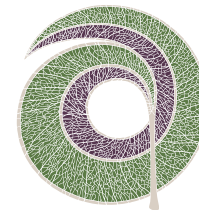


ARMSTRONG CREEK TOWN CENTRE

GUIDE TO PREPARING
A SUSTAINABILITY
MANAGEMENT PLAN

PART 2 REFERENCE MATRIX



ARMSTRONG
CREEK
TOWN CENTRE





Zero Carbon

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
<p>S1-01.O1 To source 30% of energy from either on-site, nearby renewable or low-carbon sources.</p> <p>To encourage solar electricity and hot water use in all buildings.</p>	<p>S1-01.G4 Encourage low-carbon on-site energy generation.</p> <p>S1-01.G6 Ensure staging of development and infrastructure provision considers onsite energy generation capacity, and associated energy distribution networks, to allow for staged expansion where necessary.</p> <p>S1-01.G7 Ensure development does not restrict solar access to energy systems of adjoining buildings or sites.</p>	<p>On-site generation:</p> <ul style="list-style-type: none"> › Roof mounted or building integrated solar PV. › Roof mounted or building integrated solar PV. › Roof mounted or building integrated solar hot water. › Geo-thermal heating and cooling. <p>Offer apartments/townhouses with an option to purchase a PV system (bulk purchase) or to invest in a nearby community PV array (e.g. on roof of supermarket).</p> <p>If on-site generation not to be provided provide justification (e.g. cost analysis) and consider 'future proofing' strategy to allow future installation.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Analysis and commitment (if applicable) in SMP. › Plans showing renewable/low carbon systems. › Provide calculations showing proportion of predicted energy requirements provided by on-site low-carbon sources. <p>In early concept development consider opportunities to match electricity, heating and cooling consumption profile with adjacent uses. If opportunity (current or future) exists then incorporate or future proof design.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Analysis and commitment (if applicable) in SMP. › Plans showing possible or committed opportunities. <p>Where possible, every effort should be made to maximise the potential use of solar panel on all buildings.</p> <p>Example evidence: Provide shadow diagrams showing impact of overshadowing on solar energy systems of adjacent sites.</p>	<p>On-site generation:</p> <ul style="list-style-type: none"> › Roof mounted or building integrated solar PV. Opportunity for large scale array on major tenancies, with potential income stream through leasing roof space. › Roof mounted or building integrated solar hot water. › Geo-thermal heating and cooling. Potential for this to be integrated under car park. › Co-generation/tri-generation. <p>Explore opportunities for energy resource sharing (e.g. heat from co-generation plant being used in adjacent office building or swimming pool).</p> <p>If on-site generation not to be provided provide justification (e.g. cost analysis) and consider 'future proofing' strategy to allow future installation.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Analysis and commitment (if applicable) in SMP. › Plans showing renewable/low carbon systems. › Provide calculations showing proportion of predicted energy requirements provided by on-site low-carbon sources. <p>In early concept development consider opportunities to match electricity, heating and cooling consumption profile with adjacent uses. If opportunity (current or future) exists then incorporate or future proof design.</p> <p>Example evidence: Analysis and commitment in SMP. Plans showing possible or committed opportunities.</p> <p>Where possible, every effort should be made to maximise the potential use of solar panel on all buildings.</p> <p>Example evidence: Provide shadow diagrams showing impact of overshadowing on solar energy systems of adjacent sites.</p>	<ul style="list-style-type: none"> › FirstRate5 › NABERS › STEPS › SDS › Green Star › IES virtual environment
<p>S1-01.O2 To provide a street network design maximising energy efficient building and infrastructure siting.</p>		<p>Respond to the street network design to optimise lot orientation and building orientation.</p>	<p>Respond to the street network design to optimise lot orientation and building orientation.</p>	



