Before the Independent Commissioner Hearing Panel

Under	the Resource Management Act 1991 (**RMA**)
In the matter of	an application by Dunedin City Council to develop a landfill at Smooth Hill, Dunedin.

Applicant casebook

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Applicant casebook

Appellant	**Queenstown Lakes District Council**
Respondents	**Hawthorn Estate Limited; Bailey, T and Others**
Decision Number	CA45/05 (No 2)
Court	William Young P, Robertson and Cooper JJ; Court of Appeal (NZ)
Judgment Date	12/06/2006
Counsel/Appearances	Castiglione, JR; Marquet, NS; Soper, NH; Wylie QC, ED
Cases Cited	Aley v North Shore CC 18/05/98, Salmon J, HC Auckland M251/98 (No 2), [1999] 1 NZLR 365, (1998) 4 ELRNZ 227, [1998] NZRMA 361, 3 NZED 384; Arrigato Investments Ltd v Auckland RC 11/09/01, CA84/01, [2002] 1 NZLR 323, (2001) 7 ELRNZ 193, [2001] NZRMA 481, 6 NZED 689; Bayley v Manukau CC 22/09/98, CA115/98, [1999] 1 NZLR 568, (1998) 4 ELRNZ 461, [1998] NZRMA 513, 3 NZED 772; Dye v Auckland RC 11/09/01, CA86/01, [2002] 1 NZLR 337, (2001) 7 ELRNZ 209, [2001] NZRMA 513, 6 NZED 698; Fleetwing Farms Ltd v Marlborough DC 03/07/97, CA255/96, [1997] 3 NZLR 257, (1997) 3 ELRNZ 249, [1997] NZRMA 385, 2 NZED 537; Geotherm Group Ltd v Waikato RC 01/07/03, Salmon J, HC Auckland CIV2003-404-27, AP26/03, [2004] NZRMA 1, 8 NZED 698; O'Connell Construction Ltd v Christchurch CC 15/03/02, Panckhurst J, HC Christchurch AP29/01, [2003] NZRMA 216, 7 NZED 350; Queenstown Lakes DC v Hawthorn Estate Ltd 20/05/05, CA45/05; Rodney DC v Gould 11/10/04, Cooper J, HC Auckland CIV-2003-485-2182, (2005) 11 ELRNZ 165, [2006] NZRMA 217; Smith Chilcott Ltd v Auckland CC 26/06/01, CA267/00, CA12/01, [2001] 3 NZLR 473, (2001) 7 ELRNZ 126, [2001] NZRMA 503, 6 NZED 514; Wilson v Selwyn DC 24/08/04, Fogarty J, HC Christchurch CIV-2004-485-720, (2005) 11 ELRNZ 79 [2005] NZRMA 76, 9 NZED 751
Statutes	Resource Management Act 1991, s 2, s 5, s 5(2), s 5(2)(a), s 5(2)(b), s 5(2)(c), s 6, s 7, s 7(f), s 8, s 30(1), s 31, s 45, s 56, s 61, s 66, s 94, s 104, s 104(1)(a), s 104(1)(b), s 104(1)(c), s 104(1)(d), s 104(1)(e), s 104(1)(f), s 104(1)(g), s 104(1)(h), s 104(1)(i), s 105, s 105(1)(c), s 123(b), s 125, s 271A, s 308; Resource Management Amendment Act 2003; Interpretation Act 1999, s 5(1)
Full text pages:	33 pages

Keywords
Court of Appeal; subdivision; residential; effect adverse; resource consent; environment; sustainable management; district plan; zoning; rural; rural residential

Significant in Law, s 2 and s 104 RMA
The term "environment" in s 2 RMA embraces the future state of the environment as it might be modified by the utilisation of rights to carry out a permitted activity under a district plan.

SYNOPSIS

This was an appeal by the council against the High Court's decision in CIV-2004-485-1441, 45. The High Court had upheld the Environment Court's ruling in Decision C083/04 to set aside the decision of the council declining the respondent's resource consent application. The respondent had sought consent for the subdivision of 32 residential lots in Queenstown. The proposed subdivision was in an area subject to large amounts of development with multiple resource consents granted but not yet implemented.

The key issue for the Court was whether the council, when considering whether to grant consent, had been obliged to restrict its consideration of effects to effects on the environment in existence at time of the decision or whether the council should have considered the future state of the environment.

The Court noted that the council needed to give effect to the purpose of the RMA, which was the sustainable management of resources including management both now and in the future. The Court considered that future effects were inevitably linked with the future state of the environment both modified through permitted activity and by granted resource consents, which were likely to be implemented. The Court considered the word "environment" embraces the future state of the environment as it might be modified by the utilisation of rights to carry out a permitted activity under a district plan [12 ELRNZ 321 at 31]. The Court did not endorse the High Court's approach that the council should have also taken into account the effects of resource consents likely to be granted in the future.

Following on from this conclusion the Court held that the Environment Court had not speculated when taking into account the approved building platforms in the "triangle" of land. The Environment Court had accepted evidence that it was practically certain that the approved building sites would be built on. Due to the rejection of the relevant environment being confined to the existing environment there was no error of law.

The Court rejected an argument that the Environment Court had not given proper consideration to the application of the permitted baseline. The Court considered that a permitted baseline analysis was not pertinent to the issue, and thus did not establish any error of law.

The appellant argued that the Environment Court had wrongly concluded the landscape category it was required to consider was Other Rural Landscape under the district plan. The Court held that the Environment Court had been correct to have regard to what the landscape would be like when resource consents already granted were utilised, before deciding which classification would apply. The Court held the High Court had been correct to approve the Environment Court's approach and no error of law occurred.

Lastly, the Court upheld the High Court's view that the Environment Court had not considered an irrelevant matter or committed an error of law in its references to rural-residential zones.

The appeal was dismissed. The respondent was awarded $6000 costs.

FULL TEXT OF CA45/05 (NO 2)

JUDGMENT OF THE COURT

A The appeal is dismissed.

B The appellant is to pay costs to the first respondent in the sum of $6,000 together with usual disbursements. We certify for two counsel.

REASONS

(Given by Cooper J)

[1] This is an appeal from a judgment of Fogarty J pursuant to leave granted by this Court under s 308 of the Resource Management Act 1991 ("the Act").

[2] Fogarty J had dismissed an appeal by the council and the second respondents against a decision of the Environment Court. The Environment Court had set aside a decision of the Council declining a resource consent application made by the first respondent ("Hawthorn").

[3] As a result of the Environment Court decision, Hawthorn was authorised to proceed to subdivide and carry out subdivision works on a property near Queenstown. Some 32 residential lots were proposed to be created.

[4] This Court gave leave for the following questions to be pursued on appeal:

1. *Whether His Honour Justice Fogarty erred in law when he determined (either expressly or by implication):*

   (a) *that the receiving environment should be understood as including not only the environment as it exists but also the reasonably foreseeable environment;*

   (b) *that it was not speculation for the Environment Court to take into account approved building platforms in the triangle and on the outside of the roads that formed it;*

   (c) *that the Environment Court had given adequate and appropriate consideration to the application of the permitted baseline.*

2. *Whether His Honour Justice Fogarty erred in law when he determined that the Environment Court had not erred in law in concluding that the landscape category it was required to consider was an "Other Rural Landscape".*

3. *Whether His Honour Justice Fogarty erred in law when he held that the Environment Court had not erred in law when it considered the minimum subdivision standards in the Rural Residential zone in addressing the first respondent's proposal which is in a Rural General zone.*

[5] As was observed by the Court in granting leave, the questions are interrelated, and the answers to the second and third questions are in large part dependent on the answer to the constituent parts of the first. The main issue that underlies the appeal is whether a consent authority considering whether or not to grant a resource consent under the Act must restrict its consideration of effects to effects on the environment as it exists at the time of the decision, or whether it is legitimate to consider the future state of the environment.

[6] It was common ground that the three questions fall to be considered under the Act in the form in which it stood prior to the coming into force of the Resource Management Amendment Act 2003.

Background

[7] Hawthorn applied to the Council for both subdivision and land use activity consent in respect of land in the Wakatipu Basin. The land comprises 33.9 hectares, and is situated near the junction of Lower Shotover and Domain Roads, with frontage to both of those roads. It is part of a triangle of land bounded by them and Speargrass Flat Road, known locally as "the triangle".

[8] Hawthorn's development would subdivide the land into 32 separate lots, containing between 0.63 and 1.30 hectares, together with access lots, and a central communal lot containing 12.36 hectares. The application also sought consent to the erection of a residential unit on each of the 32 residential sites, within nominated building platforms that were shown on plans submitted with the application. The proposal required consent as a non-complying activity under the operative district plan, and as a discretionary activity under the proposed district plan.

[9] There was an existing resource consent which allowed subdivision of the land into eight blocks of approximately four hectares in each case. Those approved allotments contained identified building platforms.

[10] The Environment Court recorded that the whole of the land proposed to be subdivided is flat, apart from a small rocky outcrop. The Court observed that "the triangle" had been the subject of considerable development pressure over the past decade, and that within the 166 hectare area so described, 24 houses had been erected, with a further 28 consented to, but not yet built. Outside of the roads that physically form the triangle were a further 35 approved building platforms. It is unclear from the Environment Court's decision whether any of those had been built on.

[11] In assessing the effects of the proposal on the environment for the purposes of s 104(1)(a) of the Act, a key question that arose was whether the consent authority ought to take into account the receiving environment as it might be in the future and, in particular, if existing resource consents that had been granted but not yet implemented, were implemented in the future. The council had declined consent to the application and on the appeal by Hawthorn to the Environment Court argued that that Court's consideration should be limited to the environment as it existed at the time that the appeal was considered. That proposition was rejected by the Environment Court, and also by Fogarty J.

[12] Before we confront the questions that have been asked directly, we briefly summarise the reasoning in the decisions respectively of the Environment Court and the High Court.

The Environment Court decision

[13] The Environment Court held that the dwellings, and the approved building platforms yet to be developed by the erection of buildings, both within and outside the triangle, were part of the receiving environment. As to the undeveloped sites, that conclusion was founded on evidence that the Court accepted that it was "practically certain that approved building sites in the Wakatipu Basin will be built on." That conclusion, not able to be challenged on appeal, is critical to the arguments advanced in the High Court and in this Court.

[14] The Environment Court held that the eight dwellings for which resource consent had already been granted on the subject site were appropriately considered as part of the "permitted baseline", a concept explained in the decisions of this Court in *Bayley v Manukau City Council* [1999] NZLR 568, *Smith Chilcott Limited v Auckland City Council* [2001] 3 NZLR 473 and *Arrigato Investments Limited v Auckland Regional Council* [2002] 1 NZLR 323. However, it rejected an argument by Hawthorn that landowners in the area could have a reasonable expectation that the Council would grant consent to subdivisions that matched the intensity of three other subdivisions in the triangle, for which the Council had recently granted consent. Those subdivisions had an average area of two hectares per allotment. Hawthorn had argued that the present development should be considered in the light of a future environment in which subdivision of that intensity would occur throughout the triangle.

[15] The Court rejected that proposition as being too speculative. Noting that all subdivision in the zone required discretionary activity consent, the Court observed that:

> *[25] We have no way of knowing whether existing or future allotment holders will apply for consent to subdivide to the extent of two hectare allotments, nor whether they can replicate the conditions which led the Council to grant consent in the cases referred to by Mr Brown, nor at what point the consent authority will consider that policies requiring avoidance of over-domestication of the landscape have been breached. In general terms we do not consider that reasonable expectations of landowners can go beyond what is permitted by the relevant planning documents or existing consents.*

[16] At the time that the appeal was heard before the Environment Court, there was both an operative and a proposed district plan. The Court's focus was properly on the proposed district plan, however, because the relevant provisions in it had passed the stage where they might be further modified by the submission and reference process under the Act. Under the proposed district plan (which we will call simply the "district plan", or "the plan" from this point), it was necessary for the Court to classify the landscape setting of the proposed development. The Court found that the appropriate landscape category was "Other Rural Landscape". In doing so the Court rejected the arguments that had been put to it by the Council and by parties appearing under s 271A of the Act that the proper classification was "Visual Amenity Landscape". Both are terms used and described in the district plan.

[17] Once again, the Court's reasoning was based on what it thought would happen in the future. It held that the "central question in landscape

classification" was whether the landscape "when developed to the extent permitted by existing consents" would retain the essential qualities of a Visual Amenity Landscape. That would not be the case here, because of the extent of existing and likely future development of "lifestyle" or "estate" lots both in the triangle and outside it.

[18] The Environment Court then discussed the effects of the development on the environment. It found that the subdivision works would introduce an unnatural element to the landforms in the triangle, but that they would be largely imperceptible, and the landform was not one of the best examples of its type. In terms of visual effects, the Court concluded that, although the development could be seen from positions beyond the site, it would not intrude into significant views, nor dominate natural elements in the landscape. As to the effects on "rural amenity" the Court held that the position was "finely balanced", but after it identified and considered relevant district plan objectives and policies dealing with rural amenity, concluded that the development was marginally compatible with them.

[19] The Court also considered the proposal against relevant assessment criteria in the district plan. It found that the proposal would satisfy most of them. This part of the Court's decision required it to revisit under s 104(1)(d) of the Act matters already dealt with in the inquiry into effects on the environment under s 104(1)(a).

[20] One of the assessment criteria raised as an issue whether the proposed development would be complementary or sympathetic to the character of adjoining or surrounding visual amenity landscape. Another required consideration of whether the proposal would adversely affect the naturalness and rural quality of the landscape through inappropriate landscaping. The Court was able to repeat here conclusions that it had already arrived at earlier in its decision. In particular, it said that although the effects of the proposal on the retention of the rural qualities of the landscape were "on the cusp":

> *. . .in the context of consented development on this and other sites in the vicinity the proposal is just compatible with the level of rural development likely to arise in the area.*

[21] Having considered the objectives and policies of the district plan as a whole, the Court concluded that while the proposal was marginal in respect of some significant policies, it was supported by others. Consequently, it was "not contrary to the policies and objectives taken as a whole".

[22] In the balance of its decision the Court rejected an argument of the Council that the decision would create an undesirable precedent. It considered the proposal against the higher level considerations flowing

from Part II of the Act, expressed a conclusion that the effects on the environment of allowing the activity would be minor, provided that there was a condition proscribing any further subdivision of the land, and then moved to the exercise of its discretion to grant consent under s 105(1)(c) of the Act. For present purposes it should be noted that the Court's conclusion that there would not be an undesirable precedent set by the grant of consent was expressly justified on the basis that the proposal had been comprehensively designed, and would provide facilities for the public that would link to other facilities in the triangle. The Court considered that it was difficult to imagine that another such comprehensive proposal could be designed for another location, given the "level of subdivision and building that has already occurred within the triangle". Further, the Court's conclusion that adverse effects on the environment would be minor was reached:

> *[h]aving considered carefully the changes that will occur on the surrounding environment as a result of consents already granted and the "baseline" set by existing resource consents on the land. . .*

[23] So it can be seen that, in respect of the main issues that the Court had to decide, its reasoning in each case was predicated on the ability to assess the development against the future conditions likely to be present in the area.

The High Court decision

[24] The questions earlier set out particularise the challenged conclusions of Fogarty J. On the first issue, as to whether the receiving environment should be understood as including not only the environment as it exists, but also the reasonably foreseeable environment, Fogarty J essentially adhered to his own reasoning in *Wilson v Selwyn District Council* [2005] NZRMA 76. He held in that case that "environment" in s 104 includes potential use and development in the receiving environment.

[25] Accordingly, the Environment Court had not erred when it took into account the approved building platforms both within and outside of the triangle. In [74] of the judgment Fogarty J said:

> *In my view the reason why the baseline analysis is abrupt is that the Court had no doubt at all that advantage would be taken of approved building platforms in this very valuable location. Mr Goldsmith's view was not challenged in cross-examination. Ms Kidson, the landscape witness for the Council, took into account that more houses would be built as a result of a number of consents.*

[26] Fogarty J went on to observe that the Environment Court's approach did not involve speculation, and that the Court had rejected an argument that it should take into account the possibility of further subdivision as a result of possible future applications for discretionary activity consent. He observed that in that respect, the approach of the Environment Court was more cautious than that which he himself had taken in *Wilson v Selwyn District Council*.

[27] One of the questions that has been raised on the appeal concerns the adequacy of the Environment Court's consideration of the application of what has come to be known as the "permitted baseline". Although that expression was used by Fogarty J in [74], we doubt that he was using the term in the sense that it is normally used, that is with reference to developments that might lawfully occur on the site subject to the resource consent application itself. Rather, Fogarty J appears to have used the expression to refer to the likely developments that would take place beyond the boundary of the subject site, utilising existing resource consents. Nothing turns on the label that the Judge used to refer to lawfully authorised environmental change beyond the subject site. However, it would be prudent to avoid the confusion that might result from using the term other than in its normal sense, addressed in *Bayley v Manukau City Council*, *Smith Chilcott Ltd v Auckland City Council* and *Arrigato Investments Ltd v Auckland Regional Council*. As we will emphasise later in this judgment the "permitted baseline" is simply an analytical tool that excludes from consideration certain effects of developments on the site that is subject to a resource consent application. It is not to be applied for the purpose of ascertaining the future state of the environment beyond the site.

[28] The second and third questions raised on the appeal have their genesis in particular provisions in the Council's proposed district plan. Under the landscape classification employed by that plan, the Environment Court held that the receiving environment of the subject application should be regarded as an "Other Rural Landscape". In a passage which again uses the expression "baseline" in an unusual context, Fogarty J said at [76]:

> *Mr Wylie argued that, although there was evidence before the Court on which it could conclude the landscape was Other Rural Landscape that it reached that decision after taking into account, irrelevantly, that the landscape would be developed to the extent permitted by existing consents. So he was arguing that the much earlier finding of Other Rural Landscape was affected by this same area of baseline analysis. As I do not think that there is any error of baseline analysis, this point cannot be sustained. It is, however, appropriate to comment on one detail in Mr Wylie's argument in case it be thought I have overlooked it.*

[29] The Judge accepted Mr Wylie's argument that the Environment Court had considered their judgment regarding the effect of the proposal on rural amenity as finely balanced. Having observed that the Environment Court was an expert Court, was thoroughly familiar with the Queenstown area and skilled in the assessment of landscape values, Fogarty J said at [79]:

> *In my view Mr Wylie's argument has to depend on the point he has reserved, namely that a consent authority applying s 104 in these circumstances must consider the receiving environment as it exists, and ignore any potential development: whether it be imminent pursuant to existing building consents; or allowed as permitted uses; or potentially allowable as discretionary activity, controlled activity, or non-complying activity. If that is the law, then the judgment by the Environment Court on other rural landscape may be infected with an error of law, in a material way.*

[30] The Judge had already decided that there was no such error of law, because it was proper for the Environment Court to consider the future state of the environment.

[31] Fogarty J also held that the Environment Court had not erred in assessing the proposed development by reference to the lot sizes permitted in the rural-residential zone. Essentially, he held that this was a legitimate course to follow, because the site was located in an Other Rural Landscape, which is the least sensitive of the landscape categories provided for in the district plan. Using terms that appear in the district plan itself, Fogarty J said at [87]:

> *Obviously different levels of protection of landscape value will depend on whether the proposed developments impact on romantic landscape, Arcadian landscape or other landscape. Reading the [plan] as a whole one would expect quite significant protection of romantic and Arcadian landscape. The degree of protection of other landscape, including Other Rural Landscape from any further development is less certain.*

[32] He noted there were no minimum subdivisional allotment sizes for the rural general zone. It was a zone that contemplated consents being granted for a wide range of activities provided they did not compromise the landscape and other rural amenities. The proposal had been designed to have a park-like appearance and would incorporate planting that would to some extent screen the development from neighbouring land use. He concluded at [90]:

> *Had the Court been proceeding on the basis of a classification of the landscape as Arcadian, considering Rural Residential*

> *Standards could well have been taking into account an irrelevant consideration. But where the Court considers that the Arcadian character of the landscape has gone and is dealing with a rural landscape already showing some kind of residential character, I do not think it can be said that an expert Court has fallen into error of law by looking at the standards in the rural living area zones, when exercising a judgment as to how to address a proposal which is a discretionary activity in the rural general zone of the [plan].*

[33] Mr Wylie contends that in respect of all these determinations Fogarty J's decision was incorrect in law. We discuss the reasons that he advanced for that contention in the context of the questions that we have to answer.

Question 1(a) — The environment

[34] Mr Wylie's principal submission was that Fogarty J erred in holding that the word "environment" includes not only the environment as it exists, but also the reasonably foreseeable environment after allowing for potential use and development. The Council contended that such an approach is not required by the definition of the word "environment" in s 2 of the Act, and that to read the word in that way would be inconsistent with Part II of the Act, in particular with s 7(f).

[35] Mr Wylie further submitted that a purposive approach to the relevant statutory provision would lead to a conclusion that the "environment" must be confined to the environment as it exists. He submitted that the reference to "maintenance and enhancement of the quality of the environment" in s 7(f) of the Act was strongly suggestive that it is the environment as it exists at the date of the exercise of the relevant function or power under the Act which must be relevant. He contended that it would be difficult, perhaps impossible, to have particular regard to the maintenance and enhancement of the quality of a speculative future environment.

[36] Further, referring to the importance of district plans made under the Act and the process of submission in which members of the public may formally participate in the plan preparation process, Mr Wylie argued that when a plan becomes operative, it represents a community consensus as to how development should proceed in the Council's district. Such plans, he submitted, focus on existing environments and put in place a framework for future development. But they do not, as he put it, "assume future putative environments degraded by potential use or development".

[37] In addition, Mr Wylie pointed to practical difficulties that he said would make the approach that found favour with the Environment Court and Fogarty J unworkable. There was, in addition, the potential for

"environmental creep" if applicants having secured one resource consent were then able to treat the effects of implementing that consent as something which would alter the future state of the environment whilst returning to the Council on successive occasions to seek further consents "starting with the most benign, but heading towards the most damaging".

[38] Mr Wylie also argued that to uphold Fogarty J's view on the meaning of the word "environment" would be to run counter to authorities which have established rules for priority between applicants, authorities dealing with issues of precedent and cumulative effect as well as the authorities already mentioned on the "permitted baseline".

[39] Both parties have argued the matter as if the word "environment" in s 2 of the Act ought to be seen as neutral on the issue of whether it requires the future, and future conditions to be taken into account. We think that that is true only in the superficial sense that none of the words used specifically refers to the future.

[40] The definition reads as follows:

> *"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) of this definition or which are affected by those matters:*

[41] This provision must be construed on the basis prescribed by s 5(1) of the Interpretation Act 1999; the meaning of the provision is to be ascertained from its text and in the light of its purpose.

[42] Although there is no express reference in the definition to the future, in a sense that is not surprising. Most of the words used would, in their ordinary usage, connote the future. It would be strange, for example, to construe "ecosystems" in a way which focused on the state of an ecosystem at any one point in time. Apart from any other consideration, it would be difficult to attempt such a definition. In the natural course of events ecosystems and their constituent parts are in a constant state of change. Equally, it is unlikely that the legislature intended that the enquiry should be limited to a fixed point in time when considering "the economic conditions which affect people and communities", a matter referred to in paragraph (d) of the definition. The nature of the concepts involved would make that approach artificial.

[43] These views are reinforced by consideration of the various provisions in the Act in which the word "environment" is used, or in which there is reference to the elements that are set out in the four paragraphs of its definition. The starting point should be s 5, which states and explains the fundamental purpose of the Act in the following terms:

> ***5. Purpose —***
>
> *(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.*
>
> *(2) In this Act, "sustainable management" means managing the use, development, and protection of 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 —*
>
> *(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.*

[44] "Natural and physical resources" are, of course, part of the environment as defined in s 2. The purpose of the Act is to promote their sustainable management. The idea of management plainly connotes action that is on-going, and will continue into the future. Further, such management is to be sustainable, that is to say, natural and physical resources are to be managed in the way explained in s 5(2). Again, it seems plain that provision by communities for their social, economic and cultural well-being, and for their health and safety, is an idea that embraces an on-going state of affairs.

[45] Section 5(2)(a) then makes an express reference to the "reasonably foreseeable needs of future generations". What to this point has been implicit, becomes explicit in the use of this language. There is a plain direction to consider the needs of future generations. Paragraph (b)'s reference to safeguarding the lifesupporting capacity of air, water, soil, and ecosystems also points not only to the present, but also the future. The idea of safeguarding capacity necessarily involves consideration of what might happen at a later time.

[46] The same approach is requisite under paragraph (c). "Avoiding" naturally connotes an on-going process, as do "remedying" and "mitigating". The latter two words, in addition, imply alteration to an existing state of affairs, something that can only occur in the future.

[47] Each of the components of s 5(2) is, therefore, directed both to the present and the future state of affairs. An analysis of the concepts contained in ss 6 and 7 leads inevitably to the same conclusion. That is partly because the particular directions in each section are all said to exist for the purpose of achieving the purpose of the Act. But in part also, the future is embraced by the words "protection", "maintenance" and "enhancement" that appear frequently in each section. We do not agree with Mr Wylie's argument based on s 7(f). "Maintenance" and "enhancement" are words that inevitably extend beyond the date upon which a particular application for resource consent is being considered.

[48] The requirements of ss 5, 6 and 7 must be complied with by all who exercise functions and powers under the Act. Regional authorities must do so, when carrying out their functions in relation to regional policy statements (s 61) and the purposes of the preparation, implementation and administration of regional plans is to assist regional councils to carry out their functions "in order to achieve the purpose of this Act". Further, the functions of regional councils are all conferred for the purpose of giving effect to the Act (s 30(1)). Consistently with this, s 66 obliges regional councils to prepare and change regional plans in accordance with Part II.

[49] The same obligations must be met by territorial authorities, in relation to district plans. The purpose of the preparation, implementation and administration of district plans is, again, to assist territorial authorities to carry out their functions in order to achieve the purpose of the Act. Similarly, the functions of territorial authorities are conferred only for the purpose of giving effect to the Act (s 31) and district plans are to be prepared and changed in accordance with the provisions of Part II. There is then a direct linkage of the powers and duties of regional and territorial authorities to the provisions of Part II with the necessary consequence that those bodies are in fact planning for the future. The same forward looking stance is required of central government and its delegates when exercising powers in relation to national policy statements (s 45) and New Zealand coastal policy statements (s 56). The drafting shows a consistent pattern.

[50] In the case of an application for resource consent, Part II of the Act is, again, central to the process. This follows directly from the statement of purpose in s 5 and the way in which the drafting of each of ss 6 to 8 requires their observance by all functionaries in the exercise of powers under the Act. Self-evidently, that includes the power to decide an application for resource consent under s 105 of the Act. Moreover, s 104 which sets out the

matters to be considered in the case of resource consent applications, began, at the time relevant to this appeal:

> *(1) Subject to Part II, when considering an application for a resource consent and any submissions received, the consent authority shall have regard to . . ..*

[51] The pervasiveness of Part II is once again apparent. In the case of resource consent applications, reference must also be made to the list of relevant considerations spelled out in paragraphs (a) to (i) of s 104(1). These include: "any actual and potential effects on the environment of allowing the activity" (paragraph (a)), the objectives, policies, rules and other provisions of the various planning instruments made under the Act (paragraphs (c) to (f)) and "any other matters that a consent authority considers relevant and reasonably necessary to determine the application" (paragraph (i)).

[52] Each of these provisions is likely to require a consent authority, in appropriate cases, to have regard to the future environment. Insofar as ss 104(1)(c) to (f) are concerned, that will be necessary where the instruments considered require that approach. If the precedent effects of granting an application are to be considered as envisaged by *Dye v Auckland Regional Council* [2002] 1 NZLR 337 then the future will need to be considered, whether under s 104(1)(d) or s 104(1)(i). As to s 104(1)(a), its reference to potential effects is sufficiently broad to include effects that may or may not occur depending on the occurrence of some future event. It must certainly embrace future events.

[53] Future potential effects cannot be considered unless there is a genuine attempt, at the same time, to envisage the environment in which such future effects, or effects arising over time, will be operating. The environment inevitably changes, and in many cases future effects will not be effects on the environment as it exists on the day that the Council or the Environment Court on appeal makes its decision on the resource consent application.

[54] That must be the case when district plans permit activities to establish without resource consents, where resource consents are granted and put into effect and where existing uses continue as authorised by the Act. It is not just the erection of buildings that alters the environment: other activities by human beings, the effects of agriculture and pastoral land uses, and natural forces all have roles as agents of environmental change. It would be surprising if the Act, and in particular s 104(1)(a) were to be construed as requiring such ongoing change to be left out of account. Indeed, we think such an approach would militate against achievement of the Act's purpose.

[55] A further consideration based in particular on the provisions concerning applications leads to the same conclusion. When an application for resource consent is granted, the Act envisages that a period of time may elapse within which the resource consent may be implemented. At the time relevant to this appeal, the statutory period was two years or such shorter or longer period as might be provided for in the resource consent (s 125). Consequently, the effects of a resource consent might not be operative for an appreciable period after the consent had been granted. Mr Wylie's argument would prevent the consent authority considering the environment in which those effects would be felt for the first time. Rather, the consent authority would have to consider the effects on an environment which, at the time the effects are actually occurring, may well be different to the environment at the time that the application for consent was considered. That would not be sensible.

[56] Similarly, it is relevant that many resource consents are granted for an unlimited time. That is certainly the case for most land use and subdivision consents (see s 123(b)). Yet it could not be assumed that the effects of implementing the consent would be the same one year after it had been granted, as they would be in twenty years' time.

[57] In summary, all of the provisions of the Act to which we have referred lead to the conclusion that when considering the actual and potential effects on the environment of allowing an activity, it is permissible, and will often be desirable or even necessary, for the consent authority to consider the future state of the environment, on which such effects will occur.

[58] We have not been persuaded to a different view by any of Mr Wylie's arguments based on practical considerations and conflict with other lines of authority. It was his submission that the practical difficulties arising from Fogarty J's judgment would be significant. He contended that to require those administering district plans, and applicants for resource consents, to take account of the potential or notional future environment would be unduly burdensome, and would require them to speculate about what might or might not occur in any particular receiving environment, about what future economic conditions might be, and, possibly about how such future economic conditions might affect future people and communities. He submitted that this would require a degree of prescience on the part of consent authorities that was inappropriate.

[59] In support of those propositions he referred to *O'Connell v Christchurch City Council* [2003] NZRMA 216, and in particular to what was said by Panckhurst J at [73]:

> *I also agree with the submission of Mr Chapman for AMI/AMP that an extension of the rule to include potential activities on sites*

> *other than the application site would place an intolerable burden on the consent authority when assessing resource consent applications.*

[60] The concerns expressed by Mr Wylie about practical difficulties were overstated. It will not be every case where it is necessary to consider the future environment, or where doing so will be at all complicated. Suppose, for example, an application for resource consent to establish a new activity in a built up area of a city. There will be rules which provide for permitted activities and in the vast majority of cases it would be likely that the foreseeable future development of surrounding sites would be similar to that which existed at the time the application was being considered. In such a case, it might be a safe assumption that the environment would, in its principal attributes, be very much like it presently is, but perhaps more intensively developed if there are district plan objectives and policies designed to secure that end. At the other end of the spectrum, if one supposed an application to carry out some new activity involving development in an area which was rural in nature and which was intended to remain so in accordance with the policy framework established by the district plan, then once again it ought not be difficult to postulate the future state of that environment.

[61] Difficulties might be encountered in areas that were undergoing significant change, or where such change was planned to occur. However, even those areas would have an applicable policy framework in the district plan that, together with the rules, would give considerable guidance as to the nature and intensity of future activities likely to be established on surrounding land. In cases such as the present, where there are a significant number of outstanding resource consents yet to be implemented, and uncontested evidence of pressure for development, the task of predicting the likely future state of the environment is not difficult.

[62] The observations made by Panckhurst J in *O'Connell v Christchurch City Council* must be read in context. He was dealing with an appeal from an Environment Court decision overturning a decision by the City Council to grant consent to establish a tyre retail outlet. AMI and AMP occupied multi-storey office premises adjoining the subject site and had appealed to the Environment Court against the Council's decision. When the Environment Court set aside the Council's decision, the applicant for resource consent appealed to the High Court. One of the issues raised on the appeal was a contention that the Environment Court had misapplied the "permitted baseline test" in as much as it had considered the effects of permitted activities on only the subject site and had not considered the effects of permitted activities on adjacent sites as well. At [70] Panckhurst J said:

> *[70] I accept that the Court did apply the baseline test with reference only to the subject site. That is it compared the proposed activity against other hypothetical activities that could be established on this site as of right in terms of the transitional and proposed plans. Regard was not had to the impact of the establishment of hypothetical activities on a closely adjacent site. Was such an approach in error?*
>
> *[71] I am not persuaded that it was. This conclusion I think follows from a reading of various decisions where the permitted baseline assessment has been considered in a number of contexts.*

[63] The Judge referred to *Bayley v Manukau City Council*, *Smith Chilcott Ltd v Auckland City Council and Arrigato Investments Ltd v Auckland Regional Council*, and concluded that the required comparison for purposes of permitted baseline analysis is one that is restricted to the site in question. There was nothing in those cases which was consistent with the extension of the test for which the appellant had contended. We have earlier expressed our view that the "permitted baseline" has in the previous decisions of this Court been limited to a comparison of the effects of the activity which is the subject of the application for resource consent with the effects of other activities that might be permitted on the subject land, whether by way of right as a permitted activity under the district plan, or whether pursuant to the grant of a resource consent. In the latter case, it is only the effects of activities which have been the subject of resource consents already granted that may be considered, and the consent authority must decide whether or not to do so: *Arrigato Investments Ltd v Auckland Regional Council*, at [30] and [34]-[35].

[64] We agree with Panckhurst J's observations about the limits of the "permitted baseline" concept, and we also agree with him that the decisions of this Court have not suggested that it can be applied other than in relation to the site that is the subject of the resource consent application. However, it is a far step from there to contend that *Bayley v Manukau City* and the decisions that followed it, dictate the answer on the principal issues to be determined in this appeal. The question whether the "environment" could embrace the future state of the environment was not directly addressed in those cases, nor was an argument in those terms apparently put to Panckhurst J.

[65] It is as well to remember what the "permitted baseline" concept is designed to achieve. In essence, its purpose is to isolate, and make irrelevant, effects of activities on the environment that are permitted by a district plan, or have already been consented to. Such effects cannot then be taken into account when assessing the effects of a particular resource consent application. As Tipping J said in *Arrigato* at [29]:

> *Thus, if the activity permitted by the plan will create some adverse effect on the environment, that adverse effect does not count in the ss 104 and 105 assessments. It is part of the permitted baseline in the sense that it is deemed to be already affecting the environment or, if you like, it is not a relevant adverse effect. The consequence is that only other or further adverse effects emanating from the proposal under consideration are brought to account.*

[66] Where it applies, therefore, the permitted baseline analysis removes certain effects from consideration under s 104(1)(a) of the Act. That idea is very different, conceptually, from the issue of whether the receiving environment (beyond the subject site) to be considered under s 104(1)(a), can include the future environment. The previous decisions of this Court do not decide or even comment on that issue.

[67] We do not overlook what was said in *Bayley v Manukau City Council* at p 577, where the Court referred to what Salmon J had said in *Aley v North Shore City Council* [1998] NZRMA 361 at 377:

> *On this basis a consideration of the effect on the environment of the activity for which consent is sought requires an assessment to be made of the effects of the proposal on the environment as it exists.*

The Court said that it would add to that sentence the words:

> *. . .or as it would exist if the land were used in a manner permitted as of right by the plan.*

[68] However, it must be remembered first, that *Bayley* was the case in which the permitted baseline concept was formally recognised, and as we have explained did not deal with the issue which has to be decided in this case. Secondly, it was a case about notification of resource consent applications. The issue that arose concerned the proper application of s 94 of the Act, and the provisions it contained allowing non-notification in cases where the adverse effect on the environment of the activity for which consent was sought would be minor. In that context there could be no need to consider the future environment, because if the effects on the existing environment were not able to be described as minor, there would be no need to look any further.

[69] Mr Wylie referred to other practical difficulties which he illustrated by reference to Fogarty J's decision in *Wilson v Selwyn District Council*. In that case, as in this, Fogarty J held that the term "environment" could include the future environment where the word is used in s 104(1)(a) of the Act. He held further that, to ascertain the future state of the environment it was appropriate to ask, amongst other things, whether it was "not fanciful" that surrounding land should be developed, and to have

regard in that connection to what was permitted in a proposed district plan. Because the district plan contemplated the subdivision of neighbouring land as a controlled activity, His Honour held that it was plain that the District Council did not regard it as fanciful that the land in the locality might be subdivided down into smaller sites with increased dwellings. Mr Wylie pointed out that although subdivision was a controlled activity under the proposed plan relevant in that case, and there were no submissions challenging that, there were, however, submissions challenging the right to erect dwellings, as Fogarty J himself had recorded in [38] of the judgment. Mr Wylie criticised the decision on the basis that it had effectively "pre-empted" the submission process in relation to the district plan. It would also, in his submission, lead to considerable uncertainty.

[70] Mr Wylie further argued that in the present case, some of the remarks made by Fogarty J suggested that the possibility of development pursuant to resource consents for discretionary or even non-complying activities should be taken into account to ascertain the future state of the environment, in advance of such consents being granted.

[71] That is an inference which can arise from what the Judge said at [79]:

> *In my view Mr Wylie's argument has to depend on the point he has reserved, namely that a consent authority applying s 104 in these circumstances must consider the receiving environment as it exists, and ignore any potential development: whether it be imminent pursuant to existing building consents; or allowed as permitted uses; or potentially allowable as discretionary activity, controlled activity, or non-complying activity. If that is the law, then the judgment by the Environment Court on Other Rural Landscape may be infected with an error of law, in a material way.*

[72] Fogarty J noted that the decision of the Environment Court in the present case had rejected an argument that it should take into account the likelihood of future successful applications for discretionary activity consent. At [74] he said:

> *As noted, the Court did go on to reject taking into account the further subdivision and thus even more houses resulting from successful applications for discretionary activities. It may be noted that that is a more cautious approach than I took in* Wilson and Rickerby, *see [62] and [81].*

[73] The reference here to *Wilson and Rickerby* was a reference to the case now reported as *Wilson v Selwyn District Council*.

[74] These observations by the Judge express too broadly the ambit of a consent authority's ability to consider future events. There is no justification

for borrowing the "fanciful" criterion from the permitted baseline cases and applying it in this different context. The word "fanciful" first appeared in *Smith Chilcott Ltd v Auckland City Council* at [26], where it was used to rule out of consideration, for the purposes of the permitted baseline test, activities that the plan would permit on a subject site because although permitted it would be "fanciful" to suppose that they might in fact take place. In that context, when the "fanciful" criterion is applied, it will be in the setting of known or ascertainable information about the development site (its area, topography, orientation and so on). Such an approach would be a much less certain guide when consideration is being given to whether or not future resource consent applications might be made, and if so granted, in a particular area. It would be too speculative to consider whether or not such consents might be granted and to then proceed to make decisions about the future environment as if those resource consents had already been implemented.

