The following initiatives are currently included in the preliminary sustainability strategy, in order to enhance the energy efficiency of the building. Refer to the <u>Preliminary Energy Modelling Report</u> for detailed energy modelling reporting.

- Highly energy efficient building, exceeding the minimum requirements of the NCC Section J. Energy to be undertaken to demonstrate a reduction in energy consumption in comparison to a NCC DtS compliant reference building, in line with the following targets:
 - Minimum 10% reduction, excluding any contribution from renewable energy (e.g. rooftop solar PV) in line with EFSG Section DG02.03

Final improvement will be demonstrated via energy modelling in schematic design. Specific energy efficiency provisions will include:

- Exceeding the minimum building envelope R-values of NCC Section J
- Improving on the glazing performance requirements of NCC Section J
- Effective shading devices which reduce solar heat gains to conditioned spaces



- Energy-efficient lighting (typically LED) will be provided throughout, exceeding lighting power densities of the NCC Section J
- High efficiency heating, ventilation and air conditioning systems with mixed-mode 'traffic light' controls system to reduce operational energy.
- All-electric building services
- New roof mounted solar photovoltaic (PV) system. It is noted that the Dundas Primary School works
 includes provision for a solar PV array, exact sizing to be confirmed in future versions of this report.
- High-efficiency water fixtures.
- Reduction in embodied carbon of materials, achieved through sustainable concrete and steel selection.
- Adoption of minimum targets energy efficiency of appliances (air conditioners, TVs, fridges, computers) to
 make energy efficiency one of the selection requirements. Major appliances to be at least 0.5 stars above
 the average rating at the time of purchase.

6.4 PLACES

6.4.1 GENERAL PRINCIPLES

Under this category people are placed at the forefront of the design to ensure the building supports health movement, provides enjoyable places and contributes the local community and cultural heritage of the site. General principles include:

- Active transport (walking and cycling) is encouraged, and private vehicle use is reduced
- Communal spaces which support occupant and community engagement are developed
- The local community's cultural heritage embedded in the design

6.4.2 PROPOSED INITIATIVES

The following initiatives are currently included in the preliminary sustainability strategy to improve sustainable transport options:

To encourage active and public transport, bicycle parking for staff and students to be provided to the
activity.

6.5 PEOPLE

6.5.1 GENERAL PRINCIPLES

This category recognizes the contributions made by the local workforce which develops the building and aims to ensure sustainable practices support workers during the construction process, for areas including mental health and social inclusion. Additionally, the building design is reviewed for universal design principles for improved accessibility. General principles include:

- The builder supports mental health initiatives and promotes diversity
- The building has Indigenous design aspects, or a Reconciliation Action Plan is developed
- Disadvantaged groups are supported for workforce inclusion
- Universal design principles for people with disabilities are embedded in the design.

6.5.2 PROPOSED INITIATIVES

- The builder has policies and programs to support construction workers and provides staff support.
- The Head Contractor has procurement practices in place to support disadvantaged groups gain employment opportunities, including:
 - Procurement of all materials and labour will be in accordance with the NSW DoE Aboriginal
 Procurement Policy and NSW DoE Main Works 21 Preliminaries Section 4.4 'Aboriginal Participation'
 - A project-specific Aboriginal Participation Plan will be developed to monitor and report on the minimum Aboriginal participation requirements.
 - At least 1.5% of the building's total contract value has been directed to generate employment opportunities for disadvantaged and under-represented groups.



• Inclusive design principles are followed to ensure building users with diverse needs have ease of access and way finding throughout the building.

6.6 NATURE

6.6.1 GENERAL PRINCIPLES

Impacts to nature are minimised and the biodiversity of the site is fostered through selection of native plant species, this also supports the wellbeing of building and local groups who can maintain a connection with nature through urban green spaces. Waterways are protected through a volume controlled stormwater management strategy. General principles include:

- Protect and enhance ecological and biodiversity value
- Minimise negative impacts, such as lighting pollution and stormwater pollution.

6.6.2 PROPOSED INITIATIVES

- Specified stormwater pollution reduction targets are met.
- Appropriate lighting design to reduce light pollution of external lights, including compliance with AS4282, AS/N7S 1158
- All heat-rejection systems to be waterless to eliminate risk of Legionella (no cooling towers)



7 CLIMATE CHANGE RESILIENCE

The projected impacts of climate change on the proposed activity has been assessed, based on predicted climate change models. A Climate Adaptation Workshop was held with all project stakeholders on 08 Nov 2024. The workshop goals were to:

- Identify and describe risks posed by climate change to the activity and rate the consequences and likelihood of each
- Identify and evaluate the potential adaptation actions and/or design strategies to mitigate those risks which are deemed unacceptable.

To facilitate this process, pre-workshop notes were provided to all stakeholders attending the workshop which consisted of the following parts:

- Climate change projections
- Consequence scale for the risk assessment
- Likelihood scale for the risk assessment

A climate change risk assessment undertaken as per AS 5334-2013 and EFSG requirements. Expected impacts from climate change will be identified with reference made to both CSIRO projects for the East Coast (South) sub-cluster and NSW Government's NSW and ACT Regional Climate Modelling (NARCLiM) projections. The results showed the following:

- Extreme temperatures are projected to increase with very high confidence, and substantial increases in temperatures reached on hot days, as well as the frequency of hot days.
- Average temperatures will continue to increase in all seasons (very high confidence)
- Generally, less rainfall is expected in winter (medium confidence), but the intensity of extreme rainfall
 events is expected to increase (high confidence)
- Time spent in drought is expected to increase (low confidence) over the course of the century.

The design's responsivity to the above impacts will be assessed in accordance with EFSG requirements, at least two of the risks identified will be addressed by specific design responses, suggested risks to be addressed are detailed within the Climate Adaptation Report.



8 NET ZERO AND RESOURCE EFFICIENCY

The proposed activity aims to minimise greenhouse gas emissions, to reflect the NSW government's goal of net zero emission by 2050, and consumption of energy, water and material resources. The key initiatives which have been selected to contribute to these goals are summarised below.

8.1 ENERGY CONSUMPTION AND NET ZERO 2050

The building incorporates the following initiatives into its design:

- Greater than 10% reduction in energy efficiency over minimum NCC compliance
- Passive design including consideration of orientation, thermal mass, shading, and fabric and glazing insulation performance, and colour
- Energy efficient lighting design and control
- Energy efficient heating, ventilation, and air conditioning design and control
- Energy efficient appliances and equipment
- Energy monitoring and whole of building demand management and control
- Renewable energy sources, including solar photovoltaic panels
- 100% electric design to minimise gas use and greenhouse gas emissions
- Commissioning and tuning strategies

8.2 WATER CONSUMPTION

The building incorporates the following initiatives into its design:

- Water efficient fixtures, equipment, and appliances
- Water use monitoring
- Water sensitive urban design
- Stormwater management, and groundwater and drinking water catchment protection
- Commissioning and tuning strategies

8.3 OTHER MATERIALS CONSUMPTION

The building incorporates the following initiatives into its design:

 Reduction in upfront carbon through sustainable material selection, including low embodied carbon materials and high recycled content materials. Including major construction materials – concrete, steel, timber and aluminium.



9 CONCLUSION

This report identifies the sustainability measures being pursued or investigated by the project team, demonstrating how the relevant sustainability requirements have been addressed.

The proposed design for the activity incorporates sustainability measures that have far reaching benefits from the perspective of energy, water and waste reduction; as well as providing good indoor environment quality, thermal comfort and visual comfort. By this means, the proposed activity will have a positive impact on the health and wellbeing of the students and staff occupying the building.

