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## Note by Bryce Wilkinson<sup>1</sup>

The following material has been downloaded at different times from the Quality Planning website.

"  
sharing knowledge about  
primary tool for delivering robust information on RMA processes and environmental policy to  
resource management practitioners. The QP website promotes best practice by providing  
guidance on aspects of the planning process and draws on practitioner experience and  
knowledge."

It looks mainstream as a planning document in that:

- it invites "resource management practitioners" to assume that the local authority is the only decision maker;
- practitioners are not told that protecting private property rights are a relevant consideration;
- no consideration is given to the explaining the

## 2

The most efficient policy / method will achieve either of the following objectives:

- the greatest benefit with the least cost
- the greatest 'amount of benefit' (eg, highest level of amenity) relative to the level of cost, where the objective is not expressed as a fixed amount.

Analysing [efficiency](#) means:

- identifying the various environmental costs and benefits of each alternative
- identifying the various social and economic costs and benefits of each alternative
- identifying who/what will face the cost, or experience the benefit of each alternative
- assessing the relative size of the costs and benefits of each alternative
- identifying all assumptions and uncertainties clearly. (If there is uncertainty, state how critical it is, what has caused it, and what further information might reduce it.)

This analysis can be undertaken for each policy and method or, more feasibly, for particular 'packages' of policies and methods that relate to a single objective. The latter can assist to keep the scale of the evaluation manageable. However, it is important to ensure that the evaluation does go beyond the consideration of an overall approach (such as zoning) to examine specific rules - particularly where these rules have the potential for significant costs and benefits.

### **Understanding costs and benefits**

The cost and benefit analysis required as part of a s32 evaluation needs to be broad. It should not be limited to just those that fall on councils, and should include resource users, the community and the environment, and any other relevant parties. Normally a combination of social, economic and environmental costs, include:

**Administrative costs**- how much the policy/method costs the council to administer (including implementation and enforcement)

**Compliance costs**- how much it costs the resource user to comply

**Broader economic costs**- such as may result from constrained production, sub-optimal allocation of resources across the economy and reduced innovation may result from inflexible and/or highly prescriptive regulation.

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<sup>2</sup> The following material was downloaded from the Quality Planning website around March 2013. The current version can be obtained here <http://qualityplanning.org.nz/index.php/10-useful-links/298-assess-the-costs-and-benefits>

**Social costs**- such as effects on recreational opportunities (for example, reduced recreational space in the coastal marine area as a result of the development of marine farms)

**Environmental costs**- an adverse effect on the environment that may result from, for example, allowing an activity that would not otherwise be allowed if not for the methods / rule. (For example, the loss of nutrients available to marine ecosystems as a result of further marine farms.)

Costs councils might face:

- implementation - developing a plan provision, getting approval, dealing with enquiries, setting up grant systems
- information and education
- monitoring and enforcement
- potential for increased costs associated with the Environment Court.

Costs resource users might face:

- lost opportunities from the use of a resource
- direct costs of modifying activities to meet new requirements
- compliance costs of obtaining and processing information, applying for resource consents, and undertaking monitoring
- downstream costs of challenging a provision, losing production or income, making financial contributions and paying charges, and economic uncertainty
- potential increased need to challenge decisions of councils in the Environment Court.

Costs the community might face:

- reduced employment and reduced economic efficiency
- deterioration of relationships with resources
- increased community workload in the Environment Court.

Benefits will normally include:

- environmental benefits – such as the protection of a particular habitat
- social and economic benefits that might be associated with the attainment of the objective (such as retention of a rural school or other services as a result of greater subdivision and settlement).
- other incidental environmental benefit.

The characterisations of costs and benefits differ for regional and district plan rules:

- A regional rule that provides for an activity that would not otherwise be permitted may provide an economic benefit of some description (and potentially some level of environmental cost).
- A district plan rule that provides for an activity often does so with the express or implied consequence of excluding other activities not so permitted. Such a rule therefore imposes an economic cost when compared to having no such rule and consequently, that all activities would be permitted. (This may not be the case when the effect of the rule is compared with the existing plan rule.)

The presumptions of s10-15 of the RMA need to be considered when determining what costs flow from regulation. The baseline for determining whether a cost or benefit arises also needs to be clearly set. In most cases, an existing rule will be the appropriate baseline where a new provision is proposed to replace it.