[75] It was not necessary to cast the net so widely in the present case. The Environment Court took into account the fact that there were numerous resource consents that had been granted in and near the triangle. It accepted Mr Goldsmith's evidence that those consents were likely to be implemented. There was ample justification for the Court to conclude that the future environment would be altered by the implementation of those consents and the erection of dwellings in the surrounding area.

[76] Limited in this way, the approach taken to ascertain the future state of the environment is not so uncertain as to be unworkable or unduly speculative, as Mr Wylie contended.

[77] Another concern that was raised by Mr Wylie was the possibility of "environmental creep". This is the possibility that someone who has obtained one resource consent might seek a further resource consent in respect of the same site, but for a more intensive activity. It would be argued that the deemed adverse effects of the first application should be discounted from those of the second when the latter was considered under s 104(1)(a). Mr Wylie submitted that if s 104(1)(a) requires that consideration be given to potential use and development, there would be nothing to stop developers from making a number of applications for resource consent, starting with the most benign, and heading towards the most damaging. On each successive application, they would be able to argue that the receiving environment had already been notionally degraded by its potential development under the unimplemented consents.

[78] This fear can be given the same answer as was given in *Arrigato* where the Court had to determine whether unimplemented resource consents should be included within the "permitted baseline". At [35] the Court said:

> *[35] Resource consents are capable of being granted on a non-notified as well as a notified basis. Furthermore, they relate to activities of differing kinds. There may be circumstances when it would be appropriate to regard the activity involved in an unimplemented resource consent as being part of the permitted baseline, but equally there may be circumstances in which it would not be appropriate to do so. For example, implementation of an earlier resource consent may on the one hand be an inevitable or necessary precursor of the activity envisaged by the new proposal. On the other hand the unimplemented consent may be inconsistent with the new proposal and thus be superseded by it. We do not think it would be in accordance with the policy and purposes of the Act for this topic to be the subject of a prescriptive rule one way or the other. Flexibility should be preserved so as to allow the consent authority to exercise its judgment as to what bearing the unimplemented resource consent should have on the question of the effects of the instant proposal on the environment.*

[79] The Environment Court dealt with the implications of the existing resource consents in the present case in a manner that was consistent with that approach. It will always be a question of fact as to whether or not an existing resource consent is going to implemented. If it appeared that a developer was simply seeking successively more intensive resource consents for the same site there would inevitably come a point when a particular proposal was properly to be viewed as replacing previous proposals. That would have the consequence that all of the adverse effects of the later proposal should be taken into account, with no "discount" given for consents previously granted. We are not persuaded that the prospect of "creep" should lead to the conclusion that the consequences of the subsequent implementation of existing resource consents cannot be considered as part of the future environment.

[80] Three other issues, raised by Mr Wylie in support of his argument that "environment" should be confined to what exists at the time the resource consent application is considered by the consent authority, can be briefly mentioned. First, he suggested that the contrary approach would have the effect of negating the result of cases that have decided that priority as between applicants should be established in accordance with the time when applications are made to a consent authority (*Fleetwing Farms Ltd v Marlborough District Council* [1997] 3 NZLR 257 and *Geotherm Group Ltd v Waikato Regional Council* [2004] NZRMA 1). That argument would only be legitimate if we were to endorse Fogarty J's decision that resource consent applications not yet made but which conceivably might be made, could be taken into account. That is not our view.

[81] Secondly, Mr Wylie contended that to hold that the word "environment" included potential use or development would undermine the decision of this Court in *Dye v Auckland Regional Council* where it had been decided that the grant of a resource consent had no precedent effect in the "strict sense". It is apparent from [32] of that decision, that what was meant by use of the expression "the strict sense" was that one consent authority is not bound by its own decisions or those of any other consent authority. We do not agree that a decision that the "environment" can include the future state of the environment has any implications for what was decided in *Dye*.

[82] Finally, Mr Wylie contended that if unimplemented resource consents are taken into account, then consent applications will fall to be decided on the basis of the environment as potentially affected by other consents. He submitted that this was to all intents and purposes "precedent by another route". We do not agree. To grant consent to an application for the reason that some other application has been granted consent is one thing. To decide to grant a resource consent application on the basis that resource consents already granted will alter the existing environment when implemented, and that those consents are likely to be implemented is quite a different matter.

[83] There is nothing in the High Court's decision in *Rodney District Council v Gould* [2006] NZRMA 217 on the question of cumulative effects which has any implications for the current issue. That decision simply explained what was already apparent from what this Court had decided in relation to cumulative effects in *Dye v Auckland Regional Council* that is, that the cumulative effects of a particular application are effects which arise from that application, and not from others.

[84] In summary, we have not found, in any of the difficulties Mr Wylie has referred to, any reason to depart from the conclusion which we have reached by considering the meaning of the words used in s 104(1)(a) in their context. In our view, the word "environment" embraces the future state of the environment as it might be modified by the utilisation of rights to carry out permitted activity under a district plan. It also includes the environment as it might be modified by the implementation of resource consents which have been granted at the time a particular application is considered, where it appears likely that those resource consents will be implemented. We think Fogarty J erred when he suggested that the effects of resource consents that might in future be made should be brought to account in considering the likely future state of the environment. We think the legitimate considerations should be limited to those that we have just expressed. In short, we endorse the Environment Court's approach. Subject to that reservation, we would answer question 1(a) in the negative.

Question 1(b) — Speculation

[85] The foregoing discussion means this and the subsequent questions can be answered more briefly. The issue raised by this question is whether taking into account the approved building platforms in and near the triangle, was speculative. The process adopted by the Environment Court cannot properly be characterised as having involved speculation. The Court accepted Mr Goldsmith's evidence that it was "practically certain" that the approved building sites in and near the triangle would be built on. Mr Wylie confirmed that there was no issue with the Environment Court's finding of fact on the likelihood of future houses being erected.

[86] However, Mr Wylie argued that the environment against which the application fell to be assessed comprised only the existing environment. If that assertion were correct, he submitted that it followed that the potential effects of unimplemented resource consents were irrelevant.

[87] We have already rejected his contention that the relevant environment was confined to the existing environment. It follows that there is no basis upon which we could find error of law in relation to Question 1(b).

Question 1(c) — Consideration of the permitted baseline

[88] The issue raised by this question is whether the Environment Court had given adequate and appropriate consideration to the application of the permitted baseline. Mr Wylie's argument on this issue proceeded as if the Environment Court had been making a decision about the permitted baseline when it allowed itself to be influenced by its conclusion that the building sites in and around the triangle would be developed. For reasons that we have already given, we do not consider that the receiving environment was properly to be approached on the basis of a "permitted baseline" analysis, as that term has normally been used.

[89] Whatever label is put upon the exercise, Mr Wylie's main contention in this part of his argument was that there was nothing in the Environment Court's decision to show that it had a discretion of the kind that had been explained by this Court in the decision in *Arrigato Investments Ltd v Auckland Regional Council*, in particular the passage at [35] that we have earlier set out. Mr Wylie submitted that properly understood, the decision in *Arrigato* meant that there was a discretion when it came to the consideration of unimplemented resource consents. Mr Wylie also contended that it was not obvious from the Environment Court's judgment that it was aware that it had that discretion, let alone that it had exercised it.

[90] We do not consider that it is appropriate to describe what is simply an evaluative factual assessment as the exercise of a discretion. Further, we

agree with Mr Castiglione that the Council's argument wrongly conflates the "permitted baseline" and the essentially factual exercise of ascertaining the likely state of the future environment. We have previously stated our reasons for limiting the permitted baseline to the effects of developments on the site that is the subject of a resource consent application. On the relevant issue of fact, the Environment Court relied on the evidence of Mr Goldsmith about the virtual certainty of development occurring on the approved building platforms in and around the triangle. There was no error in that approach.

[91] In reality the present question simply raises, in a different guise, the central complaint that the Council makes about the acceptance by both the Environment Court and the High Court that the receiving environment can include the future environment. That issue is not to be approached by invoking the permitted baseline, so the question posed does not strictly arise. We simply answer the question by saying that the issues raised by the Council in this part of the appeal do not establish any error of law by the Environment Court, nor by Fogarty J.

Question 2 — Landscape Category

[92] The Council argued that the Environment Court had wrongly concluded that the landscape category it was required to consider was an "Other Rural Landscape" under the district plan. It was contended that Fogarty J had erred by approving the Environment Court's approach.

[93] The district plan defines and classifies landscapes into three broad categories, "Outstanding Natural Landscapes and Features", "Visual Amenity Landscapes" and "Other Rural". The classification of a particular landscape can be important to the consideration of resource consent applications, because different policies, objectives and assessment criteria apply to land within the different categories.

[94] Landscapes in the "outstanding" category are described in the district plan as "romantic landscapes — the mountains and the lakes — landscapes to which s 6 of the Act applies". The important resource management issues are identified as being the protection of these landscapes from inappropriate subdivision, use and development, particularly where activity might threaten the openness and naturalness of the landscape. With respect to "Visual Amenity Landscapes", the district plan describes them in the following way:

> *They are landscapes which wear a cloak of human activity much more obviously — pastoral (in the poetic and picturesque sense rather than the functional sense) or Arcadian landscapes with more houses and trees, greener (introduced) grasses and tend to be on the district's downlands, flats and terraces.*

The district plan seeks to enhance their natural character and enable alternative forms of development where there are direct environmental benefits of doing so. This leaves a residual category of "other rural landscapes", to which the district plan assigns "lesser landscape values (but not necessarily insignificant ones)".

[95] There was a contest in the Environment Court as to whether the landscape to be considered in the present case was properly categorised as "Visual Amenity" or "Other Rural". In making its assessment as to which classification should apply, the Environment Court plainly had regard to what the landscape would be like when resource consents already granted were utilised. At [32], it said:

> *We consider that the landscape architects called by the Council and the section 271A parties have been too concerned with the Court's discussion of the scale of landscapes and have not sufficiently addressed the central question in landscape classification, namely whether the landscape, when developed to the extent permitted by existing consents, will retain the essential qualities of a VAL, which are pastoral or Arcadian characteristics. We noted (in paragraph 3) that development of "lifestyle" or "estate" lots for rural-residential living is not confined to the triangle itself.*

[96] It then made reference to existing developments in the area finding some to be highly visible and detracting significantly from any "arcadian" qualities of the wider setting. It concluded that the landscape category was Other Rural.

[97] We accept, as Mr Wylie submitted, that in large part that conclusion of the Environment Court was apparently based on the view that it had formed about what the landscape would be like when modified by the implementation of as yet unimplemented resource consents.

[98] In the High Court, Fogarty J recorded the submission that had been made to him by Mr Wylie that, although there was evidence before that Court on which it could have concluded that the landscape was "Other Rural", nevertheless it had reached that conclusion after taking into account, irrelevantly, that the landscape would be developed to the extent permitted by existing consents. Fogarty J held first that this was in effect a repetition of the arguments previously made about faulty baseline analysis. As he did not consider that the Environment Court had made any error in that respect, Mr Wylie's argument could not be sustained. A little later in the judgment, Fogarty J confirmed his view that a landscape categorisation decision could only be criticised if the Court was obliged to ignore future potential developments in the area ([79] of his decision, set out in [29] above).

[99] Mr Wylie repeated in this context his argument that the Court had been obliged to consider the environment as it existed at the time that it made its decision. That argument must fail for the reasons that we have already given. However, in this Court Mr Wylie developed another argument based not on the relevant statutory provisions, but on provisions of the district plan itself. Mr Wylie's argument was based on Rule 5.4.2.1 of the district plan.

[100] Rule 5.4.2 contains "assessment matters" which are to be considered when the Council decides whether or not to grant consent to, or impose conditions on, resource consent applications made in respect of land in the rural zones. As we have previously noted those assessment criteria vary according to the categorisation of the landscape. Before the actual assessment matters are stated, however, Rule 5.4.2.1 sets out a three-step process to be followed in applying the assessment criteria. It provides as follows:

> *5.4.2.1* ***Landscape Assessment Criteria — Process***
>
> ***There are three steps in applying these assessment criteria.*** *First, the analysis of the site and surrounding landscape; secondly determination of the appropriate landscape category; thirdly the application of the assessment matters. For the purpose of these assessment criteria, the term "proposed development" includes any subdivision, identification of building platforms, any building and associated activities such as roading, earthworks, landscaping, planting and boundaries.*
>
> ***Step 1 — Analysis of the Site and Surrounding Landscape***
>
> *An analysis of the site and surrounding landscape is necessary for two reasons. Firstly it will provide the necessary information for determining a sites ability to absorb development including the basis for determining the compatibility of the proposed development with both the site and the surrounding landscape. Secondly it is an important step in the determination of a landscape category — i.e. whether the proposed site falls within an outstanding natural, visual amenity or other rural landscape.*
>
> *An analysis of the site must include a description of those existing qualities and characteristics (both negative and positive), such as vegetation, topography, aspect, visibility, natural features, relevant ecological systems and land use.*
>
> *An analysis of the surrounding landscape must include natural science factors (the geological, topographical, ecological and dynamic components in [sic] of the landscape), aesthetic values (including memorability and naturalness), expressiveness and*

legibility (how obviously the landscape demonstrates the formative processes leading to it), transient values (such as the occasional presence of wildlife; or its values at certain times of the day or of the year), value of the landscape to Tangata Whenua and its historical associations.

Step 2 — Determination of Landscape Category

This step is important as it determines which district wide objectives, policies, definitions and assessment matters are given weight in making a decision on a resource consent application.

The Council shall consider the matters referred to in Step 1 above, and any other relevant matter, in the context of the broad description of the three landscape categories in Part 4.2.4. of this Plan, and shall determine what category of landscape applies to the site subject to the application.

In making this determination the Council, shall consider:

(a) to the extent appropriate under the circumstances, both the land subject to the consent application and the wider landscape within which that land is situated; and

(b) the landscape maps in Appendix 8.

Step 3 — Application of the Assessment Matters

Once the Council has determined which landscape category the proposed development falls within, each resource consent application will then be considered:

First, with respect to the prescribed assessment criteria set out in Rule 5.4.2.2 of this section;

Secondly, recognising and providing for the reasons for making the activity discretionary (see para 1.5.3(iii) of the plan [p1/3]) and a general assessment of the frequency with which appropriate sites for development will be found in the locality.

[101] Mr Wylie argued, that even if his argument confining "environment" to the current environment failed, nevertheless in accordance with these district plan provisions it could not be relevant to consider the future environment other than at Step 3. He submitted that for the purposes of Step 1 and Step 2, attention should be focused solely on the current state of the environment.

[102] Mr Castiglione argued to the contrary, suggesting that the words used in Step 1, ". . . the basis for determining the compatibility of the proposed development with both the site and the surrounding landscape"

were apt to refer to proposed development generally within the landscape. We reject that submission. In context, the reference to "the proposed development" must be the development which is the subject of a particular application for resource consent.

[103] But the wording of Steps 1 and 2 does not exclude a consideration of the environment as it would be after the implementation of existing resource consents. Although the second paragraph in Step 1 refers to "existing qualities and characteristics", the words used are inclusive, and there is nothing to suggest that they are exhaustive. The same applies in respect to the last paragraph in Step 1. We do not read the words in either paragraph as ruling out consideration of the future environment. Even if that conclusion were wrong it would be legitimate for the Council to consider the future environment as part of "any other relevant matter", the words used in the second paragraph within Step 2. Further, the second part of Step 2 authorises a broadly based inquiry when it requires the Council to "consider. . . the wider landscape" within which a development site is situated. There is no reason to read into these words, or any of the other language in Step 2, a limitation of the consideration to the present state of the landscape.

[104] It follows that the future state of the environment can properly be considered at Steps 1 and 2, before the landscape classification decision is made. Neither the Environment Court nor Fogarty J erred and Question 2 should be answered no.

Question 3 — Reliance on Minimum Subdivision Standards in the Rural-Residential zone

[105] In the High Court, the Council had argued that the Environment Court had misconstrued the relevant district plan provisions, and taken into account an irrelevant consideration by referring to the subdivision standards contained in the district plan for the rural-residential zone. The subject site is zoned rural general.

[106] Mr Wylie pointed to three separate paragraphs in the Environment Court's decision where there had been references to the rural-residential provisions of the plan. In [74] of its decision the Environment Court had discussed evidence that had been given about the desire of the developer to create a "park-like" environment. A landscape architect whose evidence had been called by the Council expressed the opinion that although the proposal would not introduce urban densities, it was not rural in nature. The Court referred to the fact that in the rural-residential zone a minimum lot size of 4,000 square metres and an associated building platform was permitted. It will be remembered that the subject development would comprise allotments varying in size between 0.6 and 1.3 hectares. No doubt with that comparison in mind, the Environment Court expressed the view that the

development would provide more than the level of "ruralness" of rural-residential amenity.

[107] The next reference to the rural-residential rules was in [78]. The Environment Court was there dealing with the issue of whether the development would result in the "over-domestication" of the landscape. The Court expressed its view that the proposal could co-exist with policies seeking to retain rural amenity and that while it would add to the level of domestication of the environment, the result would not reach the point of over-domestication. That was so, because the site was in an "other rural landscape", and the district plan considered that rural-residential allotments down to 4,000 square metres retained an appropriate amenity for rural living.

[108] Finally, Mr Wylie referred to the fact that at [92], where the Environment Court was dealing with a proposition that the proposal would be contrary to the district plan's overall settlement strategy, the Court made a reference to the reluctance that it had expressed in a previous decision to set minimum allotment sizes in the rural-residential zone. Mr Castiglione suggested that the Environment Court had made a mistake, and that it had meant to refer to the rural general zone in that paragraph, not the rural-residential zone. We do not need to decide whether or not that was the case.

[109] Having reviewed the various references to the rural-residential in context, Fogarty J held that the Environment Court had not considered an irrelevant matter or committed any error of law in its references to the rural-residential zones. We cannot see any basis to disturb that conclusion. In this Court Mr Wylie contended that Fogarty J's reasoning had been based on the fact that the Environment Court had considered that any "arcadian" character of the landscape had gone. He then repeated the point that that conclusion had turned on the fact that the Court had considered the likely future environment as opposed to confining its consideration to the existing environment. He submitted that the decision was wrong for that reason. We have already rejected that argument.

[110] We do not consider that there was any error of law in the approach of either the Environment Court or the High Court on this issue. Question 3 should also be answered no.

Result

[111] For the reasons that we have given, each of the questions raised on the appeal is answered in the negative. That answer in respect of Question 1(c) must be read in the context that the Environment Court's analysis of the relevant environment was not a "permitted baseline" analysis.

[112] The respondent is entitled to costs in this Court of $6,000 plus disbursements, including the reasonable travel and accommodation expenses of both counsel to be fixed, if necessary by the Registrar.

Decision No: C 136/98

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of appeal under section 120 of the Act
BETWEEN	SHIRLEY PRIMARY SCHOOL
	(RMA 343/96)
AND	TELECOM MOBILE COMMUNICATIONS LIMITED
	(RMA 429/97)
	Appellants
AND	CHRISTCHURCH CITY COUNCIL
	Respondent

BEFORE THE ENVIRONMENT COURT

Environment Judge J R Jackson - (presiding)
Mrs R Grigg
Ms N Burley

HEARING at CHRISTCHURCH on 4 - 8, 11 - 15 May 1998 and 29 June 1998

APPEARANCES

Messrs A Hearn QC and K G Reid for the Shirley Primary School
Messrs T C Gould and J Hassan for Telecom Mobile Communications Limited
Messrs A C Hughes-Johnson and A Prebble for Christchurch City Council

INDEX:

DECISION

Chapter 1: Introduction

1. On 17 October 1995, Telecom Mobile Communications Limited (since amalgamated into Telecom New Zealand Limited and in this decision called ("Telecom")) applied to the Christchurch City Council ("the council") for a resource consent under the Resource Management Act 1991 ("the Act" or "the RMA") to establish, operate and maintain a cellular radio base station ("the cellsite") on land at 9 Shirley Road, Christchurch to the rear of Shirley Masonic Lodge. The legal description of the land ("the site") is Part Lot 14 D.P. 1069[1].

2. The site is located near the intersection of Shirley and Hills Roads north of central Christchurch. It is half surrounded by commercial or light industrial premises consistent with the Commercial Service zone in the Council's transitional district plan. The northern and eastern boundaries of the site are shared with the Shirley Primary School ("the school"). The cellsite itself is some 14 metres from the school grounds at the closest point. The nearest classroom is about 45m to the east of the cellsite. The school currently teaches about 270 children aged between 5 and 10 years.

3. Submissions against the proposal were lodged by, amongst other parties, the Shirley Primary School Trustees (called "SPS"). Following a hearing in March 1996, the council granted a resource consent to Telecom on 12 April 1996, subject to conditions.

4. SPS appealed against that decision requesting that consent be refused. In November 1996 the parties jointly asked the Court to defer the hearing of the appeal for six months to allow time to investigate alternative sites and to

[1] CT 503/127 Canterbury Land Registry

carry on further discussions. On 12 June 1997 and with the consent of the Court, Telecom lodged its own appeal against condition 4 of the resource consent imposing a limit on the power flux density emitted by the cellsite.

5. The reasons for Telecom seeking to establish the cellsite on the site are:

- to improve the distance coverage for handheld phones in the Shirley/Richmond area;
- to add capacity to a broader Christchurch network to cope with increasing customer demand; and
- to reduce interference from the network.

6. The most visible feature of Telecom's proposal is a 20 metre mast with six antennae at the mast head. There are three sets of two antennae pointing at orientations of 90°, 210° and 330° to the north. The mast height of 20 metres is required to enable the antennae to *"see"* over objects in the immediate vicinity and to provide the required coverage. Each of the antennae will transmit low level radio frequency ("RF") waves between frequencies of 870 megahertz ("MHz") and 890 MHz with a wavelength of around 34 centimetres. The mast was (prior to this hearing) redesigned to make it thinner and therefore less visible.

7. It needs to be borne in mind that RF radiation is just one form of the electro-magnetic radiation ("EMR") which pervades the universe. For example, the earth is bombarded with EMR in the form of gamma rays from the sun (with much less from other stars) all the time. There are other sources of EMR such as x-ray tubes, lights, lasers, radar, microwave ovens, cellphones and transmitters, radio and television tubes and power supplies.

A diagram showing the EMR spectrum as we understand it, is shown as Figure 1[2].

8. The terms used in this decision are, in alphabetical order:

EMF	=	Electric, magnetic and electro-magnetic fields
GH_z	=	Gigaherz
Hertz (H_z)	=	Measurement of EMR in cycles per second
MH_z	=	Megahertz (1 MH_z = 10^6 H_z)
mW	=	Milliwatt (1 mW = 10 μw)
RFR	=	Radio Frequency Radiation-part of the EMR spectrum, below non-ionising frequencies
$\mu W/cm^2$	=	Microwatts per square centimetre Loosely, the unit for measuring exposure to RFR, or strictly what is defined as "the power flux density"

[2] Page 6 of this decision

ELECTROMAGNETIC SPECTRUM

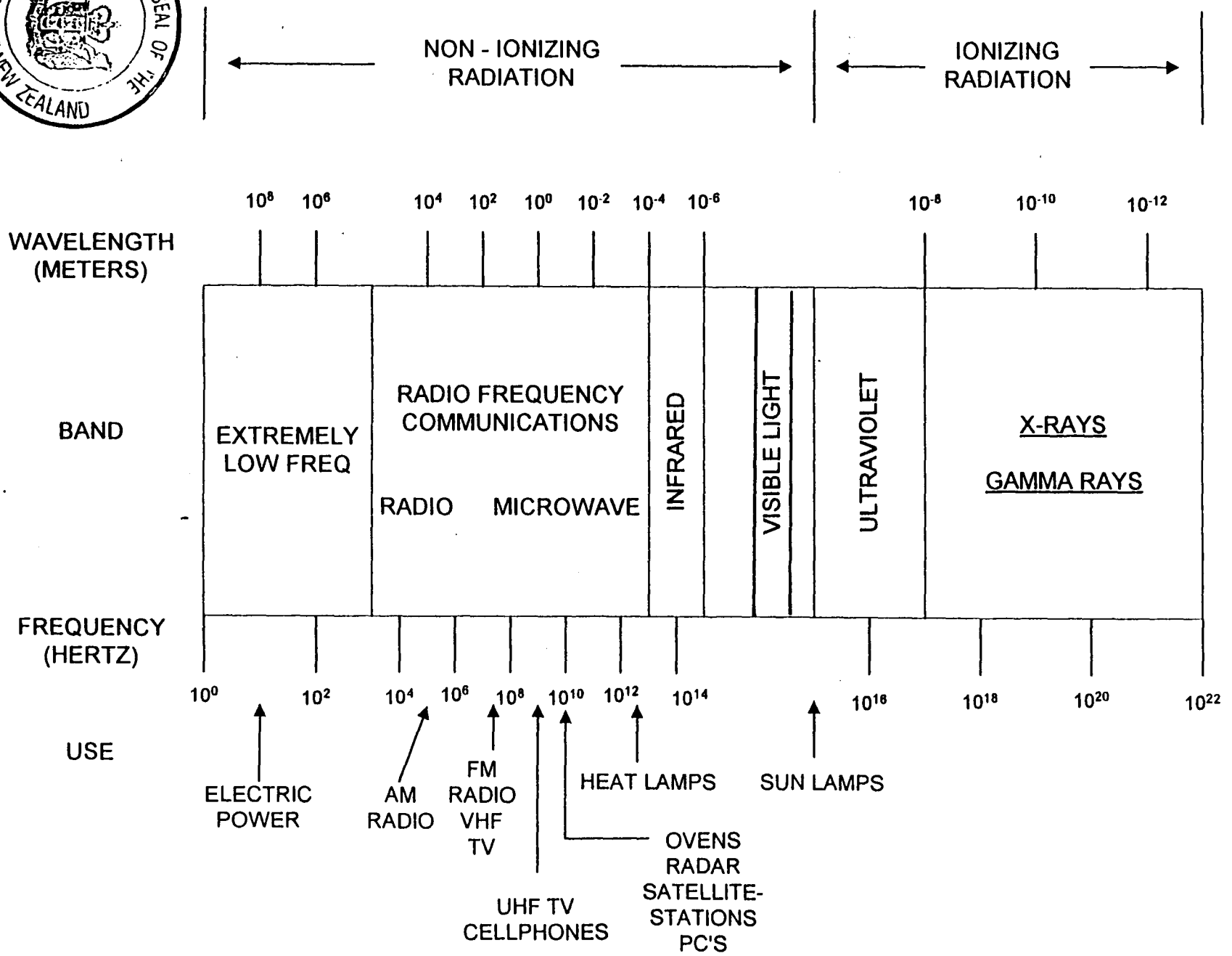

FIGURE 1

9. It was common ground that the application for the cellsite was for a non-complying activity under the transitional district plan. Although we did hear evidence and argument about whether the proposal was contrary to the relevant district plans, the most important issues in the case related to the alleged adverse effects of operating the cellsite. The four main adverse effects alleged were:

- the risk of adverse health effects from the RFR emitted from the cellsite;
- the SPS' perception of the risks and related psychological adverse effects on the pupils and teachers;
- adverse visual effects (views of mast and antennae); and
- reduced financial viability of the school if pupils are withdrawn as a consequence of a resource consent being confirmed.

10. The evidence ranged from individual statements of fear to "hard" science. The expert evidence itself ranged from the opinions of resource managers and landscape architects to the social science of psychology, to clinical science from physicians and epidemiologists and finally to bio-mechanistic studies.

11. We should explain that the hard end of scientific research into the issue of RFR occurs at two general levels, although each one in itself can then be subdivided further. The first general level is epidemiological studies.[3] The second level is a study of biological mechanisms. The levels are generally hierarchical (biological mechanisms above epidemiology) in that they are perceived as having increasing power in terms of establishing cause and effect.

[3] Epidemiology is the study of diseases in human populations.

12. Epidemiology consists at its lowest level of case studies, descriptive studies and professional experience. At a slightly higher level it consists of comparative studies including ecological studies. Higher again are cohort or case control studies and finally at the highest are randomised trials (experimental studies). The prime difficulty with epidemiological studies is that while one such study can show an **association** between facts, for example between RFR and cancer, it cannot show why or how two facts are causally linked. Epidemiological studies then give way in the perceived hierarchy to the second general level which is of biological or mechanistic studies. These in turn divide into, at a lower level, *in-vitro* studies[4] and, at the highest level, *in-vivo* studies.[5]

13. Complicating the scientific position is that initial experimentation on biological mechanisms is usually on other animal cells (i.e. not human) - at first *in vitro* and later *in vivo.* This raises other questions: for example, can one extrapolate from a study of Chinese Hamster ovary (CHO) cells to human cells? Or from Chinese Hamsters to humans?

14. The above paragraphs summarise the issues as most of the evidence and the submissions of counsel identified them. But it does not state the main issue for the school and its concerned parents - which was how could they be sure there was no risk to their children from the cellsite. We will return to that issue later.

[4] Literally "in glass" meaning test-tube or petri dish studies.
[5] Literally "in life" meaning studies of live animals.

15. Our decision is set out in the following way. First we summarise the cases for the three parties in Chapters 2-4, noting that the only issue[6] as between Telecom and the Council is whether the resource consent (if granted) should be subject to the Council's condition 4. Then because this case raises difficult evidential issues - for example, as to who (if anyone) has the onus of proving that there is no, or little, risk from exposure to RFR at athermal levels - we deal with those issues in Chapter 5. The RMA lists[7] the matters that need to be taken into account in deciding whether a resource consent should be granted. The relevant parts of the list are identified in Chapters 6-9. We turn to the exercise of our discretion[8] as to whether resource consent should be granted in Chapter 10, and we deal with Telecom's appeal against condition 4 in Chapter 11. Finally Chapter 12 sets out our final orders determining the appeals.

[6] The sole subject of Telecom's appeal RMA 429/97
[7] In section 104(1)
[8] Under section 105(1) RMA

Chapter 2: The Case for Telecom

16. Counsel for Telecom said that two broad issues fall for consideration, these being:

(1) whether the Council's decision to grant consent should be confirmed.

(2) what conditions should be included in the consent (if granted) and, in particular, what conditions should govern RF emitted from the facility. (This is dealt with in Chapter 11: "Telecom's Appeal against Condition 4").

Adverse Effects

17. Mr Gould, counsel for Telecom, covered each of the adverse effects alleged by the school in turn. Counsel pointed out that in a number of cases dating back to 1991 the Tribunal has ruled that there are no health effects, actual or potential posed by RF emissions from a cellsite[9]. Counsel claimed that nothing has changed since *McIntyre* and there is no evidence, consistent with accepted scientific opinion, of actual or potential health effects from RF emissions at the levels that will be experienced from the proposed cellsite. The second part of that submission goes to the heart of the case and we return to it later. But the first part of the submission is wrong: there have been two important changes since *McIntyre*. The first is that three more years have passed and more

[9] *Waitakere City Council v Broadcast Communications Limited and Others* A116/91 (8 November 1991), *World Services New Zealand Ltd v Wellington City Council* W90/93 (21 October 1993), 1B ELRNZ 32 *McIntyre v Christchurch City Council* [1996] NZRMA 289, *Telecom v Christchurch City Council* W165/96 (15 November 1996) ["the Telecom decision"].

relevant scientific papers have been published. The second point relates to one of those papers: that by Dr M H Repacholi published in 1997[10]. Dr Repacholi was one of the key witnesses for BellSouth in *McIntyre*. The Tribunal (as it was) stated:

> *"The opinion that harmful effects of radio frequency radiation have been established only where accompanied by heat was expressed by Dr M H Repacholi ..."*[11]

and

> *"[Dr Repacholi] gave the opinion that multiple exposures to sub-threshold levels of radio frequency [radiation] have not been found to have any adverse health impact; that exposure to radio frequency fields has not been established to cause cancer; that there is no scientific evidence to suggest that at the level which would be emitted from the proposed facility there would be any influence on cancer initiation, promotion, or progression ..."*[12]

Clearly the Tribunal relied on Dr Repacholi's evidence in its finding:

> *"On the totality of the evidence, our finding is that there would not be an actual or potential effect ... on the environment ... from the [RFR] that would be emitted by the proposed transmitter."*[13]

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[10] M H Repacholi *et al.* *"Lymphomas in Eμ-Pim 1 Transgenic Mice Exposed to Pulsed 900 MHz Electromagnetic Fields"* **Radiation Research** 147:631-640 [called "Repacholi (1997)"]
[11] ***McIntyre*** [1996] NZRMA 289 at 308
[12] ***McIntyre*** at p.309
[13] ***McIntyre*** at p. 315

But Repacholi (1997) states:

> *"I believe this is the first animal study showing a true non-thermal effect."*

We can understand why the school might be concerned about the effects of RFR from cellphones after hearing of Dr Repacholi's change of mind.

18. As for the claimed psychological effects it was submitted that to the extent that evidence does show genuinely-held anxieties, this will need to be balanced against the facts that the school administration declined Dr Black's offer to speak to the Shirley school children following the council hearing and his offer to provide the school administration with scientific data on the issue. The school also refused access to enable actual RF measurements from a temporary cellsite to be taken at the school by an independent expert during the school holidays.

19. A further issue in respect to these anxieties was whether and to what extent the Court should take them into account. Mr Gould submitted that the key issue for determination of those anxieties is whether they are founded on plausible scientific evidence that the transmission of RF signals from the proposed cell site would pose a health risk. Counsel contended that there is no plausible scientific evidence of actual health risks and that the anxieties have been fed by misinformation and misconceptions. He suggested that this is not a basis for allowing the school's appeal; instead public confidence should be fostered and misconceptions addressed. Cqunsel was of the view that the RFR conditions included in the consent have an important function in this regard. He also submitted that in terms of the Act it is not appropriate to

regard a perception or anxiety that an activity will pose a health risk as an adverse effect when there is no plausible scientific evidence that the supposed health risk is real.

20. As for the visual amenity issues Mr Gould contended that subjective value judgments about cellsites as an activity have no place in the assessment of visual amenity or amenity value aspects of the proposal. He also said that if claims of adverse psychological effects are rejected then these claims should not be allowed in the back door dressed up as visual amenity issues[14]. It was submitted that the visual effects of the proposal are minor and no landscape mitigation planting is required.

Plan and Proposed Plan Issues

21. In respect to the transitional plan, counsel submitted that while the plan is silent on radio communication facilities making the proposal technically non-complying, the proposal satisfies all performance standards relevant in the zone, is compatible with commercial and industrial activities expressly contemplated in the zone and does not offend against any objectives and policies. He said that silence on this activity in the plan is understandable given the recent development of cellphones and the cellular network.

22. In the case of the proposed plan the activity is discretionary and satisfies all relevant performance standards, and complies with the relevant objectives and policies. It was submitted that the proposed plan accords no special sensitivity to the siting of cellsites near schools.

[14] *Telecom Ltd v Christchurch City Council* W165/96 at p.33

The Search for a Site

23. Telecom employees Messrs M J Moran and C E Jennings described the need for a cellsite in Shirley and its operation if installed. They also described a search for alternative sites in the area. In particular, after the appeal was lodged, Telecom with the consent of the school, obtained an adjournment of the Environment Court hearing while a search for alternative sites could take place. In all, over 27 sites were investigated by Telecom. Its basic principle was to avoid sites that were surrounded by residences because of the resistance of occupiers to having a cellphone tower near them.

24. In cross-examination by Mr Hearn, Mr Moran conceded that it would be possible (but more expensive) to service the area by a number of less powerful "micro units" and thus have no need to establish the cellsite next door to the school.

RFR From Cellsites

25. Mr M D Gledhill, a scientist at the National Radiation Laboratory of the Ministry of Health gave evidence as to the technical characteristics of the proposed cellsite. He gave the Court:

- An estimate of exposure levels in areas to which the public might have access, including areas within the school grounds.
- An assessment of whether exposures to RFR around the site would comply with the joint **Australian/New Zealand Standard 2772.1 (Int.):1998 Radio Frequency Fields, Part 1; maximum exposure levels - 3 kHz to 300 GHz** (called "the ANZ Standard"). Under the

ANZ Standard there is a non-occupational[15] exposure limit of 200μW/cm^2.

26. He described how transmissions from the antennae are moderately directional. Each transmitting antenna emits a fan-shaped beam with the plane of the fan oriented at an angle of 2° below the horizontal extending about 60° on either side of the main transmission axis.

27. Mr Gledhill stated that when the cellsite is operating at full power each transmitting antenna will operate at a maximum of 80 watts on its sector. By comparison radio telephone sets in trucks and taxis operate at a power of around 25 watts. TV and radio transmitters operate at continuous powers considerably higher than that. On the Sugarloaf radio mast in Christchurch the total transmitter power is 64,000 watts.

28. Exposures to RFR at any point around the transmitter are quantified as the "*power flux density*". Mr Gledhill showed that very close to the mast RFR exposures are quite low. As you walk away from the mast along the direction of one of the beam axes, for example eastwards towards the school buildings exposure would increase to a maximum of about 1.4 μW/cm^2 (that is 0.7% of the non-occupational limit in the ANZ Standard) at a distance of 23 metres from the mast. Moving further away exposure decreases and then starts to increase again about 40 metres from the mast (at the closest school buildings as it happens) rising to another peak of 1.1 μW/cm^2 at a distance of 80 metres from the mast. At greater distances than that the exposure steadily decreases in inverse proportion to the square of the distance from the mast.

[15] As opposed to "occupational". The meanings seem to be self-evident, but for a more detailed explanation of the term "non-occupational" see ***McIntyre v Christchurch City Council*** [1996] NZRMA 289 at 293

29. Mr Gledhill also pointed out that there can be an effect of signal reflections so that if the reflector was perfect, such as a large flat metal sheet, the maximum power flux density can be four times that predicted. He then qualified that by stating:

> *"The importance of reflections in affecting exposures to radio frequency radiation should not be overstated. Although levels may fluctuate markedly over relatively short distances, levels averaged over, say, a square area 30 centimetres by 30 centimetres would generally average out to be close to the level estimated from calculations. One difference between [the old standard....] and AS/NZS 2772.1 (Int.): 1998 is that the latter expressly permits such averaging ... in order to determine a power flux density which is more closely related to possible health effects than a simple point measurement ...".*

30. Mr Gledhill stated in his rebuttal evidence that at worst reflections in the vicinity of the adjacent Department of Social Welfare building might cause the power flux density in "isolated fist size spots" to reach 33 $\mu W/cm^2$. However that did not affect his conclusion that if averaged in the way required by the ANZ Standard, maximum exposures in accessible areas around the site (for example the school grounds) would still only reach about 1.4 $\mu W/cm^2$ (0.7% of the non-occupational exposure limit in the ANZ Standard).

