



SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH

PART B: PLANNING ADVICE

for the **Municipal Association of Victoria** on behalf of **CASBE**

March 2022



urban planning | urban design | landscape architecture

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1.0 INTRODUCTION

Hansen Partnership, Hip V Hype and Frontier Economics have been engaged to provide advice on a range of draft ESD standards proposed for inclusion in the planning schemes of a growing number of participating councils. These standards represent an 'elevation' of existing standards currently found in the local policies of 20 of Victoria's councils.

A total of 31 Victorian councils are involved in the 'Elevating Environmentally Sustainable Development (ESD) Targets Planning Policy Amendment' project (the project), indicating the increasing awareness of the importance of planning in delivering ESD. It also signals the importance that planning plays in the ability of local governments to act in response to their communities concerns, expressed through various declarations associated with the climate emergency.

Hansen's role has been to review the proposed standards and recommend adjustments, and to provide advice on related questions of implementation. HIP V. HYPE undertook an assessment of the technical and financial implications of the Standards (Component A), and Frontier Economics considered undertook a cost benefit analysis (Component C).

This report contains two key sections - the first documents the outcomes of a review of draft standards provided to the project group, bringing together input from not only Hansen, but also technical advice and feedback from stakeholders. The second component of this report responds to a series of questions related to how those Standards could, or should, be implemented through Victoria's planning system, before the report concludes with a series of recommendations.



2.0 PEER REVIEW OF STANDARDS

Hansen have undertaken a thorough review of the proposed Standards. The outcome of this review and associated discussion is contained in this section of the report.

The review process comprised a number of stages:

- Initial review and identification of matters which were not appropriate for implementation through a planning scheme. Some of these were identified as more appropriate as guidelines, some were identified as duplicating other standards, and others were not matters that are suitably addressed through a planning scheme, for example:

All engineered wood should meet the maximum total indoor pollutant emissions limits as set out in most current GECA, Global GreenTag GreenRate, Green Star or WELL standards.

- A workshop was then held with members of the client group who had been involved in a 'strategic working group', developing the Standards in their early phases. Through this process, the intent behind particular Standards was discussed and additional Standards resolved for removal, modification or consolidation were identified.
- Hansen then undertook a more thorough review of the Standards considering the following:
 - The likely implementation mechanism and therefore the appropriate 'framing' of the Objectives and Standards.
 - Existing content within planning schemes, and content proposed through current reforms.
 - Opportunities for simplification and clarification.
 - The ability for planners to assess the proposed Standards and the ways in which they might do so.
- Following this, the Standards were further updated on the basis of advice prepared as part of Component A of this project which examined the technical feasibility and viability of the proposed Standards. Where technical challenges were identified with respect to implementing and embedding relevant standards, corresponding adjustments were made to address this.
- The Standards were also tested with a number of stakeholder groups, such as ESD practitioners and peak industry bodies.

The updated Objectives and Standards are included on the following pages, followed by identification of Standards which are recommended to not be pursued further as part of this project.

There are a number of matters to note:

- The Objectives and Standards have been arranged thematically. However, these themes have been adjusted from those originally proposed. The rationale for these adjustments is outlined in the highlight box opposite.
- While the particular requirements of development have been retained as 'Standards', it is noted that these may require further translation once the preferred implementation mechanism has been confirmed and DELWP preferences ascertained. For example - it may be that more specific Performance Measures and Criteria are preferred, or Requirements and Guidelines. See Implementation into Planning Schemes for further details.

THEMES

ENERGY

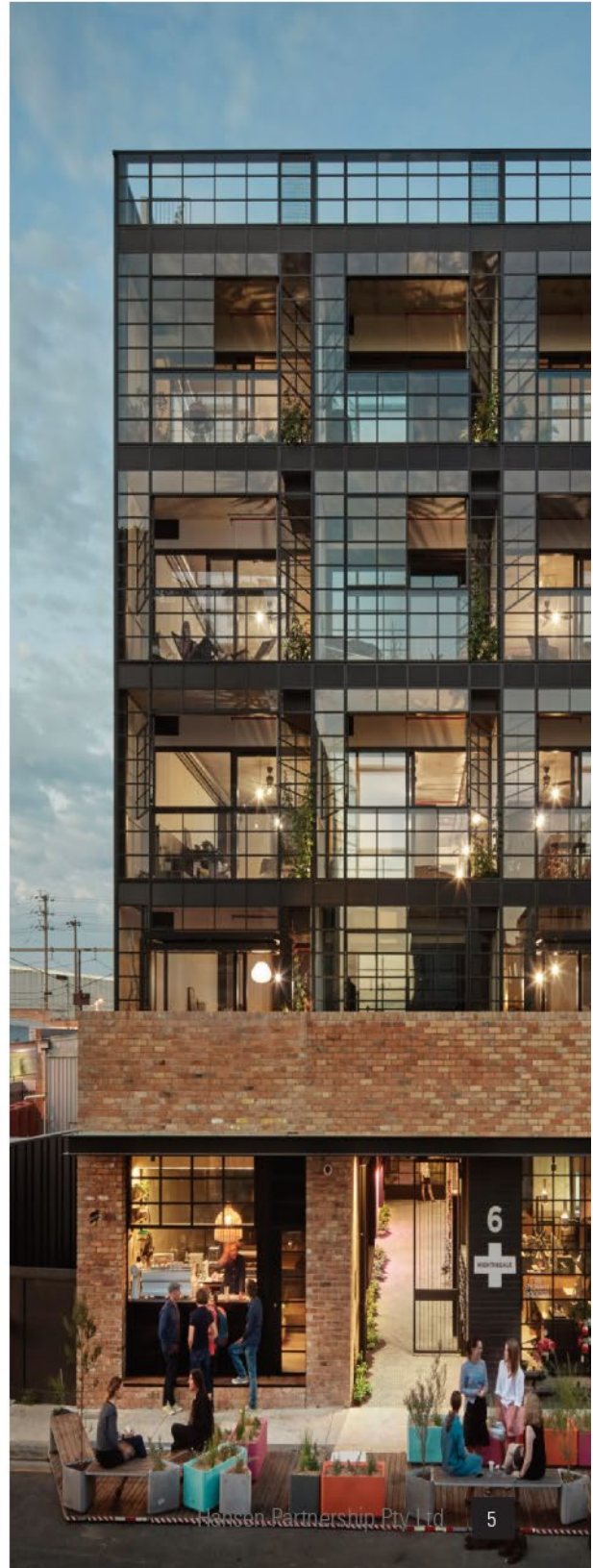
This theme has been split into Operational Energy and Embodied Carbon. This allows for the splitting of objectives related to these two matters. The introduction of a new Embodied Carbon theme allows for an increased emphasis on this and to provide a logical 'home' for Standards which are seeking to achieve objectives related to this. While most of the Standards in this theme are not quantitative or specific, it provides the opportunity for later updates as consideration of embodied carbon becomes more resolved.

GREEN INFRASTRUCTURE

This theme replaces Urban Ecology. While urban ecology is important, as a theme it fails to appropriately encompass the range of matters addressed under this heading and is perhaps more aligned with specific 'biodiversity' outcomes which are often situated in other parts of the scheme. Green Infrastructure allows a greater focus on health and wellbeing considerations alongside biodiversity outcomes.

WASTE & RESOURCE RECOVERY

While this theme was originally identified as Waste, Materials & the Circular Economy, much of the content related to materials has been moved to the Embodied Carbon theme. While the Objectives of this theme certainly relate to the development of a circular economy, it is considered that the Standards proposed under this relate primarily to waste and resource recovery rather than the broader circular economy and so a thematic heading which reflects that provides greater clarity.



2.1 THE OBJECTIVES AND STANDARDS

The table is broken into relevant themes, and for each a series of Objectives are detailed. Below these the revised Standards are included. These have been subject to a rigorous process of review and testing with stakeholders but should be subject to a further round of review prior to any exhibition of a Planning Scheme Amendment

For each theme, the relevant Objectives which the Standard is intended to deliver is identified, along with some commentary as to how the standards would be assessed through the proposed process. It is important that all the Standards are practical in terms of how they can be assessed by any decision-maker and also that they do not impose unreasonable burdens on applicants. These should be read in conjunction with the discussion at Section 2.3 on application requirements and supporting material.

THEME: OPERATIONAL ENERGY		
Objectives		
<ul style="list-style-type: none"> .1 To ensure new development achieves net zero carbon emissions from operational energy use. .2 To support the inclusion of renewable energy generation and ensure a transition to renewable energy sources. .3 To ensure higher levels of energy efficiency and reduce pressure on energy networks. .4 To support effective energy load management and storage. .5 To support development that demonstrates innovation in the delivery of carbon positive emission outcomes. 		
Standards	Assessment process	Objectives
<p>S1 All development should be designed to reflect the following hierarchy in achieving net zero carbon performance from all operational energy use:</p> <ol style="list-style-type: none"> 1. Design buildings to be all electric; 2. Design building orientation, envelope and openings to increase energy efficiency; 3. Selection of energy efficient systems, equipment and appliances; 4. Onsite generation of renewable energy; 5. Purchase of offsite renewable energy. 	<p>As part proposed Sustainability Management Plan (SMP) templates (see Section 2.3) a 'checklist' could be included which, on completion, provides the planner or other decision-maker with a clear understanding of the order and steps taken by the applicant to meet the Standard.</p>	<p>1, 2, 3, 4, 5.</p>

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Standards	Assessment process	Objectives
<p>S2</p> <p>All new development should be designed to avoid consumption of natural gas or other onsite fossil fuels.</p>	<p>This can be clearly identified in the SMP and on relevant plans, including the proposed Sustainability Response Plan. The Guidelines document will provide 'helpful hints' as to ways to overcome common issues with gas. The Guidelines should also include a clear list of uses for which discretion may be warranted from this standard, and any associated parameters.</p> <p>It is noted that advocacy for corresponding changes to the VPPs to address the issue of gas providers as Determining Authority for some permit applications will also need to be pursued.</p>	1
<p>S3</p> <p>All development should be designed to reflect the following hierarchy in achieving net zero carbon emissions from all operational energy use:</p> <ol style="list-style-type: none"> 1. Design buildings to be all electric; 2. Design building orientation, envelope and openings to increase energy efficiency; 3. Selection of energy efficient systems, equipment and appliances; 4. Onsite generation of renewable energy; 5. Purchase of offsite renewable energy. 	<p>This would be assessed through review of built form as shown on plans, and also as articulated through the SMP. Appropriate design responses would vary dependant on context, but examples of common best practice could be provided through the Guidelines.</p>	3
<p>S4</p> <p>All development should be designed to minimise energy use including:</p> <ul style="list-style-type: none"> • Provision of clotheslines to allow natural drying of clothes and bedlinen, that do not impact the amenity of external secluded private open space, or internal room function. • Provision of appropriate energy management systems (such as load management) to support use of renewable energy generated onsite and efficient energy consumption throughout the day. 	<p>Clothes drying areas would be marked on plans allowing for easy assessment and SMP would contain details of any proposed energy management systems as part of documentation. Guidelines again, could provide details as to common and cost effective forms of energy management for different typologies.</p>	3, 4
<p>S5</p> <p>All residential developments should achieve an average 7 Star NatHERS rating.</p>	<p>Relevant NatHERs modelling reports would be incorporated into the SMP.</p> <p>Note: it is anticipated that this Standard will be removed following delivery of Victorias commitment to pursuing this standard through updates to the building regulations.</p>	1, 3, 4

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Standards	Assessment process	Objectives
<p>S6 All development should maximise potential utilisation of solar energy and where appropriate, wind, through the following measures:</p> <ul style="list-style-type: none"> • Ensuring electrical systems are designed to optimise the onsite consumption of generated electricity. • Optimising roof form, pitch and orientation for photovoltaic arrays and/or solar air or water heating. • Minimising shading and obstructions. • Designing for appropriate roof structure to accommodate and access equipment. • Consider spatial requirements for future renewable energy storage or other energy management systems. 	<p>The SMP would provide detail on measures proposed, and the Guidelines would provide certainty as to what matters might need to be specified in terms of electrical systems for different typologies.</p> <p>Plans, including the Sustainability Response Plan, could detail roof characteristics allow for assessment, and again, the Guidelines could clearly articulate appropriate responses in different contexts.</p> <p>Where relevant and if load management or storage is suggested to be part of the response, relevant notations and definition of spatial requirements on plans could be sought.</p>	<p>1, 2, 4</p>



Standards	Assessment process	Objectives										
<p>S7 All developments should provide the following minimum requirements for onsite renewable energy generation:</p> <table border="1" data-bbox="240 555 734 1518"> <thead> <tr> <th data-bbox="240 555 395 589">DEVELOPMENT</th> <th data-bbox="395 555 734 589">REQUIREMENT</th> </tr> </thead> <tbody> <tr> <td data-bbox="240 589 395 786">Single dwelling, Two or more dwellings on a lot (multi-dwellings other than apartments)</td> <td data-bbox="395 589 734 786">A 3kW minimum capacity solar photovoltaic (PV) system should be installed for each 1-2 bedroom dwelling and an additional 1.0kW per bedroom for each bedroom there-after.</td> </tr> <tr> <td data-bbox="240 786 395 943">Apartment development</td> <td data-bbox="395 786 734 943">Provide a solar PV system with a capacity of at least 25W per square meters of the development's site coverage, OR 1kW per dwelling.</td> </tr> <tr> <td data-bbox="240 943 395 1189">Office, Retail, Other non-residential</td> <td data-bbox="395 943 734 1189">Provide a solar PV system with a capacity of at least 25W per square meters of the development's site coverage.</td> </tr> <tr> <td data-bbox="240 1189 395 1518">Industrial & Warehouse</td> <td data-bbox="395 1189 734 1518">A solar PV system that is: Sized to meet the energy needs of the building(s) services (lighting, air-conditioning, industrial processes). When no industrial process is proposed, minimum 1.5kW per tenancy plus 1kW for every 150m² of gross floor area must be provided, OR Where an energy intensive industrial process is likely, maximised based on the available unencumbered roof area.</td> </tr> </tbody> </table>	DEVELOPMENT	REQUIREMENT	Single dwelling, Two or more dwellings on a lot (multi-dwellings other than apartments)	A 3kW minimum capacity solar photovoltaic (PV) system should be installed for each 1-2 bedroom dwelling and an additional 1.0kW per bedroom for each bedroom there-after.	Apartment development	Provide a solar PV system with a capacity of at least 25W per square meters of the development's site coverage, OR 1kW per dwelling.	Office, Retail, Other non-residential	Provide a solar PV system with a capacity of at least 25W per square meters of the development's site coverage.	Industrial & Warehouse	A solar PV system that is: Sized to meet the energy needs of the building(s) services (lighting, air-conditioning, industrial processes). When no industrial process is proposed, minimum 1.5kW per tenancy plus 1kW for every 150m ² of gross floor area must be provided, OR Where an energy intensive industrial process is likely, maximised based on the available unencumbered roof area.	<p>The solar PV proposed would be shown on the plans and detailed in the SMP, allowing for easy assessment against the Standard. There will clearly be some instances where there is a need for discretion in the application of this Standard, including where roofs are already overshadowed (where the application of such a requirement would be unreasonable) or where a better overall sustainability outcome is generated through a combination of measures proposed for the site which results in this Standard not being appropriate.</p> <p>In order to ensure transparency, situations where discretion would always lead to the Standard not being applied should be clearly outlined in the Guidelines or suitable wording added to the Standard. Other situations where discretion may be exercised could be identified through case study examples but should not be specifically listed within the Guidelines. Where relevant these matters could be integrated into decision guidelines.</p>	<p>1, 2</p>
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<p>S8 All residual operational energy should be 100% renewable, purchased through government accredited off-site Green Power, power purchasing agreement or similar.</p>	<p>See Section 3.7 for more in depth discussion of how this Standard could be implemented and assessed.</p>	<p>1</p>										

