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Dear Hearing Committee I

**Further items required on WRC biodiversity evidence to TCDC
Hearing Committee**

Please find included the two further items requested from the Committee in relation to the Waikato Regional Council Statement of Evidence.

- Informative text contained in this document
- WRC Proposed RPS section 32 on Biodiversity

Yours faithfully



Ursula Lehr
Policy Advisor, Regional Integration

1. Proposed RPS section 32 Report

At the TCDC District plan hearing on Indigenous Biodiversity on 10 February, the hearing Committee requested that WRC provide some S32 evaluation/justification of specific parts of their evidence, namely the WRC Statement of Evidence, section 5 (5.3 to 5.12) which related to use of a transparent overlay of biodiversity sites and that part of the evidence that highlighted specific issues in relation to SNAs in the coastal environment. At the hearing under questioning WRC noted that their submission and the evidence presented to support it were underpinned by the S32 developed for the Proposed Waikato Regional Policy Statement, on Biodiversity. That S32 is **attached** for the hearing Committee's consideration. While S32 is obviously important, it is ultimately sub-ordinate to achieving the purpose of the Act.

The table in the PRPS S32 Report - Section 11.3 shows that Policy Options 1,3,5 and 6 are the selected options as they provide for the most efficient and effective options to meet implement the regional biodiversity objectives and address the resource management issue relating to biodiversity.

Of most relevance to the hearing Committee in relation to the WRC evidence would be:

- The detailed costs and benefits of Policy Option 1 which is driven by RMA S6c and the need to identify and protect SNAs as a sub-set of maintaining biodiversity
- The detailed costs and benefits of Policy Option 6 which is driven by the NZCPS, and specifically Policy 11.

WRC would also note that in relation to the NZCPS, a full S32 of the objectives and policies in that policy statement would also have been undertaken, and that a copy of that document may also be useful in the hearing Committee's deliberations on this matter.

We hope that the hearing Committee finds the additional information of some use in their deliberations.

2. Reasonable use with minor effects

The hearing Committee also requested the WRC proposed provision on Recognition of activities having minor adverse effects on indigenous biodiversity. Section 13.1.3A is presently a draft consent order and is explained below:

New Method 11.1.3A is proposed in the draft Consent Order for Indigenous Biodiversity. The new method is in response to appellants seeking exclusions from Method 11.1.3 and 11.2.2 (both methods are proposed to be amended through the draft Indigenous Biodiversity Consent Order) for activities that have minor adverse effects.

The key part of Method 11.1.3A is the first sentence which states: *Regional and district plans should include permitted activities where they will have minor adverse effects in relation to the maintenance or protection of indigenous biodiversity.* Whether an activity will have minor adverse effects in relation to the maintenance or protection of indigenous biodiversity is the key test in determining if an activity should be identified as permitted in a regional or district plan.

The second part of Method 11.1.3A (clauses (a) – (e)) sets out a number of examples of the types of activities that could be considered as having minor adverse effects. This list is not intended to be exhaustive.

11 Indigenous biodiversity

11.1 Effectiveness and efficiency of policies and methods

11.1.1 Objective 3.18 Indigenous Biodiversity

The following table summarises the policy options that have been evaluated to primarily achieve Objective 3.18 Indigenous Biodiversity.

Policy Option	RMA s32 test
<p>Policy option 1: Direction to identify and protect areas of significant indigenous biodiversity as a component of maintaining indigenous biodiversity.</p>	Effectiveness
	<p>This policy option addresses the requirements of Section 6(c) of the Resource Management Act, which is an important component of the Proposed Waikato Regional Policy Statement indigenous biodiversity objective. It also provides guidance on appropriate mitigation for unavoidable loss or damage to areas of significant vegetation and significant habitats of indigenous fauna, where activities cannot avoid adverse effects.</p> <p>A key method for implementing this policy is the criteria for determining significance of indigenous biodiversity. The criteria are similar to those in the Operative Regional Policy Statement 2000, which were developed and introduced through a robust Environment Court mediation process.</p> <p>The ongoing inclusion of criteria provides consistency and transparency to decision making. Waikato Regional Council's role in identifying areas of significant indigenous biodiversity is part of a project called 'Prioritising Natural Areas for Biodiversity Management'. The majority of costs for this project has been borne by Waikato Regional Council (with contributions from territorial authorities), as territorial authorities have identified the cost of developing schedules or inventories of areas of significant indigenous biodiversity using the criteria as a barrier to their implementation. A group of methods (11.2.1 – 11.2.4) are identified to assist with protection of areas of significant indigenous biodiversity, combining regulatory and non-regulatory approaches.</p> <p>This policy will make a strong contribution to achieving Objective 3.18 and a co-ordinated and integrated approach to the protection and management of the region's areas of significant indigenous biodiversity, which will also make some contribution to Objective 3.2.</p> <p>The policy is consistent with achieving regional community outcome 1b) under the Local Government Act 2002.</p> <p>This policy option contributes to giving effect to the New Zealand Coastal Policy Statement, including Policies 7 and 11, by identifying biodiversity under threat in the coastal environment and providing for its protection.</p> <p>The policy addresses matters under Sections 5, 7, 30(1)(a), 30(1)(b), 30(1)(c)(iia), 30(1)(ga) and provides a consistent approach to identifying biodiversity that meets Section 6(c) of the Resource Management Act across the region.</p> <p>The policy addresses matters under Section 5(2)(c) and allows for a balancing or 'weighing up' of biodiversity values in decision making.</p> <p>The policy is consistent with best practice approaches to management of areas of significant indigenous biodiversity (Quality Plan Guidance</p>

	<p>Note).</p> <p>It provides a regionally consistent set of criteria for identification and assessment. The criteria⁷³ are robust and have been developed through a comprehensive public consultation process.</p> <p>It provides a regional context within which to assess and prioritise biodiversity management of areas of significant indigenous biodiversity and assigns clear roles and responsibilities for regional and local councils. It also provides councils with a comprehensive picture of remnant areas of significant indigenous biodiversity.</p> <p>The policy provides direction and guidance to avoid adverse effects in relation to areas of significant indigenous biodiversity and what might constitute appropriate mitigation, if adverse effects are unavoidable. It also promotes collaboration between Waikato Regional Council and territorial authorities to refine data and to develop a unified approach to engaging landowners of areas of significant indigenous biodiversity.</p> <p>A unified approach to collection and analysis of ecological information for areas of significant indigenous biodiversity reduces duplication of effort and cost. It achieves better data quality through sharing of information between councils and ensures a comprehensive information base from which councils can develop more targeted biodiversity policy and methods. Enhanced data quality and quantity allows for improved region-wide monitoring of areas of significant indigenous biodiversity and habitat condition and extent.</p> <p>The policy assumes that the community and territorial authorities will support and implement the protection of areas of significant indigenous biodiversity and that councils have sufficient staff, resources and capacity to initiate the range of methods to implement the policy direction for these areas. It also assumes that monitoring and enforcement of regulatory mechanisms is adequate and that funding levels are appropriate to implement non-regulatory methods.</p> <p>There may be negative landowner and political reaction to imposition of regulatory controls on areas of significant indigenous biodiversity.</p> <p>Loss of biodiversity values within areas of significant indigenous biodiversity may still occur after 'protection', for example from lack of active management or from non-compliance.</p> <p>Summary of effectiveness: High</p>							
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⁷³ The criteria were developed and implemented through Variation 3 to the RPS (see Environment Waikato Policy series 1999/07) and subsequent Environment Court process.