Overview of Health Effects

31. Next for Telecom we heard from Dr D R Black who is a specialist physician in occupational and environmental medicine. Within his general field of expertise he has a specific interest in the biological effects of EMR,

in particular non-ionising radiation. He is an independent consultant and is a Director of the New Zealand Institute of Occupational and Environmental Medicine, as well as Senior Lecturer in Occupational Medicine in the Department of Medicine at Auckland University.

32. Dr Black stated that most RF standards, including those used in Australasia are based on those recommended by what is now called the International Commission for Non-ionising Radiation Protection ("ICNIRP").[16] ICNIRP has recently published a new standard for the whole spectrum of non-ionising electromagnetic fields below 300 GHz. That standard was published[17] during the course of the hearing and Dr Black produced a copy to us.

33. The ICNIRP standard is based on a specific absorption rate ("SAR")[18] of 0.08 watts per kilogram at VHF and above. However, it also allows for higher power flux densities at 900 MHz[19] which makes the current ANZ Standard conservative by comparison. The ICNIRP standard has changed because it is now understood that human absorption of RFR falls off above 400 MHz which means that higher power flux density would be required to produce an equivalent SAR.

34. Dr Black stated that both the ICNIRP and ANZ Standards use the demonstrable and repeatable thermal effects of RFR to determine a definable threshold, which is a rise in cool temperature of 1° centigrade in a

[16] This is the body that has replaced the International Radiation Protection Association ("IRPA") referred to in ***McIntyre*** v ***Christchurch*** City [1996] NZRMA 289.

[17] **Health Physics 88** Volume 74 No.4 (p.494) - called "the ICNIRP Guidelines".

[18] This is the rate at which energy is absorbed in body tissues. It is a dosimetric measure that has been widely adopted for use at frequencies where absorption produces the most significant biological effects. It is measured in watts per kilogram.

[19] It will be recalled that the proposed cellsite is to operate at 870-890 MHz

live animal. The ANZ Standard is defined at a 1/50th of this threshold. That basic restriction provides for a factor much greater than is required to eliminate the possibility of any thermal effects. Further, because the ANZ Standard does not allow for the established fall and absorption of power at higher frequencies the ANZ Standard becomes almost 2½ times lower than the internationally accepted and already conservative ICNIRP standard at cellphone frequencies.

35. Turning to the issue of adverse health effects from exposure to RFR Dr Black referred us to the ICNIRP Guidelines[20] which state:

> *"The main objective for this publication is to establish guidelines for limiting EMF exposure that will provide protection against known adverse health effects."*

He relied on these to show that the ANZ Standard and Telecom's proposal are consistent with the science generally accepted throughout the international scientific community.

36. Dr Black stated that he was familiar from his professional experience with the range of health concerns about RFR often raised by people. He said while he could understand why people are concerned about cancer from RFR there is really no cause for concern because non-ionising radiation (which is what RFR is) does not cause cancer. **Ionising radiation can cause cancer** as it has sufficiently high energy levels to emit particles (free radicals) which break organic chemical bonds causing mutagens which may initiate cancers.

[20] **Health Physics 88 Volume 74 No. 4 Page 494.**

37. In its efforts to show that any potential effects from RFR on human beings are very improbable Telecom called two further scientific witnesses who gave complex evidence of considerable length.

Epidemiological Evidence

38. The epidemiologist called by Telecom was Dr J M Elwood. His primary appointment at present is as Professorial Research Fellow in cancer epidemiology within the Dunedin School of Medicine at the University of Otago. He has an impressive list of academic and professional qualifications. In addition to being an expert on aspects of cancer epidemiology he is also a specialist in the medical assessment of epidemiological evidence. He has published two books on that subject.[21] Through reviewing published studies he assessed the association between exposure to RF emissions and:

- cancers;
- reproductive outcomes;
- sleep disturbances; and
- psychomotor deaths in children.

39. In relation to cancer he first referred to three "cluster" studies (where the number of cases of an uncommon disease are greater than average) but pointed out that these can have no causal implications since clusters occur by chance.[22] At most he considered that a cluster study can raise an hypothesis worth checking.

[21] Elwood J M 1988: ***Causal Relationships in Medicine***: (Oxford University Press) and Elwood JM 1997: ***Critical Appraisal of Epidemiological Studies in Clinical Trials***: (Oxford University Press).

[22] A cluster is like throwing a dice 3 times and coming up with three 6's.

40. Then he considered four recent studies looking at the incidence of cancer in general populations exposed to television, radio and similar RF emissions. These were:

    (a) a study at Sutton Coldfield in England [Dolk (1997a)][23]

    (b) a study of 20 other transmitters in the UK [Dolk (1997b)][24]

    (c) a study in north Sydney, NSW [Hocking (1996)][25]

    (d) a study in San Francisco, USA [(Selvin (1992)][26]

41. The Sutton Coldfield study [Dolk (1997a)] showed (amongst other things) that for all childhood cancer there were less cancers than expected but there were more leukaemia cases than expected. Neither of those results was statistically significant, i.e. the results were compatible with no association between cancer (or the lack of it) and RF radiation.

42. Dr Elwood described the Dolk (1997b) study as "*the most comprehensive such study we have*" but concluded that its results were equivocal. He quoted the authors of it as stating:

> *"If there were a true association with radio transmission, the lack of replication of the pattern and magnitude of excesses near Sutton Coldfield may indicate that a simple radial decline exposure model is not sufficient."*

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[23] J Dolk *et al.* (1997) "*Cancer Incidence near radio and television transmitters in Great Britain 1: Sutton Coldfield Transmitter*" **Am J Epidemiol.** 145; 1-9 [called "Dolk (1997a")]

[24] Dolk (1997) "*Cancer Incidence near radio and television transmitters in Great Britain 2: All high power transmitters*" **Am.J. Epidemiol.** 10-19 [called "Dolk (1997b)"]

[25] B Hocking *et al.* (1996)"*Cancer Incidence and mortality and proximity to TV Towers*" **Med. J. Aust.** 165: 601-605 (called "Hocking 1996")

[26] S Selvin *et al.* (1997) "*Distance and Risk Measures for the Analysis of Spatial Data: A study of Childhood Cancers*" **Soc. Sci. Med** 34: 769-777 [called "Selvin (1992)"]

43. Hocking 1996 gave equivocal results for adult leukaemia, negative results for brain cancer in adults and children, but a positive result for leukaemia in children. Dr Elwood saw this as *"substantially different"* from the result in Dolk 1997b. He also pointed out the authors' own comment:

> *"confounding variables affecting individuals cannot be adjusted for"*

and their conclusion:

> *"more detailed studies ... are required to replicate any association and to look for dose-response relationships before any conclusions can be drawn."*[27]

44. The Selvin (1992) study was of childhood leukaemias in San Francisco and gave negative results. We observe that if positive studies are seen as evidence that RFR causes cancer, then such negative studies as described in Selvin (1992) can, by the same logic, be seen as showing that exposure to RFR is beneficial in preventing childhood leukaemia. In fact, neither is true. At most a positive study can show an association.

45. Dr Elwood's conclusions were that the epidemiological evidence does not support a reasonable conclusion that exposure to RFR is a likely cause of human cancer. He considered that the evidence was weak because it is inconsistent; the design of the various studies is not strong; there is a lack of detail in the studies on actual exposures; the studies are limited in their ability to deal with other likely relevant factors; and in some studies there may be biases in the data used.

46. Similarly, he considered that in relation to reproductive outcomes there is no increased risk of either spontaneous abortions or congenital malformations in association with the use of RF emitting equipment. As for

[27] Hocking (1997) at pp. 604 and 605

sleep disturbances he considered that a study at Schwartzenburg in Switzerland ("the Schwartzenburg study")[28] was important and indicated the need for other studies of this nature, but did not demonstrate a causal link between radio frequency and sleep disorders. In relation to the evidence based on the study of the Skrunda station air defence radar transmitter in Latvia[29] (called "the Skrunda Study"), he concluded that the limited data made it impossible to conclude that the differences were due to any effect of RF emissions rather than other reasons.

47. Dr Elwood then assessed the link between other possible causes and childhood leukaemia. He referred to a recently published study[30] of 22,458 children who had died of leukaemia or other types of cancer in England, Wales and Scotland between 1953 and 1980. The result showed relative excesses of leukaemias and other cancers close to 5 different types of industrial sites which could be considered as having a potential environmental hazard. These sites were:

- oil refineries and oil storage facilities;
- factories making or repairing motor cars or car bodies;
- industrial processes using petroleum products, solvents, paints, plastics and so on;
- users of kilns and furnaces, such as steel works, power stations, cement makers, brick works, crematoria, and foundries;
- airfields, railways, motorways and harbours.

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[28] Altpeter *et al.* *"Study on Health Effects of the Shortwave Transmitter Station at Schwartzenburg"* University of Bern, **BEW Publication Series** No. 55, 1995.

[29] Kolodynski AA *et al.* (1996) *"Motor and Psychological Functions of School Children Living in the area of the Skrunda Radio Location Station in Latvia"* **Sc. Total Environ.** 180: 87-93

[30] Knox and Gilman 1977: *Hazard Proximities of Childhood Cancers in Great Britain from 1953 to 1980.* **Journal of Epidemiology and Community Health**, 51 (151-159) [called "Knox (1997)"]

48. The authors of the study concluded that the most likely hazards were in relationship to chemicals derived from petroleum, or smoke gases and effluent from kilns, furnaces and internal combustion engines. Dr Elwood then stated:

> *"Television transmitters were included in a list of facilities for which negative results were obtained; that is, there was no significant concentration of cancer deaths near such transmitters.*
>
> *My purpose in presenting this evidence is to demonstrate that it is a very complex process to assess a single postulated causal factor, such as radio frequency radiation, in connection to a single disease. Simply listing any association which has been seen in an epidemiological study leads to a large number of varied results. ... The relevant and crucial question in regard to radiofrequency emissions and serious health effects (such as cancer), is not whether there is <u>any</u> evidence which suggests a hazard, but whether the <u>total</u> available evidence suggests a potential hazard. There are results which are consistent with the potential hazard. But there are also limitations to these results, and <u>considerable results which argue against a hazard</u>"* (Our underlining).

Biological Evidence

49. Next we heard from Dr M L Meltz, Professor of Radiology at the University of Texas, Health Science Centre at San Antonio. He is an ionising and non-ionising radiation biologist of extensive academic and professional experience. For the last 28 years he has researched and studied the biological and health effects of ionising radiation, ultraviolet light, anti-cancer, chemo-therapeutic agents and chemical mutagens and carcinogens using in-vitro mammalian cell culture systems. He stated:

"Not only very few citizens, but also very few educators, elected officials, business people, and even other scientists know just how much effort has been put into exploring this RF safety issue around the world. I personally am aware, through my voluntary literature review activities, of over 1,000 peer reviewed articles dealing with the biological and health effects of radio frequency radiation. There are many more review articles, letters, book chapters, and technical reports dealing with this subject."

50. In his evidence he first:

(1) presented a number of studies which showed an absence of those biological effects which, had they occurred after RF exposure, would have been closer to signalling a possible adverse health effect;

(2) considered studies demonstrating the absence of RF induced toxicity (when excessive heating does not occur);

(3) stated the evidence demonstrating the absence of RF induced mutagenic activity; and

(4) stated the evidence demonstrating the absence of carcinogenic activity.

51. Then he commented on articles in the literature which are "*frequently cited to support the idea of an adverse effect of RF exposure.*" His conclusion on those is that there are serious flaws or technical deficiencies in approach or inconsistencies in their results or over-extension of their interpretation and they cannot be relied on for decision making.

52. His overall conclusions were that:

"... from the available literature, and from my own extensive efforts to demonstrate that RF exposures are hazardous, -

- *that RF exposures which occur below the New Zealand standard .... are of no danger to individual health and public health;*
- *that the same conclusion stands for the higher levels specified for controlled environments ....;*
- *that the accepted, repeatable and credible evidence indicates that without the heating associated with high level exposures, no biological effect has been confirmed as indicating even a potential adverse health effect."*

Other Evidence

53. We also heard from Dr K D Zelas, a specialist psychiatrist with extensive qualifications in the field of child abuse. She is an experienced witness in New Zealand Courts. The effect of her evidence was:
    (a) that the risk of adverse health effects from the cellsite is nil;
    (b) that as a consequence of their psychological dependency the children at the school may respond with anxiety to things which adults worry about;
    (c) parents and teachers have a responsibility not to arouse unwarranted anxiety in children causing them unnecessary distress;
    (d) if children suffer psychological ill effects, which is likely, that would be a reflection of the response of the principal, teachers and parents to the cellsite. That is, fear would be generated in the children by the adults around them through emotional messages, instruction and information; and
    (e) that it would be inappropriate to decline consent on the basis of a risk to psychological health since that is preventable.

54. Another witness for Telecom was Mr D S Fougere who is the Managing Director of Phoenix Research Limited, an organisation that conducts surveys in the field of marketing and social research. Mr Fougere's responsibilities, in addition to being the Director, are to design and manage research studies and surveys. He holds a Bachelor of Science in mathematics and statistics and a Bachelor of Arts (honours) in psychology. Mr Fougere was called to give his expert opinion on the survey evidence advanced by Drs Brown and Staite for SPS.

55. On visual effects we heard from Mr D J Miskell, a landscape architect who is well known to the Court. He pointed out that the site is on a rear section and the base of the mast is not visible from the street. It was important to him that there were no close residential properties with outdoor living areas in the quadrants to the east, south and west of the proposed site where the mast could dominate views from outdoor living areas. He considered the proposal was well sited from a visual viewpoint. He described the site as being within a visually mixed environment: it has light industrial businesses such as the engineering and joinery workshops, and it also has a commercial character in the form of the shop, car yard and service station. Similarly, the proposed city plan envisages a predominantly industrial character for the site as part of the Business 4 (Suburban Industrial) zone. He considered that the mast would not change the overall character or affect the aesthetic coherence of the area. He also observed and we think there is some truth in this:

> *"There is nothing wrong with the structure itself, it is the activity that people have a problem with."*

56. The final scientist for Telecom was Ms I L Stout who is an environmental health officer for the Council. In that capacity she gave a report to the

Council for its hearing. However because she could not support the condition imposed by the Council which is the subject of the appeal by Telecom (RMA 429/97) she was not called by the Council but, as we have said, by Telecom. Ms Stout was a careful and objective witness. We do not summarise her evidence here not because we found it unconvincing, but because it largely made the same statements of fact that the earlier Telecom witnesses had made in more detail.

57. The most useful part of Ms Stout's evidence was her production of a report to the Ministry of Health dated August 1996 ("the Woodward report")[31] . That report was reviewed by four people including two witnesses in this case, Dr Elwood and Dr Hocking. A third reviewer was Dr Repacholi who gave evidence in *McIntyre* and whose papers were referred to in this case on a number of occasions. We found the Woodward report useful and will refer to it again later.

58. The resource management consultant called by Telecom was Mr D McMahon who has 13 years experience. He concluded that the effects of the proposal were minor, and that it is compatible with the objectives and policies of the relevant statutory instruments.

[31] A. Woodward, M. Bates, M. Hutt "*Literature View on the Health Effects of Radiofrequency Radiation*".

Chapter 3 : The case for Christchurch City Council

59. The case for the Council was in two parts: first that Telecom should be granted its consent (thus confirming the Council decision at first instance); and secondly that the condition 4 imposing a power flux density of 6 $\mu W/cm^2$ at the site boundary (30 metres from the mast) was appropriate.

60. As to the first point the Council adopted all of Telecom's evidence. It was Mr Hughes-Johnson's submission for the Council that the SPS's evidence did not meet the basic threshold of reliability for evidence as defined in *McIntyre*. He submitted that the lynchpin in this case is the guideline in the ANZ Standard. He said that shows that a body of evidence had been assimilated and that people of standing in the scientific community had reached certain conclusions. In essence he argued that there are no adverse health effects but submitted that if there are then the Court should consider the following three matters in assessing that:

- the precautionary approach;
- the application of section 3(f);
- whether there was room for a policy of *"prudent avoidance"*.

61. As to the second part of the case, namely that the 6 $\mu W/cm^2$ in condition 4 was appropriate, he submitted that:

(a) the condition is consistent with the ANZ Standard which imposes a limit of 200 $\mu W/cm^2$ for non-occupational exposure to RFR. One has to read the standard as a whole and that clearly the 200 $\mu W/cm^2$ limit is a **maximum**.

(b) There is no practical problem for Telecom since its evidence was that it could meet the condition imposed by the Council.

(c) The only potential downside is bringing the ANZ Standard into disrepute. But, he submitted, the Court can accurately give reasons for its decision so that does not happen.

62. Finally Mr Hughes-Johnson conceded that the Council has adopted a new mode of conditions which do not include a condition like condition 4 in this case. An example is the ***Telecom*** decision[32] but he submitted that should not be followed here.

63. The only witness called for the Council was Mr D Douglas, a resource management planner. He covered the provisions of the transitional plan and the proposed City Plan. On the question of effects he pointed out that there were positive effects from the cellsite in terms of improved coverage to cellphone users in the Shirley/Richmond area. As far as health effects were concerned he conceded that he was not a health expert and his position relied on the evidence of other witnesses. He conceded that there might be psychological effects on the submitters if the cellsite is constructed and used and that there might be consequential financial effects for the school. As far as visual effects were concerned he was satisfied that because the cellsite adjoins the commercial/business zone the effects can be successfully mitigated by the light blueish grey colour of the mast and the proposed tree planting. We will deal with his discussion of the objectives and policies of the plans and plan weighting to the extent necessary when we come to consider relevant matters under section 104. As far as the contentious condition was concerned he was unable to recommend an appropriate condition on RFR levels.

[32] W165/96

Chapter 4: The Case for the Shirley Primary School

64. The school's primary position was that consent should be refused to Telecom. As a fallback position, if consent was to be granted then it should be on condition that the power flux density of RFR at the common boundary of the site and the school should not exceed 1 $\mu W/cm^2$, that is even less than the 6 $\mu W/cm^2$ limit imposed by the Council's condition 4.

65. It was the school's contention that young children are particularly sensitive to RF discharge. Mr Hearn, counsel for the school, submitted that the evidence demonstrated this and that the proposition was accepted in *McIntyre*[33].

66. Mr Hearn also submitted that because there will be adverse effects on the environment which are more than minor then consideration should be given to alternative sites as required in the Assessment of Environmental Effects by the Fourth Schedule to the Act. He relied on the evidence from Mr Gledhill (the witness called by Telecom) that it was possible to achieve the required telephone coverage by use of micro-sites, and then submitted it is only cost considerations which are stopping Telecom from using that method.

67. Mr Hearn said that a policy of "prudent avoidance" and the "precautionary principle" both suggested consent should not be granted. He submitted that the whole of the ***Woodward Report*** demonstrates the validity of the reasonable concerns of the school.

[33] [1996] NZRMA 289 at 315

Epidemiological evidence

68. The epidemiologist called by the school was Dr B Hocking. He is a medical consultant in occupational medicine in Australia. He holds postgraduate qualifications in occupational medicine, public health, general practice and radiation protection. He was a chief medical officer of Telstra for 18 years during which time he gained knowledge and experience regarding health effects of RF radiation. He has published many papers relevant to occupational and public health, including several on the subject of health effects of RF radiation. He (like Dr Black and another witness Dr Beale) is a member of the Australia and New Zealand Standards Committee TE/7.1 which sets the RFR safety standard - currently the ANZ Standard. His evidence discussed two relevant areas: the effects of RFR in causing cancer and the effects on learning.

69. He was particularly interesting on the former subject since he was the lead author of the Sydney study (Hocking 1996) of cancer in proximity to TV towers in Sydney. That paper describes an ecological study in which cancer incidence and mortality rates are compared between an inner ring of 3 municipalities which immediately surround the three TV towers in Sydney and the next ring outside those of 6 municipalities. The design of the study was on the basis that the TV signal exposure is stronger near the towers and weakens over distance (as an inverse square). The exposure was not measured but calculated to be 8 $\mu W/cm^2$ at the centre of the towers, 0.2 $\mu W/cm^2$ at 4 kilometres radius from the centre of the towers, which roughly encloses the inner ring of municipalities and 0.02 $\mu W/cm^2$ at 12 kilometres distance which is the outer ring limit. The study found an increased risk for childhood leukaemia incidence of 58%, and for mortality an increased risk of 132% in the inner ring compared to the outer ring. Lung cancer risk was not increased. The authors concluded that there is an association between

proximity to the TV towers and increased risk of childhood leukaemia incidence and mortality.

70. In his evidence, Dr Hocking carefully noted that the study did not prove that RFR was causal and hence harmful, but he pointed out that it was equally true that the study did not show that RFR at low levels for long periods was harmless. He acknowledged that the study had limitations regarding confounders and exposures. For example there may be other possible causes of leukaemia that were not adjusted for: x-radiation and car exhausts are possibilities.

71. He then pointed out that there are only two other studies, in his opinion which have looked at long term exposure of civilian populations to RFR. The first of these was based on unpublished material from the Honolulu Health Department[34]. However, the number of cases in that study was so small as to give no significant results.

72. More significantly, there are the two reports by Dolk *et al.*[35]. Dr Dolk and her team first examined the cluster of leukaemia and lymphoma cases near the Sutton Coldfield (in England) UHF TV transmitter and VHF FM radio transmitter. Their research concerned an excess risk of adult leukaemia. They then examined in their second paper another 20 sites in the UK which also transmitted either UHF TV and/or powerful VHF FM radio. Overall, they did not find the excess noted at Sutton Coldfield and instead found only a slight increase in risk of adult leukaemia and no excess of childhood leukaemia.

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[34] Goldsmith *"Epidemiological evidence of radio frequency radiation effects on health in arbitrary broadcasting and occupational studies"* **Int. J. Occup. Environ. Health.** 1995:1:47-57

[35] **American Journal of Epidemiology** 1997 Volume 145, 1-9 and 100-117

73. In summary, Dr Hocking felt that there was a paucity of epidemiological studies on which to make firmer statements regarding RFR exposures over the long term being harmful or harmless. He conceded that the wavelengths intended for use in the cellsite near the school are about 30cm (950 MHz) which is shorter than TV frequencies and may become even shorter if the mobile phone band changes to 1800 MHz. That may be significant because maximum human absorption of RF waves occur at the longer wavelengths (i.e. 10 MHz to 400 MHz). But he pointed out that it needs to be borne in mind *"that the whole safety standard is set on the basis of avoidance of thermal effects ... . If one part of the spectrum is found to be unsafe then the whole standard is in doubt."*

74. He then turned to effects on learning. He regarded the possible effects of RFR on psychological (mental) processes as being particularly relevant to the school and we agree with him about that. He also referred to the Skrunda study. The station was used as an early warning radar station by troops from the former USSR in Latvia for 25 years. It operated at frequencies of 154-162 MHz. The average power at 3.7 km was 3.2 mW/cm^2 . This equates to an exposure of 0.3 $\mu W/cm^2$. The authors studied 609 pupils from the Skrunda Valley, some of whom lived in front of the radar and some behind, and compared them with 357 students from a similar rural area without exposure (the control group). They conducted tests of motor function (tapping, reaction time) attention (seeking numbers in a puzzle), and memory (remembering number sequences). They found Skrunda children who lived in front of the radar had less developed memory and attention, and their reaction times were slower than other children who lived in the Skrunda Valley, and in turn these children did not perform as well as the control group.

75. He considered the Schwartzenburg study was also of relevance to neural effects from long term low level RFR exposure. The researchers there studied concerns arising about ill health, especially sleep disturbances in the Swiss valley of Schwartzenberg. Dr Hocking's description of the study was as follows:

> *"In the first phase of the study residents with different levels of exposure were randomly surveyed by keeping a diary over 10 days and a relationship to the transmitter (decreasing by distance) was established, particularly for sleep disturbances. Other complaints such as nervousness were thought to be secondary to loss of sleep."*

Dr Hocking stated that the importance of this report was that it described a situation in which RFR exposure was unknowingly (to the exposed parties) stopped and a response (better sleep) occurred. He regarded that result as strongly suggestive of:

> *"a causal effect on neural processes at low levels of RFR exposure."*

76. Dr Hocking observed that while the ANZ Standard gives a table for values of maximum exposure limits for the general public (e.g. setting non-occupational exposure levels in the mobile phone frequency band at 200$\mu W/cm^2$) those values should not be construed as an absolute standard. The ANZ Standard cautions:

> *".... exposure to workers and the public should be kept to the lowest levels that can be achieved consistent with best international contemporary practice and cost-effective achievement of service objectives"*

and then states:

> *"SUBJECT TO THE CONDITIONS OUTLINED ABOVE EXPOSURES SHALL BE KEPT TO A MINIMUM".*[36]

77. Dr Hocking concluded by saying that he did not regard the absence of proof as to the mechanism of how low level RFR exposure could harm people, as being a bar to accepting the epidemiological studies he referred to. He pointed out that the case for smoking causing cancer had been demonstrated epidemiologically for decades before *"proven molecular mechanisms"* were discovered. He acknowledged that the literature regarding RFR and cancer or learning effects is sparse, but said that it is not possible to state that RFR is either *"harmful"* or *"harmless"*.

Biological Evidence

78. At the level of biological mechanisms we heard for the school from Dr S F Cleary who is Professor of Physiology and Biophysics at the Medical College of Virginia in Richmond, Virginia USA. Amongst his credentials he holds a Doctorate of Philosophy in Biophysics from New York University. He has taught graduate level courses in biophysics, radiological health and biological effects of non-ionising radiation. He has supervised research on the effects of RF and microwave radiation on mammalian and cell systems for over 30 years.

79. Dr Cleary pointed out that until recently all the effects on living systems of exposure to RF or microwave radiation were attributed to radiation induced tissue heating. However, recent studies show in his opinion that there can

[36] ANZ Standard page 9 and para 9(d). The capitals are in the original.

be harmful changes under nonthermal conditions. He said that the results of such studies had been recently described in ICNIRP papers.[37]

80. He stated:

> *"The overwhelming majority of studies conducted to date have involved acute (i.e. durations of a few hours or less) high intensity microwave exposure of a few mammalian species to a very limited number of microwave frequencies ... However, the few animal studies that have reported the effects of long-term low intensity microwave exposure provide evidence of deleterious nonthermally-induced alterations."*

It is of interest that he did not qualify that last statement. We infer that in Dr Cleary's opinion all of the (few) animal studies provide evidence of adverse effects.

81. Dr Cleary referred to studies by Szmigielski[38] and Szudzinski[39] on the potential tumour promoting effect of microwave exposure. Mice were exposed for 2 hours each day for a period of between 3 to 6 months to 2,450 MHz microwave radiation at power densities from 5 to 15 mW/cm^2. The exposure suggested a tumour-promoting effect. Other evidence along the same lines in experimental animals was reported by Chou *et al.*[40]. In all those studies the microwave exposures were well below the levels that cause tissue heating.

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[37] *Non-thermal Effects of RF Electromagnetic Fields* (ICNIRP 3/97).

[38] Szmigielski, S *et al.* (1982) **Bioelectromagnetics** 3, 179-188; Szmigielski, S *et al.* (1988) *Modern Bioelectricity Murino*, A Ed; Marcel Dekker: New York, N Y 861-925

[39] Szudzinski, A *et al.* (1982) **Dermatol Res** 274, 303-311

[40] Chou, C K *et al.* (1992) **Bioelectromagnetics** 13, 460-496

82. A more recent study referred to by Dr Cleary which has some importance in this case is by Repacholi (1997). In that study mice were exposed to 900 MHz pulse modulated radiation for 30 minutes twice a day for a maximum of 18 months. Dr Cleary stated:

> *"There was a highly statistically significant doubling of lymphoma incidence in mice exposed to specific absorption rates (SAR's) in the range of 0.008 W/kg to 4.2 W/kg."*

83. Dr Cleary noted that:

> *"The microwave exposure intensities used in the animal experiments discussed above are most probably higher than anticipated from cellsite radiation emissions"*

He did not say if that affected the significance of the results.

84. Dr Cleary then moved from *in vivo* experiments to some *in vitro* studies. He said he had reviewed these in detail in his article "*Electromagnetic Fields: Biological Interactions and Mechanisms*"[41]. He said that studies carried out under highly precise temperature control - thus ruling out heating as a causative factor in cell alterations -

> "*provide unambiguous scientific proof that RF and microwave radiation can induce nonthermal changes in cell physiological functions, including most significantly the rate of cell division or proliferation and neoplastic transformation.*"

[41] Cleary, S F (1995) Blank, M.(Ed): American Chemical Society; Washington DC, 467-477.

85. Finally he referred to five articles of which he is the co-author[42] and concluded by stating:

> *"Firstly, an insufficient number of studies have been conducted to determine threshold field intensities for the induction of effects such as altered cell proliferation. Cell studies have involved acute or short term exposures. Secondly, the principle of dose-reciprocity, a central tenet in cell radiation biology, states that the probability that a radiation induced alteration will occur in a living system is proportional to the product of the exposure intensity and the exposure duration. Therefore cellular effects discussed above would be expected to occur at lower and lower intensities as the duration of exposure is increased. Pending the determination of thresholds for cellular alterations, as well as thresholds for effects on experimental animals, safe microwave exposure limits for humans cannot be defined."*

86. For the school we also heard evidence from Dr I Beale, Associate Professor in Experimental Psychology at the University of Auckland. He holds a doctorate of Philosophy and has had 25 years research and teaching experience in behaviour and experimental neuropsychology. Dr Beale represents the public interest on the joint New Zealand/Australia Standards Committee TE/7 which is revising the standards and recently published the ANZ Standard. His opinion was that the operation of the cellsite could cause adverse health effects in people spending significant amounts of time on the ground and in buildings within 30 metres of the installation.

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[42] Cleary *et al.* (1990a) **Radiation Res**; 121, 38-45
Cleary *et al.* (1990b) **Bioelectromagnetics**, 11, 47-56
Cleary *et al.* (1992) **Annals of the NY Acad. Sci**, 649, 166-175
Cao *et al.* (1995) **Bioelectrochem. Bioenerg**, 37, 131-137
Cleary *et al.* (1996a) **Bioelectrochem. Bioenerg**, 39, 167-173

87. Dr Beale referred to the same animal studies mentioned by earlier witnesses and referred to the same epidemiological studies. In addition to his evidence on the direct effects of radiation exposure Dr Beale referred to the psychological evidence on the adverse effects of unacceptable risk. On this he stated:

> *"Between 'scientific conservatism' and 'play it safe' lies a continuum representing a shifting of the balance between risks and benefits that accrue from the activity that causes the exposure.... The 'play it safe' school points out that, if scientific conservatism prevails, the possible risks are all borne by the public, whereas the economic benefits all go to the industry. This unequal distribution of risks and benefits is just one of a number of so-called 'outrage factors' that colour the public's view of risk from radiofrequency radiation exposure. Other factors include the involuntariness of exposure, the perceived unnaturalness of the activity, the newness of the technology, the invisibility of exposure, and the delayed appearance of adverse effects. Risks that involve these factors are called 'dread' risks, and people generally regard these risks as unacceptable even if they are unproven."*

Surveys

88. Dr J Brown, a Lecturer in Statistics at the University of Canterbury gave evidence as to a survey she had carried out of caregivers for children currently enrolled at the school. The purpose of the survey was to determine whether caregivers would consider removing their children from the school should the cellsite be constructed. She said that a summary of the responses of the survey, in answer to a question to that effect, was that:

"The majority 83% (± 9%) of the respondents said they would remove their children from the school should a Telecom cellphone tower be erected."

The second question in the survey was:

"Does the strength of the signal to be transmitted by the proposed tower make a difference to your decision to remove, or not remove, your child/children from the school?"

Her final question was whether there were any more comments. The answers ranged from expressing concern: for the safety of their children; over what would become of the school and community; about family stress; and through to fully supporting the cellsite.

89. Dr A Staite, a psychologist who specialises in resource management and environmental issues, was called by the school to give evidence. Dr Staite informed us that the brief he received from the school's solicitor was to :

(a) assess the social, psychological or human effects of having a cell phone tower in the Shirley Primary School Community;

(b) assess and document positive and negative effects (if any);

(c) assess people's beliefs, perceptions and emotional states in respect of the cell phone tower proposal; and

(d) identify and recommend measures which could be taken to reduce adverse effects (if any are identified) on the local community.

90. Dr Staite then went on and gave a literature review on how people judge risk. He identified two separate types of risk; "perceived risk", also called "subjective fear of potential negative effects", and "actual risk" which is

also referred to as "proven negative or positive effects" and relates to potential adverse effects of high probability.

91. He mentioned a study where Skolbekken (1995)[43] during a literature review found that there has been an increase in the use of the term "risk". Skolbekken hypothesised that this ongoing trend (a "risk epidemic") results from developments in science and technology that have changed professional beliefs about the locus of control.

92. After considering the literature on perceived risk, Dr Staite was of the view that while people's emotions and perceptions should be taken into account in consideration of the cellphone tower, the community's fears and anxieties should not form the sole basis for determining the actual risk of the tower. To do so may "export" modern technology due to the NIMBY ("not in my backyard") syndrome.

93. He looked at a study by Walker (1995)[44] where it was found that members of the public are likely to adopt a subjective interpretation when estimating their personal risks. This may result in the community *"misunderstanding or significantly discount(ing) the relevance of (objective) risk assessment conclusions"*(ibid) by either being unrealistically positive ("unrealistic optimism phenomenon") or unrealistically negative ("unrealistic pessimism phenomenon"). The first phenomenon is where people estimate their personal risk as lower than the risk estimations made by most other people. The second phenomenon is the opposite, in the face of minimal actual hazard or risk, people make subjective estimations that their personal risk will be significantly greater than that of other people. Studies have found

[43] Skolbekken, J. *"The risk epidemic in medical journals."* **Social Science and Medicine**, 1995 (Feb), Vol 40(3), 291-305.

[44] Walker, VR (1995) *"Direct inference, probability, and a conceptual gulf in risk communication"*. **Risk Analysis**, 1995 (Oct), vol 15(5), 603-609

that gender[45], sex and age[46] can play a part in how people perceive their level of risk or vulnerability.

94. Dr Staite spoke of another matter that may contribute to people attributing high risk to something, the "contagion phenomenon". This refers to the impact of people's risk perception of one place (or thing) upon their perception of another place (or thing). He was of the view that there is likely to be both positive and negative cumulative effects ("contagion") resulting from people's perceptions of cell towers at other sites.

95. He also expressed the importance of public consultation in the form of "risk communication" and "risk compensating effects" in respect to influencing risk assessment. He regarded the process of communicating "objective risk assessment conclusions" (the data we have about actual proven negative and positive effects and impacts accruing from having a cellphone tower in an urban community) as vital to mitigation of risk. Dr Staite was of the view that communities need to be a part of the democratic process through community consultation, and not dictated to.

96. The largest section of Dr Staite's evidence concerned a study that he had undertaken of the school. It involved a qualitative research method, requiring interviewees (pupils, parents and grandparents) to answer two different types of specific questions; investigative questions (designed to elicit descriptive and objective factual information) and evaluative questions (in interview format to tap the qualitative aspects of the beliefs, perceptions and emotional states of the interviewees). An example from his study of an

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[45] Greenberg MR, and Schneider, DF (1995) *"Gender differences in risk perception: effects differ in stressed vs non stressed environments"*. **Risk Analysis**, 1995 (Aug), vol 15(4), 503-511

[46] Reichard, D and McGarrity, J (1994) *"Early adolescents' perceptions of relative risk from 10 societal and environmental hazards"*. **Journal of Environmental Education** 1994 (Fall), vol 26(1), 16-23.

investigative question is: *What would be the social consequences of the cell tower going up even if there are no adverse physical effects?* An example of one of his evaluative questions is: *Rate the value of ... health risks to adults, pupils, through cell tower electro-radiation.*

97. Dr Staite's conclusions were:

(1) The cell tower proposal has given rise to present social effects in the form of a "stressed environment or community". There is at present high anxiety at the school which will be having an adverse effect on people's functioning. A future social effect will be a weakening in social cohesiveness.

(2) There are strongly held perceptions that the research on EMR is ambivalent, ambiguous and uncertain. People attribute high potential risk to EMR.

(3) There are indicators that future health effects (after the cell tower is erected) will be experienced in the form of 'environmental somatisation syndrome' (by which he meant some kind of psycho-somatic effects). He said: "The belief is strong that EMR can potentially cause a range of adverse health effects".

(4) Many interviewees are already making adaptations and future plans in respect to their lifestyles to cope with the "environmental stressor".

(5) The effects identified are significant adverse effects on the human environment being the Shirley community, including staff, pupils, parents and grandparents of the school.

Other witnesses

98. The principal of the school together with some parents of children attending the school and some past and present teachers of the school gave evidence at the hearing. All these witnesses expressed their concern about the safety of cell towers. The common theme running through their evidence was that there is no evidence that cellsites are completely harmless. Most if not all of them stated that they had read a lot on the issue and were still not convinced that no harm would come from the cellsite.

99. Comments from parents about the risk from the proposed cell tower included:

> *"until there is absolutely clear evidence about the safety of cell towers, the wider community should be extremely cautious about any proposals to erect cell towers in close proximity to schools".* (Ms F Adank)

> *"I believe that the effects of the microwave emission from cell towers may not be known for many years yet. Normally, parents adopt an extra cautious approach where their children are concerned."* (Ms J Lawrence)

> *"... because Cellular phone technology is very new, I believe that there may still be questions about the safety of cell towers. ... I am not prepared to expose my children to the cell tower."* (Ms A Morris)

100. Ms T Harrold who had been a teacher at the school but who left at the end of 1997 gave evidence that she left the school because of the possibility of the cell tower being erected. The assistant principal, Ms R Martin, also

gave evidence that she was of the view that cell towers should not be sited next to a primary school because there is no evidence they are completely harmless. Mr B Porteous who has been principal of the school for 9 years gave evidence as to the amount of research he had done on the issue including consulting experts, reading articles, listening to the radio and watching television programmes. After all his research he said he does not accept there is conclusive evidence that RFR is harmless. He also said *"I have understood it to be accepted by all experts in the field that any risk of exposure is increased for the elderly and the young."*

101. We also heard compelling evidence of the effect on the school if the tower was erected in terms of what would happen if children, volunteers and teachers left and the picture that was painted, effectively unopposed by Telecom, was a dismal one. If all the pupils and teachers and helpers leave as they said they would, it appears doubtful that the school could survive financially.

102. The last evidence for the school which we need to mention specifically is that of Ms D J Lucas, a landscape architect. It appeared to be common ground between her and Mr Miskell - the equivalent witness for Telecom - that no residences would have their view unduly imposed on by the cellsite's tower.

