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# Memo

Enquiries: Caimin McCabe
Project No: 301150784

To: Silver Thomas Hanley

From: Caimin McCabe Date: 21.07.2022

## Subject: **CAMHS & TAM** – DGN 058

Dear Elizabeth,

Further to the request by CBRE we would provide the following compliance summary of the proposed design responses for both the CAHMS and TAM buildings in respect to NSW Health Infrastructure's (HI's) *Design Guidance Note (DGN) No. 058 Environmentally Sustainable Development.*

- ***DGN 058 Environmental Performance Targets***

  Under DGN 058 the design responses for both Child & Adolescent Mental Health Hospital (CAMHS) and Total Asset management (TAM) buildings are required to meet the following environmental performance targets:

  - ***A minimum of 45 points*** to be achieved by the design in accordance with HI's ESD Evaluation Tool; and
  - ***A minimum 10% improvement*** in energy efficiency compared to a baseline of National Construction Code (NCC) Section J compliance applicable to the development.

- ***Design Development Response***

  In respect to the required DGN 058 environmental performance targets we would provide the following compliance summary for each building.

  - **Child & Adolescent Mental Health Hospital (CAMHS)**

    As directed by NSW HI's direction a review was undertaken during the Design Development phase of the project on how the design response for the CAHMS building could achieve an improved environmental performance of equivalent to 5-Star or minimum 60 points under the *HI ESD Evaluation Tool* from its 4-Star or minimum 45 points demonstrated at the completion of the Schematic Design phase.

    From this review it was concluded that although some of the target environmental strategies would be considered not attainable or lost, the following additional environmental strategies that could be targeted to meet the desired improved environmental performance:

| | |
|---|---|
| • *Credit 2.2 Building Commissioning* | • *Credit 26.2 Stormwater Pollution Targets* |
| • *Credit 2.4 Independent Commissioning Agent* | • *Credit 21.1 Product Transparency & Sustainability* |
| • *Credit 7.2 High Quality Support Staff* | • *Credit 30C No New Car Parks on Site* |
| • *Credit 15E.5.2 Fuel Switching* | • *Credit 30D Local Procurement* |
| • *Credit 17B.5 Walkable Neighbourhoods* | • *Credit 30D Universal Design* |
| • *Credit 24.2 Contamination & Hazardous Materials* | |

    The outcome of which was that the proposed design response for the CAMHS building at the conclusion of the Design Development phase would be considered to have the potential to attain 61.3 points under the *HI ESD Evaluation Tool*, refer Attachment A.

The target points for each environmental category within the *HI ESD Evaluation Tool* as graphically depicted below.

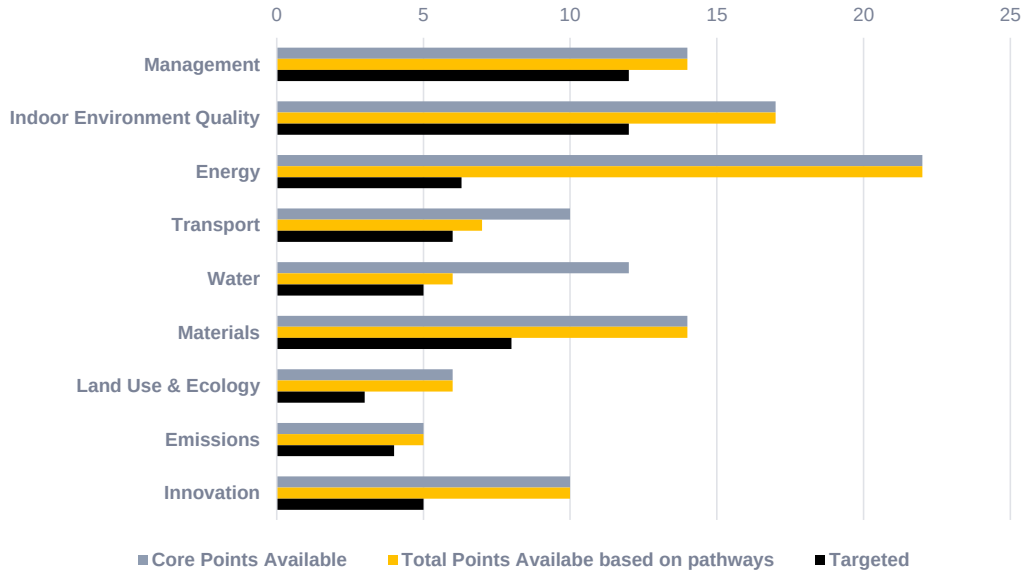


**Figure 1** – CAMHS Building Targeted Credits per Environmental Category in the *HI ESD Evaluation Tool*

Additionally, during the Design Development phase predictive energy modelling was undertaken which, in addition to confirming that the proposed design response would meet the 10% improvement in energy efficiency required by DGN 058, it would achieve a further 2.3% improvement in its building envelope performance and a 8.6% in its engineering services when compared to a Reference Design.

- **Total Asset Management (TAM)**

In respect to the TAM building a critical review was undertaken on the target environmental performance strategies within the HI ESD Evaluation Tool identified during the Schematic Design phase to confirm if any rationalisation in the target approach should or could be made.

From this review it was concluded that although some of the target environmental strategies would be considered not attainable or lost, and that some alternate credits should be targeted to meet the required minimum 45 points under the *HI ESD Evaluation Tool*. A summary of the additional target credits and credits identified during Schematic Design no longer targeted is summarised below.

| ***Additional Target Credits*** | ***Credits No Longer Being Targeted*** |
|---|---|
| • Credit 7.2 High Quality Support Staff | • Credit 9.2 Provision of Outdoor Air |
| • Credit 15E.5.2 Fuel Switching | • Credit 10.2 Reverberation |
| • Credit 17B.1 Access by Public transport | • Credit 11.2 Surface Illuminance |
| • Credit 17B.5 Walkable Neighbourhoods | • Credit 12.1 Daylight |
| • Credit 24.2 Contamination & Hazardous Materials | • Credit 12.2 Views |
| • Credit 30D Local Procurement | • Credit 14.2 Advanced Thermal Comfort |
| • Credit 30D Universal Design | • Credit 16 Peak Electricity Demand Reduction |
| • Credit 30E Design Review Process | • Credit 18B.2 Rainwater Re-use |
| | • Credit 18B.4 Landscape Irrigation |
| | • Credit 29.0 Refrigerants Impacts |

In conclusion the proposed Design Development response would have the TAM building have the potential to attain 50.5 points under the *HI ESD Evaluation Tool*, refer Attachment B, thereby meeting the required minimum 45 point requirement of DGN 058. The target points for each environmental category within the *HI ESD Evaluation Tool* as graphically depicted below.

