ECOLOGICALLY SUSTAINABLE DEVELOPMENT REPORT

APPENDIX Q

Sydney Metro City & Southwest

Pitt Street South Over Station Development:

Ecologically Sustainable Development Report

Applicable to:	Sydney Metro City & Southwest
Author:	GHD Pty Ltd
Owner	Sydney Metro
Status:	Final
Version:	4
Date of issue:	August 2018

Table of Contents

1.0 Purpose of this report

1.1 Background

This report supports a concept State Significant Development Application (concept SSD Application) submitted to the Department of Planning and Environment (DPE) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The concept SSD Application is made in accordance with Section 4.22 of the EP&A Act.

Sydney Metro is seeking to secure concept approval for a building envelope above the southern portal of Pitt Street Station, otherwise known as the over station development (OSD). The concept SSD Application seeks consent for a building envelope, maximum building height, land use options, pedestrian and vehicular access, circulation arrangements and associated car parking as well as the strategies and design parameters for the future detailed design of development.

Sydney Metro proposes to procure the construction of the OSD as part of an integrated station development package, which would result in the combined delivery of the station, OSD and public domain improvements. The station and public domain elements form part of a separate planning approval for Critical State Significant Infrastructure (CSSI) approved by DPE on 9 January 2017.

As the development is associated with railway infrastructure and is for residential or commercial premises with a Capital Investment Value of more than $30 million, the project is a State Significant Development (SSD) pursuant to Schedule 1, Clause 19(2)(a) of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). The full extent of the proposed development can also be considered to be SSD by virtue of Clause 8(2) of the SRD SEPP.

This report has been prepared to specifically respond to the Secretary's Environmental Assessment Requirements (SEARs) issued for the concept SSD Application for Pitt Street South on 30th November 2017 which state that the Environmental Impact Statement (EIS) is to address the following requirements:

Ecologically Sustainable Development (ESD)

1.2 Overview of the Sydney Metro in its context

The New South Wales (NSW) Government is implementing *Sydney's Rail Future*, a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of customers in the future. Sydney Metro is a new standalone rail network identified in *Sydney's Rail Future*.

Sydney Metro is Australia's biggest public transport project, consisting of Sydney Metro Northwest, which is due for completion in 2019 and Sydney Metro City & Southwest, which is due for completion in 2024.

Sydney Metro West is expected to be operational in the late 2020s (refer to Figure 1).

Figure 1: Sydney Metro alignment map

Sydney Metro City & Southwest includes the construction and operation of a new metro rail line from Chatswood, under Sydney Harbour through Sydney's Central Business District (CBD) to Sydenham and on to Bankstown through the conversion of the existing line to metro standards.

The project also involves the delivery of seven new metro stations, including at Pitt Street. Once completed, Sydney Metro will have capacity for 30 trains an hour (one every two minutes) through the CBD in each direction - a level of service never seen before in Sydney.

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham application lodged as a Critical State Significant Infrastructure project (reference SSI 15_7400), hereafter referred to as the CSSI Approval.

The CSSI Approval includes all physical work required to construct the CSSI, including the demolition of existing buildings and structures on each site. Importantly, the CSSI Approval also includes provision for the construction of below and above-ground structures and other components of the future integrated station development (including building infrastructure

and space for future lift cores, plant rooms, access, parking and building services, as relevant to each site). The rationale for this delivery approach, as identified within the CSSI Application, is to enable the integrated station development to be more efficiently built and appropriately integrated into the metro station structure.

The EIS for the Chatswood to Sydenham component of the Sydney Metro City & Southwest project identified that the OSD would be subject to a separate assessment process.

Since the CSSI Approval was issued, Sydney Metro has lodged four modification applications to amend the CSSI Approval as outlined below:

- Modification 1- Victoria Cross and Artarmon Substation which involves relocation of the Victoria Cross northern services building from 194-196A Miller Street to 50 McLaren Street together with inclusion of a new station entrance at this location referred to as Victoria Cross North. 52 McLaren Street would also be used to support construction of these works. The modification also involves the relocation of the substation at Artarmon from Butchers Lane to 98 – 104 Reserve Road. This modification application was approved on 18 October 2017.
- Modification 2- Central Walk which involves additional works at Central Railway Station including construction of a new eastern concourse, a new eastern entry, and upgrades to suburban platforms. This modification application was approved on 21 December 2017.
- Modification 3 - Martin Place Station which involves changes to the Sydney Metro Martin Place Station to align with the Unsolicited Proposal by Macquarie Group Limited (Macquarie) for the development of the station precinct. The proposed modification involves a larger reconfigured station layout, provision of a new unpaid concourse link and retention of the existing MLC pedestrian link and works to connect into the Sydney Metro Martin Place Station. This modification application was approved on 22 March 2018.
- Modification 4 - Sydenham Station and Sydney Metro Trains Facility South which incorporated Sydenham Station and precinct works, the Sydney Metro Trains Facility South, works to Sydney Water's Sydenham Pit and Drainage Pumping Station and ancillary infrastructure and track and signalling works into the approved project. This modification application was approved on 13 December 2017.

Given the modifications, the CSSI Approval is now approved to operate to Sydenham Station and also includes the upgrade of Sydenham Station.

The remainder of the City & Southwest project (Sydenham to Bankstown) proposes the conversion of the existing heavy rail line and the upgrade of the existing railway stations along this alignment to metro standards. This portion of the project, referred to as the Sydenham to Bankstown Upgrade, is the subject of a separate CSSI Application (No. SSI 17_8256) for which an Environmental Impact Statement was exhibited between September and November 2017 and a Response to Submissions and Preferred Infrastructure Report was submitted to the NSW Department of Planning & Environment (DPE) in June 2018 for further exhibition and assessment.

1.3 Planning relationship between Pitt Street Station and the OSD

While the southern portal of Pitt Street Station and the OSD will form an integrated station development, the planning pathways under the *Environmental Planning and Assessment Act 1979* involve separate approval for each component of the development. In this regard, the approved station works (CSSI Approval) are subject to the provisions of Part 5.1 of the EP&A Act (now referred to as Division 5.2) and the OSD component is subject to the provisions of Part 4 of the EP&A Act.

For clarity, the approved station works under the CSSI Approval included the construction of below and above ground structures necessary for delivering the station and also enabling construction of the integrated OSD. This included but is not limited to:

- demolition of existing development
- excavation
- station structure including concourse and platforms
- lobbies
- retail spaces within the station building
- public domain improvements
- station portal link (between the northern and southern portals of Pitt Street Station)
- access arrangements including vertical transport such as escalators and lifts
- structural and service elements and the relevant space provisioning necessary for constructing OSD, such as columns and beams, space for lift cores, plant rooms, access, parking, retail and building services.

The vertical extent of the approved station works above ground level is defined by the 'transfer slab' level (which for Pitt Street South is defined by RL 58.25), above which would sit the OSD. This delineation is illustrated in Figure 2 below.

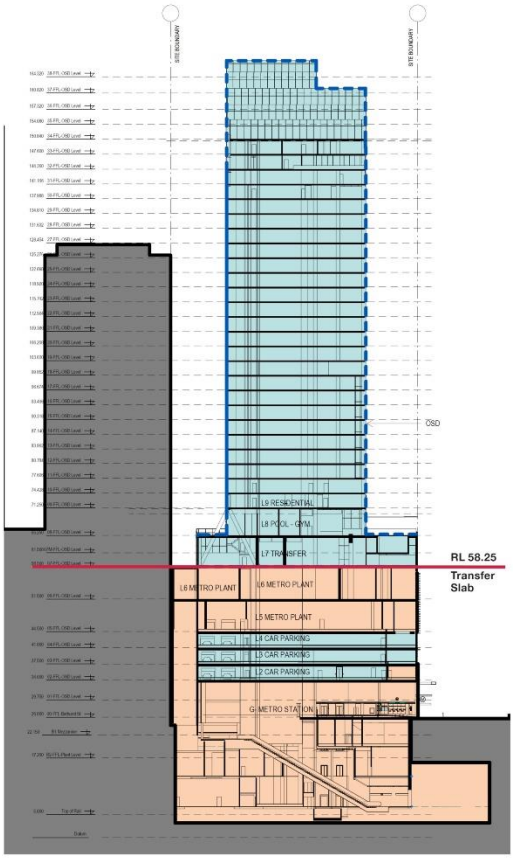

Figure 2: Delineation between station and OSD

The CSSI Approval also establishes the general concept for the ground plane of Pitt Street Station including access strategies for commuters and pedestrians. In this regard, pedestrian access to the station would be from Bathurst Street and the OSD lobby would be accessed from Pitt Street.