103. Ms Lucas stated that:

"For children, development of a positive relationship to outdoors and space is generally considered important for well-being as a person. Consideration should therefore be given that the sight of the tower could potentially affect their play and school activities. If there is a fear of it,

the structure in the visual landscape is highly likely to affect their experience of the landscape of that place" (Our underlining).

She concluded:

"Considering the aesthetic coherence of the tower structure in the proposed context, and the perception of the tower activity, the proposal is assessed as contrary to the requirement for the design elements of a utility to reference existing character and amenity values of a locality.

The presence of the proposed cell tower has the potential to have adverse landscape, visual and amenity effects of considerable significance to those who spend their time within the visual neighbourhood of the proposed structure."

Chapter 5: Evidential Issues

Assessment of risk

104. A fundamental aspect of this case is how far Telecom has to prove RF radiation from cellsites is safe. At one extreme there was a suggestion from SPS, both in submissions and in evidence, that Telecom has to prove that there is no danger. For example, Mr T Nealey, a parent of a child at the school stated in his evidence:

> *"We should not allow cellphone towers to be erected close to schools until it is proven conclusively that the cellphone towers are 100% safe."*

Other examples were given in Chapter 4.

105. We must explain immediately that we cannot guarantee there is no risk[47] from the cellsite. First that is because it is impossible to do so. Everybody lives with some risk every second of their lives. Parents must realise that their children are no exception to that. Children are exposed to significant health risks on their way to and from school, e.g. the risk of traffic accident, but also more insidiously from the lead and NO_x and CO emissions from vehicles.

106. Since life cannot be made completely safe for anybody, a no risk approach is (logically) impossible. There is also authority that the RMA is not a 'no risk' statute and therefore it is not the role of this Court to ensure that

[47] Risk was usefully defined in the Netherlands in terms that fit with the definition of "effect" in section 3 RMA as: *"the combination of the probability of occurrence of an undesired event and the possible extent of the event's consequence"* as quoted by Mr R Somerville QC in "Risk Assessments and High Dams ..." [IPENZ Proceedings (1998)p.4]

Telecom's cellsite can operate with absolute safety. In ***Aquamarine Ltd v Southland Regional Council***[48] the Court stated of a 'no risk' regime that:

> *"We do not think this is compatible with the definition of sustainable management in section 5(2) of the Act."*

An observation from high authority in another jurisdiction also bears out our approach. In ***AFL-CIO v American Petroleum Institute***[49] the Chief Justice of the Supreme Court of the USA stated:

> *"Perfect safety is a chimera; regulation must not strangle human activity in the search for the impossible."*

107. Of course as soon as we say we cannot be sure there is no risk from RF radiation from the cellsites the reaction is sure to be that that means there is a risk, and therefore children at the school should not be exposed to it. But it is extremely important to realise that the second part of that sentence does not follow from the first. The risk may be so very small it is acceptable, compared with other risks parents expose their children to daily, and that is what we are to assess.

Submissions of Counsel

108. A number of legal issues relating to evidence was raised by counsel. Some were argued as traditional legal issues as to evidence: the burden of proof and standard of proof, and whether the reliability of evidence goes to admissibility or weight. Other evidential issues related to the meaning of "effect" as defined (inclusively) in section 3 of the Act. Finally we heard

[48] Decision C126/97 at p.145
[49] (1980) 448 US 607 per Burger CJ

submissions as to what should be required of surveys of public opinion, and how we should assess expert evidence generally.

109. Counsel agreed that there was no burden of proof under the RMA - relying on *McIntyre*[50]. As for the standard of proof, Mr Gould for Telecom, and Mr Hughes-Johnson for the Council said this was "*on the balance of probabilities having regard to the gravity of the question.*"[51] Mr Hearn differed. He said trenchantly in respect of the standard:

> *"to address the issue as on the balance of probabilities is self-evident nonsense... .".*

110. Turning to the issue of the admissibility versus the weight of evidence, and ostensibly opposing the view of Mr Hearn, counsel for Telecom argued that there should be no question of admissibility in respect to scientific hypotheses. Instead reliability goes to the weight they should be given. In fact we do not understand Mr Hearn to be arguing for such a threshold of admissibility. Rather he was arguing that section 3(f), when inserted into section 5(2)(c) and interpreted in the context of the single purpose of the Act, entailed that the applicant should:

> *"place before the Court persuasive evidence that there is no possibility of an effect ever coming into being which effect has the possibility of a high potential impact."*

In respect to admissibility Mr Hearn pointed out that under the RMA the Court is not bound by the rules of evidence and may "receive anything in

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[50] ***McIntyre*** at 306

[51] ***McIntyre*** at 307 also ***Trans Power NZ v Rodney District Council*** A85/94 and also ***Leatch v National Parks and Wildlife Service and Shoalhaven City Council*** (1993) 81 LGERA 270

evidence that it considers appropriate to receive"[52]. Also noted was the fact that in *McIntyre* none of the evidence was found inadmissible.

111. Mr Gould quoted from *McIntyre:*

> *"We are confined to evidence probative of the fact, that meets a basic threshold of reliability, and is persuasive to us on the balance of probabilities having regard to the gravity of the question."*[53]

Counsel submitted that this weighing approach is correct and the Court should measure the probative value of the evidence by assessing the value expressed by the scientific community. Mr Gould submitted that approaching the evidence as a weighing exercise would bring it on all fours with the principles expressed in various authorities in *McIntyre* and the United States Supreme Court decision of *General Electric Company et al. v Joiner et ux*[54]. Before the Court can consider effects (including potential effects) and their significance in terms of s104 and Part II the Court must be satisfied as to the reliability and probative value of the evidence claiming that such effects exist. This is particularly so when the evidence is of an hypothesis for a potential effect.

112. Counsel further submitted that if Mr Hearn was correct in law on the contentions he made about s3(f) then in any event:

(a) There is no evidence with any acceptable basis before the Court of any possibility of an effect ever coming into being, which effect has the possibility of a high potential impact; and

[52] Section 276 RMA
[53] *McIntyre* p.314
[54] 118 S.Ct 512; 1997 US Lexis 7503.

(b) The evidence has not left room for reasonable doubt that any harm, or possibility of harm, will arise from RF emissions from the proposed cellsite.

113. While we do not agree with everything that Mr Hearn submitted he has made us reconsider the Environment Court approach to evaluation of evidence on resource consent applications - and especially its approach to the "standard of proof".

Purpose and Scheme of the Act

114. Going back to basic principles of statutory interpretation we consider that the purpose and scheme of the Act have implications for the burden and standard of proof and for the assessment of evidence generally. The purpose of the Act - sustainable management[55] - and Part II generally entail that the Act is forward-looking. It is preventative, precautionary and proactive. Various other provisions in the Act suggest how those probabilistic (because looking into the future) criteria should be considered and decided. These include pre-eminently:

- section 3 - the definition of "effect"
- Part V - the provisions for policy statements and plans
- Section 105(2)(b)[56]
- Section 276

115. The purpose of the Act means that in every appeal about the grant of a resource consent there is only one ultimate question to be answered, that is,

[55] Section 5: generally and in particular the reference to "... the foreseeable needs of future generations".

[56] The threshold tests as we have to consider them in this case, that is, prior to the 1997 amendment to the RMA (the Resource Management Amendment Act 1997). But section 105(2A) in the amended Act does not appear to impose an entirely new approach to non-complying activities.

will the purpose of the Act be fulfilled? As stated in *Caltex NZ Ltd v Auckland City Council*[57] citing *North Shore City Council v Auckland Regional Council*[58]:

> *"... the Act has a single purpose, and ... an overall broad judgment is needed, allowing for comparison of conflicting considerations, the scale or degree of them, and their relative significance or proportion in the final outcome."*

116. It is important to recognize that when deciding whether natural and physical resources will be sustainably managed, decision makers under the Act are usually[59] making decisions about future events. The decision-maker has:
    (a) under section 104(1):
        - to decide what the primary facts[60] are; and
        - to evaluate those facts as propositions about the future ('risks' if adverse effects, 'chances' if beneficial) - usually those propositions are given as the opinions of experts[61]; and
    (b) to carry out a further evaluation when undertaking the weighing and balancing exercise required under section 105(1) to decide the ultimate question.

117. There is high authority for the proposition that evaluating future events is a matter of judgment not proof, and thus the standard of proof is not relevant.

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[57] A95/97; 3 ELRNZ 297 at 304
[58] (1996) 2 ELRNZ 297
[59] Two exceptions are under Part XII of the Act: declarations as to existing uses, and prosecutions.
[60] And secondary (inferred) facts
[61] These two steps come under section 104. In many cases step (b) is the first step if there is no dispute about primary facts.

In *Fernandez v Government of Singapore*[62] Lord Diplock, in giving the opinion of the Privy Council, referred to 'the balance of probabilities' as:

> *"...a convenient and trite phrase to indicate the degree of certitude which the evidence must have induced in the mind of the Court as to the existence of facts, so as to entitle the Court to treat them as data capable of giving rise to legal consequences. But the phrase is inappropriate when applied not to ascertaining what has already happened but to prophesying what, if it happens at all, can only happen in the future. There is no general rule of English law that when a Court is required, either by statute or at common law, to take account of what may happen in the future and to base legal consequences on the likelihood of its happening, it must ignore any possibility of something happening merely because the odds on its happening are fractionally less than evens."*

118. In *Commissioner of Police v Ombudsman*[63] the Court of Appeal was concerned with the withholding of documents by the police despite a request from the Ombudsman under the Official Information Act 1982 ("the OIA"). The Court had to interpret a forward-looking phrase in the OIA about reasons for withholding information. Section 6 of the OIA states:

> *"Good reason for withholding official information exists, ... if the making available of that information would be likely ...*
> *(c) to prejudice the maintenance of the law ..."* (Our emphasis).

[62] [1971] 2 All ER 691, 691 (PC). This quotation is included in *Cross on Evidence* (NZ Edition) 1996 at p.214 in a very useful passage called "Evaluations of the facts".
[63] [1988] 1 NZLR 385

119. One issue in the case was whether 'likely' in that section (and in section 27(1)(a) OIA) equated to 'more likely than not'. Cooke P stated:

> *"To cast on the Department or organisation an onus of showing that on the balance of probabilities a protected interest would be prejudiced would not accord with protecting official information to the extent consistent with the public interest, which is one of the purposes stated in the long title of the Act. ... To require a threat to be established as more likely to eventuate than not would be unreal. It must be enough if there is a serious or real and substantial risk to a protected interest, a risk that might well eventuate. This Court has given 'likely' that sense in a line of criminal cases, a recent example of which is* ***R v Piri*** *[1987] 1 NZLR 66.*
>
> ...
>
> *Whether such a risk exists must be largely a matter of judgment. In that sense a reference to onus of proof is not fully apt: compare the observations in* ***McDonald v Director-General of Social Security*** *(1984) 1 FCR 354 about the inapplicability of adversary proceedings concepts, such as the onus of proof, in administrative proceedings."* (Our underlining).[64]

There are a number of important, if difficult, points in that passage including the reminder that in administrative proceedings (such as under the RMA) adversarial concepts may not apply; and that a standard of proof on the balance of probabilities may be unreal.

120. We respectfully follow the Court of Appeal in holding that whether a risk exists is "a matter of judgment". This distinction between evaluation and fact-finding is of crucial importance under the Act. Almost every case

[64] At p.391.

under the Act is concerned about the evaluation of many risks and thus issues as to the standard of proof are even more misconceived. As *Cross on Evidence* states succinctly:

> *"Unfortunately, Judges sometimes apply the balance of probabilities test to evaluations of fact when in truth the test has no part to play."*[65]

Burden of Proof

121. While counsel were agreed and the decision in *Commissioner of Police v Ombudsman* might suggest that no party bears the burden of proof in an application for a resource consent, we are not so sure. The answer seems to depend on what is meant by a burden of proof. In a basic way there is always a **persuasive** burden resting on an applicant for a resource consent because it is

> *"a fundamental requirement of any judicial system...that the person who desires the Court to take action must prove his case."*[66]

There is also a swinging **evidential** burden in that:

> *"As the evidence of varying weight develops..., the eventual burden of proof will, in accordance with ordinary principles of evidence, remain with or shift to the person who will fail without further evidence."*[67]

122. But there are statutory reasons why there is also a legal burden on an applicant for a resource consent. Since the ultimate issue in each case is

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[65] NZ Edition (1996) p.214

[66] ***Cross & Tapper on Evidence*** 8th Ed. p.133

[67] Donaldson L J in ***Forsythe v Rawlinson*** [1981] RVR 97 at 202 and see ***West Coast Regional Abattoir v Westland County Council*** (1983) 9 NZTPA 289

always whether granting the consent will meet the single purpose of sustainable management[68], even if the Court hears no evidence from anyone other than the applicant it would still be entitled to decline consent[69]. This might occur, for example, if the face of the application (or the Fourth Schedule Assessment) showed that a matter of national importance or an issue under section 5(2)(a) and (b) or section 8 is raised and not dealt with. This is reinforced by section 276 RMA which gives the Court power to call for further evidence. Otherwise the Court would have to decide on the preferred evidence even though that falls short of a reasonable standard in terms of persuading the Court that sustainable management of natural and physical resources would be achieved.

123. There is a passage in *Cross and Tapper on Evidence* which identifies the problem (and also the link between the burden and standard of proof):

> *"[T]he normal standard of proof in civil proceedings is proof on the balance of probabilities. It is fundamental to that standard that it involves weighing the evidence to see if the required standard has been achieved. If it has not, the party bearing the persuasive burden loses, however little evidence his opponent has adduced. The effect of [statutory] change [making the persuasive burden neutral between the parties] is that the only standard against which evidence can be weighed is that adduced by the opponent, in other words, if neither party bears the persuasive burden, then, if the case is to be decided at all, the party who adduces the greater amount wins, however little evidence he has adduced. In future in this area a party will win if he has adduced more evidence than his opponent, even though it may*

[68] ***Caltex NZ Ltd v Auckland City Council*** A95/97; 3 ELRNZ 297 at 304
[69] See ***Baker Boys Ltd v Christchurch City Council*** [1998] NZRMA 433 at 442 (para 22)

not, seen objectively, make his contention more probable than not. This is highly unsatisfactory, ..."[70]

124. Fortunately that is not the position under the Act for the general reasons we have given. We note that in ***Trans Power NZ Ltd v Rodney District Council***[71] the Planning Tribunal stated:

> *"The upshot is that the Tribunal has to decide an application for resource consent for the extension to the transmission line which is not now opposed by anyone. Yet the application is not to be granted in default of opposition. The Tribunal has the same power, duty and discretion as the Council had, and (subject to section 375(1)(b)) may confirm, amend or cancel the Council's decision (see section 290). So, like the Council, the Tribunal has the duty (subject to Part II) to have regard to such of the matters listed in section 104(1) as are applicable to the case; and although the application is not now opposed, it has to exercise its own discretion (subject to section 375(1)(b)) to grant or refuse consent, and if consent is to be granted, decide what conditions (if any) should be imposed (see section 105(1))."*

The Tribunal in that case proceeded to consider the evidence and submissions notwithstanding the lack of an opposing case and, after evaluation of all relevant factors, granted consent.

125. In the case of an application for a non-complying activity the threshold tests in section 105(2)(b) suggests a burden of proof resting on the applicant for the resource consent when it refers to the consent authority being *"satisfied*

[70] The 8th English edition at p. 142-3
[71] A 85/94

that..." one of the two tests is met. Even if there were no evidence from any other party the consent authority could properly refuse consent. The practice of the Environment Court under the Act where, on an appeal under section 120, it has received a consent memorandum in which a territorial authority reverses its position, is often to require some evidence of the threshold tests having been met[72] for example by some amendment to the proposal.

Standard of Proof

126. We discussed earlier why the purpose of the Act suggests that to apply an invariable test in respect of any issue that it is to be decided *"on the balance of probabilities having regard to the gravity of the issue"*[73] is inappropriate. The wording of particular sections of the Act supports that view. For example, when section 5(2)(c) refers to:

> *"(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment"*

- we need to read that with the definition of "effect" in section 3 of the Act. That defines "effect" as including:

> "...
> *(c) Any past present, or <u>future</u> effects; and*
> ...
> *(e) Any <u>potential</u> effect of high <u>probability</u>; and*
> *(f) Any <u>potential</u> effect of low <u>probability</u> which has a high <u>potential</u> effect"* (Our underlining).

[72] By formal proof or affidavit or less formally by production of unsworn briefs.
[73] *McIntyre* at p.307

127. The use of the words *"future, potential"*, and *"probability"* emphasize how the Act asks decision-makers to attempt to look into the future rather than backwards. Of course every predicted future effect is not certain to occur and the practical problem is how to assess the probability of their occurrence and the further effects if they do. Section 3 assists decision-makers by listing some[74] of the potential effects to be considered:

128. A future effect in section 3(c) is merely one of a very high statistical probability. It is impossible to find as a stone cold 100% fact that any future effect will occur. To take one incontrovertible 'future' fact - that the sun will rise tomorrow. One day many millions (billions?) of years in the future the sun will (probably) not rise over the observers' horizon - it will explode or collapse into a 'black hole'.

129. A particularly important aspect of section 3 is the recognition in paragraph 3(f) that effects of "... low probability but high potential impact" can be taken into account. This allows for the psychological fact that intuitively humans rank probabilities differently according to their assessment of the seriousness of the impact. Consider a dice game. If you win one dollar if the dice rolls a five, but lose the dollar if anything else shows, then you might consider the probability of winning is low (1 in 6). Now consider a more serious wager: if your doctor says you have cancer and a 17% (1 in 6) chance of dying within the year you might consider the chance of dying is high even though the mathematical chance is the same in both cases.

130. We consider the effect of section 3, especially 3(f), is that the Court is required to evaluate beyond the balance of probabilities (i.e. 50-50) where

[74] The definition is inclusive: for others see ***Baker Boys Ltd v Christchurch City Council*** [1998] NZRMA 433 at 448

the risk (even if low) is of high potential impact. This was expressly recognised in *Trans Power*[75] where the Court appeared to arrive at a midpoint somewhere between the common law standards for civil and criminal trials when it stated:

> *"The possibility of adverse effects on the health of people who may be exposed to electric and magnetic fields from high-voltage power lines has sufficient gravity to deserve a higher standard of proof. However we would not be justified in putting the applicant to a standard of proof beyond reasonable doubt..."*

131. Thus how the Court should assess the probability of an event with high impact is affected not only by the objective risk of the impact occurring but also by a necessarily less objective assessment of the nature of the impact (e.g. is human health or life at risk?) in the context of all the relevant factors.

132. Another way of approaching the standard of proof under the Act is to consider what applying a standard of *"balance of probabilities"* means in this context. At first sight it appears to be either playing with words or introducing a degree of mathematical complexity which cannot be complied with. Applying the usual civil standard of proof test to an alleged effect under section 3(f) entails making a decision about the proof on the balance of probabilities of a future effect of low probability and high potential impact. There are four possible "probabilities" in that test if one reads "potential" and "future" as implying probabilities.

[75] A85/94 at p.21

133. These issues were raised by counsel for the unsuccessful appellant in *McIntyre*[76]:

> *"Mr Fogarty....submitted...that one cannot graft a test of 'more probable than not' on to the provision in section 3 for an effect of low probability, which includes a proven potential effect."*

The Court then decided the issue in this way:

> *"...we have to come to our finding on the basis of the evidence before us, and not on the basis of a possibility that further research might (or might not) show something that has not already been shown by previous research. That would be to decide a different question. It would not be deciding whether, on the balance of probabilities, there would be a potential effect of low probability but high potential impact on the environment. It would be to decide whether there is a potential, even of low probability, that there would be an effect of high potential impact on the environment. We do not understand that to be the question on which we have to make a finding."*

134. In our view two of the most significant possible interpretations of section 3(f), and we think Parliament may have intended both, are (leaving out the first reference to their 'potentiality' i.e. that they are yet to happen):

(i) an effect of low statistical probability[77] but high impact which research has reliably shown is more than 50% (perhaps 99% or higher) likely to occur to a small sample of the population (hence its low

[76] [1996] NZRMA 289 at 304

[77] e.g. dying in a plane crash which in the USA has been calculated to be $1x10^{-6}$ for a person who takes one trip per year, RM Mitchell quoted in S Breyer ***Breaking the Vicious Cycle*** (1993) p.5

probability as a cause of death for any one individual). Such effects are scientific facts.

(ii) an effect of low scientific probability (loosely, as in plausibility) but high potential impact. Here there is none of the 'certainty' of a scientifically proven fact.

It is the effects covered by interpretation (ii) which concern the appellant in this case. We hold that those are legitimate concerns by virtue of section 3(f).

135. So we respectfully agree with the Court in *McIntyre* that it is not correct to say that it is impossible to graft a test of more probable than not onto section 3. It is possible to do so. However we make the further point that it is not particularly helpful to do so. To take a hypothetical example: if there is an alleged risk of some adverse effects of 1 in a million (i.e. 1×10^{-6}) and the Court assesses the evidence as establishing the risk on the balance of probabilities test then the risk assessed by the Court is at least 5×10^{-7}. When the calculation is completed we still have a potential effect of low probability of (assumed) high potential impact on the environment. When the numbers about risk are very small, probabilities that vary by less than a factor of 10 do not make much evaluative (or intuitive) difference. So the distinction made in the quoted passage from *McIntyre* tends to be unhelpful for small risks.

136. To summarise on the issues of onus and burden of proof under the Act:

(1) In all applications for a resource consent there is necessarily a legal persuasive burden of proof on the applicant. The weight of the burden depends on what aspects of Part II of the Act apply.

(2) There is a swinging evidential burden on each issue that needs to be determined by the Court as a matter of evaluation.

(3) There is no one standard of proof, if that phrase is of any use under the Act. The Court must simply evaluate all the matters to be taken into account under section 104 on the evidence before it in a rational way, based on the evidence and its experience; and giving its reasons for exercising its judgment the way it does.

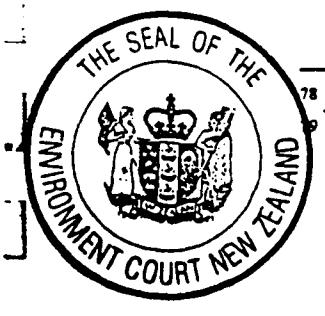
(4) The ultimate issue under section 105(1) is a question of evaluation to which the concept of a standard of proof does not apply.

Surveys

137. Evidence of a survey was called for SPS. Speaking of one class of surveys - market surveys - in a 1987 decision of the High Court[78], Barker J. acknowledged that:

> *"It is now well-settled law within New Zealand that market survey evidence is admissible as proving a public state of mind on a specific question or as proving an external fact, namely that a designated opinion is held by the public or class of the public."*

138. Judge Barker referred to the English case of ***Imperial Group plc v Philip Morris Ltd***[79] in which the Court set out the requirements for the validity of survey evidence :



[78] ***Auckland Regional Authority v Mutual Rental Cars*** (1987) 2TCLR 141 HC
[79] [1984] RPC 293 at 294

"1. The interviewees must be selected so as to represent a relevant cross-section of the public;

2. *The size must be statistically significant;*
3. *It must be conducted fairly;*
4. *All the surveys carried out must be disclosed including the number carried out, how they were conducted, and the totality of the persons involved;*
5. *The totality of the answers given must be disclosed and made available to the defendant;*
6. *The questions must not be leading nor should they lead the person answering into a field of speculation he would never have embarked upon had the question not been put;*
7. *The exact answers and not some abbreviated form must be recorded;*
8. *The instructions to the interviewers as to how to carry out the survey must be disclosed; and*
9. *Where the answers are coded for computer input, the coding instructions must be disclosed."*

Justice Barker considered the above criteria a measuring-stick for market survey evidence but was not prepared to say that if evidence fails to meet the criteria it is necessarily inadmissible in New Zealand. In a recent decision of ***Commerce Commission v Griffins Foods Ltd***[80] the Court addressed the issue of admissibility and after considering New Zealand case law held that:

> *"...providing a market research survey is undertaken objectively, and usually by a professional agency, provided such survey is scientifically based, it should ordinarily be admissible as a basis upon which expert opinion evidence might be called."*

[80] [1997] DCR 799 at 806

139. While the psychological and social surveys in this case were not described as "market" surveys, we consider that the same criteria are useful benchmarks for assessing the reliability (or even admissibility) of surveys produced to the Environment Court.

Admissibility and Reliability of Evidence

140. On the general issues of admissibility and reliability of expert evidence there was substantial disagreement between counsel. In his introduction to those disagreements Mr Hearn submitted that

> *"concepts such as the threshold of reliability and general acceptance in the scientific community, general consensus of scientist opinion, plausible biological mechanism and so on"*

are not applicable in the RMA.

141. We agree to a limited extent on one point in that there is no rigorous reliability threshold under the RMA - a concept that developed for the withholding of evidence from the jury. The concept of the Judge as a gatekeeper who stops the jury from hearing unreliable evidence is widespread in the common law jurisdictions. There is a huge debate in the USA over the Judge's gatekeeper role triggered by the Supreme Court's decisions in 'toxious tort' cases: ***Daubert v Merrell Dow Pharmaceuticals Inc***[81] and ***General Electric Ltd v Joiner***[82]. But this debate can be of limited relevance to the Environment Court which in a sense is both Judge and jury. We hold that in the NZ Environment Court there are only very low

[81] 509 US 579 (1993); 125 L Ed 2d 469; 113 S CT 2786
[82] 118 S.Ct 512

thresholds such as the requirement for experts to qualify themselves as such; for evidence to be relevant; and not to be so witless or lengthy as to be vexatious. While the Court retains a discretion[83] to receive (or refuse) anything in evidence that it considers appropriate (or inappropriate) any refusal is only exercised judicially and with extreme caution. If the evidence is relevant then it is usually heard even if unreliable, provided it relates to something higher than a "low impact" effect. The issue as to reliability is, under the RMA, much more likely to go to the weight to be given to the evidence, than to admissibility.

142. In the end whether an assessment of the reliability of evidence goes to its admissibility or weight may be academic for both a practical and a theoretical reason. The practical reason is that there is no judge/jury separation in the Environment Court. The theoretical reason is that, especially for an effect of potentially high impact, the tests may be the same or at least very similar. As we have observed, almost all evidence in the Environment Court relates to the future and thus has an hypothetical element. Before an hypothesis can be considered by any Court, there must be a basic minimum of evidence to support it. But in the case of any hypothesis about a high impact risk a scintilla of evidence may be all that needs to be established in the Court's mind to justify the need for rebuttal evidence. In other words that evidence, slight as it may be, is enough to raise a reasonable doubt in the mind.

143. However we think Mr Hearn is quite wrong in going as far as he does. The other concepts he wishes to throw out must be crucial to the weight to be given to the evidence of the various experts.

[83] Section 276(1)(a) RMA

144. In assessing the expert evidence (including rebuttal and cross-examination) on any issue we have to take into account and evaluate (inter alia) the following factors:

(1) the strength of the qualifications and the duration and quality of the experience of each witness;

(2) the reasons for each witness' opinions (and their consistency, coherence and presentation);

(3) the objectivity and independence of each witness and the comprehensiveness of their evidence - for example whether they have identified and taken into account matters which do not favour their opinion;

(4) there is an identification of and general acceptance of the science of methodology involved; and

(5) Especially for 'hard' science - the research or papers referred to by the witnesses in reaching their opinions, with respect to whether:[84]

(a) the techniques used are reliable

(b) the error rates are known and published (and the research is shown to be statistically significant)

(c) the research or papers have been published

(d) the research or papers have been subject to peer review

(e) the research is repeatable (and has been replicated).

145. Not all those aspects or even all parts of them need to be met - they are criteria for measuring the weight to be given to the specific evidence when making findings. Factors (1)-(3) may be the only relevant ones for expert

[84] Loosely these are the *Daubert* criteria

opinions which are only 'science' in the softest sense e.g. town planning and resource management. Factor (4)[85] comes into play more for the social sciences, physicians, epidemiologists and ecologists. All of factors (1)-(5) are necessary in the evaluation of some ecological evidence and all hard science.

146. It must be borne in mind that no party alleging an effect relevant to the Act has to prove causation on the balance of probabilities as in a civil trial, (i.e. in the 'toxious tort' sense). That is because:

> *"Questions involving the environment are particularly prone to uncertainty. Technological man has altered his world in ways never before experienced or anticipated. The health effects of such alterations are often unknown, sometimes unknowable. While a concerned Congress has passed legislation providing for protection of the public health against gross environmental modifications, the regulators entrusted with the enforcement of such laws have not thereby been endowed with a prescience that removes all doubt from their decision making. Rather, speculation, conflicts, and theoretical extrapolation typify their every action. How else can they act, given a mandate to protect the public health but only a slight or non existent data base upon which to draw?"*[86]

That uncertainty entails that:

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[85] For an illuminating discussion of all these factors - but (3) and (4) especially - see the dissenting opinion of Circuit Judge Davis in a decision of the Fifth Circuit of Appeals: ***Moore v Ashland Chemical Inc*** No. 95 - 20492 (Aug 14 1998). This opinion also has a good summary of the issues in the debate over ***Daubert***.

[86] ***Ethyl Corporation v Environment Protection Agency*** (Federal District Court, District Court of Columbia) (1976) S.41 F.2d 1.

> *"A risk may be assessed from suspected, but not completely substantiated, relationships between facts, from trends among facts, from theoretical projections, from imperfect data, or from proactive preliminary data not yet certifiable as 'fact'."*[87]

147. The reason we can take into account risks assessed in such a way is the presence of section 3(f) in the Act, as we discussed earlier. To fall within section 3(f) of the Act as a potential effect of low probability and high potential impact an effect must not be simply an hypothesis: there must be some evidence supporting the hypothesis. This evidence may consist of at least one of:

(1) consistent sound statistical[88] studies of a human population; or
(2) general expert acceptance of the hypothesis; or
(3) persuasive animal studies or other bio-mechanistic evidence accompanied by an explanation as to why there is no epidemiological evidence of actual effects in the real world; or
(4) (possibly) a very persuasive expert opinion.

It is important that the evidence need only fall into <u>one</u> of the categories before the Court will take it into account - if there was evidence falling in all four then the hypothesis would be established 'hard' science. As we have attempted to explain, the purpose of section 3(f) and the proactive, precautionary approach of the Act is to act in anticipation where possible.

148. For legal purposes a sound statistical (epidemiological) study is one which:

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[87] *Reserve Mining Co v EPA* 514 F.2d 492, 529 (8th Circuit of Appeals) 1975

[88] Epidemiological studies in human cases. Dr Elwood gave interesting evidence as to additional criteria that epidemiologists use for assessing the soundness and utility of studies in their field. We do not criticise those by omission, however such criteria would need much fuller scrutiny than they received in this case before we could apply them as general criteria.

(a) uses reliable techniques

(b) establishes its margins of error (and is statistically significant)

(c) preferably has been published

(d) has been peer-reviewed; and

(e) preferably has been repeated and had its results replicated.

It does not have to be generally accepted because the research may be establishing a new concept. Although a scientific theory may be:

> *"generally accepted within the scientific community, that does not mean that a Court in making findings of fact on material of probative value should treat another scientific view outside the mainstream as without substance."*[89]

For example, in this case there was a suggestion that "normal" dose-response relationships might not apply to exposure to RFR. There might be resonance phenomena so that if the wavelength of the RFR was a little smaller than the size of human cells (or cell-components) there might be a greatly increased effect on the cell or relevant part. In fact there was not nearly enough evidence of resonance phenomena for us to be persuaded they result from RF radiation. It is unlikely that one study would be sufficient, if only because the ability to repeat the study and its replication are important criteria for credibility.

149. There need not be sound statistical evidence of a hypothetical effect if there is general expert (scientific) acceptance that it will occur. Catastrophes such as earthquakes can be predicted but not yet with an accuracy that is practically helpful. If scientists were agreed that a large asteroid might hit

[89] ***Daubert v Merrell Dow Pharmaceuticals Inc*** 509 US 579, 125 L Ed 2d 469, 113 S Ct 2786 (1993)

the earth humans might prefer to take precautionary action against it rather than wait for Armageddon.

150. Persuasive animal studies could support a hypothesis if there is also an explanation as to why there are no symptoms actually demonstrated in human populations. This is conceivable: for example there may be a long latency period before any effects become patent. But usually there would need to be at least some epidemiological evidence in support of the studies.

151. In exceptional cases a very persuasive expert opinion might sufficiently support an hypothesis. This is unlikely to occur in respect of health issues such as we are considering here, but not all potential environmental effects have the same research lavished on them as human health effects. In such cases it might be appropriate to trust an expert notwithstanding lack of statistical evidence, although in such a case one would likely want there to be general acceptance of the methodology used within the scientific discipline involved.

Chapter 6 : Adverse Health Effects (Section 104(1)(a))

Submissions on Adverse Health Effects

152. As will be apparent from our summary of the evidence called for the parties, the issue as to whether exposure of the school community to RFR at athermal levels could induce adverse health effects was traversed both at the epidemiological level and at a bio-mechanistic level, and the latter included both *in vitro* and *in vivo* studies.

153. Counsel made wide-ranging submissions in respect to the evidence on health effects. We trust that the essential points they made are traversed in our consideration of effects that follows. However, one issue was raised in the written submissions that never arose at the hearing at all. Mr Hearn submitted that a quotation from a book by Messrs Garrick and Gekler (an interpretation of Dr Elwood's opinions presented in Elwood (1988)) was inconsistent with Dr Elwood's evidence. In response counsel for Telecom pointed out that this submission is based on two flawed assumptions on which Dr Elwood should have been cross-examined. These assumptions were that:

(a) the text properly reflects the views of the Professor; and

(b) the interpretation of Garrick and Gekler was fully within the knowledge of Dr Elwood.

We agree that Dr Elwood should have been cross-examined on the passage quoted by Mr Hearn in his final submissions, and in the absence of such cross-examination we are not prepared to find that the quotation affects the credibility of Dr Elwood.

Assessment of the epidemiological evidence

154. Our assessment of the witnesses on epidemiology is as follows. First, for Telecom, Dr Elwood's evidence was carefully constructed and balanced. He satisfied us - subject to any evidence on the other side of the scales and we come to that shortly - that the risks of adverse health effects on humans such as:

- sleep disturbance
- learning disabilities
- cancers, specifically childhood leukaemia
- reproductive difficulties

are very low indeed. We are reinforced in our conclusions about Dr Elwood's overall carefulness[90] and objectivity by a passage in cross-examination by Mr Hearn.

> *"Q. Would it be fair to say that means you are looking at* [the issue of adverse health effects] *on the balance of probabilities, more likely than not?*
>
> *A. No, I don't think so. The term is used less precisely and my threshold for accepting that there would be a hazard would be much less than the 50% threshold implied by your phrase.*
>
> *Q. Well there may be argument and submissions about what is the appropriate phrase but I wish to put it to you whether you are saying that in your opinion it is not possible there will be harmful effects?*

[90] With two exceptions: he consistently misspelt 'Skrunda' as 'Skundra' which is more euphonious to an English speaking ear but wrong; and one or two of his references to exposure levels in studies were incorrect because he used the wrong units.

A. I have already stated that one cannot prove using that term to mean complete certainty the absence of an effect of anything but my opinion is that in the normal use of the word I am as certain as is reasonably possible that there will be no adverse health effects."

That passage shows Dr Elwood was considering potential effects of low probability but high potential impact i.e. adverse health effects as required by the Act. He was not, as Mr Hearn submitted, applying a 'balance of probabilities' test.

155. As for the SPS witnesses, Dr Beale gave an overview of some epidemiological and bio-mechanistic studies. We are however, concerned with a lack of objectivity and balance in Dr Beale's evidence. He reported some findings from research in a way that supports the hypothesis that exposure to RF radiation causes health problems when the report of the research specifically disclaims such a conclusion. For example of the Skrunda study he wrote in his evidence-in-chief:

"thus, the results supported a hypothesis that chronic radiation exposure resulted in impairment of nervous function."

But the authors' own conclusion states:

"...at present we can only state that the children living in the exposed zone in front of the Skrunda RLS performed worse in the psychological tests given than the children living behind the RLS and even worse again compared with the control group. The validity of the statement that the RF ... field at Skrunda has caused these

differences can only be claimed with continuous and accurate assessment of dose, and close to exact standardisation of subjects."[91]

156. Dr Beale noted the results of the Sutton Coldfield study but did not point out that it was a cluster study, nor that the authors' conclusion was that *"no causal implications regarding radio and TV transmitters can be drawn from this finding, based as it is on a single cluster investigation."*[92]

157. One point in Dr Beale's evidence was that because 44 out of 66 research papers show *"statistically significant effects on some aspect of nervous system or behavioural function"* we should regard the risks of the cellsite as unacceptable. There are a number of difficulties with such an approach. First, as Dr Elwood pointed out, the 67% result[93] referred to by Dr Beale is artificial: the 66 papers referred to investigated many more than 66 effects. Dr Beale himself recognised the other criticisms of relying on the research papers he referred to. He emphasized that the animal studies were not used in setting the ANZ Standard (or at least its predecessor) because:

(1) Effects in animals are not necessarily indicative of health problems in humans given equivalent exposure.
(2) It is not known how small exposure must be to avoid these effects (i.e. the threshold for these effects has not been identified).
(3) Some of these effects have yet to be confirmed by replication.
(4) The mechanism by which radiofrequency exposure could cause such effects is not agreed or well understood.

[91] Kolodynski *et al.* (1996)
[92] Dolk (1997b) p.8
[93] 44/66 = 66.67% (approx)

158. He seemed to have, in effect, three reasons for considering such studies might nevertheless be relevant:

(a) The old NZ Standard (NZS 6609 now replaced by the ANZ Standard) referred to (only to reject) animal studies published prior to 1985. In cross-examination he accepted that that is unlikely to be correct. He also accepted that the ANZ Standard now in force, on an interim basis, was up-to-date when published.

(b) More recent animal studies - especially Dr Repacholi's study - suggested adverse health effects might occur. We return to these studies shortly.

(c) In conclusion it would seem premature to rule out the possibility that prolonged exposure of humans to cellsite radiation would result in cancers.

This last reason is the no-risk fallacy we referred to at the start of Chapter 5. Any scientist should know that except in a tautological (and therefore uninformative) sense we can never rule out possibilities altogether. The practical issue is always how low is the risk of cancer.

159. But we consider that the studies Dr Beale relied on cannot be useful for us for the additional reasons that:

- Dr Beale's statistics are artificial as we have said;
- there may be statistically significant results in the papers not referred to which are negative;
- there is no assessment by Dr Beale of the quality of the studies and results; and
- physiological changes do not necessarily have an adverse health effect.

160. As far as Dr Hocking's evidence was concerned, while in some ways we were impressed with his sincerity as a witness there were a number of ways in which he significantly, if unconsciously, showed bias or at least inconsistency in the matters he took into account in reaching his opinion:

(a) He acknowledged in his paper[94] that confounders had not been adjusted for but in his evidence implied that they had.