## Assessing costs and benefits and establishing efficiency

Section 32 requires that the appropriateness of policies and methods be assessed having regard to their [efficiency](#), rather than a more formal and prescribed [Cost and Benefit Analysis \(CBA\)](#).

It is often difficult to establish a monetary value for many environmental and social costs and benefits (such as effects on amenity and intrinsic values, landscape and heritage). It is theoretically possible to determine a monetary value for difficult-to-measure costs and benefits (using a variety of valuation techniques); but in practical terms such an approach is likely to be feasible for only a small number of interventions and/or a limited number of costs and benefits.

The disadvantages of undertaking a comprehensive monetisation of costs and benefits include that:

- the cost to a council would be high
- it would take too long given the size and nature of plans and
- because of the limitations of many valuation methodologies, the results could add to uncertainty and may not form a robust basis for decision-making.

Therefore, a robust evaluation of efficiency should not be regarded as requiring the full and comprehensive monetisation of every cost and every benefit. An evaluation should include a comprehensive and transparent disclosure of the full range and likely scale of costs and benefits that are quantified where possible, though not necessarily monetised. For example, the size of the benefits (eg, the extent of wetland to be protected) should be given even if a dollar value cannot be placed on the value of that wetland. Where quantification is not possible, qualitative and subjective assessment of the scale of the cost and benefit should be provided.

In determining the level of costs, you should:

- assess costs on an individual basis if they fall unevenly on individuals
- estimate individual costs based on the number of properties affected if costs are shared
- always identify the cost to each individual, and the total of those individual costs
- not include costs related to regulation outside of the RMA (as can happen when there are multiple regulatory regimes applying to a particular issue)
- count each cost once only - for example if you identify a cost for resource users, do not include it in council or community costs
- include costs that are flow-on effects. For example, a cost to a resource user of lost production might have the flow-on effect to the community where the loss of production will have a multiplier effect through the local economy.

There are a range of non-monetary techniques for assessing costs and benefits, ranging from simple ranking through to complex scoring and weighting.

One way to measure a cost or benefit in non-monetary terms is to apply value in accordance with a simple rating scale such as, for example, -5 to +5. Consultation with resource users and the community may aid in determining the 'score' given to different costs and benefits. Alternatively, the highly subjective nature of many of the costs and benefits can be acknowledged by simply rating them on a narrative 'low, medium, high and very high' spectrum.

Having some costs and benefits monetised and some not is an acceptable approach. In such cases, the monetised values should provide a benchmark for the qualitative and subjective assessments also included. Such an evaluation needs to disclose how it would rate the monetised values, which then needs to be used to 'calibrate' the subjective assessment.

As a general rule, potentially high economic and social costs will require in-depth analysis of the method's impact, possibly using a detailed, and more highly monetised [cost-benefit analysis](#). When the costs are likely to be high, the community will also expect a clear explanation - and quantification - of the method's environmental benefits. The depth of analysis required will also be influenced by the issue's importance, complexity, and degree of 'newness'. The depth of analysis should be commensurate with the scale of the proposal.

A [matrix or table](#) can be a useful approach to demonstrate and compare costs and benefits.

Example of a table or matrix to help evaluate costs and benefits

	Environmental		Social		Economic	
	Cost	Benefit	Cost	Benefit	Cost	Benefit
Council						
Resource user						
Wider community						

The [checklist for issues, objectives, policies and methods](#) and the [checklist of methods for achieving the purpose of the RMA](#) can also be used as tools for assessment and analysis.

## Best practice examples<sup>3</sup>

The following examples illustrate best practice in particular aspects of s32 evaluation, as described in the guidance note.

### Determining necessity

The [s32 report for proposed plan change 56 to the Wellington City District Plan, Managing infill housing development](#), provides a good example of: how to present the resource management issue within broader planning and policy issues in order to determine the necessity for the proposed provisions.

<sup>3</sup> This section was downloaded on 13 July 2015.

While presenting this broader context, the report has successfully summarised the s32 process undertaken by the council by purposefully focusing on the pivotal changes to resolve the issue being addressed. This approach, particularly the evaluation matrix which clearly outlines the preferred option, means that the effects of the proposed plan change are easily linked to the wider issue, enabling the public to be aware of the issues as well as the potential costs and benefits.