THEME: EMBODIED CARBON		
Objectives		
.1 To encourage development that considers the lifecycle impacts of resource use and supports lower carbon emissions.		
Standards	Assessment process	Objectives
<p>S9 Development should reduce the impact of embodied carbon emissions in materials used through a combination of the following measures:</p> <ul style="list-style-type: none"> • Reusing all, or part, of existing buildings. • Use of reclaimed or repurposed materials where appropriate. • Use of new materials with a recycled content. • Identifying opportunities to substitute high impact materials, such as concrete or steel, with materials with lower embodied carbon. • Selecting materials from sources which have undertaken offsetting of any carbon emissions. 	<p>The SMP would provide detail on measures proposed by the applicant to meet this Standard. The template could be structured to identify opportunities, which the applicant could confirm if they have taken up or not. Guidelines could provide guidance as to the reductions that would be considered reasonable and the circumstances where discretion would be anticipated.</p>	1
<p>S10 Development should demonstrate consideration of the potential for future adaptation and / or alternate uses where relevant, in the design of buildings.</p>	<p>This could be detailed in the SMP, where a template could provide a checklist of measures that have been considered in response to the Standard. The relevant section of the Guidelines could provide best practice case study examples.</p>	1
<p>S11 Development should contribute to the reduction in future embodied carbon through careful material selection, including:</p> <ul style="list-style-type: none"> • Utilising materials that are durable, reducing need for replacement. • Utilising materials and construction methods which facilitate future recycling of materials. • Considering the application of 'design for disassembly' principles. 	<p>Materials and finishes specifications are anticipated to be provided as per standard application requirements. This would allow assessment against the first and second dot point. Similarly to the above, the SMP template could provide a checklist against matters which have been considered by the applicant in responding to the Standard. Guidelines again could provide locally relevant case studies and ideas that could be considered by applicants.</p>	1

THEME: SUSTAINABLE TRANSPORT

Objectives

- .1 To ensure development supports sustainable and equitable transport patterns through the provision of transport infrastructure that prioritises active transport.
- .2 To support and encourage zero emissions transport.
- .3 To support development that is designed to encourage behavioural changes to reduce transport related emissions and congestion.
- .4 To ensure that development is designed to accommodate the expected increase in use of lower emission modes of transport through the provision of infrastructure that is efficient and can adapt to meet changing needs and innovations in transport technology.

Standards	Assessment process	Objectives												
<p>S12 All development should provide the following rates of bicycle parking:</p> <table border="1"> <thead> <tr> <th style="background-color: #d9ead3;">DEVELOPMENT</th> <th style="background-color: #d9ead3;">REQUIREMENT</th> </tr> </thead> <tbody> <tr> <td>New residential development</td> <td>A minimum of one secure undercover bicycle space per dwelling. Where a lesser provision of bicycle parking is proposed, development should demonstrate how additional space (i.e. car parking spaces) could be repurposed for bicycle parking should demand arise. A minimum of one visitor bicycle space per 4 dwelling.</td> </tr> <tr> <td>New retail development</td> <td>A minimum of one secure undercover employee bicycle parking space per 100 sqm net leasable area. Visitor bicycle spaces equal to at least 5% of the peak visitors capacity.</td> </tr> <tr> <td>New development associated with a Place of Assembly</td> <td>A minimum of 2 secure staff bicycle spaces per 1500 sqm of a place of assembly. A minimum of four visitor spaces for the first 1500 sqm and 2 additional spaces for every 1500 sqm thereafter.</td> </tr> <tr> <td>New office development</td> <td>A minimum of one secure undercover staff bicycle parking space per 100 sqm net leasable area of office. A minimum of one visitor space per 500 sqm net leasable area of office.</td> </tr> <tr> <td>For all other non-residential uses</td> <td>Provide bicycle parking equal to at least 10% of regular occupants.</td> </tr> </tbody> </table>	DEVELOPMENT	REQUIREMENT	New residential development	A minimum of one secure undercover bicycle space per dwelling. Where a lesser provision of bicycle parking is proposed, development should demonstrate how additional space (i.e. car parking spaces) could be repurposed for bicycle parking should demand arise. A minimum of one visitor bicycle space per 4 dwelling.	New retail development	A minimum of one secure undercover employee bicycle parking space per 100 sqm net leasable area. Visitor bicycle spaces equal to at least 5% of the peak visitors capacity.	New development associated with a Place of Assembly	A minimum of 2 secure staff bicycle spaces per 1500 sqm of a place of assembly. A minimum of four visitor spaces for the first 1500 sqm and 2 additional spaces for every 1500 sqm thereafter.	New office development	A minimum of one secure undercover staff bicycle parking space per 100 sqm net leasable area of office. A minimum of one visitor space per 500 sqm net leasable area of office.	For all other non-residential uses	Provide bicycle parking equal to at least 10% of regular occupants.	<p>Bicycle parking areas and proposed numbers should be included on relevant plans. They should also be detailed with the relevant SMP (see recommendation for consolidation of current Green Travel Plan requirements with a single SMP). SMP template could contain an adjustable table with the relevant uses so applicants can just add in relevant floor areas and identify numbers of bicycle parking spaces provided, with justification for any reduction required. This template could also allow for the easy identification of the number of 'other' types of bicycle parking provided (i.e cargo bikes, electric bikes spaces with charging etc).</p>	<p>1, 2, 4</p>
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SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Standards	Assessment process	Objectives
<p>S13 All non-residential developments should provide:</p> <ul style="list-style-type: none"> • One shower for the first 5 employee bicycle spaces, plus 1 to each 10 employee bicycle spaces thereafter. • Personal lockers are to be provided with each bicycle space required if 10 or more employee bicycle spaces are provided. • If more than 30 bicycle spaces are required, then a change room should be provided with direct access to each shower. The change room may be a combined shower and change room. 	<p>As above, this could be included as a table to fill out in any SMP template, and should be marked on relevant plans.</p>	<p>1, 2, 4</p>
<p>S14 All bicycle parking facilities should be designed for convenient access, including:</p> <ul style="list-style-type: none"> • Locating the majority of bicycle parking facilities for occupants at ground level, where this does not compromise other relevant objectives. • For bicycle parking not at ground level, providing the majority within 10 meters of vertical pedestrian access ways (i.e. lifts, stairs). • Providing safe access to bicycle parking facilities in basement car parks via a separate line of travel or by clearly signalling cycle priority through surface treatments and to facilities accessed via lanes by providing suitable lighting and surveillance. • Ensuring any lifts used to access bicycle parking areas are at least 1800mm deep. • Ensuring at least 20% of residential bicycle parking facilities are of a type which support equitable access through a combination of well-spaced ground level facilities to support ease of use and provision of parking spaces to accommodate a diverse range of bicycles (such as cargo bikes or three wheeled bikes). 	<p>Details of how the design has considered easy access could be documented in the SMP, with relevant content included on plans. The Guidelines should include examples of application types for which dot points relating to ground floor locations and separate lines of travel may not be appropriate. As with previous Standards, where decision guidelines etc are used, these matters could be addressed there.</p>	<p>1, 2, 4</p>

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Standards		Assessment process	Objectives										
<p>S15 All development should be designed to support the use of electric vehicles through the provision of:</p> <table border="1"> <thead> <tr> <th>DEVELOPMENT</th> <th>REQUIREMENT</th> </tr> </thead> <tbody> <tr> <td>Single dwellings / Two or more dwellings on a lot</td> <td>Appropriate infrastructure and cabling to support at least moderate speed, efficient EV charging (without the EV charger unit) in each garage/ carport.</td> </tr> <tr> <td>Apartment development</td> <td>Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to all car parking spaces. Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed for example, distribution boards, power use metering systems, scalable load management systems, and cable trays or conduit installation.</td> </tr> <tr> <td>Non-residential development under 5,000 sqm gross floor area</td> <td>Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to 20% of all staff car parking spaces (or a minimum of one space). Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed, for example, distribution boards, power use metering systems, scalable load management systems, and cable trays or conduit installation.</td> </tr> <tr> <td>Non-residential development over 5,000 sqm gross floor area</td> <td>Installed EV charging infrastructure complete with chargers and signage to 5% of all car parking spaces. Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to 20% of all staff car parking spaces (or a minimum of one space). Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed for example, distribution use metering systems, scalable load management systems, and cable trays or conduit installation.</td> </tr> </tbody> </table>		DEVELOPMENT	REQUIREMENT	Single dwellings / Two or more dwellings on a lot	Appropriate infrastructure and cabling to support at least moderate speed, efficient EV charging (without the EV charger unit) in each garage/ carport.	Apartment development	Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to all car parking spaces. Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed for example, distribution boards, power use metering systems, scalable load management systems, and cable trays or conduit installation.	Non-residential development under 5,000 sqm gross floor area	Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to 20% of all staff car parking spaces (or a minimum of one space). Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed, for example, distribution boards, power use metering systems, scalable load management systems, and cable trays or conduit installation.	Non-residential development over 5,000 sqm gross floor area	Installed EV charging infrastructure complete with chargers and signage to 5% of all car parking spaces. Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to 20% of all staff car parking spaces (or a minimum of one space). Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed for example, distribution use metering systems, scalable load management systems, and cable trays or conduit installation.	<p>SMPs will contain a section which includes details of EV provisions proposed on site. The template could be set up to allow easy assessment against the Standards. Location of relevant infrastructure should also be shown on relevant plans.</p>	<p>2, 3, 4, 5</p>
DEVELOPMENT	REQUIREMENT												
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SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Standards	Assessment process	Objectives
<p>S16</p> <p>All car parking facilities should be designed to support the charging of shared or visitor vehicles through:</p> <ul style="list-style-type: none"> The provision of a minimum of one EV enabled shared parking space if visitor or shared parking spaces are proposed. Locating shared EV charging space(s) in highly visible, priority locations. Providing clear signage indicating that EV charging is available at the shared space(s). 	<p>As with above this information could detailed in the EV section of the SMP through use of a template model, and through the inclusion of relevant spatial details on the plans.</p>	<p>2,3,4,5</p>
<p>S17</p> <p>All car parking facilities should be designed to support the charging of motorcycle, moped, electric bicycle or scooters through:</p> <ul style="list-style-type: none"> Providing electrical capacity for appropriate charging outlets at the parking / storage area. Providing a general power outlet for every six vehicle parking spaces to support charging. 	<p>As above.</p>	<p>2, 3, 4</p>
<p>S18</p> <p>All development should be designed to support modal shift to more sustainable forms of transport through:</p> <ul style="list-style-type: none"> Locating low and zero emission vehicles in a prominent, accessible locations within parking facilities. Designing car parking facilities to be adaptable to other uses. Adopting flexibility in the allocation of car parking spaces to facilitate adaptable uses or transfer of ownership. 	<p>SMP template could provide a section where applicant can outline steps they have taken to support modal shift which may include measures beyond those identified in the Standard. Where items included in the Standard have not been pursued by the applicant the expectation would be the rationale for this is documented in the SMP also.</p>	<p>1, 2, 4 ,5</p>

THEME: INTEGRATED WATER MANAGEMENT

Objectives
<p>.1 To support development that minimises total operating potable water use.</p> <p>.2 To support development that reduces the amount of stormwater runoff on site, and improves its quality of stormwater, and impacts for stormwater that leaves a development.</p> <p>.3 To ensure development considers and addresses the impact of future climate conditions in the management of water resources.</p> <p>.4 To encourage development that supports innovation in the use and reuse of water</p>

Standards	Assessment process	Objectives
<p>S19</p> <p>All development should be designed to reduce potable water use on site by at least 30% in interior and irrigation uses, in comparison to an equivalent standard development, with use of roof harvested rainwater supply prioritised in the delivery of reductions.</p>	<p>SMP template would include an area where the water use of the 'equivalent standard development' would be recorded (in line with definition and Guideline content). The anticipated usage based on measures which would also be outlined could then be recorded, allowing an easy assessment of the reduction in use anticipated to be achieved by the development. A breakdown of where the reductions have been achieved could also be provided.</p>	1, 4
<p>S20</p> <p>Design developments to use water resources efficiently through a range of measures, including:</p> <ul style="list-style-type: none"> • Collection of rainwater from above ground catchments, and appropriate filtering for on-site use for toilet flushing as a minimum, and additional uses such as laundry, irrigation, wash down facilities, etc. • Capture of fire-test water for on-site reuse • Collection of stormwater for on-site reuse • Considering opportunities for onsite recycling of wastewater through the installation of approved greywater or blackwater systems • Reducing potable water use for irrigation by selection of drought tolerant landscaping, design for passive irrigation, and selection of efficient irrigation systems where needed • Connecting to a precinct scale Class A recycled water source if available and technically feasible (including a third pipe connection to all non-potable sources). • Providing water efficient fixtures, fittings and equipment. 	<p>Measures taken to achieve water efficiency will vary from site to site, but should be documented in the SMP. The SMP could include all measures identified in the Standard to ensure direct response to these key opportunities but would also allow for other measures to be identified.</p>	1, 3, 4
<p>S21</p> <p>Reduce the volume and flow of stormwater discharging from the site by appropriate on-site detention and on-site retention strategies, consistent with catchment scale IWM objectives and targets.</p>	<p>This would be demonstrated through use of tools such as STORM / MUSIC as is currently the case. The results would be included in the SMP.</p>	2
<p>S22</p> <p>Improve the quality of stormwater discharging from the site by meeting best practice urban stormwater standards.</p>	<p>This would be demonstrated through use of tools such as STORM / MUSIC as is currently the case. The results would be included in the SMP.</p>	2

