Sustainable Construction in New Zealand

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2005 was declared to be the "Year of the Built Environment" in New Zealand. This article concerns the law relating to the "built environment" and specifically, examines the construction of buildings within an environmental matrix. Starting from the premise that sustainable construction is an imperative if the goal of sustainable development is to be achieved, the article examines the approach taken in New Zealand to "green" building practices. Through an analysis of the Building Act 2004, the Building Code and the Resource Management Act, the author considers whether present regulatory methods can best ensure that construction is conducted in a sustainable manner. The Code to the Building Act 2004 is presently under review and an assessment is made as to the prospects of any revised Code effectively promoting the aim of sustainability. The author concludes that, in the event of the revised Code failing to adequately address the issue, local authorities can use the Resource Management Act to require and to encourage sustainable construction via the use of district plans, conditions on resource consents and financial contributions.

1. INTRODUCTION

Sustainable human settlement development ensures economic development, employment opportunities and social progress, in harmony with the environment. It incorporates together with the principles of the Rio Declaration of Environment and Development, which are equally important, and other outcomes of

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> the United Nations Conference on the Environment and Development, the principles of the precautionary approach, pollution prevention, respect for the carrying capacity of the eco-system and the preservation of opportunities for future generations. Production, consumption and transport should be managed in ways that protect and conserve the stock of resources whilst drawing upon them. Science and technology have a crucial role in shaping sustainable human settlements and sustaining the ecosystems they depend upon.[1]
>
> United Nations Conference on Human Settlements (Habitat II)
> *The Habitat Agenda* (1996).

Buildings and the building industry are responsible for significant environmental damage.[2] Given the enormity of this damage, without radical reform

1 Please note that all ULRs listed in this paper are as at 21 October 2005.
United Nations Conference on Human Settlements (Habitat II), *The Habitat Agenda,* Chapter II, Istanbul (1996), paragraph 29, available at http://www.unhabitat.org/declarations/habitat_agenda.asp. This Agenda, containing "soft-law" political commitments, has been adopted by 171 states, including New Zealand. Paragraph 29 of the Agenda also states that: "Human settlements shall be planned, developed and improved in a manner that takes full account of sustainable development principles and all their components as set out in Agenda 21 and related outcomes of the United Nations Conference on the Environment and Development."

2 For a general overview of the environmental damage caused by the construction industry, see Wooley, T, Skimmins, P, Harrison, P and Harrison R, *Green Building Handbook*, Vol I, Spon, London. Further, see Der-Petrossian, B, *Conflicts Between the Construction Industry and the Environment*, Habitat Debate, Vol 5, No 2, Report for the UNCHS, available at http://www.unhabitat.org/HD/hdv5n2/intro.htm that states "one-tenth of the global economy is devoted to construction and the operation of residential and office buildings and one-sixth to one-half of the world's major resources are consumed by the construction and related industries" quoting Lenssen and Roodman, *State of the World*: *Making Buildings Better* (1995) World Watch Institute, p 95. Further, Der-Petrossian states that: "The building industry alone consumes some 40% of the world's energy, 25% of forest timber, and 16% of the world's fresh water. 70 % of sulphur oxides produced by fossil fuel combustion are produced through generation of electricity used to power our homes and offices. Some 50% of carbon dioxide emissions (mainly in industrialised countries) are as a result of operations of buildings-in-use" quoting Dimson, B, *Principles and Challenges of Sustainable Design and Construction, Industry and Environment*, Vol 19, No 2, April–June 1996, p 19, UNEP/IE, 1996. Further, see, CIB, *Agenda 21 on Sustainable Construction, CIB Report Publication*, "*Executive Summary*" July 1999, CIB, Rotterdam, the Netherlands, p 17, that states "in the European Union, buildings are responsible for 40% of total energy consumption, the construction sector is estimated to generate 40% of all man made waste [and] is the largest industrial sector". For the contribution of the built environment to emissions of carbon dioxide see Brown, M, Southworth, F and Stovall, T, *Towards a Climate-Friendly Built Environment*, Pew Centre on Global Climate Change, June 2005, available at www.pewclimate.org.

of the construction industry, it may become difficult to "meet the needs of the present without compromising the ability of future generations to meet their own needs".[3] Within the international sphere, New Zealand has acknowledged this fact by expressing its commitment to the principle of "sustainable construction".

In assenting to "Agenda 21",[4] New Zealand accepts that the activities of the construction sector "… can be a major source of environmental damage through depletion of the natural resource base, degradation of fragile ecozones, chemical pollution and the use of building materials harmful to human health"[5] and commits to adopting "… standards and other regulatory measures which promote the increased use of energy efficient designs and technologies and sustainable utilisation of natural resources in an economically and environmentally appropriate way".[6] Further, in 1996, New Zealand became a signatory to "The Habitat Agenda"[7]. Paragraph 88 of The Habitat Agenda states, inter alia, that, "the impacts of the construction industry should be brought into harmony with the environment" and commits signatories to this end.[8]

Aside from expressing political commitments on the international stage, has New Zealand embraced the concept of sustainable construction?

This article attempts to answer the question posed. In part 2, a working definition of sustainable construction is delineated for the purpose of informing the discussion. Part 3 considers whether it is necessary for the State to intervene to ensure that construction is practised in a sustainable manner and concludes that such intervention is essential. The fourth part of this article turns to consider the efficacy of the legislative regime in New Zealand by focusing upon the Building Act 2004 and the Building Code. The Building Code is presently under review. The progress of this review is touched upon and alternative scenarios

3 This is the definition of sustainable development as described in The Bruntland Report, World Commission on Environment and Development (1987), *Our Common Future*, OUP.

4 United Nations Conference on the Environment and Development, *Agenda 21*, Report I (1992) available at http://www.un.org/esa/susdev/documents/agenda21/english/agenda21toc.htm. Agenda 21 is a "soft-law" document containing the political commitments of signatories. See Section I, "Social and Economic Dimensions", Chapter 7, "Promoting Sustainable Human Settlement Development", section G, concerning the objective of promoting "Sustainable Construction Industry Activities". Paragraph 7.68 states the objectives of the nation States party to the Agenda: "The objectives are … to adopt policies and technologies and to exchange information on them, in order to enable the construction industry to meet human settlement development goals, while avoiding harmful side effects on human health and the biosphere …"

5 Agenda 21, ibid, Chapter 7, Paragraph 7.67 "Basis for Action".

6 Agenda 21, ibid, Chapter 7, Paragraph 7.69 (c).

7 The Habitat Agenda, supra note 1.

8 The Habitat Agenda, supra note 1, para 88.

discussed. In the event that the revised Building Code does little to advance the objective of sustainable construction, the Resource Management Act 1991 may well have a role to play in achieving this end. Accordingly, part 5 of this article analyses the interrelationship between the Building Act 2004 and the Resource Management Act. In part 6, a determination is made as to the role that the Resource Management Act might play in promoting sustainable construction.

The article concludes that to effectively promote sustainable construction, the synergies between the Building Act and the Resource Management Act must be exploited. Further, in the event that the revised Building Code fails to adequately promote sustainable construction, territorial authorities may, pursuant to their powers and duties under the Resource Management Act, have a critical role to play in ensuring that the construction industry operates in a sustainable manner.

It is important to note the author's belief that a nation will make little real progress towards the creed of sustainable development without addressing the environmental transgressions of the construction industry. This article should be read with that factor in mind.

2. THE CONCEPT OF SUSTAINABLE CONSTRUCTION AND BUILDINGS

The concept of sustainable construction has been the subject of extensive governmental review in the United Kingdom recently and the results have been of interest to the New Zealand Government.[9] Accordingly, to inform the ensuing discussion, the author will draw upon British experiences where appropriate.

Sir John Harman, Chairman of the United Kingdom Environment Agency, has asserted that:[10]

> … [t]he manner in which [the built environment] consumes natural resources means that it is responsible for some of the most serious global and local environmental change. The way we use natural resources for building and the levels of pollutants emitted in the process of building and in the use of buildings once occupied, are unsustainable.

9 By way of example, the New Zealand Department of Building and Housing, in reviewing the Building Code, have considered a number of papers originating from the UK in this regard. In particular, the work of the Sustainable Building Task Group, infra, has been examined.

10 Harman, J and Benjamin, V, *Better Buildings – Better Lives*, Sustainable Building Task Group Report prepared for the Review of the U.K. Building Code, London, United Kingdom, 2005, "Foreword" at p 1.

By corollary, what then constitutes "sustainable construction" and when might the functioning of a building be considered "sustainable"?

To some extent, the answers to these questions equate to a moveable feast and will vary according to the nationality and perhaps also the economic status of the responder. It has proved notoriously difficult to reach a universally acceptable definition of "sustainability" particularly in the context of "sustainable development".[11] Sustainability can be "viewed from economic, social, technological, political, strategic, inter-generational or ecological perspectives or a combination of these".[12] A review of the conflicting "descriptions" is beyond the scope of this paper but in simplistic terms, it is suffice to say that any definition of sustainability must incorporate the elements of intra- and inter-generational equity. A formula that straddles many of the proposed anthropocentric descriptions of sustainable development, might be that:[13]

> sustainable development involves meeting human needs by changing the environment in which we live but at the same time avoiding depletion of other types of environmental, economic and/or social degradation that may reduce the ability of future generations to meet their own needs.

Within the context of sustainable construction or building, the debate is similarly complex. A number of international agencies have attempted or are in the process of attempting to formulate a workable description of sustainable construction.[14] Sustainability might include the imperative of adequate housing for all. It may include the necessity of infrastructure to provide for utilities such as water, energy and sanitation and for transport, communication and industrial activities. Thus, economic and social factors play a part. Cultural issues and heritage may be a factor. In addition, the use of limited or finite natural resources

11 By way of example, see Bosselmann, K and Grinlinton, D (eds) *Environmental Law for a Sustainable Society*, NZCEL Monograph Series: Vol 1, at pp 81–161.

12 Grinlinton, D, "Contemporary Environmental Law in New Zealand" in Bosselmann, K and Grinlinton, D (eds), *Environmental Law for a Sustainable Society*, NZCEL Monograph Series: Vol 1, at p 24.

13 Hargreaves, R and Allan, S, *The Building Act 1991: Inclusion of Sustainable Development*, Issue Paper No 1, Energy Efficiency and Conservation Authority, 2003, at p 3.