Mitigation Measures

- SINSW Commissioning and Temporary Schools Program reviews process to assist in advising, monitoring, and verifying the commissioning and tuning of the nominated building systems throughout the design, tender, construction, commissioning and tuning phases.
- Provision of building information to facilitate operator and user understanding of all building systems, and their specific operation and maintenance requirements and/or environmental targets
- Specialist waste consultant to be engaged to develop an operational waste management plan (OWMP). OWMP principles to be incorporated into the design in future project stages, including separation of waste streams (e.g. paper, cardboard, glass, plastics, toner cartridges, batteries, organics etc.) to facilitate reuse, recycling, composting, and overall waste reduction.
- Waste management plans for demolition, construction and operation of the site. Minimum of 90% of construction and demolition waste to be diverted from landfill.
- Passive design principles have been incorporated in the design, including high-performance building envelope, effective shading and building orientation, and natural ventilation openings to support comfortable and low-energy indoor environment quality.
- Acoustic consultant engaged to advise design to support the building's function as training, teaching and multi-purpose spaces for students, staff and community use.
- Best-practice lighting will be provided to improve lighting comfort via flicker-free, high-quality lighting that accuracy addresses the perception of colour within the space.
- High levels of daylight and external views are provided to regularly occupied learning and administration areas, to support high levels of visual comfort for building occupants. Detailed daylight modelling to be undertaken in future project stages. Refer to Preliminary Daylight Modelling Assessment undertaken for the project.
- Internal air pollutants have been reduced via selection of materials with low or no volatile organic compound (VOC) levels and low formaldehyde concentrations, verified via on-site testing.
- Effective heating and cooling to improve thermal comfort, in accordance with EFSG guidelines.
- Highly energy efficient building, exceeding the minimum requirements of the NCC Section J. Energy to be
 undertaken to demonstrate a reduction in energy consumption in comparison to a NCC DtS compliant
 reference building, in line with the following targets:
 - Minimum 10% reduction, excluding any contribution from renewable energy (e.g. rooftop solar PV) in line with EFSG Section DG02.03
- Final improvement will be demonstrated via energy modelling in schematic design. Specific energy efficiency provisions will include:
 - Exceeding the minimum building envelope R-values of NCC Section J
 - Improving on the glazing performance requirements of NCC Section J
 - Effective shading devices which reduce solar heat gains to conditioned spaces
 - Energy-efficient lighting (typically LED) will be provided throughout, exceeding lighting power densities of the NCC Section J
 - High efficiency heating, ventilation and air conditioning systems with mixed-mode 'traffic light' controls system to reduce operational energy.
 - All-electric building services
 - New roof mounted solar photovoltaic (PV) system. It is noted that the Dundas Primary School works includes provision for a solar PV array, exact sizing to be confirmed in future versions of this report.
- High-efficiency water fixtures.
- Reduction in embodied carbon of materials, achieved through sustainable concrete and steel selection.



- Adoption of minimum targets energy efficiency of appliances (air conditioners, TVs, fridges, computers) to make energy efficiency one of the selection requirements. Major appliances to be at least 0.5 stars above the average rating at the time of purchase.
- To encourage active and public transport, bicycle parking for staff and students to be provided to the
 activity.
- The builder has policies and programs to support construction workers and provides staff support.
- The Head Contractor has procurement practices in place to support disadvantaged groups gain employment opportunities, including:
 - Procurement of all materials and labour will be in accordance with the NSW DoE Aboriginal Procurement Policy and NSW DoE Main Works 21 Preliminaries - Section 4.4 'Aboriginal Participation'
 - A project-specific Aboriginal Participation Plan will be developed to monitor and report on the minimum Aboriginal participation requirements.
 - At least 1.5% of the building's total contract value has been directed to generate employment opportunities for disadvantaged and under-represented groups.
- Inclusive design principles are followed to ensure building users with diverse needs have ease of access and way finding throughout the building.
- Specified stormwater pollution reduction targets are met.
- Appropriate lighting design to reduce light pollution of external lights, including compliance with AS4282, AS/NZS 1158
- All heat-rejection systems to be waterless to eliminate risk of Legionella (no cooling towers)



10 **APPENDICES**

10.1 SINSW ESD SCHEDULE

PROJECT: REVISION	Dundas Public School Upgrad A	3															INIDEDENDEND	F CHICTAINA OH ITV MC	SPISICATION		
Sustainability Strategy Priority	Distribution Suntainability initiatives / regularements Where application, this is an estructionly from the relevant ETSG. For full requirements refer to https://efsg.det.rew.edu.au/	Project stage	Basis for Initiative	Crossover with Green Star	Recommended evidence to demonstrate compliance	Has this been implemented in the project?	Contractor's ESD consultant comments	Actual evidence This evidence needs to show that the requirement from column C has been met	Responsibility:() dentify party responsible to provide evidence)	Planning check Is the evidence proposed accepted?	Design Check Is the project compliant?	As Built Check Is the project compilant? Y or N		Independent ESD Review Comments	D&C Contractors Response	Independent ESD Review Comments	D&C Contractors Response (insert	Independent ESD Review Comments	Independent ESD Compliance	Potential impact of departure on Green Star Points:	vidence Index (optional)
Act on climate change	exponented for VEC. If there for failment much be engaged and but it is that energy communitation is producted to be at least 20% lower than if bad if the recognitions with believable Could requirements. Each hadding's viptime and dispote must comply with the corresponding Section 2 requirements in the failtened Construction Could be a confident to the fail of the corresponding Section 2 requirements in the failtened Construction Could be a confident to the corresponding Section 2 requirements in the failtened Construction Could be a confident to the corresponding Section 2 requirements in the failtened Construction Could be a confident assert the confidence of the co	Ph 2-5: Architectural Design	DG02.03 GREP	DAS c15E.0 GHG Emissions Reduction - Conditional Requirement	1. There produting apport / Predictive energy modeling and thermal condo- sinances. Report seeds in these at least 12th Improvement of building our minimum ICC reportment. Support seeds 2.0 do built violence 15th model in an accusate regressmentation of the building, and during the condoctors in the condoctors are produced proposed, and predictions of the building, and during until the condoctors are professional productions of the buildings, and the condoctors of the condoctors are predictions of the condoctors of the condoctor	Y or N or NJ	Energy modeling has confirmed that the school significantly exceeds the requirement to reduce energy consumption by at least 20% vs. a reference		evidence)	YorN	YorN	YorN	SINSW Suatainability comment	(insert date)	(msert date)	(insert date)	63te)	(essert date)	TBC	Y, N, N/A provided r	1
Act on climate change	Assists design The road for solvers counting and hunting shall be minimaded by employing passive / busiliseded design principles based in DGSS, BBC and BCG 72 has well not BC 65 MSD from more and frequent in School Schoolsen. This schoolsen and shall be printing passive counting in summer and heating in winter - Thorison dates	Ph 2-5: Architectural Design	DG55 DG06.02 DG27.12 GA NSW Environmental Design in Schools		Thermal modeling report As but in vierce demonstrating measures implemented to reduce need for entire code of the reduce code of a residence code of a residence code of a residence code of a residence of the reduce of		Large reductions in energy consumption, as a result of passive design principles, have been incorporated in the design.	Tader to Energy Modelling Assessment The to Energy Modelling Assessment	Suntainability										ТВС		2
Act on climate change	excep afficient fairling single, and modelling still plating must be sell or the lighting systems and the selection of fittings in to be understand based on a Whiste of all approach, such as the design of the lighting systems and the selection of fittings in to be understand based one at Whiste of the selection of the selecti	Ph 2-5: Service Design	DG2.3.1 DG63.01 DG63.04 DC63.05 DG63.03.02	DAB c15 GHG Emissions Reduction	Lighting downings Lighting specifications of schedules Lighting specifications of schedules Lighting modelling report showing compilant power densities	,	Assumed to be included in patternhook documentation for standard hubs		Electrical										TBC		3
Act on climate change	- The cost of lighting controls will said in subdistrially improving energy efficiency on sites, and should be considered for all righting systems, makes belief or the righting systems, makes belief or the righting systems are accumumented for ELL 08. - Constructing (1) depth and Origing Howestering systems are accumented given rapidly to reduce a playing energy a whole materiates confrontably in systems, and constructions the point to have consequent as explained on Disc. 100. - Constructing simple systems are investmented in some of the point to the conteigers as explained on Disc. 100. - Constructing simple systems in means to radically the investment of the most originate provided which the speciments of the speciments of the point of the speciments o	Ph 2-5: Service Design must other or	DG63.05 DG63.07 DG65.03.01	DAS c15 GMG Emissions Reduction DAS c4 Building Information			Assumed to be included in patternbook documentation for standard holds.		Electrical												4
Act on climate change	Long or months approved in Appeals Electrical applyment and that alles 40.5 states above the market average size rating or comply with high efficiency standards uperfield on the GEEP MUXC yellow must have iterated or sensor freedback functionality for energy conservation Typions and list designed on minimal energy communities. System design / requirement selection is to be based on whole of fill Only the communities of the		ps DG2.3.3 DG55	DAS c15 GHG Emissions Reduction	2. Enforces or applicances and equipment with their star starger or personner standards, signed by head contractor or architect. All appliances and equipment required in the CREP must be lated, and are contraining equipment equipment and contractors, transformers, etc. 2. A built mechanical drawings / statement from head contractor; 2. Whole of life cost analysis demonstrating systems were selected based on WIV sections.	t,	HVAC controls are based on EFSG requirements, which comply with the noted iter		Mechanical										TBC		5
Act on climate change	Next loxy/gain. The delays must take steps to control heat loss from the building during cooler winter months and heat gain during the warms receibs. Befor to NVAC Design considerations in CODA.SI.	Ph 2-5: Service or Design		DAB c15 GHG Emissions Reduction	Thermal modelling report As bulk evidence demonstrating that model is an accurate representation of the building Specifications/ calculations supporting modelling inputs		The building utilises shading design and improved thermal fabric performance to reduce heat gains and losses, and reduce overall energy consumption.	Refer to Energy Modelling Assessment	Sustainability												6
Act on climate change	Notice meniments control — 2-bith the thermal control and indoor are quality shall be controlled automatically within specified parameters. -Controls, shall be inergia and instalive to use. -A "shall by by "gity sparse (securities to 10 55.01 Thomas Control and Valour A Quality Policy) should be used to inform the small value of the shall be used to inform the small value of the small va	Ph 2-5: Service Design users of	DG55 DG 55.01 es Thermal Comfort and Indoor Air Quality Policy	DAB c15 GHG Emissions Reduction	As bulk evidence demonstrating controls have been installed as required. Commissioning report / statement by head contractor confirming controls have been set as required.	,	Traffic light system is included to all learning spaces as per the EFSG		Mechanical										TBC		7
Act on climate change	Renovable energy A grid corrected soler PV system must be installed in line with DGSS requirements. Where feasible, PV systems shall be installed so offset as much of the electricity consumed by the school as is practicable.	Ph 2-5: Service Design	DG2.3.4 DG55	DAB c15 GHG Emissions Reduction; DAB c16 Peak Electricity Demand	As installed drawings of PV system Thergy modeling report showing renewable energy generation		PV system to be installed and sized to offset building consumption	Preliminary Calculations and proposed system size included in concept documentation (Concept Repc and Drawings)	rt Electrical												8
Act on climate change	Buttery Triengy Storage System A buttery caregy storage system shall only be designed in consultation with SINOW Zustainability nationability angulate (Bit Tries and Just	Ph 2-5: Service Design	PS DG66.8.3	Demand DAB c15 GHG Emissions Reduction; DAB c16 Peak Electricity Demand	An installed drawings of battery storage system	-			Florida										ТВС		9
Act on climate change	Readers Admits being must be preferred over gas heating. Where gas heating is considered, it must be approved by \$10000 Sustainab Reading equipment must be designed from a whole of life properties end. -Support automated design principles including reading reaming around principles and carbon entrainab are accessible and readers are very to material minimate impact on solving as when materianace is being performed are accessible and readers. The read of the principles are considered and the solven performed are accessible and readers. The read of the principles are the solven performed and a second performed and the principles are the principles and the principles are the principles and the principles are	ph 2-5: Service Design	DG56	DAB c15 GHG Emissions Reduction	If reverse cycle air conditioning is installed, confirmation that gas heaters are not installed, OR Z. Evidence that the gas heaters installed are energy efficient.		No gas heating is included in the mechanical design.		Mechanical										твс		10
Act on climate change	VOICE MARKET AND THE CONTROL OF T	Ph 2-5: Service Design	DG53.09	DAB c15 GHG Emissions Reduction	WOL cost assessment for hot water systems Hydraulic drawings/schematics showing installed DHW systems	,			Horkanikra										твс		11
Build resilience	Commencially bloody spirits much in a last braining (if ended restancing for their purpose or preferred energy socies to the through purpose of the commencial or considered or considered or developing the business cases - sliges, drivings and review to have buildings found risk (if any) consistencial and and accordances consistencial and and accordances - spirits of the consistencial considered or considered or considered or considered or spirits of consistencial consistencial shoulder scale. Supposed of available someon much particular considering or least two different climate change consistency climate change risk assessment much be undertaken considering or least two different climate changes consistency climate change risk assessment much be undertaken considering or least two different climate changes consistency climate change risk assessment much be undertaken considering or least two different climate changes consistency climate change risk assessment much be undertaken considering or least two different climate changes consistency climate change risk assessment much be undertaken considering or least two different climate changes consistency climate changes risk assessment much be undertaken considering or least two different climates changes consistency climate changes risk assessment much be undertaken considering or least two different climates changes assessment consistency.	Ph 1: Site Selection and Masterplan	DG03.02	DAB c3 Adaptation and Resilience	Distabled reports or surveys developed Tourisonment at his report Tourisonment at his report Tourison demonstrate greammental datus have been implemented and natus addressed through design responses.	,	Orgoing consultation with bushive consultant. Climate Adaptation workshop completed	Contamination and Geotech record	RPInfrastructum										TBC		12
Build resilience	seeing of all and an artist and artist artist and artist artist and artist	safor ildings Ph 1: Site Selection and Masterplan		DAB c3 Adaptation and Resilience	E. Bush for an assessment report 2. Submert by scholard for a consultant suddowng building attribuges industributed in the war MCA and ASSESS. Bush from suggested and adding suspensed distributes in the submitted of the submitt	,	Bushfire letter has been		RPInfrastructure										твс		13
Build restlience	Cleans the gas exhaption in the continue of the continue of an of the continue of adoption in recognition from the continue of the continue of a depth of the continue of the	dent Id be taken.	DG02.08		2. Climas not assessment, and 2. Climas sold present and 1. Consigney management plan	,	Climate change risk workshop and report have been completed by NDY with injust from all design disciplines. All risks and their and their thinks are their than the report.	Safer to Clinate Owner Adoptation Repo	Suntainability										ТВС		14
Build resilience	Weather protection Circulation areas provided between administrative, staff and all student spaces (except Agriculture), should be protected from rain and unfavourable winds.	Ph 2-5: sus/Architectural Design	DG08.05	Not covered in Green Star	As built drawings showing circulation areas are protected as required	,	All circulation areas have a roof to protect against weather	Refer to Schematic Design drawing	Architect										ТВС		15