Since the issue of the CSSI Approval, Sydney Metro has undertaken sufficient design work to determine the space planning and general layout for the station and identification of those spaces within the station area that would be available for the OSD. In addition, design work has been undertaken to determine the technical requirements for the structural integration of the OSD with the station. This level of design work has informed the concept proposal for the OSD. It is noted that ongoing design development of the works to be delivered under the CSSI Approval would continue with a view to developing an Interchange Access Plan (IAP) and Station Design Precinct Plan (SDPP) for Pitt Street Station to satisfy Conditions E92 and E101 of the CSSI Approval.

The public domain improvement works around the site would be delivered as part of the CSSI Approval.

1.4 The Site

The Pitt Street South OSD site is located near the corner of Pitt Street and Bathurst Street, comprising four individual allotments but excluding the Edinburgh Castle Hotel, above the southern portal of the future Pitt Street Station. The context of the site is demonstrated at Figure 3 below.

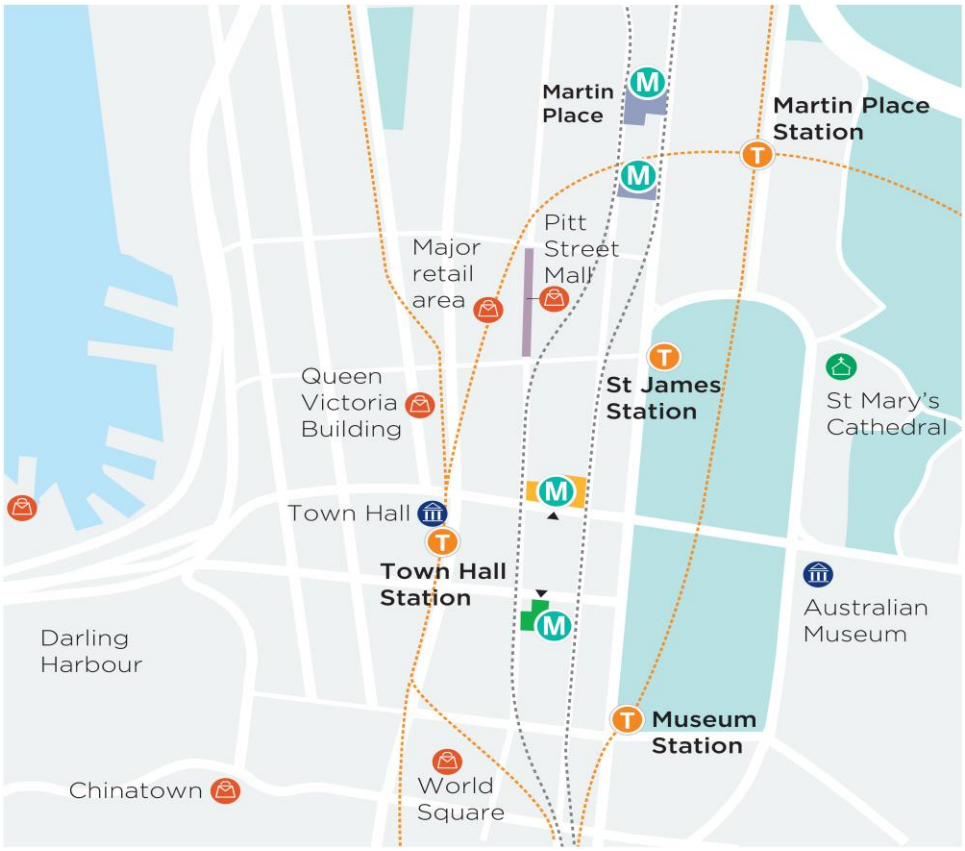

Figure 3: Pitt Street Station location plan

The site is located in the City of Sydney Local Government Area. The site (refer to **Figure 4** below) is irregular in shape, has a total area of approximately 1,708 square metres and has street frontages of approximately 32 metres to Pitt Street and 24 metres to Bathurst Street.

The Pitt Street South site comprises a number of individual properties which front Bathurst Street and Pitt Street. Specifically, the site comprises the following:

- 125-129 Bathurst Street, Sydney (Lot 1 in DP60293)
- 131-135 Bathurst Street, Sydney (Lot 1 in DP59101)
- 296-300 Pitt Street, Sydney (Lot 1 in DP436359)
- 302 Pitt Street, Sydney (Lot 1 in DP62668)

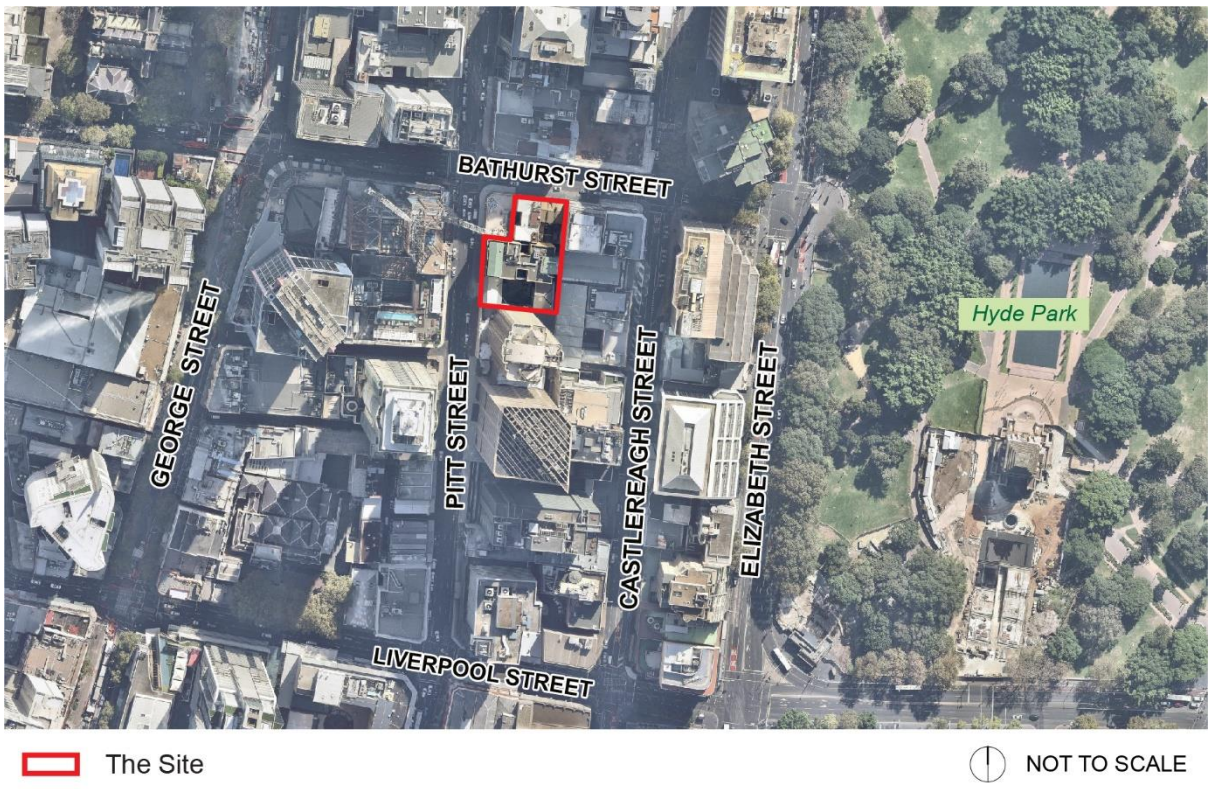

Figure 4: Aerial photo of Pitt Street South

1.5 Overview of the proposed development

This concept SSD Application comprises the first stage of the Pitt Street South OSD project. It will be followed by a detailed SSD Application for the design and construction of the OSD to be lodged by the successful contractor who is awarded the contract to deliver the integrated station development.