14 See for example, The International Standards Organization, *Building and Construction Assets – Sustainable Buildings – General Principles* ISO/TC 59/SC3 N459 (2003); CIB *Agenda 21 on Sustainable Construction*, CIB Report Publication 237, July 1999, CIB, Rotterdam, the Netherlands and CIB *Sustainable Development and the Future of Construction: A Comparison of Visions from Various Countries*, CIB Report Publication 225, May 1998, CIB, Rotterdam, the Netherlands; McDonough, W, The Hannover Principles, William McDonoghue Architects (1992), available at http://www.virginia.edu/arch/pub/hannover_list.html and Kibert, infra, note 15.

and the impacts of building on the environment should be considered a pertinent issue. Accordingly, the scope of the concept of sustainable construction is huge and any purported definition will, of necessity, be amorphous.[15]

To inform the ensuing discussion however, it is necessary to address the issue of typology. Without the delineation of a workable definition of sustainable construction and reference to techniques of sustainable construction, much of the following will appear abstract and the arguments, intangible. As this paper concerns sustainable construction in New Zealand, the focus will be upon the environmental effects of construction as opposed to, for example, issues of economic and social parity.[16] For specific assistance, we can return to the words of Sir John Harman and concentrate upon the environmental effects of the construction process and the operation of buildings. To truly promote sustainable construction, the whole life cycle of the building must be considered from the choice of raw materials used in the initial construction and the efficacy of the functional components to the final deconstruction and management of that waste. Within the context of this paper, the term "sustainable construction" will be used to mean:

> construction that adheres to best environmental practice standards firstly, in relation to the initial construction and ultimate deconstruction of the building and secondly, in the technology incorporated into or the design of the building to minimise the use of natural resources and the emission of pollutants in its subsequent operation.

Clearly, the process of "green building" is a growing field and technological advances are being made continually[17] but the following features, amongst others, may be characteristic of a building with a high degree of sustainability:

15 For example, concentrating upon ecological aspects, Kibert has defined sustainable construction as "the creation and sustainable management of a healthy built environment based on resource efficient and ecological principles", see Kibert, C J, *Sustainable Construction: Proceedings of the First International Conference on Sustainable Construction*, Tampa, USA, November 1994 quoted in CIB *Sustainable Development and the Future of Construction: A Comparison of Visions from Various Countries*, CIB Report Publication 225, May 1998, CIB, Rotterdam, the Netherlands, at p 3.

16 New Zealand is a wealthy, developed nation. Lack of housing and infrastructure is not a pronounced issue, although the quality of housing is contentious. Cultural and heritage issues are topical but would best form the basis for another paper. It is important to note that some would argue that environmental, economic and social issues are inextricably linked and incapable of separation.

17 See for example, Wooley, supra note 2 and Chiras, D, *The New Ecological Home: A Complete Guide to Green Building Options*, Chelsea Green Publishing Co 2004.

- the use of recycled and recyclable materials and materials with low-embodied energy;
- the use of timber from certified sustainable sources; no use of old-growth timber;
- materials that off-gas pollutants are avoided;
- energy-efficient design;
- adequate levels of insulation;
- passive solar heating, created by the orientation of a building and placement of windows;
- solar water heating panels and/or photovoltaic cells;
- natural ventilation and cooling including shading on windows;
- energy-efficient fixed appliances;
- efficient water use;
- grey water recycling;
- rooftop rainwater catchment systems;
- water-efficient fixed appliances;
- reduction of surface run-off into public sewers and watercourses;
- provision in the building for separating and storing recyclable waste and an area for drying clothes naturally etc.

In determining whether New Zealand has adopted a commendable approach to the concept of sustainable construction, it is necessary to consider firstly, whether natural market conditions will create a demand for sustainable buildings or in the alternative, whether State intervention is required to correct any market failure.

3. THE NECESSITY FOR COMMAND-CONTROL MEASURES AND FISCAL INCENTIVES

Buildings that are constructed to a high standard of sustainability cost less to run. The developments of the Peabody Trust in London[18] provide a good example. The Trust has pioneered sustainable housing in the UK[19] and of particular note is the Trust's innovative "BedZed"[20] venture in the London Borough of Sutton. "BedZed" has achieved a "zero-energy" rating through the use of an incredibly efficient building envelope, passive solar heating, photovoltaic cells and water-saving devices. A development in Brixton, also by Peabody and designed by Bill Dunster in collaboration with PRP Architects, has harnessed some of the

18 The first and largest "Housing Association" in London.
19 See http://www.peabody.org.uk.
20 Beddington Zero Energy Development.

technology developed at BedZed to provide accommodation with "utility bills of no higher than £50" (c. NZ$130).[21]

Given the aforesaid, one might expect that the inherent qualities of a building developed to a high standard of sustainability would provide a sufficient catalyst to provoke market demand in the product. Such a building should, theoretically, be more *valuable* than a standard building and further, should maintain that value. Are these inherent qualities sufficient to create demand for the product in developers and purchasers? The answer appears to be in the negative. The UK Sustainable Buildings Task Group believes that:[22]

> … the construction, development and house building industries have not yet subscribed to much of the sustainability agenda and have not been persuaded of its long-term benefits.

The reasons for this are many and complex. Architects working at the "coal-face" of the industry in the UK, Amy Ford of PRP Architects and Claire Warnock, an Associate with Matthew Lloyd Architects,[23] have a particular view. These architects suggest that a fundamental difficulty is that the majority of developers operate to maximise profits. As developers are not the end users of the product, aside from complying with mandatory building regulations, they have little interest in the running costs of the building and in the absence of client demand are unlikely to incorporate "green" features into the construction process. Without significant demand (which firstly, reduces the proportion of research costs in the final price of a product and secondly, fosters competitive market conditions), "green" technologies and building practices can prove expensive. Economies of scale are a pivotal factor. Given limited demand, the initial costs of photovoltaic cells are still so high that they must be used for approximately fifteen years before they pay for themselves.[24] Ford believes that, at present, "there is no incentive for an end user to demand 'green homes' for reasons other than ideological as a truly environmentally sustainable and efficient home has a construction cost of approximately twenty-five per cent more than a house that is built to current building regulation requirements".[25] This view

21 Amy Ford, Project Architect for Peabody Trust developments, PRP Architects, London, UK, quote obtained via direct communication between the architect and the author.

22 Harman and Benjamin, supra note 10, at p 9.

23 Amy Ford, PRP Architects, London, UK and Claire Warnock, Associate, Matthew Lloyd Architects Ltd, London, UK, project architects for community developments. These views were obtained by direct communication between the architects and the author.

24 Quote from Amy Ford, supra note 21.

25 Ibid.

is echoed by Warnock, who adds that "… it takes a client with a high social conscience to undertake such a challenge.[26] The issue is that, in the majority of cases, the uplift will be passed on to the purchaser and as a consequence, the final client base is limited. The average Londoner cannot afford to buy his or her own house at this stage, let alone if it were considerably more expensive as a result of increased construction costs. It is unlikely that private developers will embark on a project for which the client base is risky."[27]

The members of the UK Sustainable Buildings Task Group acknowledge this hurdle, although they anticipate that the cost of adopting higher standards will decrease sharply as volume increases.[28] The Group notes that there is a market failure in respect of sustainable buildings but its members do not believe that consumers and developers are, prima facie, acting in an "economically perverse way"[29] rather, this situation is explained by the fact that "the housing market lacks the features of choice, reliable labelling, product information and comparability which characterises consumer-led markets in most other goods".[30]

Clearly, a catalyst is required to kick-start the move to sustainable construction. It seems inevitable that this must be in the form of State intervention. Such intervention could take the form of fiscal incentives to promote sustainable construction and/or command-control measures to require the industry to adopt sustainability. Any or any significant consideration of the potential economic mechanisms is beyond the remit of this paper. It is however, feasible and appropriate to analyse the legislation that New Zealand has introduced thus far to address this issue.

4. THE BUILDING ACT 2004 AND THE BUILDING CODE

The primary piece of legislation governing construction in New Zealand is the Building Act.[31] On 31 March 2005, the Building Act 2004 came into force.[32] Section 3 sets out the purpose of the Act (emphasis added):

26 Even then, environmentally conscious developers can encounter problems. See the difficulties that the Peabody Trust have encountered as reported in *The Guardian* newspaper, "Troubled Homes Scheme up for Design Award" by Matt Weaver, 6 July 2004, available at http://www.society.guardian.co.uk/urbandesign/story.

27 Quote from Claire Warnock, supra note 23.

28 Harman and Benjamin, supra note 10, at p 14.

29 Ibid.

30 Ibid, and see the entire report for recommendations as to labelling, fiscal incentives etc.

31 Hereinafter referred to, from time to time, as "the BA04".

32 Repealing the Building Act 1991 that was in force from 20 December 1991.

> The purpose of this Act is to provide for the regulation of building work, the establishment of a licensing regime for building practitioners, and the setting of performance standards for buildings, to ensure that –
> (a) people who use buildings can do so safely without endangering their health; and
> (b) buildings have attributes that contribute appropriately to the health, physical independence, and well-being of the people who use them; and
> (c) people who use a building can escape from the building if it is on fire; and
> *(d) buildings are designed, constructed, and able to be used in ways that promote sustainable development.*

The Building Act 2004 ushers the express concept of sustainability into building legislation for the first time and although "sustainable development" is not defined in the Act, the choice of the word *development* as opposed to *management* may be considered significant.

Within the Resource Management Act 1991, the phrase "*sustainable management* of natural and physical resources" is used to describe the purpose of that Act. This phrase was carefully chosen so as to attempt to prevent decision-makers from focusing upon the wider meaning of sustainable development that inherently incorporates social and economic factors and from considering these factors in isolation to ecological considerations in the decision-making process.[33] By corollary, the use of the term *sustainable development* in the Building Act 2004 suggests that a wide interpretation of sustainability should be adopted. Section 4 of the Act may provide some additional illumination as to the intended meaning of the phrase in the context of building legislation. This section sets out the principles that must be applied by persons exercising powers under the Act. A number of the principles are particularly apposite to sustainable development and the catholic nature of these principles reinforces the argument that a wide interpretation is to be given to the concept, i.e. a restrictive interpretation focused solely upon the environment and environmental effects is not warranted.[34]

33 It is debatable as to whether this "attempt" has succeeded. See Curran, S, "Sustainable Development v Sustainable Management: The Interface Between the Local Government Act and the Resource Management Act" (2004) 8 *New Zealand Journal of Environmental Law*, 267–294 and Hargreaves and Allan, supra note 13 at p 11, who argue that despite this "attempt" many key decisions made under the RMA have been made on the basis of sustainable *development* principles. Further, the relevance of economic and social factors in resource consent applications, for example, is complex. For a brief analysis of the issue see Williams, D A R (ed), *Environmental and Resource Management Law*, 2nd ed, Butterworths, at para 3.33 and para 3.14.