	OLDS I HER HISTO MANGEMON - NOOL COOL													1	
Build resilience	The roof colour will be have an impact on the thermal performance of the roof, therefore the product's faller Inflactance Indeed about the considered is margined to the less intended and incl. Provided intended many that the faller inflactance Indeed (IM) requirements for roof gaths. S. I, secretary that of the faller inflactance Indeed (IM) requirements for roof gaths. S. I, secretary that of the faller inflactance Indeed (IM) requirements for roof gaths. S. I, secretary that IM is all the IM in the IM in the IM is all the IM in the IM in the IM in the IM in the IM is all the IM in the IM in the IM is all the IM in the IM in the IM is all the IM in the IM in the IM in the IM in the IM is all the IM in the IM in the IM is all the IM in the IM in the IM in the IM in the IM is all the IM in the IM in the IM in the IM in the IM is all the IM in the IM is all the IM in the IM is all the IM in the	e (SRI) Ph 3-4: Product and Material Selection	t DG20 Fabric	DAB c25 Heat Island Effect	1. Sits Plan highlighting all relevant wees an referenced within the area scholadar. 2. Area Scholade bitting the areas of each of the relevant the elements and other relevant, the Stit Sudain and referencing joint drawing from the size, and a support to the size a		Rend Colour will be SUMMARS TABLE 2.						ТВС		16
Consume responsibly	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	Ph 7-9: Construction, Commissioning Post Occupance and Operation	t T	and and a	3. Building user's guide		DAC contrador responsible Fallutari mácticos es	PULLIFIERA					ТВС		17
Consume responsibly	Stormwater management Must aim to minimise the transportation of toxicasts to waterways and other offsite environments, and maintain the existing hydrological regiment. Dut differed for filosofing must be done early to inform building and landscaping design Dehiling water catchment protection	Ph 1: Site Selection and Masterplan	DG2.4.3	DAB c25 Stormwater	Stormwater modelling report showing stormwater pollution and flows. Outl / Hydraulic drawings showing management measures. Water sensitive urban design report (if WSUD was use4)		Pollutain reductions are targeted through the use of filtration devices. Due diligence completed for	ed.					твс		18
Consume responsibly	Tor developments within driving water catchment area, a water cyte management study is to be included with the Developmi Application for Exclusion Facility developments involving: - Approximer sciultus: - Boundois and efficient re-use schemes - Georgian ystemmor ovorich procluting package sweezge treatment plants) - Georgian ystemmor ovorich procluting package sweezge treatment plants) - Georgian ystemmor ovorich procluting package sweezge treatment plants)	ent Ph 1: Site Selection and Masterplan	DG51.07		Water cycle management study Lividence that recommendations in the study have been followed / implemented	NA.	Dundas does not fall within disking water catchment	RPinfrastructum					твс		19
Consume responsibly	Where a new school is to be developed a Hazardous materials study is to be conducted, including: -Asbestos Constraing (Materials (ASMF)) -Synthetic Wireral Fibrus (SMF) -Shakhakhamiand (Fibrus) -Shakhamiand (F	Ph 1: Site Selection and eldesterplan	DG48.01	DAS 24.2 Contamination and Hazardous Materials	Teandon materials dayly six inspection report / survey Attenuence gives for heardon senterals destribed Attenuence gives for heardon senterals destribed Attenuence gives for implemented Attenuence confirmation of the senteral subtraction of destribution of the senteral subtraction of destribution of the senteral subtraction of destribution of the senteral subtraction of								ТВС		20
	Any contract common must be related to did not social tests. The protected against contract related to the second social tests. The protected against contract related to the second social tests and second social tests and second social tests. The second social tests are second social tests and second social tests are second social tests are second social tests and second social tests are second social tests are second social tests and second social tests are second social tests and second social tests are	Ph 2: Concept Design - Space Concept planning		DAB cB Operational Waste	Operational wade neurogenees plan Operational wade reports blooming theoretic rates	NA.	Section shows companies.	over all suction					тас		21
Consume responsibly	Soliding Resibility Position introduced members considering the future flexibility of the structure. Avoid and hoc placing of columns internally, giving preference to uniformity in layout. Design all internal wish an one-load bearing to enable future flexibility.	Ph 2: Concept Design - Space	DG21.1.16	Not covered in Green Star	As built drawings or statement by relevant professional		required at edge wall thus no room for shear walls. Shear						твс		22
Consume responsibly	Highwale curvines (Missell extracts should: - Support unknished design principles including reducing water consumption and water production Support unknished design principles including reducing water consumption and water production Supportaintly have a first desirable service minimal environmental impact or school case when manterascen is being performed - Supportaintly that only first parameters with minimal impact or school case when manterascen is being performed - Supportaintly that of greater—many hydrodize versions are considered of schools by in security and in the school of the sch	Ph 2-5: Service Design	DG51.01	DAS c18 Potable Water	Inlydraulic report showing sustainability initiatives implemented to reduce potable water consumption As built drawings showing trade waste arrestors	N	walls has been fit within	Structure Hydraulics					ТВС		23
Consume responsibly		Ph 2-5: Service Design	9 DG53.04	DAB c6.0 Metering	As built hydraulic drawings								ТВС		24
Consume responsibly	incide rod water havesting and tank storage in new unboth and where practical in existing whosh to reduce the demand on drosting water supplies. Their water cus convents to dry impation systems for adjacent landscape/gardens with the major preference being for grantly feel supply to interestinal or against greatermann. All the contractions of the contraction of the con	Ph 2-5: Service Design	DG53.14 DG2.42 DG53.01	DAS c188.2 Rainwater Reuse	As built hydraulic drawings showing tank connection to end uses and capacity	NA.	Not required on existing schools have been designed on the second of the	myorauses.					ТВС		25
Consume responsibly	For 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 lasting and maintenance water, or by using an alternative non-postable water source. Ground water	Ph 2-5: Service Design	5 DG2.4.2	DAS c188.5 Fire System Test Water	Fire engineering report								твс		26
Consume responsibly	Where ground water is available for use for irrigation purposes in drought affected locations, enquiries must be undertaken with Department of Planning, Industry and Environment to determine the suitability of a ground water system.	Ph 2-5: Service Star Design	DG53.03		Relevant due diligence report / investigation	MA.	Ground water not available for irrigation	Fire					твс		27
Consume responsibly	Have waite	Ph 2-5: Service Design	0G52	Not covered in Green Star	As built drawings showing trade waste arrestors or Letter by Nydraulic Engineer confirming arrestor have been installed as required.	NA.	No science labs, kitchens, art rooms, or carbeens within scope						твс		28
Consume responsibly	Another for any group, glass and long of adolescent processing must be realished to see a sentenciar from some interesting and continues. The continues of the	Ph 3-4: Product and Material Selection	DG53.02 DG2.4.1	DAS c188.1 Potable Water - Sanitary Ficture Efficiency	Schedulin of mularisk, finance, fittings and equipment with WELS/Modelules rating, demonstrating compliance and describing those with flow restrictors and streed flow.		Wild comply as par ETSG requirements. Chesished inscitation have not yet						ТВС		29
Consume responsibly	Okrypie auszonest (professzental) Okropienestel impatts of products and molecules has been aussest and inform material whiction	Ph 3-4: Product and Material Selection	t DG01.03	DAB c19A - Life cycle assessment	Sile-cycle assenment regard	Y	Unter place. John Stein assument has been performed by 2017 which the efficient for the regulared which the efficient for the regulared control of the regulared control o						ТВС		30
Consume responsibly	Show at the unity (DOC) The count of severe by (DOC) The count of severe by (DOC) The county (Annexes) A reduce of direct and indirect costs and inside of the county analyses The county of the severe by the select of the cost for the first feature of severe A reduce or a present produces to consider and county of the c	Ph 3-4: Product and Material Selection	DG01 t All design guide for selection of materials and building system	SSC c210 - Return on investment	iske opdie enologe opport for referent updam								TBC		31
Consume responsibly	Socialisation annuals and the deficient based on the following Construction materials with an elected based on the following construction and the second based on the following and dark have lower advance environmental impacts throughout these law party forwards to 30 per second based on the following and the following and the following and the following following the materials and the following and section . These has not included energy and seator.	Ph 3-4: Product and Material and Selection	t DG02.05	DAB c21 Sustainable Products	Environmental Product Declarations of products / materials used; Product certificates (file GCCA, ESC, et 8) Engolary declarations confirming encycled contents in products End of quartities	Y	Will be considered in Specification. Current specification based on shrift Sate project. Father development blooghout persons.	Architect					ТВС		32