This concept SSD Application seeks approval for the planning and development framework and strategies to inform the future detailed design of the OSD. It specifically seeks approval for the following:

- a building envelope
- a maximum envelope height of Relative Level (RL 171.6) which equates to approximately 35 storeys, including the podium height of RL 71.0 which equates to approximately 8 storeys above ground
- use for the OSD component of the development for uses, subject to further detailed applications, which could include:
    - residential accommodation; or
    - commercial premises
    - use of the conceptual OSD space provisioning within the footprint of the CSSI Approval (both above and below ground), including the OSD lobby areas, podium car parking, storage facilities, services and back-of-house facilities

- car parking for a maximum of 34 spaces located across three levels of the podium
- loading, vehicular and pedestrian access arrangements from Pitt Street
- strategies for utilities and service provision
- strategies for the management of stormwater and drainage
- a strategy for the achievement of ecologically sustainable development
- indicative future signage
- a strategy for public art
- a design excellence framework
- the future subdivision of parts of the OSD footprint (if required)

As this concept SSD Application is a staged development pursuant to section 4.22 of the EP&A Act, future approval would be sought for detailed design and construction of the OSD. Concept indicative designs showing potential residential and commercial building form outcomes at the site have been provided as part of this concept SSD Application at Appendix E and Appendix F, respectively.

Pitt Street Station is to be a key station on the future Sydney Metro network, providing access to the Sydney CBD. The proposal combines the metro station with an OSD component. The OSD would assist in strengthening the role of Central Sydney as the key centre of business in Australia and would contribute to the diversity, amenity and sustainability of the CBD.

It is noted that Pitt Street Station northern portal OSD is subject to a separate application, and does not form part of this concept SSD Application.

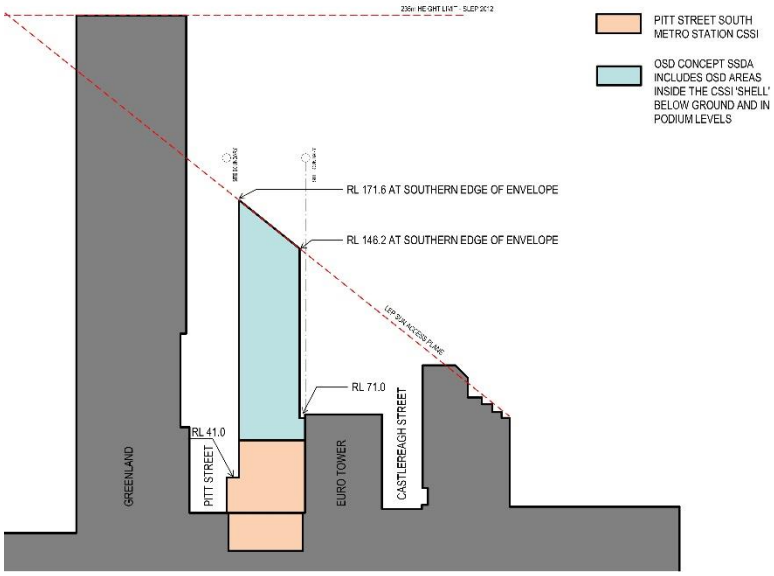

Figure 5: Pitt Street South OSD envelope, including OSD components (Blue) and station box (Orange)

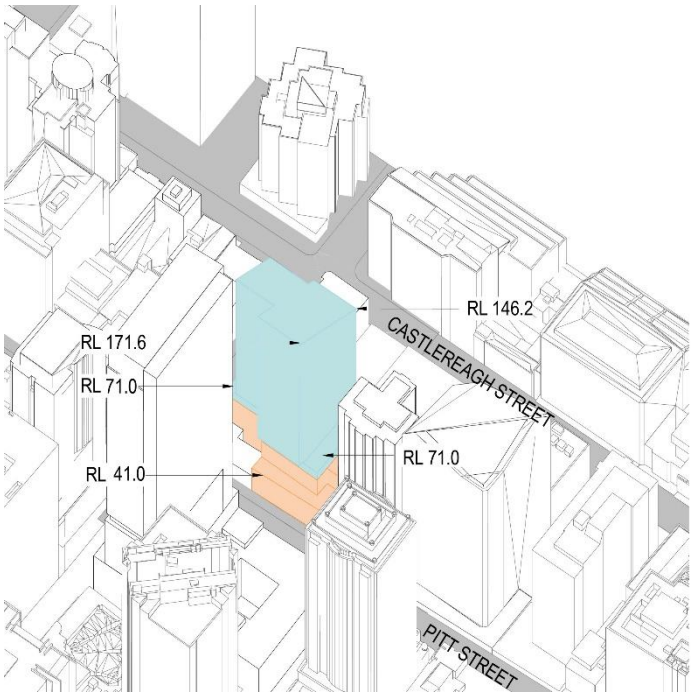

Figure 6: Pitt Street South OSD axonometric diagram, as seen from the south-west

1.6 Staging and framework for managing environmental impacts

Sydney Metro proposes to procure the delivery of the Pitt Street South integrated station development in one single package, which would entail the following works:

- station structure
- station fit-out, including mechanical and electrical
- OSD structure
- OSD fit-out, including mechanical and electrical.

Separate delivery packages are also proposed by Sydney Metro to deliver the excavation of the station boxes/shafts ahead of the integrated station development delivery package, and line-wide systems (e.g. track, power, ventilation) and operational readiness works prior to the Sydney Metro City & Southwest metro system being able to operate.

Three possible staging scenarios have been identified for delivery of the integrated station development:

1. Scenario 1 – the station and OSD are constructed concurrently by constructing the transfer slab first and then building in both directions. Both the station and OSD would be completed in 2024.
2. Scenario 2 – the station is constructed first and ready for operation in 2024. OSD construction may still be incomplete or soon ready to commence after station construction is completed. This means that some or all OSD construction is likely to still be underway upon opening of the station in 2024.
3. Scenario 3 – the station is constructed first and ready for operation in 2024. The OSD is built at a later stage, with timing yet to be determined. This creates two distinct construction periods for the station and OSD.

Scenario 1 represents Sydney Metro's preferred option as it would provide for completion of the full integrated station development and therefore the optimum public benefit at the site at the earliest date possible (i.e. on or near 2024 when the station is operational). However, given the delivery of the OSD could be influenced by property market forces, Scenarios 2 or 3 could also occur, where there is a lag between completion of the station component of the integrated station development (station open and operational), and a subsequent development.

The final staging for the delivery of the OSD would be resolved as part of the detailed SSD Application(s).

For the purposes of providing a high level assessment of the potential environmental impacts associated with construction, the following have been considered:

- Impacts directly associated with the OSD, the subject of this SSD Application
- Cumulative impacts of the construction of the OSD at the same time as the station works (subject of the CSSI Approval)

Given the integration of the delivery of the Sydney Metro City & Southwest metro station with an OSD development, Sydney Metro proposes the framework detailed in Error! Reference source not found. to manage the design and environmental impacts, consistent with the framework adopted for the CSSI Approval.