(b) While he stated that *"the number of proven causes of leukaemia are few"* he did not acknowledge, or perhaps recognize that the number of factors much more likely to cause leukaemia is considerable (as Dr Elwood demonstrated to our satisfaction).

(c) He suggested that different frequency ranges or pulses might have different (adverse) effects, without acknowledging that, if that were true, it would remove the validity of some of the studies he relied on since, as Dr Elwood pointed out: *"only results on the precise frequency ranges used in this cell ... site could be used to predict its effects."*

(d) He ignored the study of childhood leukaemia in San Francisco[95]. That study was thorough, used accepted techniques, was published in a reputable journal and showed negative results.

(e) Similarly he stated that a study in Poland was the only study of military personnel working with radar but ignored a US Naval study which came to different conclusions[96]. Dr Elwood expressed major concern about bias and inaccuracy of the Polish study[97] in his evidence-in-chief but Dr Hocking accepted it uncritically.

(f) Dr Hocking failed to observe any limitations of the Skrunda study (see paragraph 46 of this decision).

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[94] Hocking 1997 (p.8)

[95] Selvin 1992

[96] Robinette *et al.* (1980) *"Effects upon health of occupational exposure to microwave radiation (radar)"* **Am J Epidemiol** 112, 39-53

[97] Szmigielski (1996) *"Cancer Morbidity in subjects occupationally exposed to high frequency electromagnetic radiation"*. **The Science of the Total Environment.** 180:9-17

(g) Finally Dr Hocking recognized no weaknesses in the Schwartzenburg study (again see paragraph 46). The *Woodward Report*[98] points out that:

> *"[S]elf-reported insomnia is a very imprecise measure of sleep quality and is prone to reporting bias."*

Nor did he acknowledge the researchers' conclusion that: *"the effect of EMF if really present however, is not very strong ..."*[99]

161. In conclusion, in relation to the epidemiological evidence we hold that the papers relied on by the SPS witnesses are all flawed as to technique and many are biased. The evidence of these two SPS witnesses is weakened by the failure of the witnesses to acknowledge unequivocally in their evidence the defects in the research on which they rely. Further none of the witnesses for SPS gave a balanced picture to the Court by referring to papers which show a neutral or negative effect on human health from exposure to RFR, let alone explaining how or why such studies - Dolk (1997b), Knox (1977), Selvin (1992), should not be considered.

Assessment of biological/causative evidence

162. As for the biological causation level of adverse health effects we heard from two witnesses exclusively on this issue, Dr Meltz for Telecom and Dr Cleary for SPS. In addition Dr Beale included a brief section on this issue in his evidence. The most comprehensive and systematic evidence was that of Dr Meltz. He came across as a thorough and sincere witness

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[98] Page 23

[99] Altpeter *et al.* (1995) *"Study on health effects of the shortwave transmitter station of Schwartzenburg, Berne, Switzerland (Major Report)"* **Bundesamt fur Energiewirtschaft (Federal Office of Energy), Berne, pp1-152**

who gave an objective assessment of all important aspects of his area of research. He was criticised by SPS counsel for making an error in one of his published papers. But he acknowledged it in his evidence in chief by referring to the correction in his bibliography. We consider that one calculation error in a paper of Dr Meltz's (he was not the principal author) does not detract from his extensive qualifications and experience to comment on fundamental scientific methodology used by others in his area of expertise. We have already quoted Dr Meltz' overall conclusions. In summary they were that:

> *"the accepted, repeated and credible evidence indicates that without the heating associated with high level exposures no biological effect has been confirmed as indicating even a potential adverse health effect."*

163. Against that Dr Cleary gave us his opinions that:
   (a) *in vivo* studies of long-term exposure to low intensity microwaves *"provide evidence of deleterious non-thermally induced alterations"*;
   (b) *in vitro* studies provide *"unambiguous scientific proof that RF and microwave radiation can induce non-thermal changes in cell physiological functions, including most significantly the rate of cell proliferation"*.

164. The fundamental difference between Dr Meltz and Dr Cleary was that the first referred to <u>both</u> research which suggests there are adverse health effects from long-term exposure to RFR <u>and</u> that which do not. By contrast, Dr Cleary in his evidence-in-chief referred only to papers which suggest there are adverse health effects. In cross-examination Dr Cleary was asked:

"Would you characterise your evidence as being fair and balanced in terms of an examination of the issue of RF exposure and risk?"

He replied:

"It is difficult for me to answer the question in terms ... of ... fair and balanced. The information I summarised in my statement of evidence was directed towards a scientific question. Now whether this involves concepts of fairness and balance - I cannot relate to those terms. The information that I summarised again is addressing the issue of non thermal effect of microwave radiation have been reported in the literature."

165. We were concerned about that answer because it sounded evasive. In addition, insofar as his evidence related to the hypothesis that exposure to RFR causes adverse health effects at athermal levels, there are two other aspects he should have looked at:

(a) if testing the hypothesis scientifically, he should have looked at the research indicating it is not true, as well as the research indicating that it is; and

(b) adequate research should be able to show some sort of dose-response relationship (even if it is not in a straight line).

166. Dealing with those points in the context of this case, none of the studies relied on by Dr Cleary show any sort of dose-response relationship - as he acknowledged. Secondly, even if he did not understand what a 'fair and balanced' approach to the scientific data would require he should have understood the need to look at data which does not confirm the hypothesis

that at certain athermal levels of exposure to RFR adverse health effects will occur. Dr Cleary did not do that.

167. In passing we should note that Dr Cleary quotes Dr Repacholi as writing[100]:

> *"I believe this is the first animal study showing a true non-thermal effect."*

That was quoted without any explanation of the apparent inconsistency with the Chou (1992)[101] study or those of Szmigielski *et al.* (1989)[102] already relied on by Dr Cleary.

168. There have been two recent studies which he did not refer to in his evidence-in-chief. One was by M.R. Frei *et al.*[103] who exposed 100 cancer prone mice to RFR of 2450 MH_z (in circularly polarised waveguides) over 18 months for 20 hours per day. The whole body SAR was 0.3W/kg. Another 100 mice were sham-exposed. According to Dr Meltz the results reported in Frei (1992) were that the chronic exposure did not affect:

- mammary tumour incidence;
- latency to mammary tumour onset;
- mammary tumour growth rate; and
- animal survivorship when compared with the sham-irradiated controls.

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[100] Repacholi (1997)

[101] C K Chou *et al.* (1992) **Bioelectromagnetics**, 13, 460-496

[102] S. Szmigielski *et al.* (1989) In ***Electromagnetic Biointeraction*** Ed. G. Franceschetti *et al.*, Plenum Press, New York, NY81-98

[103] M.R. Frei *et al.* *"Chronic Exposure of Cancer Prone Mice to Low Level 2450 MH, Radiofrequency Radiation"* **Bioelectromagnetics**, 19, 20-31 [called Frei (1992)]

When the Frei (1992) paper was referred to Dr Cleary in cross-examination he did not criticise the methodology but said that the experiment it described was conducted under conditions different in terms of frequency of irradiation. While we understand that - the Frei mice were exposed to 2450 MH_z as opposed to the 870-890 MH_z which the cellsite will emit - that answer is almost a throwaway in that it suggests only evidence of experiments at 870-890 MH_z could be relevant. Yet neither Dr Cleary nor any other witness for the school claimed that, presumably because they relied on other studies at different exposures in support of their opinions.

169. An illustration of why Dr Cleary did not claim that, and another example of Dr Cleary only considering evidence <u>for</u> his hypothesis, was his statement in his written rebuttal evidence relating to the question whether children exhibit heightened sensitivity to adverse health effects from microwave exposure. He said:

> *"... there has been a consistent association of residential exposure to 50 or 60 H_z magnetic fields and leukaemia incidence in children. This is not the case for residential exposure of adults to such fields."*

There are apparently 9 or more studies which show such an association, although these have been criticised for the unreliability of their techniques. A recent study by M.S. Linet *et al.*[104] and known to Dr Cleary summarised its results as being that the risk of childhood leukaemia was not linked to magnetic fields. Again when that was put to him in cross-examination he said:

[104] M.S. Linet *et al.* "*Residential Exposure to Magnetic Fields and Acute Lymphoblastic Leukemia in Children*". **The New England Journal of Medicine** 337:1 ["Linet (1997)"]

"I don't think the outcome of one study changes my view in terms of the consistency of the findings"

and, rather inconsistently:

"[Linet (1997) should be given] the same weight as placed on all research in this particular area."

We consider a much fairer and more considered assessment of Linet 1997 is in the ICNIRP guidelines[105]:

"The size of this study is such that its results, combined with those of other studies, would significantly weaken (though not necessarily invalidate) the previously observed association."

Further it needs to be remembered that power lines and electric cabling transmit at extra low frequency (ELF) which is very far from the cellsite frequencies.

170. Turning to *in vitro* research Dr Cleary's own research may show evidence of RFR induced change, but not that it is harmful. However, his studies are nearly incomprehensible to us and despite being given time to file a rebuttal statement and the opportunity to explain his views to us after Dr Meltz's evidence, Dr Cleary failed to articulate his methodology in a way we could understand. Dr Meltz criticised Dr Cleary as redefining science in his description of the cell-cycle of mammalian cells, and that is how it looked to us. Again Dr Cleary did not refer to <u>any</u> paper which showed results consistent with his.

171. Dr Cleary concluded that:

[105] p.499

"recently conducted epidemiological studies as well as studies of microwave radiation effects on experimental animals and on mammalian cells provide consistent and convincing evidence of nonthermal exposure effects."

But we have to consider the limited material that lead him to this conclusion. It is also of concern that he referred to epidemiological studies when in his introduction he stated that he would leave those studies to other witnesses, and consistent with that he does not refer in his evidence-in-chief to a single epidemiological study. His final reliance on unspecified epidemiological studies undermines the objectivity of his evidence.

172. Dr Meltz criticised Repacholi (1997) (mentioned by Dr Cleary for the school) concluding that the study should not have used the methodologies or the strain of mice it did. His criticisms were:

(1) Within one year after initiating treatment with the chemical carcinogen used on the Eμ-Pim 1 strain of mice it has been reported lymphoblastic lymphomas appear in a large number of the animals. However the study by Repacholi et al. continued the treatment for up to 18 months. As the animals aged a different type of tumour, a follicular lymphoma (known to occur with age in inbred mice strains), appeared in the mice. With more of those tumours arising in the RF exposed animals the conclusion could be drawn that this was due to RF exposure. It appears to have been overlooked that after one year of the treatment the authors of the study did not see a statistically significant difference in the number of lymphoblastic lymphomas in the RF exposed group as compared to the control group.

(2) There was no positive control treatment group. Without a positive control and without historic negative controls (which would indicate the appearance of follicular lymphomas with age in the mice) the study results (other than the absence of lymphoblastic lymphoma induction) are meaningless.

(3) *There should have been a full histopathological examination of all those animals terminated at the end of the study. This may have shown the expression of the follicular lymphoma in a way that may have eliminated any statistical difference between the RF exposed groups and the control groups.*

(4) *It is important in animal studies to make sure the animals are pathogen free however there was evidence of a lethal renal disease in the mice. The bedding should have been changed more frequently to minimise the stress to the animals due to ammonia build-up and there should not have been five animals in a cage during exposure. Stress can lead to an earlier appearance of follicular lymphomas. Closer monitoring should have occurred so that dead animals could have be removed soon enough to allow successful pathological examinations.*

(5) *The exposure of each animal in the cage was dependent on reflections and scattered radiation from the other animals in the cage. When animals died, they were removed and not replaced, making the dose to the other animals different than originally calculated.*

There was no good answer to any of these criticisms from the witnesses for SPS.

173. Mr Hearn, for SPS, criticised Dr Meltz for only considering a small proportion of the total of bio-mechanistic studies of the effects of exposure to RFR. This criticism has some force especially since Dr Meltz himself had criticised Dr Cleary for only considering ten papers out of 17 referred to in Dr Cleary's evidence in chief. However, Dr Meltz himself had considered many more papers and his evidence was balanced in that he went out of his way (so it appeared to us) to examine the research which suggests there may be effects from exposure to RFR.

Is there a significant risk of adverse health effects from the proposed RFR?

174. If there are adverse health effects from the RFR discharge then they can only be effects within section 3(f) of the Act - that is potential effects of

low probability but high potential impact. It was common ground that ordinary risk assessment showed "no risk". Applying the tests for section 3(f) effects which we set out in Chapter 5 we find there are hypotheses that exposure of the school community to the proposed RF radiation might cause:

- leukaemia or other cancers
- sleeplessness
- learning disorders
- harm to foetuses.

175. Is there enough evidence to establish these hypotheses to the very limited extent we require to establish them as effects within the meaning of section 3? It will be recalled that the alternative evidential criteria include:
(1) sound consistent statistical studies of a human population;
(2) general acceptance of the hypothesis;
(3) persuasive animal studies or other bio-mechanistic evidence accompanied by an explanation as to why there is no epidemiological evidence of actual effects in the real world; or
(4) (possibly) a very persuasive expert opinion.

176. No one claimed that there was general acceptance of the idea that RFR causes athermal effects at the intensity emitted by the cellsite. The most that SPS could claim are the careful concessions by Dr Black in his rebuttal evidence. He said:

> *"6. ... Dr Beale states that there are 'numerous studies on animals that show adverse effects of brief radiofrequency exposure at levels much lower than the thermal threshold and which appear to be unrelated to the significant whole-body heating that occurs at higher levels of radiation'. I agree with that statement. It underscores why Standards are set at a large*

margin below this 'thermal threshold' which occurs at a specific absorption rate ('SAR') of 4 watts per kilogram. For example, the NZ Standard is set at 1/50th of that thermal threshold.

7. *The vast majority of these animal studies show effects which occur at levels above 1/10th of the thermal effect threshold, which accounts for some Standards (like those in the UK and Japan) that are set at this level.*
8. *It is also important to note that the vast majority of experimental results showing effects at levels below 1/10th of the threshold (i.e. below 0.4 watts per kilogram) are not studies on whole animals. The effect of a signal falling on a isolated tissue sample is altogether different from that on a whole animal, and accordingly the levels are meaningless in terms of whole body exposure."*

We find that Dr Black accurately portrays the general scientific view of the research, for example as portrayed by ICNIRP and, directly to us, by Dr Meltz. There was no expert witness who persuaded us that the mainstream of thought is wrong and that their research is right. So the only doors left open for the finding of adverse health effects from athermal RFR at cellsite levels are the presence of sound epidemiological studies and/or the bio-mechanistic studies.

177. On the epidemiological evidence given to us we find that all the studies quoted to us as support for the various hypotheses of adverse health effects were flawed[106] although at least the authors of the Sutton Coldfield study[107] admitted the limitations of that study which is why they delayed publication until they published their later study. The leukaemia studies

[106] Hocking (1996), Dolk (1997a)
[107] Dolk (1997a)

in particular were far less convincing than the studies which showed no significant association between RF discharges and cancer.[108]

178. As for the existence of animal studies these suffered from a number of defects also. There was no attempt to explain why there was no or little epidemiological evidence of actual adverse health effects. In the absence of such explanation the usefulness of animal studies is very doubtful.[109] In addition, as we have already pointed out, the existence of effects does not necessarily mean they are harmful. As Dr Repacholi himself has recently written of animal studies:

> *"It is questionable whether reported 'effects', even if substantiated, can be considered to represent evidence of a hazard simply because the significance of the effect for the organism is not understood.*
> *... Not all biological effects of exposure are necessarily hazardous; some may be beneficial under certain conditions."*[110]

179. It was a key part of the school's case that there may be adverse effects within the meaning of section 3(f), that is "potential effects of low probability but high potential impact". As we suggested in Chapter 5, the first use of the word "potential" shows that it is not proven actual effects that need to be considered but also scientifically possible effects established to our satisfaction under the criteria listed in paragraph 147. It is at this point that Mr Gould's submission, that there is no evidence of adverse effects, falls down. We hold:

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[108] Selvin (1992), Dolk (1997b), Knox (1977)

[109] There is a significant jurisprudence on this in the USA – see for example: ***General Electric Ltd v Joiner*** 118 S.Ct 512

[110] M H Repacholi *"Low-Level Exposure to Radio Frequency Electromagnetic Fields. ... "* **Bioelectromagnetics** 19: 1998 (pp.1-19) at p.5 [Repacholi (1998)]

(a) that there is very tenuous epidemiological evidence of some possible adverse health effects (effects on learning and sleep);

(b) that on our subjective assessment these effects are of very low probability; and

(c) that the effects may be of relatively high potential impact (but not of the devastating impact that cancers would have).

So there are adverse 'effects' within the meaning of section 3(f) but only in a very weak sense.

180. In conclusion we hold that:

(a) the risk of the schoolchildren or teachers at the school incurring leukaemia or other cancer from RFR emitted by the cellsite is extremely low;

(b) the risk to the pupils of exposure to RFR causing sleep disorders or learning disabilities is higher but still very small.[111]

To avoid confusion we emphasize that this is not a scientific assessment of risk. That is impossible in the present state of knowledge. We respectfully agree with ICNIRP that[112]:

> *"Overall, the literature on athermal effects ... electromagnetic fields is so complex, the validity of reported effects so poorly established, and the relevance of the effects to human health is so uncertain, that it is impossible to use this body of information as a basis for setting limits on human exposure to these fields."*

[111] Taking a relatively arbitrary figure, just to give an idea of what we mean: very small = 1 in a million (i.e. 1 x 10^{-6})

[112] ICNIRP Guidelines p.507

Our assessment is of the risk which we must assess as an effect (or product of effects) under section 5(2) of the Act. It is a reasonable assessment of the risks on the evidence presented to us.

Chapter 7 : Other Effects [Section 104(1)(a) continued]

Adverse Psychological Effects

181. In respect to claimed psychological effects the principal evidence for the school was that of Dr Staite, and to a lesser extent that of Dr Beale. With respect to Dr Staite's evidence Mr Fougere set out the requirements for survey validity (see Chapter 5 above and the discussion of ***Imperial Group plc v Philip Morris Limited***) and then stated that none of the required criteria were met by Dr Staite's survey. Mr Fougere recommended that the Court exercise "extreme caution" in considering this evidence. His main concerns about the survey were:

> *"(1) The methodology did not describe that the sample used represents any wider community. In fact Dr Staite clearly approved of the concept of focusing on "information-rich" cases - in this case that meant interviewing those with the strongest concerns about the tower. This approach may be correct for research designed to develop a theory but not to make a conclusion on the widespread adverse psychological effects;*
>
> *(2) The sample size was small. There were only a few interviews;*
>
> *(3) There is no copy of all the questions asked in the survey nor all the results obtained. It is not known whether he asked all those interviewed the same questions;*
>
> *(4) If he did ask all those interviewed the same questions then he was asking standard 3 and 4 pupils very complex questions and it would be safe to assume their comprehension of the questions would be jeopardised;*

(5) From the way Dr Staite presented his evidence it was impossible to determine whether the questions he asked in his survey were leading. He says that one question was "What negative psychological states such as anxiety and depression, in your mind, will be experienced by you along with your fear of future illness in respect of the cell tower?". This is a leading question assuming "negative psychological states";

(6) The presentation of results is too unstructured to allow formal evaluation by a third party which is unsatisfactory; and

(7) There is no dependable data to make conclusions on wide-spread effects."

182. In Chapter 4 we covered Dr Staite's evidence in some detail to give its flavour but we have to say we are troubled by it. This is not only because of the dubious validity of the survey on which it is based but for other reasons as well. Examining it as a whole and including the cross-examination, it has three rather disconnected parts: a theoretical review of some relevant psychological literature; a long summary of his survey of the parents; and a short final overview. In particular there was little apparent connection between his review and his survey.

183. In addition many pages of his evidence about his survey were full of hearsay. He included many comments from parents, teachers and children, sometimes in quite colourful language, giving their perceptions of the Telecom proposal. As far as his summary was concerned, he did not attempt to link his theoretical evidence with his survey. There was a major implicit assumption that there are adverse effects from the cellsite.

184. Telecom's counsel submitted that the Court should be guided by the *Telecom* decision[113] where the Court said that it did not think that *"social angst and lack of well-being in the community affected by the proposal"* was a material consideration in coming to its decision. Counsel also quoted Dr Zelas who said:

> *"... if a child is anxious or fearful of going to school when there is determined to be no "real" reason for this, educators do not propose that the child avoid the perceived threat and remain at home.".*

185. In respect to Dr Staite's assertion that *"... a psychological effect did in fact exist in the minds of the people and community"* counsel pointed out the criticisms by Dr Zelas and Mr Fougere of Dr Staite's study. Mr Gould also referred to the opinion of Dr Beale that the Shirley community would suffer *"indirect effects mediated by stress"*. He submitted that should be given little weight as the hypothesis lacked any foundation of fact or actual research. In contrast he said there was the evidence of Dr Black and Mr Jennings who made enquiries in schools close to where cell sites are located and found evidence of a lack of anxiety and concern.

186. Counsel opined that to the extent that claimed anxieties and fears do exist there is evidence of misinformation and therefore *Telecom* should be followed and anxieties and fears not founded on any plausible health risks ought not to be taken into account. Counsel submitted that Mr Hearn was not correct in suggesting that it would have been valuable for Dr Zelas to speak to those in the community. The purpose of her evidence was to deal with broad issues not to express opinion on the state of mind of any person.

[113] W165/96 at pp 11-12

Mr Hearn cited the case of ***Meadow Mushrooms Ltd v Paparua County Council***[114]. He referred to the passage[115] where the Board[116]:

> *"observe[d] that the health of the community, which is one of the factors mentioned in s.18 of the Town and Country Planning Act 1953, is not necessarily restricted to physical health. Whether or not it is psychological there is no question that a large number of the residents of Prebbleton appear to fear methyl-bromide gas and associate illnesses they have suffered with the proximity of that gas. Fear of exposure to a cumulative poison, whether physical damage is or is not caused thereby, is a very real factor in relation to normal health and wellbeing."* [Our emphasis]

Counsel for Telecom submitted that case is different on the key matter at issue: the fact that with cellsites any anxiety is not based on any scientifically plausible health risk.

187. There is an issue as to whether fear or other psychological effects are effects we can take into account. ***Duncan v Thames Coromandel District Council***[117] recognised that under the Town and Country Planning Act 1977:

> *"It is proper to pay some regard to fear of the unknown. Fear for safety, and of the unknown, impinges upon psychological health, and that is part of total health."*[118]

[114] (1977) 6 NZTPA p.327
[115] The same at p.333
[116] The Town and Country Planning Board: a predecessor of the Environment Court
[117] (1980) 7 NZTPA 233
[118] The same at p.240

That passage was quoted in a leading town planning case under the Town and Country Planning Act on the introduction of LPG tanks to Auckland: ***Liquigas v Manukau City Council***[119]. That decision stated:

> *"We accept that a land use which causes so great an extent of fear or worry about danger and stress as to effect the mental health of members of the community generally (rather than individual persons who may be more fearful than people generally) may properly be a consideration in land use planning. However, there was no evidence on which we could find such circumstances in this case. ... We will concern ourselves directly with the question of the safety of the community, in the expectation that if safety is properly provided for, the mental health of the community will not be affected."*[120]

188. We have to consider whether that is the appropriate approach under the RMA or whether the more robust position adopted in the ***Telecom***[121] decision is correct when it stated:

> *"social angst and lack of well-being in the community affected by the proposal ... cannot be a material consideration."*

189. One aspect of the Town and Country Planning Act cases (especially ***Liquigas***) which is clear is that the importance of the fear or psychological element is very dependent on the objective assessment of the risk:

[119] (1983) 9 NZTPA 193
[120] The same at p. 218
[121] W165/96 at pp 11-12

> *"What is called for is an assessment of the risk and the consequences of the proposal before us. In making that assessment we must endeavour to hold a balance between being unduly timorous in the face of danger, however remote, and being callous about other people's safety."*[122]

190. In our view if a Council or the Court finds that there is an unacceptable risk of adverse physical health effects then it is likely to refuse consent anyway. If the risk is acceptable then the fears of certain members of the community or even of sufficient people to be regarded as a 'community' would be unlikely to persuade the Council or at least the Court that consent should be refused, because the individual's or the community's stance is unreasonable. It is not irrational as we shall explain later, but it is unreasonable. Thus we do not go quite as far as the *Telecom* case in saying that fear is not an effect to be taken into account. We consider it is, but whether it is an effect which should be given any weight depends on the assessment of the risk.

191. This, as we understand it, was the approach taken in *Department of Corrections v Dunedin City Council*[123]. That case concerned the location of a periodic detention centre in South Dunedin which was opposed by local businessmen. The Court stated[124]:

> *"We accept that as a matter of law, the concerns expressed by the several members of the South Dunedin Business Association who*

[122] ***Liquigas*** at p.220
[123] Decision C131/97
[124] ***Department of Corrections*** at p.21

gave evidence in this case, can be regarded as giving rise to adverse effects on the environment, if they are substantiated. Consequently, it is relevant to have regard to these concerns and the evidence about them.

The question remains however, whether this evidence establishes that there are likely to be such adverse effects on the environment."

We consider the last sentence shows the difference between this case and *Meadow Mushrooms* as relied on by Mr Hearn. In the latter case the accumulation of heavy metals is a known hazard to humans and other animals. So the fear of that hazard may properly be taken into account. It was different in *Department of Corrections* where the existence of adverse effects on the environment had yet to be established, and in fact was not.

192. To summarise on the psychological evidence – on the SPS side – we have the evidence of Dr Staite which we find methodologically unreliable, partially incomprehensible (his answers in cross-examination tended to be repetition of psychological jargon) and inconsistent. On the other hand we have Dr Zelas' evidence which, while clearer and consistent, is based on the assumption that there will be no adverse physical health effects from exposure of the school community to RFR. Parents who read her evidence might be offended because it suggests they are irrational in their concerns for their children. Dr Zelas' approach seems both a little unfair, and simplistic. We cannot agree that there is no risk to the school community. There is some risk (although very small, or extremely small for leukaemia and other cancers).

193. In the end we find all the expert psychological evidence unhelpful. We had direct evidence about people's fears of exposure to RFR from enough

parents and teachers to be sure that a significant part of the school community is genuinely concerned about, even fearful of, the effects. But whether it is expert evidence or direct evidence of such fears, we have found that such fears can only be given weight if they are reasonably based on real risk.

Social and Financial Effects

194. We have described Dr Brown's evidence as to the probability that parents would withdraw their children from the school. For Telecom, Mr Fougere was highly critical of that evidence. He was of the view that generally her survey failed to comply with the requirements of a proper reliable survey. The first question in Dr Brown's survey was whether parents would consider moving their child from the school, however when she came to interpreting the results she spoke of parents who would move their children. Mr Fougere said that invalidated the remainder of the survey as this same confusion is implicit in the logic of the two questions that followed.

195. He was also of the view that the sample was almost certainly biased in that more of those who would consider moving their child(ren) than other parents are likely to have responded to the survey. Mr Fougere considered that since less than half the parents to whom the survey was sent actually replied the potential for bias in the sample (in overstating concern about the tower) is important. Mr Fougere suggested we attach minimal weight to Dr Brown's evidence and we agree. Accordingly the evidence of Mr Shand and Mr Walsey on financial issues which was based on Dr Brown's evidence can also be given little weight.

Visual Effects

196. In relation to visual effects, we accept that subjective value judgments about the safety of cellsites have no place[125] in the assessment of visual amenity. There is a chimney on the school grounds that will loom larger than the cellsite mast from some viewpoints. Further Ms Lucas, who gave evidence for the school, did not appear to have taken into account the new slimmer mast. Her evidence was based on the proposal as put to the Council. We prefer Mr Miskell's evidence over Ms Lucas's both for those reasons and also because we consider the tower will not be an undue imposition on the view from the school grounds. There is no visual conflict with surrounding development. We record that we would not necessarily come to the same conclusions if the cellsite was surrounded by houses. Its scale might then make it completely out of proportion, and therefore inappropriate.

Beneficial effects

197. Finally we should mention that there will be some beneficial effects e.g. improved mobile phone coverage on the Telecom network from the presence of the cellsite. As the Telecom witnesses pointed out, the RF spectrum is a limited physical resource under section 5 of the RMA. These advantages would be nearly[126] insignificant if a scientific assessment of risk showed that there was a real and unacceptable danger to the school community. The advantage of recalling the benefits is that they remind us of the wider context of this application which we should take into account - that is the general exposure of the wider population (including the school

[125] See the ***Telecom*** decision W165/96

[126] The RMA may still require a cost/benefit analysis under sections 5(2)(c) and 7(b).

community) to RFR from all sources. We will return to this issue in our assessment under section 105(1)(c) of the Act (Chapter 10).

Chapter 8 : Statutory Instruments (Section 104(1)(d))

The Transitional Plan

198. In the city section of the transitional district plan ("the transitional plan") the site is zoned Commercial Service ("C/S"). This zone covers approximately seven separate titles (comprising approximately 5570m^2) on the north eastern intersection of Hills Road and Shirley Road. Shirley Primary School is located to the north east of the site. It is zoned Residential 1 and designated for "Primary School" purposes. Diagonally opposite the site is a Commercial 1 zone which has been recently developed with a new shopping centre called "The Dates". The zone statement for the C/S zone states:

> *"These zones generally adjoin shopping centres and are designed to provide for service and small scale industrial activities which mainly, although not exclusively, serve local needs and which provide some local employment. These uses are often associated with uses within adjoining Commercial 1 and 2 zones."* [127]

199. Activities permitted in the C/S zone include administrative, commercial and professional offices, medical and community facilities, service industries, places of assembly , parks and recreation grounds, local taverns, service stations, public utility substations and exchanges.[128] As the zone rules do not mention radio communication facilities such as the proposed cell site, the proposal is non-complying under section 374(4) of the Act.

[127] Transitional Plan, Para 43 [p119]
[128] Transitional Plan, Ordinance, 43.1 Para 43.1A-F [pp119-120]

200. There are a number of performance standards in the C/S zone relating to floor space, visual amenity, sunlight outlook and amenities, access, parking and loading. Height is controlled indirectly by recession planes where the site adjoins two of the residential boundaries of the school.

201. The transitional plan sets out what the development of commercial centres shall have regard to in respect to design. The list includes avoiding visual conflict with surrounding residential development and providing landscaping to act as a buffer between residential and non residential uses where necessary.[129]

202. We find that the proposed cellsite sits comfortably within the objectives and policies of C/S zone of the transitional plan. It is the wire-less equivalent of a public utility such as a telephone exchange which is a permitted activity. As we have found in relation to visual effects there is no conflict with surrounding residential development. We appreciate that the school is zoned *"Residential"* – although as a public work it is obviously not used for residential purposes – but we understand the recession planes for the cellsite are met in respect of the school's boundaries.

The Proposed Plan

203. Under the Proposed Christchurch City Plan ("the proposed plan") the site is zoned Business 4 which is a suburban industrial zone. Any activity can establish in this area as a permitted activity providing it complies with all the development standards and all the community standards.[130] Height is

[129] Transitional Plan, Scheme Statement, Clause 26 [p23]
[130] Proposed Plan, Vol 3, Rule 4.1.1, [p3/17]

again controlled by recession planes and these are relevant to the two boundaries adjoining cultural zones.[131]

204. Chapter 9 of the proposed plan makes specific provision for utility structures:

Rule 4.2.1 reads:

"Application of these rules

(a) These rules on utilities replace any zone rules which may otherwise apply to utilities in zones through which utilities pass, or within which they are sited unless specifically stated to the contrary."[132]

So rather remarkably, the utilities rules generally replace all other zone rules.

205. Under Chapter 9 the facility is a discretionary activity:

" 4.4.2 Telecommunication and radio communication facilities

Any utility is a discretionary activity where it involves any of the following:

(a) Erecting any telecommunication or radio communication facility above ground level (including any mast, antenna, tower, or support structure) which is:

(i) so designed and operated as to emit microwave or ultra high frequency emissions of any type within any living zone, or within 300m of the boundary of any living zone

[131] Proposed Plan, Vol 3, Rule 4.2.5, [p3/18]
[132] Proposed Plan, Vol 3 [p9/21]

(ii) so designed and operated as to emit more than 50 microwatts per square centimetre at any time within any zone or within 300m of a living zone..."[133]

206. In the "Reasons for Rules" for the utilities it says:

"Pending the review of the New Zealand Standard 6609 (1990) in respect to microwave and ultra high frequency emissions, a conservative approach has been adopted having regard to the potential effect of such facilities on the health of persons in the vicinity."[134]

The proposed plan thus turns risk into a key element when considering the approval of the cellsite as a discretionary activity. Risk is not spelled out clearly as an objective or policy but we assume that an objective or policy about it can be inferred from the reason for the rule stated above. So whether or not the cellsite proposal is consistent with the objectives and policies of the proposed plan depends on whether there is a significant risk to persons in the vicinity of the cellsite. In other words the proposed plan does no more than refocus on the principal issue in the case: whether there is a risk from exposure to RFR at athermal levels.

207. Little weight should be given to the proposed utilities section of the plan because there are submissions to the Council challenging aspects of the section – including submissions from both appellants in these proceedings.

[133] Proposed Plan, Vol 3, [p 9/22]
[134] Proposed Plan, Vol 3, Paragraph 4.6, [p9/23]

Chapter 9 : Other Matters (Section 104(1)(i))

Introduction

208. There are a number of other matters we have to consider in this case:
- the application of the ANZ Standard and the ICNIRP Standard
- whether alternative sites for the cellsite should have been considered, and if so, were adequately covered by Telecom;
- the application of the *"precautionary principle"*; and
- whether the "prudent avoidance" principle or the policy of 'as low as reasonably achievable' ("ALARA") is relevant.

The Standards

209. We have to consider the two new standards both published in 1998. The ANZ Standard[135] states that the variables considered when developing the safety factors were:

> *"(a) Absorption of electromagnetic energy by humans of various sizes, with particular reference to whole body or partial body resonant absorption of energy.*
>
> *(b) The lack of knowledge of the relationship between peak SAR and biological effects.*
>
> *(c) Environmental conditions - the exposure limits should be protective under adverse conditions of temperature, humidity and air movement.*
>
> *(d) Reflection, focusing and scattering of the incident fields in such a way that enhanced absorption occurs.*
>
> *(e) Possible altered response of humans taking medicines.*

[135] The ANZ Standard is AS/NS2772.1 (Int) :1998 expires on 5 March 1999

(f) Possible combined effects of RF electromagnetic energy with chemical or other physical agents in the environment.

(g) The possible effects of modulated microwave fields on the central nervous system and the possible existence of 'power' and 'frequency' windows for such effects.

(h) Possible non-thermal effects."[136]

This list shows that the Committee which set the standard was aware of the types of (potential) risk which have been raised in this case.

210. The Foreword then compares the standard with that endorsed by ICNIRP:

"At frequencies between 400MHz and 2GHz the ICNIRP literature gives progressively rising derived levels and thereafter a level which is constant with frequency. This Interim Standard does not, however, follow this methodology and requires a lower and constant level to be met across the entire frequency range above 400MHz. Furthermore, a lower spatial peak SAR is prescribed for all parts of the body except hands, feet, wrists and ankles. This approach was followed because of the existence of ongoing research projects by WHO and public concerns about RF radiation, particularly from cellphone systems. The higher ICNIRP derived levels in the frequency range above 400MHz are given in this Interim Standard for information only."[137]

The standard itself then states:

[136] AS/NZS 2772.1 (Int): 1998 Part 1, p.25
[137] AS/NZS 2772.1 (Int): 1998 (p.4)

"6.1 General

The exposure limits have been developed on the basis of there being a threshold of 4W/kg whole body SAR before any adverse health consequences are likely to appear. Whilst occupational limits are based on reducing exposure by a factor of 10 below the 4W/kg threshold, non-occupational exposure limits are derived from values one fifth (or less) those of clause 5.2 [Clause 5.2 refers to the new limiting values for persons exposed to RF in the course of their occupation]. *The non-occupational limit is therefore 0.08W/kg whole body average SAR."*[138]

211. On the issue of whether there could be athermal effects from RF radiation the ANZ Standard states:

"The Committee responsible for this Interim Standard considered both thermal and non-thermal effects of RF exposure. The Committee found that, when established scientific literature is used, exposure limits can only be based on thermal effects at frequencies above about 10 MHz. This is consistent with the findings of organisations developing standards in all Western countries. The Committee noted that while some researchers had found effects at body cell levels, there has been no conclusive evidence that such effects constitute a health hazard to humans" (Our underlining).[139]

The use of the word 'conclusive' in the last sentence is likely to cause some concern about the ANZ Standard amongst lay people. It suggests a very high standard of proof before standards would be altered. For example if

[138] AS/NZS 2772.1 (Int): ;1998 (p.13)
[139] AS/NZS 2772.1 (Int): 1998 Foreword (p.4)

there was merely a 'significant' but not conclusive evidence of a health hazard would the standard be altered?

212. Most causes of cancer (to take one hazard as an example) were initially recognized as a result of epidemiological studies, even though the causes cannot be 'proved' by such studies. Bearing that in mind we would have thought that if there are such studies suggesting a link between low-level (i.e. athermal) chronic RF exposures and cancer then their significance should have been discussed, rather than simply summarising the issue by stating that athermal effects had been considered but that there were no 'conclusive' results. Because we consider the public is entitled to ask for action taken under the Act if the impact of the potential hazard is sufficiently severe even if the effect has

- not been conclusively proved (including an explanation of the biological mechanism)
- possibly not even been significantly established at an epidemiological level

- the ANZ Standard cannot guide us on this issue.

213. Turning to the ICNIRP Standard, the individuals who comprise ICNIRP including Dr Repacholi as Chairman Emeritus explain that:

> *"These guidelines for limiting exposure have been developed following a thorough review of all published scientific literature. The criteria applied in the course of the review were designed to evaluate the credibility of their various reported findings (Repacholi and Stolwijk 1991: Repacholi and Cardis 1997). Only established effects were used as the basis for the proposed exposure restrictions. Induction of cancer from long term EMF exposure was not considered to be established and so these guidelines are based on short-term, immediate health effects*

such as stimulation of peripheral nerves and muscles, shocks and burns caused by touching conducting objects and elevated tissue temperatures resulting from absorption of energy during exposure to EMF. In the case of potential long-term effects of exposure, such as an increased risk of cancer, ICNIRP concluded that available data are insufficient to provide a basis for setting exposure restrictions, although epidemiological research has provided suggestive, but unconvincing, evidence of an association between possible carcinogenic effects and exposure at levels of 50/60 Hz magnetic flux densities substantially lower than those recommended in these guidelines.

.....

