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Applying strategic environmental assessment to land use and resource management plans in Scotland and New Zealand: a comparative analysis.

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Abstract

A comparative analysis of strategic environmental assessment (SEA) processes is provided for two planning regimes with common origins that have recently radically diverged. New Zealand passed legislation in 1991 that placed sustainable resource management at the centre of its new 'environmental effects' based regime. Following political devolution in 1997, Scotland retained its traditional regime, but has sought to refocus this to deliver key elements of a Scottish sustainable development strategy. The Glasson-Gosling typology is used to classify the SEA processes applied to statutory planning by each regime. The New Zealand Resource Management Act (RMA) has elements of holistic and incremental SEA. The current use of sustainability appraisal in Scotland can be regarded as a stapled form of SEA, whereas the application of the new European Union SEA Directive will require a more concurrent approach. Case studies are used to explore the extent to which statutory emphasis on assessment of environmental effects is compatible with holistic SEA that embraces socio-economic factors.

Planning and sustainable development in Scotland and New Zealand

In spite of a series of policy and legislative initiatives over the past decade intended to transform their land use and resource management systems into tools for promoting sustainable development, environmental planners in New Zealand and Scotland have yet to realise the desired outcomes. A survey undertaken by New Zealand's Parliamentary Commissioner for the Environment of his country's efforts to implement Agenda 21 since the 1992 Rio Earth Summit observed that the country's innovative 1991 Resource Management Act (RMA) had played a "dominant role… in shaping New Zealand thinking about sustainability (i.e. it is an environmental matter)", and that this "appears to have slowed the adoption of sustainability principles into economic and social policies" (PCE, 2002: 4). In the same vein, commenting on the report it commissioned from a recently retired senior Scottish civil servant to review progress since devolution on implementing a Scottish sustainable development strategy (Birley, 2001), a Scottish environmental group accused the Scottish Executive of confusing actions with coherent policies. It asserted "the bits don't hang together… There's no strategy, and no analysis on which to base one… It's like a string of beads without the string" (WWF-Scotland, 2001: 1).

One of the principal tools now available to environmental planners in promoting sustainability is the strategic environmental assessment (SEA) of policies, plans and programmes. The European Union's SEA Directive comes into effect in Member States on 21 July 2004. Its objective is "to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that…an environmental assessment is carried out on certain plans and programmes which are likely to have significant effects on the environment" (CEC, 2001: Article 1). New Zealand's RMA offers a similar opportunity to promote sustainability. Its objective is to manage the use, development and protection of natural and physical resources so as to enable "people and communities to provide for their social, economic and cultural well-being and for their health and safety", while "sustaining the potential of natural and physical resources", "safeguarding the life-supporting capacity" of the biosphere, and "avoiding, remedying, or mitigating any adverse effects of activities on the environment." (RMA, 1991: Section 5).

This paper examines the role of SEA as a key mechanism to deliver more sustainable plans and to assuage criticisms about the current environmental performance of both planning regimes. It starts by examining the divergent planning pathways that these two regimes have followed in recent years and how this has affected their capacity to implement SEA. An SEA typology is then applied to classify the approaches, and tested against case studies of the application of SEA to development plans under each regime. The comparative

lessons drawn from these case studies form the basis for an evaluation of current SEA practice as a tool to promote sustainable development.

Scottish spatial planning and SEA

Current official guidance requires Scottish land use strategies to address the economic, social and environmental issues of sustainable development. Statutory planning is tasked with guiding "the future development and use of land in cities, towns and rural areas in the long term public interest… to ensure that development and changes in land use occur in suitable locations and are sustainable" (SEDD, 2002: para 4). The delivery of sustainability objectives requires "co-ordinated action to combine economic competitiveness and social justice with environmental quality and justice", with planning "providing a means of integrating policies and decision making through its influence over the location of development and other changes in the way land is used"(*ibid*., paras 6-7).

The tool-kit available to Scottish planners to fulfill this remit has expanded over the past decade. Project-based environmental impact assessment (EIA) is now firmly embedded within the Scottish planning system, following implementation of the 1985 European Union EIA Directive and its 1997 revision, which tightened various requirements in the light of operational experience (SEDD, 1999a & 1999b). The SEA of development plans has evolved more gradually, from an initial Whitehall emphasis on desk-based in-house environmental policy appraisal (DoE, 1991), through good practice guides still focused primarily on environmental considerations (DoE, 1993; DTA, 1995), to the development of sustainability appraisal (SA) techniques for evaluating development plans in terms of appropriate local, regional or national sustainability frameworks (Baker Associates, 1999; DETR, 2000b).