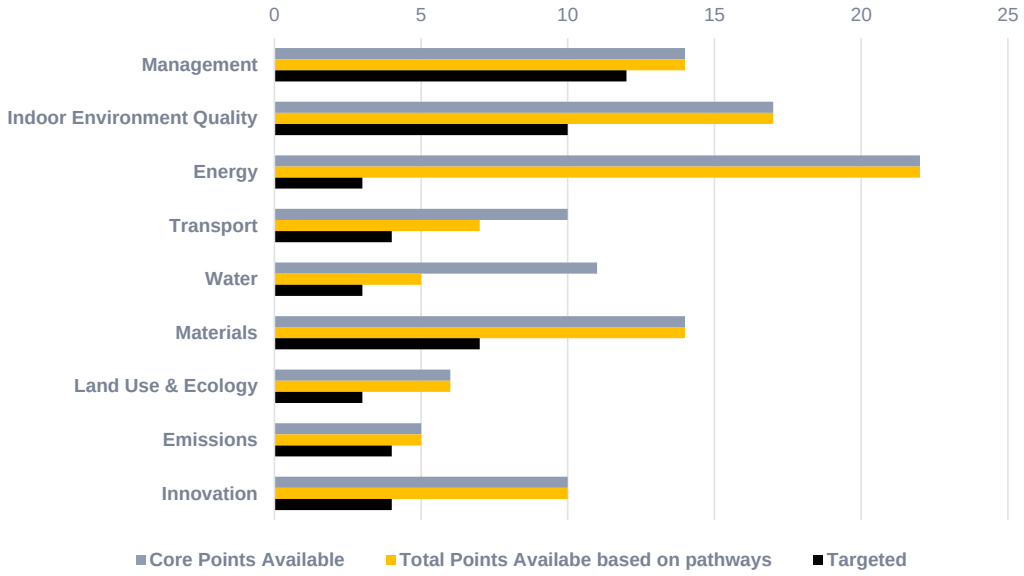


**Figure 1** – TAM Building Targeted Credits per Environmental Category in the *HI ESD Evaluation Tool*

Although predictive energy modelling was not undertaken for the TAM building during the Design Development phase the building proposes to meet the 10% improvement in energy efficiency required by DGN 058 by adopting a minimum 10% deemed-to-satisfy (DTS) approach to its building envelope as required by Parts J1 and Part J2 of the NCC 2019.

To further assist with the development of the Contract Documentation for each building the following further guidance and direction was provided to the design team:

- Primary and secondary design responsibility guidance was prepared for each target environmental strategy or credit within HI's ESD Evaluation Tool for each building, and issued to the design team to ensure compliance could be met.
- Recommended contractual *Preliminaries* and *ESD Specification* requirements were prepared and provided in the ESD Design Development Report.

We trust this provides sufficient confirmation that the target environmental performance requirements of DGN No. 058 have been satisfied, but should you need anything further please do not hesitate to contact me.