Zero Carbon

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
<p>S1-01.O3 To encourage energy efficient buildings through improved thermal performance, green roofs and walls and building management systems.</p>	<p>S1-01.G1 Achieve a base target of National Construction Code (NCC) plus one star for residential development.</p> <p>S1-01.G2 Achieve a minimum of ½ star increase on average NABERS rating for new commercial developments, or equivalent, at the time of application.</p>	<p>Provide a sample rating of a range of representative dwellings to demonstrate that the development achieves an average 7 star rating and a minimum of 6 stars for all units.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › FirstRate sample assessments. › Discussion of thermal performance measures and commitment to achieving a stated average rating in SMP. 	<p>Complete a projected NABERS rating using projected consumption figures for the development, and demonstrate ½ star increase against average NABERS rating for comparable buildings in the same climate zone.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › NABERS predicted rating assessment and analysis to justify benchmark average (or CoGG can provide this). › Discussion of thermal performance measures and commitment to achieving a stated rating in SMP. 	<ul style="list-style-type: none"> › FirstRate5 › NABERS › STEPS › SDS › Green Star › IES virtual environment
<p>S1-01.O4 To encourage car parking and landscape design that reduces the urban heat island effect.</p>	<p>S1-01.G5 Reduce urban heat island effects of car parks and buildings through design, landscaping, materials and colours.</p>	<p>Demonstrate use of green walls, green roofs, light coloured materials and finishes.</p> <p>Use mature shade trees or other fast growing greenery, and shade sails or other lightweight shade devices in car parks.</p> <p>Use light coloured pavements in car parks.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans and elevations showing green roofs and walls. › Landscape plans and planting schedules. › Material schedules. 	<p>Demonstrate use of green walls, green roofs, light coloured materials and finishes.</p> <p>Use mature shade trees or other fast growing greenery, and shade sails or other lightweight shade devices in car parks.</p> <p>Use light coloured pavements in car parks.</p> <p>Example evidence: Landscape plans and planting schedules. Material schedules.</p>	
<p>S1-01.O5 To implement best practice energy efficient lighting within the public realm.</p>	<p>S1-01.G3 Include energy efficient street and public space lighting.</p>	<p>Provide analysis of specified street or public space lighting showing it represents best practice in energy efficiency (e.g. LED technology).</p> <p>Example evidence: Analysis, including expected energy consumption or rated energy efficiency of different lighting technologies. Statement of commitment and to the chosen technology, including rationale for selection, shown in SMP.</p>	<p>Provide analysis of specified street or public space lighting showing it represents best practice in energy efficiency (e.g. LED technology).</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Analysis, including expected energy consumption or rated energy efficiency of different lighting technologies. Statement of commitment and to the chosen technology, including rationale for selection, shown in SMP. 	



Zero Waste

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
<p>S1-02.O1 Recovery of 75% of waste (recycled, reclaimed or composted).</p>	<p>S1-01.G1 Provide separated waste streams in public places, retail, commercial and residential developments.</p>	<p>Commit to installation of separated waste bins in kitchen cabinetry.</p> <p>For apartment buildings consider advanced organic waste treatment system.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Analysis and commitment in SMP. 	<p>Commit to waste contracts that achieve target rates.</p> <p>Advanced organic waste treatment system, particularly for large waste generators.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Analysis and commitment in SMP. 	<ul style="list-style-type: none"> › STEPS › SDS › Green Star › Sustainability Victoria Waste Minimisation Plan Checklist
<p>S1-02.O2 Reduce waste to landfill by 26% by 2030.</p>		<p>As above.</p>	<p>As above.</p>	
<p>S1-02.O3 Reduce the amount of waste generated in construction and demolition.</p>	<p>S1-01.G2 Ensure construction maximises re-use and recycling of construction materials.</p>	<p>Commit to waste practices and contracts that maximise reuse and recycling – 70% was standard practice in 2008-2009, 80% (by weight) is becoming increasingly common in Victoria today.</p> <p>Burbank have just delivered a pilot home that diverted 99% of waste from landfill².</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Analysis and commitment in SMP. › Draft waste management contract. › Waste Management Plan. 	<p>Commit to waste practices and contracts that maximise reuse and recycling – 70% was standard practice in 2008-2009, 80% (by weight) is becoming increasingly common in Victoria today¹.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Analysis and commitment in SMP. › Draft waste management contract. › Waste Management Plan. 	