The EU SEA Directive comes into force on 21 July 2004. Interim Scottish planning guidance (DTA, 2003) indicates that this will require further significant modification of the current appraisal techniques that are applied to Scottish development plans (Jackson, 2003). The changes include greater emphasis on:

- collecting and presenting baseline environmental information;
- predicting the significant environmental effects of the plan and addressing them during its preparation;
- identifying strategic alternatives and their effects;
- consulting the public and environmental authorities as part of the assessment process;
- monitoring the actual effects of the plan during implementation.

Compliance with the EU SEA Directive will also require a number of specific additional process outputs:

- the preparation of an environmental report on the likely significant effects of the plan;
- a public consultation phase on the draft plan together with its environmental report;
- the formal incorporation of the results of the environmental report and of ensuing public consultations into subsequent decision-making;
- formal demonstration of how the results of an SEA have been taken into account when the plan is publicly adopted.

Our Scottish case study examines the SA of a structure plan and considers how these additional requirements may be fulfilled.

New Zealand effects-based planning and SEA

Changes in the Scottish planning system since political devolution have been far less radical than those implemented by New Zealand since the mid-1980s. The overhaul of New Zealand's approach to environmental management reflects the country's ideological switch in economic development strategies. This has produced a move away from heavy reliance on State corporatism to promote export-based commodity exports within a highly protected domestic market (Moran, 1989), towards a market-driven emphasis on deregulation, down-sizing of the public sector, and the opening up of domestic markets to international competition. The new approach to statutory planning in New Zealand is the product of creative tension between advocates of the greening of government environmental policies and neo-liberal believers in the virtue of market-driven reform. For some informed New Zealand commentators, the RMA is simply "an attempt to establish two potentially conflicting ideologies – economic liberalism and sustainability – for planning", (Gleeson, 2000:116). An alternative interpretation is that this new discourse coalition has applied an ecological modernisation agenda (Jackson & Dixon, 2004) to the New Zealand planning system.

However interpreted, the RMA replaced more than fifty planning, conservation and environmental protection statutes previously enforced by a myriad of ministries, agencies and authorities mandate with a major piece of consolidating legislation that fundamentally refocused the thrust of land use planning and resource management in New Zealand. Previous divisions of government responsibility for the environment struggled to cope with a conflict between the role of the State as a major agent in the commercial development of the country's resource base and its stewardship of the country's natural resources. These have been replaced with a co-operative, devolved mandate, giving a newly rationalised two-tier local government system the primary responsibility for enforcing combined land use planning and environmental protection controls through a system of resource consents. As the current Minister for the Environment recently confirmed, the RMA embodies a neo-liberal philosophy of minimal government intervention into people's affairs together, where necessary,

with intervention at the lowest level compatible with efficiency. The Minister emphasised that this principle "is central to the Resource Management Act", which regards local communities as "best placed to make decisions about their future and their environment" (Hobbs, 2003: C2).

The Act has facilitated a shift from the more prescriptive style of land use zoning to an effects-based approach that places emphasis on the biophysical environment, with limited consideration of social and economic considerations. What has emerged is a system that can be described as 'effects-based planning'. Although much depends on the requirements of the particular sets of district and regional plans in place, applicants now need to provide an 'assessment of environmental effects' (AEE), which effectively puts EIA procedures at the heart of development control (Schedule 4, RMA). In doing so, applicants need to show that they can meet any performance standards and 'avoid, remedy or mitigate' potential environmental externalities (Section 5, RMA).

As part of the new philosophy of restricting intervention in development to the control of environmental externalities that market forces cannot address, Sections 24 and 36 of the RMA promote the use of economic instruments, allowing planning authorities to make the 'polluter' pay by passing on the full costs of administering the resource consent system, including any modifications to plans, in the form of charges to applicants. The plans required under the Act provide the basis for determining resource consents in terms of their environmental effects, so that they must of necessity embody a form of SEA. However, the slow emergence of clear official guidance on national standards and objectives has allowed SEA in New Zealand to evolve without a clearly agreed methodology, as our case study makes clear.

The role of SEA in Scottish and New Zealand planning

Glasson & Gosling (2001: 92) offer a typology for SEA that distinguishes the various ways this tool may be incorporated into the preparation of strategic land use and resource management plans:

- the *incremental* model to which project EIA techniques can be readily applied: 'EIA as plan-making';

- the *stapled* model where SEA is undertaken as a single act at a specific stage of the plan-making process: the 'EIA of plans';

- the *concurrent* model, where SEA is undertaken at various stages of the plan-making process in an iterative fashion: 'EIA in plan-making';

- the *holistic* model in which EIA becomes the tenet of the plan-making process to the extent that its presence as a separate exercise disappears: 'plan-making as EIA'.