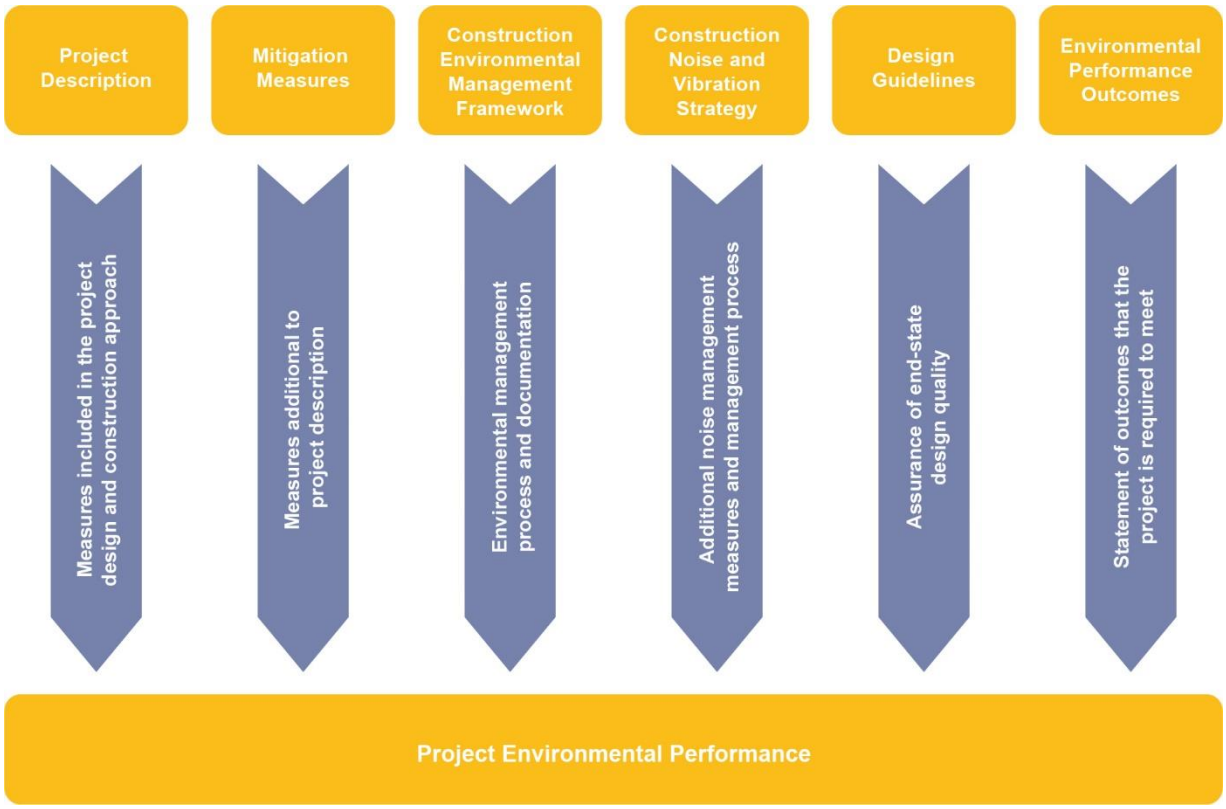

Figure 7: Project approach to environmental mitigation and management

Sydney Metro proposes to implement a similar environmental management framework where the integrated delivery of the CSSI station works and the OSD occur concurrently. This would ensure a consistent approach to management of design interface and construction-related issues.

Sydney Metro proposes this environmental management framework would apply to the OSD until completion of the station and public domain components of the integrated station development delivery contract (i.e. those works under the CSSI Approval). Should the OSD be constructed beyond the practical completion and opening of the station, standard practices for managing construction related environmental impacts would apply in accordance with the relevant guidelines and Conditions of Approval for the detailed SSD Application(s).

2.0 Sustainability requirements for OSD

2.1 Overview

Sydney Metro has developed high level sustainability requirements for OSD which are outlined in Section 2.3. The following items are outlined in this report to achieve these:

- PSS OSD sustainable design response outlined in Section 3.0, and the ESD & Green Star Matrix, demonstrates how these requirements (where they are applicable) are achieved in the current design.
- PSS OSD ESD Framework dictating how the ESD requirements are to be carried through into design, construction and operation.

The detailed design and final delivery of the PSS development shall track and implement performance against the relevant requirements in this section.

2.2 Minimum sustainability requirements for OSD

The table below outlines the sustainability requirements developed by Sydney Metro applicable as part of the concept SSD Application. Many of these are already demonstrated as being implemented as per Section 3.0, or would be implemented in later detailed design and contract documentation.

Theme	Objective	Sustainability requirement for OSD
Governance	Demonstrate a high level of performance against objectives and appropriate benchmarks.	Aim for best-practice Demonstrate a market-leading level of performance using building sustainability rating tools: Indicative: • 4-5 Star Green Star for residential • 5 Star Green Star Commercial for northern sites • 6 Star Green Star Commercial for City office sites • 5 Star Green Star for City Hotel sites Develop and implement a sustainability plan. *PSS Note: 4-5 Star for Residential applicable as per Sustainable Design response in Section 3.0. Commercial will require uplift to 5 or 6 Star to be line with above, with options for uplift provided in the matrix.*
Carbon & Energy Management	Reduce energy use and carbon emissions during construction	Minimise greenhouse gas emissions generated during construction.

Theme	Objective	Sustainability requirement for OSD
	Reduce energy use and carbon emissions during operations	Minimum 5 Star NABERS for commercial buildings Energy efficient lighting, heating, ventilation and cooling. Incorporate passive design measures to minimise energy consumption *PSS Note: NABERS Not applicable to residential developments but may be applied to any commercial fitouts in detailed design.*
	Support innovative and cost effective approaches to energy efficiency, low-carbon / renewable energy sources and energy procurement.	Consider inclusion of renewable energy generation. *PSS Note: Due to limited roof area relative to building size, onsite solar generation was considered but is currently not practical. Wind generation in this context would likely not provide viable whole-of-life performance.*
Pollution Control	Reduce sources of pollution and optimise control at source to avoid environmental harm	Develop and implement a construction environmental management plan during construction, in accordance with the planning approval.
Climate change resilience	Infrastructure and operations will be resilient to the impacts of climate change	Design for resilience to the impacts of climate change.
Resources – Water Efficiency	Minimise use of potable water.	Water-efficient fittings and fixtures.
	Maximise opportunities for reuse of rainwater, stormwater, wastewater and groundwater.	Incorporate rainwater harvesting and reuse where feasible *PSS Note: Due to limited roof area relative to building size and water demand, rainwater capture and storage has not been considered viable.*
Resources – Waste & Materials	Minimise waste through the project lifecycle.	Recycling and reuse of construction and demolition waste (90%).
	Consider embodied impacts in materials selection	Consider embodied impacts in materials selection. Use responsibly sourced construction materials.
Biodiversity Conservation	Protect and create biodiversity through appropriate planning, management and financial controls	Consider opportunities for enhancing ecological value (eg green roofs / facades and landscaping).

Theme	Objective	Sustainability requirement for OSD
Heritage Conservation	Protect and promote heritage through appropriate design, planning, and management controls.	Comply with planning approval requirements in relation to heritage.
Liveability	Promote improved public transport patronage by maximising connectivity and interchange capabilities.	Provide bike parking and end of trip and encourage use of Metro and other public transport modes. *PSS Note: Refer to transport section of ESD green star matrix in Section 4.0*
Supply Chain	Influence contractors, subcontractors and materials suppliers to adopt sustainability objectives in their works and procurement.	Develop and implement a sustainable procurement strategy for the construction stage.

2.3 Sydney Metro Sustainability Objectives

Sydney Metro's sustainability objectives applicable to the project are provided below. Note these are provided alongside the minimum requirements in Section 2.2, as many of the below specific objectives are not included in the minimum requirements (e.g. be accountable and report publicly on performance).

Theme	Objective
Governance	Demonstrate a high level of performance against objectives and appropriate benchmarks.
	Demonstrate leadership by embedding sustainability objectives into decision making.
	Be accountable and report publicly on performance
Carbon & Energy Management	Improve the shift toward lower carbon transport.
	Reduce energy use and carbon emissions during construction
	Reduce energy use and carbon emissions during operations
	Support innovative and cost effective approaches to energy efficiency, low-carbon / renewable energy sources and energy procurement.
Pollution Control	Reduce sources of pollution and optimise control at source to avoid environmental harm
Climate change resilience	Infrastructure and operations will be resilient to the impacts of climate change
Resources – Water Efficiency	Minimise use of potable water.
	Maximise opportunities for reuse of rainwater, stormwater, wastewater and groundwater.
Resources – Waste & Materials	Minimise waste through the project lifecycle.
	Reduce materials consumption.
	Consider embodied impacts in materials selection
	Maximise beneficial reuse of spoil
Biodiversity Conservation	Protect and create biodiversity through appropriate planning, management and financial controls
Heritage Conservation	Protect and promote heritage through appropriate design, planning, and management controls.
Liveability	Promote improved public transport patronage by maximising connectivity and interchange capabilities.
	Provide well designed stations and precincts that are comfortable, accessible, safe and attractive.
Community	Make a positive contribution to community health and well-being.