Regards,

**Caimin McCabe**
**Principal Sustainability Consultant**
for **Stantec Australia**

# Attachment A – CAMHS Building HI Evaluation Tool Summary

## Nepean CAMHS – 46/60 Derby St, Kingswood NSW 2747

Rev 5
CMM 23/06/2022

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| CATEGORY / CREDIT | AIM OF THE CREDIT / SELECTION | CODE | CREDIT CRITERIA | POINTS AVAILABLE | Overlaps HI ESG AusHFG NCC 2019 SSDA Req | Standard Practice (1) Minimum requirement (C) | Healtcare relevant initiatives (1) Primarily for IPU type spaces. | Low focus initiatives | Target Points | Possible / TBC Points | Stantec Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Management** | | | | **14** | | | | | | | |
| **Accredited Professional** | To recognise the appointment and active involvement of an Accredited Professional (under an Environmental Rating System) in order to ensure that the rating tool is applied effectively and as intended. | 1.0 | Accredited Professional | 1 | | 1 | | | 1 | | **Stantec Sustainability** providing Accredited Professional consulting role |
| | | 2.0 | Environmental Performance Targets | - | | C | | | - | | For construction documentation and drawings, and this evaluation tool considered sufficient to demonstrate project's environmental performance targets<br>As HI is taking on role of ICA **HI** will need to undertake a Services & Maintainability Review covering the following:<br>- Commissionability<br>- Controllability<br>- Operability<br>- Safety |
| | | 2.1 | Services and Maintainability Review | 1 | | 1 | | | 1 | | |
| **Commissioning and Tuning** | To encourage and recognise commissioning, handover and tuning initiatives that ensure all building services operate to their full potential. | 2.2 | Building Commissioning | 1 | | 1 | | | | 1 | **ESD** and **Engineering Services Consultants** to ensure the following Building Commissioning requirements are captured in tender specifications:<br>- Commissioning Standards<br>- Requirement to prepare Commissioning Plan<br>**Main Contractor** to allow for:<br>- Preparing of Commissioning Plan and issuing of Commissioning Reports<br>- ATTMA or AIVAA certified air permeability tester to be engaged.<br>**HI** to review commissioning plan and verify commissioning outcomes |
| | | 2.3 | Building Systems Tuning | 1 | | 1 | | | 1 | | **ESD Consultant** to ensure tender specification include requirement for 12 month Building Tuning as per D&AB (v1.3) to be included within tender specifications. HI to note commitment will need to be included in the Commissioning Plan outlining a 12 month building systems tuning. |
| | | 2.4 | Independent Commissioning Agent | 1 | | | | Requires an additional consultant. HI to undertake a similar role to ICA | | 1 | Equivalent ICA role to be undertaken by **HI** |
| **Adaptation and Resilience** | To encourage and recognise projects that are resilient to the impacts of a changing climate and natural disasters. | 3.1 | Implementation of a Climate Adaptation Plan | 2 | SEARS condition: Credit can be used to demonstrate CSIRO project climate Impacts | | | | | | Only recommended if required as a SEARS condition, **HI** to advise if action needed. |
| **Building Information** | To recognise the development and provision of building information that facilitates understanding of a building's systems, operation and maintenance requirements, and environmental targets to enable the optimised performance. | 4.1 | Building Information | 1 | | 1 | | | 1 | | **Main Contactor** to address:<br>- Operating Manuals<br>- Warranty documents<br>- Contact details for maintenance and operational issues<br>**Architect** to provide details on the function and usage of the building.<br>**Building Service Engineers** to provide a summary of basic functions and operation of day-to-day building systems incl. lighting, waste, hot/cold water control<br>**ESD Consultant** to address:<br>- summary of energy/water efficiency measures<br>**HI** to address: FM strategy and use Project Requirements in standard design documents and this Evaluation Tool |
| **Commitment to Performance** | To recognise practices that encourage building owners, building occupants and facilities management teams to set targets and monitor environmental performance in a collaborative way. | 5.1 | Environmental Building Performance | 1 | | 1 | | | 1 | | **ESD Consultant** to set preliminary water and energy targets.<br>**HI** to address:<br>- Commitment in writing to the targets<br>- Performance measurement procedures.<br>**Mech Consultant** to ensure IEQ requirements and operational controls are integrated.<br>Elec Consultant to ensure sufficient non-utility metering present to track energy use.<br>**Hyd Consultant** to ensure sufficient non-utility metering present to track water use.<br>Internal commitment to extend the life of the finishes to all common areas to at least 10 years. Feasible if the consultant rooms aren't privately tenanted. |
| | | 5.2 | End of Life Waste Performance | 1 | | | | | 1 | | |
| **Metering and Monitoring** | To recognise the implementation of effective energy and water metering and monitoring systems. | 6.0 | Metering | - | | C | | | - | | **Elec Consultant** and **Hyd Consultant** to ensure that:<br>- Metering is easily accessible meters (not in roof spaces etc.)<br>- Main Elec, Water and gas (if present) meters are capable of automatic communication with a monitoring system.<br><br>**Note:** If the GFA (excl car parking areas) <1000m2 only 1 accessible meter per utility is required. |
| | | 6.1 | Monitoring Systems | 1 | | 1 | | | 1 | | **Elec Consultant** to ensure tender specification outlines requirements for a simple monitoring system capable of collecting meter data and raising alarms. |
| **Responsible Building Practices** | To reward projects that use best practice formal environmental management procedures during construction. | 7.0 | Environmental Management Plan | - | | 1 | | | - | | **ESD Consultant t**o ensure tender specification captures EMS requirements to be met by project**.**<br>**Main Contractor** to ensure prepares a best practice EMP |
| | | 7.1 | Formalised Environmental Management System | 1 | | 1 | | | 1 | | **HI** to ensure, with assistance from ESD Consultant, that contract preliminaries captures EMS requirements to be addressed by Main Contractor.<br>**Main Contractor** to ensure EMS is suitably audited. |
| | | 7.2 | High Quality Staff Support | 1 | | | | Construction related credit for contractor to consider. | | | |
| **Operational Waste** | Performance Pathway | 8A | Performance Pathway - Specialist Plan | 1 | | 1 | | | 1 | | **HI** to engage a waste consultant and ensure their engaged scope includes confirmation that performance requirements for operational waste are addressed.<br>**Note**: If no waste consultant is engaged to address performance pathway then sufficient space for separate waste streams will need to be provided.<br>**Architect** to ensure drawings show waste storage and waste types provisions. |
| | | 8B | Prescriptive Pathway - Facilities | - | | | | | | | |
| **Total** | | | | **14** | | **10** | **0** | | **9** | **2** | |
| **Indoor Environment Quality** | | | | **17** | | | | | | | |
| **Indoor Air Quality** | To recognise projects that provide high air quality to occupants. | 9.1 | Ventilation System Attributes | 1 | | | 1 | | 1 | | **Mech Consultant** to ensure:<br>- air intake is designed / located in accordance with ASHRAE Standard 62.1:2013<br>- Air handling systems have access to clean the AHS<br>- Tender specification requires Main Contractor to keep ductwork clean and sealed<br>**Main Contractor** to ensure keep all ductwork clean and sealed. |
| | | 9.2 | Provision of Outdoor Air | 2 | EFG requirements request 2.0 ACH to IPU spaces. | | 1 | | 1 | | **Mech Consultant** confirmed HVAC systems have O/A provisions that are 50% higher than minimum in AS 1668.2:2012 |
| | | 9.3 | Exhaust or Elimination of Pollutants | 1 | | | 1 | | 1 | | **Mech Consultant** to ensure dedicated exhausts are provided from print/photocopy rooms, and kitchens. |
| **Acoustic Comfort** | To reward projects that provide appropriate and comfortable acoustic conditions for occupants. | 10.1 | Internal Noise Levels | 1 | | | 1 | | 1 | | **Acoustic Consultant** to ensure design response can achieve internal ambient noise levels < 5dB(A) above Table 1 AS/NZS2107:2016 |
| | | 10.2 | Reverberation | 1 | | | 1 | | | | **Acoustic Consultant** to advise if reverberation requirements are achievable in respect to proposed floor and ceiling finishes. |
| | | 10.3 | Acoustic Separation | 1 | | | 1 | | 1 | | **Acoustic Consultant** to ensure design can achieve Rw of >45 without a door, and >35 with a door |