The Scottish approach: concurrent or stapled?

Prior to implementation of the EU Directive, the preferred methodology for SEA in the UK has been 'objectives-led' policy appraisal (Baker Associates, 1999; DETR, 2000b). Rather than placing primary emphasis on the establishment of an environmental baseline and then predicting changes in this consequent on adoption of the plan, which can be characterised as incremental ('EIA as plan-making'), 'bottom-up' (Marsden, 2002) or 'baseline-led' (Smith & Sheate, 2001) SEA, objectives-led SA focuses on testing the plan for its consistency with sustainability policies. A set of sustainability criteria (DETR, 2000a) is used to test conformity of the strategies, policies and proposals contained in development plans with national and regional sustainability frameworks. Advocates claim that this methodology promotes "precision through the use of objectives and targets to define sustainable development benchmarks, against which the emerging…strategy can be iteratively appraised." DETR, 2000b: para 2.6).

Several evaluations of the application of this approach to UK development plans have been undertaken. Surveying its use for the environmental aspects of sustainability, Curran *et al* (1998: 429) concluded that "the utility of an environmental appraisal depends on the *stage at which it takes place during the plan-preparation process* and the *degree to which the findings of the appraisal are integrated into the decision making stage*" (authors' italics). In a subsequent review of the effectiveness of this approach when extended to cover socio-economic aspects of sustainability, Thérivel and Minas (2002) confirmed the importance of early and iterative appraisal of strategic options, and identified the need for an independent element in the appraisal process to introduce fresh thinking and add authority to the process.

Both these post-audit evaluations support what Glasson and Gosling term a concurrent approach, in which SEA functions as a form of 'EIA in plan-making'. Hitherto, Scottish development plans have not succeeded in applying SEA in this iterative fashion, beginning the exercise at an early stage in plan preparation and running it in parallel with the drafting exercise. As part of the process of creating English regional bodies, Whitehall issued guidance on SA (DETR, 2000b) that recommended the use of external consultants to provide the independent element of appraisal. Although well-intentioned, this advice encouraged the use of a stapled approach to SEA in appraising UK development plans. Current practice commonly sees a draft compiled by in-house planning practitioners subsequently subject to a limited period of SEA testing by external consultants, producing an 'EIA of plans'. This approach, driven partly by cost considerations, is gradually being modified in the light of the impending EU SEA Directive, as our Scottish case study demonstrates.

The New Zealand approach: incremental or holistic?

It is important to note that while the RMA contains a number of SEA features (for example the requirement to undertake a section 32 analysis), overall it does not provide a strong mandate for SEA. For example, the term SEA or any variant of it does not appear in the Act. There is no specific requirement to prepare an SEA report. It is only recently, as a result of the 2003 amendment to the act, that provisions for policy analysis and monitoring have been strengthened. For example, councils must now prepare a report under section 32 and publicly notify five-yearly reviews of the results of monitoring planning policies. Further, there is no provision for an independent review of an SEA process. While decisions of the councils can be contested in the Environment Court, the criteria used by the Court are of course determined by the Act, rather than what might constitute good SEA practice. In this respect, however, it is significant to note that there has been a discernible shift away from a somewhat narrow interpretation of section 5 of the Act in futhering sustainable development. This was noted by Skelton and Memon (2002), who reviewed a number of recent Environment Court decisions. They observed that a broad overall judgment approach (as opposed to one that might single out a particular element of the meaning of sustainable development), was the one now generally applied by the Court. Despite amendments and reinterpretations, the mandate for SEA within the RMA remains partial at best and is more appropriately characterised as providing for a form of environmental policy appraisal.

The mandate for SEA in New Zealand therefore has to be construed with reference to its broader institutional context. Councils are required to take account of other management plans and strategies when developing plans under the RMA. At a policy level, horizontal and vertical linkages are formally required with other policy instruments such as *iwi* (Maori tribal) management plans, and conservation management strategies prepared by the Department of Conservation. Beyond the statutory requirements, other documents can also be influential. There is an increasing raft of documents, including growth strategies, strategic and structure plans, which have significant environmental implications but are prepared by councils under other mandates such as the Local Government Act. For example, regional and district councils are required to prepare annual plans that should be linked with statutory planning policies developed in regional policy statements and regional and district plans. In addition, the recent Local Government Act 2002 has created a new type of plan, the long term council community plan, which will become the key strategic planning document and set the overall strategic directions for councils.