34 In particular, note BA04 s 4(2)(e), the costs of a building (including maintenance) over the

Despite the foregoing, for the purposes of the present discussion, which is to focus upon the environment, section 4(2) subsections (m)–(p) of the Building Act 2004 are of particular note:

(m) the need to facilitate the efficient use of energy and energy conservation and the use of renewable sources of energy in buildings:
(n) the need to facilitate the efficient and sustainable use in buildings of
  (i) materials (including materials that promote or support human health); and
  (ii) material conservation:
(o) the need to facilitate the efficient use of water and water conservation in buildings:
(p) the need to facilitate the reduction in the generation of waste during the construction process.

The inclusion of these particular principles is interesting and relates, to a degree, to "existing technical knowledge, their fit with national sustainable development goals/policies, and the availability of established measures and benchmarks".[35]

In contrast to the Resource Management Act, which permits variety in resource management standards between localities,[36] the Building Act contains one simple, standard code to ensure national uniformity and efficiency in construction.[37] All building work carried out in New Zealand must comply with this national building code.[38] In essence, the Code specifies the level of performance for building work and "articulates our expectations about the quality of buildings".[39] Although the Building Code at present operates from an effects-based perspective, as opposed to adopting a prescriptive approach, the setting of standards in, for example, heat exchange,[40] will tend to lead to a delineated range of acceptable solutions, or processes, to achieve that standard. In practice, many developers adopt the specified "acceptable

whole of its life; and (l) the need to facilitate the preservation of buildings of significant cultural, historic or heritage value.

35 See Hargreaves and Allan, supra note 13, at p iii.

36 Although, note that the Government has begun to introduce national standards (NES) via the RMA, and NES with regards to air quality came into effect on 1 September 2005.

37 The building code is a schedule to the Building Regulations authorised by the Building Act.

38 BA04, s 17.

39 Townsend, S, *Sustainability and the New Zealand Building Code Review*, Report prepared for the Review of the Building Code, DBH, 2005, para 3.4.

40 See Building Amendment Regulations, 2000, s 5, clause H1 – Energy efficiency provisions. The present Building Code contains energy-efficiency regulations but no other standards relevant to sustainability are set.

solutions" to achieve compliance with the Code, as this is an easy route to take.[41] (This factor is considered in greater detail below.) Thus, the purpose of the Building Act taken in conjunction with the principles espoused in section 4 of that Act, delineated, quantified and translated in the Building Code, should provide a comprehensive legislative regime to practically promote the objective of sustainable development. The marriage of both the *objective* of sustainable development and the *processes* to promote that objective is, surprisingly, a rarity in New Zealand legislation[42] and to this extent, the Building Act is commendable.

4.1 The Review of the Building Code

The Building Code that is presently operative has not been comprehensively reviewed since it came into force in 1992 and accordingly, it provides standards that give effect to the stated purposes of the 1991 Building Act.[43] To bring the Code into line with the present legislation, the Building Act 2004 mandates that a wholesale review of the Building Code shall be completed by 30 November 2007.[44] A new government department, the Department of Building and Housing,[45] has been established to administer the Act and one of its functions is to review the Building Code. In particular, the review must consider "the extent to which the Building Code complies with and meets the requirements of the Act".[46] The review must therefore determine, in accordance with section 3(d) of the Act, how the Code is to achieve sustainable development.

A process of consultation is presently taking place between the Department of Building and Housing and interested sectors of the public.[47] During the course of national workshops, significant focus has been placed upon the concept of

41 See Bannister, P, Lee, J and Isaacs, N *Sustainable Energy and the Building Code*, Report prepared for the Energy Efficiency Standards Project Contract 6 Sustainables Study, EROL-CR-01, 2001 at p 29.

42 See Curran, supra note 33 for a critique of the RMA and LGA in this regard.

43 Section 6 of the 1991 Building Act states that: "The purposes of the Act are to provide for (a) necessary controls relating to building work and the use of buildings and for ensuring that buildings are safe and sanitary and have means of escape from fire; and (b) the co-ordination of these controls with other controls relating to building use and the management of natural and physical resources."

44 BA04, s 451(1).

45 The DBH was established in November 2004, replacing the BIA, to bring together all government agencies and services pertaining to the building and housing industry within one department. See DBH website at http://www.building.dbh.govt.nz.

46 BA04, s 451(2)(a).

47 See the DBH website at http://www.building.dbh.govt.nz/e/publish/cw4-whshps.shtlm.

sustainable construction.[48] The Building Act has defined the parameters of the debate by emphasising the importance of the conservation of natural resources and the minimisation of waste in the construction of buildings and the necessity for functioning buildings to minimise energy and water use. Although the Act does not state that other facets of sustainable construction cannot be taken into account, these stated issues *must* be taken into account.[49] Participants in the Workshops have, inter alia, considered the following issues:

- 'energy-neutral' homes;
- passive solar energy;
- increased insulation requirements;
- rainwater storage and use;
- grey-water use;
- storm-water control;
- water-efficient fixed appliances;
- the use of recyclable and recycled materials;
- natural ventilation as opposed to air conditioning;
- the durability of buildings as an important facet of sustainability (and buildings in New Zealand are expected to last at least fifty years);
- materials that have low "embodied energy".[50]

To what extent will a revised code incorporate these facets of sustainable construction? It is difficult to anticipate the likely outcome. Clear policy statements have not yet been forthcoming from the Department of Building and Housing. However, the Building Act aims to *promote* not *achieve* sustainable development which, of course, is a pragmatic approach to the issue and to an extent, the approach of the Department of Building and Housing, in reviewing the Code, seems to reflect this factor. The Manager of Building Policy for the Department, Suzanne Townsend, has suggested that:[51]

> … the Green agenda is not dictating the country's building legislation … [w]hat is true, is that a growing recognition of sustainable development has reinforced to policy makers that environmental issues are as important as economic

48 See, for example, DBH, *Societal Expectations of the New Building Code: Building Act Implementation*, Report on the Workshop to Review the Building Code, 4 November 2004, Wellington and DBH, *Societal Expectations: Building for the 21 Century*, Report on the Workshop to Review the Building Code, 14 and 15 February 2005, Wellington.

49 BA04, s 4(2).

50 See DBH Report, 4 November 2004, supra note 48, at pp 7–9 and 11. It is useful to compare this list with the list in part 2 hereinabove.

51 Townsend, S, *Sustainability and the New Zealand Building Code Review*, Report prepared for the Review of the Building Code, DBH, 2005 at para 3.4.

> issues and community issues. Essentially this review is not about accepting the dominance of one point of view. It is about negotiating trade-offs between competing priorities in a way that is acceptable to society.

Clearly, cost-benefit analysis will play a part in the final determination. By way of an illustration, in 1992 the Ministry of Commerce calculated that the entirety of the country's energy demand from buildings could be met by the use of solar energy utilising photovoltaic technology.[52] Buildings with photovoltaic cells could achieve "energy-neutrality"; emissions of greenhouse gases could be radically reduced. However, as enticing as this prospect might be, the costs of transforming New Zealand's energy generation to photovoltaic-powered technology is likely to run to many billions of dollars.[53] In contrast, a hot-water system powered by solar panels is considerably more affordable.[54] As water-heating accounts for approximately 29 per cent of the energy needs of a home,[55] this may be a specification that should be encouraged by the Building Code, and indeed, a report prepared by Paul Bannister and Jacky Lee of Energy Research Otago Ltd and Nigel Isaacs of Victoria University, Wellington makes precisely this point.[56]

Given factors of cost, the degree or quantum of sustainability that a revised code could hope to achieve is the pivotal issue. Another complicating factor

52 Ministry of Commerce (1992), *An Energy Baseline Forecast to 2020: Supply and Demand Interactions in New Zealand's Energy Markets*, September 1992, Wellington (available from the Ministry of Economic Development: http://www.med.govt.nz/pubs/publications/-03.html) and quoted in Bosselmann, K, *Compliance Without Complying*, Paper for the 4th International Symposium at ICECA Kagawa University, "Common but Differentiated Responsibilities in the Protection of the Global Climate", Takamatsu, 13–15th December 2002, at p 4. Paper on file with the author.

53 The present costs of a photovoltaic system (not taking opportunities of scale into account) can range from between $14–16,000 for a 2-kWp system with electricity grid back-up to $34–38,000 for a complete stand-alone system. See New Zealand Photovoltaic Association Inc, *Turing Sunlight into Electricity: Photovoltaics for Homeowners*, Information Sheet No 3, July 2003, available at http://www.photovoltaics.org.nz. It is highly unfortunate that Government has failed to provide any financial incentives or grants to encourage the use of this technology, if only from the perspective of meeting the Kyoto Protocol targets.

54 See Bannister, P, Lee, J and Isaacs, N, *Sustainable Energy and the Building Code*, Report prepared for the Energy Efficiency Standards Project Contract 6 Sustainables Study, EROL-CR-01, 2001, para 2.2.1, solar panels to heat hot water cost from $2,500.

55 See BRANZ, *Energy Use in New Zealand Households: Report on the Year 7 Analysis for the Household Energy End-Use Project*, Study Report No SR 122, 2003.

56 Bannister, Lee, Isaacs, supra note 54. For completeness, this report also recommends the promotion of solar passive architecture, active generation (such as photovoltaics, wind and micro-hydro), and natural ventilation.

is apparent, however. The ability or otherwise of the building industry to provide sustainable construction is an additional stumbling block. At present, there is insufficient education and training available to equip builders with the necessary skills and technological knowledge required to fully utilise techniques of sustainable construction.[57] Thus, the faculties of the building industry may hinder the adoption, at this stage, of comprehensive technological solutions.

