



Solar Panel Guidelines

A guideline for permit applications lodged under the *Heritage Act 2017*

Made and published under s19(1)(f) of the *Heritage Act 2017*, 10 October 2022

Objectives

The Objectives of this Guideline are to:

- Ensure the installation of solar panels at places included in the Victorian Heritage Register in a manner which does not impact upon the cultural heritage significance of the place.
- Allow owners to address matters of environmental performance of their property whilst also minimising impacts on the cultural heritage significance.
- Ensure that installation of solar panels does not damage original fabric or the setting of a heritage place.

Purpose

This guideline applies to all proposals for solar panels at places included in the Victorian Heritage Register. It should be used as a guide for those preparing an application under the *Heritage Act 2017*. Heritage Victoria officers will refer to this guide when assessing applications. Some heritage places may not be able to accommodate solar panels without unacceptable impacts to their significance, due to the nature and orientation of their roofs.

Please note these Guidelines:

- Do not constitute approval of an application if complied with, as there may be particular heritage values associated with a heritage place, which make these guidance principles inappropriate to apply.
- Apply to all building types, not just dwellings.
- Are subject to the statutory application processes set out in the *Heritage Act 2017*.

Introduction

Heritage places were not originally designed to include ancillary services and equipment such as solar panels, air conditioning units, hot water systems and satellite dishes, found in contemporary buildings. While buildings and settings have always changed over time to include new technologies from light bulbs to lavatories, new technologies have the potential to adversely impact the heritage values of a building or place if not installed appropriately.

Solar panel installations provide the opportunity to save on electricity bills and reduce carbon footprint. However, the location of these installations can have a detrimental impact on the heritage values of a place. The same considerations also apply to the installation of associated equipment including tanks, heat pump units, batteries and the like which must be located discreetly without adversely impacting the heritage place.

The Guidelines are a guide for Heritage Victoria Permit Officers and permit applicants. Compliance with the Guidelines does not guarantee the approval of an application. They are applicable to solar panel applications for any building or property listed in the Victorian Heritage Register.

What do I need to include with my permit application?

- Permit application form.
- Whole of site plan indicating all buildings and significant features and landscaping, title boundaries, the Victorian Heritage Register extent area, street names and details of adjacent site details that are relevant to the application. The location and extent of proposed works must be indicated.
- Drawings or images which demonstrate the location and size of the panels and views from ground level, and how the panels are fixed. Additional information may be requested during the assessment.
- Details of the type of renewable energy installation proposed, ie. Solar panels, solar hot water, batteries etc.
- Details of existing roofing material and profile and fixing details appropriate to the roof type and material.
- Height of installation above roof surface.
- Distance of the solar panels from ridge and side points of the roofline.
- View lines to solar panels from the public realm.
- Colours, materials and other equipment needed to run the solar panels.
- Photographs of the building and location of the proposed solar panels.

Guidelines

Protecting the cultural heritage significance of a place

The roofscapes of most heritage buildings are very important to their character. The requirements of this guideline ensure that renewable energy installations will not substantially disrupt the form and character of roofs and other significant features or detrimentally impact the setting of the heritage place.

Matters to consider when installing solar panels and other renewable energy facilities at places in the Victorian Heritage Register:

- Locate solar devices to avoid visual impacts resulting from their location, scale, form, colours and reflectivity. Devices should not intrude on the principal views of a place. Heritage Victoria typically does not support systems visible from the street, key public views or primary elevations.
- Select colour of frame or structural elements associated with renewable energy systems to reduce the visual impact of the installation.
- Do not unnecessarily disturb or destroy the historic fabric of a building in line with minimum intervention and reversibility principles. That is, when a system is removed the building should be able to be fully restored.
- Install or locate free-standing collectors in locations which will not impact the heritage values of the place, for example, where not visible from the street, principal views or primary elevations of a place. Alternatively, locate these devices on structures of lesser cultural heritage significance, such as garages, carports or pergolas.
- Avoid the use of stands to fix solar collectors or solar hot water systems onto roofs of heritage buildings.
- For solar hot water systems, ensure the tank is installed inside the roof space or in another location which reduces the visual impact of the installation. Installation in internal spaces may have the added benefit of reducing heat loss.
- Ensure that the weight of new devices can be borne by the supporting structure (eg: roof rafters or ceiling joists), or that the structure is appropriately strengthened to accommodate the additional weight. The minimum number of fixing holes should be used to fix the device to the roof, which will help minimise the extent of damage, and will assist with future removal and replacement.