	Contamination smaller and the contamination for the contamination of the contamination of the contamination for the contamination of th	b # þ 3-4: Produs	DG2.5.1	DAS c20.2 Responsible	1. Evidence of chain of custody										22
Consume responsibly	engineered and glued timber composite products, or timber from plantations or from sustainably managed regrowth forests that FSC, AFS or PEFC certified	Selection	DG21.05.01	Responsible Building Materials -	2. Bill of quantities								TBC		33
	- All timber used is to be termite (white ant) essistant or treated to be termite resistant to the appropriate hazard built for disassembly	Ph 3-4: Produc	pg02.07	Timber				Aronneci							24
Consume responsibly		Selection	DG02.07			NA.							TBC		34
		Ph 3-4: Produc	pg21.02		1. Structural specifications and drawings		Upfront Carbon assessment has been completed								25
Consume responsibly	Unicorest - Une materials complying with AS based on the Whole of Life approach to materials selection Do not use breccia or dolerite in concrete mises Thy ash is manufacturing bi-product that can be used as a cement replacement but should limited to a maximum of 20% by we dispersed in manufacturing the product that can be used as a cement replacement but should limited to a maximum of 20% by we dispersed in manufacturing.	and Material	DG21.02	DAS c198.1	2. Structural Engineer's report showing % cement replacement		between the section of the section o						TBC		35
	of comerci content. Construction waste	Ph 7-9:		DAB c22		Y	of appropriate material NDY Embodied Carbon Assessment	Sustainability							
Consume responsibly	Tarnets must be established to increase discriment waste sent to landfill with a minimum discrimentate tarnet of 90%.	Construction, Commissionin	E DG02.07	Construction an Demolition Waste	d Construction waste reports showing percentage (minimum 90%) of waste re- used and recycled (diverted from landfill)								TBC		36
	Consider opportunities for re-use and recycling of materials in the construction phase	Post Occupant and Operation	cy 1	Waste	and respect farming tronsmitting		To be confirmed in future phases								
	Maintainability 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 fault) building including all equipment and equipment access arrangements.			DAB c2.1											
				DAB c2.1 Services and Maintainability Review											
	Any mechanical ventifation system within the building must be designed to provide adequate access for maintenance, to both sid of all mosture and debric activing components, within the air distribution system. Mosture-producing and debric activing components include terms such an confige cost, heating cost, for cost units, hundridner and fifteen in the air handling system.	des	ns DG16.10												
Consume responsibly	components include items such an coaling colls, hearing cold, fac coil units, hundridlers and fifter in the air shading system. The project team should demonstrate that there is a project level makes process in place to ensure that the building has been dissipled as your the EACS, that any issues identified have been closed out and that the outcomes can be communicated to the noiseuser facilities/ operations teams.	Ph 2-5: Service Design	DG 01.04	DAB c9.1.2 Ventilation System Attributes	 As built drawings including all equipment access arrangements for maintenance 								TBC		37
	designed as per the ETSG, that any issues identified have been closed out and that the outcomes can be communicated to the			Attributes											
	Maintenance required and cost of this maintenance are to be considered in assessment of the project's life cycle cost.			DAS c4 Building Information											
				and and a			To be completed during								
	Operation and Maintenance manuals (O&M Manuals) are to be provided, written in clear, concise English covering the various hadden element, susembles, engineed, service installations and outerers inconcerated into the World			1			future phases								
	The following detailed reports/ surveys/ information should be considered in developing the business case: - Local environment/ character			GSC c12 Culture Heritage and Identity											
Seater connections	- Climate and microclimate - Henitage significance / Impact	Ph 1: Site Selection and Masterplan	DG03.02		 Relevant reports/surveys developed (these ideally include recommendations for further development stages) Svidence dermostrating recommendations / best practice solutions have been implemented/addressed. 		No heritage considerations						TOC		38
	Appraisal of pixtucial and visual factors affecting site development. Appraisal of pixtucial 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 articipated sub-grade.	Masterplan		DAB 24.2 Contamination and Hazardous Materials	Evidence demonstrating recommendations / best practice solutions have been implemented/addressed.		No nertage consideration, were identified. Transport and geotechnical assessments will be								30
	materials for horticultural purposes.			and Hazardous Materials			completed during future								
	- Testing for took: residues must be undertaken in all areas identified as being a possible risk - i.e. filled or dumped gros			1	3 Birellograthe or professival possessment / local flora and facus surpay	Y	phases. Neritage Reports	RPInfrastructum							
					3. Studieverby or coolingual assessment of frood files and faces servey. 3. Endinguity of Assessment found files and faces servey. 3. Endinguity of Assessment faces which the course it the fallowing. 3. Endinguity of Assessment faces which the course it the fallowing and interest them assessment for the fall of the fallowing and the countries of the fallowing and the countries of the fallowing and t										
					protection measures - ecological impacts from light and noise pollution and water quality and their										
	Ecological conservation Schools sites must conserve for future generations, the biological diversity of genetic materials, species and ecosystems on that s	ibe			mitigation requirements - existing vegetated areas and biodiversity values being retained how										
	and consider the surrounding natural environment.			DAB c23	biodiversity has been considered within the project's material supply chain - list of management strategies to protect the integrity of ecological values.										
Foster connections	An cooppea Assessment export must be prepared for the site in order to understand the existing conditions and future conserv strategies.	Ph 1: Site Selection and Masterplan	DG02.06	GSC c29	throughout project planning, construction, and occupancy community and local stakeholder expectations including Aboriginal or Torres Strait Islander								твс		39
	The design of the facilities must provide unique and valuable environmental conservation learning opportunities and effective	Masterplan		(incl Biodiversity	groups and environmental groups - Adequate due diligence must be conducted where an area of biodiversity or										33
	The design of the facilities must provide unique and valuable environmental conservation learning opportunities and effective environmental medicing to the wider community. Schools must connect with nature and incorporate biophilic design principles. Open space must allow for exploration, and biodive and earth education to enhance the late's quotion learning contental.	ersity		Enhancement)	high ecological value is identified on the site, where at least 50% of this area must be retained.										
	and on the opposition of a construction in the second of t				 Biodiversity management plan describing measures for the conservation and protection of threatened species or communities, biodiversity 										
					enhancement, tree protection, etc. 4. Evidence demonstrating measures have been implemented to protect and										
					enhance endangered species / ecological communities identified; to preserve or re-establish native flora; etc.		Flora and Fauna assessment report in progress. Report to be provided in future phases								
	Productive landscape Consider including opportunities for development of community garden within the site and relationships with community groups	Ph 1: Site (Selection and Masterplan		GSC c14.2 Local	Site plan demonstrating location and size of community garden	y	de provided in titture phases	KPINISSPUCTUR					TRC		40
Poster connections	this to occur.	Masterplan	062.06		Site plan demonstrating location and late or community garden	NA.							160		40
Foster connections	Elkycle storage Provide 1 space for every 20 students to AS2890.3 standard	Ph 2: Concept Design - Space	565524.36	DAB c17 Sustainable Transport			Needs to be reviewed as to what is existing. Residual to						TBC		41
	Community use of facilities	planning	DG16.08	Transport	Confirmation by the Architect that direct access has been provided to open	Y	be added to project scope.	Architect							
	Some school facilities are used out of hours for activities such as weekend church groups, sport events and public meetings. Liais with the Project Director to gain an understanding of any shared use, or community use arrangements that are being considered	e 19th 2: Concept	Department of Education's	DAB c 308	space and any other facilities that could be shared with the community.										
Foster connections	de de														
	UN SUE.	Design - Space planning	of School	Community Senefits	community benefits strategy. 3. Plans clearly outlining how the outcomes from the community benefits								твс		42
	New schools should be designed so that direct access to the open play space, fields , hall and gym can be achieved without the programs as to the buildings.	Design - Space planning ublic	of School Facilities Implementation	Community Benefits	A row observation or regignment according to the community benefits strategy. First clearly outlining how the outcomes from the community benefits strategy have been implemented in the project. A circinus or clear agreements where already in place.	200							ТВС		42
	New whods should be designed so that direct access to the open play space, fields, half and gym can be achieved without the p gaining access to the buildings. Open pay space Open play space must be provided for students to access during recess, bunch breaks and for outdoor learning. Open play space	Design - Space planning ublic	of School Facilities Implementation	Community Senefits	Confirmation by the Architect that direct access has been product to ago- iness and any other Confirms that could be short with the community. 2. All let of community engagement activities undertaken to directly a community harmless strategy. 3. Plans (skelly costising how the actioners from the community benefits strategy have been improvemented in the present production of the history production of the community density of the community density. 4. Note that or listed agreements where skelly in place	NA.							ТВС		42