## Consultation

The **s32 report for proposed plan change 56 to the Wellington City District Plan, Managing infill housing development**, illustrates good practice with regard to the integration of consultation into a s32 report. The summary report lists documents and consultation records that provide more detail on the consultation process used in Council's s32 considerations. As this consultation was undertaken as part of the initial broader process, it effectively determined the extent of the resource management issue and allowed feedback on the costs associated with alternatives and their appropriateness, in particular, those costs associated with maintaining the status quo.

## Alternative methods and appropriateness

The **s32 report for proposed plan change 13 to the Manukau Operative District Plan, Wairoa River Maritime Village**, illustrates good practice when evaluating planning methods to achieve the proposed outcome. The report provides a summary discussion of the three broad alternative methods considered (ie, doing nothing, implementing an existing residential zone and creating a new specialised zone). It then proceeds to consider these methods in terms of their benefits and costs in relation to environmental and social outcomes.

The report subsequently includes an evaluation of the appropriateness of each of the proposed objectives, policies and methods. The report includes an assessment of each objective and its appropriateness; it also sets out how each policy has been considered in terms of the benefits and costs in relation to the relevant objectives while having regard to their overall efficiency and effectiveness.

The objectives and policies have been broken into various subsections as they relate to the broad resource management issues. These are:

- social, economic and cultural wellbeing, health and safety
- maintenance and enhancement of amenity values
- managing adverse effects.

In using this approach the analysis provides a reasonable level of detail and complexity in a simple and understandable manner. The report clearly sets out how the approach is considered the most appropriate and linked this to how the plan change will be appropriate in achieving the purpose of the RMA.

## Appropriateness

The **s32 report for Variation 1 to Environment Canterbury 's Proposed Natural Resources Regional Plan Chapter 6, Beds and Margins of Lakes and Rivers**[KA1] [KA1], is a best practice

example of how to evaluate whether the objectives are the most appropriate to achieve the purpose of the RMA at a regional level.

The report includes two matrices used to assist in evaluating the appropriateness of both proposed policy options and the methods to implement the policies. The first matrix provides a summary of the matters considered in Council's s32 assessment. The second uses a ranking approach of low, moderate or high to subsequently evaluate the related appropriateness of each option. This means that the appropriateness of options can be easily ascertained in terms of where there are high levels of effectiveness, efficiency and benefits versus the costs and uncertainty relative to the other options considered.

## Determining the issue

The **s32 report for the Air Quality Chapter of the Proposed Canterbury Natural Resources Regional Plan** provides a good example of how **Issue 2 (winter ambient air quality)** was determined. This issue relates to the contribution of domestic fires and older wood burners on air pollution and the degree to which they should be controlled, which was contentious within the community. To assist in determining the issue, the council:

- investigated the national air quality guidelines
- identified the different emissions and their effect on community health (ie, suspended particulate, nitrogen dioxide, carbon dioxide, sulphur dioxide, ozone and other hazardous pollutants)
- analysed monitoring data
- considered the relative contribution of emissions from different sectors (domestic heating, transportation, industry)
- considered the costs to the community for domestic heating.

This detailed analysis was considered necessary given the potential economic and social costs to Christchurch City. It also enabled submitters to better scrutinise the assumptions behind the objective and policy alternatives.

## Cost-benefit analysis

The **s32 report for the Air Quality Chapter of the Proposed Canterbury Natural Resources Regional Plan** includes a good example of a cost-benefit analysis for a controversial **issue**. The economic costs and benefits to the community could be quantified for some of the alternative methods. For example, the report states that there is a net economic benefit, in the long term, in banning open fires because of their poor heat output for the amount of fuel used. However, it also identifies that there is an overall net economic cost to the community in upgrading old wood burners and banning new wood burners in new houses. The environmental costs and benefits are qualitative, due to the difficulty in quantifying health and amenity benefits costs generally.

The s32 analysis combines the qualitative and quantitative parts of the cost-benefit analysis to give an overall qualitative efficiency rating (low, moderate, high). The cost and benefits are easily identified in a table with the more feasible methods being highlighted.

## Risk of acting or not acting

The **s32 report for Proposed District Plan Change 3 to the Dunedin City District Plan, Dunedin Airport**, provides an example of how the costs and benefits of the proposed policies and methods should be assessed together with the risk of acting or not acting if there is uncertain or insufficient information.