One important issue that has arisen during the course of the review is the query as to whether the Building Code should adopt a prescriptive approach. As opposed to setting a figure to achieve standards of energy-efficiency, should the Code require specifically that, for example, all new buildings have solar panels? Of interest is the fact that builders groups have endorsed a more prescriptive approach and maintain that this would make a revised code easier to understand and implement.[58] A number of commentators,[59] however, have averred that compulsory measures "do not sit easily in the structure of the New Zealand Building Act and they are contrary to its underlying philosophy".[60] The present approach with regards to energy-efficiency is to set a figurative standard and then to incorporate suggested "acceptable solutions" to achieve that standard. Acceptable solutions are a simple means "by which a developer may readily prove the acceptability of a proposed design without having to go through the rigours and uncertainties of a performance-based test".[61] Bannister, Lee and Isaacs see "acceptable solutions" as the key to increasing the use of sustainable energy resources and believe that "well-written 'acceptable solutions' have the potential to influence building design in a direct yet voluntary manner, as those not wishing to follow the above path can always use the performance-based verification methods". In practice, as stated above, developers often prefer to use "acceptable solutions" as this proves the easiest route to compliance with the Code. Bannister, Lee and Isaacs recommend that in terms of energy efficiency, for example, acceptable solutions should include solar passive architecture, active energy generation such as photovoltaic cells (as well as wind and micro-hydro) and solar water-heating panels. The use of carefully drafted acceptable solutions, taken in conjunction with a figurative ceiling, is clearly an approach that could be used in relation to other areas of sustainable construction.[62]

57 For example, see DBH, *Code User Expectations of the New Building Code: Building Act Implementation*, Report on the Workshop to Review the Building Code, 5 November 2004, Wellington and Harman and Benjamin, supra note 10.

58 DBH Report, ibid.

59 DBH Report, ibid, and in particular the consultation groups of engineers and from science and research held this view. Also see Bannister, Lee, Isaacs, supra note 54.

60 Bannister, Lee, Isaacs, supra note 54, at para 5.1.1.

61 Bannister, Lee, Isaacs, ibid, at para 5.1.3.

62 For example, water, waste, percentage use of recycled or recyclable material in initial construction.

Potentially, the revised Building Code may usher high standards of sustainable construction into being. However, regardless of the level of sustainability that the revised Code demands, sustainable construction will not be fully promoted unless those exercising powers under the Building Act work in conjunction with planners exercising powers under the Resource Management Act.

4.2 Maximising the Sustainability of Construction

Planning can promote higher standards of sustainable building practices than can be achieved by the control of individual buildings alone. By way of example, the aspect of a building has a major impact on its energy use and efficiency. The orientation of the building and the placement of windows can be used to maximise passive solar gain. Nalanie Mithraratne and Brenda Vale, of Auckland University, School of Architecture, have emphasised the importance of the orientation of a house and state that:[63]

> generally, irrespective of the construction type and the location, life cycle energy (grid-energy use) is the least when the orientation, i.e. the direction the living room faces, is from North through North-west to West, North-West being the best in Christchurch. However, North is the best … in both Auckland and Wellington.

Thus, if a building in Auckland is built in the lee of a hill, with a south-facing living room, Building Code standards might dictate the acceptable level of heat loss of that building and specify degrees of insulation as an acceptable solution in this regard. However, it is likely that the occupiers of that building will be more inclined to use the gas or electric heating system to warm the house in the first place than if the house had been designed and positioned in accordance with the best practices of solar passive architecture. From a psychological perspective, if rooms are dark and dingy people may also be more inclined to turn on the heating and will certainly use electric lighting to a greater degree than if the room was filled with natural light. An additional, important point is that, to promote sustainable construction, one shouldn't rely too heavily on compensatory measures such as insulation. Insulation material invariably has a high degree of embodied energy. The preferable route is to use solar passive architecture.

The building regulations cannot control the orientation of a building nor can they affect the external appearance of buildings or the access of sunlight.

63 Mithraratne, N and Vale, B, *Optimum Specification for New Zealand Houses*, School of Architecture, University of Auckland, Report prepared for the BIA, 2003, at p 4.

These factors are planning issues. Bannister, Lee and Isaacs suggest that, "solar passive architecture" be included as an acceptable solution to meet energy-efficiency standards set by the Building Code but will it be possible for the Code to regulate this planning issue? The overlap between the two statutes and potential for synergies in this regard are clear.

Another example where the Building Code will not, in isolation, promote sustainable construction practices concerns surface water run-off. Development invariably increases the volume of surface water run-off. This is a particularly important issue in the UK at present and Sustainable Drainage Systems (SUDS)[64] have been developed to manage this issue in a sustainable manner. SUDS are built of one or more structures to manage surface run-off. There are five main areas of control: prevention, filter strips and swales, permeable surfaces and filter drains, infiltration devices, and basins and ponds. Again, this is not a facility that could be controlled by the Building Act and Code in isolation; it is a matter for the local authority to manage at a community level, potentially in conjunction with the developer.[65]

Issues of design and spatial planning, water management, community heating systems such as local combined heat and power generation, waste management and so on, all fall within the remit of the local authority. It seems clear that the synergies between the two acts, and indeed the overarching authority of the Local Government Act, must be exploited to achieve truly sustainable construction and buildings.

How this might be achieved in practice, particularly given the philosophical or structural divergence between the acts, may prove complicated. There are no centralised national regulations or guidelines pertaining to the Resource Management Act that would influence this area. Local authorities may prioritise the concept of sustainable construction depending upon local conditions, both environmental and political. This would invariably result in an ad hoc approach to the matter. Ideally, *all* local authorities should implement practices that will

64 For a technical explanation of SUDS see http://www.ciria.org/suds/index.html.

65 The Local Government Act 2002 provides the specific statutory powers in relation to water supply infrastructure, waste-water and storm-water management. For completeness, note that s 68(2A) of the RMA makes specific reference to surface water run-off from developments and provides: "Notwithstanding section 7(2) of the Building Act, rules may be made under this section, for the *protection of other property* (as defined in s 2 of that Act) *from the effects of surface water*, which require persons undertaking building work to achieve performance criteria additional to or more restrictive than, those specified in the building code in force under that Act" (emphasis added). Tipping J in *Christchurch International Airport v Christchurch City Council* [1997] 1 NZLR 573 at 578 described this section as dealing with building function rather than resource management functions presumably because the point of any rule would be to protect other buildings as opposed to managing natural resources.

promote sustainable construction and the interface between the acts in order to magnify the level of sustainability that might be achieved. There are no specific or clear statutory criteria presently in existence to achieve this aim. The only approach, in the absence of statutory reform, would be for a national conference of local authorities to be convened to address this issue. Alternatively, the Urban Design Protocol,[66] introduced by the Government in March 2005, may have some bearing on this matter; in particular, it may prove useful as a conduit for collaboration between the signatories to that Protocol. The Protocol is discussed in greater detail below.

If the review of the Building Code proves disappointing and minimal standards of sustainability are adopted, are there any other existing command-control measures in New Zealand that could be utilised to ensure a higher degree of sustainable construction? Could, for example, territorial authorities require sustainable construction via their powers pursuant to the Resource Management Act?[67] To answer this question, it is first necessary to consider the interrelationship between the Building Act and the Resource Management Act.

5. THE INTERRELATIONSHIP BETWEEN THE BUILDING ACT 2004 AND THE RESOURCE MANAGEMENT ACT 1991

The 1991 Building Act contained a section that, by analysis, affected the relationship between the Building Act and the Resource Management Act. Section 7 of the 1991 Building Act precluded the imposition of performance criteria for building work additional to or more restrictive than those specified in the Building Code. This section has, in essence, been replicated in the 2004 Building Act:

> s. 18 (1) A person who carries out any building work is not required by this Act to –
>
> (a) achieve performance criteria that are additional to, or more restrictive than, the performance criteria prescribed in the building code in relation to that building work: or
>
> (b) take any action in respect of that building work if it complies with the building code.
>
> (2) Subsection (1) is subject to any express provision to the contrary in any Act.

66 Ministry for the Environment (2005), *Urban Design Protocol*, March 2005, Wellington, available from the Ministry or at http://www.mfe.govt.nz/publications/urban/design-protocol-mar05. See in particular the "Design Champion Network", a networking resource, at p 26.

67 Hereinafter referred to from time to time as "the RMA".

The ambit of this section has been considered by the High Court in the matter of *Christchurch International Airport Ltd v Christchurch City Council*.[68] In that case, the Court was asked to consider the validity of a condition on a resource consent that required a development close to Christchurch Airport to have noise attenuation features. The Building Industry Authority argued that the condition was invalid because, inter alia, this required the buildings to attain greater performance standards than were required pursuant to the Building Code. The Building Code operative at the time that the case was decided contained standards as to airborne and impact sound from abutting buildings but it did not contain any specific standards as to noise controls relating to airports. The Court upheld the imposition of the condition.

The decision of the Court flowed from a finding that acted as an important starting point: the condition in question was not being imposed (other than incidentally) upon the builder but rather was a condition imposed upon the consequent *use* of the building. The buildings were to be occupied as residences. Without the additional insulation, the buildings would have undoubtedly received a building consent certificate but would not have received resource consent and would therefore, have been useless. In explanation, Tipping J stated:[69]

> … [A] council in its resource capacity is concerned with activities and their actual or potential effect. The relevant activity for present purposes is the residential occupation of land and buildings. In regulating the activity in the area in question, the Christchurch City Council considered that the activity in the area in question should only be allowed if the dwelling was satisfactorily insulated against the noise of the airport … it was a requirement imposed for the regulation of the activity within the proposed building. It was not imposed other than incidentally and indirectly upon the intended occupier in undertaking any building work within the meaning of s 7 (2) of the Building Act. While the activity of building is no doubt an activity for resource management purposes it is not that activity which, by imposing the noise insulation requirement the Council was seeking to regulate. The Council was not prepared to allow the building, once built, to be occupied and used for residential purposes unless it had sufficient noise control insulation. Thus the Council was not imposing the requirement on the relevant person in undertaking building work, the requirement was imposed as a precondition to the use of the building for its permitted activity i.e. residential occupation. A building consent could have been obtained without the extra insulation but without that insulation the building could not have been occupied and used, ie the intended activity could not have taken place.

68 [1997] 1 NZLR 573. Specifically, the operative section considered in the case was s 7 of the Building Act 1991.