A significant body of informed opinion (see, for example: Gleeson & Grundy, 1997; Barton, 1998; Frieder, 1998; Berke *et al*, 1999; Wilson *et al*, 2000; Armstrong, 2001; Perkins & Thorns, 2001; Dixon, 2002; Skelton & Memon, 2002; Upton *et al*, 2002; Memon, 2002), echoed by a number of Parliamentary Commissioner reports (for example: PCE, 1998; 2002), has cast doubt on

whether the RMA offers the New Zealand planning system adequate scope to deliver overall improvements in sustainability. Jay (1999: 478) contends that New Zealand planners are "unable to link environmental policies to the social and economic factors which drive them" because the "broader political and social context has resulted in a planning act which focuses on management of natural and biophysical resources to the exclusion of social and economic matters".

A recent promising initiative at the national level is the government's commitment to an action programme for promoting sustainable development. The initial phase sets out four strategies, one of which – water quality - is under the remit of the RMA, while the remainder address the socio-economic factors affecting the sustainability of cities, child and youth development policy, and energy usage (DPMC, 2003). The existence of a governmental action programme on sustainability that goes well beyond the scope of the RMA adds official credence to arguments that sustainable management of bio-physical resources does not adequately embrace the full range of issues normally envisaged by the term sustainable development.

The conclusion that can logically be drawn from these policy developments is that the application of SEA to plans and policy statements drafted under the RMA's provisions may not provide an adequate appraisal of their impact on sustainability. This leaves open the question of whether SEA processes applied under the Act are incremental or holistic. Do they merely seek to extend the assessment of environmental effects required under the Act from development proposals to plans, to produce 'EIA as plan-making'? Alternatively, do they establish an overall approach towards SEA which so imbues the plan-making process that its presence as a separate exercise disappears, resulting in 'plan-making as EIA'? Our New Zealand case study attempts to shed further light on this.

Case Studies of SEA applied to Scottish and New Zealand Land Use Plans

Scotland: Sustainability appraisal of the Perth and Kinross Structure Plan

The most recent Structure Plan for Perth and Kinross, a planning authority that straddles the divide between the urbanised lowlands and the sparsely populated highlands of Scotland, was finalised in 2003. During its preparation, the local authority, rather than employing external consultants, contracted another of its departments, Environment Services, to undertake an independent sustainability appraisal of the structure plan being drafted by its Planning and Development Services staff (Esson *et al*, 2004). The brief covered four elements:

- identification of sustainability criteria or indicators appropriate to Perth and Kinross;
- assessment of the draft Structure Plan and its strategy, policies and proposals against identified criteria;

- identification of key performance indicators to allow ongoing assessment, monitoring and appropriate review of the Structure Plan throughout its lifetime; and
- reassessment of the Finalised Structure Plan strategy, policies and proposals against the identified sustainability criteria, prior to its submission to the Scottish Ministers (PKC, 2002a).

Table 1: Integration of sustainability appraisal and plan preparation
(Baker Associates, 1999).

Preparation of plan	Stages in sustainability appraisal
1. Baseline studies	a. Establish appraisal criteria by taking sustainability objectives, targets and indicators from UK strategy and regional sustainability framework, comparing these with draft plan objectives, targets and indicators
2. Setting of strategic objectives	b. Sustainability scoping to determine internal consistency of plan strategy and policies and with sustainability objectives
3. Option development and selection	c. Appraisal of spatial options against sustainability objectives
4. Policy development and preparation of draft plan	d. Iterative appraisal of policies using a matrix to score each plan policy against each sustainability objective
5. Policy evaluation and modifications	
6. Implement plan and monitor	e. Confirm indicators and targets to be applied in monitoring and evaluate of plan performance
7. Review plan and evaluate	

Current UK guidance on SA involves an iterative five stage process that is intended to run concurrently against the seven stage preparation of a development plan, as indicated in *Table 1*. A key element of this approach is the selection of sustainability criteria, indicators and targets. These allow the process of assessment to be broken down into individual elements each capable of being evaluated for validity and consistency during the initial plan appraisal, with the same criteria subsequently used in monitoring and evaluating plan performance. For this exercise, the criteria required to create an appropriate sustainability framework for the area were identified and extracted from the various Scottish and UK sources of guidance on indicators of sustainable development to hand (DETR, 1999 & 2000c; SECRU, 2001; SEEG, 2002).