THEME: GREEN INFRASTRUCTURE		
Objectives		
<p>.1 To deliver development that protects existing landscape values on and adjoining the development site, including canopy, vegetation, and habitat for biodiversity.</p> <p>.2 To deliver development that increases vegetation, particularly indigenous and native vegetation, and enhances existing landscape values, connects biodiversity corridors and increases the resilience of ecosystems.</p> <p>.3 To ensure landscaping proposed as part of development will be resilient to future climate conditions and supports integrated water management and energy efficiency outcomes.</p> <p>.4 To support development that increases amenity, improves connections to surrounding natural landscapes and supports health and wellbeing.</p> <p>.5 To encourage development that provides opportunities for on-site food production.</p>		
Standards	Assessment process	Objectives
<p>S23 All new development should achieve a Green Factor score of 0.55 (0.25 for industrial and warehouse uses)</p> <p>OR</p> <p>A minimum of at least 40% of the total site coverage area (20% for Industrial or Warehouse) must comprise green cover (external landscaping) that delivers at least one of the following:</p> <ul style="list-style-type: none"> A minimum of 65% of the required green cover area as new or existing canopy planting and a minimum of 35% as understory planting. Canopy planting and understory planting can overlap. Species selection and associated planting arrangement comprising native and / or indigenous species which provides habitat for native fauna. Green cover which is located to provide maximum benefit in relation to the cooling of the adjoining public realm. Green walls or facades under this pathway must benefit the public realm and be on the lower levels of the building. 	<p>If using the Green Factor Tool (GFT), the final score report which is generated would be provided allowing the Standard to be easily assessed.</p> <p>If alternate measures are proposed to meet the Standard then this would be documented on the relevant plans, including planting schedules. Guidelines would be needed to provide additional detail as to the parameters of how the alternate pathway would be assessed (i.e. lower levels are up to three storeys etc).</p>	<p>1, 2, 3, 5</p>

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<p>S24 Green infrastructure should:</p> <ul style="list-style-type: none"> • Support the creation of complex and biodiverse habitat. • Provide a layered approach, incorporating both understory and canopy planting. • Provide either native, indigenous and/or climate change resilient exotic plants that provide resources for native fauna. • Support the creation of vegetation links between areas of high biodiversity through planting selection and design. • Ensure species selection is appropriate to address expected future climate conditions. 	<p>As per some earlier standards, a 'checkbox' approach within the SMP template could provide an easy mechanism for assessment.</p>	<p>1, 2, 3, 5</p>
<p>S25 Siting of buildings should seek to retain existing mature canopy trees (excluding invasive species) or significant areas of other green cover which contribute to biodiversity corridors and habitat.</p>	<p>Existing trees would be shown on plans. Any removal of mature canopy trees would need to be justified as part of any application. Guidelines would make clear the parameters what appropriate responses may be in different circumstances. This could addresses approaches based on preferred densities, location of trees on lots etc. If trees are proposed for removal an arborists report would form part of application requirements.</p>	<p>1, 2, 3</p>
<p>S26 Development should ensure appropriate measures are integrated to support the establishment and ongoing maintenance of landscaping</p>	<p>Review of landscape plans and any associated material should detail proposed measures (noting crossover with IWM requirements).</p>	<p>5</p>



THEME: CLIMATE RESILIENCE		
Objectives		
<p>.1 To improve the resilience of the built environment to climate change related hazards and natural disasters. .2 To deliver development that reduces the urban heat island effect.</p>		
Standards	Assessment process	Objectives
<p>S27 New development should demonstrate that future climate impacts have been considered and addressed in any design response.</p>	<p>Applicants would be required to prepare a Sustainability Response Plan, similar to existing Design Response Plans, which identify the future climate impacts. Impacts would be as per State of the Climate reports. This plan would summarise impacts and then identify proposed responses which would be outlined in more detail in SMPs. Guidelines could provide further information of the impacts that would need to be considered and what potential responses could include.</p>	<p>1, 2</p>
<p>S28 Provide at least 75% of the development's total site area with a combination of the following elements to reduce the impact of the urban heat island effect:</p> <ul style="list-style-type: none"> • Green infrastructure. • Roof and shading structures with cooling colours and finishes that have a solar reflectance index (SRI) of: <ul style="list-style-type: none"> • For roofing with less than 15 degree pitch, a SRI of at least 80. • For roofing with a pitch of greater than 15 degrees, a SRI of at least 40 • Water features or pools. • Hardscaping materials with SRI of minimum 40. 	<p>The total 75% area would be documented on the Sustainability Response Plan, allowing for easy assessment as per current documentation of permeability requirements under ResCode.</p>	<p>1,2</p>
<p>S29 Pedestrian pathways should be designed with thermal comfort in mind. This includes incorporating landscaping (tree canopy and other vegetation), shading and covered structures.</p>	<p>Plans would allow easy assessment of whether pedestrian paths incorporate responses to urban heat.</p>	<p>1,2</p>

THEME: INDOOR ENVIRONMENTAL QUALITY

Objectives

- .1 To support development that achieves safe and healthy indoor environments, specifically addressing:
 - Thermal comfort
 - Thermal safety
 - Access to clean, fresh air
 - Access to daylight and sunlight
 - Harmful indoor air pollutants
- .2 To deliver development that considers the impact of future climate conditions on indoor environment quality.

Standards	Assessment process	Objectives								
<p>S30 Buildings should be designed to be able to provide appropriate levels of thermal comfort without reliance on mechanical heating and cooling systems, as follows:</p> <table border="1"> <thead> <tr> <th>DEVELOPMENT</th> <th>REQUIREMENT</th> </tr> </thead> <tbody> <tr> <td>Single dwellings Two or more dwellings on a lot</td> <td>All habitable rooms should be cross ventilated.</td> </tr> <tr> <td>Apartment development Residential Buildings</td> <td>60% of all apartments should be effectively naturally ventilated, either via cross ventilation, single-sided ventilation or a combination At least 40% of apartments on every floor to be cross ventilated</td> </tr> <tr> <td>Non-Residential development</td> <td>All regular use areas of non-residential spaces should be effectively naturally ventilated; or commensurate mechanical measures provided.</td> </tr> </tbody> </table>	DEVELOPMENT	REQUIREMENT	Single dwellings Two or more dwellings on a lot	All habitable rooms should be cross ventilated.	Apartment development Residential Buildings	60% of all apartments should be effectively naturally ventilated, either via cross ventilation, single-sided ventilation or a combination At least 40% of apartments on every floor to be cross ventilated	Non-Residential development	All regular use areas of non-residential spaces should be effectively naturally ventilated; or commensurate mechanical measures provided.	<p>Plans should document proposed flow paths allowing for assessment of ventilation. Guidelines should make definitions of cross and single side ventilation clear.</p>	1
DEVELOPMENT	REQUIREMENT									
Single dwellings Two or more dwellings on a lot	All habitable rooms should be cross ventilated.									
Apartment development Residential Buildings	60% of all apartments should be effectively naturally ventilated, either via cross ventilation, single-sided ventilation or a combination At least 40% of apartments on every floor to be cross ventilated									
Non-Residential development	All regular use areas of non-residential spaces should be effectively naturally ventilated; or commensurate mechanical measures provided.									
<p>S31 Buildings should achieve a daylight level across the entirety of every habitable room of 100 lux and of 50 lux across the entirety of any other regularly occupied space.</p>	<p>Proposed lux levels should be documented in the SMP. For larger and more complex development, application requirements would include specialist reporting.</p>	1								
<p>S32 Internal spaces in buildings should utilise natural light to minimise the use of artificial lighting during daylight hours, unless the proposed use of the room is contrary to the provision of glazing.</p>	<p>Standard application plans such as elevations would be used to assess this Standard.</p>	1								

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<p>S33 Primary living areas of at least 70% of all dwellings in a development should achieve direct sunlight for 2 hours on the 21st day of June to at least 1.5m deep into the room through glazing.</p>	<p>Extent of sunlight through glazing could be documented on plans. Guidelines could show how this should be demonstrated, and detail considerations in calculating solar access. For larger and more complex development, application requirements would include specialist reporting.</p>	<p>1</p>
<p>S34 Development should include openable external windows to circulation corridors and lift lobbies to facilitate natural ventilation for residential development below six storeys.</p>	<p>Plans notate openable windows.</p>	<p>1, 2</p>
<p>S35 Development should use materials which are low toxicity in manufacture and use, and that do not cause harm to people or ecosystems.</p>	<p>Guidelines would list materials to be avoided and cross references could occur with Materials and Finishes specification.</p>	<p>1</p>



THEME: WASTE & RESOURCE RECOVERY**Objectives**

- .1 To facilitate development that supports functional waste recovery and management.
 .2 To enable the continuous improvement of sustainable waste management and resource recovery

Standards	Assessment process	Objectives
<p>S36 Development should include:</p> <ul style="list-style-type: none"> Adequate waste and recycling infrastructure to manage the waste demand of the development in a sustainable manner and to support recycling, such as an appropriate number of bins, waste chutes, and cleaning facilities. Waste and recycling infrastructure and enclosures which are: <ul style="list-style-type: none"> Adequately ventilated. Integrated into the design of the development. Located and designed for convenient access by occupants and made easily accessible to people with limited mobility Signposted to support recycling and reuse. Adequate facilities or arrangements for bin washing. 	A Waste Management Plan would be required as part of application requirements for applications other than single dwellings, and a template will assist easy assessment against aspects of the Standards.	1
<p>S37 Development should be designed to facilitate:</p> <ul style="list-style-type: none"> Collection, separation and storage, and where appropriate, opportunities for on-site management of food waste through composting or other waste recovery as appropriate. Collection, storage, and reuse of garden waste, including opportunities for on-site treatment, where appropriate, or off-site removal for reprocessing. Collection and storage of glass recycling Collection and storage of containers under any Container Deposit Scheme as appropriate for the proposed use and scale. The provision of adequate circulation space on site to allow waste and recycling collection vehicles to enter and leave the site without reversing. Waste and recycling separation, storage and collection designed and managed in accordance with an approved Waste Management Plan, if required by the responsible authority. For apartment development, the provision of space for communal storage of additional waste streams including E waste, hard waste and textiles. 	A Waste Management Plan would be required as part of application requirements for applications other than single dwellings, and a template will assist easy assessment against aspects of the Standards.	1
<p>S38 An application should demonstrate through the provision of a Construction / Demolition Waste Management Plan, if required by the Responsible Authority, that all practical and feasible practices and activities to minimise waste and increase resource recovery will be implemented.</p>	The required CMP, and associated template would support assessment.	1

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2.1.1 OTHER STANDARDS

It is noted that a number of other Standards were initially proposed as part of this amendment. Some of these initial Standards will inform updates to BESS (CASBE’s sustainability rating tool) or relevant Guidelines, while others may form part of a future planning scheme amendment when further work has been undertaken.

The Standards which were not pursued at this point in time related to:

ENERGY

- Improvements on NCC for commercial energy efficiency.
- Glazing specifications.
- Airtightness requirements.
- Penetration points in insulation.
- Appliance and system efficiency requirements.
- Electric heat pump minimum standards.
- Illumination power density of internal lighting.
- Provision of electric cooktops.
- Basement car park ventilation.
- Installation and specification of HVAC systems.
- Specific controls for energy management.
- Preparation of an EV management plan.
- Discretionary fast charging points.
- Reduction in vehicle crossover lengths.
- Efficient fixtures, appliances and fittings.

INTEGRATED WATER MANAGEMENT

- Increased permeability requirement.
- Reduction in flood impact on site and in associated context.
- Modelling of flood impacts.
- Ensuring environmental safety and human health in reuse of water.

GREEN INFRASTRUCTURE

- Retention of soil profiles.
- Provision of composting and soil conditioning.
- Provision of uncontaminated top soil.
- Landscape measures compliance reporting.

- Shared urban ecology space (including food production) requirements.
- Water supply and taps to balconies.

CLIMATE RESILIENCE

- Strengthening local community resilience.
- Blackout refuge requirements.

INDOOR ENVIRONMENTAL QUALITY

- Internal room temperature minimum and maximums for habitable rooms.
- Workplace heating requirements.
- Provision of double glazing.
- Heating and cooling load densities of habitable rooms.
- Higher provision of daylight levels to specified proportion of habitable rooms.
- Winter sun access to primary private open space.
- Provision of layered views from habitable rooms.
- Distance between fixed points of occupation (i.e desks) and glazing.
- Pollutant emissions of engineered wood, carpet, paint and sealants and other materials.
- Olfactory comfort in non-residential development.
- Land use directives for development within proximity of main roads truck routes and diesel train corridors and other sources of pollution.
- Specific technical requirements for development within proximity of main roads truck routes and diesel train corridors.

WASTE & RESOURCE RECOVERY

- Onsite reuse of materials.
- Private waste contractor resource diversion.
- Onsite versus street collection of waste and street space allocation.
- Internal waste storage space (dwellings).
- Provision of charity donation bins.
- Waste capacity for peak demand times.
- Odour impacts of waste collection vehicles.

2.2 ASSOCIATED MATTERS

2.2.1 DEFINITIONS

While planning should always be drafted in plain English, in the case of ESD, this can often mean including reference to specific elements, for example “green infrastructure” or “Solar Reflectance Index (SRI)”. It is important that there is a consistent understanding of these terms.

There are two options for including definitions. They could be included within the provision itself (which is standard practice) or they could be included in a Glossary which is an Incorporated Document within the schemes. If further consideration or legal advice suggests only a small number of terms would require statutory weight then the definitions could be included within the provision. If however, there are a large number of terms requiring definition with statutory weight, then the Incorporated Document is the preferred approach as it is considered that most of the terms are unlikely to require an ‘explanation’ for most users of the scheme. Specific definitions are relevant only when a Councils definition of them (for example) as included in the proposed Policy Document) is challenged in a legal setting. In that scenario, the statutory weight accorded to a definition included as an Incorporated Document becomes important. If agreed State definitions are introduced through Clause 73 then these definitions may not be required.

Terminology included within the proposed Standards which may benefit from definition include:

- Net zero carbon performance
- Operational energy use
- Residual carbon emissions
- Embodied carbon
- Green infrastructure
- Green cover
- Solar Reflectance Index (SRI)
- Net Leasable Area (NLA)
- Available unencumbered roof area
- Peak visitor capacity
- Regular occupants
- Total site area
- EV ready
- Mature canopy trees
- Regularly occupied spaces

2.2.2 INFORMATION REQUIREMENTS

The review also identified other considerations and associated requirements which may be needed to support planners, and other relevant officers or decision-makers, in assessing the various Standards.

Generally speaking, it is considered that the *content* required to undertake an assessment against these Standards is likely to be similar across all scale and types of development. What is likely to differ is the *scope and level of detail of information* provided under relevant themes.