69 Ibid, per Tipping J, at p 579.

Against this backdrop and in considering whether s 7 emasculated the RMA, Chisholm J stated:[70]

> It was not part of the statutory intention that building controls concerning the use of buildings or controls arising from the management of natural and physical resources under the Resource Management Act should be circumscribed by the building code … Where the objective of the condition/rule is to control activities under the Resource Management Act the condition/rule is not a performance criterion within the meaning of s 7 (2). Accordingly that subsection could not preclude the exercise of the power. In my view s 7 (2) is ineffective to prevent consent authorities imposing controls over buildings as part of the lawful exercise of their powers under the Resource Management Act. This conclusion sits comfortably with the statutory framework of the Building Act and the Resource Management Act. Both acts fulfil different functions in respect of the control of buildings. As already mentioned, s 35 (1A) of the Building Act provides a clear statutory acknowledgment that powers exercised under the Resource Management Act can materially affect building work. The existence of overlapping functions between regional authorities and territorial authorities were recognised by the Court of Appeal in *Canterbury Regional Council v Banks Peninsula District Council* [1995] NZRMA 452 at 458. There is no sound basis for excluding the possibility of overlapping functions on the part of the building consent authorities and the planning consent authorities.

Thus, to summarise, a territorial authority will be free to promulgate conditions and rules concerning the *use* of a building even if those rules affect the construction of buildings, provided of course that such rules are "appropriate and necessary"[71] to "promote the sustainable management of natural and physical resources". The imposition of noise attenuation standards was accepted to be a valid resource management concern in the Christchurch case and, accordingly, the Court did not explore in any detail the question as to what would be "appropriate or necessary … to promote the sustainable management of natural and physical resources". However, for the purposes of the present discussion, the efficient use of water and energy is clearly both a resource management issue and also an end to be fostered by methods of sustainable construction. How an occupier's use of a building affects water and energy consumption is not solely related to the "performance of a building in the isolated context of it being a structure";[72] it is a valid resource management concern and arguably any resource management rule influencing this matter would not therefore be caught by s 18 of the BA04.

70 Ibid, per Chisholm J, at p 593.
71 Ibid, per Tipping J, at p 577.
72 Ibid, per Chisholm J, at p 595.

There are potentially limitations to this proposition however. As noted above, although the Building Code operative at the time that the *Christchurch* case was decided contained standards as to airborne and impact sound from abutting buildings it did not contain any standards as to noise controls relating to airports.[73] What would be the position if the Code had contained performance criteria covering precisely the same subject matter as that RMA-imposed rules sought to regulate? Could the territorial authority impose a higher standard? Although one would have thought not, this is not the gravamen of the *Christchurch* decision. In concluding, Chisholm J stated:[74]

> If the controls imposed by way of condition/rule under the Resource Management Act are more stringent than those imposed under the Building Act, the more stringent condition/rule will apply.

This conclusion only appears to make sense if one presupposes that the RMA condition/rule and Code clause are concerned with controlling the same issue. This point is important because the present (and probably the future) Building Code includes a clause relating to the energy efficiency of buildings.[75] Would local authorities be able to impose higher energy efficiency standards than the Code? The answer to that question may depend upon whether the authority could fundamentally justify the imposition of such conditions as a "lawful exercise of powers conferred by the Resource Management Act notwithstanding that such rules affect the construction of buildings".[76] The particular local conditions may be relevant in this regard as local authorities are concerned with resources in their district. If a revised Building Code included water efficiency measures, could a local authority promulgate rules in relation to water use (surely a resource management activity) that were more stringent than those imposed under the Code? Arguably they could if local conditions justified this.

Ensuring that buildings *operate* to foster high standards of sustainability is, however, only one part of the equation. To recall the definition of sustainable construction espoused in part 2 of this article:

> construction that adheres to best environmental practice standards firstly, in relation to the initial construction and ultimate deconstruction of the building and secondly, in the technology incorporated into or the design of the building to minimise the use of natural resources and the emission of pollutants in its subsequent operation

73 Ibid, per Tipping J, at p 576.
74 Ibid, per Chisholm J, at p 597.
75 See Clause H1– Energy Efficiency Provisions.
76 Supra note 68, per Chisholm J, at p 597.

it is clear that the actual construction and eventual deconstruction of buildings are also essential factors to consider in achieving the sustainable management of natural resources. By way of example, products used in the construction of a building may "off-gas" pollutants that in turn may affect the quality of the surrounding air.[77] From a resource management perspective, local authorities would want to prevent the use of such products. In addition, to comply with their resource management duties, authorities would ideally wish to ensure that timber used in the construction process originated from sustainable forests, recycled and locally produced materials were used, and construction waste minimised or recycled etc. All these issues relate to resource management matters but at first blush appear to be directly linked to the construction process and not the subsequent use of a building. Could local authorities promulgate resource management rules that influenced these issues?

Although one would have thought not (this appears to be classic s 18 territory), it is difficult to reach a definitive conclusion on the basis of the *Christchurch* decision. The matter was not addressed in the clearest of manners and, arguably, given the initial finding set out hereinabove, any pronouncements must be considered obiter dicta. However, it is interesting to consider the apparent ambiguity of the judgment in this regard and the comments made by the bench. For example, Chisholm J stated:[78]

> The key is the purpose of the functions performed. If the exercise of the power relates only to the physical building structure it will be caught by s 7 (2). On the other hand, if the exercise of the power relates to the control of activities or the effects of activities in terms of the Resource Management Act it will not be caught by s 7 (2).

By way of additional clarification, Tipping J stated that:[79]

> … a requirement which goes beyond the building code is not permissible at the behest of the building inspector but is permissible at the behest of the planner provided always that it is appropriate for resource management purposes.

And:[80]

> Under s 76 (1) of the Resource Management Act territorial authorities are concerned with activities. Their rule making powers are limited to rules which

77 Products that may not be banned by other regulations.
78 Supra note 68, per Chisholm J, at p 593.
79 Ibid, per Tipping J, at p 577.
80 Ibid, per Tipping J, at p 579.

> "prohibit, regulate or allow activities". Under s 76 (3) territorial authorities must in making rules have regard to the effect of activities on the environment. Thus a council in its resource management capacity is concerned with activities and their actual or potential effect.

And further:[81, 82]

> For the purposes of granting building consents s 7(2) prevails and different territorial authorities cannot impose their own requirements on top of or in substitution of the code. If, however, the territorial authority is facing a particular planning or resource management issue whose appropriate solution lies in the imposition of a requirement going beyond the code, s 7 (2) does not prevent that course. This will not give territorial authorities carte blanche to supplement or depart from the code, which is clearly intended, within its proper compass, to have national application. The construction which I prefer simply allows the building code to be exceeded when resource management considerations justify such a departure. Stated in the most simple of terms, the code can be exceeded when, but only when, "the use of land, air and water" requires it.

Just how wide is this? Consider the following: local authorities have the power to make rules to regulate the *effects of activities on the environment*. "Activity" is not defined in the "Interpretation" part of the RMA. However, land use is described as an activity[83] and specifically, "the word **use** in relation to any land" is drafted with incredible width to include:[84]

> Any use, erection, reconstruction, placement, alteration, extension, removal or demolition of any structure or part of any structure in, on, under, or over the land … or any other use of land.

Clearly, building construction and deconstruction are activities for the purposes of the RMA. The effects on the environment that flow from particular construction practices are resource management issues. Taken in conjunction with the *Christchurch* decision, could a local authority promulgate resource

81 Ibid, per Tipping J, at p 580.

82 In addition, the head-note in the *Christchurch* case summarises that: "the [Building] Act did not intend that building controls concerning the use of buildings **or controls arising from the management of natural or physical resources** should be circumscribed by the building code. The building code might therefore be exceeded when the legitimate exercise of powers under the Resource Management Act justifies such a departure" (emphasis added).

83 RMA, s 9(3).

84 RMA, s 9(4).

management rules to prevent the deleterious effects on natural resources from construction activities? Arguably they could, if such measures were "appropriate and necessary".

Critics of this analysis may point to the fact that the Building Act of 2004 has a different stated purpose to that of the 1991 Act; the legislation pertinent at the time of the *Christchurch* decision. Specifically, the 2004 Act has the express purpose of promoting sustainable development.[85] This may lend greater force to any arguments that the RMA should not be used to "fill gaps in the Code"[86] concerning sustainability. However, it is difficult to state categorically how this would impact upon the RMA powers of local authorities.

To date, in the absence of clear authority to the contrary, it is apparent that local authorities will be able to introduce rules to ensure the sustainable management of natural and physical resources even if these directly influence the construction process. Carefully drafted rules, emphasising their valid resource management function, are likely to be safe from legal challenge despite s 18 BA04. To further safeguard any rules, local authorities would be well advised to tie or to link the rule to the *use* of the building if possible. To stimulate debate, the author poses the following question; is it arguable that most products used in the construction process are included to facilitate the subsequent use or occupation of the building as opposed to relating solely to the building as an isolated structure?

Whilst acknowledging the counter-arguments, the following part of the paper is premised on the supposition that territorial authorities can impose rules for resource management purposes that also influence sustainable construction.

6. THE RESOURCE MANAGEMENT ACT 1991

Part II of the Resource Management Act is entitled "Purpose and Principles". Section 5 is described in the Act as the **Purpose** and states:

> s. 5 (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.
>
> s. 5 (2) In this Act, sustainable management means managing the use, development and protection of the natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety while –

85 BA04, s 3(d).

86 See the arguments of counsel in the *Christchurch* case, supra note 68, summarised at p 594.

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
(c) avoiding, remedying or mitigating any adverse effects of activities on the environment.

Whilst the drafters of the RMA did not attempt to include a comprehensive definition of "environment", Part 1 s 2 of the Act states that:

Environment includes –
(a) ecosystems and their constituent parts, including people and communities; and
(b) all natural and physical resources; and
(c) amenity values; and
(d) the social, economic, aesthetic and cultural conditions which affect the matters stated in paragraphs (a) to (c) or which are affected by those matters.

"Natural and physical resources" are defined in section 2 as including:

land, water, air, soil, minerals and energy, all forms of plants and animals, (whether native to New Zealand or introduced) and *all structures* (emphasis added).

Structure means *any building*, equipment, device or other facility made by people and which is fixed to land.[87] Thus, to reiterate, the purpose of the RMA is to promote the sustainable management of natural and physical resources that includes, inter alia, managing the use and development of any building. To impose rules with regards to this activity, as stated in Part 5 hereinabove, is a valid resource management purpose.

For completeness, sections 6 and 7 serve to flesh out the meaning of sustainable management. Section 6 contains **Matters of National Importance** that shall be recognised and provided for by all persons exercising powers under the Act. Section 7 provides a list of matters that such persons shall pay particular regard to.