	have whosh should be designed as that direct access to the open-play space, fields, half and gen can be achieved without the p gening access to the buildings. Open pay again. The proposed of the proposed for final pays to the proposed of the proposed for the	Design - Space planning ublic	of School Facilities Implementatio	Community Benefits	A few claim of a region of the community benefit strategy by the community benefit strategy have been implemented in the project A, zono care or lease agreements where already in place	NA.							ТВС		42
	was known should be designed as that direct access to the open play gapes, fields, hall and gan can be achieved without the pginning access to the halfsets. Open pay years Open pay years must be provided for students in access during recess, kuch breaks and for nutders learning. Open pay years Agent pay years must be provided for students in access during recess, kuch breaks and for nutders learning. Open pay years Accessing part of students. Covered actions of stresses. Covered actions are stresses.	Design - Space planning ublic can	of School Pacifities Implementatio	Community Sensits	Amounts produced a religion of the continue from the community benefit strings. After a case, continue from the continue for	NA.							ТВС		
Foster connections	The weak which should be disquest on that direct accounts the open-play years, fields, half and gain can be arbitreed without the propring general to this beliefless. Journal of the should be disputed to the should be should	Design - Space planning ublic Ph 2: Concept Design - Space	of School Facilities Implementatio Connectures DOGIO.03	Community Benefits Not covered in Green Star	enomously burefls to steep; 2. First calley, locally be the outcomes from the community benefits contaging have been implemented in the project. 4. Direct case of benear agreements where already in pileas. Plan view directors to be provided to the project of the project of the pileas agreements where already in pileas.	NA.							TBC		42
Foster connections	The war shoult hould be disigned as that direct account to the open-play years, fields, half and gon can be achieved writined the garriage series to the buildings. Deep any years must be proposed for students to account during recess, both breaks and for couldon's learning. Open play years at the comprised of the students to account during recess, both breaks and for couldon's learning. Open play years at the comprised and states. Covered couldon's recess.	Design - Space planning uble on Ph 2: Concept Design - Space planning	Community Us of School Facilities Implementation Concentrates	Economisty Benefits in Not covered in Green Star	emmently accepted to straige. The miss design and the second seco	NA.							TBC		
Fester connections	The war should have deeperd as that direct accounts to the open play years, fields, half and gon can be achieved without the gamene sense to the halfstep. John play sear must be achieved. John play sear must be achieved. John play sear must be achieved with the season during revens, butch threats and for couldonr learning. Open play space as to compared of the	Design - Space planning ubbc ph 2: Concept Design - Space planning	of School of Sch	Senefits In Not covered in Green Star	community warmed to strategy. The first closely in closely be the document from the community benefits ofting the street becames from the community benefits ofting the beam implemented in the project. Limits over it has no greatment when already in place. First view of housing promotions and open space.	76/4							TBC		
Faster connections	The working through the disignated on their directs accounts the open play speece, fields, half and gon can be arbitrared without the property of the control of the control of the control of their speeces of th	Design - Space planning polic con Ph 2: Concept Design - Space planning	of School of Sch	Mot covered in Green Star	commonly search is story; If firm closely is obtained by the the autoiment from the community benefits desired that the community benefits desired that the same implemented in the groups: A limit can be have agreements above shouly in place. Part value drawing showing provision of open upon	NA.		Architect					TEC		
Faster connections	Staff rooms should adequately accommodate staff work and recreation, and focus on indoor environment quality, enjoyment an	Design - Space planning Ph 2: Concept Oesign - Space planning	Community United States of School of School of School Facilities implementation implementation of School o	Not covered in Green Star	emensity week its straigs. The first factory continues from the community barefits Extend today collection by the 10th outcomes from the community barefits. Extend to the collection of collec	NA.		Architect					TBC		
Paster connections	Staff rooms should adequately accommodate staff work and recreation, and focus on Indoor environment quality, enjoyment an interaction through provision of the following:	d			3 Patrick from the PERS construents for stall const.	NA.		dechdaeci					18C		43
Faster connections Faster connections	Staff rooms should adequately accommodate staff work and recreation, and focus on Indoor environment quality, enjoyment an interaction through provision of the following:	d		Community Benefits Not covered in Green Star GSS c Amenity Space		70/4		Architect					TBC TBC		
Faster careections Faster careections	Saff rams should departely azommodels stelf work and recreation, and focus on indoor environment quality, evjayment an exerction through provision of the following: -Copylight -Vourtistion -Vour	d			3 Patrick from the PERS construents for stall const.	70.0	Staff mans not included in	derbeten					16C		43
Failer connections Failer connections	Staff rooms should adequately accommodate staff work and recreation, and focus on Indoor environment quality, enjoyment an interaction through provision of the following:	d	EFSG Staff Uni		3 Patrick from the PERS construents for stall const.	10A	Salf rann out soluble to says of motor.	deshitares					TRC		43
Fasier connections Fasier connections	Soft many solubil deligrating assummations of the Americanium, and focus on indicer environment quality, egypment and strength reference of the following: Complete: Very Complete of the C	d			3 Patrick from the PERS construents for stall const.	506	Staff more not included in compared works.	Anthres					18C		43
Faster connections Faster connections	Soft many should adequately accumulate shall set all each and recreation, and focus on indice continuenced quality, equipment on contraction from production of the following: Complete Views	d Ph 2: Concept Design - Space planning	Department of Education's Action Plan	GSI c Amenity Space	3 Patrick from the PERS construents for stall const.	NA.	Staff more, not included in stages of moth	Architect					1100		43
Paster connections Faster connections	Soft many should adequately accumulate shall set all each and recreation, and focus on indice continuenced quality, equipment on contraction from production of the following: Complete Views	d Ph 2: Concept Design - Space planning	Department of Education's Action Plan	GSI c Amenity Space	Schools from the 1755 repairment for sold ranes. Estatement of sold reconsiderant assorbidy.	565	Salf more not related to stops of motor.	Architect					18C		43
Feder connections Feder connections Feder connections	Soft many solubilist disripativity accumulations shift with and recreation, and focus on indicar continuenced quality, equipment on contract the focus of the following: Complete Verification Veri	Ph 2: Concept Design - Space planning with Ph 2-5: Architectural Design	Department of Education's Action Plan	GSI c Amenity Space	3 Patrick from the PERS construents for stall const.	50.	Staff mores and included in stage of works	deshitest					18C		43
Fasher connections Fasher connections Fasher connections	Soft many solubilist disripativity accumulations shift with and recreation, and focus on indicar continuenced quality, equipment on contract the focus of the following: Complete Verification Veri	Ph 2: Concept Design - Space planning with Ph 2-5: Architectural Design	Department of Education's Reconciliation Action Plan NSW Government Aboriginal Procurement Policy	GSI c Amenity Space DAB c300 Reconciliation Action Plan	Schools from the 1755 repairment for sold ranes. Estatement of sold reconsiderant assorbidy.	500.	Staff more, not included in stage of works	Architect					18C		43
Faster connections Faster connections Faster connections	Soft many solution designating assumed sets of the and recreation, and focus on in later environment quality, expressed as consistent and property of the following: Coupling to Versitation Landing problems Plant Landing	Ph 2: Concept Design - Space planning with Ph 2-5: Architectural Design	Department of Education's Reconciliation Action Plan NSW Covernment Policy GANSW Country Count	GSI c Amenity Space DAB c300 Reconciliation Action Plan	Schools from the 1755 repairment for sold ranes. Estatement of sold reconsiderant assorbidy.	50.	Saff more not solubed in stops of mobile	Archites					18C		43
Faster connections Faster connections	Soft many soluted designating assumedates at all and and exception, and focus on in-later continuenced quality, expapsives and continuenced assumedates and continuenced quality expapsives and continuenced assumedates and continuenced quality expansives and continuenced assumedates continuenced assumedates continuenced assumedates continuenced assumedates continuenced assumedates continuenced assumedates continuenced continuenced assumedates continuenced con	Ph 2: Concept Design - Space planning with Ph 2-5: Architectural Design	Department of Education's Reconciliation Action Plan NSW Government Aboriginal Procurement Policy	GSI c Amenity Space DAB c300 Reconciliation Action Plan	Schools from the 1755 repairment for sold ranes. Estatement of sold reconsiderant assorbidy.	50.	Their means and included as accepted frames.	Jacobstees .					78C		43
Faster connections Faster connections	and many sould adequately accumulated set if and and exception, and focus on indicar continuenced quality, expapsives of minimal continuenced and included to the focus on the	Ph 2: Concept Design - Space planning Ph 2-5: Architectural Design entry'	Department of ducation's Reconciliation Action Plan NSW Government Aboriginal Procurement Policy GANSSW CANSSW CAN	GSI c Amenity Space DAS c 200 Reconcilation Action Plan	2. Excitates from the TSG requirements for stuff rooms 2. Excitates of skell from discharged accordingly 2. Excitates of skell from discharged accordingly 2. Excitates of the project's relationship with the MSF, e.g. actions employmented in low with MSF, etc.	500.	Staff more, not included in each of work	Anahitera					10C		43