¹ Queensland Department of Environment and Resource Management 2011, Construction And Demolition Waste Status Report.

² <http://www.burbank.com.au/victoria/newsdetails.aspx?idnews=165>



Sustainable Transport

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
<p>S1-03.O1 To prioritise active transport (walking and cycling) as a means of accessing services and facilities within the Armstrong Creek Town Centre.</p>	<p>S1-03.G1 Ensure the provision of movement and access networks are designed and planned based on the following priority:</p> <ul style="list-style-type: none"> › pedestrian and mobility restricted; › cycling; › public transport user; and › private cars. 	<p>Link any internal movement and access routes to the broader network, prioritising active transport. This could include design and placement of pedestrian crossings and signage.</p> <p>Provide an overview of the project’s approach to movement and access and its alignment with the PSP objectives. This could take the form of a green travel plan.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans and engineering drawings. › Discussion in SMP. › Discussion in Traffic/Movement and Access reports. 	<p>Link any internal movement and access routes to the broader network, prioritising active transport.</p> <p>Provide an overview of the project’s approach to movement and access and its alignment with the PSP objectives. This could take the form of a green travel plan.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Discussion in SMP. › Discussion in Traffic/Movement and Access reports. 	<ul style="list-style-type: none"> › STEPS › SDS › Green Star › www.activehealthycommunities.com.au/ › Crime Prevention Through Environmental Design and Safety By Design Manual
<p>S1-03.O2 To provide facilities that support active transportation (walking and cycling) including end of trip facilities, secure convenient storage, mode interconnections and safe and conducive environments.</p>	<p>S1-03.G2 Ensure easy, direct and safe pedestrian access between complementary uses including the co-location of car parking where possible to reduce internalised vehicle trips.</p>	<p>Link any internal movement and access routes to the broader network, prioritising active transport.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Discussion in SMP. › Discussion in Traffic/Movement and Access reports. 	<p>Link any internal movement and access routes to the broader network, prioritising active transport.</p> <p>Consider opportunities to reduce overall car parking numbers through centralised parking provision matching space needs to a balanced profile of different user groups (e.g. shoppers, workers, visitors).</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Discussion in SMP. › Discussion in Traffic/Movement and Access reports. 	
	<p>S1-03.G4 Provide centrally located and easily accessed bicycle storage with good connections to major destinations such as retail anchors, Interim Bus Interchange, and the Ultimate Integrated Transit Hub.</p>	<p>Provide internal and external bicycle storage for residents, workers (mixed use development) and visitors.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Discussion in SMP. › Discussion in Traffic/Movement and Access reports. 	<p>Provide internal and external bicycle storage for visitors and workers in convenient and safe locations.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Discussion in SMP. › Discussion in Traffic/Movement and Access reports. 	
	<p>S1-03.G13 Encourage centrally located and easily accessed end-of-trip facilities with good connections to major destinations such as retail anchors and the Ultimate Integrated Transit Hub.</p>	<p>Provide end of trip facilities including showers, lockers and secure bike storage for workers (in mixed use developments). Provide secure storage for visitors.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Discussion in SMP. › Discussion in Traffic/Movement and Access reports. 	<p>Provide end of trip facilities including showers, lockers and secure bike storage for workers</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Discussion in SMP. › Discussion in Traffic/Movement and Access reports. 	