The importance of Part II of the RMA cannot be understated. The Hon Simon Upton, Minister for the Environment in 1991, has stated that sustainable management is enshrined as the guiding principle of the Resource Management Act and, as such, carries far more ethical weight than a simple statement of

87 RMA, s 2.

purpose.[88] He has explained that the sustainable management of natural and physical resources is the "motivating core" of the Act and "goes to the heart of the way in which the Act speaks".[89] In introducing the Resource Management Bill to the House of Representatives for the final reading, he stated that:[90]

> … the Bill provides us with a framework to establish objectives with a biophysical bottom line that must not be compromised. Provided that those objectives are met, what people get up to is their own affair. As such the Bill provides a more liberal regime for developers. On the other hand, activities will have to be compatible with hard environmental standards and society will set those standards.

Territorial authorities can set those standards. By s 31 of the RMA, territorial authorities are, inter alia, empowered to control land use in their district and are concerned specifically with:[91]

> s. 31 (1) (b) the control of any actual or potential effects of the use, development or protection of land …

In order to give effect to the purpose of the Act in its district, a territorial authority shall have the following functions:

> s. 31 (1) (a) the establishment, implementation and review of objectives, policies and methods to achieve integrated management of the effects of the use development or protection of land and associated natural and physical resources of the district.

There are three methods by which territorial authorities could arguably utilise their powers pursuant to the RMA to require or to promote sustainable construction as a resource management activity. Requirements could be included in district plans or attached as conditions to resource consents. Further, the financial contributions mechanism could be utilised as an incentive to sustainable construction. Each of these proposals is considered in turn in the following paragraphs.

88 Infra, at p 4.

89 Upton, S, *Purpose and Principle in the Resource Management Act*, The Stace Hammond Grace Lecture 1995, University of Waikato, 26 May 1995, at p 5.

90 *Hansard*, vol 5lb 1991, Resource Management Bill Third Reading, Hon Simon Upton, at p 3020.

91 RMA, s 3 describes the **Meaning of Effect**.

6.1 District Plans

Unlike the Building Code, which is prescribed centrally, territorial authorities can use the planning system in a holistic manner and can adapt plans to ensure that they are sensitive to local circumstances and concerns.

Section 31 of the RMA empowers territorial authorities to promulgate a "district plan". In preparing such a plan, the authority must have regard to Part 4 section 32[92] and must evaluate the alternatives to and benefits and costs of the proposals.[93] Further, the territorial authority shall consider Part 5, sections 72 to 75 of the RMA. Section 74 dictates that a plan must be prepared in accordance with the requisite sections contained in Part 2 of the RMA and specifically, must accord with the purpose and principles of the Act. As stated above, sections 6 and 7 flesh out the meaning of sustainable management in the RMA and provide guidance to territorial authorities as to specific issues that should be translated into policies and plans. For present purposes, section 7 is of particular interest. Pursuant to this section:

> all persons exercising functions and powers under [the RMA] in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to –
> (b) the efficient use and development of natural and physical resources:
> (ba) the efficiency of the end use of energy:
> (d) the intrinsic value of ecosystems:
> (f) maintenance and enhancement of the quality of the environment:
> (g) any finite characteristics of natural and physical resources:
> (i) the effects of climate change:
> (j) the benefits to be derived from the use and development of renewable energy.

Thus, in the preparation of district plans, territorial authorities shall have particular regard to all of these issues in managing the use and development of any building. In ensuring the correlation between the "use and development of any building" and the principles espoused in section 7 the territorial authority should, arguably, have the concept of sustainable construction at the forefront of its decision-making process.

92 RMA, s. 32 (3) An evaluation must examine the extent to which each objective is the most appropriate way to achieve the purpose of this Act and whether having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.
RMA, s. 32 (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 risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.

93 See *Foodstuffs (Otago Southland) Ltd v Dunedin City Council* [1993] 2 NZRMA 497 for the importance of the s 32 procedure.

Elements inherent in sustainable construction[94] are capable of addressing all of the criteria specified in section 7. Theoretically therefore, a territorial authority, in having regard to section 7, could incorporate regulations providing for sustainable construction in the district plan. A review of all the operative district plans in New Zealand is beyond the scope of this paper but in order to examine this issue to some degree, the Auckland City District Plan is considered. Does this Plan contain any policies that provide for sustainable construction in any form?

One of the stated objectives of the Auckland City District Plan is that "buildings and activities will have little adverse effect on the environment".[95] In accordance with this, the Plan specifies a general duty on "every person to avoid, remedy or mitigate any adverse effect on the environment arising from an activity carried on by, or on behalf of the person".[96] In relation to the "maintenance and condition of land and buildings" the Plan contains specific prohibitions concerning the prolonged emissions of dust or air suspended particulate matter, the discharge of contaminants[97]and "offensive or objectionable" odours or air pollution.[98] The protection of heritage buildings is an important part of the District Plan.[99] Heritage buildings are identified as "an essential part of the City's cultural values",[100] and although the stated aim is "to preserve a link to past generations" the preservation of such buildings is an important factor in contributing to sustainability.

However, despite the foregoing, there are no clear, specific mandatory regulations in relation to sustainable construction in the Auckland City District Plan.[101] To some extent, this may simply be a matter of timing. Auckland City and Regional Councils, in conjunction with many other local authorities, developers, investors, professionals and educational establishments,[102] have expressed their formal support of sustainable construction. The Council and others are signatories to the Urban Design Protocol.[103] The Protocol is a voluntary initiative

94 See part 2 of this paper.
95 Auckland City District Plan Central Area Section, part 3.8.1 (a).
96 Ibid, part 15.5.1.2.
97 Ibid, part 15.5.1.4.
98 Ibid, part 15.5.1.5.
99 See part 5C of the Isthmus Section and part 10 of the Hauraki Gulf Islands Section, available at http//:www.aucklandcity.govt.nz. The heritage part of the Central Section District Plan was not, at the date of writing, operative.
100 See part 5C.2, ibid.
101 Nor indeed in the Waitakere District Plan, a city that styles itself as an "eco-city" (although the council has developed a number of advisory guidelines in relation to "green building practices").
102 Ibid, Part 5, at p 32.
103 Ministry for the Environment (2005), *New Zealand Urban Design Protocol*, March 2005, Wellington, available from the Ministry or at http://www.mfe.govt.nz/publications/urban/design-protocol-mar05.

that forms part of the Government's Sustainable Development Programme of Action. It aims to promote a partnership between all sectors concerned with development in order to foster quality urban design. Whilst the Protocol is not legally binding, it contains the formal political undertakings of the signatories. In particular, those signatories acknowledge that:

> Successful towns and cities maintain, celebrate and add to their best environmental attributes … [t]hey enhance these qualities by maintaining and sometimes recreating natural networks through their urban areas and **by designing new buildings, transport services and infrastructure that meet the highest standards of sustainable design and construction …**[104] Environmentally responsible towns and cities constantly seek ways to minimise adverse impacts on human health and natural and cultural systems, including air quality and water quality. They minimise waste production, energy and water use and maximise the efficiency of land use and infrastructure.[105]

Importantly, signatories agree that, "[q]uality urban design … utilises 'green' technology in the design and construction of buildings and infrastructure, incorporates renewable energy sources and passive solar gain".[106]

Accordingly, the political expression of will to promote sustainable construction has been formally recorded. In addition, the Government urges local authorities to "… develop appropriate statutory policies, rules and guidance" to achieve the aims of the Protocol.[107] Local authorities should seize the opportunity to do just that.

Auckland City Council has recently published an Urban Design Strategy[108] that acknowledges the importance of sustainability in construction processes and buildings and highlights practical elements that will promote this end.[109] At this stage, the Strategy is an amalgamation of goals but avers that the elements identified "can form the basis for design guides and regulatory changes".[110] In accordance with its duties as a signatory to the national Urban Design Protocol, Auckland has produced a Proposed Action Plan.[111] The Action Plan, inter alia,

104 Emphasis added.

105 *Urban Design Protocol*, supra note 103, at page 14.

106 Ibid, at p 23.

107 Ibid, at p 10.

108 Auckland City Council (2004), *Urban Design Strategy*, February 2004, available at http://www.aucklandcity.govt.nz/council/documents/urbandesignstrategy/default.asap.

109 Ibid, contained in the section on "Principles and Objectives".

110 Ibid.

111 Auckland City Council, Senior Urban Designer, *NZ Urban Design Protocol: Proposed Action Plan*, Environment, Heritage and Urban Form Committee, 29 September 2005, No 311252008, available at http://www.aucklandcity.govt.nz/council/members/committeemeetings/environment.

recommends, "investigating mechanisms for providing incentives to encourage environmentally sustainable design techniques in new developments".[112]

The terminology used within this draft recommendation, i.e. "providing incentives" and "encourage", is somewhat tentative. Why this hesitancy? Given the enormity of the environmental change and damage caused by the construction industry, a territorial authority cannot be fulfilling its duty to promote sustainable management under the RMA without addressing this issue. Further, in light of the analysis in part 3 of this article, command-control measures, in the form of clear rules, are required to achieve this end. Potentially, there are two main reasons for such apparent caution.

Firstly, any relevant rule or rules may be susceptible to legal challenge. Opponents to a rule might seek to argue a more restrictive interpretation of *Christchurch International Airport v Christchurch City Council*[113] than is provided for in this paper. They might pray in aid the contention that if territorial authorities incorporated elements of sustainable construction into their district plans, the purpose of the Building Act, which is to provide for national uniformity in construction standards, would be diluted. (Invariably, different territorial authorities would include varying elements pertaining to sustainable construction within their plans.) Authorities will seek to avoid the expense and inconvenience of legal challenges if possible. However, for the reasons espoused in part 5 of this article, a court is unlikely to overturn a well drafted, justifiable rule in a Plan that was adopted following a transparent process.

Secondly, territorial authorities might consider, for example, the conservation of water and energy to be more appropriately dealt with at a national or regional level as opposed to district level.[114] In addition, the RMA emphasises that district plans must concern the natural and physical resources "*of the district*". A critic might argue that the word "of" has been chosen for a particular purpose and specifically preferred to "*in* the district" for example. Does this mean that the source of the water or resources providing the energy must be the district to validate the proposition in this paper? This cannot possibly be correct. To import such a test would severely restrict a territorial authority's other resource management activities and it would prove impossible to administer. In pragmatic terms, Auckland, for example, suffers from poor air quality,[115] faces a looming

112 Ibid, at p 11, 7.8.

113 Supra note 68.

114 By way of example, section 30(1)(c) of the RMA allocates responsibility to maintain the quality and quantity of water in water bodies to the regional authority.