Once the headline criteria were chosen, each element was then articulated in terms of specific Scottish Executive policies and guidance. As *Table 2* indicates, in contrast to the bio-physical approach inherent in the RMA, this methodology immediately introduced socio-economic as well as environmental considerations into the assessment process. The chosen criteria were initially used to scope the draft plan's themes and strategy. This part of the exercise applied a simple checklist to test whether the strategy as presented adequately embraced all aspects of sustainable development embraced by the relevant policy documents.

Table 2: Scoping the Plan Themes & Strategy Against Sustainability Criteria (PKC, 2000a)

Plan Themes & Strategy	Sustainability Criteria
1. Building sustainable communities: - travel & accessibility - healthy & safe environment - provision of housing - access to employment	a. Social progress which recognises the needs of everyone: - housing - access - training - participation - safety
2. Creating a sustainable economy: - generation of sustainable growth - creation of job opportunities - support of indigenous business - attraction of inward investment - meeting local needs locally	b. Effective protection of the environment: - travel - pollution prevention - protection & enhancement of open space, landscape & biodiversity - built environment - cultural heritage
3. Managing the environment: - care of natural environment - urban environmental quality - resource management	c. Prudent use of natural resources: - waste - water - energy - land & soil - air
	d. Maintenance of high & stable levels of economic growth & employment: - diversification - employment - vitality - investment - entrepreneurship

After using a similar process to appraise the plan's spatial options, the central element of the whole appraisal was the application of a simple matrix to score each of the fifty-three planning policies and three further proposals set out under the draft plan's three themes against the suite of twenty sustainability criteria listed in Table 2. The scoring system used the subjective grading system indicated in *Table 3*. The results of these policy assessments were then converted into an overall grading scale for each policy, applying a traffic lights test, namely: green, indicating go with the policy; amber, indicating modify policy; red, indicating review policy. These individual scores were then summarised in a 56 column by 20 row colour-coded matrix. Fourteen policies (25%) were given a 'red' grading, indicating need for review, and twenty-two (39%) an 'amber' grading, indicating a need for more minor revision, leaving twenty (36%) judged to be sustainable without amendment. The extent to which the appraisal of the draft plan resulted in subsequent changes can be gauged by inspecting the revisions to the policies included in the finalised plan (PKC, 2002b).

Elements of the 'building sustainable communities' theme were considerably strengthened, especially in respect of promoting access for all in a part of Scotland that suffers from limited public transport provision in remote highland

communities, supporting the use of local materials, and promoting high quality and sustainable design. Fewer policies under the 'creating a sustainable economy' theme were found to need revision. The draft plan already recognised the strong links required between a sustainable transport and communications network and a sustainable economy. One policy, referring to economic development proposals outwith the plan strategy, was removed following the appraisal, and another, dealing with developing facilities to support sustainable methods of freight distribution, was added.

Table 3: Grading Scale Applied to Score Plan Policies Against Sustainability Criteria (PKC, 2000a)

++	Significant move towards sustainable development
+	move towards sustainable development
0	Neutral effect
-	move away from sustainable development
- -	Significant move away from sustainable development
?	Unknown

Policies under the 'managing the environment and resources' theme received the least post-appraisal modification, but not because few weaknesses were identified. The SA Report on the Finalised Structure Plan comments that for this theme a "number of the policies highlighted originally as not being in context with a sustainable structure plan remain and such policies reinforce the concern that the environment within the framework of the structure plan is not being treated as a non-renewable resource" (PKC, 2002a: 109). Four of the policies under this theme identified as 'red for review' (protection of wildlife habitats, use of aggregates and extraction of minerals and coal) were subsequently left un-amended. Another, which supported the recycling of demolition wastes as primary aggregates, was removed against the wishes of the appraisal team. However, the policy dealing with the green belt around Perth was substantially strengthened, and a new policy on sustainable drainage systems was added. Judged on this basis, the final outcome demonstrates that the SA process succeeded in significantly modifying the drafting of land use policies for Perth and Kinross, but that it did not succeed in making all the changes deemed desirable.

The final aspect of the appraisal entailed identification of key performance indicators to allow ongoing assessment, monitoring and review of the plan throughout its lifetime. The approach involved the selection of headline indicators during the development of the sustainability criteria. Each of these was then supported by a set of specific quantifiable sustainability measures. This will allow targets to be agreed for the local development plans that are covered by the structure plan, which will enable their performance to be monitored and evaluated using these indicators. Compliance with the EU SEA Directive will require further work on refining the coverage and measurement of the performance indicators, to allow these to be converted into a metric for

establishing an overall environmental or sustainability baseline and the means of predicting, monitoring and evaluating the impact of plans on this.