Sustainable Transport

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
	<p>S1-03.G7 Provide safe, well lit access after-hours to entry points to major destinations, such as the ACTC Library, Town Square and major retail tenancies.</p>	<p>Demonstrate use of principles such as Crime Prevention Through Environmental Design (CPTED) or Safety By Design.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Discussion in urban design response. 	<p>Demonstrate consideration of safety through design of entries and lighting specifications. Demonstrate use of principles such as Crime Prevention Through Environmental Design (CPTED) or Safety By Design.</p> <p>Example evidence:</p> <p>Plans. Discussion in urban design response.</p>	<ul style="list-style-type: none"> › STEPS › SDS › Green Star › www.activehealthycommunities.com.au/ › Crime Prevention Through Environmental Design and Safety By Design Manual
	<p>S1-03.G8 Provide well located 'rest stops', shelter and seating for pedestrians to encourage walking trips.</p>	<p>Provide any publically accessible areas or internal movement routes with appropriate shelter and seating.</p> <p>Example evidence:</p> <p>Plans.</p>	<p>Provide any publically accessible areas or internal movement routes with appropriate shelter and seating.</p> <p>Example evidence:</p> <p>Plans.</p>	
	<p>S1-03.G3 Provision of access all abilities pedestrian networks.</p>	<p>Demonstrate response to Australian Standard AS 1428 – Design for Access and Mobility.</p> <p>Example evidence:</p> <p>Plans. Discussion in urban design response.</p>	<p>Australian Standard AS 1428 – Design for Access and Mobility.</p> <p>Example evidence:</p> <p>Plans. Discussion in urban design response.</p>	
<p>S1-03.O3 To minimise car-based travel by providing mixed use neighbourhoods with recreation facilities, community infrastructure and employment opportunities.</p>	<p>S1-03.G5 Prioritise bus movements over private vehicle movements.</p>	<p>Where involved in delivery of street network ensure lane design, intersection design and signal sequencing prioritises bus movements.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Traffic/Movement and Access report. 	<p>Where involved in delivery of street network ensure lane design, intersection design and signal sequencing prioritises bus movements.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Traffic/Movement and Access report. 	
<p>S1-03.O4 To encourage sustainable transport behaviour through early provision of an integrated public transport network with a high level of frequency and convenience.</p>	<p>S1-03.G12 Support real-time public transport information within large developments.</p>	<p>Incorporate real time public transport information into in-home display, web portal or foyer display.</p> <p>Example evidence:</p> <p>Discussion and commitment in SMP.</p>	<p>Incorporate real time public transport at key building exits and other information displays.</p> <p>Example evidence:</p> <p>Discussion and commitment in SMP.</p>	
	<p>S1-03.G6 Prioritise location of disabled, car-share and electric vehicle charging spaces.</p>	<p>Provide car parking plan demonstrating prioritisation according to this requirement. Work with an electric vehicle charging provider to install charging points.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Traffic/Movement and Access/Car Parking report. › In principle agreement with charging infrastructure provider. 	<p>Provide car parking plan demonstrating prioritisation according to this requirement. Work with an electric vehicle charging provider to install charging points.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Traffic/Movement and Access/Car Parking report. › In principle agreement with charging infrastructure provider. 	