New format Local Policy does not allow for the identification of application requirements. Consistent with the *Planning and Building Approvals Process Review* undertaken in 2019 by Better Regulation Victoria, application requirements should be identified by councils external to planning schemes.

While this approach is supported, it is also important to ensure that it is clear to applicants what information is required to allow decision-makers to assess their proposal against relevant Standards. This need is reflected in proposed changes to ResCode (*Improving the operation of ResCode, 2021*) which retains the Information Requirements against the various Standards contained within those Clauses. If such a model is adopted then relevant requirements should be integrated into the provision.

While relevant documents such as Sustainability Management Plans (SMPs) are sometimes provided only as Permit Conditions, it is considered that in delivering these Standards, councils will need additional information to be able to efficiently assess the Standards. Upfront provision of such documents also signals the importance of integrating their content with the overarching design of any development, rather than ESD measures being an ‘add-on’.

There are significant opportunities to streamline the required information pertaining to other parts of the scheme (for instance Water Sensitive Urban Design / Integrated Water Management requirements) into a single document, reducing complexity and avoiding contradictions. Well-considered structuring of a shared templates for participating councils will also significantly improve consistency and transparency for applicants in required ESD information.

Developing templates will not only support council staff in ensuring that the ‘right’ information is provided upfront, reducing the need for Requests for Further Information, but will also assist applicants (particularly those who may not be frequent users of the planning system) in understanding what material needs to be provided and what council will be considering during any assessment phase.

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Sustainability Management Plan

As noted earlier, this is a key document and should be seen as an 'automatic' requirement similar to the requirement for an Urban Context Report for apartment development. A refresh of these key documents as part of this process is suggested. This would allow the development of a consistent template, and also make clear the level of expectation in terms of content for differing scales of development. A Practice Note on the preparation of an SMP would also be of benefit.

Sustainability Response Plan

In addition to the more detailed SMP, it is suggested that all development should include within their set of plans a 'Sustainability Response Plan', modelled on the current Design Response required under ResCode - with a focus on responding to existing and future environmental conditions rather than neighbourhood character. This would not be a replacement for the more detailed SMP or the inclusion of relevant elements on other plans, but a way of bringing upfront acknowledgement of the climatic and other environmental conditions to which the design of any building should be responding to. It would provide a summary of key elements of the design response relevant to sustainability on a single plan.

In addition, a number of other reports are likely to be required to allow assessment. These are discussed briefly below:

- A **Waste Management Plan** (WMP) which deals with how operational waste will be managed on the site should be required for all development, other than single dwellings or two dwellings on a lot. As part of reducing complexity and ensuring the burden on applicants is not unreasonable, templates for smaller scale development should be considered to allow applicants to provide this information without the need to employ specialist waste experts. This 'template' could also be used to convey 'best practice' to applicants and educate them in effective ways of managing their waste. For larger scale developments more typical WMPs would still be required, with relevant updates and endorsement to follow as part of any issue of permit, as per current practice.

- In addition to operational waste, construction (and in relevant cases where a permit is triggered, demolition) waste is also a key source of landfill. While some targets proposed have sought specific landfill diversion targets etc, the diversity of areas covered by the councils affiliated with these Standards means a flexible approach is more appropriate. Permit Conditions now often require **Construction Management Plans** for larger scale development and similar application requirements are embedded in other parts of the scheme (i.e. requirement that the application describes how the site will be managed prior to and during construction periods at Clause 53.18) - such requirements could be integrated with this requirement, and this integration communicated through Application Requirement guidelines. Similar to the approach proposed to WMPs it is suggested that a template for the management of construction waste, including tips for best practice could also be adopted.
- Although again, increasingly standard practice, it will be important that a **Landscape Plan**, and associated maintenance plan for larger scale development is also submitted with any applications. See discussion on Guideline Material for more detail.

Finally, it should be made clear through any Application Requirement guidelines that all relevant ESD content should be shown spatially on plans where relevant to ensure they are carried through all stages of the construction process. As part of a 'support package' for implementation of any amendment, Application Requirement guidelines could be prepared which could be used by all councils who apply the seek to integrate the Elevated ESD Standards in their schemes.

2.2.3 PERMIT CONDITIONS

As outlined in Section 3.7 of this report, Permit Conditions will be critical in ensuring objectives for net zero operational energy. The proposed requirement for Sustainability Certificates at Construction and Operational stages would need to be included as Permit Conditions.

There are also a number of other matters which would need to be addressed as Permit Conditions to effectively implement the proposed Standards. While many of these are already applied by some councils, again, a consistent approach across all councils applying the Elevated ESD Standards would be highly beneficial.

Other matters to be addressed by Permit Conditions would include:

- Endorsement of the SMP (including EV management and also IWM) prior to construction commencing.
- Endorsement of the Construction / Demolition management plan (if required) prior to construction commencing.
- Endorsement of the WMP prior to construction commencing.
- Endorsement of Landscape Plan/s and associated Maintenance Plan (if required) prior to construction commencing.
- Endorsement of any Green Travel Plan, if relevant and not integrated into the SMP.

2.2.4 GUIDELINE MATERIAL

As noted in the Peer Review of the Standards, a number of the initial standards and some of the more 'technical' details are suggested for inclusion in a document which sits outside planning schemes.

A **Guidelines for Sustainable Building Design** document is recommended which could be used consistently by all councils who apply the Elevated ESD Standards, and could be included as a Background Document in relevant schemes. This could provide more explicit technical information, appropriate alternatives for responding to performance criteria, and real life case studies. Its inclusion as a Background Document may provide the flexibility for it to be included (similar to the Best Practice Environmental Management Guidelines) in a manner which allows it to be updated over time as technology changes (i.e. "or as updated"), ensuring the technical recommendations are consistent with any contemporary best practice.

These Guidelines could provide not only clear direction as to options for delivering the Standards, but could also clearly articulate expectations at different scales of development. This confusion about expectations from different councils is a key issue for applicants, as a lack of understanding of what may be expected in the 'ESD' space can act as a significant barrier. Guidelines can assist with breaking down this barrier. Importantly, the Guidelines should be structured and drafted to directly relate to the content within the schemes which would be assessed through any approval process.

Areas relevant to the proposed Standards which could benefit from coverage in any guidelines include:

- SMP content, outlining expectations of a SMP and the level of detail required for different development. This could then link directly to different thematic headings where common issues, helpful tips and best practice case studies are documented.
- Landscape plans & maintenance plans, in particular requirements at different scales and references to other key resources (such as the City of Melbourne Green our City resources).
- Best practice case studies of construction waste management.
- Guidelines for designing for adaptation or 'design for disassembly' for different typologies.
- How to maximise available roof space for solar and options for managing competing space requirements.
- Expectations around EV infrastructure, including addressing tricky issues like how EV infrastructure might be integrated with car stackers.
- Guidelines for ventilation, across all typologies and tips for addressing common issues.

3.0 IMPLEMENTATION CONSIDERATIONS

This part of the report addresses a number of specific questions posed in the project brief. They include the following:

Advise on what proportion of technical information can be contained within the draft objectives and standards, and what proportion would be better located elsewhere..

Advise on how other external references such as incorporated documents, background documents and reference tools could be utilised to deliver the best format and structure.

Review proposed staged triggers for the planning scheme amendment. Consider the value of this as a tool for implementing the more ambitious and challenging aspects of the proposed objectives and standards.

Consider whether these staged triggers could be exhibited and published as part of one planning scheme amendment, rather than a series of amendments.

To assist the analysis, consider the proposed planning mechanisms in context of the eight development typologies included below to ensure an adequate cross section of development typologies across Victoria are represented to demonstrate net community benefit of sustainable resilient built environments.

Advise on suitable application documentation, such as Sustainability Management Plan (SMP) being suitable for initial development application and assessment.

Advise on suitable operational evidence and reporting options, by referring to previously completed legal advice from Maddocks and consider how best to administer new provisions notably the operational aspects of the zero-carbon performance standard including ongoing operational purchasing of renewable energy, by considering the following:

- i. Use of SMP and planning permit conditions to set ESD performance standards, including new zero carbon standards.*
- ii. Use of s173 agreements, Owners' Corporation Rules, Tenancy agreements or other devices to require renewable energy purchasing for the life of the building.*
- iii. Use of Implementation Reports, similar to Operational Waste Management Plans.*
- iv. Other alternative reporting, submission or assessment mechanisms as necessary.*

3.1 TECHNICAL INFORMATION WITHIN OBJECTIVES AND STANDARDS

A question posed in the brief was to:

Advise on what proportion of technical information can be contained within the draft objectives and standards, and what proportion would be better located elsewhere.

The initial draft of the elevated standards circulated with the brief contained considerable detailed technical information and reference to technical requirements and standards. Examples include:

- *Buildings must be designed, constructed and tested to achieve a maximum air permeability of 5 m³/hr.m² when tested at 50 Pa.*
- *Electric heat pump hot water must have a COP of at least 3.0 at winter design conditions or within 85% of most efficient system available.*
- *Infrastructure and cabling (without the EV charger unit) is to be provided for each garage, to support a minimum Level 2 (Mode 3) 7kW 32Amp EV car charging.*

It also included reference to some sustainability assessment tools such as the Green Factor Tool and NatHERS.

Planning is the first stage of the approvals process for the construction buildings. Initially the planning process dealt with basic issues concerning the use and the development of land (i.e. the construction of buildings and works). In relation to buildings, it focussed on the basics of siting, form and design, and the impacts of buildings on their surrounds.

The building system deals with more detailed technical information that sets minimum requirements for safety, health, amenity and energy efficiency in the design and construction of new buildings.

Over time, increasingly more detailed and technical information has been incorporated into planning schemes. This is largely because the building process focusses on minimum standards whereas the planning process provides the opportunity to implement higher than minimum standards. This is particularly relevant in relation to sustainability standards.

The outcome is that additional technical expertise and specialised tools are required to assess planning permit applications. Sustainability engineers and other more specialised areas of expertise, and documents that relate specifically to sustainability, such as Sustainable Design Assessments and Sustainability Management Plans, are now required as part of the planning permit application and assessment process.

The proposed elevated ESD Standards contain considerable additional technical information in relation to requirements to be met for sustainable buildings. In deciding on the type of technical information appropriate to include in planning policies and controls, the following principles should be applied:

- The information must assist in realising a planning objective.
- The information must assist in determining whether a development meets stated objectives or requirements contained in a planning control.
- The information must be from a verified and legitimate source that is recognised by the planning system.
- The information must be understood and be capable of being measured, applied and assessed by professionals that are commonly involved in assessing planning permit applications, both within local government and the development industry.
- Should not replicate standards included in other legislation.

It is considered appropriate for technical information that complies with the above principles to be included in objectives and standards in any provisions proposed to be included in planning schemes.

Principles for including technical details in the VPPs

- Must assist in realising a planning objective.
- Must assist in determining if a development meets stated objectives or requirements.
- Must be from a verified and legitimate source.
- Must be understood and be capable of being measured, applied and assessed by professionals involved in assessing planning permit applications.
- Should not replicate standards included in other legislation.

3.2 USE OF EXTERNAL AND OTHER DOCUMENTS

The project brief seeks advice on:

... how other external references such as incorporated documents, background documents and reference tools could be used to deliver the best format and structure.

3.2.1 DOCUMENTS REFERRED TO IN THE VPPS

Planning Practice Note 13 Incorporated and Background Documents explains the role of external documents in planning schemes. Two options exist in relation to referencing external documents in schemes:

- Incorporated documents.
- Background documents.

Incorporated documents

Incorporated documents are documents that are essential to the function of planning schemes. Incorporated documents form part of planning schemes. They carry the same weight as other parts of the scheme. An incorporated document can only be changed by a planning scheme amendment. It can include planning controls and requirements and can trigger the need for a planning permit.

An incorporated document must be listed in Clause 72.04 of the VPPs, which provides a list of all documents that are incorporated into a scheme.

There is a strong preference as part of the planning reform process underway in Victoria, to simplify and streamline planning provisions. The aim is for all planning requirements to be included within planning schemes rather than in incorporated documents, wherever possible.

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It is not considered necessary to include an incorporated document into the VPPs to implement the proposed Standards as part of this project. All relevant provisions related to elevated ESD Standards for sustainable buildings can be included in appropriate controls within the framework provided by the VPPs, such as particular provisions. See also discussion on Definitions (at Section 2.2.1) which identifies one potential use of an Incorporated document that may be considered.

Background documents

Background documents are documents that are referred to in planning schemes but which are not actually part of schemes.

They are documents that may provide useful background advice to applicants or that assist in understanding planning scheme requirements, why particular requirements are included in the planning scheme, substantiate issues or provide background to specific decision guidelines in local planning policies or schedules. The substantive planning elements of background documents are generally included within the planning scheme itself.

Background documents must be listed in Clause 72.08 of the VPPs. As set out in that clause a background document is one that may:

- Have informed the preparation of, or an amendment to, the planning scheme;
- Provide information to explain the context within which a provision has been framed; or
- Assist the understanding of the planning scheme.

The key documents and key tools that are referred to in any proposed planning provision included in the VPPs as part of this project, will need to be listed as background documents. An example of this might be the proposed *Guidelines for Sustainable Building Design*.

3.2.2 SUSTAINABILITY TOOLS

The proposed elevated ESD Standards include reference to external tools and other published standards such as:

- NatHERS – The National House Energy Rating Scheme, which measures the energy efficiency of dwellings.
- The Green Factor Tool, developed by the City of Melbourne (currently in a voluntary pilot phase) to deliver green infrastructure in line with international best practice.

It is commonplace for planning schemes to refer to external tools to be used in the assessment of planning permit applications. Tools that are presently commonly referred to in planning schemes include:

- NatHERS.
- Green Star.
- The Built Environment Sustainability Scorecard (BESS) tool.
- STORM and MUSIC – Calculators used to model stormwater treatments for small subdivisions (STORM) and more complex projects (MUSIC).

Application of external sustainability tools in planning schemes has been considered and supported by Planning Panels Victoria in a number of key panel hearings in relation to planning scheme amendments:

- Environmentally Efficient Design Local Policies, Planning Panels Victoria 2014
- Fishermans Bend Planning Review, Planning Panels Victoria, 2018

In both cases the committees / panels supported reference to various sustainability tools within planning policies in planning schemes. The amendments have since been approved.

Various approaches have been used to reference tools in existing planning schemes:

- Some tools are listed as reference documents (i.e. Melbourne Planning Scheme, Clause 22.19-7, Port Phillip Planning Scheme Clause 22.13-6, Manningham Planning Scheme, Clause 22.21-6).
- In some cases they are 'defined' in local policies (i.e. Melbourne Clause 22.19.8).
- In others that are included as policy guidelines (i.e. Moreland).