New Zealand: Section 32 report of Waitakere City Council Plan

Under the RMA, territorial authorities (districts and city councils) have primary responsibility for the effects of land use and are required to produce spatial plans. Regions, which have responsibility for water use, the marine environment and the control of discharges to the environment, are required to produce plans for coastal areas, permitted to do so for their other areas, and obliged to produce policy statements. The coverage required of an assessment of environmental effects (i.e. an EIA) for a resource consent application is set out in the Fourth Schedule of the RMA. The schedule sets out the elements of an environmental statement, including a description of the proposal, alternative locations and methods to avoid, remedy or mitigate any significant environmental effects, and arrangements for subsequent monitoring.

As the latest official guidance (Willis, 2003) observes, the RMA is prescriptive about the formulation of policy statements and plans. It indicates how policy statements and plans must be developed, by setting out the requisite processes; what context the plans must include, by establishing the provisions; and how they must be appraised, by laying down the tests to be applied. Sections 62, 67, and 75 of the RMA list the contents of regional policy statements, regional plans and district plans, which all have the same provisions:

- issues to be addressed
- objectives to be achieved
- policies regarding the issues and objectives
- methods (including rules) to implement the policies
- environmental results anticipated.

Taken together, these processes bear on a loose relationship with what is generally recognised as SEA. The requirement under these provisions to specify the "environmental results anticipated" can be interpreted as requiring that such plans and policy statements should be drafted to incorporate a SEA of their significant effects. However, this interpretation sits uncomfortably alongside Section 32 of the Act, which obliges regions and districts to justify the use of plans and policy statements. In its original form, Section 32 imposes an obligation on local authorities to consider alternatives and evaluate benefits and costs so that "they be satisfied that the proposed objective, policy, rule, or other method is necessary in achieving the purpose of the Act, and is the most appropriate means of exercising the function, having regard to its efficiency and effectiveness relative to other means", (Fisher, 1992: A4-12). This section has since been amended by the 2003 revisions to the Act, but the new version remains essentially a neo-liberal 'new public management' test of the need for any form of intervention, as the relevant extracts listed in *Table 4* indicate.

Table 4: Section 32 of the New Zealand Resource Management Act 2003

32. Consideration of alternatives, benefits and costs

(1) In achieving the purpose of this Act, before a proposed plan, proposed policy statement, change, or variation is publicly notified, a national policy statement or New Zealand coastal policy statement is notified under section 48, or a regulation is made, an evaluation must be carried out…

(3) An evaluation must examine –

a. the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and

b. whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.

(4) For the purposes of this examination, an evaluation must take into account

a. the benefits and costs of policies, rules, or other methods; and

b. the risks of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods;

(5) The person required to carry out an evaluation…must prepare a report summarising the evaluation and giving reasons for that evaluation.

(6) The report must be available for public inspection at the same time as the document to which the report relates is publicly notified or the regulation is made.

Official guidance does little to promote the belief that the outcome of an 'evaluation report' under Section 32(5) in Table 4 should resemble the environmental report normally produced for an SEA. The Ministry for the Environment's only specific advice on Section 32 (MfE, 2000) advocates a balancing approach to the weighing of socio-economic and environmental costs and benefits. It states (MfE, 2000:10) that a "council has to determine whether any plan provision is necessary to achieve the purpose of the RMA" and that this must be judged on the criteria of effectiveness and efficiency, the latter to be measured by "the ratio of benefits to costs (the higher the ratio, the greater the efficiency)".

Rather than providing the basis for an SEA, this elaboration of Section 32 amounts to the use of a deterministic form of social cost-benefit analysis in situations for which many of the environmental effects would be difficult to quantify. Practitioners are reminded that the effectiveness and efficiency of a plan must be assessed purely in relation to the purposes of the RMA, namely to achieve the sustainable management of bio-physical resources. This official guidance regards the actual process of evaluating the alternative strategies simply as an exercise in comparing the net environmental gains expected from a policy or method with the net socio-economic losses incurred:

> "The efficiency of a policy or method is best assessed by comparing the extent to which it achieves an objective…against how much is foregone as a result of using that policy or method. The extent to which the purpose of the Act is achieved is calculated by subtracting environmental costs from environmental benefits. How much is foregone is worked out by subtracting social and economic benefits from social and economic costs.

> Efficiency is then determined by comparing the first value with the second" (MfE, 2000: 11).