| **Lighting Comfort** | To encourage and recognise well-lit spaces that provide a high degree of comfort to users. | 11.0 | Minimum Lighting Comfort | - | | | C | | - | | **Elec Consultant** to ensure electronic drivers and LEDs, and CRI >80 |
| | | 11.1 | General Illuminance and Glare Reduction | 1 | | | 1 | | 1 | | **Elec Consultant** to ensure lighting design achieves lux levels in Table F1 of AS/NZS 1680.2 and prepares luminaire schedule with diffusers or similar to hide bulbs for all lighting. |
| | | 11.2 | Surface Illuminance | 1 | | | 1 | | | | **Architect** to ensure white coloured ceilings are specified.<br>**Elec Consultant** to ensure the following are achieved:<br>- 30% illuminance on ceilings compared with working plane. Likely to achieve 20% because the alternative will required suspended lighting which has additional dust and health implications.<br>**HI** to confirm if approach sufficiently meets the credit intent to be deemed to be met. |
| | | 11.3 | Localised Lighting Control | 1 | | | 1 | | 1 | | **Elec Consultant** to ensure that design provides:<br>- Task lighting and/or occupant operable lighting in work areas e.g. kitchens<br>- Outlets for lamps or task lighting |
| **Visual Comfort** | To recognise the delivery of well-lit spaces that provide high levels of visual comfort to building occupants. | 12.0 | Glare Reduction | - | | | C | | - | | Architect to ensure suitable blinds are provided to 95% of glazing. |
| | | 12.1 | Daylight | 2 | | | 1 | | 1 | | **ESD Consultant** to undertake annual calculations on typical areas to demonstrate compliance |
| | | 12.2 | Views | 1 | | | 1 | | 1 | | **Architect** to ensure 60% of nominated areas (8m from a window) have external views |
| **Indoor Pollutants** | To recognise projects that safeguard occupant health through the reduction in internal air pollutant levels. | 13.1 | Paints, Adhesives, Sealants and Carpets | 1 | | | 1 | | 1 | | **Architect** to ensure that low or zero TVOC paints and ECS or similar certified carpet are specified.<br>**Main Contractor** to ensure low/zero TVOC paint, adhesives and sealants and carpets are used / installed. |
| | | 13.2 | Engineered Wood Products | 1 | | | 1 | | 1 | | **Architect** to ensure that low formaldehyde emission MDF, LVL, HPL, compact laminate, decorative overlaid wood panels are specified.<br>**Main Contractor** to ensure low formaldehyde emission MDF, LVL, HPL, compact laminate, decorative overlaid wood panels are installed. |
| **Thermal Comfort** | To encourage and recognise projects that achieve high levels of thermal comfort. | 14.1 | Thermal Comfort | 1 | NCC 2019 JV3 requires a PMV assessment to be undertaken | | 1 | | 1 | | By meeting NCC 2019 Section J requirements the Thermal Comfort requirements will be deemed to be met.<br>**Mech Consultant** to ensure that temperature sensors are provided in all rooms as part of HVAC design response. |
| | | 14.2 | Advanced Thermal Comfort | 1 | | | 1 | | | | Not being targeted. |
| **Total** | | | | **17** | | **0** | **15** | | **12** | **0** | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Energy** | | | | **22** | | | | | | |
| **Greenhouse Gas Emissions** | | 15E.0 | Conditional Requirement: Reference Building Pathway | - | Aligns with HI ESG 10% Improvement and NSW GREP. | C | | | - | **ESD Consultant** to test to confirm compliance.<br>**Architect** to ensure the combination of double glazing and improved thermal performance requirements to meet conditional requirements are captured in documented design response. |
| | | 15E.1 | Comparison to a Reference Building Pathway | 20 | Aligns with HI ESG 10% Improvement and NSW GREP.<br>10% improvement equates to approximately 1.6 points. | 1 | 1 | | 3.3 | 1 | **ESD Consultant** to confirm that a minimum 15% increase on minimum R-values for roof, ceiling, walls, and floor<br>**Elec Consultant** to ensure lighting design uses LED lighting and that switched motion sensors are provided to all consult rooms<br>**Mech Consultant** to ensure HVAC design response meets a minimum 15% improved efficiency than NCC J5.2, J5.4a, J5.4b, J5.4d, and J5.4e is not likely to be achieved as it's a water-cooled system.<br>**Hyd Consultant** to adopt a gas hot water solution, although further discussion needed with HI re a potential full electrification solution, which may wish to add roof mounted solar PV to offset immediate greenhouse penalty prior to greening of grid.<br>To meet 5-Star performance **HI** will need to consider the integration of a nominal 30kW roof mounted solar PV array to achieve additional potential points. |
| | | 15E.3 | Off-site Renewables | | | | | | | |
| | | 16A | Prescriptive Pathway - On-site Energy Generation | - | | | | | | |
| **Peak Electricity Demand Reduction** | Prescriptive Pathway | 16B | Performance Pathway - Reference Building | 2 | | | 1 | | 1 | **Architect** to adopt strong passive design approaches including double glazing, improved thermal performance and passive solar control.<br>**Elec Consultant** to ensure lighting design uses LED lighting and that switched motion sensors are provided to all consult rooms<br>**Mech Consultant** to ensure HVAC design response meets a minimum 15% improved efficiency than NCC J5.2, J5.4a, J5.4b, J5.4d, and J5.4e is not likely to be achieved as it's a water-cooled system.<br>**HI** to considering financing integration of roof mounted solar PV to reduce peak electrical demand and offset an all-electric solution. |
| **Total** | | | | **11** | | **1** | **2** | | **4.3** | **1** | |
| **Transport** | | | | **10** | | | | | | |
| **Sustainable Transport** | Performance Pathway | 17A.1 | Performance Pathway | | | | | | | |
| | | 17B.1 | Access by Public Transport | 3 | | | | Hospitals are usually well connected to public transport nodes. Large percentage of patients require access to hospitals via vehicles. Expansion of existing hospital also require additional carparking. | 3 | | Penrith train station located 300m away<br>bus stops located under250m away |
| | | 17B.2 | Reduced Car Parking Provision | 1 | | | | | 1 | | To meet prescriptive requirements 10 car parks would be allowable based on a peak occupancy of 50 people for the building.<br>**HI** to confirm if expected peak occupancy will be no more than 50 people. |
| | | 17B.3 | Low Emission Vehicle Infrastructure | 1 | | | | | | | HI have advised that no EV parking to be provided. |
| | | 17B.4 | Active Transport Facilities | 1 | | | | | 1 | | Hi to confirm any bike parking provisions noting that 2 double-sided racks would be required. |
| | | 17B.5 | Walkable Neighbourhoods | 1 | | | | | | 1 | Although a Walkscore of 80 is not being met the development would meet the prescriptive requirements to attain point. |
| **Total** | | | | **10** | | **0** | **0** | | **5** | **1** | |
| **Water** | | | | **12** | | | | | | |
| **Potable Water** | Prescriptive Pathway | 18A.1 | Potable Water - Performance Pathway | 0 | AusHFG Requirements limit use of RW systems (maintenance / Payback / health risks) | | | Hospitals require extensive use of potable water and typically lower use for recycled water. AusHFG requirements limit use of rainwater systems, limiting the use to primarily landscaping. | | | |
| | | 18B.1 | Sanitary Fixture Efficiency | 1 | | 1 | | | 1 | | **Hyd Consultant** & **Architect** to ensure fixtures and fitting meet the following performance requirements:<br>- 5 Star WELS taps<br>- 5 Star WELS urinals<br>- 4 Star WELS toilet<br>- 3 Star WELS showers<br>- 5 Star WELS dishwashers |
| | | 18B.2 | Rainwater Reuse | 1 | AusHFG Requirements limit use of RW systems | - | | | | | |
| | | 18B.3 | Heat Rejection | 2 | | | | | 2 | | Inherently attainable as air cooled heat rejection proposed. |
| | | 18B.4 | Landscape Irrigation | 1 | | 1 | | | 1 | | **Landscape Architect** to ensure drip irrigation with moisture sensor override are used to irrigate proposed landscape or xeriscape solution adopted. |
| | | 18B.5 | Fire System Test Water | 1 | | 1 | | | 1 | | As a sprinkler system will be present within CAHMS and the system will be fitted with isolation valves on each floor to facilitate system-by-system testing, available point would be considered attained. |
| **Total** | | | | **6** | | **3** | **0** | | **5** | **0** | |
| **Materials** | | | | **14** | | | | | | |
| **Life Cycle Impacts** | Prescriptive Pathway - Life Cycle Impacts | 19A.1 | Comparative Life Cycle Assessment | 0 | | | | Life Cycle Assessor (additional consultant) required | | | |
| | | 19A.2 | Additional Life Cycle Impact Reporting | 4 | | | | Life Cycle Assessor (additional consultant) required | | | |