Sustainable Transport

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
<p>S1-03.O5 To encourage transition to low-emission vehicles through priority access and provision of charging infrastructure.</p>	<p>S1-03.G11 Consider the provision of electric vehicle (EV) shared infrastructure within large car parking areas.</p>	<p>Work with an electric vehicle charging provider to install charging points.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Traffic/Movement and Access/Car Parking report. › In principle agreement with charging infrastructure provider. 	<p>Work with an electric vehicle charging provider to install charging points. In larger car parks this could be connected to on-site PV installation for renewable EV charging. Electric car share vehicles could be incorporated.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Traffic/Movement and Access/Car Parking report. › In principle agreement with charging infrastructure provider. 	<ul style="list-style-type: none"> › STEPS › SDS › Green Star › www.activehealthycommunities.com.au/ › Crime Prevention Through Environmental Design and Safety By Design Manual
	<p>Co-location of car parking where possible.</p>	<p>Consider opportunities to reduce overall car parking numbers through centralised parking provision matching space needs to a balanced profile of different user groups (e.g. shoppers, workers, visitors).</p> <p>Example evidence:</p> <p>Plans. Traffic/Movement and Access/Car Parking report.</p>	<p>Consider opportunities to reduce overall car parking numbers through centralised parking provision matching space needs to a balanced profile of different user groups (e.g. shoppers, workers, visitors).</p> <p>Example evidence:</p> <p>Plans. Traffic/Movement and Access/Car Parking report.</p>	
<p>S1-03.O6 To encourage flexible approaches to car parking provision.</p>	<p>S1-03.G9 Limit the provision of car parking within the Ultimate Integrated Transit Hub.</p>	<p>N/A</p>	<p>Provide analysis to justify chosen car parking rates.</p>	
	<p>S1-03.G10 Consider staged provision of car parking to limit excessive car parking development.</p>	<p>Demonstrate consideration of staged provision of car parking to allow 'user pays' approach to reduce per dwelling cost and overall car park numbers. An independent car parking provider could be appointed to manage all off-street parking within the AC, with performance indicators that incentivise efficient car parking management.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Traffic/Movement and Access/Car Parking report. 	<p>Demonstrate consideration of staged provision of car parking to allow 'user pays' approach to reduce per dwelling cost and overall car park numbers. An independent car parking provider could be appointed to manage all off-street parking within the AC, with performance indicators that incentivise efficient car parking management.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Plans. › Traffic/Movement and Access/Car Parking report. 	
	<p>S1-03.G14 Encourage usage of car parking technologies to maximise efficiency of car parking.</p>	<p>N/A</p>	<p>Real time space availability sensors.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Traffic/Movement and Access/Car Parking report. 	



Sustainable Products and Materials

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
<p>S1-04.O1 To encourage the use of construction products and materials that are sustainably sourced and have low embodied energy.</p>	<p>S1-04.G1 Utilise construction materials and products that incorporate low-embodied energy, are robust and weather resilient, and are low maintenance to maximise their life-cycle.</p>	<p>Demonstrate process for material selection evaluating various sustainability considerations.</p> <p>Demonstrate use of tools and resources such as Life Cycle Assessment, Green Star and Ecospecifier in decision making.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › SMP to include material selection protocol or reference to external guide (e.g. Green Star Mat credits). › Analysis using Life Cycle Assessment. 	<p>Demonstrate process for material selection evaluating various sustainability considerations.</p> <p>Demonstrate use of tools and resources such as Life Cycle Assessment, Green Star and Ecospecifier in decision making.</p> <p>Example evidence:</p> <p>SMP to include material selection protocol or reference to external guide (e.g. Green Star Mat credits). Analysis using Life Cycle Assessment.</p>	<ul style="list-style-type: none"> › Life Cycle Assessment (e.g. eTool) › Ecospecifier › Green Star › www.livingprinciples.org/ › Green Lease Handbook www.gbca.org.au
	<p>S1-04.G3 Encourage development that aligns with 'Design for Sustainability' principles including green procurement.</p>	<p>Demonstrate that the project has considered sustainability principles across its full life cycle and evaluated and incorporated design and material opportunities to improve outcomes at all project stages. Design for Sustainability is one of many frameworks that could be used for this. Evidence could also include Life Cycle Assessment and rating tools such as Green Star.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › SMP to include material selection protocol or reference to external guide (e.g. Green Star Mat credits). › Analysis using Life Cycle Assessment. 	<p>Demonstrate that the project has considered sustainability principles across its full life cycle and evaluated and incorporated design and material opportunities to improve outcomes at all project stages. Design for Sustainability is one of many frameworks that could be used for this. Evidence could also include Life Cycle Assessment and rating tools such as Green Star.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › SMP to include material selection protocol or reference to external guide (e.g. Green Star Mat credits). › Analysis using Life Cycle Assessment. 	
	<p>S1-04.G2 Incorporate materials re-use, and those from sustainable resources with low embodied energy e.g. Forest Stewardship Council certified timbers, fly-ash component in concrete.</p>	<p>Demonstrate process for material selection evaluating various sustainability considerations.</p> <p>Demonstrate use of tools and resources such as Life Cycle Assessment, Green Star and Ecospecifier in decision making.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › SMP to include material selection protocol or reference to external guide (e.g. Green Star Mat credits). › Analysis using Life Cycle Assessment. 	<p>Demonstrate process for material selection evaluating various sustainability considerations.</p> <p>Demonstrate use of tools and resources such as Life Cycle Assessment, Green Star and Ecospecifier in decision making.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › SMP to include material selection protocol or reference to external guide (e.g. Green Star Mat credits). › Analysis using Life Cycle Assessment. 	
<p>S1-04.O2 To provide awareness of sustainable consumption practices.</p>	<p>S1-04.G4 Encourage alternative construction techniques that reduce waste and disposal.</p> <p>S1-04.G5 Encourage provision for on-site waste treatment.</p>	<p>Use of prefabricated or modular construction approaches.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Discussion in SMP and detail on approach taken (if applicable). <p>Developing a Building Users Guide, which covers all aspects of sustainable building operation and sustainable living, could include a focus on sustainable consumption. This includes shopping locally, use of shared resources (e.g. tool library) and maximising reuse and 'upcycling'.</p>	<p>Use of prefabricated or modular construction approaches.</p> <p>Example evidence:</p> <ul style="list-style-type: none"> › Discussion in SMP and detail on approach taken (if applicable). <p>Green Leases, which provide an agreement between the lessor and lessee regarding how the tenancy will maximise the sustainability of its operations, can provide a tool to encourage sustainable consumption principles to be built into the operations of businesses in the activity centre.</p> <p>Businesses that focus on sourcing local produce, products and services could also use sustainable consumption principles to market the benefits to the Armstrong Creek community.</p>	