Theme	Objective
Benefit	Ensure community and local stakeholder engagement and involvement in the development of the project.
	Contribute to the delivery of legacy projects to benefit local communities.
	Create opportunities for local business involvement during the delivery and operations phases.
	Consider community benefit of residual land development.
	Minimise negative impacts on the community and local businesses during construction and operation.
Supply Chain	Influence contractors, subcontractors and materials suppliers to adopt sustainability objectives in their works and procurement.
Workforce development	Increase opportunities for employment of local people, participation of local businesses, and participation of SME's.
	Enable targeted and transferable skills development which resolves local and national skills shortages, supports industry to compete in home and global markets, and embeds a health and safety culture within all induction and training activities, promoting continuous improvement.
	Increased workforce diversity and inclusion, targeting indigenous workers and businesses, female representation in non-traditional trades, and long term unemployed.
	Inspire future talent and develop capacity in the sector, engaging young people via education and work experience, collaborating with higher education institutions to provide programs responding to rapid transit and other infrastructure requirement, and supporting vocational career development through apprenticeships and traineeships.
Economic	Consider adopting a Whole of Life Costing model to maximise sustainability benefits.
	Optimise development opportunities for residual land.
	Capture sustainability benefits in the business case for the project.

3.0 PSS Sustainable design response

3.1 Overview

The basis for the project's sustainable design is that it is shown to be at a level of a 'Green Star Design & As-Built' rating of 4 Stars, plus potential for 5 Stars without significant design modifications. This demonstrates that the envelope design can facilitate a building of this performance provided that the ESD targets and elements are carried through into detailed design and materials selection within this building envelope.

This section provides an overview only. Please refer to the ESD Green Star Matrix appended to this report for a full overview of the design performance, including potential further design opportunities.

3.2 Green Star Design & As-Built

In summary, carrying through the current design concepts that are detailed in the ESD & Green Star Matrix (attached to this report) through to detailed design should yield a project at a performance level of at least 4 Star Green Star rating. The design elements are presented broken down into individual categories that correlate to how they are recognised and certified under Green Star. A 4 Star rating is considered by the Green Building Council of Australia (GBCA) to be 'Australian Best Practice'.

The additional design elements that would be required to uplift to a 5 Star level of performance, considered by the GCBA to be 'Australian Excellence', are essentially specification items and investment in improved performance for certain aspects. Examples include:

- Building materials' sustainability credentials, such as sourcing recycled content materials
- Glazing materials to manage heat gains and losses and solar control
- Refinement of detailed design around shading, glazing extents and thermal performance
- Undertaking specialist consultant studies and providing input to detailed design, such as acoustics and climate change adaptation
- Refinement of system detailed design including air conditioning selections and lighting power density
- Innovation opportunities such as contractor education, high performance site offices, or demonstrating social return on investment

In this sense, the current design is in line with principles for achieving either a 4 or 5 Star Green Star rating.

The pathway currently taken to demonstrate Best Practice and opportunity for 5 Star Australian Excellence is detailed in the Green Star matrix as an Appendix to this report. It outlines the proposed base performance against each environmental impact category as well as the specific opportunities to up-lift that are touched on above.

Sustainability performance under the tool is demonstrated across the following categories, as broken down in the matrix:

- Management
- Indoor Environment Quality
- Energy
- Transport
- Water
- Materials
- Land Use & Ecology
- Emissions
- Innovation

3.3 Energy Performance

If the development is commercial, the energy targets outlined in the Green Star matrix should be readily achievable as outlined in the comments under credits related to Greenhouse Gas Emissions credit 15 through proper consideration during detailed design.

If the development is residential, specific apartment thermal performance ratings will apply as outlined below.

A primary component of the apartment design to achieve the benchmarked overall Green Star performance is to undertake the detailed apartment designs to ensure an average NatHERS (National House Energy Rating Scheme) of 7 Stars across all residences. It is noted this does not preclude individual apartments from achieving the minimum mandated 5 Star NatHERS for multi-unit residential developments, such as Penthouse apartments or corner apartments with large extents of glazing where 7 Stars may not be readily achievable individually.

This will require the detailed design process to remain conscious of aspects such as balcony depths, overhangs, shading, and importantly the materials selection for glazing and walls.

It is noted that the overall Green Star rating is an entirely different scheme to the NatHERS thermal performance rating of individual apartments. However, the overall Green Star rating is affected by how well the apartments' thermal ratings perform.

3.4 Performance in Design

This report, and specifically the ESD matrix, reflects a proposed performance level in the current design. This concept design demonstrates an ability to achieve at least a 4 Star, or national best practice, level of sustainable design performance, which should form the basis for the site's future detailed design and DA submissions.

3.5 Implementation in Design, Construction & Ongoing Operation

The ESD Framework in Section 4.0 outlines how the principles are to be carried through each stage of the project.

3.6 BASIX

Note that BASIX will only apply if the development is residential. This requires that the apartments meet minimum levels of performance for:

- Energy
- Thermal Comfort
- Water efficiency

At this early stage of concept design there are currently no barriers in the design to achieving the required performance against the above categories, and the design performance listed against the above three categories within the ESD & Green Star Matrix provide compliance against BASIX.

As per the Green Star ESD performance, based on this indicative design the project at this early stage is compliant against BASIX requirements.

4.0 ESD Framework

4.1 Purpose

This ESD Framework is provided to facilitate the project achieving 'national best practice' sustainable building principles to improve environmental performance and to achieve the Sydney Metro ESD minimum requirement and objectives through the design, delivery and operation of the project.

4.2 Responsibilities

The allocation of responsibility for implementing sustainability elements and process is provided below. Requirements shall be incorporated into all relevant tendering and contractual documents for all relevant parties.

It is noted that depending on the design and delivery method, some of the below parties' responsibilities may be split, merged or transferred as to be determined by Sydney Metro.

Party	Responsibilities
Design Team	• Assist Sydney Metro in correctly scoping and including ESD requirements in all processes and contractual documentation • Preparing a design, including design documentation and relevant reports, that meets the ESD requirements. • Specifically consider implications for renewable energy, noting that limited roof space relative to building size currently precludes the project from including viable solar generation. • Mange and deliver the Green Star (or other, if agreed) rating certifications with the GBCA during the Design Stage and As-Built Stage, with input from the head contractor, developer, and Sydney Metro. • Liaising with the head contractor prior to, during, and post construction. This includes site checks and review of as-built documents, and contractor ESD briefings. • Development of specific targets including energy and water usage. • Overseeing ESD workshops with all relevant parties at major milestones.

Party	Responsibilities
Sydney Metro	• Oversee inclusion of all requirements into contractual documents to ensure responsibilities are allocated. • Planning for projects to achieve the requirements of this framework • Overseeing implementation of the framework process throughout each major design and delivery milestone • Reviewing design and construction compliance against the requirements, with input from design team • Incorporate ESD costs in planning budgets • Oversee and allocate responsibility for delivery of the ESD targets listed in Section 4.3
Head Contractor	• Providing environmental management certifications and site management in line with ESD requirements • Constructing the project to meet the documented ESD requirements in specifications and contractual documents • Managing sub-contractors to ensure all site works and materials are compliant, including provision of ongoing documentation for design team to review for compliance
Developer and/or Owner	• Incorporating the ESD costs as part of the construction costs • Engaging with all parties outlined above and participating in ESD workshops • Tracking performance against specific project environmental targets during operation, and undertaking appropriate remediating actions where appropriate.

Achievement of the targeted levels of sustainability require a collaborative approach from all parties. Appropriate ESD workshops are required between the relevant representatives from the parties at major milestones.

4.3 ESD Targets

The project is required to meet 'national best practice' in terms of ESD and built-form sustainability. The design team and Sydney Metro shall implemented this through:

- Overarching ESD Target(s):
    - Achievement of a Green Star Design & As-Built 4 Star certified rating where the site development is to be residential. This is defined as 'best practice' in terms of built-form sustainability by the Green Building Council of Australia (GBCA)
    - Achievement of a Green Star Design & As-Built 5 or 6 Star certified rating where the development is a commercial office (refer to Section 2.2). The appropriateness of the rating level would be determined by Sydney Metro

when scoping the detailed design. 5 Star is defined as 'Australian excellence' by the GCBA, whilst 6 Star is considered 'international leadership'.