	<p>biodiversity.</p> <p>Provides for appropriate ecological mitigation or enhancement of areas of significant indigenous biodiversity in those situations where adverse effects cannot be avoided.</p> <p>Improved identification and protection of biodiversity values from combined expertise and sharing of information.</p> <p>Good information of the significant indigenous biodiversity resource provides the ability to proactively manage and prioritise that resource.</p> <p>Ensures environmental outcomes are consistent with all legislative and other non-statutory frameworks.</p> <p>Enables strategic thinking and dialogue around common biodiversity issues, leading to improved outcomes.</p>	<p>Some loss of indigenous biodiversity values is allowed for, but the loss is explicit in decision making (rather than as a permitted activity) and is balanced by mitigation and remediation opportunities.</p>
	<p>Community:</p> <p>Comprehensive identification of areas of significant indigenous biodiversity provides a coherent plan for their management assisting a co-ordinated response that is justifiable, efficient and equitable.</p> <p>Collection of data at regional level reduces cost barriers at local level, provides potential for economies of scale and avoids duplication.</p> <p>Ranking sites can assist in prioritising funds, sharing costs across all levels government and prioritising management action.</p> <p>Provides for more targeted and effective planning provisions (rules are generally targeted to where values exist) and financial or other assistance.</p> <p>Provides certainty for all interested parties.</p> <p>Promotes administrative efficiencies for plans and resource consents.</p>	<p>Community:</p> <p>There are social and economic costs for landowners, councils and communities associated with research, analysis, interpretation, governance and decision-making processes, to identify, protect and collaboratively manage areas of significant indigenous biodiversity. Costs would be more clearly defined and shared under a co-ordinated approach.</p> <p>Costs may be associated with identifying precise locations for areas of significant indigenous biodiversity, which may fall on individuals, however, such costs are transparent.</p> <p>Perceived loss of financial opportunities to convert or change land use from indigenous vegetation to other 'productive' uses.</p> <p>Costs will fall to Waikato Regional Council for providing territorial authorities with district inventories of areas of significant indigenous biodiversity⁷⁶ and other biodiversity values (method</p>

⁷⁶ An approximate cost for each district is, on average, around \$100,000 (some territorial authorities provide some contribution). Funding is secured through the "Managing Priority Habitats" work brief.

	<p>Increased transparency about how and why areas of significant indigenous biodiversity have been identified.</p> <p>Reduced conflict or debate over what factors or characteristics to consider when determining values of areas of significant indigenous biodiversity.</p> <p>If regulatory incentives are provided under method 11.1.4(a), there may be positive effects on the market value of land with significant biodiversity values.</p> <p>Promotes social and economic benefits from ongoing provision of ecosystem services, such as the provision of a habitat for native birds, endemic biodiversity, landscape amenity, passive value, climate regulation and recreation. The ecosystem service benefits from indigenous forest and scrubland ecosystems have been estimated at \$500 per hectare per year⁷⁴. Similarly ecosystem service benefits from wetland ecosystems have been estimated at \$40,000 per hectare per year⁷⁵. The benefits of these values are ongoing.</p> <p>Promotes inter-generational benefits by providing for the rights of future generations to enjoy biodiversity values protected within areas of significant indigenous biodiversity.</p> <p>Promotes social and cultural benefits by contributing to the region's quality of life, cultural values, amenity values and clean, green image.</p>	<p>11.2.1).</p> <p>Costs may fall to territorial authorities (or Waikato Regional Council) for ground truthing of sites⁷⁷ and for undertaking ecological assessments of sites⁷⁸. These costs are likely to be one-off costs and may be apportioned in different ways, for example territorial authorities may pay for the assessments at time of resource consent application to balance the public good aspects of protection, or the full cost may fall to applicants who wish to remove or degrade existing values.</p> <p>The cost of incentive programmes to support biodiversity requires a secure funding base.</p>
	Summary of efficiency: Medium-High	
<p>Policy option 2: Status Quo – Regional Policy Statement criteria guide identification of areas of significant</p>	<p>Effectiveness</p> <p>The aim of this policy direction is to provide a 'hands-off' minimum guidance approach. The key method is the criteria for determining significance of indigenous biodiversity.</p> <p>It provides more flexibility than Policy option 1 to territorial authorities, while still allowing for 'significant biodiversity' to be identified in a</p>	

⁷⁴ From Patterson and Cole, 1999, *Estimation of the Value of Ecosystem Services in the Waikato Region*, Environment Waikato Internal Series 1999/02. Adjusting for inflation between 1997 and 2009 would yield a figure of \$700.

⁷⁵ Ibid. Adjusting for inflation would yield a figure of \$52,000/ha/year.

⁷⁷ "ground truthing" is verifying the SNA boundaries and the basic vegetation type which is probably required for D Plan review purposes due to scale. Cost estimate is \$100-150 per site. The number of sites varies for each district, for example Hauraki District has 136 SNAs on private land, by comparison Waitomo has 429.

⁷⁸ Ecological assessment includes compiling a full species list, assessing vegetation pattern, significance level and identifying key threats. Cost estimate is \$2-3,000 per site.