The Waitakere plan offers an illustration of the extent to which practice complies with such advice. Waitekere City Council notified its district plan in 1995. This plan later became identified as one of the country's leading examples of an effects-based plan by practitioners through a number of awards given to the Council and a research programme on plan quality and implementation (Berke, et al, 1999). As part of its documentation, the Council prepared an analysis under section 32 of the Act to fulfil its requirements when notifying its plan. The report was entitled "Section 32 Record - a record of action taken and documentation prepared by Waitakere City Council in discharge of its duties pursuant to Section 32 of the Resource Management Act in respect of the Proposed District Plan" (WCC, 1995). The record begins with a background which sets out its purpose and contents. The contents section (and the format for the remainder of the report) follows the requirements of the Act very closely. The report of 399 pages is divided into 13 parts, based on the 12 policy sections of the plan with a separate section on financial contributions. Each policy section is reviewed in relation to:

a. identifying the objective, policies and rules relevant to each of the section;
b. listing the relevant documentation used in the development of each policy and method;
c. an outline of why the objectives/policies/rules are necessary in achieving the purpose of the Act;
d. consistency with other plans;
e. a summary of reasons for and against, and costs and benefits of alternative methods (within which there is an explanation of the assessment of factors used in the cost/benefit analysis of alternative methods: effectiveness, implementation costs, and compliance costs).

Section (e) used two formats to present the analysis undertaken. First the reasons for and against the methods adopted in respect of each policy were summarised in table format. Alternative methods (to that of regulation) were described as *1. take no action* (ie leave the issue to be dealt with by private decision-makers) and *2. Non-regulatory* (ie use development impact fees to manage the location of future growth) (WCC, 1995: 121).

Method	Reasons for	Reasons against
Take no action		
District Plan regulation		
Non-regulatory		

The costs and benefits were then expressed in a cost/benefit matrix with a simple scoring system of four categories for benefits or costs: major, moderate, minor through to nil (WCC, 1995: ii).

Assessment Factors	No action		District Plan regulation		Non-regulatory		High Regulation	
	C	B	C	B	C	B	C	B
Effectiveness								
Implementation Costs								
Compliance costs								

Each section then concluded with an explanatory statement justifying the particular method adopted. The record also contains a summary of the process undertaken to develop the plan along with an archive of all the council minutes, reports and other material received by the Council between January 1993 and September 1995. There is a detailed statement of the consultation process undertaken by the Council during the development of its plan (which was very extensive by most standards).

In summary the Council used a systematic approach to present its justification for adopting particular policies in the plan. It followed the spirit of the Act very closely in doing so but did not go so far as suggested in the MfE's report on section 32 (MfE, 2000). It is significant to note, too, that the Waitakere report is a qualitative not a quantitative assessment. No explanation is provided in the summary of costs and benefits in any of the sections of how the categories of major through to minor were interpreted in dollar terms. There are two likely explanations for this omission. Firstly, the information would not have been readily available in the detail required as the policy development process is not always so precise or indeed needs to be. Secondly, to include quantification, where it was available, would have been overly onerous at a time when the Council was under considerable pressure to notify the plan, particularly when there was little established experience elsewhere to draw upon. While we have little evidence to suggest this, we suspect that the Waitakere approach to its record of action under section 32 more than likely set a benchmark for other councils at the time.

In conclusion, any report prepared under section 32 by a council is necessarily limited to the provisions of the Act and cannot be seen, by itself, as a reliable form of sustainability appraisal. For example, the tests applied by Waitakere in its analysis made no explicit reference to sustainability, although the plan itself was significantly driven by that goal. Moreover, the section 32 report is only a snapshot in time, given that the process of submissions and hearings will inevitably modify the provisions of the plan as first notified. The Waitakere Plan

finally became operative in 2003, having been notified in 1995. Given the weak and diffuse nature of the SEA mandate, to undertake an adequate appraisal of sustainability of a district or regional plan in any New Zealand council would also require reference to other documentation such as annual Council plans and reports, monitoring reports, the long term council community plan, policy statements and documents prepared by external agencies that influence council planning policy, and other reviews that may have been undertaken within or outside the council.

Conclusions: can holistic SEA of land use plans deliver sustainable development for Scotland and New Zealand?

The case studies considered in this paper, taken together with our review of how SEA has evolved in markedly different fashion within these two planning regimes, offer an opportunity to consider whether SEA processes designed specifically to deliver environmental objectives are also capable of being used to realise the broader goals of sustainable development. In Scotland, existing policy appraisal techniques designed to evaluate development plans in terms of their compatibility with sustainability frameworks are now being refocused to meet the more specific environmental requirements of the EU SEA Directive. In the process, the capacity of planning authorities to undertake SEAs that encompass all aspects of sustainable development is increasingly being questioned, both in official guidance and at local level.