- Consideration of mandating a NABERS Energy rating if development is to be commercial office, noting this will be required if to be used for government office tenancy.
- Application of an alternative overarching rating or certification scheme to meet at least 'national best practice' where agreed with Sydney Metro.

- Specific ESD targets and Requirements:
  - The design team is to develop specific targets on energy and water usage, as well as consideration of waste targets. Energy and water targets are to be tracked during operation by the project owner.
  - Meet the Sydney Metro 'Minimum Sustainability Requirements for OSD' (refer Section 2.2) and address, where appropriate, the additional Objectives listed in Section 2.3.

4.4 Implementation Process

The process for implementing these requirements is outlined below. Individual steps may be tailored around the specific design and delivery process:

Timeline	Actions
Project Planning	• Undertake workshop between Sydney Metro and major stakeholders to agree Overall ESD Targets (including ESD certification such as Green Star) as well as high level ESD Principles. This workshop is to be based around, and reported against: a) The SEARs ESD principles listed in Section **Error! Reference source not found.**; and b) The Sydney Metro Sustainability Objectives listed in Section 2.3 • Where an overall performance is required such as Green Star, Identify any specific elements which should be included as minimum 'non-negotiable' mandated credit points. • Review inclusion of the ESD design elements listed in the ESD & Green Star Matrix (within this report) and capital works budgets in line with the items proposed for inclusion. • Ensure ESD requirements are included within contractual documents of all design and delivery parties to be appointed.

Timeline	Actions
Project Design	• Undertake workshops at major milestones to agree ESD drivers and certification, including pathways to achieve. These are to build on the elements agreed in the ESD workshop during planning. • Prepare and refine an ESD matrix for the detailed design stage. The ESD & Green Star Matrix appended to this report, and design elements therein, are to be included and carried through design until so far as alternative methods are identified for cost or practicality benefits. • Undertake an ESD design review at each major design milestone to confirm that the required ESD performance is being achieved • Establish specific energy and water targets • Include checklist (separate or within above matrix) for the Sydney Metro 'Minimum Sustainability Requirements' listed in Section 2.2 of this report. • Where agreed, submit design document to GBCA for third party 'Design Review' Green Star certification.
Construction and Delivery	• Undertake contractor briefings (by design team) to discuss the ESD certifications and requirements. • Contractor to monitor and report on compliance against ESD requirements, including preparing draft documentation for certification. • Commissioning against relevant standards. • Final third party 'As-Built' ESD certifications.
Operation	• Undertaking post-occupancy building systems tuning, if included in the project contract, and certify operational ESD ratings if in place. • Monitor building performance against targets established during design stage, and take action as required.

1.0 ESD & Green Star Matrix

The ESD & Green Star Matrix attached to this report provides a detailed breakdown of the project's indicative design performance for a 4 Star Green Star Design & As-Built equivalence, as well as the potential pathway for this envelope design to achieve 5 Star performance. The concept design demonstrates an ability to achieve this level of sustainable design performance, which should form the basis for the site's future detailed design and DA submissions.

It is noted that whilst the '5 Star' Opportunities add to a total of 70.5 points, only 60 points (plus reasonable safety margin, typically 10%) would be required to achieve 5 Stars.

5.0 Conclusion

Based on the project's ESD principles, objectives, targets, and design performance outlined in this report, the project meets the SEARs ESD requirements as part of the concept SSD Application. An ESD framework is provided to guide the ongoing implementation of the required ESD performance into the detailed design, construction and operation of the project.

OSD Pitt St South - ESD Green Star Offline Assessment Tracker (Design & As-Built Tool)

Date	10/05/2018
Targeted Rating:	4 Star - Best Practice (Min Base Case)

Core Points Available	Total Score Targeted	
100	47.5	Equivalent to 4 Star (45 points) plus small amount of 'buffer' points. Note additional points from 5 Star column can be added for further buffer.

Total Score Targeted	
70.5	Equivalent to 5 Star (60 points) plus a moderate amount of 'buffer' points