<p>indigenous biodiversity, territorial authorities protect as appropriate.</p>	<p>regionally consistent manner.</p> <p>It allows for local knowledge of land to be applied to data collection.</p> <p>It could allow for inconsistent approaches and timing to proactively manage areas of significant indigenous biodiversity, which could hamper efforts to gain region-wide understanding of biodiversity and habitat resources.</p> <p>Costs would fall mostly to territorial authorities and success would be dependent on resources and expertise at district level.</p> <p>It increases chance for duplication of effort and discourages efficient sharing of resources and knowledge.</p> <p>The policy direction would not support prioritisation of significance and importance by territorial authorities, and does not provide a set of regional priorities.</p> <p>This policy direction would allow for variable policy/method responses at local level to protect areas of significant indigenous biodiversity and would not achieve integrated management.</p> <p>Variable responses may not meet S6c) requirements.</p> <p>The Regional Policy Statement Policy Effectiveness Report on biodiversity and natural heritage found that biodiversity had continued to decline under this policy and recommended a number of policy changes to improve management.</p> <p>There is a risk that continuing this approach will not achieve Objective 3.18.</p> <p>The policy is only partially consistent with Objectives 3.18.</p> <p>Summary of effectiveness: Low</p> <table border="1" data-bbox="555 1205 1412 2087"> <thead> <tr> <th colspan="2" data-bbox="555 1205 1412 1249">Efficiency</th> </tr> <tr> <th data-bbox="555 1249 963 1294">Benefits</th> <th data-bbox="963 1249 1412 1294">Costs</th> </tr> </thead> <tbody> <tr> <td data-bbox="555 1294 963 2087"> <p>Environmental:</p> <p>Provides for consistent identification of areas of significant indigenous biodiversity.</p> <p>Biodiversity values are protected where territorial authorities take a comprehensive approach to implementation.</p> <p>Provides some ability to monitor and compare areas of significant indigenous biodiversity across the region and target funding and assistance to those landowners.</p> </td> <td data-bbox="963 1294 1412 2087"> <p>Environmental:</p> <p>Without regional direction and assistance, environmental outcomes will be variable across the region. Where implementation is incomplete, further losses in biodiversity values are likely to occur.</p> <p>Inconsistent approaches to evaluation and implementation undermine efforts to gain a regional understanding of managing areas of significant indigenous biodiversity (including cumulative effects), inhibit strategic and proactive responses, and discourage information sharing.</p> <p>Ad hoc approaches to protecting areas of significant indigenous biodiversity are leading to continuing loss of indigenous biodiversity values, particularly the cumulative effects of many small losses. For example between 1996</p> </td> </tr> </tbody> </table>	Efficiency		Benefits	Costs	<p>Environmental:</p> <p>Provides for consistent identification of areas of significant indigenous biodiversity.</p> <p>Biodiversity values are protected where territorial authorities take a comprehensive approach to implementation.</p> <p>Provides some ability to monitor and compare areas of significant indigenous biodiversity across the region and target funding and assistance to those landowners.</p>	<p>Environmental:</p> <p>Without regional direction and assistance, environmental outcomes will be variable across the region. Where implementation is incomplete, further losses in biodiversity values are likely to occur.</p> <p>Inconsistent approaches to evaluation and implementation undermine efforts to gain a regional understanding of managing areas of significant indigenous biodiversity (including cumulative effects), inhibit strategic and proactive responses, and discourage information sharing.</p> <p>Ad hoc approaches to protecting areas of significant indigenous biodiversity are leading to continuing loss of indigenous biodiversity values, particularly the cumulative effects of many small losses. For example between 1996</p>
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	<p>and 2002, 580 hectares of indigenous forest and scrub was removed, while between 1995 and 2002, the Waikato region lost a further 600 hectares (approximately) of wetlands⁷⁹ (this is in addition to the 92% of wetlands already lost between 1840 and 1995)⁸⁰.</p> <p>Losses are also likely to continue to occur outside identified areas of significant indigenous biodiversity.</p>
<p>Community:</p> <p>Councils have increased flexibility in how they protect biodiversity, and decisions are made on a case-by-case basis at the local level.</p> <p>Provides some increased certainty to landowners about location of some areas of significant indigenous biodiversity.</p> <p>Public awareness of areas of significant indigenous biodiversity is improved.</p>	<p>Community:</p> <p>Costs would fall mostly to territorial authorities (though some may be recoverable) or individual landowners within each district, and success would be dependent on resources and expertise at district level. Initial estimates suggest costs per district of \$200,000 or more to establish the necessary capacity, and \$150,000 per year on an ongoing basis.</p> <p>It increases chances of duplication of effort and discourages efficient sharing of resources and knowledge.</p> <p>The policy direction would inhibit territorial authorities and the region in prioritising levels of significance and importance.</p> <p>There is increased uncertainty about how areas of significant indigenous biodiversity will be protected, particularly where indigenous biodiversity values cross district boundaries.</p> <p>Ad hoc approaches to protection can lead to loss of ecosystem services and loss of cultural, amenity, and natural character values. The loss of ecosystem services is expected to be substantial and cumulative. For example, if losses of wetlands continued at the same rate as recorded between 1995 and 2002, this would be estimated to incur an additional \$3.4 million costs <i>each year</i>.⁸¹</p>

⁷⁹ Progress toward achievement of Environment Waikato's Regional Policy Statement Objectives: Biodiversity and natural heritage.

⁸⁰ Ausseil A-G, Gerbeaux P, Chadderton WL, Stephens T, Brown D, Leathwick J 2008. *Wetland ecosystems of national importance for biodiversity: criteria, methods and candidate list of nationally important inland wetlands*. Prepared by Landcare Research for Department of Conservation Landcare Research contract report no. LC0708/158.

⁸¹ Based on the loss of 86 hectares per year and an ecosystem service of \$40,000 per year per hectare. Ecosystem service values are derived from Patterson & Cole, 1999 – *Estimation of the value of ecosystem services in the Waikato Region* – EW Internal Series 1999/02. If figures are adjusted for inflation to show 2009 dollar values, the annual increase in annual losses would be \$4.5 million (i.e. \$52,000 x 86ha = \$4.5 million).

	<p>Over a similar period (1996-2002), the loss of 580 hectares of indigenous forest and scrub equates to additional losses in ecosystems services of between \$52,000 and \$229,000 per year.⁸²</p>
	<p>Summary of efficiency: Low</p>
<p>Policy option 3: Direction to maintain all indigenous biodiversity.</p>	<p style="text-align: center;">Effectiveness</p> <p>The aim of this policy option is to provide direction to Waikato Regional Council and territorial authorities to achieve their functions to maintain indigenous biodiversity across the landscape. Direction is provided by the Policy and supported by methods that combine regulatory and non-regulatory mechanisms to achieve the policy directions.</p> <p>The policy recognises that in order to maintain indigenous biodiversity, enhancement is sometimes required. Maintaining and enhancing indigenous biodiversity in the long term requires enhancement and restoration, both in terms of extent of ecosystems and of ecological functions and processes.</p> <p>The policy and methods adopt a ‘no net loss’ approach to biodiversity to maintain the current levels of regional indigenous biodiversity. This is particularly important in situations where biodiversity has been significantly depleted or degraded. The no net loss provision recognises that the RMA is about use and development of resources, as well as protection. It allows for competing interests around use of the biodiversity resource to be weighed and balanced against the sustainable management purpose of the RMA, including other matters of national importance.</p> <p>The methods recognise that there are a range of mechanisms by which regional and district plans can maintain or enhance indigenous biodiversity when managing activities, and provide guidance on adverse effects to be avoided, remedied or mitigated when managing activities.</p> <p>Methods also provide a range of non-regulatory approaches intended to allow councils to work collaboratively and strategically to identify opportunities and priorities for enhancement and restoration activities, to ensure that they have appropriate funding mechanisms, incentives and information to achieve positive biodiversity outcomes locally and regionally, and to develop a methodology to enable improved region-wide monitoring and assessment of ecosystem health and functioning (quality).</p> <p>This policy will make a strong contribution to achieving Objectives 3.18 and 3.7 and a co-ordinated and integrated approach to the management of the region’s indigenous biodiversity, which will also make a contribution to Objectives 3.1 and 3.11.</p> <p>The policy option provides for an assessment of the health or condition of regional biodiversity – an important component of Objective 3.18.</p> <p>The policy recognises the need for improved ecological connectivity and ecological enhancement to maintain indigenous biodiversity. It supports and complements the narrower significant indigenous biodiversity policy direction in Option 1.</p>

⁸² Based on the loss of 97 hectares per year and estimated ecosystem services valued at \$500 per year per hectare for scrub and \$2,400 per year per hectare for forest. After adjusting for inflation the annual increase in annual losses would be between \$68,000 and \$302,000.