Transient, cellular and tissue responses to EMF exposure have been observed, but with no clear exposure – response relationship. These studies are of limited value in the assessment of health effects because many of the responses have not been demonstrated in-vivo. Thus in-vitro studies alone were not deemed to provide data that could serve as a primary basis for assessing possible health effects of EMF."

214. The ICNIRP standard was the last word in scientific consensus on the issue of athermal effects from chronic exposure to RFR at the time we heard the case. We are reassured to find that it confirms our findings on the other evidence before us that the risk of adverse health effects on humans of chronic low-level exposure to RFR is very low. Strengthening our reassurance is the fact that at cellphone frequencies the ANZ Standard becomes almost 2½ times lower than the international standard in the ICNIRP guidelines.

Alternative Sites

215. In response to the argument by Mr Hearn that Telecom was obliged to consider alternatives, counsel for Telecom responded that there is no onus on Telecom to give evidence or provide information regarding alternative sites unless:

(a) A matter of national importance is at issue with regard to the selected site[140]; or

(b) There is a likelihood of significant adverse effects - clause 1(b) of the Fourth Schedule[141]; or

(c) The activity is a non-complying activity and granting consent for the activity within the zone would reduce public confidence in the administration of the district plan[142].

Counsel for Telecom was of the view that none of these applied.

216. Referring to the evidence given on behalf of Telecom by Messrs Moran, Jennings and Gledhill, counsel for Telecom emphasised that in practical terms the proposed site is realistically the only one available to achieve Telecom's service objectives. He also pointed out that in response to questioning from Mr Hearn, Telecom's witnesses, Mr Moran, Mr Gledhill and Dr Black explained that micro cells (as opposed to the macro cells as proposed in this case) as an alternative are not realistic as they are not the correct technology for the engineering purpose sought to be achieved. Further Telecom witnesses, Doctors Elwood, Black and Meltz all denied the contention made by Mr Hearn that the proposed site is "unsuitable" due to

[140] *TV3 Network Services Limited v Waikato District Council* [1997] NZRMA 539 at 551
[141] *Trans Power* and *Dumbar v Gore District Council* W189/96
[142] *Stark v Auckland Regional Council* [1994] NZRMA 126 and *Manos v Waitakere City Council* (1993) 2 NZRMA 226.

its close proximity to a primary school attended by children aged 5-10 with a special sensitivity to RFR discharges. Counsel for Telecom pointed out that in *McIntyre* consent was granted despite the relative proximity of the site to dwellings and a creche, as the Tribunal found no evidence of effects, actual or potential.

Additional Principles and Policies

217. Mr Gould submitted there are three further matters that arise for consideration under s104(1)(i):

- the 'precautionary principle';
- the policy of prudent avoidance; and
- the concept of keeping RFR "as low as reasonably possible".

218. Mr Hearn relied on the general 'precautionary principle' of environmental law referred to in *McIntyre*. The Court then considered the principle under both section 104(1)(i)[143] and then because it was relevant in its overall evaluation under section 105(1)(c) where it stated:[144]

> *"The influence of the general precautionary principle in the evaluation and ultimate judgment is a matter of discretion. None of the cases supports the application of a formal threshold. Like all elements that contribute to the ultimate judgment, the weight to be given to the precautionary principle would depend on the circumstances. The circumstances would include the extent of present scientific knowledge and the impact of otherwise permitted activities. However we think that in an appropriate case they would also include*

[143] *McIntyre* at p.304
[44] *McIntyre* at p. 305

the gravity of the effects if, despite present uncertainty, they do occur."

219. There is some confusion apparent over the applicability of the precautionary principle. We hold that the correct position is that the RMA is precautionary and thus justifies a precautionary approach[145]. We consider, without deciding, that the precautionary principle is a limited consideration introduced by international law. The precautionary principle, a subset of the precautionary approach, derives from the ***Rio Declaration***[146] principle 15 which states:

"In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to protect environmental degradation."

220. It will be seen that the precautionary approach applies where there is a threat of 'serious or irreversible damage' and entails that just because it is not, say, 99% certain that the threat will materialise, or perhaps that the damage will be irreversible, does not mean that no step should be taken to minimise risk. To paraphrase in the language of section 3 of the RMA the principle is, if a potential effect is only of high (and not very high) probability and high potential impact that is no reason for failing to take

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[145] ***Trans Power*** used the words "precautionary approach" and so did the Australian case of ***Greenpeace Australia v Redbank Power Company*** (1994) 86 LGERA 143. Other New Zealand cases that have used "approach" rather than "principle" have been cases involving the New Zealand Coastal Policy Statement which specifically mentions a precautionary approach: ***Clyma v Otago Regional Council*** W64/96; ***North Shore City Council v Auckland Regional Council*** [1997] NZRMA 9 and ***Trio Holdings v Marlborough District Council*** 2 ELRNZ 353

[146] *Rio Declaration on Environment and Development adopted at the United Nations Conference on Environment and Development*, Rio de Janeiro, 3-14 June 1992, [1992] **International Legal Materials**876, 879

action to guard against the effect. The position facing us of course is quite different in that the alleged effect is clearly one of low probability and of unknown potential impact.

221. The reason we doubt why a wider *"precautionary principle"* is useful is precisely because a precautionary approach is inherent in the Act. As a result of the wording of section 3(f) - as discussed earlier - we are to have regard to potential effects of low probability but high potential impact. In our view this is precisely what the precautionary approach is about. Nor does the *"principle"* help (any more than does section 3(f)) by indicating how much weight is to be given to it.

222. Reference to principles or policies outside the Act which can already be found inside it is simply confusing. We think Occam's razor should apply and reference to the precautionary principle either eschewed or, if used, should be recognized as a restatement of section 3(f) and the precautionary approach. That position is encouraged by the fact that in this case we were also referred to the *"prudent avoidance"* policy or principle; and to the ALARA policy (*"as low as reasonably achievable."*) In our view all of these are simply ways of expressing concern about future effects of low probability (so that we do not know whether they will occur) and high potential (again because we do not know) impact.

223. In summary, we do not consider it is appropriate to apply the "precautionary principle" or the other policies suggested by witnesses and supported by counsel, for three reasons. First a precautionary approach is already implicit in the Act and emerges in the flexibility of the standard of proof applied by the Court and (as we shall see) in the weight given to evidence that has only been "proved" to a low standard (probability). Secondly such a "principle" is an unnecessary complication in an already complex

statutory and factual matrix. Thirdly, application of the precautionary principle (or any of the other rules of thumb) to our decision under section 105(1) would lead to double-counting of the need for caution. If the appropriate standard of proof is on a sliding scale between the balance of probabilities and beyond reasonable doubt, depending on the impact of the effect, the fact is that the appropriate caution has been exercised when deciding under section 104(1)(a) what the effects are to be considered under section 105. If the Court applies the "precautionary principle" as another matter under section 104(1)(i)[147] then the need for caution will have been considered twice.

[147] As *McIntyre* suggests at p.305

Chapter 10 : Section 105

Threshold Tests

224. Since the proposed cellsite is deemed to be non-complying[148] we have to consider whether it passes either of the threshold tests in section 105(2)(b). This states:

> *"(2) A consent authority shall not grant a resource consent –*
>
> ...
>
> *(b) Notwithstanding any decision made under section 94(2)(a), for a non-complying activity unless it is satisfied that –*
>
> *(i) The adverse effects on the environment (other than any effect to which s104(6) applies) will be minor; or*
>
> *(ii) Granting the consent will not be contrary to the objectives and policies of the plan or proposed plan;"*

In our extensive coverage of the adverse effects we have already come to the conclusion that none of them are more than minor. Hence the first threshold test is met.

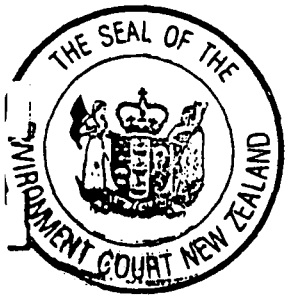
225. Although we do not strictly need to consider the second threshold test under section 105(2)(b) we find that the proposal is not contrary to the objectives and policies of the proposed City plan. That is hardly surprising given that the use of the cellsite is a discretionary activity in that plan. And there is nothing in the transitional district plan to which the proposal is contrary.

[148] Section 374 RMA

The Ultimate Test

226. Since the application passes the threshold tests we now turn to the exercise of our discretion under section 105(1)(c). The overall test to be applied when exercising that discretion is stated in ***Baker Boys Ltd v Christchurch City Council***[149] as follows:

> *"[109] As for our discretion under s 105(1)(c) we have to make an overall judgment to achieve the single purpose of the Act. This is arrived at by:*
>
> - *taking into account all the relevant matters identified under s 104*
> - *avoiding consideration of any irrelevant matters such as those identified in s 104(6) and 104(8)*
> - *giving different weight to the matters identified under s 104 depending on the Court's opinion as to how they are affected by application of s 5(2)(a), (b) and (c) and ss 6-8 of the Act to the particular facts of the case, and then*
> - *in the light of the above*
>
> *allowing for comparison of conflicting considerations, the scale or degree of them, and their relative significance or proportion in the final outcome."* ***North Shore City Council v Auckland Regional Council*** (1996) 2 ELRNZ 297."



[149] [1998] NZRMA 433 paragraph [109]

227. Mr Hearn submitted that Part II of the RMA was the essence of this case especially that part of the definition of sustainable management which refers to the health and safety of people and communities.[150] In a sense he is right but then almost every relevant factor under the RMA can be brought back to some part of the definition of sustainable management. However, we do accept that because the health of the people potentially affected by the RFR discharge is an element of sustainable management we must place a great deal of weight on that issue.

228. The main factors we have to balance in this case, but overlooking neither the other issues raised, in particular under section 104(1)(i), nor the purpose of the Act, are:

(1) The very low risk, subjectively but reasonably assessed, of adverse learning effects and/or sleeplessness from exposure of pupils at the school to RF radiation;
(2) A very low risk to pregnant women of miscarriages;
(3) The extremely low risk of exposure to RFR causing cancer, e.g. leukaemia in humans;
(4) The minor adverse visual effects from the cellsite mast[151];
(5) The provisions of the city plans[152];
(6) The ANZ Standard, and the ICNIRP standard;
(7) The fear of some teachers, pupils and parents of RFR;
(8) The possibility that the school might close (but acknowledging that such a possibility derives from SPS' own actions); and
(9) The context given by other sources of RFR and public acceptance of them[153].

[150] Section 5(2) RMA
[151] Points 1-4 come under section 104(1)(a)
[152] Point 5 arises under section 104(1)(d)
[153] Points 6-9 come under section 104(1)(i) and Part II of the Act

229. There is nothing else we need to say about considerations (4) and (5) in that list. They are either of little weight or (in the case of the proposed plan) subsumed in later considerations. When allotting the weight to be attached to the key considerations (1)-(3) we have to recognize that there is no objective risk assessment of these because it is common ground that it is impossible, on current knowledge, to say that there is a causal connection between RFR exposure and the adverse effects mentioned, or that there is a dose-response relationship, or that there is a threshold beyond which athermal harm will occur. In the end the weight given by the Court to the issue depends to a substantial extent on how far it is persuaded that there is a risk of really severe injury, or ultimately death.

230. Measuring the proposal against the other relevant issues we found first that the cellsite is not contrary to the objectives and policies of the plans. Rather it is recognized by the proposed plan. It is consistent with the ANZ Standard and the ICNIRP standard. Finally, the purpose of the Act is met in that the use by Telecom of its resource (part of the EM spectrum) is managed in a way which enables Telecom and its subscribing community to provide for their wellbeing, while not in any significant way putting at risk the health and safety of children and teachers at the school.

231. The last (ninth) consideration - the overall circumstances of the case - is important. We have to recognize how much EMR citizens of New Zealand are exposed to both voluntarily and involuntarily. As we pointed out in Chapter 1, everyone in the whole world is exposed to EMR all the time. That includes exposure to the most dangerous EMR which is high-frequency ionising radiation (such as cosmic rays). At lower frequencies there is ultraviolet light and then the narrow band of visible light with frequencies of between 10^{14} and 10^{15} Hertz. The important and conspicuous

EMR we all receive is direct from the sun. Sunlight gives each and every living thing a continuous exposure of about 80,000 $\mu W/cm^2$. Below the frequencies of visible light there is no danger from ionising radiation. This radiation can of course still be dangerous - it contains enough energy to cause heating or thermal effects. However, greater exposures are needed at lower frequencies to cause those effects.

232. So there is nearly nothing special about radio frequency (RF) radiation - it is just one of the many forms of EMR that humans have evolved to live with. However, the background natural level of RFR is very low. It is only in the last 100 years that we have become exposed to much more "un-natural" i.e. human-generated RFR. Now we receive it from televisions, microwave ovens, electric blankets, visual display units and of course cellphones.

233. As a link between the adverse (physical) health effects as we have found them, and the psychological effects discussed in Chapter 7 we observe that there is often a large gap between scientists and the public's assessment of risk. Scientists attempt to calculate risk on a probabilistic basis, whereas the public is swayed by other factors or, possibly, by the same factors viewed in a different way. One aspect of this is that[154]:

> *"Most people have considerable difficulty understanding the mathematical probabilities involved in assessing risk ... People consistently overestimate small probabilities. What is the likelihood of death by botulism? (One in two million). They underestimate large ones. What is the likelihood of death by diabetes? (One in fifty thousand). People cannot detect inconsistencies in their own risk-related choices."*

[154] Justice S Breyer: Breaking the Vicious Circle (1993) p.35

234. There is a useful discussion of the public perceptions of risk in part B of the *Woodward Report*. Most of the items in the report's list, except for suspicion of multinational companies, were exhibited by one or other of the individual witnesses for the school in this case, for example:
    - concern for vulnerable groups (e.g. children)
    - uncertainty of knowledge
    - lack of confidence in the standard-setting process
    - imposition of involuntary risk
    - (to which we add) scepticism about scientists.

235. In this case there is definitely concern for a vulnerable group - the children who go to the school. But we note that their vulnerability is because they are children not because they are exposed to RFR. There was no evidence given to us (only speculation) that children are more vulnerable to exposure to RFR.

236. As for uncertainty of knowledge, while it is true that we cannot be 100% sure that RFR does not cause adverse health effects there is no demonstrable basis for saying that it does either. There is so little evidence for an adverse health effect that it cannot be scientifically calculated as a percentage probability in small fractions of a percent. And it must be remembered that many health effects such as cancers are stochastic. For example, one can expose a group of animals to a known carcinogen and only a percentage of them will get cancer.

237. There are of course well-documented cases of scientists approving technology that turns out later to be harmful, e.g. thalidomide or growth hormone. The birth defects caused by thalidomide were referred to in this case; and the deaths from Creutzfeldt-Jakob Disease (CJD) transmitted

through growth hormone are well known. The public in general and the school in particular are entitled to ask whether microwave RFR could also have unpredicted effects in the future, possibly years into the future. The answer is that it possibly could, but we find that the possibility is very, very remote having assessed all the evidence as carefully and sceptically as we could.

238. As for the possibility that the school might suffer financially or even have to shut down, we consider the first is probable. However, that is a problem of SPS' own making. The possibility of closure is also there, but the other side of that argument is that Telecom should find an alternative site. We are satisfied there is no other available site on which Telecom could place the cellsite in the Shirley area, so its options are to keep the cellsite as proposed or move to other technology e.g. micro cellsites that are not next to the school. Although the latter would be possible (as Mr Moran for Telecom conceded), we consider it unfair to force Telecom to move to this new (and apparently expensive) technology when the need has not been demonstrated. In the situation as we assess it there is very little (or extremely low) risk to the school from the presence of the cellsite.

239. For these reasons, we consider that SPS should have to make the accommodation. If SPS has generated an atmosphere of fear and distrust amongst parents, teachers and pupils then it might have to live with the consequences of that. Having said this, SPS does have a practical remedy available to it in the light of its witness Dr Beale who said in his evidence-in-chief:

> *"the operation of this cellsite could cause adverse health effects in people spending a significant amount of time on the ground and in buildings within 30 metres of the installation."* (Our underlining).

The obvious answer for those who still consider the cellsite will cause adverse health effects is for the school to fence off and not use the area within 30m of the cellsite. We consider that step is entirely unnecessary, but obviously it is within the SPS' capacity to undertake and they should do so if they consider that prudence requires it.

240. To explain why the parents and teachers at the school held some of the opinions they did, counsel for Telecom suggested they had been fed misinformation. We heard insufficient evidence to establish whether that was so, or who may have been responsible. However, the information (as produced to us) circulated to the school and the wider Christchurch community does have a very subjective and unbalanced tone to it. As Dr Black pointed out in his evidence there are a number of published fallacies about exposure to RFR and the ANZ Standard controlling such exposure. He mentioned three of these:

> *"For example, it has been said that the Australasian Standard is set at "1/50th of the lowest level at which any harmful effects occur." This is quite wrong because the SAR of 4 watts per kilogram is nothing more than a benchmark. It is a threshold of effect, not a threshold of harm.*
>
> *Others who criticise the standard* [in the ANZ Standard] *of 0.08 W/kg claim that because the standard is based on a heating effect only, it is purely a thermal standard and does not take into account any other possible effects (e.g. athermal effects). This is also incorrect. The thermal benchmark was chosen only because it is a definite, repeatable level. By setting the non-occupational standard for RF at 1/50th of this thermal benchmark, any detectable thermal effects have long vanished. Indeed thermal effects are not observable at 1/5th of 4 watts per*

kilogram and this level (0.8 watts per kilogram) has formed the basis of some Standards overseas.

Moreover, the [ANZ] *Standard takes into account both thermal and non-thermal effects of RF exposure."* (our underlining)

241. In the end we have to say to the members of the school community that we consider they have greatly exaggerated the risks of exposure to RFR. We do not find SPS or the school community to be irrational, but we do find that they have assessed Telecom's proposal unreasonably. Perhaps there is a psychological analogy with the risk of an asteroid - we refer to the lines in Les Murray's poem ***Corniche*** which read:

"The rogue space rock is on course to snuff your world,
Sure. But go acute, and its oncoming fills your day."

242. Looking at the issue that the wider public is also concerned with – whether exposure to RFR is very safe - we have concluded that the argument over cellsites is different from other health scares such as the fiasco in England over mad cow disease (BSE) and its human equivalent nv CJD. The differences are:

- So far as we can judge the scientists and doctors who gave evidence to us for Telecom did so honestly and conscious of their responsibilities;
- RFR is not new – it is not like tampering with food by feeding previously vegetarian animals with bits of other animals (the cause of BSE) or the modification of plants by insertion of 'alien' genes (the debate over genetic modification);
- Humans are exposed to RFR (indeed EMR in all its forms) all the time;

- While the school and its inhabitants may have isolated themselves from other sources of 'unnatural' RFR (microwaves, cellphones, electric blankets etc) the rest of the community has not. If we are to stop the cellsite from operating where would this issue stop?
- There is international agreement by responsible scientists in the ICNIRP Guidelines that exposure to less than 450$\mu W/cm^2$ is very likely to be safe; and
- There is no sense of an international conspiracy of scientists hiding information from us (or the public). On the contrary, there appear to be wide attempts to spread information dispassionately (for example via the ***Woodward Report*** which we strongly recommend to everyone interested in the issue) and to continue research into various hypotheses about possible adverse health effects.

243. In our final balancing of all the factors, we place a very heavy weighting (under section 5(2) RMA) on the need to protect the school community from harmful health effects. In the end we are persuaded to the very high standard that we require, by the evidence of scientists called by Telecom and by the view of ICNIRP, that the risks to the Shirley Primary School community are very low and are acceptable and accordingly we consider that the Telecom proposal should be allowed to proceed as achieving the purpose of the Act.

Chapter 11 : Telecom's Appeal as to Condition 4

244. The appeal by Telecom asserts that condition 4 as inserted by the Council in its decision is neither a necessary or appropriate condition for dealing with RF emissions. The condition reads:

> *"4. The total power flux density of radio frequency radiation emitted by the facility, measured in accordance with the principles and methods of measurement set out in Part 2 of NZS 6609:1990:*
> *(a) at 30 metres from the mast at 2 metres above ground level (in the 90 GN sector) shall not exceed 6 microwatts per square centimetre; and*
> *(b) in addition at the nearest outside wall of the residence at 222 Hills Road at 2 metres above ground level, if permission from the owner and the occupier can be obtained, shall not exceed 6 microwatts per square centimetre."*

245. Counsel for Telecom acknowledged that in terms of fostering public confidence, consent conditions can serve a valid purpose but was however of the view that condition 4 (which is similar to the condition imposed in *McIntyre*) sets an arbitrary limit different from (and much lower than) the ANZ Standard[155] and would:
   (1) serve to undermine public confidence in the ANZ Standard and any standard setting process;
   (2) contravene the principle of "prudent avoidance" as expressed in that standard;
   (3) tend to suggest there is a health issue above but not below that level (thereby fostering community anxiety);

[155] 200 $\mu W/cm^2$

(4) possibly expose the consent holder to jeopardy for technical breach for no environmental purpose; and

(5) serve no valid purpose under the RMA.

246. Dr Black explained that prudent avoidance in the context of the ANZ Standard requires:

(a) All other things being equal, the way in which people most comfortably behave is to take the apparently safer course of action;

(b) RF should be kept as low as possible (notwithstanding the maximum limiting values in the new Standard) but not limited to the point that there is detriment to the desired performance of the installation, or excessive additional cost to the operators;

(c) Prudent avoidance can be readily attained with cellphone technology, as the use of "just enough but no more" power is inherent in the basis of technology; and

(d) Prudent avoidance is not to place reliance on arbitrary levels, but to require best contemporary practice (as stated in the standard) to achieve minimum exposure. To set specific limits sends the message to the community that there are health effects above that limit.

247. Counsel for Telecom was of the view that there was no real inconsistency between how the ***Woodward Report*** and Dr Black and other witnesses describe "prudent avoidance", but to the extent inconsistency is perceived, he submitted that the evidence of Dr Black be preferred. This is because the ***Woodward Report*** was published in 1996 and although commissioned by the Ministry of Health is not the policy of the Ministry; it did not take into account the ANZ Standard or the 1998 ICNIRP Guidelines; and the authors were not witnesses in this case.

248. For the Council in support of condition 4, Mr Hughes-Johnson's submissions have been summarised in Chapter 3 of this decision. For SPS, Mr Hearn argued that, far from justifying the approach to prudent avoidance given by Dr Black, a proper understanding of the policy as explained in the *Woodward Report* would mean that, if the Court was to grant consent it should be subject to a condition that the total power flux density at the boundaries of the school be no more than $1\mu W/cm^2$. Such a condition would provide for certainty, clarity and public confidence in the application of the principle of prudent avoidance.

249. For the reasons given in Chapter 9 we are reluctant to apply yet another principle not already stated in the Act. We consider the idea of prudent avoidance is simply an aspect of the Act's inherent precautionary approach. Further we are concerned that the ANZ Standard contains the seeds of inconsistency. The recommended conditions of operation for RF discharges can be seen as ways of staying within the standard. Or they can be seen as Dr Black suggested as an aspect of an extra prudent approach. But if they are seen as the latter then any undermining of the standard is of its own making. There is some discussion of the difficulties with the prudent avoidance and ALARA (as low as reasonable achievable) approaches in the *Woodward Report*. This reinforces our conviction we should disregard them. As does the fact that the ICNIRP guidelines do not contain any reference to the prudent avoidance principle.

250. Turning more directly to the appropriateness of condition 4, we bear in mind that:

(1) a precautionary approach is already inherent in the ICNIRP and ANZ Standards:

(a) in the ANZ Standard the level for non-occupational exposure to RFR is set at 1/50th of the exposure level at which thermal effects occur;

(b) ICNIRP imposes a maximum level of exposure of 0.08 W/kg (which translates to 450μW/cm^2) at the cellsite's frequency.

(2) we have not considered condition 4 as necessary for mitigation of any effects – principally because we consider the effects of (or the risk which is the combination of them) exposure to RFR to be so minor that they do not require mitigation. Thus any argument over the level is essentially irrelevant so long as the ANZ Standard is met.

251. Given that background, and all our findings in the previous chapter we now find that:

(a) There is no reasonable defect in the ANZ Standard's non-occupational limit of 200μW/cm^2 (or SAR equivalent) except perhaps that it is too low at the cellsite frequencies (see the ICNIRP standard which is equivalent to 450 μw/cm^2);

(b) The Council has, in the ***Telecom*** case and since, adopted a policy of not imposing a "condition 4" type of limitation, and we can see sense in consistency of conditions across consents;

(c) Imposing a limit lower than the ANZ Standard would tend to undermine the credibility of the standards;

(d) Imposing the lower limit of condition 4 would suggest that exposures of more than 6μW/cm^2 do cause adverse health effects.

(e) Any limit such as 6μW/cm^2 is arbitrary and arbitrary figures serve no purpose;

(f) The words *"SUBJECT TO"* in the ANZ Standard mean what they say, that is, any lower figures dictated by prudence or caution are subservient to the ANZ Standard for enforcement purposes[156]; and

(g) This decision may be referred to by communities elsewhere in New Zealand, so it may have some precedent value. Thus we should not undermine the Standards for no good reason if, as we have found, that the risk of adverse health effects from chronic exposure to athermal RFR at the levels to be emitted from the cellsite is very low.

252. Weighing those aspects up, we hold that both condition 4 and SPS' suggested amendment are inappropriate and that condition 4 should be deleted.

[156] Applying the principle in ***Environmental Defence Society v Manganui County Council*** [1989] 13 NZTPA 197 at 202 (CA)

Chapter 12 : Outcome

253. The outcome of these proceedings is that the SPS appeal (RMA 343/96) fails, and the Telecom appeal (RMA 429/97) succeeds. No party sought that costs be reserved, and indeed we consider this an inappropriate case for any order as to costs. Accordingly we make the following orders:

(1) Under section 290 of the Act, the decision of the Council granting resource consent is confirmed, except that it is varied by:

(a) the deletion of condition 4; and

(b) corresponding deletions to the remaining conditions where necessary to reflect the deletion of condition 4.

(2) There is no order for costs.

DATED at CHRISTCHURCH this 14th day of **December 1998**

J R Jackson
Environment Judge

THE SEAL OF THE ENVIRONMENT COURT NEW ZEALAND

ORIGINAL 162

Decision No: C 102/97

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an appeal under section 120 of the Act

BETWEEN **W K CHEN**

(RMA: 196/96)

Appellant

AND **CHRISTCHURCH CITY COUNCIL**

Respondent

BEFORE THE ENVIRONMENT COURT

Environment Judge J R Jackson - (presiding)
Mr R S Tasker

HEARING at **CHRISTCHURCH** on the 18th and 19th days of September 1997

COUNSEL

Mr J R Milligan for the appellant
Mr A C Hughes-Johnson for the respondent

DECISION

Background

This is an appeal under section 120 of the Resource Management Act 1991 ("the RMA") against the refusal by the Christchurch City Council to grant a resource consent in respect of a property at 24B Takahe Drive, Cashmere, Christchurch. The application to the Christchurch City Council ("the Council") was for a land

THE SEAL OF THE ENVIRONMENT COURT NEW ZEALAND

use consent to allow the roof to exceed the 7 metre maximum height development standard for the Living H (Hills) zone under the Council's proposed plan by a maximum of 1.66 metres.

Although Mr W K Chen is the nominal appellant he was the agent for Mr K S Chan and Mrs L Y M Lee (together called "the applicants") who are the owners of the property. The applicants have neighbours, Mr and Mrs Ireland, who live at 21 Longhurst Drive uphill and south of the applicants' property.

Chronology

The basic facts were agreed by the parties although we did not receive an agreed statement of facts. Because the timing of events is rather important to this case we outline the events as they occurred:

1995

24 April	The appellant (as agent for the applicants) applied for a building consent under the Building Act 1991. This was to add a first floor to an existing single-storey building. As will be seen, under the Council's transitional district plan the maximum height was 9 metres so no resource consent was needed as the building was a permitted activity. The plans showed that the roof was to be 0.34 metres less than that;
11 May	Building consent granted;
2 June	Work of alteration commenced;
24 June	Proposed plan publicly notified. It provided: • New height limit as of right was to be 7 metres, • Between 7-9 metres high became a discretionary activity.

27 July	Concern was expressed by a neighbour as to the extent of shading to be produced by the applicants' new roofline;
9 August	Roof tiling completed;
11 August	The Council gave notice requiring that work above 7 metres cease. It is common ground that by this date all work above that height had been completed;
17 August	Application ("the application") made retrospectively for resource consent for the roof above the 7 metres limit;
19 December	Hearing before a commissioner appointed by the Council.

1996

11 March	Commissioner's decision declining land use consent;
27 March	Appeal filed with this Court in the names of the applicants;
12 August	Mr and Mrs Ireland, submitters on the application, sought orders striking out the appeal on the grounds that the applicants were not submitters;
26 August	The Environment Court made an order substituting the present appellant. At that stage section 10B RMA was shortly to come into effect and counsel for Mr and Mrs Ireland indicated that he would take further instructions in the light of that.
2 September	Section 10B became part of the principal RMA

1997

31 January	At a further call before this Court counsel for Mr and Mrs Ireland indicated that he had not yet obtained further instructions;
24 March	Mr and Mrs Ireland withdrew as parties to the present proceeding.

One feature in this chronology is of interest, and of possible significance, if the Court is able to take *"justice or fairness"* into account in the exercise of its discretions under section 104 and 105 of the RMA. It is that, up to 24 June 1995, the applicants could have obtained a certificate of compliance for the building work, and if they had, they would not have required a resource consent when the proposed plan was notified for the work they still had to complete.

The Statutory Instruments

The transitional district plan is the former Heathcote District Council district scheme under the Town and Country Planning Act 1977 ("the TCPA"). Under the transitional plan the maximum height permitted in the relevant (Residential 8) zone was 9 metres. The relevant objectives and policies for residential zones in the transitional plan are as follows:

> *"Objective 2* (page 17)
>
> *To provide for diversified residential development involving a variety of housing types, innovative subdivision design and a high standard of amenity.*
>
> .....
>
> *Policy 2.2* (page 17)

To use the bulk and location and subdivision controls to achieve a reasonable amount of the amenities of sunlight, view and privacy for residential sites. (Our emphasis).

.....

Objective 4 (page 18)

To maintain and improve the amenities of the existing residential area and to protect the character of the district.

.....

Policy 4.2 (page 19)

Bulk and location standards and landscaping requirements for existing residential areas will ensure that the amenities are maintained and improved by providing for such factors as visual and aural privacy, shading control, off-street parking, protection of views and landscaping." (Our emphasis).

It is of some importance (when coming to the question of how much change there has been between plans) that the transitional plan purported to protect views.

The relevant objectives and policies in the **proposed** plan are:

*"**Objective: Diverse Living Environments** (p 11/3)*

11.1 A diversity of living environments based on the differing characteristics of areas of the city.

Policy: Character

11.1.2 To maintain the general character of the suburban living environment.

.....

***Policy: Building Height** (page 11/6)*

11.1.5 To provide for different height of buildings in living environments based on the existing character of an area, on strategic objectives of urban consolidation, and to provide for a diversity of living environments.

.....

***Objective: Adverse environmental effects** (page 11/12)*

11.4 A living environment that is pleasant and within which adverse environmental effects are minimised, while still providing the opportunity for individual and community expression.

.....

***Policy: Privacy and outlook** (page 11/13)*

11.4.5 To ensure that the design and siting of development does not unduly compromise outlook, privacy and views of adjoining development, having regard to the character of the area and reasonable expectations for development."

As we have said, under the proposed district plan, buildings in the Living H zone between the development standard of 7 metres [rule 2.2.3] and the critical standard of 9 metres [rule 2.4.4 (p.2/19)] are limited discretionary activities. Clause 6, Section 2 (page 2/38) lists the relevant assessment matters to be considered by the Council under the heading:

"6.2.2 Building height and sunlight and outlook for neighbours".

We consider the individual criteria later in this decision.

The Evidence

The core issue for the two parties was the extent of the effect of the applicant's roof on the views enjoyed from Mr and Mrs Ireland's property.

For the applicants we heard evidence from Mr Chan himself; from their solicitor, Mr P L Mortlock; and from two planners, Mrs J Carter and Ms J Whyte. Mrs Carter is a planner employed by the Council. She had given evidence at the hearing by the Commissioner in which she recommended that the land use consent be granted. Since she was not being called before us by the Council she was called by Mr Milligan for the applicants. Before us she reiterated her expert opinion that on balance the land use consent should be granted. To like effect we heard from Ms J Whyte, an independent planner engaged by the applicants.

For the Council we heard evidence from Mr Ireland - who expressed his concern about the effect of the applicant's roof on the views from his house - and Ms Robson, a planner. She had been originally engaged by Mr and Mrs Ireland, and gave evidence on their behalf at the Commissioner's hearing, but since Mr and Mrs Ireland had withdrawn from this case (as a party) she was called by the Council before us.

In assessing the evidence, we find that the evidence of both Mrs Carter and Ms Whyte was more detailed and fuller than that of Ms Robson. The former witnesses also had photographs demonstrating the points they were making and

we find that by a clear margin we prefer their evidence. We should also add that at the invitation of the parties we inspected the site after the hearing and that inspection confirms our assessment of the evidence.

We should also comment on three evidential issues that arose during the hearing. First we were concerned that the Council was calling only two witnesses and that one was Mr Ireland who has an interest in the matter, and the other was a planner who had originally been called before the Commissioner by Mr and Mrs Ireland. It appeared to us that by calling those witnesses, and only those witnesses, at the appeal hearing, the Council could be seen to be acting with insufficient independence. Put simply, the Council would look as if it was taking the side of Mr and Mrs Ireland. We raised the issue whether it would have been preferable (and the Council has had since 24 March 1997 to arrange this) to instruct another independent planner for their opinion on the issues. As against that Mr Hughes-Johnson submitted that the Council had a duty to defend the Commissioner's decision. To do that, he said, it should call the best evidence available, and indeed the only evidence the Council had available was that of Mr Ireland and this planning witness at the Commissioner's hearing.

We still have some doubts about that, although we acknowledge that some independence was imparted to the process by the Council appointing a Commissioner. In any event we accepted Ms Robson's evidence and have considered it. Mr Milligan appeared to consider this issue was more relevant to any issue of costs.

The second evidential issue was that Ms Robson included in her evidence a reference to the Council's section 32 analysis in respect of the proposed plan. Mr Milligan objected to that. We allowed the evidence in when Mr Hughes-Johnson made the standard answer that if we were concerned about the evidence that could go to the weight we attributed to it. However we were concerned

about difficulties described by Mr Milligan (that the evidence is hearsay and may also have been challenged in submissions on the proposed plan) and so we invited later submissions from counsel on that in case we could come to a definite conclusion as to its admissibility. We have not received those (and no longer require them). Having admitted the evidence, the approach we take is to give that section of Ms Robinson's evidence minimal weight. Indeed it is of little relevance anyway. The principal reasons for any objective, policy, or method should be stated in the proposed plan itself: section 75(1)(e) RMA.

Finally Mr Hughes-Johnson referred to the passage of the Resource Management Amendment Act 1996. In cross-examination he elicited from Mr Chan that Mr Chan and Ms Lee had made submissions to the parliamentary select committee about this. Mr Hughes-Johnson referred to Hansard and the relevant pages of Hansard were put in without objection by Mr Milligan. Those pages do not contain any comment on what the attitude of the Members of Parliament was in relation to whether or not section 10B of the RMA (as added by the 1996 Amendment) was retrospective or not in its operation. However Mr Hughes-Johnson also put to Mr Chen in cross-examination (and indeed annexed to his own submissions) a copy of the report of the deliberations of the Parliamentary Select Committee in which the issue of retrospectivity was specifically mentioned in the context of Mr Chan's and Ms Lee's submissions.

We consider the occasions on which this Court needs to resort to Hansard itself are not frequent. And at first consideration we deprecate the idea of introducing hearsay reports of the proceedings of a Parliamentary Select Committee. We have had no regard to that report in this case.

Section 104 Considerations

In considering whether or not to grant consent under section 105(1)(b) of the RMA we need to consider the relevant matters in section 104 of the Act. The relevant parts of this are:

(a) *Any actual and potential effects on the environment from allowing the activity.*

Mr and Mrs Ireland previously had a one-storey building in front of them. They returned from an overseas holiday to find a two-storey building of 8.66 metres that interferes substantially with the views from the ground floor of Mr and Mrs Ireland's own building. Understandably they were distressed by that. However, a first floor could have been added to the applicants' building as of right, even under the proposed plan, in a way that would have interfered with the views from Mr and Mrs Ireland's ground floor. It is only from the first floor of the Ireland building, and in particular from their living rooms and deck, that the offending part of the applicant's building (the 1.66 metres above the 7 metre as of right limit) really has an effect on the Irelands' view. We leave more detailed consideration of the *"adverseness"* of that effect for when we consider the factors listed in the proposed plan because they give the context in which the adverseness of the effects on the views from Mr and Mrs Ireland's property can be assessed.

(b) *Any relevant objectives, policies, rules or other provisions of a plan or a proposed plan.*

As we have said a reference to the statutory instruments shows the building work and/or the building are a permitted activity under the **transitional** plan. While the objectives show that the district plan considers it desirable

to protect views (and we add that whether or not it was valid to do so under the TCPA - ***Anderson v East Coast Bays City*** (1981) 8 NZTPA 35 (HC) - it is certainly proper under the RMA) the rules give effect to that by permitting building up to a maximum height of 9 metres. To that extent the applicants' roof line, as built, is in compliance with the objectives, policies and rules of the transitional plan.

As for the **proposed** plan obviously the proposal is consistent with the objectives and policies of the proposed plan since it specifically contemplates an application of this kind. A discretionary activity under the RMA (as under the TCPA) is one which is appropriate generally in the zone, but not necessarily on every particular site. We now turn to the criteria listed in the rules of the proposed plan (at p.2/38) as matters to be considered:

> *"(a) ...the extent to which the character of the site and the surround area remains dominated by open space, rather than by buildings, with buildings at low heights and low densities of building coverage."*

We find that the area surrounding 24B Takahe Drive is not dominated by open space. To the contrary it has buildings which are more often than not quite luxurious in scale. There are many two-storey houses and there is a relatively high density of building coverage.

> *"(b) The extent to which the proposed buildings will be compatible with the scale of other buildings in the surrounding area."*

The large two-storey house built by the applicants is certainly compatible with the scale of other buildings in the surrounding areas. That was the evidence of the expert witnesses called for the applicants. It was not controverted by Ms

Robson; was demonstrated to some extent by the aerial photograph produced for the applicants; and was confirmed by our site visit.

> *"(c) The effect of the increased height...extends in terms of visual dominance of buildings of the outlook from other sites..."*

The photographs produced by and the opinion of the planning witnesses called for the applicant show that the applicants' roof line is not unduly dominant. Mr and Mrs Ireland still enjoy a panoramic view. Whereas the foreground to their view was formerly vegetation between their house and that of the applicants', their foreground is now small trees and a rather bland roof. That roof does not dominate the view. Since there is a reasonable distance (about 30 metres) between the two houses, Mr and Mrs Ireland could provide more screen planting (of the sort already obscuring some of the applicants' house) along their boundary.