115 See ARC website, *Air Pollution in Auckland*, available at http://www.arc.govt.nz/arc/index.cfm.

energy crisis,[116] and water shortages have occurred from time to time.[117] The use of land exacerbates such problems and the Council must take such matters into account when formulating plans for the City. Increased expenditure on infrastructure is only one means to mitigate these difficulties. Clearly, the ever-increasing consumption of water and energy is far from ideal. Fresh, pure water is not an unlimited resource[118] and, without all energy being derived from renewable sources, energy use has a number of deleterious environmental side effects.[119] The sustainable management of the use of these resources is a valid goal for all local authorities. Simply because a number of districts or regions face similar problems should not prevent the territorial authority from introducing measures to address such difficulties in Auckland.

In summary, given the conclusions espoused in part 3 of this article, taken in conjunction with the legal analysis in part 5, it is to be hoped that Auckland City (and other local authorities) will consider strategies that *require* environmental sustainability in building in addition to *encouraging* this practice. The author's view is that it would be preferable for requirements as to sustainable construction to be included in the district plan so as to ensure the maximum applicability of such standards. This would for example, catch "permitted building activities". However, a territorial authority might also utilise conditions on resource consents for this purpose.

6.2 Conditions on Resource Consents

Where a development requires a resource consent, the territorial authority, or consent authority, may attach conditions to the granting of that consent.[120] The Resource Management Act does not place a limit on the nature of conditions that may be attached to a resource consent but any condition must be fair and reasonable on its merits.[121] In accordance with *Newbury District Council v Secretary of State for the Environment*:[122]

- the condition must fairly and reasonably relate to the development permitted by the consent to which the condition is attached;

116 For example, see O'Sullivan, F, "Let's Look at N Power", *New Zealand Herald*, 6 September 2005, available at http://www.nzherald.co.nz.

117 Williams, M, *Beyond Ageing Pipes: Urban Water Systems for the 21st Century*, Parliamentary Commissioner for the Environment, June 2000, Wellington.

118 Ibid.

119 Most notably, in the production of greenhouse gas emissions that contribute to global warming and climate change.

120 RMA, s 108.

121 *Newbury District Council v Secretary of State for the Environment* [1980] 1 All ER 731.

122 Ibid, as applied to the RMA in *Housing New Zealand Ltd v Waitakere City Council* [2001] NZRMA 202 (CA) at para 18.

- the condition must not be so unreasonable that no reasonable planning authority could have imposed it; and
- the condition must be imposed for a planning/resource management purpose not an ulterior purpose such as a revenue gathering exercise.[123] It is important to note that the phrase "resource management purpose" has a wide ambit.[124]

In determining whether the condition is fair and reasonable, the following criteria are applicable:[125]

- the condition must be the result of a process of reason rather than whim or arbitrariness;
- the condition must be fair to both the appellant and the community;
- the condition must be proportionate.

Within the Auckland City District Plan, part 15.3.1.2 (d) sets out the categories of conditions that may be imposed on a resource consent in relation to a discretionary activity. The only condition that may potentially have any clear relevance to sustainable construction is "(xxi) controlling the adverse effects arising from development on wastewater, storm water and water supply infrastructure".

It is difficult to determine the reason why other facets of resource management equating to sustainable construction are not expressed as potential conditions. Potentially the same reasons identified above apply. However, this is not a situation that is readily justifiable given the arguments contained above. Conditions that met resource management purposes whilst also equating to sustainable construction would be relatively easy to formulate. Auckland City Council could publicise conditions that fulfilled this purpose and comply with the tests set out above with relative ease.

6.3 Resource Management Act – Financial Contributions

Section 108(2)(a) of the RMA allows a resource management consent to be granted with a "condition requiring that a financial contribution be made". A financial contribution means a contribution of money or land (or a combination

123 *Woodridge Estates Ltd v Wellington City Council* (1993) 2 NZRMA 656 (Planning Tribunal).

124 *Nicoll Management Ltd v Manukau City Council* A62/94 28 July 1994 (Planning Tribunal).

125 *Retro Developments v Auckland City Council* A35/2005, para 10, per Newhook J.

of both)[126] paid by the developer to the territorial authority. A financial contribution will only be valid if "the condition is imposed in accordance with the purposes specified in the plan or proposed plan (including the purpose of ensuring positive effects on the environment to offset any adverse effects) and the level of contribution is determined in the manner described in the plan or proposed plan".[127] These criteria aim to ensure transparency.

The Ministry for the Environment has described financial contributions as a form of environmental compensation.[128] Akin to the internationally recognised "polluter pays" principle,[129] financial contributions compensate communities for the adverse effects on the environment of development. Salter explains that:[130]

> The incorporation of the financial contribution provisions in the RMA were intended to be a useful instrument to allow councils to address the effects of activities that could not generally be avoided by other means.

Specifically, the Environment Court has stated that the emphasis of financial contributions:[131]

> … is on the mitigation of effects caused by persons in the units, not the units themselves.

Contributions should, theoretically therefore, provide financial recompense so as to allow territorial authorities to avoid, remedy, mitigate and/or offset the environmental effects of a proposed activity. When this is considered within a factual matrix, it can be seen to be a rather obtuse tool. Depending upon the environmental effects that are considered, financial contributions may not suffice to avoid, remedy, mitigate and/or offset the environmental damage of development. By way of an example, many building materials release formaldehyde and volatile organic compounds into the air that in turn can affect

126 RMA, s 108 (9).

127 RMA, s 108 (10).

128 Ministry for the Environment: Resource Management Ideas No 9, "Developing Financial Contributions Policy Under the Resource Management Act" at p 6, quoted in Prendergast, C, "Funding the Infrastructure Required to Mitigate the Effects of Developments" (2004) 8 *New Zealand Journal of Environmental Law*, 327–359 at page 344.

129 For an explanation of this principle within the context of international law, see Birnie, P and Boyle, A, *International Law and the Environment*, 2 ed, Oxford University Press, 2002, pp 92–95.

130 Salter, R, "Financial Contributions and the Environment" (1999), Paper presented to the NZPI Seminar on Financial Contributions, Auckland, November 1999, available at http://www.qualityplanning.org.nz/pubs/3626.pdf at p 9.

131 *Retro Developments v Auckland City Council* A35/2005 para 36, per Newhook J.

human health and contribute to smog and ground-level ozone pollution.[132] In the absence of measures banning building materials such as particle board, certain adhesives, solvent-based finishes and carpeting etc. (such measures being unlikely), how will financial contributions "avoid, remedy, mitigate and/or offset" the adverse effects on the environment of the use of such building products?

Given that financial recompense is such a blunt tool, the *main* focus of territorial authorities seems to have been to use RMA financial contributions towards developing or improving the infrastructure associated with growth.[133] The Auckland City District Plan, Central Area Section,[134] states that financial contributions may be made a condition of a resource consent for a non-complying activity.[135] Financial contributions paid in respect of developments within the central area of Auckland, may be used, for example, to preserve "open spaces" or reserves,[136] the development and improvement of pedestrian linkages, streetscape enhancements and drainage.[137] The rationale for this approach is that increased development will inevitably increase demand for these facilities. Development has subsumed "open space" and, therefore, developers should compensate the community accordingly by ensuring the preservation of alternative "open space" or reserves by providing money or land to this end.[138] Contributions are utilised specifically within the area that the development has occurred.[139] Thus, in relation to the central area of the city, Auckland City Council appears to have adopted a rather traditional planning approach to the issue. The focus is wholly upon infrastructure. It is clear,

132 See Denver AIA Committee on the Environment, "Checklist for Environmentally Sustainable Design and Construction" 1997, available at http://aiacolorado.org/SDRG/intro/checklist.htm, p 3. This is not an issue covered by the performance standards of the Building Code but is arguably a resource management issue as it affects air quality.

133 For a useful summary of the financial contributions provisions that apply in the Auckland City District Plan see Auckland City, *Amendments to Focus on the Future 2004–2014*, pp 21–22, part 13.1, available at http://www.aucklandcity.govt.nz/council/services/devcons/docs/policy.pdf. Further, see Salter, supra note 130.

134 See Auckland City District Plan, Central Area Section, part 8, available at http://www.aucklandcity.govt.nz. For further detail as to financial contributions in Auckland, see part 9 of the Plan for the Hauraki Gulf Islands and part 4 B for the isthmus section.

135 Auckland City District Plan, Central Area Section, ibid, part 15.3.1.5.

136 Auckland City District Plan, Central Area Section, ibid, part 8.4.3. For an exploration of this issue, consider the judgments in *Retro*, supra note 131 and *Symphony v Auckland City Council* A038/2005 (Environment Court).

137 Auckland City District Plan, Central Area Section, supra note 134, part 8.4.2.

138 Ibid, part 8.5.2.

139 Ibid, part 8.7.1.5.

however, that within the realms of *resource management*, territorial authorities are not so constrained.[140]

In contrast to the Central Area Section, the Isthmus Section of the Plan provides for the Council to collect "environmental and heritage financial contributions"[141] that are for the specific express purpose of remedying or mitigating the adverse environmental effects of a development. The contribution is utilised for the benefit of heritage or environmental features in the vicinity of the development or elsewhere in the city. The Hauraki Gulf Islands Section of the Plan also provides that contributions collected in relation to subdivisions or land-use activities shall be for the purpose of "protecting and enhancing the environment",[142] although, again, such contributions can also be used for infrastructure.

The provision of infrastructure as a necessity flowing from growth is a concrete concept, easily understood and to an extent, this may be one reason why councils have primarily explained the purposes of financial contributions in such terms. However, financial contributions may be required for much wider environmental purposes and seemingly, their use has been restricted and purpose diverted to one cause, perhaps because that is where the most pressing need has been. In explaining the policy behind financial contributions, Salter notes that:[143]

> … the original policy intent was for financial contributions to be used for a wide range of purposes.[144] … There has been no attempt through the legislation to narrow or further define the scope of applications intended for financial contributions. This in part reflects the permissive nature of the RMA … the provisions were written in a general manner without any specific restrictions other than the section 32 test to justify their application and that the financial contributions were to achieve the purpose of the RMA.

Arguably, however, the primary reasons for the emphasis on infrastructure, has been because other *precision*[145] funding methods have not previously been available. This situation changed with the introduction of "development contributions".