The policy option is consistent with the requirements of the Resource Management Act Sections 5(2)(a), 5(2)(b), 6a, 6(c), 6(e), 7(d), 8, 30(1)(a), 30(1)(b), 30(1)(c)(iia), 30(1)(ga), 31(1)(b)(iii).

The policy option provides for the management of terrestrial and freshwater indigenous biodiversity beyond areas of significant indigenous biodiversity and makes a contribution to achieve Objectives 3.3, 3.8, 3.13 and 3.15.

The management of terrestrial, freshwater, coastal and marine indigenous biodiversity beyond areas of significant indigenous biodiversity will provide for those elements of indigenous biodiversity that contribute to the natural character of the coastal environment, wetlands, lakes, rivers and their margins, and of amenity values, and make a contribution to achieve Objectives 3.20 and 3.21.

The policy option addresses matters under Section 5(2)(c) and allows for a balancing or 'weighing up' of biodiversity values in decision making.

It provides regionally consistent guidance on the type of adverse effects to be avoided in relation to indigenous biodiversity and on appropriate mitigation, if effects cannot be avoided.

The policy option is consistent with achieving regional community outcome 1(b) under the Local Government Act 2002.

This policy option contributes to giving effect to the New Zealand Coastal Policy Statement, including Policies 11 and 14, by maintaining indigenous biodiversity in the coastal environment and providing for restoration of habitats.

The policy option is consistent with best practice approaches to management of areas of significant indigenous biodiversity and it addresses one of the key issues identified in the biodiversity best practice guide (Quality Plan Guidance Note), that there is inadequate information on trends in biodiversity condition for different ecosystem types to evaluate policy performance.

It provides councils with a comprehensive picture of remnant biodiversity, its extent and quality, and degree of loss.

It assumes that the community and territorial authorities will support and implement the broader approach to maintaining biodiversity, and that councils have sufficient staff, resources and capacity to initiate the range of methods to implement the policy direction.

It provides for assessment of biodiversity values that may be significant, for example ecosystems and habitats not identified as significant due to limitations of the methodology to accurately identify areas below half a hectare in size, and would otherwise be lost or modified.

It ensures a comprehensive information base from which councils can develop more targeted biodiversity policy and methods, and which enables decision making that supports biodiversity outcomes.

Enhanced data quality and quantity allows for improved region-wide monitoring of biodiversity and habitat condition and extent.

The policy option assumes that an appropriate methodology for measuring ecosystem health and condition can be developed.

The policy option assumes that Waikato Regional Council will work

with national agencies such as the Department of Conservation, NIWA and Landcare to avoid duplication and share resources in developing a methodology for measuring ecosystem health and condition.

Budgetary constraints may compromise the size of funding available to implement the range of non-regulatory methods, and inhibit development of a methodology for measuring ecosystem health and condition.

There may be negative landowner and political reaction to imposition of additional regulatory controls.

Incentives to remove or degrade indigenous biodiversity may continue to be a stronger influence on behaviour than incentives to protect it.

Summary of effectiveness: High

Efficiency

Benefits	Costs
<p>Environmental:</p> <p>Improved and more comprehensive identification, assessment and monitoring of regional biodiversity values and better management of natural (biodiversity) resources.</p> <p>Provides for assessment of cumulative adverse effects on biodiversity values and for adaptive management.</p> <p>Provides clarity and consistency on the types of adverse effects to be managed in relation to indigenous biodiversity.</p> <p>Provides for appropriate ecological mitigation or enhancement in those situations where adverse effects cannot be avoided.</p> <p>The more common or degraded indigenous biodiversity can contribute to the overall ecological health and indigenous character of the region.</p> <p>Good information of the biodiversity resource provides the ability to proactively manage that resource and to apply flexible approaches to suit varying situations in each district.</p> <p>Biodiversity values outside of areas of significant indigenous biodiversity can be assessed as part of decision making.</p> <p>Supports management of areas of significant indigenous biodiversity by recognising links,</p>	<p>Environmental:</p> <p>Allows for some loss of indigenous biodiversity values, but loss is explicit in decision making (rather than as a permitted activity) and balanced by mitigation and remediation opportunities.</p> <p>Territorial authorities have widely varying capacities to assess potential impacts of proposed land use activities on terrestrial biodiversity and habitat.</p> <p>Implementation may lack consistency across different districts and across different types of areas of significant indigenous biodiversity and habitat types.</p>

	<p>connections and buffers across the landscape.</p> <p>Provides for improved resilience for biodiversity to cope with climate change.</p> <p>Enables regional plan to develop stronger methods for biodiversity protection consistent with biodiversity policy effectiveness report recommendations.</p> <p>Clarifies that Waikato Regional Council develops policies and rules for areas of significant indigenous biodiversity in the coastal marine area, freshwater and riparian margins.</p>	
	<p>Community:</p> <p>Better and more comprehensive biodiversity information able to be incorporated into decision making.</p> <p>Collection of data at a regional level reduces cost barriers at local level, reduces significant information gaps and avoids duplication.</p> <p>Consistent regional development of methodology to monitor ecosystem health will result in improved biodiversity outcomes in future, with the potential to generate large ecosystem service values.</p> <p>Provides clarity about where biodiversity condition is declining and where to apply resources to manage it.</p> <p>Provides for more effective and targeted planning provisions and financial or other assistance to affected landowners.</p> <p>Provides certainty for all interested parties.</p> <p>Promotes social and economic benefits from ongoing provision of ecosystem services. The values provided by ecosystems vary widely, depending on type. For example the ecosystem service benefits associated with indigenous forest and scrubland ecosystems have been estimated at \$500 per hectares per year; for wetland ecosystems the estimate is \$40,000/ha/yr; for estuarine</p>	<p>Community:</p> <p>There are social and economic costs for landowners, councils and communities associated with research, analysis, interpretation, governance and decision-making processes, to identify, protect and collaboratively manage indigenous biodiversity. Costs are likely to be ongoing, but can be more clearly defined and shared under a co-ordinated approach.</p> <p>Where changes to regional and district plans affect the ability of landowners to undertake particular activities or to subdivide, market values of land may be affected. Estimating the size and extent of such effects is difficult without the information that would be gathered under the proposed methods.</p> <p>Costs may be associated with identifying precise locations of remnant indigenous biodiversity, which may fall on individuals; however, such costs are transparent and territorial authorities are able to balance public good and private costs.</p> <p>The approach to land use controls are somewhat more restrictive than the status quo and associated administrative costs may be higher. It is noted, however, that such an approach should be currently undertaken as part of the Resource Management Act framework, in which case additional costs of the policy are minor.</p>