| | | 19B.1 | Concrete | 3 | | 1 | | | 1 | | **ESD Consultant / Structural Engineer** to ensure tender specifications include performance requirements re concrete.<br>**Main Contractor** to deliver on 30% reduction in Portland cement content. Refer to Green Star Design & As-Built v1.2 for reference case |
| | | 19B.2 | Steel | 1 | | 1 | | | 1 | | **Structural Engineer** to confirm that proposed design solution reduces mass of steel and requires the use of high strength steel refer to Green Star Table 19B.2A.1 for strengths proposed. |
| | | 19B.3 | Building Reuse | 4 | | | | | | | |
| | | 19B.4 | Structural Timber | 4 | | 1 | | | | | |
| **Responsible Building Materials** | To reward projects that include materials that are responsibly sourced or have a sustainable supply chain. | 20.1 | Structural and Reinforcing Steel | 1 | | 1 | | | 1 | | **ESD Consultant / Structural Engineer** to ensure tender specifications require steel to be sourced from responsible steel maker.<br>**Main Contractor** to confirm that steel sourced rom a Environmental Sustainability Charter of the Australian Steel Institute (ASI) accredited steel maker |
| | | 20.2 | Timber Products | 1 | | 1 | | | 1 | | **Architect** to ensure that all nominated specific timber products and all timber to be used within development are FSC or PEFC certified.<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| | | 20.3 | Permanent Formwork, Pipes, Flooring, Blinds and Cables | 1 | | 1 | | | 1 | | **Architect** and **Hyd, Mech, Elec Consultants** to ensure tender specifications require all flooring, blinds, plastic pipes and cables specified meet PVC Best Practice certification requirements.<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| **Sustainable Products** | To encourage sustainability and transparency in product specification. | 21.1 | Product Transparency and Sustainability | 3 | | | | | | 2 | **Architect** to select or nominate that:<br>- Furniture and joinery to have sustainability certification e.g. Green Tag, GECA, ECS<br>- Carpet and floor coverings to have sustainability certification.<br>**Structural Engineer** to require concrete to use fly ash or blast furnace slag to reduce Portland cement content by 30%.<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| **Construction and Demolition Waste** | Fixed Benchmark | 22A | Fixed Benchmark | 1 | | | | | | | |
| | | 22B | Percentage Benchmark | - | | 1 | | | 1 | | **HI** with assistance ESD Consultant to ensure tender specifications require 90% waste generated during construction and demolition is diverted from landfill.<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| **Total** | | | | **12** | | **7** | **0** | | **6** | **2** | |
| **Land Use & Ecology** | | | | **6** | | | | | | | |
| **Ecological Value** | To reward projects that improve the ecological value of their site. | 23.0 | Endangered, Threatened or Vulnerable Species | - | | C | | Hospitals usually built on brown field sites | - | | Brown field site so compliance requirements inherently met. |
| | | 23.1 | Ecological Value | 3 | | | | Hospital sites are usually mainly buildings with minimal landscape area. | | | Minimal existing landscaping which has no ecological value so compliance requirements inherent met. |
| **Sustainable Sites** | To reward projects that choose to develop sites that have limited ecological value, re-use previously developed land and remediate contaminate land. | 24.0 | Conditional Requirement | - | | C | | | | | Brown field site |
| | | 24.1 | Reuse of Land | 1 | | | | Most hospital and healthcare projects are located within existing hospital sites. For most projects, this credit would be considered achieved. | 1 | | Site was already developed prior to proposed redevelopment. |
| | | 24.2 | Contamination and Hazardous Materials | 1 | 1 | | | | | 1 | **HI** to advise if contamination and hazardous material study has been undertaken and if any issues found they have been remediated appropriately. |
| **Heat Island Effect** | To encourage and recognise projects that reduce the contribution of the project site to the heat island effect. | 25.0 | Heat Island Effect Reduction | 1 | | 1 | | | 1 | | **Architect** to ensure roof colour specified meets SRI >81 e.g. Colorbond Surfmist or Whitehaven. |
| **Total** | | | | **6** | | **1** | **0** | | **2** | **1** | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Emissions** | | | | **5** | | | | | |
| **Stormwater** | To reward projects that minimise peak stormwater flows and reduce pollutants entering public sewer infrastructure. | 26.1 | Stormwater Peak Discharge | 1 | 1 | | 1 | | **Civil Engineer** to confirm that ARI discharge is less than pre-development |
| | | 26.2 | Stormwater Pollution Targets | 1 | | | | 1 | **Civil Engineer** to design stormwater management solution so that stormwater pollutant removal achieves reductions of TSS (80%), gross pollutants (85%), TN (30%), TP (30%), total petroleum hydrocarbons (60%), free oils (90%) |
| **Light Pollution** | To reward projects that minimise light pollution. | 27.0 | Light Pollution to Neighbouring Bodies | - | | Neighbouring buildings are usually the hospital buildings. Consider impacts to surrounding residential if | 1 | | **Elec Consultant** to ensure lighting design complies with AS 4282:1997 Control of the obtrusive effects of outdoor lighting |
| | | 27.1 | Light Pollution to Night Sky | 1 | | | 1 | | **Elec Consultant** to ensure that outdoor lighting design meets *AS 4282:1997 Control of the obtrusive effects of outdoor ligh* t. |
| **Microbial Control** | To recognise projects that implement systems to minimise the impacts associated with harmful microbes in building systems. | 28.0 | Legionella Impacts from Cooling Systems | 1 | | 1 | 1 | | Inherently attainable as air cooled heat rejection proposed. |
| **Refrigerant Impacts** | To encourage operational practices that minimise the environmental impacts of refrigeration equipment. | 29.0 | Refrigerants Impacts | 1 | | | 1 | | **Mech Consultant** to ensure design includes a leak detection system with one sensor, and that refrigerants are R410A or R22 (depending on capacity (kWr) and refrigerant charge (kg)).<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| **Total** | | | | **5** | **1** | **1** | **5** | **1** | |
| | | | | | | | | | |
| **Innovation** | | | | **10** | | | | | |
| **Innovative Technology or Process** | The project meets the aims of an existing credit using a technology or process that is considered innovative in Australia or the world. | 30A | Innovative Technology or Process | 10 | | | | | |
| **Market Transformation** | The project has undertaken a sustainability initiative that substantially contributes to the broader market transformation towards sustainable development in Australia or in the world. | 30B | Market Transformation | | | | | | |
| **Improving on Benchmarks** | The project has achieved full points in a credit and demonstrates a substantial improvement on the benchmark required to achieve full points. | 30C | Improving on Benchmarks | | | | 2 | | **- Architect** to ensure that at least 50% of paints have a maximum TVOC content of 5g/L and **Main Contractor** to ensure evidence is provided confirming compliance.<br>- No new carparking is being provided by the development |
| | Supplementary or tenancy fitout systems review | 30C | Commissioning and Tuning | | | | | | |
| | Daylight See credit | 30C | Visual Comfort | | | | | | |
| **Innovation Challenge** | Where the project addresses an sustainability issue not included within any of the above Credits. | 30D | Innovation Challenge | | | | | 2 | The development target the following Innovation Challenges:<br>- Whole Building Air Tightness Test to be undertaken for CAMHS building.<br>- Main Contractor be required to ensure a nominated percentage of the services and skilled labour employed for the project come from the local area surrounding the site.<br>- Project target meeting the Universal Design requirements (i.e. Review Design for Dignity Guidelines or similar, undertake needs analysis, develop accessibility plan, etc.) |
| **Global Sustainability** | Project teams may adopt an approved credit from a Global Green Building Rating tool that addresses a sustainability issue that is currently outside the scope of this rating tools. | 30E | Global Sustainability | | | | 1 | | **HI** to commit to undertaking a formalised Design Review Process to occur of certain aspects of the design at different stages of the Project, including;<br>- Integration with existing development<br>- Urban Form<br>- Design for Mixed Use Density<br>- Public Transport<br>- Activity Centre's and Employment and<br>- Landscape and Green Infrastructure. |
| **Total** | | | | **10** | **0** | **0** | **3** | **2** | |
| **TOTAL** | | | | | **23** | **18** | **51.3** | **10** | |