Sustainable Water

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
S1-05.O1 To target an average potable water usage of less than 110 litres per person per day.	S1-05.G10 Provide drought tolerant/water-saving landscape plantings.	Demonstrate through planting schedule.	Demonstrate through planting schedule.	STORM MUSIC STEPS SDS Green Star www.epa.vic.gov.au/your-environment/water/reusing-and-recycling-water
S1-05.O2 To minimise the use of potable water where recycled or reuse options are 'fit for purpose'.	S1-05.R1 Connect to the Third Pipe recycled water network.	Show connection to Third Pipe network on plans and provide evidence that health and safety issues have been considered and will be managed appropriately. Example evidence: <ul style="list-style-type: none"> › Plans › Discuss in SMP. 	Show connection to Third Pipe network on plans and provide evidence that health and safety issues have been considered and will be managed appropriately. Example evidence: <ul style="list-style-type: none"> › Plans › Discuss in SMP. 	
	S1-05.G6 Consider the use of underground tanks for water capture and storage to minimise the encumbrances on ground level land.	Demonstrate consideration of underground or other innovative rainwater storage approaches. Example evidence: <ul style="list-style-type: none"> › Plans › Discuss in SMP. 	Demonstrate consideration of underground or other innovative rainwater storage approaches. Example evidence: Plans Discuss in SMP.	
	S1-05.G4 To source 100% of water for landscape irrigation from on-site rainwater collection or recycled water.	Provide a water balance showing how requirement can be met, where practical (noting seasonal demands and storage capacity). Example evidence: Water balance or report from appropriate tool.	Provide a water balance showing how requirement can be met, where practical (noting seasonal demands and storage capacity). Example evidence: Water balance or report from appropriate tool.	
	S1-05.G8 Provide visual demonstration of water conservation and re-use where appropriate.	Utilise landscaping an stormwater management elements to provide visual cues regarding water efficiency. Example evidence: Plans Discuss in SMP and design reports.	Utilise landscaping an stormwater management elements to provide visual cues regarding water efficiency. Example evidence: Plans Discuss in SMP and design reports.	
S1-05.O3 To provide integrated solutions to water management that recognise opportunities for on-site water collection and reuse including rainwater tanks, green roofs, utilisation of recycled water reticulation and stormwater management.	S1-05.G2 Demonstrate an integrated stormwater management approach inclusive of WSUD treatments and/or other stormwater capture initiatives.	Provide evidence of a structured approach to incorporating WSUD urban design principles and treatments into design. Including use of STORM, MUSIC or Urban Developer tools, showing treatments on plans, use of Green Star credits. Example evidence: Plans Discuss in SMP. Outputs from appropriate tool.	Provide evidence of a structured approach to incorporating WSUD urban design principles and treatments into design. Including use of STORM or MUSIC tools, showing treatments on plans, use of Green Star credits. Example evidence: Plans Discuss in SMP. Outputs from appropriate tool.	