<p>ecosystems the estimate is \$46,000/ha/yr; for lakes the figure is \$20,000/ha/yr; for rivers it is \$17,000/ha/yr and for the coastal zone it is \$8,000/ha/yr⁸³. Each hectare of functional ecosystem that is protected represents an annual stream of benefits from services provided.</p> <p>Promotes inter-generational benefits by providing for the rights of future generations to enjoy indigenous biodiversity values.</p> <p>Promotes social and cultural benefits by contributing to the region's quality of life, amenity values and clean, green image.</p> <p>Promotes ongoing relationship of Māori with indigenous biodiversity and habitats.</p> <p>Reflects that territorial authorities have a closer relationship with landowners with biodiversity values on their land.</p> <p>The different levels of local government can provide for more targeted and effective planning provisions and financial or other assistance.</p> <p>If regulatory incentives are provided, there may be positive effects on the market value of land with important biodiversity values.</p>	<p>For indigenous biodiversity values under the threshold for identification (less than 0.5 hectares in size), there may still be uncertainty for landowners as to whether they are affected.</p> <p>Additional costs incurred (to councils and landowners or developers) in bringing all biodiversity values into decision making, and in terms of ecological expertise. Territorial authorities can incur these costs or pass them onto landowners and applicants.</p> <p>Waikato Regional Council is likely to incur increased costs to implement the range of advocacy methods to achieve this policy direction, the most significant being collaborative development of local biodiversity strategies (requiring an estimated one full-time staff member, costing around \$150,000 over a two to three year period = \$300,000 to \$450,000). Other costs largely absorbed by current regional integration team budgets.</p> <p>Costs of developing methodology to measure ecosystem health are highly uncertain, but likely to be significant, and could fall largely on Waikato Regional Council and ratepayers. However, costs may be offset through a collaborative national effort, including co-ordination with other regional councils⁸⁴.</p> <p>The financial costs of monitoring are estimated to require one full-time equivalent staff member on an ongoing basis, that is, \$150,000 per year.</p> <p>Territorial authorities are likely to incur increased costs to be involved in local biodiversity strategies (possibly one half to one full-time equivalent staff member for between six and 12 months per territorial authority (\$37,500 - \$150,000)).</p>
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⁸³ Patterson & Cole, 1999 – Estimation of the value of ecosystem services in the Waikato Region – EW Internal Series 1999/02, unadjusted for inflation. Adjusted for inflation between 1997 and 2009, these figures would be \$700/ha/year for scrubland; \$52,000/ha/year for wetlands; \$61,000/ha/year for estuaries; \$27,000 for lakes; \$23,000 for rivers; and \$10,600 for the coastal zone.

⁸⁴ See MAC report Exec Summary recommendation 5 – national guidance on biodiversity info and monitoring extent and character, and TFBIS funding application seeking consistent approach to monitoring biodiversity on private land by all regional councils.

		<p>Costs of gathering information are expected to average approximately \$20,000 per year. An additional cost of maintaining the inventory, disseminating information, and interpreting the data for territorial authorities is initially estimated as equivalent to a half to one full-time equivalent staff member (\$75,000 - \$150,000) on an ongoing basis.</p> <p>There is the potential for confusion from landowners who must engage with different councils across boundaries.</p>		
	Summary of efficiency: Highly efficient			
<p>Policy option 4: Identify and protect areas of significant indigenous biodiversity as the <i>only</i> approach to maintain indigenous biodiversity.</p>	<table border="1"> <thead> <tr> <th data-bbox="480 651 1340 701" style="background-color: #cccccc;">Effectiveness</th> </tr> </thead> <tbody> <tr> <td data-bbox="480 701 1340 1960"> <p>This policy option focuses on identification and protection only of areas of significant indigenous biodiversity, without acknowledgement of indigenous biodiversity values beyond these areas. The key methods for this policy option are those identified in Option 1 above. This policy direction prioritises management intervention and available resources to selected areas only.</p> <p>This policy may partially achieve Objectives 3.18 and 3.7, however there is a risk that continuing this approach longer term will not achieve these objectives.</p> <p>This policy is partially consistent with achieving regional community outcome 1(b) under the Local Government Act 2002.</p> <p>This policy is consistent with S(6c) of the Resource Management Act 1991.</p> <p>This policy helps to prioritise scarce resources to the higher value sites.</p> <p>This policy will not address matters under sections 5(2)(a), 5(2)(b), 5(2)(c), 6(a), 6(e), 7(d), 8, 30(1)(a), 30(1)(b), 30(1)(c)(iia), 30(1)(ga), 31(1)(b)(iii).</p> <p>The policy will not address the issue of ongoing loss of indigenous biodiversity beyond areas of significant indigenous biodiversity .</p> <p>The policy will not consider indigenous biodiversity that buffers, links or otherwise supports or complements the management of areas of significant indigenous biodiversity.</p> <p>A focus on areas of significant indigenous biodiversity alone will not improve ecological integrity or provide for the life-supporting capacity of ecosystems. Over time, this will impact on the areas of significant indigenous biodiversity themselves, reducing their functioning and resilience.</p> <p>The policy will not consider potentially significant areas of less than 0.5 hectares in size that are not captured by the methodology.</p> <p>It provides a regionally consistent set of criteria for identification and</p> </td> </tr> </tbody> </table>		Effectiveness	<p>This policy option focuses on identification and protection only of areas of significant indigenous biodiversity, without acknowledgement of indigenous biodiversity values beyond these areas. The key methods for this policy option are those identified in Option 1 above. This policy direction prioritises management intervention and available resources to selected areas only.</p> <p>This policy may partially achieve Objectives 3.18 and 3.7, however there is a risk that continuing this approach longer term will not achieve these objectives.</p> <p>This policy is partially consistent with achieving regional community outcome 1(b) under the Local Government Act 2002.</p> <p>This policy is consistent with S(6c) of the Resource Management Act 1991.</p> <p>This policy helps to prioritise scarce resources to the higher value sites.</p> <p>This policy will not address matters under sections 5(2)(a), 5(2)(b), 5(2)(c), 6(a), 6(e), 7(d), 8, 30(1)(a), 30(1)(b), 30(1)(c)(iia), 30(1)(ga), 31(1)(b)(iii).</p> <p>The policy will not address the issue of ongoing loss of indigenous biodiversity beyond areas of significant indigenous biodiversity .</p> <p>The policy will not consider indigenous biodiversity that buffers, links or otherwise supports or complements the management of areas of significant indigenous biodiversity.</p> <p>A focus on areas of significant indigenous biodiversity alone will not improve ecological integrity or provide for the life-supporting capacity of ecosystems. Over time, this will impact on the areas of significant indigenous biodiversity themselves, reducing their functioning and resilience.</p> <p>The policy will not consider potentially significant areas of less than 0.5 hectares in size that are not captured by the methodology.</p> <p>It provides a regionally consistent set of criteria for identification and</p>
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assessment of areas of significant indigenous biodiversity. The criteria⁸⁵ are robust and have been developed through a comprehensive public consultation process.