None of the documents mentioned above are presently listed as background documents in Clause 74.08 of those planning schemes. This is probably because the schemes were amended prior to the VPPs being reformatted as a consequence of Amendment VC148.

It will be necessary to list any sustainability tool directly referred to in any proposed planning provisions within the actual provision and also in Clause 74.08 of the VPPs.

In the case of the Green Factor Tool, it is noted that current testing is underway to ensure it broader applicability beyond an inner city context. It will also be important to provide a level of transparency in the content of any tool referenced in the planning scheme. This may be addressed through a current review of governance arrangements, but alternatively the relevant Standard could include a 'date' thereby ensuring that any change to the tool from that identified time would require a planning scheme amendment to carry statutory weight. This would ensure relevant 'checks and balances' are in place.

Principles for including references to external tools in the VPPs

- It will be necessary to list any sustainability tools referred to in the planning provisions as a background document
- Any tool would need to be transparent in relation to the content against which any application would be assessed.

While considering the use of external tools it is pertinent to also note some further work which could be undertaken in this area. While current practice to refer to a variety of tools that can be used to support assessments has many benefits, there is the potential for a more streamlined approach to the use of external tools which would be beneficial.

Given the role that CASBE plays in leading both this amendment project and in the governance of the BESS tool, the benefits of more widespread use of that tool is noted. While this is happening to a degree naturally due to the ease of use and the alignment of the tools with requirements of existing Local ESD policies, it should be encouraged. If possible, further liaison should occur with the State government around issues of governance and responsibilities for maintenance. These discussions around governance of external tools will also likely be important in generating support at State level for tools such as the Green factor Tool.

There may also be benefit in some clearer articulation of the different tools currently referenced in planning schemes and their role through a Planning Practice Note. This could provide clarity for planners, many of whom may benefit from a greater understanding of, for example, what NatHERS does, as opposed to more holistic tools such as BESS or Green Star. Such a note may also allow for the identification of preferred tools, while leaving open the opportunity to utilise other tools where appropriate.

3.3 PLANNING PRACTICE NOTES

Planning Practice Notes give advice about how to prepare, apply and use planning provisions contained in planning schemes.

A wide range of planning practice notes that have been prepared by DELWP for a wide range of issues. They generally relate to statewide issues.

No planning practice note has been prepared to date that explains the sustainability initiatives that presently exist in planning schemes and how such matters are to be taken into account in the assessment of planning permit applications.

Benefit would exist in the Department preparing a planning practice note in relation to sustainable buildings. The practice note could:

- Explain the policy context and justification for sustainability requirements for buildings.
- Explain the relationship between the proposed statewide building sustainability requirements and the elevated sustainability standards proposed to be included in planning schemes as a consequence of this project.

3.4 SUSTAINABILITY GUIDELINES

The initial list of elevated ESD Standards generated by the client, upon which this project is based, was extensive. It included many initiatives that were not appropriate to be included in a planning provision as Objectives or Standards but which were good design ideas to improve the sustainability of buildings.

Merit exists preparing a separate detailed document called *Guidelines for Sustainable Building Design*. That document could be listed as a background document in the VPPs and / or referenced in the proposed particular provisions recommended to be included into the VPPs as part of this project.

The guidelines would provide additional sustainability advice and guidance beyond that contained in the particular provision itself. It could operate in a similar fashion to the *Urban Design Guidelines for Victoria* which were prepared by DELWP and which are a reference document in all planning schemes through the state.

3.5 PERMIT TRIGGERS

Generally the VPPs provide the opportunity to impose requirements on development that needs a planning permit. The VPPs do not generally provide the opportunity for standards to be imposed on development that does not require a planning permit. Exceptions to this do exist. It is not recommended that an exception be pursued for the purpose of implementing sustainable building standards. The preferred approach to apply sustainability standards to developments that do not require a planning permit would be:

- Via the National Construction Code.
- Via public education and a voluntary approach. The design guidelines referred to in the previous section could be made available to the general community, builders and designers.

Planning permits are required for most buildings and works undertaken in most zones. Noticeable exceptions include:

- Single dwellings on standard size lots (i.e. 300 to 500 sqm or more).
- Public buildings in public use zones such as universities, hospitals, local government building etc, on land that is zoned for public purposes.

3.5.1 ZONES AND OVERLAY TRIGGERS

The requirement for a planning permit for buildings and works arises from the VPPs provisions from either:

- Zone controls.
- Overlay controls.
- A particular provision.

In situations where a planning permit is not required for buildings and works by zone controls, an overlay may trigger the need for a permit. When an application under an overlay is being assessed, it is only assessed against the purpose for which the overlay has been introduced. For example:

- A single dwelling in a residential zone does not require a planning permit.
- However a planning permit is required because the land is covered by a heritage overlay.
- The only matters that can be taken into account in assessing the application, are heritage matters.
- The fact that a heritage overlay triggers the need for a planning permit, would not enable sustainability requirements contained in a particular provision to be imposed.

3.5.2 VICSMART

VicSmart is a fast track process for assessing planning permit applications that are triggered by other requirements of the VPPs – either zone or overlay requirements. VicSmart provisions do not trigger the need for planning permits in their own right.

One of the features of the VicSmart process is that the matters to be taken into account when assessing a planning permit application, are limited to only those specified for that type of application (i.e. decision guidelines). Sustainability requirements contained in a particular provision, could only be taken into consideration in assessing a VicSmart application, if they were specified as a VicSmart decision guideline for that class of application in the scheme (either as a standard requirement or as a local requirement).

Most development that has been identified for assessment via the VicSmart process, is smaller types of development or extensions. In most cases, it would not be necessary to specify that sustainability considerations need to be taken into account for VicSmart applications.

Under VicSmart a council officer cannot ask for more information than the planning scheme requires. A council can only consider a local planning policy where it is included in the decision guidelines for a VicSmart class of application and included in the planning scheme.

Under the VicSmart process there is an application requirement for buildings and works pathway for a written statement describing whether the proposed buildings and works meet *“Any development requirement specified in the zone or the schedule to the zone”*. There are requirements to meet certain clauses of ResCode but energy efficiency, for example, is not one of these.

A DDO would also trigger assessment under VicSmart (and therefore not allow for consideration of local policy) in any commercial zone or a Special Use, Comprehensive Development, Capital City, Docklands, Priority Development or Activity Centre Zone up to \$500k or in an industrial zone up to \$1million

For land in a Design and Development Overlay, a written description of the proposal including *“how the proposal responds to the design objectives specified in a schedule to the overlay”* and *“how the proposal meets the requirements specified in a schedule to the overlay”*.

There is no explicit reference under VicSmart requirements that reference the need to comply with any particular provisions.

3.6 BUILDING TYPOLOGIES

The brief sought advice in relation to the types and scale of development that might be used as a basis for staging:

To assist the analysis, please consider the proposed planning mechanisms in context of the eight development typologies included below to ensure an adequate cross section of development typologies across Victoria are represented to demonstrate net community benefit of sustainable resilient built environments.

The suggested typologies and scales referenced in the brief included the following:

Typology
i. Large residential mixed use development > 50 apartments and small retail
ii. Large non-residential > 2000sqm GFA office development
iii. Large industrial > 2000sqm
iv. Small multi-dwelling residential < 3 dwellings
v. Small multi-dwelling residential > 5 dwellings but less than < 10 dwellings
vi. Small residential apartment building < 10 dwellings but > 20 dwellings
vii. Small non-residential office and retail > 2000sqm
viii. Single dwelling and/or residential extensions

Another suggestion was included as part of the documentation of initial draft Standards, also attached to the brief. These differed slightly and were as follows:

Typology
Residential: 100 or more dwellings
Non-residential: > 5000sqm new floor space
Residential: 50 or more dwellings
Non-residential: > 3000sqm new floor space
Residential: 20 or more dwellings
Non-residential: > 2000sqm new floor space
Residential: 2 or more dwellings
Non-residential: > 200sqm new floor space

Building typologies shown in the first table above, categorise buildings by three land use types:

- Residential
- Non-residential
- Industrial

For non-residential and industrial development only one category was suggested, for larger developments of more than 2,000 sqm. No category was suggested for smaller developments of less than 2,000 sqm. It is noted that existing local policies for sustainable buildings in planning schemes, commonly apply to non-residential buildings of less than 2,000 sqm, often down to 50 sqm in area (i.e. Moreland, Port Phillip etc.) Local policies in the Melbourne Planning Scheme relate to offices of all sizes, although lesser standards apply to smaller offices.

There is a need for a consistent approach to classifying building typologies. Typologies used for sustainability standards should closely align with land use definitions and building types used throughout the VPPs. The VPPs define land uses and group (or nest) similar uses together in nesting diagrams contained in Clause 73.43 of the VPPs. This grouping of land uses is an effective way to categorising different groups of land uses to which the elevated ESD Standards can be applied. The recommended approach is outlined in the following table. The table:

- Lists all of the land use ‘nesting groups’ identified in Clause 73.04 of the VPPs.
- Identifies those groups appropriate to be subject to sustainable building guidelines.
- Identifies categories of uses with each group, where appropriate. This only relates to residential development.
- Groups together ‘nesting groups’ that have similar built form characteristics.
- Lists the names of the building typologies recommended to be used for the purpose of this project.
- Identifies scales of development (i.e. small or large) for typologies where it is appropriate to do so.

A number of “nesting groups” are identified in the table as not needing sustainability standards. They are generally land uses that do not rely on buildings for the use of the land. Where some buildings are required in association with the use (i.e. an office, a restaurant, a workshop, storage building etc), Standards applicable to those particular activities should be applied to those buildings. The typologies to which the elevated ESD Standards applied is likely to require further refinement during any implementation phase, particularly considering non-metropolitan contexts.

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Nesting groups	Are standards needed?	Categories within group	Similar groups	Recommended building typologies	Size classification (where relevant)	
					Small	Large
Accommodation	Yes	Single dwelling		Single dwelling	10 or less	More than 10
		Multi-dwellings – other than apartments		Multi-dwellings – other than apartments		
		Multi-dwellings - apartments		Multi-dwellings – apartments		
		Other accommodation <u>i.e.</u> corrective institution, residential aged care facility, residential building, residential village, retirement village		Accommodation (other than dwellings)		
Agriculture	No					
Education centre	Yes		Hospital	Institutional – Includes education centre and hospitals	1,000 sqm or less	Greater than 1,000 sqm
Industry	Yes		Warehouse	Industry and warehouse – <u>includes</u> storage		
Leisure and recreation	Yes		Place of assembly Transport terminal			
Earth and energy resource industry	No					
Office	Yes		Shop			
Place of assembly	Yes		Leisure and recreation Transport Terminal	Place of assembly and other gathering places – includes Place of assembly, Leisure and recreation, Transport terminal	1,000 sqm or less	Greater than 1,000 sqm
Recreational and boat facility	No					

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Nesting groups	Are standards needed?	Categories within group	Similar groups	Recommended building typologies	Size classification (where relevant)	
					Small	Large
Retail premises – other than shop	Yes		Retail premise - shop Office	Retail premises and offices	1,000 sqm or less	Greater than 1,000 sqm
Retail premises – shop	Yes		Retail premises – other than shop Office			
Transport terminal	Yes		Place of assembly Leisure and recreation			
Utility installation	No					
Warehouse	Yes		Industry			
Energy generation	No					

Table 1: Assessment of typologies



SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

3.7 NET ZERO CARBON

A key objective of the elevated ESD Standards is to achieve net zero carbon emissions during the operational stage of buildings. If this is to be sought through the issue of the planning permit there are a number of important considerations. Any requirement of a planning permit condition / or a Sustainability Management Plan must be able to be monitored and enforced by council for it to have effect.

There are four stages of the development cycle: Design, Construction, Operation and Demolition. Planning generally deals with the first two stages – design and construction. It also deals with the third stage to a more limited degree. Permits can contain conditions that regulate the future use of the land such as hours of operation, patron numbers, compliance with EPA requirements etc.

The question is whether an objective for net zero operational carbon is appropriate or necessary to include in the elevated sustainability standards. Given this is a key objective and a strong case can be made for the built environment to deliver net zero buildings and for the role of the planning system in this, the critical question becomes, how can it be monitored and applied?

It is noted that planning regulation to ensure that new development does not contribute to increased carbon emissions is only one part of jigsaw in the current transition phase. However, planning controls are important in an efficient transition as it is well understood that embedding appropriate responses at a planning stage results in more considered and integrated responses.

One of the matters required to be taken into account by Ministerial Direction 11 – Strategic Assessment of Amendments, is the administrative burden an amendment will place on a responsible authority:

- To monitor compliance with a permit condition that required ongoing carbon emissions to be met during the operational life of a building would likely require either regular inspections from Council enforcement officers or a self-reporting mechanism like a certificate of compliance lodged by owners or tenants of the building.
- To be effective throughout the operational life of building, this would need to be done on an ongoing basis. While some typologies or developers may chose a pathway such as NABERS which includes monitoring of operational energy use, for most development, ongoing monitoring would place an unreasonable administrative burden on Councils.

It is therefore considered that the need for one certificate of compliance upon occupation of a building (i.e. within 12 months), would be sufficient to demonstrate that the requirements of a permit condition had been complied with, at least in the short term. Such a requirement is less likely to impose an unreasonable administrative burden on a Council. The process for issue of this operational certificate may also be able to be undertaken by a consolidated resource (i.e through funding of a compliance program via CASBE).

In addition, given the complexity and the varying interpretations of associated terms, statutory definition of net zero operational emissions must be included in any amendment. Any other relevant terms such as green power or offsets should also be included.

Any process for documenting and demonstrating compliance should be documented in the proposed Guidelines so this is clear to applicants. This should include the various 'options' that would be considered acceptable in demonstrating to Council the achievement of relevant standards (such as through external tools such as NABERS or GreenStar).

For applicants the process could look as follows:

1. Document proposed approach to delivery of zero carbon in the SMP, including anticipated energy efficiency, proposed onsite energy generation and proposed approach to delivery of green power (e.g. through a power purchase agreement, Section 173, GreenStar certification or other).
2. Permit conditions would be applied and updated SMP endorsed as part of the planning permit process.
3. If applicable, S173 applied (CASBE should consider development of a 'standard' S173 for consistent application) if this option is used.
4. At construction completion, an '*ESD compliance certificate: construction*' would be issued. This certificate could be issued either by Council or by a consolidated resource funded through CASBE for those councils without sufficient internal resources. Where relevant external certification could be used. This would confirm that all the proposed steps to deliver net zero outlined in the SMP had been delivered. A standard assessment template / process should be developed by CASBE.