> *"(d) The extent to which the proposed building will overshadow adjoining sites and result in reduced sunlight and daylight admission, beyond that anticipated by the recession plane requirements for the area."*

> *"(e) The extent to which development on the adjoining site, such as large building setbacks, location of outdoor living spaces, or separation by land used for vehicle access, reduces the need for protection of adjoining sites from overshadowing."*

These relate to sunlight and shadow and are not relevant in this case since the applicants' property is downhill of Mr and Mrs Ireland's house.

"(f) The extent to which the increased height would have any adverse effect on other sites in the surrounding area in terms of loss of privacy through being overlooked from neighbouring buildings."

There is no loss of privacy for Mr and Mrs Ireland.

"(g) In the Living H Zone, the extent to which the increased building height will result in decreased opportunities for views from properties in the vicinity."

The expert witnesses generally agreed that (g) was one of the two most relevant factors [(h) was the other]. There is no doubt that there is a decreased view from Mr and Mrs Ireland's property. This is however, a notoriously subjective matter. We sympathise with Mr and Mrs Ireland: anyone who has been used to a view and then finds that a building protrudes into their view is normally upset. We also find that the photographs show, and our inspection confirmed, that part of the potential view that Mr and Mrs Ireland could have (to the east of the applicants' roof) is obscured by small trees on Mr and Mrs Ireland's property which they obviously prefer to keep there rather than increase their view. Nor does the applicants' roof protrude into the horizon for Mr and Mrs Ireland from their first floor. They can still look down to Hagley Park and all the Plains beyond. While the applicant's roof does decrease the opportunity for views from their upstairs living space and deck it is only to a minor extent. Their view is not, as the policy puts it, unduly compromised.

"(h) In the Living H Zone where it would be unreasonable to require the development standard for height to be complied with given the height of existing buildings in the surrounding locality."

As we have said many of the houses in the surrounding locality are two-storeys. In the circumstances we consider it would be unreasonable to require the applicants' roof to be kept down to a seven metre development standard.

> *"(i) The ability to mitigate any adverse effects of increased height or exceedance of the recession planes, such as through increased separation distances between the building and adjoining sites or the provision of screening."*

We were told by the applicants' witnesses that the applicants' house is further away from the boundary than it needs to be. Indeed Mrs Carter went so far as to say that if the applicants had built as close as they were able to the Irelands' boundary and gone up to the maximum of 7 metres as of right under the proposed plan then an effect of the same magnitude as that actually existing could have been created. Mr and Mrs Ireland would have not been able to object to that. As far as screening goes there appears little scope on the applicants' property, but as we have said Mr and Mrs Ireland could, if they wished allow existing trees to grow and obscure more of the applicants' roof.

We now turn back to the other relevant matters in section 104(1) especially paragraph (i):

> (i) *Any other matters the consent authority considers relevant and reasonably necessary to determine the application.*

Mr Milligan urged on us the facts that the building consent had been obtained and the work started before the proposed plan was notified was relevant and that fairness required we take that into account. Mr Hughes-Johnson fairly and responsibly accepted that was a proper consideration. The effect of this is limited however by the fact that the applicants had received at least constructive

notice of potential problems from notification of the proposed plan. In cross-examination, Mr Hughes-Johnson put a *"Project Information Memorandum"* (PIM) to Mr Chan which the latter accepted had been received by the appellant Mr Chen (as the applicants' agent). That PIM showed that the Council standardly and expressly warned recipients of such memoranda of the need for certificates of compliance.

Mr Milligan also submitted that we should take into account that section 10B would, if the same scenario had occurred since the Resource Management Amendment Act 1996 came into force, have protected Mr Chan and Ms Lee and that they were simply unfortunate that their predicament arose during the 12 or 15 months before the Amendment came into force. Mr Hughes-Johnson pointed out that that would be to give *de facto* retrospectivity to the 1996 Amendment even though, as Mr Milligan had conceded, section 10B is not retrospective in operation. The reason for his concession, which we think was properly made, was that unlike section 2A of the RMA which also came into force on 2 September 1996, section 10B is substantive rather than procedural. Therefore it is not retrospective, and the High Court decision in ***Kaitiaki Tarawera Inc v Rotorua District Council*** [1997] NZRMA 372 which decided that section 2A is retrospective can be distinguished. However, we agree with Mr Hughes-Johnson that Mr Milligan cannot bring in section 10B from the side and accordingly we disregard section 10B for the purposes of considering this matter.

Section 105

Turning then to our overall weighing of all matters (including the purpose of the RMA) under section 105(1) the other matter we have to consider is the weight to be given to the proposed plan. We bear in mind that it is not yet in force and there have been many submissions on the objectives, policies and rules which are

relevant to this case. The approach of the Court was stated in ***Hanton v Auckland City Council*** [1994] NZRMA 289, 305 to be:

> *"Rather than have a general rule about the cases where a proposed plan is to prevail over inconsistent provisions of an operative plan, and vice versa, each case is to be decided individually according to its own circumstances"* (applied in ***Lee v Auckland City Council*** [1995] NZRMA 241).

Mr Hughes-Johnson submitted that this was a case where the proposed plan has produced a *"paradigm shift"* from the old TCPA regime to the new RMA regime (***Chan v Auckland City Council*** [1995] NZRMA 263) with the effect that the proposed plan should be given more weight. However, we do not find that this is such a case. Indeed the planner called for the Council gave evidence which in effect confirmed this. Although Ms Robson said that considerable weight should be given to the proposed plan, earlier in her evidence she had stated that the policies and controls in the transitional plan *"have been refined in the proposed review"*. The references in the transitional plan to protection of views (quoted earlier) confirm that. Far from being a *"paradigm shift"* there has been a relatively smooth and consistent transition from one plan to the next (proposed) plan. In those circumstances we consider we should give relatively less weight to the proposed plan.

We do not give any weight to the fact that Mr Chan and Ms Lee could have been completely protected by a certificate of compliance but did not obtain one. We agree that since their agent received a document - the PIM - drawing that issue to his attention, they are bound by the knowledge and/or lack of action of that agent. The effect of the PIM has been to reduce the weight we have given to the fact that their roof was legal when they built it.

However where the community decides, in a proposed plan, to change (slightly in this case) the allocation of property rights does not mean that people in the situation of the applicants should automatically be penalised (as ***Hanton*** recognises at 305 when it refers to *"circumstances of injustice"*). And conversely we do not consider that Mr and Mrs Ireland have any grounds for saying they are being unfairly treated if the roof is allowed to stay. The effect of the roof on their views is relatively minor. Too much weight should not be placed on section 5(2)(c) of the RMA. Just because the applicants' roof does cause some adverse effect on views does not mean that effect has to be avoided. As Temm J. stated in ***Shell New Zealand Ltd v Auckland City*** [1995] NZRMA 490 at 495:

> *"There seems to me no doubt that the Act contemplates applications for consent that not only do not enhance an amenity but also do not even maintain it."*

The adverseness is a question of degree in the overall balancing under section 105(1) of the RMA. Taking those matters and all the section 104(1) considerations into account we are of the view that a resource consent should be granted.

Since our decision reverses that of the Commissioner it is important for the parties to understand that we have come to our decision on the basis of the evidence as presented to us. It is clear that the Commissioner heard more evidence than we did but we cannot take that into account. We also observe that the Commissioner may have misled himself in a number of ways, and in deference to the obvious care and attention he gave the matter we now comment on those.

First the Commissioner was persuaded that he should consider the situation as if the applicants' roof had not been constructed. That is certainly correct as a general approach. For example in ***Taylor v Heathcote County Council*** (1982) 8 NZTPA 294 a builder applied for a retrospective dispensation from the recession plane requirements in the County's already notified review. The Council and Planning Tribunal refused the dispensation and their decisions were confirmed by the High Court in the reported case. The fact that the building had already been erected was not, it appears, considered relevant.

The factual situation is different here. It was common ground before us (if not before the Commissioner) that the roof line and underlying structure were complete before the proposed plan was notified. Indeed the only reason that Mr Milligan did not argue that the applicants had existing use rights for the building, was because some fitout building work had to be carried out (inside the roof as we understand it) after notification of the proposed plan and that work was caught as a discretionary activity before section 10B came to the rescue (but not for the applicants).

In those circumstances we consider it is appropriate for us to consider the situation as it was when the roof became illegal as part of the fairness considerations in section 104(1)(i). While the Commissioner certainly considered fairness or injustice he appears to have done so from a different starting point (an imaginary clean slate). We consider that was wrong in the particular circumstances of this case.

Secondly the Commissioner heard some valuation evidence which was not given to us - especially evidence as to the reduction in value of Mr and Mrs Ireland's property because of the interference with their view. Such evidence needs to be carefully used because it can lead to *"double-weighting"*. A valuation is simply another expert opinion of the adverse effect (loss) being assessed by the Council

or Commissioner (or Court) (see ***Goldfinch v Auckland City*** A66/95), whereas the Commissioner "also" took into account "a potential diminution in value to the Irelands property". Such a valuation can be used to confirm the Council's opinion of the scale of an effect but not as an additional or separate factor.

Thirdly he did not expressly consider the application in terms of the discretionary factors expressly set out by the Council in rule 6.2.2 (proposed plan p.2/38). He earlier describes the evidence about some of those criteria, but then in his "statutory considerations" simply says (p.21 of his decision) that he has *"taken into account the relevant objectives and policies and rules."* With respect, that is an inadequate assessment of the relevant factors. He appears to have overlooked that the activity is a limited discretionary activity under the proposed plan [rules 2.1.1(b) (p.2/12) and 6.1(c) (p.2/38)] and therefore the exercise of the Council's discretion (and, on appeal this Court's discretion) should be limited to the relevant matters stated in the rules.

That is the scheme contemplated by section 76(3B) of the RMA and it is put into effect in the rules of the proposed plan we have referred to. That is why we have considered the roof *"activity"* in terms of each of the factors in rule 6.2.2. We accept that there is an over-riding *"check"* in the form of the section 105(1) discretion (being informed by Part II of the RMA) but where a plan (or proposed plan) sets out careful criteria then applicants are entitled to have their application tested primarily by those criteria.

Determination

Accordingly under section 290 of the Act we make the following orders:

1. the appeal is allowed and the respondent's decision is cancelled; and

2. a land use consent as sought is granted to the appellant.

Our preliminary view, without in any way determining the issue, is that the applicants should have some costs from the Council and we invite the parties to resolve that by agreement. If that cannot be achieved then leave is reserved to file memoranda on the issue.

DATED at **CHRISTCHURCH** this 26th day of **September** 1997.

J R Jackson
Environment Judge

THE SEAL OF THE ENVIRONMENT COURT NEW ZEALAND

ORIGINAL

Decision No **A 42/96**

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of an appeal under section 120
BETWEEN	JJC BUNNIK
	(Appeal RMA 428/95)
AND	THE WAIKATO DISTRICT COUNCIL
	Respondent
AND	R J and D M BLAIR
	Applicants

BEFORE THE PLANNING TRIBUNAL

Planning Judge DFG Sheppard (presiding)
Mr P A Catchpole
Dr A H Hackett

HEARING at HAMILTON on 8 May 1996

APPEARANCES

The appellant in person
Miss C Heaton for the respondent
Mr C J Hlavac for the applicants

DECISION

Introduction

This appeal challenges a grant of land-use consent for expansion of a child care facility.

The applicants, Mr and Mrs Blair, own a property at Marychurch Road, Matangi, with an area of 4.5372 hectares. They have their home there and they also operate a child care facility on the property, under the style of Country Creche, in a building in a former orchard on the land. The property is in the Rural B zone of the transitional district plan, and the creche was authorised by resource consent granted in 1992 for a maximum of 25 children. The present proposal is to expand that to 40 children. An additional building would be erected, having a floor area of about 70.4 square metres; and the hardstanding area for carparking would be extended to provide spaces for 9 cars. The site is largely screened from view from the road by trees and shrubs.

The appellant, Mrs JJC Bunnik, has a farm property on the opposite side of Marychurch Road. Having lodged a submission in opposition to the resource consent application for expansion of the creche, she brought the present appeal by which she raised three grounds for refusing consent : noise, traffic safety, and devaluation of her property.

Effects

By section 104(1)(a) of the Resource Management Act when considering a resource consent application a consent authority is to have regard to any actual and potential effects on the environment of allowing the activity. That requirement is expressed to be subject to Part II, which means that in the event of a conflict, the provisions of that part are to prevail over it: *Environmental Defence Society v Mangonui County Council* [1989] 3 NZLR 257; 13 NZTPA 197 (CA). We are not aware that having regard to any of those matters in this case would conflict with any of the contents of Part II. We therefore consider the evidence relating to the three grounds of opposition raised by Mrs Bunnik.

Mrs Bunnik's evidence on this topic related to noise emanating from an increased number of children at the creche. She remarked that she considered that she had a

right, as an elderly person who had lived at Matangi for 34 years, to live in a quiet area; and that if 40 children are playing outside, it is not possible that they would be silent. She considered that it would not be very nice to live in an area with that noise.

Mrs Blair confirmed that at certain times of the day the children at the creche play outside, although it is unlikely that they would all be outside at once. She had never received complaints of the noise of the children playing from any of the other neighbours. For noisier activities, such as kicking a ball or bubble blowing, the children are taken to the outer paddocks, ie, further away from Mrs Bunnik's farm. The trampoline is also located in those paddocks.

A consulting engineer with considerable experience in noise control and measurements, Mr D H Sim, was called to give evidence for the applicants. Because Mrs Bunnik had refused permission for him to make measurements on her property of the noise from the creche, he had made measurements on the boundary of her property, and made adjustments to allow for the additional distance to Mrs Bunnik's home from the boundary to her property. Mr Sim estimated that the distance from the creche to Mrs Bunnik's home is 215 metres. He deposed that at the notional boundary of Mrs Bunnik's property the maximum noise level from the children active in the creche playground was 46 dBA. The witness gave the opinion that increasing the maximum number of children at the creche from 25 to 40 would not increase the noise level by the same proportion, and would not significantly increase the noise level at the notional boundary of Mrs Bunnik's property. His reasons for that opinion were, in short, the frequencies of the children's voices, the short intensities of them, and the effect of noise from the passing traffic. Mr Sim concluded that 40 children at the creche would not produce sound levels greater than 50 dBA at the notional boundary of Mrs Bunnik's property.

An environmental health officer employed by the District Council, Mr JRC Blackness, gave evidence of having made sound measurements at the notional boundary of Mrs Bunnik's home of the noise from the creche at a time when 25 children were playing outside. The notional boundary is 20 metres from the facade of Mrs Bunnik's home and in his estimation about 150 metres from the creche. Mr

Mackness deposed that the noise of the children was barely audible, that the dominant noise was birdsong, and that the noise of passing traffic was readily audible. He concluded that the noise from the children at the creche did not exceed the maximum permitted by the district plan of 50 dBA L_{10}. It was put to the witness by Mrs Bunnik that the time of his visit to make the measurements had been arranged with Mrs Blair. He denied that, and there is no evidence to suggest that Mr Mackness's measurements and his evidence of them was other than faithfully done in accordance with his duties as an environmental health officer and as a witness in these Planning Tribunal proceedings.

At Mrs Bunnik's request, we visited her home in the course of a site visit following completion of the evidence in this appeal. We did not visit in order to make a test of the noise from the creche, but to assist us to assess the evidence given at the hearing. At the time of our visit there were children playing outside at the creche, and at that time they were just audible from Mrs Bunnik's front veranda. We observed nothing in our visit to Mrs Bunnik's home, or to the creche, that caused us to doubt the expert evidence given by Mr Sim and Mr Mackness. We find that the proposed increase in the maximum number of children at the creche would not have any significant actual or potential effect on the environment of noise.

Traffic

The second effect of increasing the number of children at the creche that was raised by Mrs Bunnik was increased traffic dangers from a greater number of vehicles entering the creche site. The appellant deposed that there had been 2 accidents within 30 metres of each side of the entry to the creche site in the last 3 months of 1995; and that the vision of drivers approaching the creche from the west could be improved by realigning the road. In cross-examination, Mrs Bunnik stated that she was not aware of any other accidents that she could recall. She had no personal knowledge of one of the two that she mentioned.

Mrs Blair had herself been involved in an accident, which occurred when she was leaving her home by its drive, which is separate from the drive for the creche, and is

some 50 metres closer to the bend in Marychurch Road to the north. She was not aware of any other accidents in the vicinity of her property. Mrs Blair deposed that the redevelopment of the parking area for the expanded creche would include widening the driveway to allow for two-way traffic in and out of the property. She also deposed that children are delivered at staggered times during the morning, and supported that with records of delivery and collection times for all the children.

Evidence on traffic safety was given by Mr G J Gordon, a professional engineer with more than 9 years' experience in road and traffic engineering. He had been district roads engineer for the District Council at the time the Blairs' resource consent application had been heard and decided by the District Council. Mr Gordon deposed that the entry to the creche site has more than 700 metres visibility to the south and 125 metres visibility to the north. The limit for visibility to the north is a sharp curve in the road, which is sign posted with an advisory speed of 65 kph. He considered that the road curvature has the general effect of limiting vehicle speeds to the range of 60 -75 kph.

Mr Gordon referred to Guidelines for Visibility at Driveways which had been published by the Roads and Traffic Standards Section of the Land Transport Safety Authority in 1993, by reference to which the minimum visibility appropriate for the creche drive would be 105 metres. On that basis he gave the opinion that the available visibility exceeds this provided that the stretch of the road between the drive and the bend is kept clear of vegetation that would obstruct a driver's view. In cross-examination Mr Gordon confirmed that the visibility to the north is adequate for the traffic speed environment. He also confirmed his approval of the carparking and manoeuvring plan that had been submitted by the applicants.

From our own observations when we visited the site, we find Mr Gordon's evidence acceptable. In reliance on that evidence, we find that the increased traffic generated by increasing the maximum number of children that may be accommodated at the creche to 40 would not have an effect on the environment of increasing traffic hazard.

Devaluation

In general if a property is devalued as a result of activity on an adjacent property, the devaluation reflects effects of that activity on the environment. For the purpose of considering a resource consent application, it is preferable to consider those effects directly, rather than to consider the market's response to them. A market can be an imperfect measure of environmental effects.

In this case, although Mrs Bunnik expressed her concern that the proposed expansion of the creche would cause devaluation of her property, she called no evidence to support that claim. We do not consider that the expansion would have any significant effects on the environment, and we are not persuaded that it would cause any decrease in the value of her property.

Instruments

Section 104(1) of the Resource Management Act directs that when considering a resource consent application a consent authority is to have regard to various instruments made under the Act. The only instruments that are relevant in this case are the transitional district plan and the proposed district plan. The proposed district plan has reached the stage at which the contents which are applicable to the proposal are now beyond challenge in the process by which the plan becomes approved. It represents the current policies of the community. We focus on the provisions of the proposed plan accordingly.

By the proposed district plan the Blairs' property is in the Rural zone. Childcare facilities for up to 10 children are permitted activities in that zone; and for greater numbers they are discretionary activities.

The proposed district plan contains extensive statements of objectives and policies. Mrs Bunnik's appeal did not raise any grounds relating to any of them. The evidence of an assistant planner employed by the District Council, Ms T L Moore, addressed them in detail, and we have had regard to that evidence. However we do

not need to give point-by-point consideration to them all in this decision. It is sufficient that we consider the principal issue, which is that the creche expansion will be on land containing elite soils, which the proposed district plan seeks to protect.

The relevant objective in that respect (paragraph 9.1.2) is —

> To protect high quality soils so that their potential versatility is maintained in terms of their capability for the production of food, fuel, and fibre (including timber).

A related policy (paragraph 9.2.1) is—

> To minimise the amount of land taken out of productive use.

The Blair's land contains elite soils which are potentially versatile for production. However we find that the proposed new creche building is to be located so as not to encroach more than is necessary on to the grazing land at the rear of the creche, and that the extension of the hardstanding for additional car parking spaces would not take any land out of productive use. In our judgment the proposal is not contrary to the objectives and policies of the proposed district plan, and having regard to the detailed assessment criteria in that plan, it is deserving of resource consent as a discretionary activity.

To the extent that the transitional district plan remains effective, the proposal is a non-complying activity because of the site's elite soils. We find that the effects of the proposed extension of the creche would be minor, and would not be contrary to the objectives and policies of that plan, which expressly recognises the need for residents to have access to community opportunities necessary for their personal well-being and quality of life (paragraph 9.1(i)). In our judgment, the proposal deserves consent in terms of the transitional district plan as well.

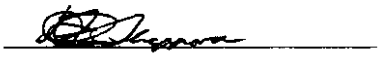
Conclusion

We consider that the proposed expansion of the creche would promote the sustainable management of natural and physical resources. Granting consent is

managing the use, development and protection of the site in a way that enables the applicants, their customers, and the local community to provide for their well-being. By the minor expansion of an existing facility rather than establishing a new one, it sustains the potential of the elite soils of the locality to meet the needs of future generations, and safeguards the life-supporting capacity of the soil. The conditions of consent imposed by the District Council avoid, remedy and mitigate any adverse effects on the environment. In addition, the operation will have to continue to comply with the noise control rule of the proposed district plan, and the District Council will continue to have responsibility for maintaining Marychurch Road in safe condition, trimming vegetation to maintain sight lines if necessary.

For those reasons, the appeal is disallowed and the respondent's decision is confirmed.

DATED at AUCKLAND this 24th day of May 1996.



DFG Sheppard
Planning Judge

bunnik.doc

BEFORE THE ENVIRONMENT COURT

Decision No. [2017] NZEnvC 204

IN THE MATTER	of the Resource Management Act 1991
AND	of an appeal pursuant to s 198E of the Act
BETWEEN	CITY RAIL LINK LIMITED ('CRLL') (SUCCESSOR TO AUCKLAND TRANSPORT)
	KIWIRAIL HOLDINGS LIMITED
	(ENV-2017-AKL- 000059)
	Requiring Authorities
AND	AUCKLAND COUNCIL
	Territorial Unitary Authority

Court:	Principal Environment Judge Newhook Environment Commissioner RM Dunlop Environment Commissioner DJ Bunting
Hearing:	6, 7, 8 & 9 November 2017
Appearances:	A Beatson and N Garvan for CRLL A Arthur-Young and A Cameron for KiwiRail Holdings Limited V Evitt and Ms L Ziegler for Auckland Council D Allan and D Sadlier for CB Trustees 2012 Limited M van Zonneveld for himself R Bartlett QC for Qambi Properties Limited (to announce no participation in the hearing by that party)
Date of Decision:	15 December 2017
Date of Issue:	15 December 2017

DECISION OF THE ENVIRONMENT COURT APPROVING REQUIREMENTS FOR DESIGNATION (ALTERATIONS)

REASONS

Introduction

[1] On 23 May 2017 Auckland Transport (now succeeded by CRLL) and Kiwirail Holdings Limited applied to the Court under s 198E RMA for alterations to the City Rail Link designation 1714 (in particular Designations parts 3 and 6) and Kiwirail

Designation North Auckland Line 6300, seeking to have it confirm those requirements at first instance in the place of Auckland Council.

[2] The requisite procedural steps under ss 198B, 198C, and 198D RMA had been taken on various dates in March and May in 2017.

[3] Under s198E the Applicants expressed their desire that the proceedings continue before the Environment Court instead of the Council.

[4] The Application was supported by an affidavit of GE Edmonds and accompanied by a list of names and addresses of persons to be served with the notice.

[5] While the application was on the books of the Auckland Council, 79 submissions were lodged either in favour of or in opposition.

[6] Process was forthwith commenced by the Court under s 274 RMA gaining notices from parties expressing interest in the proceedings. Notices were received from the following persons and entities:

- CB Trustees 2012 Limited
- Qambi Properties Limited
- Mr Brian MacCormack
- Mr Martin van Zonneveld

Nature of the relief sought by the requiring authorities

[7] The City Rail Link ('CRL') is a significant 3.4 kilometre-long passenger railway line being constructed largely underground from Britomart Station in Central Auckland to the North Auckland Line ('NAL') where it cuts through Mount Eden. It was the subject of confirmed designations (1–6), construction having now commenced at the northern end of the line.[1]

[8] It was the largely unchallenged claim of CRLL (and previously AT) that the CRL will almost double the capacity of the existing rail networks servicing Auckland's CBD, and provide significant connectivity and improvements in the public transport

[1] The designation was confirmed by the Environment Court by consent order except in relation to designation 5 which was the subject of the *Tram Lease Ltd v Auckland Council* [2015] NZEnvC 191 decision.

infrastructure system in Auckland.

[9] Subsequent to the confirmation of the designations, considerable further design work has been done resulting in changes said by the requiring authorities to be desirable, indeed necessary, to both the CRL and the NAL in the general vicinity of where they intersect in the suburb of Mount Eden.

[10] The prime focus of the parties in the case before us was an element of the proposed changes that includes the removal of the vehicular component of the over-bridge that had been required above the railway tracks on the alignment of Porters Avenue and Wynyard Road in part of CRL existing Designation 6.

[11] The issues in dispute in the case narrowed considerably during the course of the conferencing of groups of expert witnesses, and subsequently in response to procedural direction by the Court. The narrowed issues are described below.

Issues in dispute

[12] In the week preceding the hearing members of the Court read the enormous collection of statements of evidence lodged by the parties in preparation for the hearing, together with the joint witness statements from the conferencing of several groups of experts. The Court perceived that the issues should have narrowed considerably from those at large prior to evidence exchange. The parties were directed to confer and to produce by the end of Friday 3 November a succinct statement of the issues remaining to be resolved in the case, focussing on the "true theory of the case". Reference was made to an earlier minute from the Court about the requirements of the Evidence Act 2006 as to relevance and evidence being likely to provide substantial help to the Court. Counsel were also required to provide to the Court a list of witnesses they agreed would not be needed for cross-examination.

[13] A further direction was made that after the opening submissions by the requiring authorities at the commencement of the hearing, counsel for the other parties were required to address certain matters of law, in particular as to whether the Court could lawfully direct acquisition of land not included in the NoRs as notified, and as to whether it could direct demolition of certain buildings described in evidence.

[14] A memorandum was filed in answer to those directions, by counsel for CRLL, Kiwirail, Auckland Council and CB Trustees 2012 Limited advising that the issues to be resolved in the case were:

(a) What is the extent, and significance, of connectivity effects arising from the proposed alterations?

(b) Should the proposal to remove the vehicular component of the overbridge at Porters Avenue be confirmed, refused, or should it be confirmed subject to modification to include appropriate mitigation?

(c) Of the potential mitigation options that have been identified, what are the benefits and costs of these and are they able to be implemented?

(d) What potential mitigation options exist?[2]

[15] Counsel indicated that there were two residual issues relating to the adequacy of the alternatives assessment undertaken by AT/CRLL, and the necessity for a condition about vibration raised by the acoustic expert for Auckland Council.

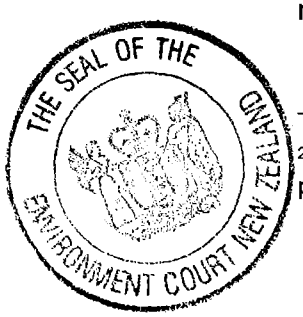
[16] After consulting Mr van Zonneveld, counsel advised that he identified two further issues as follows:

(a) A third and most easily achievable mitigation measure, utilising certain streets in Edenvale, which had been rejected by the traffic experts.

(b) The Porters Avenue overbridge should be removed entirely despite the agreement by the traffic experts that there would be pedestrian and cycling benefits from the retention of two bridges servicing those requirements, across the railway line in the vicinity.

[17] The parties confirmed that only three of the witnesses in the extensive list would not be needed for cross-examination.

[18] They confirmed that the lack of a need for cross-examination of those 3 witnesses had arisen from a notice suddenly issued by Mr Bartlett on behalf of Qambi Properties the same day (the last working day before the hearing) that, having taken part in mediation, having provided expert evidence, and having participated in expert conferencing, it did not propose to take any further part in the proceedings. (It nevertheless maintained its status as a submitter).



[2] For ourselves we place issue (d) after issue (a), and counsel issue (b) becomes issue (d), in order to place consideration of them in an appropriate order.

[19] Qambi submitted that its primary issue of concern remained the lack of mitigation proposals by CRLL concerning removal of the Porters Avenue vehicular connection. It expressed some amazement at the fact that a full vehicular overbridge had been a feature of the earlier designation, but that the requiring authority had not only resiled from that position, but was now asserting that no mitigation was required.

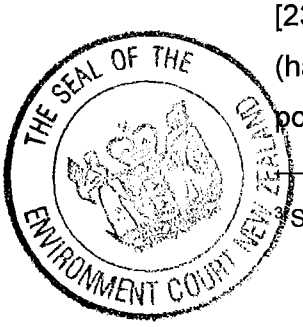
[20] A few weeks before the hearing, Qambi had sought from the Court and obtained a subpoena for an urban design expert Mr Ian Munro, on what it asserted was the "critical urban design/connectivity issue". Qambi now passed that witness over to CB Trustees 2012 Limited. Qambi joined with CRLL in its memorandum filed immediately prior to the hearing, that if the Court was persuaded by the evidence of Mr Munro and/or others that CRLL was not offering adequate mitigation, the Court might direct the requiring authority to further consider matters and initiate any processes that might flow from it. Mr Bartlett agreed that it could not be contended that the Court has powers to direct, in the present proceedings, actions that could interfere with the rights of third parties who would have entitlements of notification and hearing.

[21] Of some importance, Qambi accepted that it was bound by agreements its advisors made during expert conferencing.

[22] An consequence of Mr Bartlett's announcements was that Qambi's expert witnesses would not be available for questioning by other parties, or by the Court. The Court needed to consider whether it should take any account of the pre-circulated statements by Qambi's witnesses. After short deliberation, we held that because the direct referral procedure requires us to have regard to all submissions[3], whether or not the makers of those submissions proceeded to obtain party status under s 274 RMA, let alone participated in the hearing; and because the Qambi expert witnesses had participated in expert conferencing and reached numerous agreements with experts called by other parties, that we would take their evidence into account. We nevertheless held, and confirm, that the weight that can be attached to their pre-circulated evidence must be low, except in relation to the agreements just mentioned.

Matters of jurisdiction

[23] In its minute issued on 2 November, the Court asked the parties to comment (having regard to pre-circulated evidence which we had read) whether it would be possible to use the designation of 6 Porters Avenue and 3 Ngahura Street, to demolish



[3] Section 171(1) RMA.

existing apartments at these locations to enable construction of an alternative Porters Avenue vehicle overbridge suggested by traffic engineer Mr D McKenzie called by CB Trustees 2012 Limited, and enable reinstatement of access to 1A Porters Avenue.

[24] We also recorded that we wished to be addressed as to whether the existing designation condition that requires the designation of 6 Porters Avenue and 3 Ngahura Street is to be uplifted on completion of the CRL construction, including any proposed reinstatement work on the apartments.

[25] We also recorded that if the requiring authorities were not intending to use the designation in that way, we required to be advised what relief the parties were seeking in respect of that part of the NoR proposing deletion of the requirement for a Porters Avenue vehicle overbridge.

[26] We identified subsidiary questions as to what parties saw as the legal and practical consequences of the answers to those questions, and what their clients were actually seeking in the proceedings at this juncture, whether refusal of the NoR, modification of it within jurisdiction, conditions to be imposed, and consequences of any alleged inadequacy of consideration of alternatives, or whatever course.

[27] CRLL, Kiwirail and Auckland Council responded that the effects of removal of the vehicular component of the Porters Avenue overbridge were not such as to require further mitigation. They recorded that if the Court disagreed with that assessment and was to find that the requirements should be cancelled in the absence of further mitigation, then there would be 3 theoretically available options:

(a) Modify the requirements to include the overbridge as per the existing designation but with the benefits of the alterations which required a lowered rail alignment, as assessed in the evidence in chief of Stephen Knight,[4] at a cost of approximately $168m; an option that had been discounted in conferencing by all engineering experts.[5]

(b) Indicate the overbridge referred to as "Alternative 2" in the evidence in chief of Mr McKenzie (or some variant thereof) might be necessary, which would require the following additional processes:

i. Further notices of requirement to alter the existing

[4] At para [16].
[5] JWS: Engineering at para [11].

designation;

ii. Private property acquisition processes under the Public Works Act 1981.

(c) Indicate that the Fenton/Akiraho link road proposed by Qambi might be necessary at a cost of approximately $7.2m to $8.5m, requiring additional processes to be undertaken being application for restricted discretionary resource consent to construct the road, and private property acquisition processes under the Public Works Act 1981.

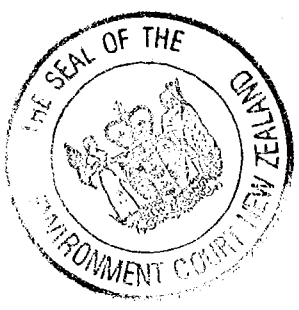
[28] These parties submitted that the Court did not presently have jurisdiction to modify the requirement to include "Alternative 2" or the link road as part of the present processes. They considered that the Court could contemplate obtaining a "best endeavours" undertaking from the requiring authorities if it held that these options should be pursued.

[29] By memorandum counsel for CB Trustees 2012 Limited accepted that the Court could not lawfully direct acquisition of land not included in the NoR as notified; and neither could it direct the demolition of buildings within or outside the designation footprint. It sought direction by the Court of consideration by the requiring authorities of further processes.

[30] CB Trustees 2012 Limited in its memorandum accepted that the Court could not direct requiring authorities to use a PWA process to acquire and demolish such.

[31] As to the Court's question about whether there was a designation condition requiring uplifting of the designation of 6 Porters Avenue and 3 Ngahura Street on completion of construction works, CB Trustees 2012 Limited advised that it could not identify any such condition. It accepted that it seemed likely that the intentions of the requiring authorities in this regard had been confirmed in the second engineering joint witness statement.

[32] As a consequence, CB Trustees 2012 Limited indicated that if the Court found that appropriate mitigation of the loss of the vehicular function of the overbridge would not to be achieved, it should decline the NoR. It acknowledged that if this was not the Court's finding, the Court might be in the position of confirming the NoR as sought by the requiring authorities in the context of the wider first instance enquiry to be undertaken by the Court in the present proceedings.



[33] The requiring authorities and the Council in answer, maintained that no further mitigation was required. They requested the Court to press CB Trustees 2012 Limited to either confirm that it was seeking relief along the lines of Mr McKenzie's suggested "Alternative 2" bridge, or was taking that option out of the mix in the proceedings. After quite considerable discussion of the issue between counsel and members of the Court, Mr Allan confirmed on behalf of CB Trustees 2012 Limited that the McKenzie proposal was now "off the table".

[34] The consequence of that confirmation was that the issues in the case finally narrowed further, such that if we were to find that mitigation would be required, CB Trustees 2012 Limited would adopt and pursue the Qambi link-road suggestion to the extent that the Court might consider it as coming within jurisdiction, or if not, by way of directing further processes as an alternative to refusing the requirements for designation.

Statutory framework

[35] Section 181 RMA enables requiring authorities to give notice of requirements to alter existing designations. Sections 168 – 179 apply as though for a new requirement.

[36] Section 198E RMA provides for direct referral to the Environment Court, as has happened here, and that in making its decision the Court must have regard to the matters set out in s 171 and may either cancel, confirm or modify or impose conditions as the Court thinks fit.

[37] Section 171(1) provides as follows:

> **Recommendation by territorial authority**
>
> (1) When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to —
>
> (a) any relevant provisions of—
>
> (i) a national policy statement:
> (ii) a New Zealand coastal policy statement:
> (iii) a regional policy statement or proposed regional policy statement:
> (iv) a plan or proposed plan; and
>
> (b) whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if—
>
> (i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or
> (ii) it is likely that the work will have a significant adverse effect on the environment; and

(c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and

(d) any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement.

Relevant statutory instrument provisions

[38] We are satisfied that S 7 and Appendix J of the Assessment of Effects on the Environment ("AEE") offer a detailed analysis of the relevant statutory provisions. The CRL is expressly referenced in a number of them including the partly operative Unitary Plan, the Auckland Long Term Plan, the Auckland Regional Land Transport Strategy and the Auckland Regional Land Transport Programme.[6] Of some note, the Unitary Plan expressly identifies the CRL as "the foremost transport ... project in the next decade", and as "providing the most significant place-shaping opportunity".[7] The present proceedings did not of course entail a fundamental attack on the CRL, being limited to a preference for some parties to retain originally designated features, or in the alternative that there be some other mitigation for the loss of vehicular connectivity at Porters Avenue. Nevertheless we note fundamental support for the CRL in relevant statutory instruments on the following bases:

- An efficient transport system that will enable economic growth.
- Ongoing consultation with mana whenua to ensure that potential adverse effects on cultural values are addressed.
- Some benefits for other infrastructure in the vicinity such as the Mount Eden corrections facility.
- Improvements in safety and operation of the CRL and integration into the existing upgraded section of the NAL.
- Appropriate management of noise and vibration effects to acceptable levels.[8]
- Would enable the frequent safe and efficient movement of people and support the type of built development enabled in the surrounding mixed land use and light industry zones.

[39] Having regard to the evidence of the planners, and in particular the agreements

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[6] Evidence in chief of D McGahan at [87].
[7] Unitary Plan in Box 13.2.
[8] The vibration aspect had been the subject of considerable negotiation between experts, finally resolved between them at the end of the hearing.

reached by them in expert conferencing, we are satisfied that when regard is had to the applicable provisions of the relevant policy instruments, the Requirements align satisfactorily. We have also had regard to the provisions of the Unitary Plan in relation to the mixed-use zone and other relevant provisions. The planning experts in conference appeared to take a stance somewhere between positive and neutral concerning alignment of the notices of requirement with Unitary Plan objectives and policies. They focussed on those that had been referred to in the s 198D report, and also considered a number of other objectives and policies as set out by the s 274 parties' evidence.[9] Any areas of disagreement amongst the experts on this score were largely referable to differences concerning effects on the environment, so these matters will be considered in that section of this decision, which follows next.

Effects on the environment

[40] Effects on the environment arise in two ways under s 171(1); first in the introductory words to that sub-section where we are, amongst other things, to consider the effects on the environment of allowing the requirement; having particular regard to – sub-subsection (b) as to whether adequate consideration has been given to alternative sites, routes or method of undertaking the work if either the requiring authority does not have an interest in the land sufficient for undertaking the work or is it likely the work will have significant adverse effects on the environment.