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- Ensure that new metal components in contact with metal roof cladding are chemically compatible or insulated to avoid corrosion.
- Ensure solar panels, tanks and other infrastructure do not display any form of private advertising or branding.
- Select less bulky systems installed flush with the roof line where possible
- Ensure that the system is installed by a qualified professional.

Are the solar panels appropriately located?

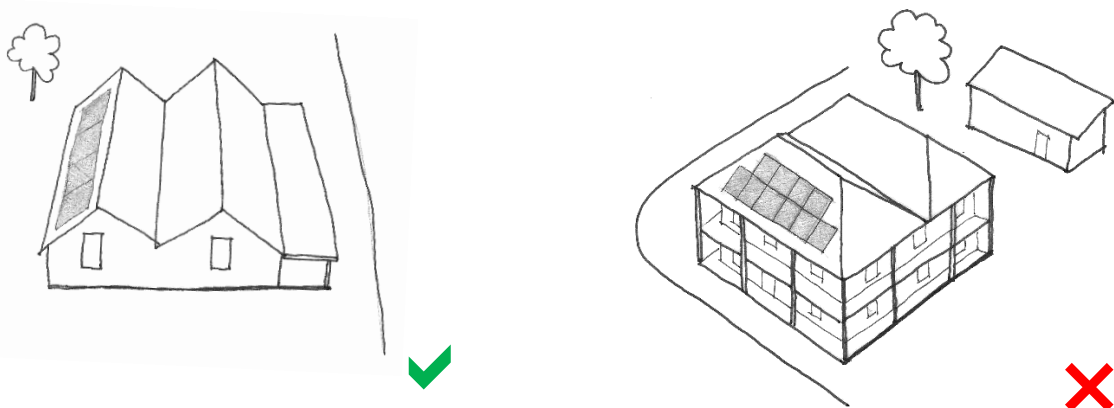
Guideline A:

DO:

- Locate panels at the rear of an historic building, concealed from the street and neighbouring sites.

DO NOT:

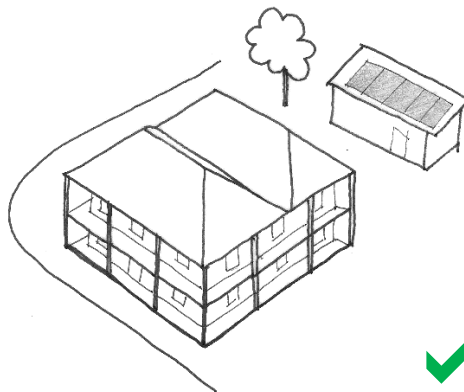
- Locate panels in a highly visible location that will distract or disrupt the roof form.
- Install panels on frames that are at odd angles with the roof unless the panels are concealed by a parapet.



Guideline B:

Do:

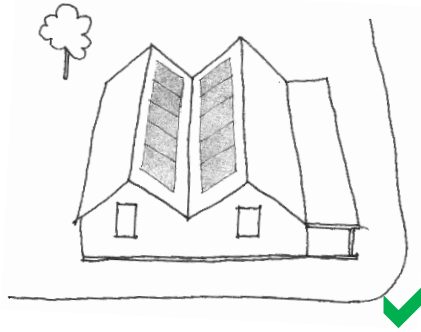
- Install panels on a non-significant outbuilding such as a garage, carport, shed or addition, where the building cannot be seen from the street front or other key views.
- Other options include pergolas and ground mounted frames.