The policy provides a regional context within which to assess and prioritise management of areas of significant indigenous biodiversity and assigns clear roles and responsibilities for regional and local councils with respect to these areas. It provides direction and guidance on the type of adverse effects to be avoided in relation to areas of significant indigenous biodiversity and what might constitute appropriate mitigation, if effects cannot be avoided.

It provides for collaboration between regional council and territorial authorities to refine data on areas of significant indigenous biodiversity and to develop a unified approach to engaging landowners with these areas on their property.

Budgetary constraints may compromise the size of funding available to implement the range of non-regulatory methods. There may also be negative landowner and political reaction to imposition of additional regulatory controls.

Summary of effectiveness: Medium

Efficiency	
Benefits	Costs
<p>Environmental:</p> <p>Improved and more comprehensive identification of areas of significant indigenous biodiversity, consistent implementation and decision making.</p> <p>Highest priority ecosystems, habitats, and areas with regionally significant biodiversity values that satisfy assessment criteria are protected.</p> <p>A focused and targeted approach to highest priority areas can improve active management.</p> <p>In general, the benefits of protecting a given area are expected to be greatest where biodiversity losses have been greatest in the past.</p> <p>The reduced risk of further loss of ecosystem types and associated indigenous species of flora and fauna.</p>	<p>Environmental:</p> <p>There may be short-term risks to biodiversity until provisions are included in all levels of relevant plans. For example, landowners with areas of significant indigenous biodiversity on their property may react negatively, resulting in potential loss of biodiversity values before plan provisions are 'locked in'.</p> <p>Loss of biodiversity values may still occur after protection, for example from lack of active management or from non-compliance.</p> <p>A focus on areas of significant indigenous biodiversity alone will not improve ecological integrity or provide for the life-supporting capacity of ecosystems.</p> <p>There may be a loss of biodiversity values outside of areas of significant indigenous biodiversity through lack of active management, or due to values not being considered as part of consent or plan processes. Losses outside of areas of significant indigenous biodiversity will lead to increased fragmentation of remnant ecosystems, and consequently</p>

⁸⁵ The criteria were developed and implemented through Variation 3 to the RPS (see Environment Waikato Policy series 1999/07) and subsequent Environment Court process.

		<p>reduce the environmental benefits generated by the network of areas of significant indigenous biodiversity itself.</p> <p>A reduced ability to plan strategically may undermine the health and function of areas of significant indigenous biodiversity.</p> <p>A focus on protecting fragments will not provide resilience to potential climate change impacts.</p>
	<p>Community:</p> <p>Lower social and economic resource costs for landowners with 'non-significant' biodiversity values.</p> <p>Reduced implementation costs for territorial authorities and Waikato Regional Council as policy deals only with areas containing significant values.</p> <p>Greater clarity of roles, reducing the potential for duplication of functions across local government, and avoids associated costs.</p> <p>Better biodiversity information is able to be incorporated into decision making on areas of significant indigenous biodiversity, however, there will be gaps in information reflecting the limitations to the methodology. In particular, it focuses on areas greater than half a hectare.</p> <p>The values provided by ecosystems vary widely, depending on the type. For example, wetlands are estimated to provide services valued at \$40,000 per hectare per annum, whereas forests provide services of approximately \$2,400 per hectare per annum⁸⁶. Each hectare of functional ecosystem that is protected as part of an area of significant indigenous biodiversity represents an annual stream of benefits from services provided.</p>	<p>Community:</p> <p>Where changes to regional and district plans affect the ability of landowners to undertake particular activities or subdivide, market values of land may be affected. The information required to estimate size and extent of such effects would occur as part of the implementation of policy option 1. However, since it only applies to areas of significant indigenous biodiversity, the affected properties will be fewer than under policy option 3 (substantially fewer in some districts, and marginally fewer in others).</p> <p>Providing territorial authorities with inventories of areas of significant indigenous biodiversity is estimated to cost Waikato Regional Council, on average, around \$100,000 per district.</p> <p>The cost of identifying precise locations and ecological values of remnant indigenous biodiversity may range from \$100 for ground truthing, up to \$5,000 for developing a management plan per site. These costs may be borne by councils, or may be recovered from landowners. The number of areas of significant indigenous biodiversity in each district varies, for example, there are 123 areas of significant indigenous biodiversity identified on private land in Hauraki compared with 481 areas of significant indigenous biodiversity identified in Waitomo. The cost of implementing management plans will also vary widely.</p>

⁸⁶ Patterson & Cole, 1999 – Estimation of the value of ecosystem services in the Waikato Region – EW Internal Series 1999/02, unadjusted for inflation.

	<p>There is no ability to assist landowners with indigenous biodiversity values that are not significant but still important.</p> <p>To the extent that biodiversity and associated ecosystem services are lost outside areas of significant indigenous biodiversity, there will be an annual stream of costs (services lost), ranging in size depending on the type of ecosystem.</p> <p>There are social and economic costs associated with the loss of contribution to quality of life, amenity values and clean, green image. Such costs are ongoing (permanent).</p> <p>The policy will not promote the relationship of Māori with indigenous biodiversity and habitats.</p> <p>The policy will not promote inter-generational equity, as future generations will be denied access to enjoy indigenous biodiversity.</p>
	Summary of efficiency: Moderate-low
Policy option 5: Collaborative management.	<p style="text-align: center;">Effectiveness</p> <p>This policy option recognises the importance of engaging with landowners and land managers, and co-ordinating the range of agencies that need to be involved to achieve integrated management of the region's indigenous biodiversity. This policy option is supported by non-regulatory methods that encourage positive behaviour, information sharing and awareness in relation to indigenous biodiversity. This policy option is an important corollary to some of the earlier regulatory-based options, and is informed by information gathering and monitoring methods. These methods provide the ability to assess the range of mechanisms to improve collaborative management within a more coherent regional biodiversity picture.</p> <p>The policy will make a strong contribution toward achieving Objective 3.18 and a co-ordinated and integrated approach to the maintenance and enhancement of the region's indigenous biodiversity, which will also make a contribution to achieving Objective 3.2.</p> <p>The policy addresses matters under Resource Management Act sections 5, 6, 7(a), 7(aa), 7(d), 30(1)(a), 30(1)(b), 30(1)(ga), 62(1)(e).</p> <p>This policy option contributes to giving effect to the New Zealand Coastal Policy Statement, including Policy 5, by advocating requirements of other legislation.</p> <p>The policy is consistent with the report recommendations of the Ministerial Advisory Committee on Biodiversity and Private Land to encourage approaches to collaboration to enhance biodiversity on private land, and to overcome some of the barriers to action.</p> <p>The policy is complementary to the other biodiversity policy directions and would be expected to increase their expected effectiveness also. In this regard, this policy will contribute to Objectives 3.3 and 3.8.</p>

The policy allows for awareness to be raised about biodiversity issues that arise under other legislation⁸⁷ where local authorities may not have functions, but have responsibilities to pass on this information to landowners or resource users.

