

NELSON CITY COUNCIL

Nelson Resource Management Plan

Proposed Plan Change 23
Daylight and Solar Panels

Section 32 Report

25 September 2010



1.0 Introduction

1.1 Purpose of report

Section 32 of the Resource Management Act 1991 (RMA) requires Council to consider alternatives and assess the benefits and costs of adopting any objective, policy, rule or method in a Plan or Policy Statement prepared under the RMA. Before publicly notifying a proposed Plan or Plan Change, the Council is required to prepare a Section 32 report summarising these considerations.

The purpose of this report is to fulfil these Section 32 requirements for proposed Plan Change 23 (Daylight and solar panels).

1.2 Steps followed in undertaking the Section 32 evaluations

The 7 broad steps which this section 32 evaluation follow are:

1. identifying the resource management issue;
2. evaluating the extent to which any objective is the most appropriate way to achieve the purpose of the RMA;
3. identifying alternative policies and methods of achieving the objective;
4. assessing the effectiveness of alternative policies and methods;
5. assessing the benefits and costs of the proposed and alternative policies, rules, or other methods;
6. examining the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods; and
7. deciding which method or methods are the most appropriate given their likely effectiveness and their likely cost, relative to the benefit that would likely deliver.

1.3 Description of proposed Plan Change

Some elements of Appendix 15 (daylight admission – residential) are confusing. Text and diagram changes are proposed to clarify the daylight provisions. These technical changes do not result in any material change to policy or methods in the NRMP, and are not discussed further in this report.

The Council has undertaken several initiatives to reduce barriers to the uptake of solar hot water system, including the Solar Saver Scheme to reduce upfront costs, and simplifying the building consent process. Another potential barrier is the requirement for resource consent for solar panels which do not comply with the daylight and maximum height provisions of the Nelson Resource Management Plan (NRMP). An exemption for solar panels from the daylight and maximum height provisions is included in this Plan Change, to overcome a potential barrier to their installation.

Allowing for non-compliance with the daylight provisions is proposed for up to seven square metres of solar panels on the northern boundary. This is the practical placement for solar panels, and its north facing aspect will ensure that the non-compliance does not create shade on neighbouring properties. A 0.5 metre encroachment into the maximum height provisions is proposed.

1.4 Consultation

Plan Change 23 involved advice from NCC Resource Consents planners on the problems they have had with interpretation of the text and diagrams in Appendix 15 and suggestions to improve it.

The Council's Eco Design Advisor provided practical input, based on his experience working with solar installations.

This consultation informed the content of the Plan Change.

2.0 Resource Management issue

2.1 Resource Management issue being addressed

An issue is an existing or potential problem that must be resolved to promote the purpose of the RMA. The RMA does not require the identification or analysis of issues within Section 32 evaluations. Notwithstanding this issues are being included in this report because it will be helpful to users to understand the basis and origin of the issue as this provides a context for the evaluations of the objectives and policies that follow.

The Plan Change relies on an existing operative issue within clause RI14 (Amenity Values) of Chapter 4 (Resource Management Issues) of the Plan:

RI14.1.ii Compromise of the use and enjoyment of individual properties as a consequence of the adverse effects of on site and neighbouring development.

The other relevant issue is RI10 (Energy Efficiency) of Chapter 4 (Resource Management Issues) of the Plan, which includes the following issue:

RI10.1.iii Adverse environmental effects of the production and use of alternative energy sources.

The specific issue to be resolved in this Plan Change is how to promote more use of renewable solar energy without impacting on access to daylight by surrounding properties.

3.0 Appropriateness in achieving the purpose of the RMA

3.1 Evaluation of the objective(s) – the environmental outcome to be achieved

Section 32 requires an evaluation of the extent to which the objective is the most appropriate to achieve the purpose of the Act. Appropriateness is not defined in the Act. In undertaking the evaluation it has generally been helpful to consider alternative forms of the objective and test them in terms of how well they met the environmental, social/cultural, and economic outcomes in Section 5, plus achieving other Part 2 matters. Often these assessments require value judgements because they are not readily quantified. Usually the objective is also tested against how well it addresses the elements of the issue.

In the case of Plan Change 23 no new objectives are being proposed. Instead the Plan Change relies on existing operative objectives within the Energy chapter of the Nelson Regional Policy Statement (page 120) and Chapter 7 – Residential Zone of the Nelson Resource Management Plan, specifically:

Nelson Regional Policy Statement objective:

EN1.2.1

Sustainable use of energy through an orderly transition from non-renewable resources to renewable resources.

Nelson Resource Management Plan objectives:

RE2.3 daylight and sunlight

Buildings and structures should be designed and sited so that adjoining sites are not unduly shaded, and there is reasonable access to daylight.