Faster connections Faster connections	Soft many solution designating assumed sets of all with and recreation, and focus on in labor environment quality, expressed assumed in the contraction of the following: Complete Complete Complete Complete Complete Landingsongholder Facts	Ph 2: Concept Design - Space planning Ph 2-5: Architectural Design entry'	Department of ducation's Reconciliation Action Plan NSW Government Aboriginal Procurement Policy GANSSW CANSSW CAN	GSI c Amenity Space DAS c 200 Reconcilation Action Plan	2. Excitates from the TSG requirements for stuff rooms 2. Excitates of skell from discharged accordingly 2. Excitates of skell from discharged accordingly 2. Excitates of the project's relationship with the MSF, e.g. actions employmented in low with MSF, etc.	500		Architect					78C		44 45
Faster connections Faster connections	Soft many solution designating assumed sets of all with and recreation, and focus on in labor environment quality, expressed assumed in the contraction of the following: Complete Complete Complete Complete Complete Landingsongholder Facts	Ph 2: Concept Design - Space planning Ph 2-5: Architectural Design entry'	Department of ducation's Reconciliation Action Plan NSW Government Aboriginal Procurement Policy GANSSW CANSSW CAN	GSI c Amenity Space DAS c 200 Reconcilation Action Plan	Schools from the 1755 repairment for sold ranes. Estatement of sold reconsiderant assorbidy.	500.		Achitect					190 190 190		43
Faster connections Faster connections	and many sould adequately accumulated as all and and exception, and focus on in-later continuence quality, exprepared and increased in the following: Copylight Visitation	Ph 2: Concept Design - Space planning Ph 2-5: Architectural Design entry'	Department of ducation's Reconciliation Action Plan NSW Government Aboriginal Procurement Policy GANSSW CANSSW CAN	GSI c Amenity Space DAS c 200 Reconcilation Action Plan	2. Excitates from the TSG requirements for stuff rooms 2. Excitates of skell from discharged accordingly 2. Excitates of skell from discharged accordingly 2. Excitates of the project's relationship with the MSF, e.g. actions employmented in low with MSF, etc.	100 A	helal consolidates with 1900 50 Union, Caterrine	Anthrea					78C		44 45
Faster connections Faster connections	Soft many solubilist designating assummediates that if and and exception, and focus on in-later continuence quality, engineers and secretarists related produced on the following: Chapigit * Invadingment **Complete **LeadingmyTechnor Facility **LeadingmyTechnor **Leadin	Ph 2: Concept Design - Space planning with Ph 2-5: Anchitectural Design statty' Ph 3-5: Service Ph 3-5: Service Design	Department of Education's Reconcilation Action Plan Action Plan Policy Generated Policy GANSW Construction of Country discussion pag	GSI c Amenity Space DAId : 300 Beconciliation Action Plan SSC c15 Safe Places	Establish from the ETES requirements for staff reason Establishes of staff record debiesed accordingly Establishes of staff record debiesed accordingly Establishes of the project violationship with the BAP, e.g. actions requiremented is like with SAP, etc. Common risk accordingly of the SAP, etc. Common risk accordingly of the project	70A	Initial completions with SMM ISS have because the control of the c	Architect Minor M					116		43 44 45 46
Fester connections Fester connections Fester connections	Soft many solubilist designating assummediates that if and and exception, and focus on in-later continuence quality, engineers and secretarists related produced on the following: Chapigit * Invadingment **Complete **LeadingmyTechnor Facility **LeadingmyTechnor **Leadin	Ph 2: Concept Design - Space planning with Ph 2-5: Anchitectural Design statty' Ph 3-5: Service Ph 3-5: Service Design	Department of Education's Reconcilation Action Plan Action Plan Policy Generated Policy GANSW Construction of Country discussion pag	GSI c Amenity Space DAId : 300 Beconciliation Action Plan SSC c15 Safe Places	Excitate from the TSG requirement for staff rooms Excitates of skell from debiened accordingly Tolderon of skell from the skell room of the staff room of the sta	Total	helal consolidates with 1900 50 Union, Caterrine	Architect SINSON Althorised activation Circonnail					116		44 45
Faster connections Faster connections Faster connections	and many solubility department processing of the control of the co	Ph 2: Concept Design - Space planning with Ph 2-5: Anchitectural Design statty' Ph 3-5: Service Ph 3-5: Service Design	Department of Education's Reconcilation Action Plan Action Plan Policy Generated Policy GANSW Construction of Country discussion pag	OSI c Amenity Space DARI c 2000 Reconciliation Action Plan OSC c 25 5 Safe Places OSC c 22 .2 Digital Infrastructure	Distinct from the ETG impartments for staff comm. J. Enderson of staff comm dishwared accordingly L. Enderson of the property independing to the ETG of the property independing to the ETG of the property independing to the ETG of the ETG of the Property independing to the ETG of the ETG of the ETG of the ETG of the Sentence of the staff of the ETG of the	7 And	Initial completions with SMM ISS have because the control of the c	Andrien Andrien Andrew					116 116 116 116 116 116 116 116 116 116		43 44 45 46
Fester connections Fester connections Fester connections	South many southed adequately accumulated set off and and exception, and floors on infloor environment quality, expressed and reception, and floors on infloor environment quality, expressed and reception of the filtering. Complete **Complete **Complete **Leading problems** Factor **Leading problems*** Factor **Leading problems*** Factor **Leading problems*** Factor **Leading problems**** Factor **Leading problems**** Factor **Leading problems***** Factor **Leading problems************************************	Ph 2: Concept Design - Space planning with Ph 2-5: Architectural Design planning Ph 2-5: Service Design Ph 2-5: Service Design	Department of ducation's Reconciliation Floring Modern Action Plan NOW Government Abonignal Procurement Procurement Office (Cantry' discussion page 20065.10 DG65.10	OSI c Amenity Space DARI c 2000 Reconciliation Action Plan OSC c 25 5 Safe Places OSC c 22 .2 Digital Infrastructure	Distinct from the ETG impartments for staff comm. J. Enderson of staff comm dishwared accordingly L. Enderson of the property independing to the ETG of the property independing to the ETG of the property independing to the ETG of the ETG of the Property independing to the ETG of the ETG of the ETG of the ETG of the Sentence of the staff of the ETG of the	TANA	herial comulation with SMOW 50 km to Caseman American Stateman Caseman American Stateman Caseman American Stateman Caseman Cas	Architect Million M					116 116 116 116 116 116 116 116 116 116		43 44 45 46
Fester connections Fester connections Fester connections	South many southed adequately accumulated set off and and exception, and floors on infloor environment quality, expressed and reception, and floors on infloor environment quality, expressed and reception of the filtering. Complete **Complete **Complete **Leading problems** Factor **Leading problems*** Factor **Leading problems*** Factor **Leading problems*** Factor **Leading problems**** Factor **Leading problems**** Factor **Leading problems***** Factor **Leading problems************************************	Ph 2: Concept Design - Space planning with Ph 2-5: Architectural Design planning Ph 2-5: Service Design Ph 2-5: Service Design	Department of ducation's Reconciliation Floring Modern Action Plan NOW Government Abonignal Procurement Procurement Office (Cantry' discussion page 20065.10 DG65.10	OSI c Amenity Space DARI c 2000 Reconciliation Action Plan OSC c 25 5 Safe Places OSC c 22 .2 Digital Infrastructure	Distinct from the ETG impartments for staff comm. J. Enderson of staff comm dishwared accordingly L. Enderson of the property independing to the ETG of the property independing to the ETG of the property independing to the ETG of the ETG of the Property independing to the ETG of the ETG of the ETG of the ETG of the Sentence of the staff of the ETG of the	700.	herial comulation with SMOW 50 km to Caseman American Stateman Caseman American Stateman Caseman American Stateman Caseman Cas	Architect SIND W STHE satinulum Flactorised					11C		43 44 45 46
Faster connections Faster connections Faster connections	Soft many sounds of all quarter by accumulated as all and an and exception, and floors on indicar continuence quality, equipment and increased in the following: Copylight Verification Verificatio	Ph 2: Concept Design - Space planning with Ph 2-5: Architectural Design planning Ph 2-5: Service Design Ph 2-5: Service Design	Department of ducation's Reconciliation Floring Modern Action Plan NOW Government Abonignal Procurement Procurement Office (Cantry' discussion page 20065.10 DG65.10	OSI c Amenity Space DARI c 2000 Reconciliation Action Plan OSC c 25 5 Safe Places OSC c 22 .2 Digital Infrastructure	Distinct from the ETG impartments for staff comm. J. Enderson of staff comm dishwared accordingly L. Enderson of the property independing to the ETG of the property independing to the ETG of the property independing to the ETG of the ETG of the Property independing to the ETG of the ETG of the ETG of the ETG of the Sentence of the staff of the ETG of the	7 MA	herial comulation with SMOW 50 km to Caseman American Stateman Caseman American Stateman Caseman American Stateman Caseman Cas	Architect 1000W Athlesischen Glastinisch					116. 116. 116. 116. 116.		43 44 45 46 47
Paster connections Paster connections	South many southed adequately accumulated set off and and exception, and floors on infloor environment quality, expressed and reception, and floors on infloor environment quality, expressed and reception of the filtering. Complete **Complete **Complete **Leading problems** Factor **Leading problems*** Factor **Leading problems*** Factor **Leading problems*** Factor **Leading problems**** Factor **Leading problems**** Factor **Leading problems***** Factor **Leading problems************************************	Ph 2: Concept Design - Space planning with Ph 2-5: Architectural Design planning Ph 2-5: Service Design Ph 2-5: Service Design	Department of ducation's Reconciliation Floring Modern Action Plan NOW Government Abonignal Procurement Procurement Office (Cantry' discussion page 20065.10 DG65.10	OSI c Amenity Space DARI c 2000 Reconciliation Action Plan OSC c 25 5 Safe Places OSC c 22 .2 Digital Infrastructure	Educate Loren the ETES companies for stall reason Educate Loren deal recent descendingly Educate Loren deal recent descending with the ROP, e.g. actions requiremented in those with ROP, etc. Educate Loren deal ROP, etc.	700.	Initial completions with SMM ISS have because the control of the c	Architect MONOW SProfestorius Statement					116 116 116 116 116 116 116 116 116 116		43 44 45 46 47