Guideline C:

DO:

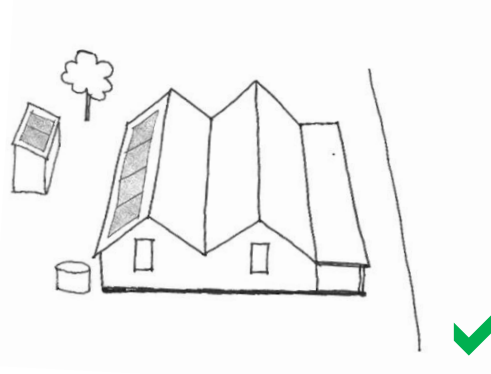
- Install panels on concealed planes such as internal valleys or skillion roof at rear



Guideline D:

DO:

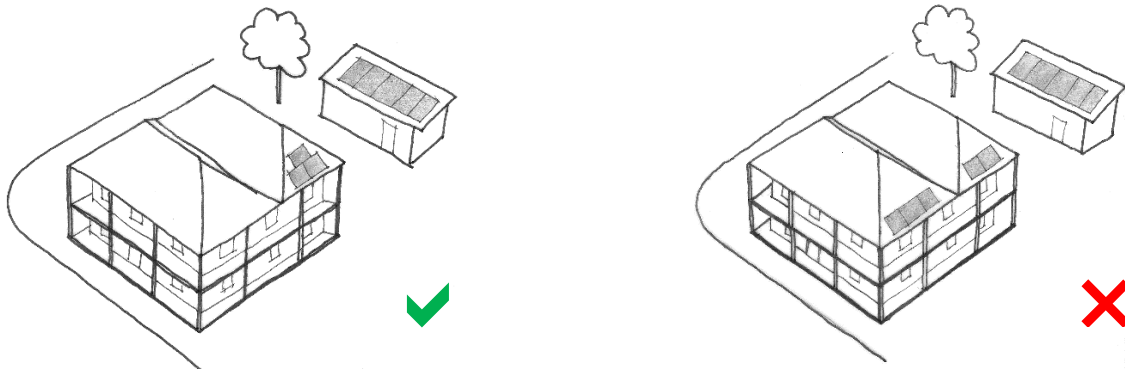
- Install split solar hot water systems that allow for alternative tank locations other than the main roof. Aim to locate the tank outside the primary elevation of the property.



Guideline E:

DO:

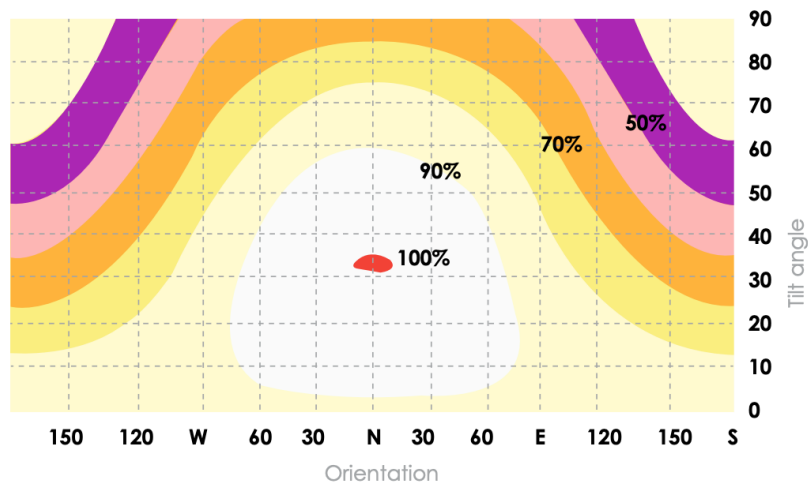
- Install solar arrays on side elevations only if they're minimal in size and number, and have been set back from the front of the building at least the depth of one room.



Solar Panel Guidelines

Heritage and sustainable design guidelines

To achieve maximum benefits, solar panels do not have to face north. They can sit at a variety of angles and directions and still achieve high levels of solar energy generation. As a guide, the graph below demonstrates the efficiency of solar panels at several different angles and orientations.



Solar panel tilt, orientation and output variation

Source: Commonwealth of Australia 2010, www.yourhome.gov.au

If you require further information on the viability of solar panel orientation, please seek guidance from Solar Victoria <https://www.solar.vic.gov.au/>