The report includes a matrix table that sets out an assessment of the rules as a package and then also provides a more detailed examination of specific rules. Both the process and analysis are easy to understand and effective, as a clear link is provided between the costs and benefits and the social, environmental and economic risks associated with each provision or package of provisions. The matrix includes specific columns that summarise the considerations of the risk of acting or not acting.

This approach means that the s32 report can easily be interpreted by the public, while effectively conveying the necessity of the proposed new provisions including the risks of acting or not acting.

## Applying s32 in the council decision

**Waipa District Council's decision on proposed private plan change 53 to the Waipa District Plan, Bilimag Re-zoning**, is a good example of a council meeting its obligations under s32(2) to undertake a further evaluation before making its decision on a plan change. The decision sets out the decision-makers robust consideration of how the proposed objectives, policies and methods will support the purpose of the RMA. The decision also provides a comprehensive assessment of how the proposed policies and methods (in this case zoning) would efficiently and effectively achieve the objectives by providing a tiered activity status for specific zoning rules.

Like many s32 reports, in considering the appropriateness of the proposed policy and methods, the assessment utilises a matrix that includes columns related to effectiveness, efficiency, benefits, costs and uncertainty.

### 4

The nature and scale of issues faced by councils will generally be clear. Previous experience and/or research and monitoring data could demonstrate that the issue to be addressed is real, and that its size and significance warrants the attention of proposed plan provisions.

However, in some cases the information will be conflicting, uncertain or simply inadequate to categorically demonstrate the scale and nature of the 'problem' to be addressed. This may lead to debate about whether councils should do anything or adopt a 'wait and see' approach.

In these situations the s32 evaluation must consider the risks of acting or not acting, or the **'symmetry' of risk**. 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. The converse applies, which is known as 'asymmetric' risk.

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<sup>4</sup> <http://www.qualityplanning.org.nz/index.php/component/content/article/10-useful-links/299-identify-the-risks>

An example of determining the symmetry of risk can be demonstrated through a proposed change to a district plan to enable the development of a major infrastructural asset like a power station. Say, the issue is that there is demand for a power station in the vicinity and the electricity it would produce is needed to maintain the region's and New Zealand's security of electricity supply.

While there may be uncertainty about whether the power station proponents could successfully use existing provisions in the plan to secure necessary resource consents, there might also be uncertainty about whether the electricity generation is really required. However, the risk of not acting is high: a delay to the development of the power station (or even the possibility that the current plan provisions might lead to a decision to decline such a project) might lead to the region or the country facing a crisis in electricity security of supply and hence significant economic loss.

Therefore, the consequence of not acting is very high even if the probability might be relatively low. The risk of acting is, by comparison, low since the cost of getting plan provisions in place is comparatively low - even if the probability is high that those costs would occur. The analysis would also need to consider whether the provisions would mean that the environment would face a greater or lesser cost. This could be deemed to be an asymmetric risk: the risk of acting is low whereas the risk of not acting is very high.

Again, the level of potential cost and probabilities of those costs occurring (and therefore the risk) will seldom be quantifiable. However, one means of assessing the relative risk is to use the conceptual framework outlined below. If the level of risk of not acting is assessed as being in the upper left-hand quadrant with the risk of acting being in any other quadrant, then the conclusion would support acting. Conversely, if the risk of not acting is assessed as being within the bottom right-hand quadrant while the risk of acting is within any other quadrant then the analysis would support not acting.

Risk is symmetrical when the cost of acting and the cost of not acting are located at precisely the same point of the matrix illustrated below. The further apart the risk of acting and the risk of not acting are plotted the greater the asymmetry of risk

The concept of risk has two dimensions:

- the probability of something adverse occurring
- the consequence of it occurring.

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.

Given that by this stage there should be information on actual and potential costs, risk evaluation should involve:

- determining just how certain and sufficient the information about each issue really is
- identifying those provisions which relate to any issues about which there is uncertain or insufficient information
- identifying the costs of the policies and methods proposed in relation to those issues
- identifying the costs associated with the 'do nothing' or 'status quo' option

- assessing the likelihood of those costs occurring with the provisions proposed and (separately) without the provisions proposed (ie, the cost of the 'do nothing' option)
- determining the symmetry of the risk.

The RMA requires that the symmetry of risk is taken into account rather than undertaking a highly quantified risk assessment. A simple methodology such as demonstrated in this example will normally be sufficient to demonstrate compliance with s32(4)(b) of the RMA.