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

5. At a certain timeframe post occupancy a second certificate 'ESD compliance certificate: occupation' would be issued. This should only occur one time, nominally 1 year post occupation. This certificate would focus on ensuring that required operational aspects of the SMP has been delivered, including relevant greenpower or purchase arrangements.

This last step has been subject to further legal advice as to how any operational compliance would operate in respect the strata titled or multi-tenancy development, where the operational components of energy use may fall outside the control of any landowner to whom the planning permit would apply. The legality of the proposed approach and applicable responsibilities has been confirmed through this advice.

Given net zero can be achieved through the purchase of GreenPower etc, without major changes to building fabric, there remains avenues to achieve compliance with the net zero objective even in a post-construction phase. Consideration should be given to the wording of permit conditions to ensure that councils can seek alternative approaches to the delivery of net zero objectives if constructed development precludes any approach which formed part of original planning approvals.

The process for assessing and issuing 'compliance' certificates should be documented to ensure this occurs in a consistent manner across all councils. This could be modelled on, or build on, the Residential Energy Efficiency Scorecard program to ensure compatibility with other programs and with NatHERS. Any process must be designed in a manner which integrates with existing processes to avoid creating additional burdens. As noted, where compliance monitoring is required at construction and operational stages, consideration should be given to whether this can be absorbed within existing regulatory processes of participating councils or through RBS processes or if a more effective approach may be through shared central or regional resources to undertake this work. It is recommended that a monitoring and review system be implemented so that common issues and levels of compliance can be tracked and processes improved or adjusted if needed.



3.8 IMPLEMENTATION INTO PLANNING SCHEMES

A question in the brief was to:

Provide advice on the best format and location for the zero carbon and elevated sustainability outcomes in the Victorian planning scheme.

Initial policy work has indicated that a preferred location would be for a new local schedule for a new Victorian Particular Provision (VPP), from the ESD Roadmap or other (e.g. Existing or new Particular Provision addressing ESD objectives). This relies on an appropriate VPP being in place. This also assumes that any State drafted VPP changes will be of a lower standard to what is drafted as part of this project. Review and assess this position and consider whether there is another suitable place in the planning scheme that may have higher value. See DEWLP discussion paper for detail on ESD Roadmap.

Before the new VPPs are finalised, the draft planning scheme amendment is currently formatted as a Design and Development Overlay for entire municipalities. Analyse whether this is viable over all zones and land uses across the range of local government areas contained within the participating councils.

The Advisory Committee that considered the amendments exhibited by Councils in 2014, considered options as to how the provisions should be implemented. It considered the following five options:

- Incorporated document.
- Local planning policy framework.
- Amended existing particular provisions – i.e. Clause 55, 56, 58 etc.
- A new particular provision.
- Design and Development Overlays.

The committee noted that each option had advantages and disadvantages, and may be appropriate in different circumstances. However, it did not form an opinion on the most appropriate option, as the amendments before it proposed local policies.

The Table 2 on the following pages includes an updated review of options to include elevated ESD Standards into the VPPs.

A new particular provision in Clause 53 of the VPPs is considered the most appropriate way to introduce elevated ESD Standards for buildings into the VPPs. A new particular provision is considered a superior option to a DDO.

A new particular provision would work in the following way:

- It would be a freestanding Clause that would include all operational provisions required to implement the elevated ESD Standards in the one clause in the VPPs.
- This Clause would appear in planning schemes in Victoria, where a council had adopted the Clause for its municipality.
- The provision would include a list of municipalities to which the provision applies.
- Those municipalities that choose to adopt the Standards would amend their planning schemes to add the name of their municipality to the list.
- Any local policies regarding sustainable buildings already contained in municipal planning schemes would need to be reviewed and potentially deleted as part of the amendment, to avoid duplication and inconsistencies between existing policies and the new particular provision.
- If the state government introduced a separate statewide policy for sustainable buildings at a later date, both provisions could apply in a municipality. If a contradiction existed between two controls the accepted practice is that the more stringent control applies.
- There would be no need to amend other clauses that may apply to existing uses (such as Clause 55, Clause 56, Clause 58 etc).

A new particular provision in the VPPs is the most appropriate way in which to introduce elevated standards for sustainable buildings

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Location in the VPPs	Comments
Local Planning Policy	<p>Similar to the way existing sustainability requirements are implemented into many municipal schemes.</p> <p>A policy has less statutory weight than a requirement that is contained within a planning control, such as a DDO or a particular provision.</p> <p>A policy cannot be applied as a mandatory requirement or include mandatory standards.</p> <p>Conflicting policies need to be balanced in regard to net community benefit and sustainability. This may lead to policies for sustainable buildings being given lesser weight than other policies in some circumstances.</p> <p>An aim of this project is to move beyond the current policy approach and to give greater statutory weight to elevated sustainability requirements.</p> <p>Application requirements, definitions and decision guidelines cannot be included in Local Policy the new PPF format</p>
Design and Development Overlay	<p>A municipal wide DDO would be a mechanism that could be used to introduce elevated sustainability standards into planning schemes.</p> <p>DDOs can introduce planning permit triggers for buildings and works into a planning scheme that may not presently require a permit under other provisions of a planning scheme.</p> <p>Both discretionary and mandatory requirements can be included in a DDO.</p> <p>A municipal wide DDO could be crafted to relate to all land uses within a municipality, or to different uses in different parts of a municipality.</p> <p>The opportunity would exist to apply different DDOs to different zones or localities within a municipality, if there was a benefit in doing so i.e. Central City Zone, industrial zones, residential zones etc.</p> <p>The structure and set sections of a DDO schedule are not ideal and do not provide enough flexibility to achieve what is intended from the elevated targets (i.e. bicycle parking rates could not be included).</p> <p>DDOs are generally designed to apply to specific locations within a municipality and are not the preferred tool for a requirement that applies across a whole municipality.</p>
Particular Provision	<p>A particular provision would be an appropriate mechanism by which to introduce elevated sustainability standards into planning schemes.</p> <p>Generally, particular provisions are statewide provisions. They usually apply to a particular issue or to a particular type of use or development across the state, often regardless of the zoning of the land.</p> <p>Other than in a few situations where schedules exist, there is no opportunity for a local council / or groups of local Council's to introduce a new particular provision into the VPPs. However, with the consent of DELWP, it would be possible to introduce elevated ESD as a new particular provision into Clause 53 of the VPPs (i.e. General Requirements and Performance Standards). This would involve preparing a particular provision that contained a clause that stated which municipality the provision applied to. As additional municipalities adopt the elevated sustainability standards, a simple amendment would be made to the VPPs to add the name of those municipalities to the list of municipalities to which the provision applies.</p> <p>Greater flexibility exists in the structure of a particular provision than a schedule to a DDO, as the contents and structure of schedules to DDOs are set out in a Ministerial Direction regarding the Form and Content of Planning Schemes. This is not the case in relation to particular provisions.</p> <p>This approach could be presented to DELWP as a provision that will apply across the state, but only in those municipalities that choose to adopt the provision, technically meeting the test of being a statewide provision.</p> <p>Some flexibility could be included in the scheme for municipal variations and for staged implementation with municipalities, by the inclusion of a schedule to the provision if deemed necessary.</p>

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

Location in the VPPs	Comments
All standards in the one place in the planning scheme or spread throughout the scheme.	<p>Preferably, elevated sustainability standards should be embedded into relevant existing provisions contained in the VPPs for particular uses or issues in a fully integrated way (i.e. Clause 52.34 Bicycle Facilities; Clause 53.18 Stormwater in Urban Areas; Clause 55 Multi dwellings; Clause 58 Apartments etc). This would remove the potential for duplication and contradictory standards between different clauses of the planning scheme and would be a better overall approach.</p> <p>This approach would only be possible where standard statewide provisions are introduced into the VPPs that apply to all municipalities from the outset. Such an amendment could include a thorough review other aspects of the VPPs that also relate to sustainability, and make consequent changes to those clauses to achieve a fully integrated outcome.</p> <p>This approach would not be practicable where elevated sustainability standards are being introduced at the municipal level, as proposed by this project. It would not be practical to amend other statewide provisions of the planning scheme (i.e. Clause 55 and 58) to include sustainability standards that only applied in specified municipalities.</p> <p>The most practical approach to include elevated standards for specified municipalities, is for all standards to be included in the one place in the VPPs, either a single particular provision (preferable) or alternatively a schedule to a DDO.</p> <p>This may result in some duplication and conflict between provisions that already exist in other clauses of planning schemes. However, such an outcome is justified in the short to medium term, until elevated standards eventually become statewide standards and any duplication is removed.</p> <p>This approach has been supported by Planning Panels Victoria in relation to Amendment C278 to the Melbourne Planning Scheme. That amendment introduced new mandatory overshadowing controls for parks throughout the municipality. Those controls contradicted numerous other specific overshadowing controls contained in numerous other schedules to DDOs throughout Melbourne. Where two contradictory controls exist, the planning principle is that the most stringent control applies.</p>
Special Control Overlay	Inconsistent with the stated purpose of the overlay.
Incorporated document	<p>Technically, elevated sustainability standards could be presented in a single document that sits outside the planning scheme but which is incorporated into the planning scheme by a planning scheme amendment.</p> <p>An incorporated document is read as if it is part of the planning scheme and it can include planning permit triggers and both discretionary and mandatory requirements.</p> <p>There is a strong preference within DELWP for planning provisions to be included in the VPPs, rather than to be included in separate free standing document, wherever possible.</p>

Table 2: Potential implementation options

3.9 ALIGNMENT WITH STATE GOVERNMENT'S APPROACH TO SUSTAINABILITY STANDARDS

It is understood that the state government is preparing statewide standards for sustainable buildings that are likely to be included as a particular provision in the VPPs. These provisions are likely to be based on lesser targets and a lesser number of matters than the elevated targets advanced as part of this project.

This does not present an impediment to the introduction of elevated standards that can be applied in those municipalities that choose to adopt them in their planning schemes.

As far back as 2007, when one of the first reports was prepared that investigated the role of sustainability requirements for buildings in planning schemes in Victoria, it was noted that there is a valid role for local government to encourage and to trial best practice sustainability standards in municipal planning schemes. The observation was made that municipal planning schemes provide a legitimate vehicle to implement new best practice requirements, ahead of the introduction of more widespread statewide planning requirements, or ultimately requirements that might eventually be included in the National Construction Code.



Figure 1: Interaction between standards in the planning and buildings systems in Victoria

Elevated municipal targets would work in conjunction with proposed state government targets as follows:

- The elevated targets would only apply in those municipalities listed in the particular provision.
- Upon the introduction of statewide provisions by the state government, those provisions would apply in those municipalities that had chosen to adopt the elevated standards.
- In municipalities in which both sets of provisions apply, the established planning principle is that the most stringent control prevails.
- In municipalities in which only the statewide provisions applies, those provision would apply with no reference to the elevated standards.
- Over time as the elevated standards become more widely applied in more municipalities, the ambition would be that the state government would adopt the elevated standards as statewide provisions.
- In the longer term, the opportunity may exist for all or many of the standards to be adopted as requirements of the National Construction Code. This would remove the burden of requiring and assessing compliance with the standards as part of the planning process.

The advisory committee that considered a number of amendments exhibited by Council's in 2013 to concurrently implement local planning policies sustainable buildings into planning schemes, discussed the appropriateness of including local provisions for sustainable buildings in schemes, as distinct from statewide provisions. The committee supported the approach, commenting as follows:

- A statewide approach would be the most effective way to implement sustainability outcomes into planning schemes.
- In the absence of a statewide approach it is appropriate for Councils to develop local policies for sustainable buildings.
- It would be a concern if Councils adopted different approaches between municipalities.
- Until statewide policies are prepared, it is appropriate for municipalities to include a local policy in their planning schemes.
- Even if a statewide policy is introduced, local policies may still be appropriate where municipalities seek to raise the bar either in specific locations, or where the community has higher sustainability expectations.

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

- There would be merit in including a sunset clause in any local policies introduced. That would enable the review of the policies in light of any statewide approach introduced. If the policies duplicated the statewide approach it would be appropriate for the local policies to be deleted. However, if the local policies went further than the statewide approach, the policies could be refined to delete areas of duplication and retain those elements that are higher than the state wide provisions.

The above comments clearly envisage a role of local sustainability standards that are higher than statewide targets. Whilst the comments were made in relation to local policies into schemes, it is considered they are also relevant to standards in planning controls, rather than policy.

3.9.2 WHERE MIGHT DUPLICATION OCCUR?

While the previous section of the report discusses the broad parameters of alignment with State level ESD standards, it is noted that as part of the second stage of the delivery of the ESD Roadmap (now scheduled for mid 2022) also identifies areas where specific Standards are being developed. The development of specific State level ESD standards means it will be important to assess any duplication or key differences to properly integrate the two processes.

Areas where specific State level standards are proposed include the following. The table includes relevant cross-references to proposed 'local' Standards:

ESD Roadmap areas of interest	Standard
Residential:	
Improved guidance on passive design including building and subdivision orientation	S3
Support for generation and deployment of renewable and distributed energy systems	S1, S6, S7
Updated development standards to minimise overshadowing	S6
Clearer guidance on assessing 'unreasonable' overshadowing of rooftop solar panels	N/A

Investigate measures to support 'solar ready' building design to support future installation of rooftop solar systems	S7
Enhance planning system guidance to support implementation of the 2018 stormwater reforms	S20, S21, S22, S23
Review measures to support water efficiency/ use of alternative water sources	S20, S21
Update of standards for apartments and developments of two or more dwellings on lot to include key elements from Sustainability Victoria's Better Practice Guide for Waste Management and Recycling in Multi-unit Developments	S37, S38
Encourage assessment of opportunities for subdivision infrastructure to facilitate small scale recycling and resource recovery technologies (e.g. reverse vending machines)	N/A
Investigate design measures to support new multi-unit developments being EV ready	S17
Review bicycle space allocation requirements and end of trip facility standards of clause 52.34	S14
Consideration of development interaction with strategic cycling corridors	N/A
Review planning policy, tools and guidance to support sustainable and active transport outcomes for land use development	S13, S14, S15, S16
Suite of planning measures to support retaining and increasing urban tree cover as further developed through the forthcoming planning response to cooling and greening	S24, S25, S26
Guidance and new planning standards to reduce urban heat exposure (in addition to tree canopy cover), including cool paving and surfaces, shade devices and water sensitive urban design	S29

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Extend apartment noise design standards to other residential developments and other noise sensitive land uses	Local Standard not pursued
Implement siting and design standards to reduce impacts of air and noise pollution from transport corridors on building occupants	Local Standard not pursued
Commercial & Industrial	
Support for generation and deployment of renewable and distributed energy systems	S1, S6, S7
Enhance planning system guidance to support implementation of the 2018 stormwater reforms (e.g. advice on treatment options to meet planning standards)	Guide only
Review how to support VicSmart processes to improve assessment of stormwater management	N/A
Adopt minimum requirements to support effective management, separation and storage of waste and recycling	S37, S38
Encourage assessment of opportunities for subdivision infrastructure to facilitate small scale recycling and resource recovery technologies (e.g. bio-digestion unit in commercial precinct)	N/A
Investigate design measures to support new developments being EV ready	S13, S17, S18, S19
Investigate measures to support new industrial developments being designed to be EV ready, where appropriate	S17
Suite of planning measures to support retaining and increasing urban tree cover as further developed through the forthcoming planning response to cooling and greening*	S24, S25, S26
Consideration of measures to support urban biodiversity	S24, S25, S26

Guidance and new planning standards to reduce urban heat exposure (in addition to tree canopy cover), including cool paving and surfaces, shade devices and water sensitive urban design ^	S29
Implement noise and air pollution siting and design standards for sensitive land uses	Local Standard not pursued

Table 3: Alignment with ESD Roadmap

3.9.3 OTHER REFORM CONSIDERATIONS

In addition to any alignment of Standard with comparable Standard, in light of ongoing programs of planning reform (see <https://reform.planning.vic.gov.au/>) it is important to also acknowledge any potential influences on recommendations which may arise.