The policy recognises that territorial authorities, the Minister of Conservation, Minister of Fisheries and the Minister of Agriculture and Forestry have primary responsibility for the management of land and indigenous flora and fauna. Waikato Regional Council's role is to manage the use, development and protection of natural and physical resources and to control use of land to maintain biodiversity in the coastal marine area and in fresh water.

The policy supports and assists regional council co-ordination of organisations, landowners and iwi to ensure that biodiversity, ecosystems, and the protection of significant indigenous vegetation and the significant habitats of indigenous fauna are addressed through their different functions and responsibilities.

The policy supports more effective use or integration of other existing mechanisms, including funding, to enhance biodiversity.

It recognises that many landowners have acted as kaitiaki of the indigenous biodiversity remaining on their properties, and supporting landowners to maintain and enhance this into the future is an important policy direction.

It assumes that the community and territorial authorities will support and implement the policy direction, and that councils will have sufficient staff, resources and capacity to initiate the range of methods to implement the policy direction.

Summary of effectiveness: High

Efficiency

Benefits	Costs
<p>Environmental:</p> <p>Improved biodiversity management on private land from harnessing landowners' co-operation.</p> <p>Biodiversity features on private land are viewed as assets rather than liabilities.</p> <p>An improved ability to assess and target a range of incentive instruments that contribute to a coherent regional plan for biodiversity maintenance.</p> <p>The reduced risk of individual incentives creating ad hoc or disconnected protected areas with limited ecological viability or resilience.</p> <p>Improved co-ordination and clarity around roles and responsibilities</p>	<p>Environmental:</p> <p>None.</p>

⁸⁷ For example the Wildlife Act would require permits to be sought from the Director-General of Conservation if absolutely protected wildlife were to be disturbed or damaged in the course of undertaking an activity that modified its habitat.

	<p>resulting in better protection of indigenous biodiversity from combined expertise and information sharing.</p> <p>The intrinsic values of biodiversity will be protected and retained for future generations.</p>	
	<p>Community:</p> <p>Regional collaboration can avoid duplication of local level approaches and reduce inefficiency.</p> <p>Relationships with Māori landowners can provide for biodiversity protection and kaitiaki responsibilities.</p> <p>Financial and other support overcomes some of the barriers to engagement or action by landowners or groups.</p> <p>Support may stimulate private effort and commitment, and voluntary efforts will add to or exceed the value of the incentive provided.</p> <p>Landowners, community groups and iwi are valued, appreciated and supported.</p> <p>Biodiversity values are retained and may have future potential use, for example species may hold as yet unrecognised properties for medicines or cures for diseases.</p> <p>Biodiversity is retained and provides for ecosystem services, such as watershed management, nutrient cycling and tourism.</p> <p>Promotes inter-generational benefits by providing for the rights of future generations to enjoy biodiversity values to the same (or better) extent as present generations.</p> <p>Promotes social and cultural benefits by contributing to the regional community's quality of life, sense of place and cultural values.</p>	<p>Community:</p> <p>There are likely to be additional financial costs to Waikato Regional Council, reflecting the effort to engage with a variety of stakeholders across the region. In practice this is likely to involve improved co-ordination of the collaborative work undertaken in different parts of the organisation. An indicative estimate for this is that it would take around a fifth of a full time equivalent staff, or around \$30,000 per annum.</p> <p>Cost includes ongoing funding of non-regulatory methods, which requires successive council endorsement through annual plans.</p>
	Summary of efficiency: highly efficient	
Policy option 6: Safeguard coastal/marine	<p style="text-align: center;">Effectiveness</p> <p>This policy option recognises that indigenous biodiversity occurs in coastal and marine habitats and ecosystems, as well as terrestrial and freshwater habitats and ecosystems, and that there is a high level of</p>	

ecosystems.

inter-connectedness between ecosystem types. This policy option recognises the specific functions allocated to regional councils for maintaining and enhancing ecosystems in coastal water (Section 30(1)(c)(iii) Resource Management Act). This policy option contributes to giving effect to the New Zealand Coastal Policy Statement, including Policies 11 and 14, by protecting and enhancing coastal habitats and ecosystems.

It provides an outcome-based approach for important aspects of coastal ecosystems, habitat health and biological integrity. The supporting methods provide a link to identification of areas of significant indigenous biodiversity within the coastal and marine environment, recognise the benefits of protecting representative marine habitats in a marine protected area network, and provide for a regulatory approach for activities in the coastal environment to protect and enhance indigenous biodiversity.

Coastal and marine habitats and the biodiversity they support are receiving environments for the sediments and contaminants from freshwater systems that flow from catchments, requiring a strong focus on a whole of catchment approach⁸⁸.

The policy will make a strong contribution to the achievement of Objectives 3.18, 3.6 and 3.15, and a co-ordinated and integrated approach to the protection, maintenance and enhancement of the region's coastal and marine indigenous biodiversity, which will also make a contribution to Objectives 3.1 and 3.2.

The policy addresses matters under Resource Management Act sections 5, 6, 7, 8, 30(1)(a), 30(1)(b), 30(1)(c)(iii), and 30(1)(ga).

The management of coastal and marine indigenous biodiversity will assist in the protection and enhancement of those elements of indigenous biodiversity that contribute to the natural character of the coastal environment, lakes, wetlands and their margins, and to amenity values, and make a contribution to achieve Objectives 3.20 and 3.21.

An integrated catchment response to implement this policy is consistent with and gives effect to Sections 7 and 8 of the Hauraki Gulf Marine Park Act.

It assumes that both Waikato Regional Council and territorial authorities have sufficient staff, resources and capacity to implement a catchment-wide approach.

Summary of effectiveness: Medium-High

Efficiency

Benefits	Costs
<p>Environmental: Provides for improved management of coastal and marine biodiversity.</p> <p>Provides for improved integrated management of catchments and land-water margins.</p> <p>Provides clear direction for development of regional plan policy, rules and other methods</p>	<p>Environmental: There may be some loss of significant marine/coastal biodiversity in areas under the 0.5 hectare threshold for identification.</p>

⁸⁸ This is exemplified by the Coromandel Blueprint process – an inter-agency project that looks at the use, development and protection of resources in a holistic manner for the Coromandel Peninsula with implementation based on catchments or groups of catchments and responses that cross usual jurisdictional boundaries.