# Attachment B – TAM Building HI Evaluation Tool Summary

# Nepean Hospital TAM

Rev 7
CMM 23/06/2022

Stantec

| CATEGORY / CREDIT | AIM OF THE CREDIT / SELECTION | CODE | CREDIT CRITERIA | POINTS AVAILABLE | INPUT | Overlaps HI ESG AusHFG NCC 2019 SSDA Req | Standard Practice (1) Minimum requirement (C) | Healtcare relevant initiatives (1) Primarily for IPU type spaces. | Low focus initiatives | Target Points | Possible / TBC Points | Stantec Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Management** | | | | **14** | | | | | | | | |
| **Accredited Professional** | To recognise the appointment and active involvement of an Accredited Professional (under an Environmental Rating System) in order to ensure that the rating tool is applied effectively and as intended. | 1.0 | Accredited Professional | 1 | ESD | | 1 | | | 1 | | **Stantec Sustainability** providing Accredited Professional consulting role |
| | | 2.0 | Environmental Performance Targets | - | HI | | C | | | - | | For construction documentation and drawings, and this evaluation tool considered sufficient to demonstrate project's environmental performance targets |
| | | 2.1 | Services and Maintainability Review | 1 | ICA | | 1 | | | 1 | | As HI is taking on role of ICA **HI** will need to undertake a Services & Maintainability Review covering the following:<br>- Commissionability<br>- Controllability<br>- Operability<br>- Safety |
| **Commissioning and Tuning** | To encourage and recognise commissioning, handover and tuning initiatives that ensure all building services operate to their full potential. | 2.2 | Building Commissioning | 1 | ICA | | 1 | | | 1 | | **ESD** and **Engineering Services Consultants** to ensure the following Building Commissioning requirements are captured in tender specifications:<br>- Commissioning Standards<br>- Requirement to prepare Commissioning Plan<br>**Main Contractor** to allow for:<br>- Preparing of Commissioning Plan and issuing of Commissioning Reports<br>- ATTMA or AIVAA certified air permeability tester to be engaged.<br>**HI** to review commissioning plan and verify commissioning outcomes |
| | | 2.3 | Building Systems Tuning | 1 | ICA | | 1 | | | 1 | | **ESD Consultant** to ensure tender specification include requirement for 12 month Building Tuning as per D&AB (v1.3) to be included within tender specifications. HI to note commitment will need to be included in the Commissioning Plan outlining a 12 month building systems tuning. |
| | | 2.4 | Independent Commissioning Agent | 1 | ICA | | | | Requires an additional consultant. HI to undertake a similar role to ICA | 1 | | Equivalency ICA role to be undertaken by **HI** |
| **Adaptation and Resilience** | To encourage and recognise projects that are resilient to the impacts of a changing climate and natural disasters. | 3.1 | Implementation of a Climate Adaptation Plan | 2 | ENV | SEARS condition: Credit can be used to demonstrate CSIRO project climate Impacts | | | | | | Only recommended if required as a SEARS condition, **HI** to advise if action needed. |
| **Building Information** | To recognise the development and provision of building information that facilitates understanding of a building's systems, operation and maintenance requirements, and environmental targets to enable the optimised performance. | 4.1 | Building Information | 1 | ARCH | | 1 | | | 1 | | **Main Contactor** to address:<br>- Operating Manuals<br>- Warranty documents<br>- Contact details for maintenance and operational issues<br>**Architect** to provide details on the function and usage of the building.<br>**Building Service Engineers** to provide a summary of basic functions and operation of day-to-day building systems incl. lighting, waste, hot/cold water control<br>**ESD Consultant** to address:<br>- summary of energy/water efficiency measures<br>**HI** to address: FM strategy and use Project Requirements in standard design documents and this Evaluation Tool |
| **Commitment to Performance** | To recognise practices that encourage building owners, building occupants and facilities management teams to set targets and monitor environmental performance in a collaborative way. | 5.1 | Environmental Building Performance | 1 | HI | | 1 | | | 1 | | **ESD Consultant** to set preliminary water and energy targets.<br>**HI** to address:<br>- Commitment in writing to the targets<br>- Performance measurement procedures.<br>**Mech Consultant** to ensure IEQ requirements and operational controls are integrated.<br>Elec Consultant to ensure sufficient non-utility metering present to track energy use.<br>**Hyd Consultant** to ensure sufficient non-utility metering present to track water use. |
| | | 5.2 | End of Life Waste Performance | 1 | WASTE | | | | | 1 | | Internal commitment to extend the life of the finishes to all common areas to at least 10 years. Feasible if the consultant rooms aren't privately tenanted. |
| **Metering and Monitoring** | To recognise the implementation of effective energy and water metering and monitoring systems. | 6.0 | Metering | - | MECH | | C | | | - | | **Elec Consultant** and **Hyd Consultant** to ensure that:<br>- Metering is easily accessible meters (not in roof spaces etc.)<br>- Main Elec, Water and gas (if present) meters are capable of automatic communication with a monitoring system. |
| | | 6.1 | Monitoring Systems | 1 | MECH | | 1 | | | 1 | | **Note:** If the GFA (excl car parking areas) <1000m2 only 1 accessible meter per utility is required.<br>**Elec Consultant** to ensure tender specification outlines requirements for a simple monitoring system capable of collecting meter data and raising alarms. |
| | | 7.0 | Environmental Management Plan | - | CONTR | | 1 | | | - | | **ESD Consultant t**o ensure tender specification captures EMS requirements to be met by project**.** |
| **Responsible Building Practices** | To reward projects that use best practice formal environmental management procedures during construction. | 7.1 | Formalised Environmental Management System | 1 | CONTR | | 1 | | | 1 | | **Main Contractor** to ensure prepares a best practice EMP<br>**HI** to ensure, with assistance from ESD Consultant, that contract preliminaries captures EMS requirements to be addressed by Main Contractor. |
| | | 7.2 | High Quality Staff Support | 1 | CONTR | | | | Construction related credit for contractor to consider. | 1 | | **Main Contractor** to ensure EMS is suitably audited. |
| **Operational Waste** | Performance Pathway | 8A | Performance Pathway - Specialist Plan | 1 | WASTE | | 1 | | | 1 | | **HI** to engage a waste consultant and ensure their engaged scope includes confirmation that performance requirements for operational waste are addressed. |
| | | 8B | Prescriptive Pathway - Facilities | - | WASTE | | | | | | | **Note**: If no waste consultant is engaged to address performance pathway then sufficient space for separate waste streams will need to be provided.<br>**Architect** to ensure drawings show waste storage and waste types provisions. |
| **Total** | | | | **14** | | | **10** | **0** | | **12** | **0** | |
| **Indoor Environment Quality** | | | | **17** | | | | | | | | |
| **Indoor Air Quality** | To recognise projects that provide high air quality to occupants. | 9.1 | Ventilation System Attributes | 1 | MECH | | 1 | | | 1 | | **Mech Consultant** to ensure:<br>- air intake is designed / located in accordance with ASHRAE Standard 62.1:2013<br>- Air handling systems have access to clean the AHS<br>- Tender specification requires Main Contractor to keep ductwork clean and sealed<br>**Main Contractor** to ensure keep all ductwork clean and sealed. |
| | | 9.2 | Provision of Outdoor Air | 2 | MECH | EFG requirements request 2.0 ACH to IPU spaces. | 1 | | | 1 | | Confirmation received from **Mech Consultant** that 50% improvement on AS1668 will be delivered for mechanically ventilated spaces and for naturally ventilated spaces the credit compliance requirements will also be met. |