In particular the following is noted:

- The introduction and potential expansion of the VicSmart program, which includes specification of application requirements, what can be assessed by any decision-maker and a shorter timeframe for assessment. See Section 3.5.2 for more in depth discussion of VicSmart implications
- Introduction of other streamlined planning pathways for particular types of development (such as State Significant projects etc which include similar restrictions on matters which inform any assessment of permits. In some cases this may include the turning off of other VPPs.
- Introduction of new decision-makers for some precincts or areas, meaning in some cases, local government may not be the decision-maker for applications.
- Reforms to ResCode provisions to align with future digitalisation of the system and introduction of new code assessment pathways. As part of the implementation of SMART planning objectives around digitisation, there is clear intention to deliver increased clarity to the planning system to allow some aspects to be easily assessed as part of a 'code' that increases clarity for applicants that if they commit to certain performance measures they can have greater confidence in the approval process and reduction in assessment timeframes can be achieved.

3.10 STAGING IMPLEMENTATION

The project brief seeks advice on the following matters:

Review proposed staged triggers for the planning scheme amendment. Consider the value of this as a tool for implementing the more ambitious and challenging aspects of these proposed objectives and standards.

Consider whether staged triggers could be exhibited and published as part of one planning scheme amendment, rather than a series of amendments.

To assist the analysis, consider the proposed planning mechanisms in context of the eight development typologies included below to ensure an adequate cross section of development typologies across Victoria are represented to demonstrate net community benefit of sustainable resilient built environments.

3.10.1 A STAGED APPROACH

A staged approach to the implementation of elevated ESD Standards may be easier to gain approval from the State government, as it provides the ability to progressively introduce new standards into planning schemes over time.

However, it is recommended that the full suite of proposed elevated ESD Standards should be presented to the State Government. The package should be seen as an indication of the preferred level of building sustainability standards sought to be included in planning schemes and any changes to the proposed suite of Standards should be tested through a transparent and independent Panel process. It should be presented as the benchmark to be pursued by local government preferably also by state government. This process would also ensure the development industry and the community are aware of local government ambitions for sustainable buildings in Victoria.

If the package of standards is to be introduced in stages, the aim should be to pare back the full suite of Standards, in a number of progressive steps, with each step based on minimising the disbenefits to the community of retreating from the full suite of Standards.



Options for staging the introduction of sustainability provisions

Immediate implementation of the full package of elevated ESD Standards is the preferred approach. The need to progress to a zero net carbon built environment is urgent. After a decade of debate, a staged implementation plan would result in further greenhouse gas emissions from the built environment and more buildings which may require expensive retrofitting. The elevated ESD Standards proposed are an important component in slowing climate change, which has been highlighted by the UN as critically important in the next eight years.

While the following are not considered to apply, it should be acknowledged that there is a potential rationale that may suggest a staged approach to implementation including matters such as:

- Potential political impacts of concerns from the community and the development industry about perceived additional costs and regulations, particularly around housing affordability.
- The need to give to the development industry 'time' to adapt to new requirements.
- If the complexity of assessing the benefits of some Standards makes the justification for more ambitious requirements less clear.
- To enable the time to build up resources and implement capacity building to support implementation of the Standards through assessment of planning permit applications.

However, in relation to 'staging, it must be acknowledged that the proposal to introduce elevated ESD Standards as a particular provision into the planning scheme will be a form of staged implementation in itself:

- A number of municipalities already have policies for sustainable buildings in their planning schemes. This project is advancing those existing policies, giving them greater statutory weight by making them planning requirements rather than just planning policy, and by including elevated targets and a wider range of considerations.
- The new particular provision would only apply to those municipalities that amend their planning schemes to apply the particular provision. This would result in a gradual increase (i.e. a staged implementation) in the number of municipalities that apply the provisions over time.

It is considered that the need to allow for time for adaptation is of less relevance than if an entirely new suite of controls was proposed.

If the Standards were not implemented as a single package as recommended, the following alternative approaches exist to staging the implementation of provisions:

- A transition period.
- A two tiered system.
- By theme.
- By location.
- By building use / size of development.

Transition period

This option would involve:

- The particular provision being included in the VPPs in its entirety.
- The provision being worded to the effect that "This provision will not come into effect until 1 year (or an alternative time to be determined) after the approval date. Until that time a responsible authority and planning permit applicant may agree to apply the requirements of this provision in part or in full."
- During the 'transition period' councils could seek to implement the provisions with the 'co-operation' of planning permit applicants.

This approach would lend itself to introducing the full package of requirements into the planning scheme at the outset. This would enable the development industry and community to become aware of the elevated ESD Standards and adapt to them prior to them becoming mandatory controls.

Two tier system

This option would involve wording the particular provisions to set out two different levels of standards. For example:

- Standard requirements – Standards that are based on lesser targets or a lesser number of items than included in the full package.
- Preferred requirements - The full list of elevated ESD Standards ultimately sought to be applied by the proposed particular provision.

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The particular provision would be worded to say that the 'standard requirements' apply for a specified period i.e. one year. After that period the 'preferred requirements' would apply and the standard requirements would become redundant. The provision could be worded so that the transition period applies from the 'approval date' at which each municipality amends its planning scheme to make the provisions apply to that municipality.

The consultant team has not identified which standards fall within each category. This would need to be further considered and determined by the project working group.

By theme

The proposed standards are framed around the following themes:

- Operational Energy
- Embodied Carbon
- Sustainable Transport
- Integrated water management
- Green Infrastructure
- Climate resilience
- Indoor environmental quality
- Waste and resource recovery

Implementation could be staged by theme. Those themes that are considered more critical to the issue of climate change, more consistent with existing state planning policies and those that have a higher level of strategic justification could be implemented first. Requirements in relation to other themes could be implemented over time, as State government policies evolve to provide a higher level of strategic justification for the inclusion of additional requirements into planning schemes.

Themes or standards for which there is presently insufficient supporting information to enable standards to be prepared and assessed, should be deferred from inclusion in the amendment until those matters are rectified.

By location

This option involves staging the implementation of the particular provisions for different regions within the state. Logical regions include:

- Metropolitan Melbourne.
- Municipalities comprising Victoria's main regional centres i.e. Greater Geelong, Greater Ballarat, Greater Bendigo and Latrobe City.
- The 'rest of the state'.

The particular provision could be worded so it initially only applies to municipalities within specified parts of the state i.e. metropolitan Melbourne and the municipalities of Greater Geelong, Greater Ballarat, Greater Bendigo, Latrobe Valley and Greater Shepparton. Municipalities within those parts of the state would still need to decide to amend their individual planning schemes before the provisions would apply.

Application of the elevated ESD Standards to metropolitan Melbourne and major regional cities would maximise the community benefit of the amendment, as those locations accommodate the vast majority of the state's population and the majority of new building development.

By building use and scale

The existing approach to sustainable building policies contained in a number of planning schemes, commonly applies to different land uses (i.e. residential or non-residential) and has different requirements and assessment pathways for buildings of different scales (i.e. number of dwellings or floor area).

The elevated provisions recommended as part of this project have been specifically designed to be applicable to all urban land uses and to developments of all sizes. Accordingly, there is no technical need for implementation of the provisions to be staged based on the use of the building or the scale of the development.

In linking staged implementation to different type of buildings, the aim should be to ensure that Stage 1 applies to those building types that are most commonly constructed throughout Victoria.

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It can be assumed that the value of building approvals for different types of buildings, equates to the floor area of buildings constructed, which equates to the sustainability benefits that would accrue by applying sustainability standards to those types of buildings. The following table (Table 4) summarises the value of building approvals in Victoria as at March 2020. That date has been used to avoid the impacts of Covid on the building industry. It shows the total value of construction works by building use. The building typologies that experienced the greatest value of approvals in the calendar year up to March 2020 were, in order of priority:

- Domestic (single dwellings - by far the highest value)
- Commercial
- Public buildings
- Retail
- Residential (apartments and other)
- Industrial

If a staged approach based on building typologies was to proceed, maximum sustainability benefits would be realised by applying the elevated ESD Standards based on the priorities listed above. Given that detached dwellings (i.e. domestic) do not generally require a planning permit, the greatest benefits would be achieved by a staged approach that commenced with commercial buildings (i.e. offices) and public buildings. However, at a municipal level the proportion of investment in different types of buildings varies considerably, depending on whether municipalities contain large activity centres or industrial precincts. For this reason, the first stage of sustainability standards should also be applied to residential developments (other than single dwellings).

FINANCIAL YEAR TO DATE

Period	Current Financial Year		Previous Financial Year		Analysis	
	July 2019 to March 2020		July 2018 to March 2019		% Changes	
Building Use	No. of Permits	CoW \$M	No. of Permits	CoW \$M	No. of Permits	CoW \$M
Domestic	63,848	17,900.65	68,486	18,449.07	(6.77%)	(2.97%)
Residential	582	1,134.83	580	1,224.53	0.34%	(7.33%)
Commercial	5,007	4,686.67	5,466	4,607.79	(8.40%)	1.71%
Retail	3,170	1,476.41	3,322	1,610.62	(4.58%)	(8.33%)
Industrial	1,030	822.76	961	612.59	7.18%	34.31%
Hospital/Healthcare	344	404.51	410	663.58	(16.10%)	(39.04%)
Public Buildings	2,975	2,613.29	3,116	2,369.91	(4.53%)	10.27%
Total	76,956	29,039.11	82,341	29,538.09	(6.54%)	(1.69%)

Table 4: Summary of number and value of building approvals by building use as at March 2020, Victorian Building Authority

Note: CoW stand for 'cost of works'

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

3.11 CAN STAGED TRIGGERS BE PART OF ONE AMENDMENT

The brief sought advice on whether the staged triggers could be exhibited and published as part of one planning scheme amendment, rather than a series of amendments.

Maddocks Lawyers addressed this issue in its advice which the consultant team has reviewed. Maddocks did not see any impediment to introducing staged permit triggers into planning schemes by way of different commencement dates for different types (and scales) of development.

3.12 RECOMMENDED APPROACH TO STAGING

The level of detail DELWP is likely to allow in any amendment will likely be a political decision. It is likely to be based on the Department’s opinion about the degree that municipal sustainability standards can vary from proposed State standards, if at all. As a consequence it is not possible to recommend a definitive approach to staging at this time. However, it is recommended the following approach should be followed to resolving this issue:

- **Pursue the full suite of standards in their entirety as a starting point.** This is because there is an imperative to improve the sustainability of buildings to the highest degree possible, as soon as possible. The initial draft amendment should express the preferred optimal outcome. This will establish a starting position as the basis for discussion with the Department. It will also provide an end point to aim for, if the full suite of provisions are included in any initial amendment supported by the Department.
- **Staging of the standards should only be considered if the Department will not accept the full suite of standards.** The approach to staging that results, will depend on the variables that the department if prepared to accept.
- **Minimising the sustainability disbenefits to the community** of a staged withdrawal from the full suite of standards, should be the key guiding principle in any discussions with the Department about staging. The starting point should be the full suite of standards. Any withdrawal from that starting point, should be based on adjusting those variables that have the least impact on net sustainability outcomes, until a position of agreement is reached with the department.

It is recommended that the discussion process with the department proceeds on the following basis:

- Priority 1 – **Implement the full suite of standards** (i.e. the preferred requirements) to all building types and make the particular provision available for all municipalities across the state to adopt.
- Priority 2 – Implement the preferred standards but **vary the municipalities** that can adopt the particular provision, based on the following order of priority:
 - Municipalities in metropolitan Melbourne.
 - Municipalities containing larger regional cities: Greater Geelong, Greater Bendigo, Greater Ballarat, Latrobe, Greater Shepparton.
 - Municipalities containing major regional towns.
 - All other municipalities.
- Priority 3 – As for Priority 2 but vary the standards to only implement the **standard requirements** identified and not the preferred standards.
- Priority 4 – As for Priority 3 but only apply the standards to **larger buildings / developments**.
- Priority 5 – As for Priority 3 but limit the **type of buildings** the standards apply to, based on an agreed order of priority linked to scale of impact.

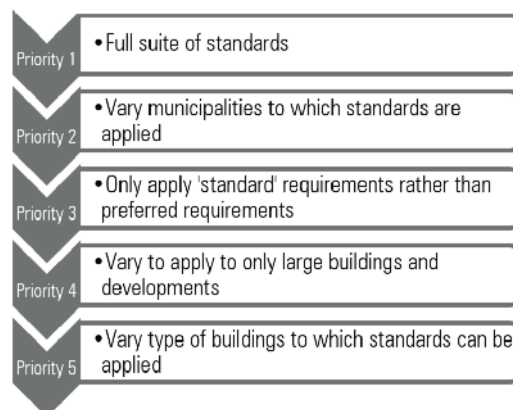


Figure 2: Priorities for stage implementation

3.11 APPLICATION REQUIREMENTS AND ASSESSMENT DETAILS

The project brief requested a response to the following questions

Advise on suitable application documentation, such as Sustainability Management Plan (SMP) being suitable for initial development application and assessment.