Unfock human potential	- Use of HEPA filtration in vacuum equipment	Ph 7-9: Construction, Commissionin Post Occupan and Operatio	ng WoG Facilities & ncy n	GSP c6 Green Cleaning	WEE Clean School User Guide Green Cleaning specifications		To be confirmed during						ТВС		49
Unlock human potential	The distribution of the control of t	hia Ph 2: Concept Design - Spac planning day'	Department of Education's Healthy Canteer Policy	DAS c300 Integrating Healthy Environments	Research report behind Healthy Casteen Policy Undernore that policy initiative has been incorporated into the school under assessment.		Seture design phases Cunteen not within scope of						TBC		50
Unfock human potential	Supplied year extented Constructive from an art frequency contract to must be avoided. Designent must seek but Thicked desire an inferigence contract must be avoided. Designent must seek but Thicked desire an inferigence of the contract properties of the contract properties of the properties of the Contract belows and their properties of the contract belows and their properties of the contract belows and their properties of the contract below and their properties of the contract belows and their properties of the contract belows and their properties of the contract belows and their properties of their properties of the contract pro	ICpm Ph 2-5: Architectural etQusign	DG12 DG07.01	DAS c12.0 Glare Reduction	Depight giver modeling report / sun diagrams showing direct surlight has been excluded an required. Dennings supporting treats of model, showing location of blinds and any other gives control direct. Y		second of a size on the regular second or size of the regular second or size of the regular second or size of the regular second or shaded by the were reduced. With regular fact the utilitizeness ("Size most only be a low or reduced by binders as a last second or size of the regular second or size of the	Architect					ТВС		51
Unfock human potential	Design of internal spaces must address the following Acoustic outcomes: - Internal Notice Levels: An internal noise level assessment must be cented out for all new buildings to ensure confirmable acous conditions for the spaces occupied: The internal noise levels within the space must meet the limits stipulated in Table 11.05.1 of Section 11.08 Acoustic Performance Collidations for be within the new stitutiation 17.86 is 10.46.ACM 21.07.20.20.30 internal to the limit the new stitutiation 17.86 is 10.46.ACM 21.07.20.30 internal to be within the new stitutiation 17.86 is 10.46.ACM 21.07.20.30 internal to be within the new stitutiation 17.86 is 10.46.ACM 21.07.20.30 internal to be within the new stitutiation 17.86 is 10.46.ACM 21.07.20.30 internal to be within the new stitution 18.46.ACM 21.07.20.30 internal the stitution	Ph 2-5: Architectural Elexion Design	DG 11.06 DG 11.03 DG 11.02	DAB c10 Acoust comfort	Report by qualified acoustics consultant demonstrating noise measurements at or compliant. Detailed Drawings indicating sound insulation details and other relevant acoustic design features. Y			Acoustic					ТВС		52
Unfock human potential	tions desired, of the two shoulds are in the control of the subject the control of the control	fa co d th 2-5: Architectural Design	DG11.04	Not covered in Green Star	Report by qualified acoustics consultant Y			Acoustic					TBC		53
Unfock human potential	In fees indicate If you remain your lab provided in all schools to the doors, windows and other openings in food preparation, biology, and non-well- closes to field spaces or where specifically continued in the ETSG. Schools in localists where fy incidence constitutes a health heard (expecially trachoms or other nuisamos) will require fly screen, all opening subtes.	ateh 2-5: Architectural mi De sign	DG31.01	Not covered in Green Star	As-built drawings showing fly screening has been provided as required	A	There are no external windows to the Cosh Kitchenette, Mence no Nycreen allowed for.	Architect					ТВС		54
Unfock human potential	According to All one facilities must need current DTS provisions of the NCC and the associated standards. All one facilities must need current DTS provisions and must be little and the STA STATE of the standard for according to the standard standard standard standard standard standard standard standard standard According to the standard or standard standard standard standard standard standard standard provisions and standard standard standard standard standard standard standard standard design standard	Ph 2-5: Architectural to Design	DG19.01 DG65.14	DAS 10D Universal design	Accessibility plan A built drawings or other evidence demonstrating that minimum and evidence accessibility requirements have been provided for walkneys, exercised every page. Princip reprice or other evidence of signage installed.			Architect					ТВС		55
Unlock human potential	Building design most ensure that at least EOS of primary occupied opera have a clear leve of light to high quality interned or extreme. The quality control wide to be found to write. May pleasely reservation, being of leaster, as, for primary or control or movement people, whiches, seriously cleared on the control of leaster, as for the quality of the control of leaster, as where features, which control of leaster of leaster, as where features, and the control of leaster of leaster of leaster, and the control of leaster o	enal Ph 2-5: Architectural Design	DG2.10	DAS c12.2 Views	Ween Calculations and Mark-up this must be done in accordance with the GECAStrylight and Youn Need Coloution Guide: Mays //www.geck.org.ou.jupics/179/25913/Green/S200155-S100ELCAG dollary //www.geck.org.ou.jupics/179/25913/Green/S200155-S100ELCAG dollary/www.scales-s100elcades-s100elcades-S200elgy/S200155-S100ELCAG dollary/s100elcades-S200elcades-S200elgy/S200155-S100ELCAG dollary/s100elcades-S20		View calculations demonstrate that the Sability active VIE. Sability VII. Sability VII	Suntainabilits					TBC		56
Unfock human potential	Access to Duylight Consigners must seek to maximize natural daylight in all learning and administration spaces to improve indoor amenity and creat pleasant environment and reduce energy usage through windoors and skylights -Access to high lives of daylight throut be ensured for at least 40% of primary occupied spaces per floor. A space is considered to have high levels of daylight if:	Ph 2-5: Architectural Design	DG2.3.1 DG12	DAB c12 Visual Comfort	Desight modeling report demonstrating box natural displight his been maximal as inhibitation spaces, and the model of the properties of the model according to report the state of the properties of the state of the properties of the state of the properties of the state of t		Opyligh modeling solutions of the control of the co						TBC		57
Virtual human patential	The maximum Co2 concentration must not except. \$300ppm for more than 20 connectable minutes in each day A ventilation in origin must be developed to make that efficient ventilations by provided to all quarts in most the requirement and \$20,000cc. All considerables applied must be all dependent as whole of life projection and support healthy roles or more requirement for the contract of maximum contracts. The contract is the contract of the contract requirement for the contract of the contract origination of the contract of the contract origination in the contract of the contract origination is the contract or support healthy and the contract origination is the contract origination in the contract origination is the base of the contract origination in the contract origination is contract origination in the contract origination in the contract origination is contract origination in the contract origination is contract origination in the contract origination is contract.	of d d d d d d d d d d d d d d d d d d d	DOS7 01 DOGS D4 DOGS D5 DOGS 16 DOGS 18 DOGS 18 DOGS 02 DOGS 02 DOGS 02 DOGS 02 DOGS 02 DOGS 02 DOGS 02 DOGS 02 DOGS 04 DOGS 02 DOGS 04 DOGS 0	DAB c15 GHG Emissions Reduction	L. Coaling system storage michaling WCQ, analysis Z. Converge plane A. District plane A. Start Start of Start Start Start Start A. Start Start of systematics L. A. Start districts L. A. Start districts L. A. Start districts A. Start Start of Start Sta		All term comply with the exception of the real exception of the re	Mechanical					тис		58
Unfock human potential	Consider for formular by Equal to determine the constitution of functionars. Expectedly when positiving furnitures are in Miderich Consider for formular by Equal to determine the consideration of functionars. Expectedly when positiving furnitures are in Miderich Consideration of Consideration o		DG51.03	DAB c11 Lighting Comfort DAB c11.1 General Bluminance and Glare Reduction	L. Lighting drawings A. Architecture of partner A. Architecture of partner A. Architecture of partner A. Architecture of partner S. Architecture of partner L. Lighting manifelding report showing compliant uniformity and USSs Lighting manifelding report showing compliant uniformity and USSs		Assert to be included in the control of the control	<u>Electrical</u>					твс		59
Unfock human potential	Thermal comfoct The inclusion of active cooling within school facilities is directed by the Department's Air Cooling policy: 2.1 Schools, with a long term purpose mean maximum language temperature of 31 of and above. Generally air conditioning is to	be Ph 2-5: Servic Design	DGD6.03 DG55.01 DG55.02	DAB c14 Therma Comfort	2. Notcharical drawings showing MYAC systems installed, or 2. Confirmation from sub-contrasters that services have been installed and commissioned as required, and 3. Modelling report thowing required PMV is achieved. Modelling report to be done in line with methodology described in Dark thermal confirm and indoor and quality sterior primaries brief in COST.		Air conditioning is provided to all members of pure and an artificial form of the annual form of the annual form of the annual confirst requirements, adopted to fallow members, and annual form of the ann	Mechanical					TBC		60
Unlock human potential	Microbial control	Ph 2-5: Servic Design overd	DG53.11	DAB c28 Microbial Contro	Letter by hydraulic engineer confirming hot water is stored above 65 deg and that valves comply with code of practice.								ТВС		61
Unlock human potential	by the USE Vision Conjunction. We have been a second to be provided to flummate building entirects, finingaths, sheltered without, residency and car particularly continued to the provided to flummate building entirects, finingaths, sheltered without, residency and car particularly continued to the continued and disposition of the provided to the p	k SD, Ph 2-5: Servic ghDegign	DG63.08.01	DAS c27.0 Light Polision to Neighbouring Sodies	As but drawings indicating the location of all external luminosiss Listler by lighting designer describing glary provention measures		Edermal lighting products are one of MOY respo. Specifications will proceed productions to residue give and comply and comply and CADIZE ARCH STATES.	tlectrical					TBC		62