RE2.5 scale

The size and scale of buildings, structures, and activities should be compatible with the character and amenity of the residential area.

Given the operative status of these objectives, including an exemption for solar panels up to a maximum size of seven square metres is considered the most appropriate way to achieve the purpose of the RMA. It balances the value of renewable energy with the potential effects on amenity for neighbouring properties.

These exemptions for solar panels is intended to enable people and communities to provide for their social and economic wellbeing while avoiding or mitigating the adverse effects of using non-renewable sources of energy. The proposed intrusions into the daylight planes are similar to existing allowances for chimneys, dormer windows, gables and other roof ends.

3.2 Whether the policies, rules, or other methods are the most appropriate for achieving the objectives in terms of their efficiency and effectiveness, benefits and costs, and in regards to the risk of acting or not acting

3.2.1 Introduction

The evaluation of appropriateness assesses the alternative policy options under the headings of efficiency, effectiveness, benefits, costs, and the risk of acting and of not acting.

A range of criteria/matters have been used to assist in undertaking the evaluations:

efficiency	the ratio of inputs to outputs. Efficiency is high where a small effort/cost is likely to produce a proportionately larger return. Includes the ease of administration/administrative costs e.g. if the cost of processing a grant or collecting a fee exceeds the value of the grant or fee, that is not very efficient;
effectiveness	how well it achieves the objective or implements the policy relative to other alternatives. The likelihood of uptake of a method;
benefits	social, economic, environmental - as both monetary and non monetary cost/benefits;
costs	social, economic, environmental - as both monetary and non monetary cost/benefits; and

risk the risk of taking action and not taking action in say the next 10 years because of imperfect information e.g. the cause/effect relationships are not fully understood.

The report concludes with a summary of the analysis undertaken and outlines which option best meets the requirements of Section 32 of the RMA.

3.2.2 Format of the evaluation

The following table provides an evaluation of the costs and benefits of the proposed policies, and considers whether these policies are the most appropriate for achieving the objectives, having regard to their efficiency and effectiveness. The terms efficiency and effectiveness are not defined in the RMA and, therefore, the criteria set out in Part 3.2.1 of this report have been used to help focus the analysis.

Costs and benefits have largely been assessed subjectively and or comparatively because of the great difficulty in assessing/quantifying intangible costs e.g. environmental costs. In some cases quantitative assessments of costs have been given.

The concept of risk has two dimensions, the probability of something adverse occurring and the consequence of it occurring. For example, if there is low risk associated with acting but high risk associated with not acting, then taking action is clearly the sensible thing to do. Risk is usually expressed as 'probability times consequence' and associated with a cost – usually a severe economic, social or environmental cost. Assessing the risk of acting or not acting means assessing the probability of a cost occurring and the size of that potential cost.

The policy alternatives assessed in this section will achieve the objective to different degrees and combinations of policy approaches will be used to form the final preferred option.

The following four broad options are evaluated in Table 1 (Part 3.2.3 of this report):

- Option 1 Status quo (do nothing) - do not exempt solar panels from daylight and maximum height rules.
- Option 2 Proceed with the Plan Change - exempt solar panels up to a total of 7m² in size from the daylight and maximum height rules.
- Option 3 Proceed with an alternative Plan Change - exempt all solar panels from daylight and maximum height rules.

As mentioned in section 1.3 of this report, the technical changes to Appendix 15 (daylight admission – residential) are technical, and do not result in any material change to policy or methods in the NRMP. Therefore no alternative approaches have been considered or evaluated.

3.2.3 Table 1: Assessment of Alternative Options

	Option 1: Status quo (do nothing)	Option 2: Proceed with Plan change	Option 3: Proceed with an alternative Plan Change
Benefits	<p><u>Social Benefit (Community):</u> Retains the existing protection of amenity and access to daylight for neighbouring properties.</p> <p><u>Economic Benefit (Council):</u> Small financial saving from not having this Plan Change, and subsequent reporting and hearing costs.</p>	<p><u>Environmental Benefit (Community and Homeowner):</u> Promotion of renewable energy by removing some regulatory barriers to their installation.</p> <p><u>Social Benefit (Community):</u> The size restrictions for solar panels (as a permitted activity) provide protection of amenity and access to daylight for neighbouring properties.</p> <p><u>Social Benefit (Council):</u> The Council is seen to be proactively overcoming barriers to uptake of solar energy.</p> <p><u>Economic (Community):</u> Reduced number of resource consents required where solar panels intrude to a minor level on daylight angles or maximum height restrictions.</p>	<p><u>Environmental Benefit (Community and Homeowner):</u> Promotion of renewable energy by removing regulatory limits on the scale of solar energy able to be generated on residential roofs, particularly as Photovoltaic energy becomes more financially viable.</p> <p><u>Economic (Community):</u> No resource consents required where solar panels intrude on daylight angles or maximum height restrictions.</p>