Advise on suitable operational evidence and reporting options, by referring to previously completed legal advice from Maddocks and consider how best to administer new provisions notably the operational aspects of the zero-carbon performance standard including ongoing operational purchasing of renewable energy, by considering the following:

- i. Use of SMP and planning permit conditions to set ESD performance standards, including new zero carbon standards.*
- ii. Use of s173 agreements, Owners' Corporation Rules, Tenancy agreements or other devices to require renewable energy purchasing for the life of the building.*
- iii. Use of Implementation Reports, similar to Operational Waste Management Plans.*
- iv. Other alternative reporting, submission or assessment mechanisms as necessary.*

Whilst there is some variation between different municipalities, existing policies regarding sustainable buildings contained in planning schemes generally refer to two key documents:

- A Sustainability Design Assessment (SDA) for small scale developments – provides a simple assessment that can generally be prepared by a specialist.
- A Sustainability Management Plan (SMP) – provides a more detailed assessment of a development that generally needs to be prepared by a specialist consultant.

These documents have an established place in the planning permit process that is generally accepted by the industry and by planning practitioners. It is appropriate that the use of these documents continue in any approach recommended as part of this project. However, given the aim of the project to include higher standards of sustainability into planning scheme than in the past, the use of more basic Sustainability Design Assessment is unlikely to be appropriate in assessing applications under the proposed new planning provisions.

Sustainability is relevant at four stages of the development process of buildings:

- Permit application stage – To ensure that the design of a building complies with all relevant sustainability policies and requirements contained in a planning scheme.
- Construction stage – To confirm that all sustainability initiatives required to include in a development have actually been built into the development.
- Ongoing operation stage – To confirm that a building is being operated in accordance with any requirements included in the initial sustainability management plan, which are relevant to the ongoing operation of a building.
- Demolition stage – To confirm waste minimisation and maximisation of the reuse of buildings materials.

Maddocks Lawyers were asked to provide advice in relation to the legality of requiring sustainability management plans or the like, at each of these three stages of the process. Their advice was that it is possible to require management plans or like at each stage, provided that the need for such was clearly expressed as a requirement in the planning provisions to be included in planning schemes. If the requirement for such documents is contained in a planning control, the documents that can only be prepared after a planning permit has been issued, can be required either by a planning permit condition or a Section 173 Agreement.

While Section 2.2.1 of this report addresses proposed application requirements, the following discussion addresses the questions contained in the brief more specifically.

3.11.1 SUSTAINABILITY MANAGEMENT PLAN

A Sustainability Management Plan (SMP) should be required to be lodged with a planning permit application. The plan should address sustainability requirements at the permit application, construction and operational stages of a development.

If the plan lodged with a planning permit application is not adequate, either a request for further information can be made to rectify the deficiencies, before a planning permit application is assessed, or a condition can be placed on a permit requiring changes to the SMP before it is endorsed as part of the approved planning permit.

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3.11.2 CERTIFICATES OF COMPLIANCE

This section of the report details with the issue of certificates of compliance at the construction stage and during the operational stage of a building’s lifecycle.

The relevance of and the need for certificates of compliance for operational aspects of buildings was discuss in Section 2 of this report. This section further discusses the issue, assuming that a one-off certificate of compliance is are required.

The documents required to be submitted at the construction phase and operation phase of a development are not management plans as such, which set out what needs to be done to make a development comply with the sustainability requirements contained in the planning scheme. Rather, they are documents that confirm that the requirements of the endorsed sustainability management plan are met. Accordingly, they should be referred to as certificates of compliance rather than management plans. They could be referred to as follows:

- Sustainability Certificate – Construction
- Sustainability Certificate – Operation

In relation to a Sustainability Certificate – Operation, a question is, when and how often should such as certificate be required. It is considered that an operations certificate should only be required once, 12 months after the occupation of a development. To require a certificate on an ongoing basis would impose an excessive administrative burden on both Council and the owner / body corporate of a development.

Whilst Maddock’s advice was that a condition could be included on a planning permit requiring an operation certificate to be provided at some time after a building had been occupied, there are practical issues. Who is responsible for providing such a certificate once a development has been strata subdivided and an owners corporation and multiple owners exist? There may be an ability to seek a certificate from the owners corporation that relates to the communal areas it is responsible for. However it would be impractical and an administrative burden to require certifications from multiple owners of dwellings within a large development. This matter needs to be clarified by further legal opinion.

The following actions are required in response to the question of application requirements and compliance with requirements at the construction and operation stage of a development:

- Include a requirement in the planning scheme (if appropriate based on mechanism) or in any Application Requirement guidelines that a Sustainability Management Plan must be submitted with a planning permit application.
- Include a requirement in the planning scheme that a *Sustainability Certificate – Construction* must be submitted to the satisfaction of the responsible authority upon completion or within 6 months of the occupation of a building. That certificate is to demonstrate that all requirements of the Sustainability Management Plan relevant at the construction stage of a development are complied with.
- Include a requirement in the planning scheme that a *Sustainability Certificate – Operation* is required to be submitted to the satisfaction of the responsible authority within 12 months of the occupation of a building. That certificate is to demonstrate that all requirement of the Sustainability Management Plan relevant to the ongoing operation of the building are complied with (subject to further legal opinion).

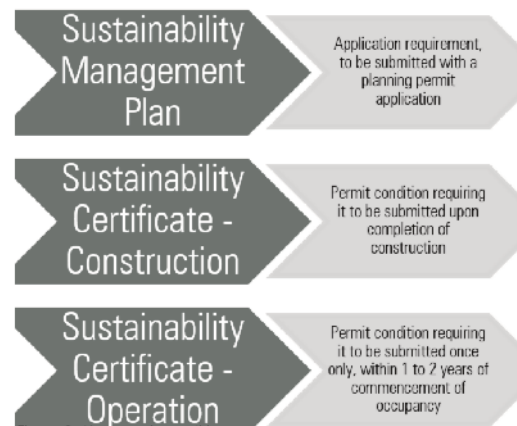


Figure 3: Key permit conditions

4.0 SUMMARY RECOMMENDATIONS

As outlined above, the following key recommendations are suggested:

- That a new Particular Provision be prepared and incorporated into the planning schemes of relevant councils that includes the elevated ESD standards. The new Particular Provision would include the following characteristics.
 - Mandatory objectives, with associated Standards (or performance measures and criteria) which would be applied as relevant to ascertain delivery of the Objectives.
 - Provision would only to those municipalities who 'opt in' to the elevated standards and amend their schemes to include the provision. State guidelines on ESD would be applied through proposed changes (to clauses 54, 55 and 58, as well as the new particular provision for commercial and industrial uses) and would apply to all other municipalities.
 - Provisions would include relevant definitions if a small number required (i.e net zero operational carbon).
 - Inclusion of a specific 'date-stamped' reference to the Green Factor Tool to ensure certainty. Resolution of external governance issues may mean this is not required.
- Further work may be undertaken to adjust existing proposed Standards to be suitably framed as performance 'measures' (i.e where specific metrics have been identified) and criteria (where a range of measure may be appropriate) consistent with proposed reforms to particular provisions. This would also allow clear identification of the information required to support assessment of the relevant performance measure / criteria. However, this should not occur until there is a greater degree of certainty as to that proposed reform.
- Further work would also be required to confirm participating Councils expectations regarding the inclusion of typologies as proposed in the current Standards.
- A consistent set of Application Requirements should be developed, along with relevant templates, in particular a standard Sustainability Management Plan template, to support applicants in preparing application material. These templates would also assist in ensuring consistent responses across the various municipalities.
- A consistent set of Permit Conditions should be developed to deliver Standards (i.e. sustainability certificates).
- A *Guidelines for Sustainable Building Design* document be prepared that could be used consistently by all councils who apply the elevated ESD standards, and would be included as a Background Document in relevant schemes. This should provide more explicit technical information where relevant, appropriate alternatives for responding to Objectives where Standards cannot be met, and real life examples.
- Background documents could be included in any local strategies contained in the Planning Policy Framework which address ESD and underpin the application of the particular provision.
- A consistent set of Definitions should also be incorporated into relevant planning schemes. If a small number then integration within provision is recommended, if large then consideration of Glossary as Incorporated Document should be considered. Ideally definitions should be consistent across State and included at Clause 73 General Terms.

4.1 RATIONALE AND BENEFITS OF THIS APPROACH

As clearly articulated by DELWP (for example, in relation to neighbourhood character as part of ResCode reforms) Local Policy should not be used as a planning control, nor is it mandatory. What this means is that for Local Government to have any certainty about the delivery of ESD outcomes through their planning schemes, a Local Policy is no longer appropriate, unless it is drafted in a manner which is directly contradictory to instruction contained within the Practitioners Guide prepared by the Department. The approach to the delivery of ESD Standards recommended in this report offers a number of benefits, including:

- Provides certainty to Local Government about the standard of design responses that will be delivered through their planning schemes.
- Provides a mechanism to ensure that actions proposed through the any development approval process are delivered.
- Provides a much greater level of transparency and certainty to the development community as to what is required to meet policy Objectives.

- Provides the opportunity for a much greater level of consistency in requirements and assessment of ESD across the municipalities to which the Standards would apply.
- Provides a framework within the planning scheme for future changes in response to new evidence, and the flexibility for robustly tested standards to be migrated to Statewide provisions if appetite for change increases at a State level.
- Allows for other municipalities to join the 'elevated' ESD group if and when their council and community supports such a move.
- Fills key gaps in the delivery of ESD outcomes prior to any more widespread changes to building regulations.

It is noted particularly, that in current processes, many of the elements addressed through the proposed Standards are already considered and delivered through Permit Conditions under existing Local Policies. The consideration of these matters through Permit Conditions occurs without any legislated timeframes and without clear guidance. In many ways, while these targets represent an 'elevation' of existing targets, and certainly bring new aspects such as Climate Resilience, Green Infrastructure and net zero outcomes into greater focus they are, in fact, also streamlining an existing process in many ways. They do this by bringing consideration and agreement about relevant ESD matters upfront in the process, and integrating them with broader consideration of the appropriateness of any application.

4.2 ALTERNATE PATHWAYS

While the preferred option for the integration of these Standards has been clearly articulated, it must be acknowledged that there is the possibility of some resistance at a State level to some of the underlying rationale behind what is proposed through any amendment seeking to introduce more stringent and elevated ESD Standards applied to participating municipalities, rather than Statewide.

It is acknowledged that the approach taken by this amendment and sought by the participating councils, in some ways, represents a shift from business as usual. It seeks to position the planning scheme as the 'front line' in the critical transition to net zero across all sectors, while other systems lag in the delivery of appropriate responses to the current climate emergency. This is however, more accurately characterised as an 'evolution' of the role planning schemes already play in ensuring that aspects of sustainable design are embedded from the earliest stages of the development process.

Careful consideration has been needed to ensure that the proposed Standards act in a complementary way to other regulations. While it is considered that the right 'balance' has been identified, other options must also be considered, not least due to the preferred option requiring State level commitment to a new provision prior to any amendment gaining authorisation for exhibition.

The alternate pathways and the implications of these are therefore explored in Figure 4 on the following page.

SUSTAINABILITY PLANNING SCHEME AMENDMENT BACKGROUND RESEARCH - COMPONENT B: PLANNING ADVICE

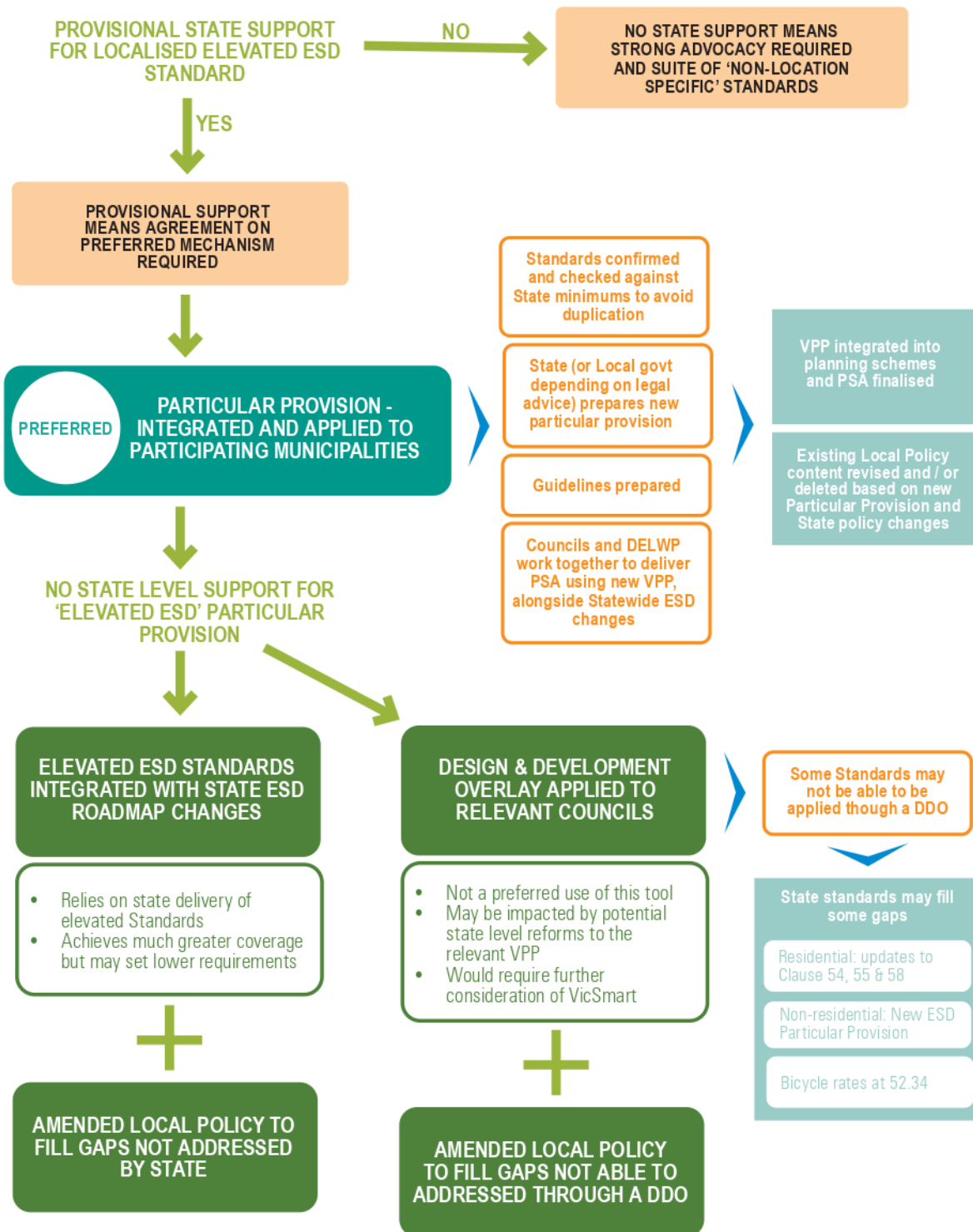


Figure 4: Alternate implementation pathways