| | | 9.3 | Exhaust or Elimination of Pollutants | 1 | MECH | | 1 | | | 1 | | **Mech Consultant** to ensure dedicated exhausts are provided from print/photocopy rooms, and kitchens. |
| **Acoustic Comfort** | To reward projects that provide appropriate and comfortable acoustic conditions for occupants. | 10.1 | Internal Noise Levels | 1 | ACOUS | | 1 | | | 1 | | **Acoustic Consultant** to ensure design response can achieve internal ambient noise levels < 5dB(A) above Table 1 AS/NZS2107:2016 |
| | | 10.2 | Reverberation | 1 | ACOUS | | 1 | | | | | **Acoustic Consultant** to advise if reverberation requirements are achievable in respect to proposed floor and ceiling finishes. |
| | | 10.3 | Acoustic Separation | 1 | ACOUS | | 1 | | | 1 | | **Acoustic Consultant** to ensure design can achieve Rw of >45 without a door, and >35 with a door |
| **Lighting Comfort** | To encourage and recognise well-lit spaces that provide a high degree of comfort to users. | 11.0 | Minimum Lighting Comfort | - | LIGHT | | C | | | - | | **Elec Consultant** to ensure electronic drivers and LEDs, and CRI >80 |
| | | 11.1 | General Illuminance and Glare Reduction | 1 | LIGHT | | 1 | | | 1 | | **Elec Consultant** to ensure lighting design achieves lux levels in Table F1 of AS/NZS 1680.2 and prepares luminaire schedule with diffusers or similar to hide bulbs for all lighting. |
| | | 11.2 | Surface Illuminance | 1 | ARCH | | 1 | | | | | |
| | | 11.3 | Localised Lighting Control | 1 | LIGHT | | 1 | | | 1 | | **Elec Consultant** to ensure that design provides:<br>- Task lighting and/or occupant operable lighting in work areas e.g. kitchens<br>- Outlets for lamps or task lighting |
| **Visual Comfort** | To recognise the delivery of well-lit spaces that provide high levels of visual comfort to building occupants. | 12.0 | Glare Reduction | - | ESD | | C | | | - | | Architect to ensure suitable blinds are provided to 95% of glazing. |
| | | 12.1 | Daylight | 2 | ESD | | 1 | | | | | |
| | | 12.2 | Views | 1 | ARCH | | 1 | | | | | |
| **Indoor Pollutants** | To recognise projects that safeguard occupant health through the reduction in internal air pollutant levels. | 13.1 | Paints, Adhesives, Sealants and Carpets | 1 | ARCH | | 1 | | | 1 | | **Architect** to ensure that low or zero TVOC paints and ECS or similar certified carpet are specified.<br>**Main Contractor** to ensure low/zero TVOC paint, adhesives and sealants and carpets are used / installed. |
| | | 13.2 | Engineered Wood Products | 1 | STRUC | | 1 | | | 1 | | **Architect** to ensure that low formaldehyde emission MDF, LVL, HPL, compact laminate, decorative overlaid wood panels are specified.<br>**Main Contractor** to ensure low formaldehyde emission MDF, LVL, HPL, compact laminate, decorative overlaid wood panels are installed. |
| **Thermal Comfort** | To encourage and recognise projects that achieve high levels of thermal comfort. | 14.1 | Thermal Comfort | 1 | MECH | NCC 2019 JV3 requires a PMV assessment to be undertaken | 1 | | | 1 | | By meeting NCC 2019 Section J requirements the Thermal Comfort requirements will be deemed to be met.<br>**Mech Consultant** to ensure that temperature sensors are provided in all rooms as part of HVAC design response. |
| | | 14.2 | Advanced Thermal Comfort | 1 | MECH | | 1 | | | | | |
| **Total** | | | | **17** | | | **0** | **15** | | **10** | **0** | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Energy** | | | | **22** | | | | | | |
| **Greenhouse Gas Emissions** | A. Prescriptive Pathway | 15A.0 | Conditional Requirement: Prescriptive Pathway | - | | C - | | | | |
| | | 15A.1 | Building Envelope | 1 | | | | 1 | | |
| | | 15A.2 | Glazing | 1 | | | | | | |
| | | 15A.3 | Lighting | 1 | | | | | | |
| | | 15A.4 | Ventilation and Air-conditioning | 1 | | | | 1 | | |
| | | 15A.5 | Domestic Hot Water Systems | 1 | | | | 1 | | |
| | | 15A.7 | Fuel Switching | 1 | | | | | | |
| | | 15A.8 | On-Site Storage | 1 | | | | | | |
| **Peak Electricity Demand Reduction** | Prescriptive Pathway | 16A | Prescriptive Pathway - On-site Energy Generation | - | ELEC | | | | | |
| | | 16B | Performance Pathway - Reference Building | 2 | ELEC | 1 | | | | |
| **Total** | | | | **9** | | **0** | **1** | **3** | **0** | |
| **Transport** | | | | **10** | | | | | | |
| **Sustainable Transport** | Performance Pathway | 17A.1 | Performance Pathway | | TRANS | | | | | |
| | | 17B.1 | Access by Public Transport | 3 | | | Hospitals are usually well connected to public transport nodes. Large percentage of patients require access to hospitals via vehicles. Expansion of existing hospital also require additional carparking. | 3 | | Kingswood train station located 500m away and next stop is Penrith Station which is a hub and bus stops for 4 buses located under 250m away |
| | | 17B.2 | Reduced Car Parking Provision | 1 | | | | 1 | | To meet prescriptive requirements 10 car parks would be allowable based on a peak occupancy of 50 people for the building.<br>**HI** to confirm if expected peak occupancy will be no more than 50 people. |
| | | 17B.3 | Low Emission Vehicle Infrastructure | 1 | | | | | | HI have advised that no EV parking to be provided. |
| | | 17B.4 | Active Transport Facilities | 1 | | | | 1 | | Hi to confirm any bike parking provisions noting that 2 double-sided racks would be required. |
| | | 17B.5 | Walkable Neighbourhoods | 1 | | | | 1 | | Although a Walkscore of 80 is not being met the development would meet the prescriptive requirements to attain point. |
| **Total** | | | | **10** | | **0** | **0** | **6** | **0** | |
| **Water** | | | | **12** | | | | | | |
| **Potable Water** | Prescriptive Pathway | 18A.1 | Potable Water - Performance Pathway | 0 | HYDR | AusHFG Requirements limit use of RW systems (maintenance / Payback / health risks) | Hospitals require extensive use of potable water and typically lower use for recycled water. AusHFG requirements limit use of rainwater systems, limiting the use to primarily landscaping. | | | |
| | | 18B.1 | Sanitary Fixture Efficiency | 1 | HYDR | | 1 | 1 | | **Hyd Consultant** & **Architect** to ensure fixtures and fitting meet the following performance requirements:<br>- 5 Star WELS taps<br>- 5 Star WELS urinals<br>- 4 Star WELS toilet<br>- 3 Star WELS showers<br>- 5 Star WELS dishwashers |
| | | 18B.2 | Rainwater Reuse | 1 | HYDR | AusHFG Requirements limit use of RW systems | - | | | |
| | | 18B.3 | Heat Rejection | 2 | MECH | | | 2 | | Inherently attainable as air cooled heat rejection proposed. |
| | | 18B.4 | Landscape Irrigation | 1 | LAND | | 1 | | | |
| | | 18B.5 | Fire System Test Water | 1 | FIRE | | | N/A | | As it is understood the building will not have a sprinkler system or no water-based fire protection system, available point inherently attainable. |
| **Total** | | | | **6** | | **2** | **0** | **3** | **0** | |
| **Materials** | | | | **14** | | | | | | |
| **Life Cycle Impacts** | Prescriptive Pathway - Life Cycle Impacts | 19A.1 | Comparative Life Cycle Assessment | 0 | | | Life Cycle Assessor (additional consultant) required | | | |
| | | 19A.2 | Additional Life Cycle Impact Reporting | 4 | | | Life Cycle Assessor (additional consultant) required | | | |
| | | 19B.1 | Concrete | 3 | ARCH | | 1 | 1 | | **ESD Consultant** / **Structural Engineer** to ensure tender specifications include performance requirements re concrete.<br>**Main Contractor** to deliver on 30% reduction in Portland cement content. Refer to Green Star Design & As-Built v1.2 for reference case |
| | | 19B.2 | Steel | 1 | ARCH | | 1 | 1 | | **Structural Engineer** to confirm that proposed design solution reduces mass of steel and requires the use of high strength steel refer to Green Star Table 19B.2A.1 for strengths proposed. |