Unlock human potential		les, Ph 3-4: Produc and Material Selection		DAS c13 Indoor Pollutants	Product specifications, certificates, safety datasheets that demonstrate low VOC contents D. Bill of quantities		Will be detailed further in secrifications	Architect				ТВС		63
Unlock human potential	stipulated in the Green Sax Buildings rating tool. Engineered wood products include particleboard, phywood, Medium Dernity Föreboard (Not), Laminated Veneer Lumber (VL), High-Pressure Laminate (NPL), Compact Laminate and decorative overlaid wood panels. This requirement excludes formwork.	Ph 3-4: Producents and Material		DAS c13 Indoor Pollutants	Product specifications, certificates, safety datasheets that demonstrate low-formalish-yiel contents Ell of quantities	- v	Will be detailed further in specifications	Nechitect				ТВС		64
Unlock human potential	- Room acoustics, - Note emission, - Room-to-com acoustics performance	Ph 7-9: Construction, Commissionin Post Occupans and Operation	cy	GSP c13 Interns Noise Levels	Commitment by SI to conduct accounts prod occupancy availuation							твс		65
Unlock human potential	Pesticide free environments Schools must be designed, constructed and maintained, without using chemicals for territie and other past control.	Ph 7-9: Construction, Commissionin Post Occupant sk and Operation	cy	Not covered in Green Star	Sistement by head contractor that no pesticides or termites have been used.							ТВС		66

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