

## Worksheet 4.1A

**[Project name]**

# Sustainable Design Plan

This is an example only – adapt this worksheet to suit your organisation’s requirements.

**Working document—initial schematic design stage**

**Compiled for [name of Design team leader] by [name of Sustainability Facilitator]**

Date of issue to Project Manager:	Last review date:	Design Manager approval:  date	Project Manager approval: (completion of all actions)  date
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## Using this template

Guidelines for using this template are included here and in Section 4.1 of the DECC NSW Sustainable Property Guide.

This Sustainable Design Plan (SDP) template could be applied to any commercial or retail property base-building refurbishment (retrofit) or tenancy fitout.

Adapt this generic SDP template to suit your project. Adaptations might include adding references to Green Star, NABERS, the Property Council of Australia's (PCA) *A Guide to Office Building Quality* or other performance categories which will help achieve the project's sustainability vision.

This SDP will be retained as a project management record of commitments at schematic design stage and will be progressively updated as investigations proceed, decisions are made and outcomes are progressed during the design and contract documentation phases.

Importantly, information should be provided in sufficient detail to explain why initiatives have been incorporated and why others have been considered, investigated and discounted. Wherever possible, likely outcomes or benefits (e.g. energy/CO<sub>2</sub> savings, potable water savings) should be quantified, based on a traditional design approach.

**Aim:** To stimulate, track and record the sustainable design process and to ensure every reasonable effort is made to support the project's environmental and social sustainability goals.

**Model:** The content of the SDP may be guided by a building environmental rating tools e.g. the Green Star or NABERS rating system.

**Sustainability intent:** The 'design intent' listings in the SDP are a result of a sustainability workshop. They represent the desired sustainability goals for this project.

**Design team responsibility:** Review relevant sections and add information to Column B 'Design team actions' to record actions that will be taken during the design, design development and contract documentation phases to achieve the design intent. Actions will be discussed and confirmed at the first team meeting.

**Sustainability Facilitator responsibility:** Progressively record status of actions, investigations and decisions made against each action item. Include options presented for approval and resulting decisions. Quantify expected environmental or social benefits wherever feasible.

[Company name] is responsible for maintaining this SDP, seeking updated information from the design team and providing advice to the Design Manager as necessary to ensure an appropriate record of the sustainable design decisions on this project are maintained for project and client purposes.

[name of Sustainability Facilitator/Environmental Practitioner]

[Contact details]

<b>Appropriate benchmarks (examples)</b>	
<b>Identify a set of appropriate design benchmarks against which this project can be compared. Design objectives may exceed these benchmarks. Individual criteria from tools may be used.</b>	
<b>Benchmark examples</b>	<b>Source</b>
2 star NABERS Energy	Current accommodation
2.5 star NABERS Energy and 4 star Green Star	Current portfolio average
3.5 star NABERS Energy	Competitors recent achievement in this market
1 star NABERS Water	Current accommodation
1.45 kL/m <sup>2</sup> NLA pa potable water	Current accommodation
No refrigerant containment	Current accommodation
22% tenant waste recycling	Current accommodation
67% construction waste diversion from landfill	Last development
tenant complaints regarding comfort and air quality reduced to 57% of all complaints	Last development
313 mJ/m <sup>2</sup> /pa base building energy consumption – Sydney best practice	Property Council of Australia
Other: NABERS Waste NABERS Indoor Environment <i>PCA Guide to Office Building Quality</i>	

<b>List key agreements and actions arising from the sustainability workshop (if undertaken)</b>

## Project context

**Identify information that sets the context for sustainable design objectives and design team actions. Examples may include:**

Have outcomes of the feasibility study been provided to design team?	yes/no
Have key findings of the contaminated site investigation been provided to design team?	
Have sustainability objectives been stated in the project brief?	
Has a tenant agreement been entered into to provide a specific level of environmental quality?	

## Key people involved

Client Representative	[name]
Project Director	[name]
Project Manager	[name]
Design Manager	[name]
Sustainability Facilitator/ Environmental Practitioner	[name]

## Sample only: how the tables work

<b>A Design intent</b>	<b>B Design team actions</b>	<b>C Resp.</b>	<b>D Status and outcomes</b>	<b>E Indicators</b>	<b>Complete</b>
Briefly describe the design intent in regard to sustainability, item by item.	For each design intent, list actions proposed or agreements made by the design team at the initial concept design workshop.	Identify who is primarily responsible for carrying out the agreed actions.  List key supporters if necessary.	Update this section as design and documentation work progresses.	Identify performance indicators for areas of responsibility. May relate to agreed 'green building' indicators.  These indicators will provide information for promoting the outcomes to key stakeholders.	Sign off when complete.

## Integrated design

A Design intent	B Design team actions	C Resp.	D Status and outcomes	E Indicators	Complete
<p>Examples:</p> <p>Achieve an effective and collaborative design process by engaging the multiple design disciplines, as well as owners, users, contractors, facility managers and operations personnel.</p>					
<p>Establish project environmental and social performance goals and use these as the basis for selecting and implementing related building design, construction and operational strategies.</p>					

## Sustainable site

Describe the environmental features of the site, including proximity to public transport, Green Star credits and any limiting factors or likely DA conditions.

A Design intent	B Design team actions	C Resp.	D Status and outcomes	E Indicators	Complete
<p>Examples:</p> <p>Reduce the environmental impact of the location of the development on adjacent residential or business communities.</p>	<p>List actions that will optimise environmental and social outcomes of site development. Refer to any environmental studies (or site contamination studies) and resulting required mitigating actions relating to design work.</p>				

## Sustainable site

Describe the environmental features of the site, including proximity to public transport, Green Star credits and any limiting factors or likely DA conditions.