| | | 19B.3 | Building Reuse | 4 | | | | | | |
| | | 19B.4 | Structural Timber | 4 | STRUC | | 1 | | | |
| | | 20.1 | Structural and Reinforcing Steel | 1 | STRUC | | 1 | 1 | | **ESD Consultant / Structural Engineer** to ensure tender specifications require steel to be sourced from responsible steel maker.<br>**Main Contractor** to confirm that steel sourced rom a Environmental Sustainability Charter of the Australian Steel Institute (ASI) accredited steel maker |
| **Responsible Building Materials** | To reward projects that include materials that are responsibly sourced or have a sustainable supply chain. | 20.2 | Timber Products | 1 | ARCH | | 1 | 1 | | **Architect** to ensure that all nominated specific timber products and all timber to be used within development are FSC or PEFC certified.<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| | | 20.3 | Permanent Formwork, Pipes, Flooring, Blinds and Cables | 1 | HYDR MECH ELEC ARCH STRUC | | 1 | 1 | | **Architect** and **Hyd, Mech, Elec Consultants** to ensure tender specifications require all flooring, blinds, plastic pipes and cables specified meet PVC Best Practice certification requirements.<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| **Sustainable Products** | To encourage sustainability and transparency in product specification. | 21.1 | Product Transparency and Sustainability | 3 | | | | | | **Architect** to select or nominate that:<br>- Furniture and joinery to have sustainability certification e.g. Green Tag, GECA, ECS<br>- Carpet and floor coverings to have sustainability certification.<br>**Structural Engineer** to require concrete to use fly ash or blast furnace slag to reduce Portland cement content by 30%.<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| **Construction and Demolition Waste** | Fixed Benchmark | 22A | Fixed Benchmark | 1 | | | | | | |
| | | 22B | Percentage Benchmark | - | CONTR | | 1 | 1 | | **HI** with assistance ESD Consultant to ensure tender specifications require 90% waste generated during construction and demolition is diverted from landfill.<br>**Main Contractor** to ensure evidence is provided confirm compliance. |
| **Total** | | | | **12** | | | **7** **0** | **6** | **0** | |
| **Land Use & Ecology** | | | | **6** | | | | | | |
| **Ecological Value** | To reward projects that improve the ecological value of their site. | 23.0 | Endangered, Threatened or Vulnerable Species | - | ECO | | C | - | | Brown field site so compliance requirements inherently met. |
| | | 23.1 | Ecological Value | 3 | | | Hospitals usually built on brown field sites<br>Hospital sites are usually mainly buildings with minimal landscape area. | | | Minimal existing landscaping which has no ecological value so compliance requirements inherent met. |
| **Sustainable Sites** | To reward projects that choose to develop sites that have limited ecological value, re-use previously developed land and remediate contaminate land. | 24.0 | Conditional Requirement | - | LAND | | C | | | Brown field site |
| | | 24.1 | Reuse of Land | 1 | | | Most hospital and healthcare projects are located within existing hospital sites. For most projects, this credit would be considered achieved. | 1 | | Site was already developed prior to proposed redevelopment. |
| | | 24.2 | Contamination and Hazardous Materials | 1 | CONTR | 1 | | 1 | | **HI** to advise if contamination and hazardous material study has been undertaken and if any issues found they have been remediated appropriately. |
| **Heat Island Effect** | To encourage and recognise projects that reduce the contribution of the project site to the heat island effect. | 25.0 | Heat Island Effect Reduction | 1 | ARCH | | 1 | 1 | | **Architect** to ensure roof colour specified meets SRI >81 e.g. Colorbond Surfmist or Whitehaven. |
| **Total** | | | | **6** | | | **1** **0** | **3** | **0** | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Emissions** | | | | **5** | | | | | | |
| **Stormwater** | To reward projects that minimise peak stormwater flows and reduce pollutants entering public sewer infrastructure. | 26.1 | Stormwater Peak Discharge | 1 | CIVIL | 1 | | 1 | | **Civil Engineer** to confirm that ARI discharge is less than pre-development |
| | | 26.2 | Stormwater Pollution Targets | 1 | | | | | | |
| **Light Pollution** | To reward projects that minimise light pollution. | 27.0 | Light Pollution to Neighbouring Bodies | - | | | Neighbouring buildings are usually the hospital buildings. Consider impacts to surrounding residential if | - | | **Elec Consultant** to ensure lighting design complies with AS 4282:1997 Control of the obtrusive effects of outdoor lighting |
| | | 27.1 | Light Pollution to Night Sky | 1 | | | | 1 | | **Elec Consultant** to ensure that outdoor lighting design meets *AS 4282:1997 Control of the obtrusive effects of outdoor ligh* t. |
| **Microbial Control** | To recognise projects that implement systems to minimise the impacts associated with harmful microbes in building systems. | 28.0 | Legionella Impacts from Cooling Systems | 1 | MECH | 1 | | 1 | | Inherently attainable as air cooled heat rejection proposed. |
| **Refrigerant Impacts** | To encourage operational practices that minimise the environmental impacts of refrigeration equipment. | 29.0 | Refrigerants Impacts | 1 | MECH | | | | | |
| **Total** | | | | **5** | | **1** | **1** | **3** | **0** | |
| | | | | | | | | | | |
| **Innovation** | | | | **10** | | | | | | |
| **Innovative Technology or Process** | The project meets the aims of an existing credit using a technology or process that is considered innovative in Australia or the world. | 30A | Innovative Technology or Process | 10 | | | | | | |
| **Market Transformation** | The project has undertaken a sustainability initiative that substantially contributes to the broader market transformation towards sustainable development in Australia or in the world. | 30B | Market Transformation | | | | | | | |
| **Improving on Benchmarks** | The project has achieved full points in a credit and demonstrates a substantial improvement on the benchmark required to achieve full points. | 30C | Improving on Benchmarks | | | | | 1 | | **Architect** to ensure that at least 50% of paints have a maximum TVOC content of 5g/L and **Main Contractor** to ensure evidence is provided confirming compliance. |
| | Supplementary or tenancy fitout systems review | 30C | Commissioning and Tuning | | ICA | | | | | |
| | Daylight See credit | 30C | Visual Comfort | | ESD | | | | | |
| **Innovation Challenge** | Where the project addresses an sustainability issue not included within any of the above Credits. | 30D | Innovation Challenge | | | | | 2 | | The development target the following Innovation Challenges:<br>- Main Contractor be required to ensure a nominated percentage of the services and skilled labour employed for the project come from the local area surrounding the site.<br>- Project target meeting the Universal Design requirements (i.e. Review Design for Dignity Guidelines or similar, undertake needs analysis, develop accessibility plan, etc.) |
| **Global Sustainability** | Project teams may adopt an approved credit from a Global Green Building Rating tool that addresses a sustainability issue that is currently outside the scope of this rating tools. | 30E | Global Sustainability | | ESD | | | 1 | | **HI** to commit to undertaking a formalised Design Review Process to occur of certain aspects of the design at different stages of the Project, including;<br>- Integration with existing development<br>- Urban Form<br>- Design for Mixed Use Density<br>- Public Transport<br>- Activity Centre's and Employment and<br>- Landscape and Green Infrastructure. |
| **Total** | | | | **10** | | **0** | **0** | **4** | **0** | |
| **TOTAL** | | | | | | **21** | **17** | **50** | **0** | |