CATEGORY / CREDIT	AIM OF THE CREDIT / SELECTION	CODE	CREDIT CRITERIA	POINTS AVAILABLE	POINTS TARGETED - 4 Star	OSD Comments - Potential Points for Base Case 4 Star Design	ADDITIONAL POINTS TARGETED - 5 Star	OSD Comments - Potential Points for Uplift 5 Star Design (or alternative make-up points for 4 Star)
Management				14		Comments on high level design requirements (see Green Star Technical Manuals for full compliance requirements)		
Green Star Accredited Professional	To recognise the appointment and active involvement of a Green Star Accredited Professional in order to ensure that the rating tool is applied effectively and as intended.	1.0	Accredited Professional	1	1	Requires a registered Green Star Accredited Professional (GSAP) to be involved in all stages of the project through to delivery. Following development approval, a structured official Green Star workshop would be required.		
Commissioning and Tuning	To encourage and recognise commissioning, handover and tuning initiatives that ensure all building services operate to their full potential.	2.0	Environmental Performance Targets	-	Complies	Requires environmental performance targets to be set during schematic / detailed design in the form of a 'design intent' report, which would be prepared by the Green Star consultant with input from design team.		
		2.1	Services and Maintainability Review	1	1	A Services & Maintainability review would be undertaken during Detailed Design stage, followed by another prior to construction. Covers aspects such as commissionability, controllability, maintainability, operability, and safety.		
		2.2	Building Commissioning	1	1	Including requirements in specifications for full commissioning to relevant standards, and developing a commissioning plan. This is a relatively standard requirement. Role would be best fulfilled by an Independent Commissioning Agent to oversee this.		
		2.3	Building Systems Tuning	1	1	Including a contractual requirement for building systems tuning for 12 months following practical completion. This is beyond standard building services DLP, as it requires active monitoring during occupation at quarterly periods and recommissioning for optimum performance where required.		
		2.4	Independent Commissioning Agent	1	1	The developer directly appointing an independent commissioning agent to oversee commissioning (and 12 month tuning, if adopted) and add further integrity to the commissioning process. This is recommended as it may also help reduce maintenance and running costs. Not required until after DA period.		
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		(Not proposed in base case)	2	Additional consultant cost to appoint and undertake climate adaptation study and consider the results in design. Potential design implications are relatively untested/unknown in current industry but unlikely to influence anything related to DA stage design, so could be appointed and undertaken following DA.
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 Operations and Maintenance Information	1	1	After practical completion, Building Operations and Maintenance information must be provided to the owner. This is generally good standard practice and to achieve compliance must include specific Green Star checklists.		
		4.2	Building User Information	1	1	After practical completion, provide information for building occupants (inlcuding residents if development is residential) on relevant building use information, e.g. energy efficiency, operational waste procedures and locations, local transport options, etc according to Green Star requirements. Could be either via short publication or an online website or pdf accessible by occupants.		
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	Commit to report on actual operational environmental performance against targets. Multiple options for metrics may be used, however standard items may be greenhouse gas emissions and water use. Must be reported at least quarterly to occupants. May be reported through online portal, for example.		
		5.2	End of Life Waste Performance	1	1	To reduce waste from 'fitout' works, building management must commit to maintaining the finishes of all common areas (lobbies etc) for at least 10 years before they are replaced or upgraded (barring minor wear and tear).		
Metering and Monitoring	To recognise the implementation of effective energy and water metering and monitoring systems.	6.0	Metering	-	Complies	Requires energy and water metering for major uses. If development is residential, this is required at each apartment, and for each floor or tenancy (whichever smaller) for non-apartment areas, and for major base building items (e.g. lift energy). Water meters for each apartment may be a small additional cost above a standard multi-residential design.		
		6.1	Monitoring Systems	1	1	Requires connection of all meters to the BMS (Building Management System).		
Construction Environmental Management	To reward projects that use best practice formal environmental management procedures during construction.	7.0	Environmental Management Plan	-	Complies	The contractor must implement a comprehensive project-specific Environmental Management Plan (EMP) for construction.		
		7.1	Formalised Environmental Management System	1	1	All prospective contractors must have an Environmental Management System (EMS) certified to ISO 14001, BS 7750 or European Community's EMAS. This should be standard for this size of project.		
Operational Waste	Performance Pathway	8A	Performance Pathway - Specialist Plan	1	1	The building must include waste separation and a dedicated waste storage area(s) large enough to accommodate all bins or containers for at least one collection cycle. Calculations on area provisions should be able to be supported up by relevant standards or guidelines.		
		8B	Prescriptive Pathway - Facilities	-				
Total				14	12		2	
Indoor Environment Quality				17				
FALSE	To recognise projects that provide high air quality to occupants.	9.1	Ventilation System Attributes	1	1	- Entry of outdoor pollutants to ventilation intakes is mitigated in accordance ASHRAE 62.1 ; - All mech vent systems must have access for maintenance to both sides of all moisture and debris collecting components; and - All ductwork must be cleaned (or kept clean throughout construction after initial clean state) in accordance with Green Star guidelines		
		9.2	Provision of Outdoor Air	2		(Not proposed in base case)	2	APARTMENTS: Naturally ventilated apartments in line with AS1668.4-2012, which requires an openable window area equivalent to at least 5% of the apartment/room floor area. Does not impact mech vent for toilets/kitchens. OTHER AREAS: with code requirements for outside air require 100% increase over minimum AS1668 outside air rates.
		9.3	Exhaust or Elimination of Pollutants	1	1	Kitchens ventilation directly to outside in accordance to AS1668.2-2012. Dedicated printer exhausts will be required if development is commercial.		
Acoustic Comfort	To reward projects that provide appropriate and comfortable acoustic conditions for occupants.	10.1	Internal Noise Levels	1		(Not proposed in base case)		Requires acoustic consultant and improvement in measured acoustic performance (Internal noise levels) to be better than AS2107:2000. This may be difficult with openable windows but possible, however for conservativeness no points claimed. If development is commercial, points may be more easily achieved. Could be pursued during detailed design for a potential further points uplift.
		10.2	Reverberation	1		(Not proposed in base case)	1	Requires acoustic consultant and improvement in measured acoustic performance (Reverberation times) to be better than AS2107:2000. Would require detailed design assessment and input.
		10.3	Acoustic Separation	1	1	Acoustic partitions between enclosed spaces of at least Rw 45, or acoustic consultant to apply a performance based approach in accordance with ISO 1404:1998. This is credit incurs some additional cost, however provides a better design outcome.		
Lighting Comfort	To encourage and recognise well-lit spaces that provide a high degree of comfort to users.	11.0	Minimum Lighting Comfort	-	Complies	Specification item for detailed design: Flicker free lighting ballast & light with Colour Rendering Index of 80 (unless demonstrated that activity is not impeded by lower CRI) or as appropriate under AS1680.1:2006.		
		11.1	General Illuminance and Glare Reduction	1	1	If development is residenital: Living spaces, kitchens, bedrooms and bathrooms: lighting design provides (or permits) general fixed lighting that provides good maintained illuminance values for the entire rooms and within applicable Green Star colour variation limits. If development is commercial: Lighting illuminance must meet the requirements of Table 3.1 of AS/NZS 1680.2.		
		11.2	Surface Illuminance	1	1	At least one wall in each living space, kitchen and bedrooms are provided with specific wall-washing or a wall mounted fitting.		
		11.3	Localised Lighting Control	1	1	For resdidential this is a standard item: GPO design to allow for provision of plug lights/lamps around predicted furniture layouts. Detailed design item and easily achieved. For commercial areas, lighting zoning needs to enable a high degree of individual control, and therefore this point would likey be removed and replaced with another such as 'Internal Noise Levels'.		
Visual Comfort	To recognise the delivery of well-lit spaces that provide high levels of visual comfort to building occupants.	12.0	Glare Reduction	-	Complies	Blinds to façade as a minimum, fixed shading or blinds to other areas.		
		12.1	Daylight	2		Points not claimed. Requires daylight modelling for all spaces during detailed design. If development is commerical, 1 point shuold be achieved, however residential will be difficult to achieve; compliance difficult to predict as heavily influenced by intricacies of apartment layouts, glazing selections, shading, balcony design etc.		This point could be analysed during detailed design to identify potential daylight levels and whether design refinement (if required at all) could achieve points.
		12.2	Views	1	1	Calculations for current design show this point is achieved; with approximately 70% of floor area achieving Green Star definitions of external views. A minimum of 60% is required, so this factor shuold influence interanl partitioning design.		
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	At least 95% of all internal paints, adhesives, sealants and carpets meet stipulated VOC limits. Relatively standard specification item.		
		13.2	Engineered Wood Products	1	1	At least 95% of all engineered wood products meet stipulated formaldehyde limits. Relatively standard specification item.		
Thermal Comfort	To encourage and recognise projects that achieve high levels of thermal comfort.	14.1	Thermal Comfort	1	1	For a residenital development, this is achieved with 7 Star average NatHERS rating for apartment thermal design. During detailed design this may require some careful refinement of glazing, shading, and balcony projections to achieve 7 Star average performance. For a commercial development, this point shoudl be readily achieved with good performing glass and industry standard mechanical heating and cooling.		Average NatHERS star rating of 8 could be pursued for additional point, however is likely to be very difficult with large extents of glass and particularly with corner apartments with reduced common-walls (which reduce heat loss). Additional point is unlikely for commercial development.
		14.2	Advanced Thermal Comfort	1				
Total				17	10		3	

Energy								
				22				
Greenhouse Gas Emissions	C. BASIX Pathway	15C.0	Conditional Requirement: BASIX Pathway	-	Complies		Complies	
		15C.1	BASIX Pathway	16	4.5	If the development is residential, energy performance is dominated by NatHERS ratings for apartment thermal design. Whilst other energy reductions are all beneficial and should be pursued, other energy use and non-residential areas constitute relatively small contribution and may not impact Green Star energy score. Onsite generation is currently not proposed as limited roof area available for solar (with wind load issues). Demonstrate improvement through use of central chilled water to apartments, which will require slight modification to reporting pathway to demonstrate this (as a typical residential development would use split systems). This system is via a water cooled central chilled water plant (noting that air cooled will increase energy use). Energy performance is estimated and needs to be confirmed via detailed modelling during detailed design stages. Estimated change from air cooled to water cooled chillers to be 9% reduction of building energy use, which equates to approximately 1.5 points. If the development is commerical, this level of points performance should be readily achieved with a reasonably efficient central chilled water and heating hot water HVAC system, LED lighting, good controls and selection of glazing with good thermal properties. Additional points are likely to be readily achieved through refining detailed design for energy efficiency.	4	For residential, these additional points would require: Investment in maximum energy efficiency for systems and services above standard practice including lighting, ventilation and air-conditioning, appliances, domestic hot water (noting solar thermal is unlikely to provide sufficient yield for 30% benchmark) and potentially accredited Green power products. Compliance would need to be quantified and modelled during detailed design. For commercial, additinal points of 1-4 will likely be readily achievable through design refinement and investment in efficient systems.
							2	Investment in high performance building fabric with a priority on thermal impacts, to reduce HVAC loads. Design and cost implications, but does not impact DA stage design and can be 'uplifted' during detailed design.
								Building air tightness testing provides a potential opportunity for additional 1-2 points, however may be very expensive and impractical on a large scale due to being a relatively new concept in Australia. Points not claimed here but may be adopted if additional required.
Total				18	4.5		6	

Transport								
				10				
Sustainable Transport	Performance Pathway	17A.1	Performance Pathway	10	7	Transport points achieved via proximity to public transport options including station below. Project also commits to providing bike parking spaces in line with Green Star Technical Manual Table 17B.4.1 for residents/occupants plus Table 17B.4.2 visitor bike parking spaces. The exact number required will be relative to the number of commerical occupants or residents that the internal design facilitates.		
Total				10	7		0	