<b>A Design intent</b>	<b>B Design team actions</b>	<b>C Resp.</b>	<b>D Status and outcomes</b>	<b>E Indicators</b>	<b>Complete</b>
No adverse visual impact when viewed from neighbouring areas.					
Undertake site remediation and rehabilitation as required to optimise site use and eliminate health hazards.					
Conserve, protect and enhance existing natural areas and restore damaged areas providing environmental habitat.					

## Water efficiency

Describe the appropriate performance benchmark to measure outcomes against e.g. local water authority best practice, Green Star credits or NABERS Water rating, or current accommodation water efficiency.

<b>A Design intent</b>	<b>B Design team actions</b>	<b>C Resp.</b>	<b>D Status and outcomes</b>	<b>E Indicators</b>	<b>Complete</b>
Examples: Eliminate use of potable water for HVAC equipment cooling.			As above	As above	As above
Limit or eliminate the use of potable water for landscape irrigation.					
Reduce generation of wastewater and potable water demand through innovative water demand technologies.					

## Water efficiency

Describe the appropriate performance benchmark to measure outcomes against e.g. local water authority best practice, Green Star credits or NABERS Water rating, or current accommodation water efficiency.

A Design intent	B Design team actions	C Resp.	D Status and outcomes	E Indicators	Complete
Maximise potable water usage efficiency to reduce burden on municipal water supply and wastewater systems.					
Achieve a NABERS Water 4 star rating.					
Through sub-metering, provide for ongoing accountability and optimisation of building water use efficiency over time.					
Reduce use of process water—use building system equipment with low-flow or no-flow water use. Reduce or eliminate use of potable water for non-potable processes.					
Use 5-star WELS rated water efficient appliances throughout.					
Use waterless urinals throughout.					

## Energy and atmosphere

Describe the appropriate performance benchmarks to measure outcomes against e.g. Green Star credits; NABERS Energy rating, PCA Quality or current accommodation energy efficiency.

A Design intent	B Design team actions	C Resp.	D Status and outcomes	E Indicators	Complete
Examples: Establish the minimum level of energy efficiency for the building and systems.	List specific actions by specific members of the design team to achieve design intent				
Reduce use of non-renewable energy sources through increased energy efficiency of building services and lighting.					
Achieve a performance comparable to 5 star NABERS Energy (base building).					
Investigate use of renewable energy technologies to reduce fossil fuel use by 10%.					
Ensure that fundamental building elements and systems are designed, installed and calibrated as intended.					
Reduce ozone depletion potential and global warming potential through careful selection of chillers and their refrigerants.					



## Energy and atmosphere

Describe the appropriate performance benchmarks to measure outcomes against e.g. Green Star credits; NABERS Energy rating, PCA Quality or current accommodation energy efficiency.

<b>A Design intent</b>	<b>B Design team actions</b>	<b>C Resp.</b>	<b>D Status and outcomes</b>	<b>E Indicators</b>	<b>Complete</b>
Provide for the ongoing accountability and optimisation of building energy consumption performance over time.					

## Materials and resources

Describe the appropriate performance benchmarks to measure outcomes against e.g. Green Star credits, emerging good practice or best practice trends or client's current accommodation recycling performance.

<b>A Design intent</b>	<b>B Design team actions</b>	<b>C Resp.</b>	<b>D Status and outcomes</b>	<b>E Indicators</b>	<b>Complete</b>
Examples: Conserve material resources by minimising initial resource use and designing for flexibility and ease of adaptation for future uses.	List specific actions by specific members of the design team to achieve design intent				
Divert at least 90% of construction and demolition waste materials from landfill through recycling and reuse.					
Reduce operational phase solid waste to landfill by designing effective recycling facilities for tenants.					

## Materials and resources

Describe the appropriate performance benchmarks to measure outcomes against e.g. Green Star credits, emerging good practice or best practice trends or client's current accommodation recycling performance.

<b>A Design intent</b>	<b>B Design team actions</b>	<b>C Resp.</b>	<b>D Status and outcomes</b>	<b>E Indicators</b>	<b>Complete</b>
Reduce ozone depletion potential and global warming potential by preventing refrigerants leaks and through careful selection of materials.					
Use materials with a recycled content.					
Encourage environmentally responsible forest management through use of certified timbers.					
Ensure life-cycle impacts are identified in material selection.					

## Indoor environmental quality

Describe the appropriate performance benchmarks to measure outcomes against e.g. Green Star credits, NABERS Indoor Environment, NHMRC thresholds, or current accommodation

<b>A Design intent</b>	<b>B Design team actions</b>	<b>C Resp.</b>	<b>D Status and outcomes</b>	<b>E Indicators</b>	<b>Complete</b>
Examples: Provide a high level of control over temperature and ventilation or lighting systems for occupants to promote their productivity, comfort and wellbeing.	List specific actions by specific members of the design team to achieve design intent				

## Indoor environmental quality

Describe the appropriate performance benchmarks to measure outcomes against e.g. Green Star credits, NABERS Indoor Environment, NHMRC thresholds, or current accommodation

A Design intent	B Design team actions	C Resp.	D Status and outcomes	E Indicators	Complete
Establish minimum indoor air quality (IAQ) performance requirements to prevent the development of IAQ problems.					
Provide capacity for IAQ monitoring during occupation to sustain long-term safety and comfort.					
Provide for the effective delivery and mixing of fresh air to support occupants' safety, comfort and wellbeing.					
Reduce emissions of indoor air contaminants from materials that are odorous, potentially irritating or harmful to the comfort and wellbeing of installers and occupants.					
Avoid materials or products with urea-formaldehyde resins.					
Avoid all fitout or building materials which off-gas VOCs.					
Use very low-VOC finishes throughout.					
Avoid using furnishings that may foster allergens or dust mites.					