Sustainable Water

OBJECTIVES (PRECINCT WIDE-AMBITION)	GUIDELINES	EXAMPLE INITIATIVES TO MEET GUIDELINES (RESIDENTIAL)	EXAMPLE INITIATIVES TO MEET GUIDELINES (COMMERCIAL)	SUGGESTED TOOLS
	S1-05.G9 Communicate innovative approaches to stormwater management in public areas (e.g. through interpretive signage).	New public spaces created as part of residential development could include a designed water feature showcasing the town centre's recycled water supply, potentially incorporating a functional irrigation element. Other WSUD and stormwater management initiatives should be considered in terms of design and visibility for opportunities to showcase them as part of education and engagement. Example evidence: Plans Discuss in SMP and design reports.	New public spaces created as part of commercial development could include a designed water feature showcasing the town centre's recycled water supply, potentially incorporating a functional irrigation element. Other WSUD and stormwater management initiatives should be considered in terms of design and visibility for opportunities to showcase them as part of education and engagement. Example evidence: Plans Discuss in SMP.	<ul style="list-style-type: none"> › STORM › MUSIC › STEPS › SDS › Green Star › WELS www.waterrating.gov.au
S1-05.O4 To encourage visual demonstrations of water conservation and reuse through water sensitive urban design (WSUD), rainwater harvesting and other treatments.	S1-05.G5 Encourage water sensitive urban design initiatives within landscaped environments.	As per above.	As per above.	
S1-05.O5 To promote reductions in water consumption for individual buildings through building design and water-efficient landscaping.		Where appliances such as dishwashers and washing machines are supplied (or offered) maximise water and energy efficiency. Ensure all fittings and fixtures achieve the highest WELS rating possible.	Where appliances such as dishwashers and washing machines are supplied (or offered) maximise water and energy efficiency. Ensure all fittings and fixtures achieve the highest WELS rating possible.	
S1-05.O6 To mitigate the impact of development on waterways and downstream environments	S1-05.G3 Minimise construction impacts on waterways	Example evidence: Provide principles of environmental protection that will be incorporated into Construction Management Plan.	Example evidence: <ul style="list-style-type: none"> › Provide principles of environmental protection that will be incorporated into Construction Management Plan. 	
	S1-05.G7 Consider the use of rain-gardens, and bio-retention systems, particularly within large areas of at-grade car parking.	N/A	Provide analysis showing how car parking design will retain a higher than average proportion of water through treatment measures, reducing impact on stormwater system. Example evidence: <ul style="list-style-type: none"> › Discuss in SMP and/or Car Parking Plan. › Provide evidence of modelling. 	
S1-05.O7 To provide a stormwater management strategy that restricts flows to predevelopment levels.		Example evidence: <ul style="list-style-type: none"> › Provide principles of environmental protection that will be incorporated into Construction Management Plan. 		
S1-05.O8 To encourage the use of permeable surfaces that assist natural stormwater seepage.	S1-05.G1 Minimise the percentage of non-permeable surfaces for mixed-use and commercial development, particularly where large areas of at-grade car parking are required.	Utilise permeable pavements and other systems to maximise permeability. Example evidence: Provide analysis showing balance of permeable and non-permeable surfaces. Show materials on plan.	Utilise permeable pavements and other systems to maximise permeability. Example evidence: Provide analysis showing balance of permeable and non-permeable surfaces. Show materials on plan.	