	Option 1: Status quo (do nothing)	Option 2: Proceed with Plan change	Option 3: Proceed with an alternative Plan Change
Costs	<p><u>Environmental Cost (Community):</u> No exemptions for solar panels, and potential requirements for resource consent, may discourage some residents from installing solar energy.</p> <p><u>Social Cost (Council):</u> Perception that Council is being contradictory by promoting solar energy through the Solar Saver programme and other initiatives, and discouraging it through its Resource Management Plan.</p> <p><u>Economic Cost (Community):</u> Cost of resource consent process for residents installing solar panels which intrude on daylight angles or maximum height restrictions.</p>	<p><u>Environmental Cost (Community):</u> Limited exemptions for solar panels, and requirement for resource consent in some cases, may discourage some residents from installing solar energy. Any intrusion into daylight planes is an environmental cost for neighbours, but this is mitigated by the location of panels on the north facing side of the house, and the limit on the size of the panels to be exempted.</p> <p><u>Economic Cost (Council):</u> Small financial cost of undertaking this Plan Change, and subsequent reporting and hearing costs.</p> <p><u>Economic Cost (Community):</u> Resource consent will still be required where solar panels are intrude on daylight angles or maximum height restrictions, and are greater than 7 square metres in size, or more than 0.5m above the height limit.</p>	<p><u>Environmental Cost (Community):</u> The potential for impacts on residential amenity of neighbours is much higher for this option than for option 2, particularly if very large solar panels are installed in future.</p> <p><u>Economic Cost (Council):</u> Small financial cost of undertaking this Plan Change, and subsequent reporting and hearing costs.</p>

	Option 1: Status quo (do nothing)	Option 2: Proceed with Plan change	Option 3: Proceed with an alternative Plan Change
Benefit and Costs Summary	The costs far outweigh the benefits of the status quo option.	There are environmental, social and economic benefits from pursuing this Plan Change. There are no social costs, and the minor environmental and economic costs are outweighed by the benefits.	This option potentially has the greatest environmental and economic benefits for the community as a whole, but also higher environmental costs for neighbours.
Effectiveness and Efficiency	The status quo option is an inefficient and ineffective way to meet the objectives of the Plan. In particular, triggering resource consent for minor incursions by solar panels into northern daylight angles and maximum height is inefficient.	The Plan Change is an efficient and effective way to address the operative issues and achieve the objectives. <u>Efficiency</u> Permitting minor incursions by solar panels into northern daylight angles and maximum height avoids regulation of minor effects. <u>Effectiveness</u> Triggering resource consent for significant incursions by solar panels into northern daylight angles and maximum height is an acceptable balance between promotion of renewable energy and protection of residential amenity.	This option is less efficient and effective than option 2 because it does not discriminate between minor and more significant shading/daylight impacts on neighbouring properties.

	Option 1: Status quo (do nothing)	Option 2: Proceed with Plan change	Option 3: Proceed with an alternative Plan Change
Risk of Acting or Not Acting if there is uncertainty or insufficient information	Council has sufficient information on Option 1 to make a decision on its effects. Therefore there is no risk of acting of not acting.	Council has sufficient information on Option 2 to make a decision on its effects. Therefore there is no risk of acting of not acting.	Council has sufficient information on Option 2 to make a decision on its effects. Therefore there is no risk of acting of not acting.

4.0 Conclusion

An evaluation of three alternative options of status quo (do nothing), proceed with the Plan Change and proceed with an alternative Plan Changes has been undertaken in Part 3.2.3 of this report. The report has evaluated these alternative options against the benefits, costs, effectiveness, efficiency, the risk of acting and the risk of not acting.

This evaluation has clarified that Option 2 (proceed with this Plan Change) balances environmental, social and economic benefits, and is the best option in regards to its efficiency and effectiveness with minimal risks of acting and potential higher risks of not acting.

The alterations to the Plan as a result of the proposed Plan Change will be:

- an amendment to the height definition in Chapter 2 (Meaning of Words) provides an exemption for solar panels up to a total of 7m² in size and not exceeding 0.5m above the maximum permitted height for the zone.
- A change to Appendix 15 to allow solar panels up to a total of 7m² in size to intrude into the daylight plane on the northern site boundary (defined for the purpose of this rule as being in a quadrant of 45 degrees east and west of north).

The Plan Change relies on existing operative issues (amenity values and energy efficiency) and an existing operative objective in the Nelson Regional Policy Statement (sustainable use of energy).

These issues and the objective are not being considered in this report because of their operative status.