140 For an exploration of some of the reasons proffered by other councils for taking a financial contribution, see Salter, supra note 130, at pp 13–15.

141 Auckland City District Plan, Isthmus Section, supra note 134, clause 4B.7.4.

142 Auckland City District Plan, Hauraki Gulf Islands Section, supra note 134, rule 9.2.1.

143 Salter, supra note 130, at pp 10–11 and see this paper for a critical appraisal of the emphasis that has been placed on financial contributions to fund infrastructure.

144 Salter, supra note 130, at p 16.

145 That is, a form of funding that attaches directly to the source of the growth as opposed to being provided for by the generalised rates system.

6.4 Local Government Act 2002 – Development Contributions

Sections 197–211 of Part 8, subpart 5 of the Local Government Act 2002[146] grant territorial authorities the power to charge development contributions. The specific purpose of development contributions is to require developers to help fund the cost of new infrastructure associated with growth. Specifically, section 199(1) of the LGA states that:

> Development contributions may be required in relation to developments if the effect of the developments is to require new or additional assets or assets of increased capacity and as a consequence, the territorial authority incurs capital expenditure to provide appropriately for –
> (a) reserves:
> (b) network infrastructure:
> (c) community infrastructure.

Within Auckland City, development contributions will be attached to residential and non-residential developments that "increase the demands for storm-water, community facilities or open space".[147] Revenue received from development contributions can *only* be used to fund capital expenditure for growth.[148] The Local Government Act makes reference to the interrelationship between development contributions and financial contributions made pursuant to the RMA. Section 200(1) of the LGA mandates that (emphasis added):

> A territorial authority must not require a development contribution for a reserve, network infrastructure, or community infrastructure if, and to the extent that,
> (a) it has under section 108(2)(a) of the Resource Management Act 1991, imposed a condition on a resource consent in relation to the same development *for the same purpose* …

Perhaps in light of this section, Auckland City has stated that, "development contributions are likely to replace financial contributions over time".[149] Certainly, in relation to funding the infrastructure associated with growth, development

146 Hereinafter referred to from time to time as "the LGA".
147 Auckland City Development Contributions Fact Sheet, DCA01, June 2005, p 3, available at http://www.aucklandcity.govt.nz/council/services/devcons/docs/factsheet.pdf.
148 Ibid, p 1.
149 Ibid, p 2. For research into this issue see Prendergast, supra note 128, at pp 351–356.

contributions would appear to be the correct funding tool for councils to use and should "replace financial contributions" for *that purpose*. However, to phase out financial contributions as a result, is to misinterpret the function of these RMA-based tools. The introduction of the development contribution affords councils a prime opportunity to re-evaluate the use of financial contributions. They should not be seen primarily as a source of revenue; they should be used to make developers limit the adverse effects on the environment of their activities and to achieve this, financial contributions need to be seen from a different perspective. Although the drafters of the RMA would no doubt baulk at the suggestion, financial contributions, philosophically, should be seen as more akin to a "fine" or penalty. If developers meet acceptable standards of sustainable construction, councils could use their discretion to reduce the amount of financial contributions payable, or, in certain cases,[150] extinguish the requirement to pay altogether. Thus, territorial authorities could offer financial incentives to developers in order to promote sustainable construction via the financial contribution mechanism. Would this suggestion meet with legal scrutiny?

The Court of Appeal considered the use and imposition of financial contributions in the matter of *Retro Developments Ltd v Auckland City Council*.[151] William Young J, for the Court, stated that:

> We are of the view that a plan which provides a method for determining the maximum contributions which can be imposed but which also provides that a lesser amount can be imposed at the discretion of the local authority, is within the contemplation of this section.

And that:[152]

> Section 108(9) of the Act requires the Council to state either the maximum amount which is required to be paid as a financial contribution or the formula or means by which this amount can be assessed.

The Court focused on the necessity for transparency. To ensure that the proposed scheme was sufficiently transparent and just, there would be a need to ensure that the discretion to reduce the required contribution was not exercised in an arbitrary or opaque manner.[153] Accordingly, a council would need to regulate the exercise of its discretion. It could do so by utilising an assessment scheme such as the BRANZ Green Home Scheme.[154] This scheme provides an

150 For example, an eco-development akin to the Peabody Trust's BedZed.

151 *Retro Developments Ltd v Auckland City Council* [2003] NZRMA 360 (CA).

152 Ibid, at paras 21 and 26 respectively.

153 *Far East Investments Ltd v Auckland City Council* A048/01 (2001).

154 See BRANZ website at http://www.branz.co.nz/main.php?page=Greenhome%20Scheme. For

environmental rating system for buildings and calculates the sustainability of buildings in the form of "eco-points". Reductions in the financial contribution payable could equate to the eco-points awarded. BRANZ already has an established system of Green Home Accredited Assessors that could be utilised to assess the eco-points that a development attracted and therefore the framework is in place. Arguably, this proposal would provide consistency, transparency and a more accurate reflection of the deleterious environmental effects, or otherwise, of buildings. Given that the framework for assessment already exists, it will prove relatively easy and cost-effective to implement.

To be fully transparent in their use of the financial contribution mechanism, councils also have to explain clearly the *purpose* to which funds received are put. Indeed, using the Auckland City District Plan as an example, the Council emphasises that:[155]

> … while the Council has wide powers to require a financial contribution as part of a development or other form of resource consent, the [RMA] also places various responsibilities on the Council to identify and justify the purposes for which contributions are collected. The Council is also required to spend and administer funds received in a prudent and transparent way. Section 108(10)(a) requires the Council to identify in the Plan, the purposes for which financial contributions will be collected. Section 32 of the [RMA] requires the Council to adequately justify all its objectives, policies and rules and to evaluate their effectiveness against alternative means … section 111 of the [RMA] requires the Council to spend any money received as a financial contribution for the purposes for which it was collected and account for this money in the same way as other Council funds.

There are clearly many environmental programmes that meet the purposes of the RMA but do not relate to infrastructure, to which contributions could be put. In an analysis of the case law in this area, Prendergast comments that:[156]

> [p]rovided the basis on which the contribution is made is clear and justifiable, the contribution is determined on that basis, and like cases are treated alike, the Court has shown a willingness to endorse the Council requirements.

examples of eco-rating systems in other countries see BREEAM, British Building Research Establishment Environmental Assessment Method at http://www.breeam.org and the Green-Star rating system of the Green Building Council of Australia at http://www.gbcaus.org.

155 Auckland City District Plan, supra note 134, part 8.2. Section 111 of the RMA states: "Where a consent authority has received a cash contribution under section 108(2)(a), the authority shall deal with that money in reasonable accordance with the purposes for which the money was received."

156 Prendergast, supra note 128, at pp 350–351.

No doubt "need" will dictate council policy in this area. To truly promote sustainable construction however, councils could use part of the funding to promote education and training in this issue, which, as noted above, is a present stumbling block to advancing sustainable construction practices and further, is one of the commitments contained in the Urban Design Protocol.[157]

In summary, a proposal to utilise financial contributions as an incentive for sustainable construction is likely to pass legal scrutiny. Would, however, such a scheme attract political support?

Inevitably there would be dispute between various bodies and organisations as to the merits of any such scheme. It is difficult to anticipate if such a scheme would find favour with developers or be subject to legal challenge. No doubt developers' views as to the proposal would be informed by financial calculations, i.e. the additional cost of implementing the required elements versus the reduction in contribution payable.

Opponents of any scheme might point to an inherent philosophical inequality of the proposal. The "burden" of protecting the environment by the manner in which buildings are used will be upon the users of new buildings as opposed to those utilising existing building stock. In practice, however, would this translate to anything more than a principle? Depending upon the measures required, the cost of compliance might not add to overall construction costs if the reduction in financial contribution was weighted accordingly. Thus, the cost of a new property may not increase significantly or at all. Economies of scale would become relevant in bringing down the cost of incorporating "green" design, technology or building practices. Certainly in Auckland, for example, the primary costs associated with the purchase of a house relate to land value. The costs of construction tend to equate to a minor percentage of the overall price. In addition, there will be practical benefits to purchasers. The increased use of an eco-homes rating scheme would serve to "label" green buildings, provide greater information to purchasers and result in increased market choice.[158] Importantly, the costs of operating the building would invariably be lower.

All factors being equal, to implement such a scheme would, theoretically, lower the overall income of the territorial authority and as a consequence, a greater emphasis would be placed on rates. Although this would rectify the philosophical inequality referred to above, increasing rates is a politically unpalatable proposition in the present climate. Whether an increase in rates was actually necessary, would depend upon the accounting approach that was taken to the issue. Clearly a financial balancing exercise would have to be performed. The income derived from development contributions, the maximum level set

157 Supra note 103.

158 A failing of the present system. See UK Sustainable Building Task Group Report, supra note 10.

for financial contributions and the amount of the reductions granted would all have to be carefully balanced. If political will remained immune to the cause, potentially alternative incentives could be offered to developers. By way of example, instead of a reduction in the financial contribution, the authority could negotiate the relaxation of particular development controls, for example, height restrictions, with a builder in return for "resource management friendly" building practices. This would supply an indirect financial incentive to the developer.[159]

In summary, financial incentives may prove to be an effective method to alter developers' practices and to promote sustainable construction. Fundamentally, as argued above, if authorities are to truly promote the purpose of sustainable management in their districts, the promotion of sustainable construction is an imperative. There are a number of ways to achieve this objective and the most obvious methods have been explored above.

7. CONCLUSION

To achieve truly sustainable construction, those exercising powers pursuant to the Building Act and the Resource Management Act need to work in tandem. The purposes of both statutes are now essentially, in a fundamental manner, ad idem. The review of the Building Code aims to promulgate standards that will achieve sustainable development but the goal of truly sustainable development in the construction industry will fail unless the RMA is also considered. Local authorities need to conduct a parallel review of their powers under the RMA to complement and complete the aim of sustainable development of the built environment as espoused in the Building Act 2004.[160]

In the event that the revised Building Code proves disappointing and fails to deliver sufficiently high standards of sustainability for construction, local authorities could and should utilise their powers pursuant to the RMA to require and/or to promote sustainable development. The preferred method would be to incorporate appropriate requirements within district plans. In addition, financial contributions could be utilised as a financial incentive to support such requirements. Those reviewing the Building Code should be aware of this possibility.

159 Although it may not supply the best environmental outcome.

160 The framework envisaged by the Urban Design Protocol may provide an appropriate conduit for nationwide collaboration between local authorities on this issue.