Water								
				12				
Potable Water		18A.1	Potable Water - Performance Pathway	12		Performance pathway no longer being used.		
		18B.1	Sanitary Fixture Efficiency	1	1	Fixtures and fittings are within 1 Star of Maximum available.		
		18B.2	Rainwater Reuse	1	0	No rainwater collection proposed. Very limited roof area relative to demands.		
		18B.3	Heat Rejection	2	0	Cooling towers are now included in the indicative design.		
		18B.4	Landscape Irrigation	1	1	Landscape irrigation is to be subsoil drip irrigation only with moisture sensor override control.		
		18B.5	Fire System Test Water	1	0		1	Fire system test water collection. May be costly due to requirement for separate isolation of each floor.
Total				12	2		0	

Materials								
				14				
Life Cycle Impacts	Prescriptive Pathway - Life Cycle Impacts	19B.1	Concrete	3	2	Specification item: 30% reduction in Portland cement content in concrete; concrete mix water includes at least 50% captured/reclaimed water; and an aggregate reduction is achieved in line with Green Star guidelines.		
		19B.2	Steel	1	1	Requires the project to specify high strength grade for reinforcing steel.		
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	Requires specification of steel from a 'responsible steel supplier' as per Green Star definitions. This is typically readily available in the Australian market.		
		20.2	Timber Products	1		Requires specification of Forestry Certified timber for at least 95% of all timber used in the building. This is less readily available in Australia but can be specified at additional cost if required for a 5 Star rating.	1	Requires specification of Forestry Certified timber for at least 95% of all timber used in the building. This is less readily available in Australia but can be specified at additional cost if required for a 5 Star rating.
		20.3	Permanent Formwork, Pipes, Flooring, Blinds and Cables	1	1	Requires specification of Green Star best practice requirements for PVC in permanent formwork, pipes, flooring, blinds, and cables, or specification of non-PVC materials for these applications.		
Sustainable Products	To encourage sustainability and transparency in product specification.	21.1	Product Transparency and Sustainability	3			1	Requires at least 3% of products in the building meet one of the following: reused; recycled content; environmental product declarations; third party environmental certification; or stewardship programs. This could be specified at additional cost if a 5 Star rating is pursued.
Construction and Demolition Waste	Percentage Benchmark	22B	Percentage Benchmark	1	1	Requires at least 90% of construction waste is diverted from landfill. This is a specification/contract item that should be readily achievable if a rating is pursued with strict active monitoring and management by the contractor.		
Total				12	6		2	

Land Use & Ecology								
				6				
Sustainable Sites	To reward projects that choose to develop sites that have limited	24.1	Reuse of Land	1	1	Point is achieved due to reusing developed land.		
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	Provide over 60% of roof area (or plan view of site) as one or more of: - Vegetation - Green Roof - High reflective surface >82% - Fixed surface shading, could be Solar PV / Solar HW Panels - Water / pool surface		
Total				6	2		0	

Emissions								
				5				
Stormwater	To reward projects that minimise peak stormwater flows and reduce pollutants entering public sewer infrastructure.	26.1	Reduced Peak Discharge	1	1	Minimum stormwater performance achieved by not increasing peak stormwater flows compared to the site's current condition.		
		26.2	Reduced Pollution Targets	1				Option to provide onsite treatment with supporting modelling to demonstrate reduction in pollutants; however points not claimed as this requires detailed assessment that has not been undertaken.
Light Pollution	To reward projects that minimise light pollution.	27.0	Light Pollution to Neighbouring Bodies	-	Complies	All outdoor lighting must be specified to comply with AS 4282:1997 to reduce light pollution to neighbouring sites.		
		27.1	Light Pollution to Night Sky	1	1	All outdoor lighting must be specified to limit its upward light output ratio to be less than 5% of total light output, to reduce light pollution impacts.		
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	Cooling towers are being provided, and compliance is achieved via using design that mitigates risk from Legionella in accordance with AS/NZS 3666.1:2011 and the risks managed in accordance with the Victorian Public Health and Wellbeing Act 2008.		
Total				5	3		0	

Innovation Opportunities		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 or Initiative	10	1	Hot-desking Virtual Environment Office, to reduce transport environmental impacts of residents through avoiding the need to travel to offsite workplaces each day.	1	**Affordable Housing:** - Demonstrate that the project contains a mix and diversity of lot sizes at an affordable purchase price for low to moderate income households. This may include the supply of social housing within the development, or through the provision of worker housing; - Establish partnerships between the project's owner and organisations dedicated to housing affordability to ensure the stock is allocated as intended; and - Provide an incentive program through rebates, free sustainability items, or reductions in the recommended retail price (RRP) for appliances to these occupants.
							1	**Community Benefits:** - Perform a 'needs analysis' of the surrounding community. This may include community briefings, meetings or workshops; - Develop a strategy for how the project will provide social/community benefits and consult with the broader community on the proposed plan; and - Implement the plan and deliver outcomes as defined by the community benefits strategy.
							1	**Contractor Education:** - Deliver training on the core concepts of global warming, climate change and the health impacts of minimum building practices. - Deliver site-specific training that highlights the sustainable solutions of your project. - Ensure that the training provides information on any certification that is being achieved by the project, and why the concept of certification is important, as well as the role they play in achieving it. - Ensure that at least 80% of all contractors and subcontractors that were present for at least three days on site have received the training. - Demonstrate that head personnel hold, or have received at some point during the design, construction or operational phase of the project, a qualification related to holistic sustainable practices.
							1	**Culture, Heritage & Identity:** - Demonstrate that the building selected is recognised as a place of heritage value, as defined in the Burra Charter or through a heritage listing within a state or local register. - Demonstrate how the building is occupied or has been significantly refurbished, in such a manner as to celebrate and makes visible heritage elements. - Make information on the heritage values of the building available to the public visitors to the site through site displays or a context aware smart phone application.
							1	**Financial Transparency:** - Agree to complete the 'Financial Transparency Disclosure Template' that comprehensively itemises design, construction, documentation and project costs. In the case of building operations, the information provided will relate to the cost of collecting documentation, building operations and any building upgrades. - Provide this information in Excel format at the time of the project's Green Star submission. - Agree to participate in the yearly GBCA report, using anonymized data provided by project teams.
							1	**High Performance Site Offices:** Require the contractor to provide high environmental performance offices during construction. Details are available via the following link to 'High Performance Site Office Checklist': http://www.gbca.org.au/green-star/technical-support/innovation-in-green-star/
							1	**Local Services and skilled labour:** 1 point is awarded where the project team demonstrates that a percentage of the services and skilled labour employed by the project come from the local area surrounding the site. This is likely to require in the order of 80% of personnel be from within 50km of the site.
							1	**Marketing Excellence:** - Develop methodology and perform market research on the investment drivers of end-users of the building, fitout or community e.g. likely investors, occupants or staff. Note that this is not intended to be generic market research based on published reports. Rather, it is market research that involves the project itself and potential likely end users. - Develop a marketing strategy that addresses these drivers in relation to the sustainability measures implemented. - Implement this marketing strategy and provide developed samples at the time of the project's Green Star submission. - Provide information on the benefits of sustainability in a public and prominent way within your building (or sales office). - Provide the information required to create a case study at the time of the project's Green Star submission
							1	**Reconciliation Action Plan:** 1. Develop a Reconciliation Action Plan (RAP), as defined and endorsed by Reconciliation Australia. The RAP must be endorsed by Reconciliation Australia. The Green Star project being rated must play a central role in the delivery of the Reconciliation Action Plan. 2. Demonstrate evidence that relevant Indigenous organisations have been consulted in the development of the RAP. 3. A structure is in place to deliver the plan including a RAP Working Group, with a RAP Coordinator as part of the Working Group, comprising Indigenous and non-Indigenous staff members from all business areas. 4. Public reporting is undertaken to Reconciliation Australia (or equivalent body) and in the organisation's Annual Report, or project website, to report on tangible achievements towards reconciliation goals. 5. At least 80% of the RAP targets have been met in the first reporting cycle.
							1	**Social Return on Investment:** - Complete an analysis of the direct costs and benefits provided by elements of the project above and beyond standard practice. This analysis can include those costs and benefits resulting from the sustainability initiatives implemented in targeting credits for your project's Green Star rating (excluding Innovation credits); and - Complete an analysis of the indirect costs and benefits provided by the project in the areas of productivity, health, crime reduction, employment, and skills development or similar.
Total		10			1		10	