Table 5 summarises the interim guidance issued to Scottish planning authorities on the contents of an environmental statement to comply with the EU SEA Directive. This new guidance focuses principally on the environmental aspects of assessment, and its main thrust is simple compliance with the Directive. In passing, it offers additional advice on how to convert an SEA that complies with the Directive into what is still termed a 'sustainability appraisal'. The eight pages provided on how to translate an environmental assessment into one dealing with all aspects of sustainability starts with the comment that "[s]ome planning authorities may wish to extend the environmental assessment of the development plan so that it also covers socio-economic issues. Only environmental assessment is required by the Directive" (DTA, 2003: Appendix 1).

The clear implication is that most Scottish planning authorities are likely to have enough on their hands coping with the heavy demands of assessing environmental sustainability along the lines listed in Table 5 without attempting to combine this with a comprehensive assessment their plans covering all aspects of sustainable development. To achieve the latter would require the production of baselines and predictions for the local socio-economic as well as environmental variables that the plan will influence. Realistic projections require the use of reasonably advanced modelling techniques to identify the inter-relationships between these variables and their synergistic impact on sustainability parameters (Meyer *et al*, 2000). Opinion seems to be inclining to the view that one step at a

time is currently the most sensible strategy to adopt for achieving compliance with the SEA Directive.

Table 5: Suggested format for an EU SEA Environmental Statement
(DTA, 2003)

1. Contents page
2. Non-technical summary of report
3. Introduction including purpose of report and compliance with explicit reference to Directive
4. Explanation of the main objectives of the plan, its statutory purpose, its links with national policy and [other] structure or local plans and an outline of its contents
5. The state of the environment of the plan area generally
6. How the environment might evolve in the absence of implementation of the plan
7. A description of existing environmental problems that the plan should address
8. A report on scoping – how the significant environmental effects of the plan have been identified
9. The areas likely to be most affected by the plan's policies or proposals and their particular environmental characteristics
10. The method of assessment and any limitations, which restrict the effectiveness of the assessment, including technical deficiencies or a lack of information or know-how
11. The environmental objectives and criteria and a brief reasoning as to why they were adopted and how they have been applied in the assessment (eg in the matrices)
12. A description of the main alternative policy frameworks and spatial strategies considered with a description of their likely significant environmental effects and a reasoned account as to why he selected option(s) were chosen
13. A report on the policy coverage and range of policies in the plan
14. The likely significant effects of the plan's policies and proposals, including any secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects
15. A list and description of mitigation measures to avoid or reduce the significant effects and their likely effectiveness, including changes made to the plan as a result of the assessment process
16. A list and description of compensation measures and a description of the extent to which they may be expected to offset significant residual effects
17. A description of the measures envisaged for monitoring the implementation of the plan and how it will influence the review of the plan
18. Consultations carried out and how to comment on the environmental report
19. Source documents, cross-references, bibliography, etc.

In New Zealand, the remit of the RMA has increasingly been found wanting for addressing the wider implications of resource management, which require the cumulative effects of specific developments to fully integrated into broader sustainability strategies on housing provision, transportation, waste management and energy use. Although SEA is specifically designed to tackle such effects, the 'bottom-up' philosophy that drives the RMA seems ill-suited to the development of strategic approaches that consider the effects of policies that extend beyond local boundaries. As Fookes (2000: 91) observes, New Zealand practitioners feel that "there is little in the current planning documents or in Section 32 reports that suggests any systematic analysis. It is also questioned whether local body

politicians adequately appreciate the questions they should ask when carrying out their duties under Section 32."

Recent initiatives to enhance the strategic powers of local government offer a way out of this impasse (Fookes, 2002). These are most apparent in the Auckland area, which contains a third of the country's population and displays many of the symptoms of unsustainable development in terms of congestion, urban sprawl and increasing social exclusion attributable to escalating property values. Since 1991 greater Auckland has been administered by seven territorial authorities and a regional council. A regional body created in 1998, *Infrastructure Auckland*, has been complemented by a *Regional Growth Forum* established the following year, covering all seven district and city councils and forming a committee of the Auckland Regional Council. The Forum's efforts to develop strategic spatial initiatives across the region on a collaborative basis have been boosted by agreement on a Regional Growth Strategy in 1999 (ARGF, 1999), a Regional Economic Development Strategy in 2002 (ARC, 2002), and a Regional Transport Strategy in 2003 (ARC, 2003). The 2002 Local Government Act gives local authorities the power to establish Regional Development Partnership programmes, while central government's 2003 Sustainable Development Programme of Action reinforces these initiatives. It is to these spatial strategies that SEA might be applied with greatest effect to link the environmental protection afforded by the RMA at local level with the broader aims of sustainability.

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