

A guide to **REDUCING GLARE AND REFLECTION** in the Queenstown Lakes District



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WHY A GUIDELINE?

- To encourage the use of building materials, in particular for roofs, that complement the environment in terms of colour and texture, and do not cause glare or excessive reflectance.
- To ensure that building materials with low glare are used in the Queenstown Lakes District, particularly in Outstanding Natural Landscapes and Visual Amenity Landscapes.
- To explain the rules and intent of the District Plan.

WHY AVOID GLARE AND EXCESSIVE REFLECTANCE?

- To avoid negative impact on the visual landscape of the District.
- In consideration of immediate neighbours.



WHAT CAUSES THE PROBLEM?

Visual reflectance is caused by white light being reflected.

If large amounts of white light are reflected in a bundle this is called glare. All surfaces reflect light, but:

- Light colours reflect more white light than dark colours. This visual reflectance has a correlation to solar reflectivity. The reflectivity value listed by, for example, paint manufacturers can be used to judge how reflective a particular colour is.
- Smooth surfaces reflect white light directly whereas textured surfaces scatter the light causing it to be less bright in any one spot. This means that smooth surfaces are more likely to cause glare than textured surfaces.

WHAT ARE THE RULES?

There is now much more focus on the issues of glare and excessive reflectance in this district than ever before.

In all rural zones the exterior of buildings is assessed under the resource consent process and some restrictions might be imposed. The assessment criteria emphasise that buildings should not be prominent. Recessive colours help to protect the landscape values.

In high and low density residential zones metal cladding, roofing or fencing is required to be painted or otherwise coated with a non-reflective finish (rule 7.5.5.1 viii). As there is no such thing as a non-reflective surface (it would make it invisible), this is intended to mean a surface giving limited visual reflection.

At present, there are no other rules concerning the choice of colour or material, but it is best practice to consider neighbours.

WHAT COLOURS AND MATERIALS ARE APPROPRIATE?

The exterior colours and materials of buildings should reflect the natural character of the locality. Special attention needs to be paid to the choice of colour and material of roofs.

Colours

Emphasis should be given to colours in the natural range of browns, greens and greys to complement materials and tones found in the natural surroundings. In particular white should be avoided, as it can cause an annoying glare and stand out in the visual landscape.

Paint and roofing manufacturers are often able to provide reflectance values for their colours and products. This is the percentage of white light reflected and can be used as a guide to choosing appropriate colours:

Reflectance value	Appropriateness	Examples of colours in colour steel range
0 – 20 %	Natural colours usually appropriate	Karaka, Grey Friars, Rivergum
21 – 35 %	Natural colours often appropriate	Lichen, Kauri, Sandstone Grey
36 – 100 %	Not appropriate	Desert Sand, Titania, Gull Grey

Materials

Materials with a non-shiny, textured or matt/powder finish are preferable to glossy or shiny finishes. Emphasis should be given to low reflective materials that tend to scatter the light rather than bounce it directly back. The following materials should be avoided as outer cladding if possible:

- zincalume
- any material with a reflectance greater than 35%
- any shiny, highly reflective materials, even for small surfaces
- large expanses of glass
- large smooth surfaces

WHEN DO YOU NEED A REFLECTIVITY REPORT?

In some cases, particularly if the materials listed above as inappropriate are being used, a Reflectivity Report may be required to assess the potential visual reflectance from a proposed building. In the report, aspects such as the visibility of the surface from various public and private viewpoints, the angle and orientation of the surface to the sun and the surroundings of the building should be taken into account.

CONTACT DETAILS

Please contact CivicCorp at either Queenstown or Wanaka offices between 8.30am and 5.00pm Monday to Friday.

If you are considering lodging a resource consent application please ask for an appointment to meet with our enquiries planner.

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