<p>for coastal and marine biodiversity.</p> <p>The intrinsic values of indigenous coastal and marine biodiversity are protected and retained for future generations.</p>	
<p>Community:</p> <p>Community and inter-agency strengthening as a result of integrated approach.</p> <p>Establishes a clear intent and direction to protect coastal and marine biodiversity.</p> <p>Provides certainty and clarity to resource users as to coastal and marine biodiversity outcomes.</p> <p>Assists and clarifies with territorial authorities' roles and responsibilities with respect to catchment-wide approaches, and promotes administrative efficiencies for plans.</p> <p>Targets directly some of the key causes of coastal and marine ecosystem degradation.</p> <p>Coastal and marine biodiversity is retained and provides for ecosystem services such as watershed management, nutrient cycling and tourism. The ecosystem service benefits associated with coastal and marine areas are typically very high, ranging from \$500 per hectare for the coastal marine area to \$46,000 per hectare for estuarine ecosystems⁸⁹.</p> <p>Promotes social and cultural benefits by contributing to the regional community's quality of life, sense of place and cultural values.</p> <p>Promotes inter-generational benefits by providing for the rights of future generations to enjoy coastal and marine biodiversity values to the same (or better) extent as present generations.</p> <p>Coastal and marine biodiversity values are retained and may have future potential use.</p>	<p>Community:</p> <p>Effective management of coastal and marine biodiversity depends partly on the wider catchment. The costs of catchment management are high, but are only partially attributable to this policy.</p> <p>Implementation will require actions such as identification and mapping, ecological assessments, and where necessary, development of management plans. There is less certainty about these costs than is the case for terrestrial sites. However, as an example, estuarine mapping costs Waikato Regional Council between \$1,700 and \$8,000 per harbour, plus internal staff time.</p> <p>Costs may be associated with identifying precise locations for coastal/marine areas of significant indigenous biodiversity, which may fall on individuals. However, such costs are transparent.</p> <p>For coastal indigenous biodiversity values under the threshold for identification (less than 0.5 hectare) there may still be uncertainty for landowners as to whether they are affected.</p>

⁸⁹ Patterson & Cole, 1999 – Estimation of the value of ecosystem services in the Waikato Region – EW Internal Series 1999/02, unadjusted for inflation.

	Promotes the ongoing relationship that Māori have with indigenous biodiversity within coastal and marine habitats.	
	Summary of efficiency: Medium-High	
Policy option 7: Do nothing.	Effectiveness	
	This option is not consistent with Objective 3.18, and it will also limit the achievement of Objectives 3.1, 3.2, 3.3, 3.6, 3.7, 3.8, 3.11, 3.13, 3.15, 3.20 and 3.21.	
	This option will not address matters under sections 5, 6, 7, 30(1)(a), 30(1)(b), and 30(1)(ga) of the Resource Management Act.	
	This option does not acknowledge the 2003 amendment to the Resource Management Act and the clear role of regional councils in biodiversity management. It would not give effect to the New Zealand Coastal Policy Statement.	
	This option relies on ad hoc protection measures applied by territorial authorities without clear regional guidance or direction, and will not achieve integrated management.	
	This option would be a dereliction of functions and duty under the Resource Management Act.	
	Summary of effectiveness: Low	
	Efficiency	
	Benefits	Costs
	Environmental:	Environmental: There is a high risk of further loss and degradation of indigenous biodiversity values if no regional direction is provided. Between 1996 and 2002, an average of 80-90 hectares of wetland and nearly 100 hectares of forest and scrub was lost each year. The irreversible loss of remnant biodiversity would be expected to continue or even accelerate. Loss of intrinsic biodiversity value.
	Community: There may be windfall gains to individual landowners if restrictions on activities are removed.	Community: Biodiversity values and ecosystem services would continue to be lost. Each 'unit' lost would result in the loss of an annual stream of ecosystem service benefits. Moreover, the value of the benefits lost would increase as the remnant biodiversity in the region became increasingly scarce. Estimates of ecosystem service values were derived for the Waikato region in 1998. These figures do not take account of inflation, nor the increase in scarcity. These values (and the type of services provided) vary widely, depending

		<p>on the ecosystem type, for example agricultural land provides approximately \$1,000 per hectare, forest \$2,400 per hectare and wetlands \$40,000 per hectare⁹⁰.</p> <p>Lack of action now could lead to increased costs of restoring and recreating habitats and species later.</p> <p>There would be no direct financial costs for Waikato Regional Council from this policy option.</p> <p>Territorial authorities may face substantial costs if they choose to fill the gap left by Waikato Regional Council.</p> <p>Costs would be incurred as each local authority would have to develop an appropriate policy response on a case-by-case basis, increasing the likelihood of duplication and inefficiency.</p> <p>The increased social and economic costs from loss of quality of life, cultural values associated with biodiversity, sense of place and amenity values.</p> <p>The cost to future generations from loss of biodiversity values now.</p>
Summary of efficiency: Not efficient		

11.2 Risk of acting or not acting

Section 32(4)(b) of the Resource Management Act requires the evaluation of appropriateness to take account of 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.

With regards to indigenous biodiversity, there is sufficient information upon which to base analysis as to the appropriateness of acting or not acting. There is sufficient information to demonstrate the scale and nature of the biodiversity problem, and the policies and methods proposed will add to the level of regional biodiversity knowledge over time. A combination of rules and incentives to implement the policies can be targeted to where the biodiversity values exist and to provide a balance of public good and private cost. Waikato Regional Council would take the lead in promoting integrated management practices across the Waikato region.

The risk of not acting in the proposed ways is that the regionally significant issue of ongoing biodiversity loss and degradation will continue into the future. Objectives and policies to address the issue will become less effective and more difficult to implement, if the issue is allowed to persist. This will increase costs into the future.

⁹⁰ Patterson & Cole, 1999 – Estimation of the value of ecosystem services in the Waikato Region – EW Internal Series 1999/02, unadjusted for inflation.

The risk of acting in the ways proposed is that costs may be imposed on individual landowners and on the community, local government and developers.

11.3 Appropriate policies and methods

The following table summarises the appropriateness of the policy options to achieve Objective 3.18:

Policy Option	Effectiveness	Efficiency	Selected Option/s
Policy option 1: Direction to identify and protect areas of significant indigenous biodiversity as a component of maintaining indigenous biodiversity.	High	Medium-High	Yes [Policy 11.2]
Policy option 2: Regional Policy Statement criteria guide identification of areas of significant indigenous biodiversity and Territorial Authorities protect as appropriate.	Low	Low	No
Policy option 3: Direction to maintain all indigenous biodiversity.	High	High	Yes [Policy 11.1]
Policy option 4: Identify and protect areas of significant indigenous biodiversity as the sole approach to maintain indigenous biodiversity.	Medium	Medium-Low	No
Policy option 5: Collaborative management.	High	High	Yes [Policy 11.3]
Policy option 6: Safeguard coastal and marine ecosystems.	Medium-High	Medium	Yes [Policy 11.4]
Policy option 7: Do nothing.	Low	Low	No

Having regard to this information, and taking into account the benefits and costs, and the risks of acting or not acting due to insufficient information, it is proposed that the most appropriate way of achieving Objective 3.18 is by inclusion of policy options 1, 3, 5, and 6.

11.4 Policies and methods in the Regional Policy Statement

The evaluation concludes that, having regard to their efficiency and effectiveness, the policies and methods contained within the Proposed Waikato Regional Policy Statement (Decisions version) Chapter 11 Indigenous Biodiversity are the most appropriate for achieving the objectives.