[41] This case was significantly about effects on the environment, which we shall discuss shortly. We start by noting however that the requiring authorities own all the land needed for undertaking the work (construction and operation), so it is potentially only the second part of subsection (b) that would trigger an enquiry as to whether adequate consideration has been given to alternative sites, routes or methods of undertaking the work. That is, as to whether there would be <u>significant</u> adverse effects on the environment.

[42] To assist a reading of what follows, we record that after consideration of all evidence we have reached the conclusion that not only are there no <u>significant</u> adverse effects on the environment, but that adverse effects on the environment overall are no more than minor. We can also find that in any event there was more than adequate consideration given to alternatives by the requiring authorities, the detail of which we record later in the decision.

[9] Paragraph [35] of the planners' joint witness statement.

Existing environment

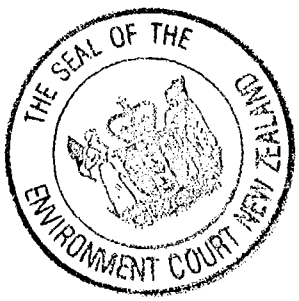
[43] Assessment of effects on the environment from the proposed alterations must take into account the existing environment. We agree with submissions on behalf of the requiring authorities that the existing environment in this case is the physical environment inclusive of the current designation, and that the appropriate comparison is between the existing designation and the new Designations. That is an important starting point.

[44] Absent the proposed alterations to the designations, closure of the Porters Avenue overbridge would occur during construction of the works authorised in the existing designation for a period of between 2-3 years. For the purposes of assessing effects on the environment, the existing environment therefore includes a 2-3-year closure of the access, and effects of permanent closure need to be considered in this context.

Effects of Alteration

[45] Remembering that s 171(1) requires consideration of effects on the environment of allowing a requirement, it is relevant to consider positive effects. Probably of greatest importance would be that the alteration would facilitate grade separation of the CRL from the NAL, with many operational and safety benefits arising. We will summarise[10] these, they not being greatly contested by the parties. Grade separations remove problems commonly found with flat junctions, shortening journey times, preventing reduction in numbers of carriages and frequencies of trains available in peak times, and limit the potential for disruption to the network because less maintenance is required. The grade separated junction would also remove the risk of collision and risk to maintenance staff. We were told as well that grade separation would eliminate the need for freight trains to be stopped on an uphill grade which in turn would reduce the noise emitted from braking and acceleration of large diesel engines.

[46] CRLL's Operations Planning Manager Mr M R Jones also advised that alterations to the platform and station building of Mount Eden would result in operational benefits, particularly the addition of a four-platform station assisting to decongest the network and enabling CRL trains to pass through the station. There would be an improvement in journey times of those travelling in and out of the CBD, with improvements in service and safety for over 30,000 people per hour at peak times.



[10] Taken largely from the evidence in chief of Mr M R Jones.

[47] The alterations would also result in substantial construction cost savings compared to the currently designated design, including potential savings to the construction programme due to the lower alignment and a significant reduction in the scale of construction works to be undertaken on private properties on Normanby Road.[11]

[48] Much evidence focussed on potential adverse traffic effects (together with disruption of connectivity and consequent business impacts; noise and vibration; and visual amenity and urban design effects).

Traffic and connectivity effects; also, effects on property values and economic effects

[49] The conference of traffic experts achieved a considerable narrowing of the disputes in this area. The experts agreed in their joint witness statement that the combined flow to and from Fenton Street and Haultain Street would be approximately 1,000 vehicles per day, with approximately two thirds of those vehicles (660) projected to use the Porters Avenue overbridge planned for in the existing designation. They agreed that the impacts of closure would largely be limited to local traffic as there are a range of alternative travel routes within the wider road network for other traffic. Importantly, they agreed that the increase in travel times for these 660 vehicles per day would be between 1 and 4 minutes, and typically 2 minutes.[12]

[50] They further agreed that the increases in travel times are modest, by which they meant the increases are noticeable but in the context of the general and local traffic environment, are not unreasonable.[13]

[51] There were claims by the s 274 parties and their experts that the loss of vehicular connectivity would have a significant impact which would justify mitigation.

[52] The requiring authorities not only pointed to the modest increases in traffic times, but through evidence which we accept, primarily from Mr E L Jolly consultant urban designer called by CRLL, pointed to connectivity improvements offered by the NAL and CRL alterations. The existing Mount Eden station is located approximately 150m from the primary street network, with the closest street connections being from dead-end streets with no vehicular through movement, as a result of which passenger connectivity and access to the station is presently poor. The proposed redeveloped

[11] Evidence of Damian McGahan.
[12] Joint witness statement: traffic at [16].
[13] Joint witness statement: traffic at [17].

station would be accessed via an extension to Ruru Street which would allow the station to have an entry on a key road to provide increased pedestrian, cycle and vehicular movement thereby improving connectivity to the station.[14] In answering questions by the Court, Mr Jolly confirmed the following:[15]

> **QUESTIONS FROM COMMISSIONER DUNLOP**
> Q. Mr Jolly, evidence-in-chief, figure 5, page 9.
> A. Yes.
> Q. There's an illuminated triangle there.
> A. Yes.
> Q. Does that depict the proposed extension of Nikau Street on its existing alignment, through to Ngahura? Is that what we're looking at by the Fenton Street overbridge?
> A. I'm just taking a look. I believe so, as much as I know. I wasn't involved specifically with the development of this image.
> Q. Okay, well I'll put it a different way, is it your understanding that Nikau Street is proposed to be extended on its existing alignment, across Ruru, to Ngahura?
> A. Yes I do.

[53] The improved station would encourage public transport use, on account of its improved amenity, legibility,safety and efficiencies. It was the evidence of Mr C A Jack a consultant architect called by CRLL[16] that the station would become a significant nodal point for the local community. It was the evidence in rebuttal of Mr I D Clark[17], a transportation planner called by CRLL that there would be improved frequency of services which would improve travel choices for the local community and businesses.

[54] While CB Trustees 2012 Limited had focussed in preparation for the hearing on retention of the full Porters Avenue overbridge or Mr McKenzie's suggested "Alternative 2", Qambi Properties exchanged evidence suggesting another mitigation option of creating a vehicular link between Fenton and Akiraho Streets which would require formation works and land purchases and possible separate statutory processes outside the scope of the present NoR at a significantly lower order of cost (than Alternative 2) of about $7.5m – 8.5m. There appeared to be a relatively high order of agreement amongst the relevant expert witnesses that the option was technically feasible, noted particularly from the evidence of Mr Clark and Mr Nixon[18], and the Traffic Joint Witness Statement.[19] In addition, CRL Project Director Mr Meale confirmed in cross-examination by Mr Allan that there would be no funding constraint on the work if the Court concluded

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[14] Evidence of Ed Jolly at [15], [16] and [24].
[15] Transcript, pages 118-119. Outcome confirmed by proffered Urban Design Principles Condition 47.2(b)(xiii) in Memorandum of counsel for Auckland Council 14 November 2017.
[16] Jack, paragraph [50].
[17] Jack, rebuttal paragraph [10].
[18] Rebuttal evidence of traffic engineer Mr MI Nixon called by CRLL
[19] Joint witness statement: Traffic at [5] and [23]-[31]

that adverse effects would justify such mitigation.[20]

[55] CB Trustees 2012 Limited having adopted the Qambi option in presenting its case at the hearing, put forward argument through counsel that while the Fenton/Akiraho link option would not retain all of the connectivity inherent in the Porters Avenue crossing, it would provide significant and very desirable mitigation, particularly for vehicles travelling to and from the east and north, and represent "appropriate and acceptable" mitigation for the loss of the Porters Avenue vehicular crossing.[21]

[56] Counsel elaborated on this theme in discussing the first and second engineering joint witness statements.[22] Close examination of their statements reveals emphasis on feasibility of the Fenton/Akiraho option, benefits that would flow from it, and absence of "fatal flaws from a social, urban design or other relevant perspective".

[57] We return later in this decision to the issue about whether mitigation is necessary. That is where the focus must be under s 171 RMA. The case law is clear that requiring authorities do not need to choose a particular, let alone "the best", or a desirable alternative.[23]

[58] We accept the submission on behalf of CRL that given the evidence about the shift within the Central Auckland environment towards public transport use, the upgraded station would be of significant benefit for the Mount Eden area in the future. We also agree that this needs to be assessed alongside the significance of travel time increase as being modest and not unreasonable for vehicular traffic servicing local commercial businesses.

[59] In the context of the existing environment as we have found it to be, and whether viewing the traffic connectivity issue in isolation, or in the overall context of accessibility and connectivity in the Edenvale locality and beyond at least as far as the CBD, we hold that the adverse traffic and connectivity effects from the deletion of the Porter's Avenue vehicular overbridge will be no greater than minor. We noted from the cross-examination of Mr Clark that in assessing the adverse effects of the closure of Porters Avenue and determining whether mitigation was needed, he had offset those

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[20] Transcript, pages 53-54.
[21] Submissions of Mr Allan and Mr Sadlier, dated 8 November 2017, paragraph [11].
[22] In paragraph [25] of their submission.
[23] Decision of the High Court in *Meridian Energy Limited v Central Otago District Council* [2010] NZRMA 477 at [81], cited with approval of the Board of Inquiry in its Draft Report and Decision in to the NZTA Waterview Connection Proposal, published by the EPA in May 2011, at [996]; and the Board of Inquiry into the Basin Bridge Proposal, Final Report and Decision, August 2014 at [1090]; and affirmed by the High Court once again in *NZTA v Architectural Centre Inc and others* [2015] NZHC 1191 at [154].

effects against positive effects arising from the NoR as a whole. Similar answers were given by Mr McGahan under cross-examination; we also note that all planning witnesses relied on the assessment of Mr Clark. We note the criticism by Mr Allan and Mr Sadlier that this did not amount to a focussed assessment, and could result in a very large project being found when examined in a holistic fashion, not to warrant mitigation of localised adverse effects because they would be dwarfed in the bigger picture.[24] As already noted, we will deal with the issue of need for mitigation in a later section of this decision.

[60] Section 274 parties (except for Mr van Zonneveld) offered evidence that there would be a loss in value to properties and that tenants would demand reduced rent or even end their tenancies to move to other premises. We found their evidence rather speculative and unpersuasive[25]. In some contrast the requiring authorities called the evidence of Peter Churchill, experienced in commercial real estate matters in the area, to the effect that there is currently a shortage of commercial land close to the CBD, and that vacancies are at historically low levels.[26] We were satisfied by his evidence that there is indeed high demand for commercial premises of the type described by the s 274 parties.[27] It was his advice to the Court, and that of Mr Galli, that the loss of tenants and reduced rentals would be unlikely; and that if tenants did leave, replacements would readily be found.

[61] We also heard rebuttal evidence from Mr PM Osborne, Economic Consultant called by CRLL that given the likelihood of significant redevelopment in this city fringe area and its proximity to the redeveloped station, the area will be subject to dynamic positive change. In this context the removal of the vehicular component of the Porters Avenue overbridge would be minor. The witness considered that from an economic viewpoint the area would improve in economic efficiency terms, resulting in increased land values, productivity and rental returns.[28]

[62] The legal context for these considerations is as follows. Adverse effects on land and property values are not in themselves a relevant consideration, but if they occur,

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[24] Paragraph [29](d) of their submissions.
[25] Evidence of Kerry Titchener at [14]; also evidence of Fraser Powrie at [10]-[14]; Edgar Smithies at [15]; Hadi Younan at [7], [13]-[16]; James Hook at [41]; and Peter Phillips at [34]-[36].
[26] Evidence of Peter Churchill at [16] and [18]; also statement of rebuttal evidence by Rick Galli at [11].
[27] Rebuttal evidence of Peter Churchill at [20]; also rebuttal evidence of CRL Land Acquisition Manager Rick Galli [18].
[28] Rebuttal evidence of Phil Osborne at [26] to [33].

they are simply a measure of adverse effects on amenity values.[29]

[63] If property values are reduced as a result of activities on adjoining land, the devaluation would reflect the effects of that activity on the environment. The correct approach is to consider those effects directly rather than market responses because the latter can be an imperfect measure of environmental effects.[30] We were not persuaded that the s274 parties' witnesses paid sufficient regard to the likely positive economic effects that would result from CRLL's proposed investment in the Mt Eden Station and its environs, or the redevelopment and economic activity likely to be stimulated by such in adjoining areas.

[64] It is also relevant to re-state that decisions in cases like this should not be made based on people's fears that might never be realised. In *Shirley Primary School v Christchurch City Council* the Court held that "*whether it is expert evidence or direct evidence of such fears, we have found that such fears can only be given weight if they are reasonably based on real risk.*"[31]

Visual amenity and urban design effects

[65] The case for the s 274 parties was that there would be significant adverse visual amenity and urban design effects, necessitating mitigation involving acquisition of a property not presently designated, and the creation of a new vehicular access link.

[66] In addition to denying there would be adverse visual amenity and urban design effects, the requiring authorities pointed to significant improvements in the locality from the redevelopment of the Mount Eden station as proposed by the alterations, particularly in comparison to the present visual amenity and general quality of the urban realm in the vicinity of the station.[32] The placement of the Mount Eden station on a street frontage would provide improved access and visibility, a substantial forecourt with opportunities for retail, landscaping, and artworks.[33] Also improvements in surrounding streets including footpath widths, tree plantings, new open spaces and shared areas for vehicles, pedestrians and cyclists.[34] There would also be redevelopment of the construction yard after completion of the CRL, providing opportunities for urban renewal

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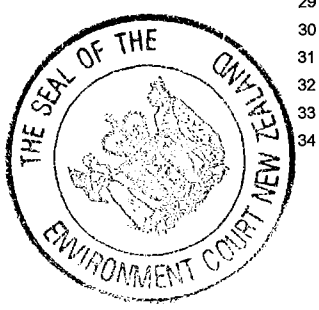
[29] *Foot v Wellington City Council* Environment Court decision number W73/98 at [256].
[30] Bunnik v Waikato District Council Environment Court decision A42/96 at page 6.
[31] *Shirley Primary School v Christchurch City Council* [1999] NZRMA 66 at [193].
[32] Evidence of Mr Jolly at [16] and [17].
[33] Evidence of Mr Jack at [29].
[34] Evidence of Mr Jolly at [25]-[26].



and a more vibrant and visually attractive neighbourhood.[35]

[67] While obviously detailed design of these features has not been carried out, conceptual graphic illustration was provided by Mr Jolly who offered his opinion, not seriously challenged by others, that there would be a significant uplift in the desirability, safety and quality of the urban environment in the general location.

[68] Several weeks before the hearing, the s 274 party Qambi Properties Limited arranged for the Court to issue a subpoena to Mr I C Munro, an urban planner and designer.

[69] Given Qambi's last minute decision not to participate in the hearing, the opportunity to call the pre-circulated evidence of Mr Munro was handed to C B Trustees 2012 Limited, and he was in fact called to give evidence by Mr Allan.

[70] Mr Munro holds qualifications in planning, architecture and engineering and environmental legal studies. Of relevance to the present case, he is familiar with the CRL project because in 2009/10 he led a small project for Auckland City Council seeking to inform the Council's preferred number and location of stations, including in the vicinity of what is now proposed. Since 2014 he has chaired an ongoing special urban design panel for Auckland Council dedicated to the CRL project. The reason for his needing to be subpoenaed can be seen from these appointments.

[71] In preparing his evidence Mr Munro received a briefing from Mr Bartlett QC on behalf of Qambi, which he acknowledged was limited in scope, and attended meetings with Mr Jolly and Mr Jack.

[72] Of some importance, Mr Munro commenced evidence by acknowledging the prospect for substantial positive urban design outcomes for Auckland from the overall CRL project, and in particular that the Mt Eden station and various improvements proposed would also on balance result in numerous positive urban design effects.

[73] Mr Munro was however strongly opposed to the removal of the vehicular link at Porters Avenue, which he considered would result in inappropriate adverse urban design effects. A problem for his rather belated involvement with the case however was that by the time of the hearing, at least one iteration of same was "off the table", being Mr McKenzie's "Alternative 2" version.

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[35] Evidence of Mr Jolly at [27].

[74] Mr Munro was critical of lack of calculation of additional vehicle kilometres to be travelled and vehicle emissions resulting, in the approach by the requiring authorities to the alterations. He offered the interesting opinion that if we were not dealing with the CRL, but instead a proposal by a developer wishing to cut off the Porters Avenue link to place a building over it, he would perceive a serious defect with what he considered to be a resultant very inefficient urban structure within the affected area. This was on the basis of the quality compact urban form sought by the Auckland Unitary Plan and its expectations for efficient and convenient blocks and road networks. He was worried about the existing poorly integrated and mostly disconnected road structure of the affected area, which with or without a closing of the vehicular link would not in his view be deemed acceptable in a new subdivision based on the provisions of Chapter E38 of the Unitary Plan.

[75] Mr Munro proceeded to consider and rank four options from the urban design point of view. Option (a) was the existing approved designation; his second most optimum outcome would be a new road connection between Fenton and Akiraho Streets; the third most optimum outcome would be to establish a new overbridge in a very similar alignment as Porters Avenue as proposed by some s 274 parties; with the least preferable solution, distantly trailing, being that favoured by the requiring authorities.

[76] Mr Munro took into consideration the objectives of the CRL as follows (he called them "options"):[36]

a. The existing approved designation providing for a lowered railway line and grade-separated Porters Avenue road over-bridge.

b. The current Requiring Authority proposal, being to remove the road link, replace it with a pedestrian over-bridge, and route vehicles through the local road network via Wynyard and View Roads. This is best described in the evidence of the Requiring Authority's witnesses.

c. A replacement road over-bridge in an alignment similar to Porters Avenue and associated access roads (to transition between the relative road levels) proposed by a group of s.274 parties.

d. An alternative at-grade road connection linking Fenton Street and Akiraho Street to allow vehicle access north via Mount Eden Road, proposed by Qambi Ltd.

[77] He also considered the Urban Design Principles for CRL which he acknowledged did not have the same statutory significance as the CRL objectives, and

[36] Statement of evidence, pages 6 and 7.

proceeded to analyse his four identified options against each of these.

[78] Mr Munro's overall analysis of these matters was quite detailed and precise, but undertaken in something of a vacuum. As noted already there is clear authoritative law that requiring authorities do not need to choose a particular, let alone "the best" alternative, but rather the Court should be satisfied that the requiring authorities have adequately considered alternative options to the extent needed under the legislation.[37]

[79] The legal position is that the meaning of "adequate" is not "meticulous" or "exhaustive" but "sufficient", or "satisfactory".[38] We note from the same High Court decision, that a more careful consideration of alternatives might be required where there are more significant effects of allowing the requirement.[39] It will be seen from our decision overall that the present case is not one of those situations. Nevertheless our reading of the AEE at [4.2], and consideration of much of the expert evidence called by the requiring authorities, demonstrates to us that considerable attention was paid to a at least 7 alternatives, three of which involved road bridges in the vicinity, and four of which involved various permutations of a link near Porters Avenue. We find that the consideration of alternatives by the requiring authorities on this occasion has been little short of exhaustive. Importantly, it has been multi-disciplined, unlike Mr Munro's approach from which he seems to have had an expectation that we will place a major emphasis on urban design matters and identify a "best" alternative.

[80] We comment further on Mr Munro's approach to the objectives for the CRL in the separate part of this decision addressing that topic to which we are to have particular regard under s 171(1).

[81] We are critical of an apparent major plank in Mr Munro's evidence, a comparison of the current proposal with a hypothetical "greenfields" subdivision proposal. Without being too unkind to it, the commercial and mixed-use part of the locality around Mt Eden Station is very "brownfields". The roading pattern and current run down appearance of much of it are the result of many unrelated infrastructural and development decisions made by many people over a considerable period of the history of this area of Auckland.

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[37] Refer to the decision of the High Court in *Meridian Energy Limited v Central Otago District Council* [2010] NZRMA 477 at [81], cited with approval of the Board of Inquiry in its Draft Report and Decision into the NZTA Waterview Connection proposal, published by the EPA in May 2011, at [996]; and the Board of Inquiry into the Basin Bridge Proposal, Final Report and Decision, August 2014 at [1090]; and affirmed by the High Court once again in *NZTA v Architectural Centre Inc and others* [2015] NZHC 1191 at [154].
[38] High Court decision in *NZTA v Architectural Centre Inc and others* [2015] NZHC 1191 at [137].
[39] *Architectural* decision at [142].

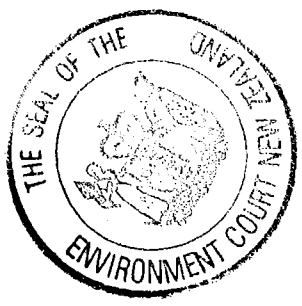
[82] A significant limitation occasioned by Mr Munro's very narrow focus, was that he preferred options that no party was now seeking, and which the engineering experts had not supported in their joint witness conferencing.

[83] Mr van Zonneveld raised matters which went significantly beyond the authority that we have on the present proceedings, particularly some highly detailed suggestions about the potential benefits of reconfiguring a significant part of the local roading network. Those matters are beyond our purview. However, Mr van Zonneveld raised concerns about the juxtaposition of the now proposed pedestrian and cycling bridge on the Porters Avenue alignment in relation to his commercial building at 5 Porters Avenue. These concerns could in part be characterised as urban design concerns. Question marks arose as to just how far from the face of the building it is proposed to place the new bridge, and we agree that care is necessary in that regard. We shall return to that topic later in this decision.

Adequacy of consideration of alternatives

[84] We have already set out the relevant part of s 171(1) RMA, and indicated findings based on the evidence before us, that the requiring authorities can pass through the two alternative gateways in s 171(1)(b). First, we have found that they own all the land needed for undertaking the work, including properties that will be needed only during the construction phase, the designation on which should cease at the conclusion of construction works. Also that it is not possible to find that the proposed works will have significant adverse effects on the environment.

[85] Nevertheless, out of care, and reiterating our findings of law earlier in this decision about what it is meant about adequacy of consideration of alternatives, we reiterate that such consideration in the present case has not been far short of exhaustive, a test higher than must be met. Such consideration has even extended to the benefits and cost of both principal options ultimately put forward as possible mitigation, the construction of a road bridge at Porters Avenue after the construction works are completed, being cost at approximately $180m but not being supported by the engineers and traffic experts; and the cheaper option of providing a road connection through a yet to be acquired property between the eastern end of Fenton Street through to Akiraho Street, at a lesser cost of approximately $7.5m – $8.5m.



[86] On the evidence before us, and even before the urgings of the various s 274 parties and other submitters, we hold that consideration of alternatives by the requiring

authorities has been more than adequate.

Reasonably necessary for achieving the project objectives?

[87] Subsection (c) of s 171(1) requires us to have particular regard to whether the work and Designations are reasonably necessary for achieving the objectives of the requiring authorities for which the designations are sought.

[88] We remind ourselves that the present proceedings are not an enquiry into the overall designation for the CRL. That has been the subject of an approved designation for some time. It is an enquiry concerning proposed alterations to both the CRL and NAL designations, a much more confined enquiry.

[89] We have already mentioned projected objectives for the CRL when discussing the urban design evidence of Mr Munro. It is interesting to note that under cross examination by Mr Beatson, Mr Munro acknowledged that the project objectives are not bottom lines, although he advised that he nevertheless considered them to be a significant part of the assessment.

[90] Objectives not met in Mr Munro's view include objectives 2(a) ("improved journey time, frequency and reliability of all transport modes"); 3(a) ("support economic development opportunities"); 4(a) ("limit visual, air quality and noise effects"); 4(b) ("contribute to the country's carbon emission targets"); and 5(a) ("enhance the attractiveness of the city as a place to live, work and visit").

[91] We do not favour a piecemeal approach to the assessment of the proposal against project objectives. Some objectives will be relevant for present purposes, others not; those that are relevant may be of greater or lesser importance in the overall assessment. An holistic approach to whether the work and designation are reasonably necessary for achieving the objectives, is what is required. Referring primarily to the largely unchallenged evidence in chief and supplementary rebuttal evidence of MrJolly called by CRLL, we consider that the objectives identified by Mr Munro are in fact met to a sufficient extent.

[92] Concerning objective 2(a) we agree with Mr Jolly and his supplementary rebuttal evidence that Mr Munro does not identify or balance the loss of vehicle connectivity against improvements to the operation and safety of the CRL and NAL, including through grade separation near Mount Eden junction. Further, we note with approval the evidence that journey times from Mount Eden to the city would be improved for

pedestrians, cyclists and rail users. We have already made our findings about minor adverse effects for vehicle movements, and positive effects for pedestrians and rail users. We agree with the statement of supplementary rebuttal evidence by Mr Clark on behalf of CRLL that improvements in public transport in the area will be beneficial as the numbers of people living and working in the area increase, the converse of that being that the road network might otherwise become more congested in the absence of reliable alternative public transport.

[93] Regarding objective 3(a), the alterations would, we accept, be likely to assist in encouraging urban renewal in Mount Eden, which would support opportunity for economic growth in the area.

[94] As to objective 4(a), while the alterations might to a degree limit visual air quality and noise effects from vehicles, they have the potential to assist with enhancement of the amenity of the area by reducing the bulk of the bridge structure on the Porters Avenue alignment.

[95] As to objective 4(b), while those travelling to and from Haultain Street and Fenton Street will have slightly longer journey times, and therefore slightly increased carbon emissions, the alterations will have beneficial effects on these aspects as well. We heard no compelling evidence about net emissions but expect the longer vehicle journeys necessitated for some would be more than offset by the significantly increased number of journeys shifted to public transport means. In any event the objective is not about seizing upon individual impacts, whether positive or negative, and basing a decision around individual findings.

[96] Objective 5(a) will potentially be strongly supported by the alterations for reasons already discussed.

[97] We find that in the overall sense, the proposed alterations are reasonably necessary to achieve the objectives in the round, because:

(a) They will improve the transport mode choice in Mount Eden by providing a safer, more resilient and efficient service to the CBD and other benefits for the Auckland train network including the CRL and NAL;

(b) Result in significant operational benefits with consequent minimising of negative environmental impacts;

(c) Result in significant capital and operational cost savings for the public purse;

(d) Improve the amenity of Mount Eden Station and potentially improve that of surrounding streets by way of urban renewal thus encouraged;

(e) Encourage opportunities for business and economic growth in the area.

Application of Part 2 RMA

[98] All consideration under s 171(1) is, as noted, subject to Part 2.

[99] The long-standing judicial approach to an "overall broad judgment" approach to assessing applications for resource consent against Part 2, was, as it is well known, rejected for at least some purposes by the decision of the Supreme Court in *Environmental Defence Society Inc v New Zealand King Salmon Company Limited*[40].

[100] There have been subsequent decisions exhibiting some uncertainty about the application of that finding, particularly in relation in notices of requirement. (Also in relation to resource consenting).

[101] The Board of Inquiry concerning the Puhoi to Warkworth road of national significance held that there remains a need to carry out an overall balancing test and questioned wide spread applicability of the "environmental bottom lines" approach to the New Zealand Coastal Policy Statement.[41]

[102] The High Court in what is colloquially known as the Basin Bridge decision[42] also distinguished *King Salmon* on the basis that s 171(1) RMA provides for specific statutory authority to consider Part 2, which is different from the statutory wording in the Plan Change context.[43] The High Court held:[44]

> King Salmon did not change the import of Part 2 for the consideration under s 171 (1) of the effects on the environment of a requirement.

[103] The Environment Court took the same approach in *KPF Investments v*

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[40] [2014] NZSC 38.
[41] Final Report and Decision of the Board of Inquiry into Ara Tuhono-Puhoi to Wellsford road of national significance: Puhoi to Warkwath section, 2 September 2014 at [133]-[134].
[42] *New Zealand Transport Agency v Architectural Centre Inc* [2015] NZHC 1991.
[43] *New Zealand Transport Agency* at [118].
[44] At [399].

Marlborough District Council.[45]

[104] Question marks remain however because of the decision of the Environment Court, upheld in the High Court in *R J Davidson Family Trust v Marlborough District Council.*[46] (The latter decision concerned a resource consent application measured against s 104 RMA).

[105] We are aware that the *Davidson* decision has recently been the subject of a hearing in the Court of Appeal, and a reserved decision is awaited.

[106] For completeness in this rather uncertain area, we mention *Envirofume v Bay of Plenty Regional Council.*[47]

[107] We hold that the debate is (perhaps fortunately) academic in the present case. We consider that a Part 2 analysis would be satisfied in this case on the evidence before us. Noting that the essence of the present case is about effects on the environment, we hold that it passes muster in relation to s 5 RMA; further that the proposed alterations do not run counter to any of the Section 6 matters, provide for appropriate and efficient use of resources subject to appropriate conditions, enhance amenity values and the quality of the environment, and support sustainable management. We can find little fault with the detailed analysis of the alterations against Part 2 set out in Section 7 and Appendix J of the AEE.

Is mitigation needed?

[108] We were offered considerable amounts of evidence about possible mitigation of loss of connectivity in the street system, with the focus ultimately being on a proposed joining of the dead end of Fenton Street with nearby Akiraho Street, through a property at 13 Akiraho Street. That property was not included in the original designation, is not included within the proposed alterations to the designation, and has not been acquired.

[109] If we were to have found that mitigation was necessary, separate processes outside of those presently before us, might have been necessitated. The parties debated how such might be undertaken.

[110] In the event the effects on the environment are so minor as not to warrant imposition of any further mitigation. Not only is there no significant adverse effect

[45] [2014] NZEnvC 152 at [202].
[46] [2016] NZEnvC 81. High Court decision at [2017] NZHC 52, particularly at [76].
[47] [2017] NZEnvC 12, which appears to take a broad approach to assessments under Part 2.

sufficient to trigger the gateway in s 171(1)(b)(ii), but our overall findings about effects on the environment for the purposes of s 171(1), are such that the suggested mitigation is not required.

Consideration of the cases of the parties

[111] Pursuant to 198E RMA we believe we are required to consider the content of the submissions lodged with the Council, inclusive of those that did not become subject of notices under s 274. We have done so, assisted in part by the council's s198D report[48]. Nothing in those materials causes us to change our views about any of the matters on which we heard evidence and have made decisions.

[112] As indicated early in the hearing, we have not disregarded the case brought by Qambi Properties Limited or the issues on which its witnesses prepared evidence. We have taken those matters into account, albeit that we can apply somewhat less weight to them than to matters that were the subject of evidence tested in the hearing. We also note that Qambi's experts participated in the conferences of groups of experts that reached significant levels of agreement with experts called by other parties. We also note that ultimately Qambi's proposal for mitigation was adopted by CB Trustees 2012 Limited in preference to its own, after the Court required precise advice from parties as to relief being sought and issues in contention in the case.

[113] Mr van Zonneveld's situation was different from the other s 274 parties. He did not want there to be a bridge of any sort crossing the railway tracks on the Porters Avenue alignment.

[114] As earlier recorded, we cannot assist Mr van Zonneveld with his extremely detailed request for intervention in traffic patterns on Mount Eden streets. As to a bridge on the Porters Avenue alignment, we hold that a pedestrian and cycle bridge as more or less proposed by the requiring authorities, is appropriate, and that the existing designation can be altered to delete the vehicular component.

[115] One matter raised by Mr van Zonneveld however requires to be handled with care in the conditions of approval. We felt that Mr van Zonneveld was justified in expressing concern about how close the pedestrian and cycling bridge might come to the Porters Avenue façade of his property on the corner of Porter's Avenue and Haultain Street, where current plans and graphic exhibits show a lift tower associated

[48] Section 198D report by Auckland Council, 10 May 2017, Section 3: Submissions.

with the bridge being very close.

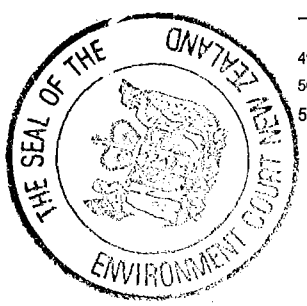
[116] Mr van Zonneveld said that the façade of his building was set back 2 metres from its boundary. He asked Mr Ryder questions about the separation distance and was told that it would be of the order of 3 metres from the boundary of the property. Mr Ryder also said that the bridge might have to be moved in the order of half to one metre to accommodate turning movements underneath the bridge.[49] Mr van Zonneveld asked Mr Jack the same question and was told that the separation distance was 3 – 3.5 metres.[50]

[117] With the façade of the building being set back 2 metres from the boundary, the separation distance from the lift would be of the order of 5 – 5.5 metres.

[118] The finally condition 47.2(b)(xi) records that the pedestrian/cycle bridge is to be located no closer than 3.5 metres from the property boundary of 5 Porters Avenue excluding any below-ground foundation support. That would mean a separation distance of 2 metres from the existing building façade plus 3.5m in the road reserve for a total separation distance of 5.5m. The dimension of 3.5m from the property boundary proffered by CRLL and agreed by the council is unqualified except as to foundations. We expect that it allows for any widening for turning movements underneath the bridge of the type mentioned by Mr Ryder as possibly being required[51]. We understand Mr Nixon's rebuttal drawing 1046 rev 2.0 3/10/17 "road layout Fenton Street extension to Akiraho Street" to allow for "intersection widening for rigid 8m truck" making the Wynyard – Fenton turn.

[119] We confirm that Condition 47(b)(xi) is to provide that no part of the pedestrian/cycle bridge including the lift tower element, but excluding below-ground foundations, is to be located any closer than 3.5m from the boundary of 5 Porters Avenue.

[120] Condition 47.2(b)(xii)(a) provides that the design of the bridge shall minimise loss of privacy on adjacent residential sites. The most potentially affected existing residential development is at 6 Porters Avenue. A large utilitarian business premise is opposite on the western side of Porters Avenue. We have found nothing in the materials that fixes the location of the proposed pedestrian/cycle bridge in the road



[49] Transcript, p 94.
[50] Transcript, p 98.
[51] Transcript p94.

reserve with certainty (other than its proximity to 5 Porters Avenue). Minimising loss of privacy is an imprecise term and we find the intended outcome would be secured with greater certainty if Condition 47.2(b)(xii)(a) were amended to read "Minimise loss of privacy on adjacent Porters Avenue residential sites, including by locating the pedestrian/cycle bridge in the western half of the Avenue". This would align with and secure the outcome given in evidence. We direct accordingly.

Other conditions

[121] Counsel for the council advised in a memorandum dated 14 November 2017 that it supported amended conditions circulate by CRLL on 13 November subject to a handful of minor editorial changes highlighted in that version. We comment on the latter and make the following directions in respect of them:

(a) The highlighted minor changes sought by the council are confirmed;

(b) The proposed Explanatory Note applicable to the operative CRL designation and NoR is confirmed subject to references in the figures being to Designations not NoRs and the figures being reproduced in more legible form;

(c) The proposed change to Condition 1.2(b) is not confirmed. The condition wording will revert to that supported by MediaWorks in the operative Designation conditions;

(d) The change to Condition 47.2(b)(xiii) for Ruru Street and Nikau Street extensions is confirmed.

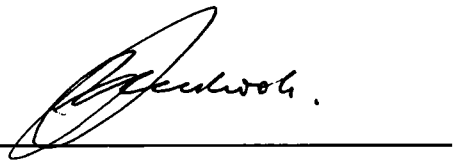
Conclusion

[122] We confirm the alterations to the designations in terms of s 198E(6) in the place of the territorial authority, subject to the changes outlined above.

[123] The conditions of the approval are attached to this decision, modified in the manner set out above.

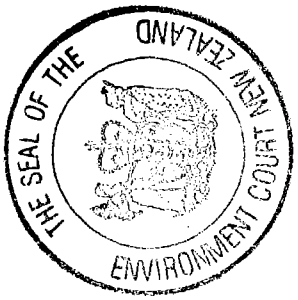
[124] Costs are reserved. Any application is to be made within 15 working days of the date of this decision.

For the Court:



LJ Newhook

Principal Environment Judge



IN THE HIGH COURT OF NEW ZEALAND
DUNEDIN REGISTRY

CIV 2009 412 000980

IN THE MATTER OF the Resource Management Act 1991
AND IN THE MATTER OF an appeal under section 299 of the Act

BETWEEN	MERIDIAN ENERGY LIMITED Appellant
AND	CENTRAL OTAGO DISTRICT COUNCIL First Respondent
AND	OTAGO REGIONAL COUNCIL Second Respondent
AND	MANIOTOTO ENVIRONMENTAL SOCIETY INCORPORATED Third Respondent
AND	UPLAND LANDSCAPE PROTECTION SOCIETY INC (IN LIQUIDATION) Fourth Respondent
AND	J, S AND A DOUGLAS Fifth Respondents
AND	E AND C LAURENSON AND THE ERIC AND CATE LAURENSON FAMILY TRUST Sixth Respondents
AND	I & S MANSON AND RIVERVIEW SETTLEMENT TRUST Seventh Respondents
AND	GAELLE SOGUEL DIT-PIQUARD Eighth Respondent
AND	E R CARR Ninth Respondent
AND	R P SULLIVAN Tenth Respondent

Hearing: 21, 22, 23, and 24 June 2010

Court: Chisholm J
Fogarty J

Appearances: H B Rennie QC, AJL Beatson and H J Tapper for Appellant
A J Logan for Central Otago District Council and Otago Regional Council
JBM Smith, M C Holm and M J Slyfield for Maniototo Environmental Society Inc, Upland Landscape Protection Society Inc, J S and A Douglas, G S Dit-Piquard and E R Carr
M J Fisher and K S Muston for R P Sullivan

Judgment: 16 August 2010

JUDGMENT OF THE COURT

A. Meridian appeal allowed.

B. Remitted back to the Environment Court for reconsideration in accordance with the directions in [144] – [149].

C. Mr Sullivan's cross-appeal dismissed.

D. Costs to be resolved in terms of [167].

REASONS

Table of Contents

Introduction

[1] Meridian Energy Limited, a state owned enterprise and major energy company, applied to the Central Otago District Council (CODC) and Otago Regional Council (ORC) for resource consents to establish and operate a substantial wind farm for the generation of electricity in Central Otago. Consents were granted. The third to tenth respondents appealed to the Environment Court. Although Meridian cross-appealed about some conditions, its cross-appeal is irrelevant in the present context.

[2] By a majority (Judge Jackson and Commissioners McConachy and Fletcher) the Environment Court decided that the project was inappropriate, being in an outstanding natural landscape under consideration, and that it did not achieve sustainable management in terms of s 5 of the Resource Management Act 1991 (RMA). This was principally because the nationally important positive factor of providing a very large quantity of renewable energy was outweighed by adverse considerations including the substantial impact on the outstanding natural

landscape.[1] The appeals were allowed and the resource consents were cancelled. Commissioner Sutherland, who dissented, would have upheld the consents.

[3] Meridian appeals to this Court on points of law pursuant to s 299 of the RMA. It alleges that the Environment Court erred in law by:

(i) Applying a "new test" for consent applicants where s 6 of the RMA is involved which requires an applicant to demonstrate to the satisfaction of the Court that the project is "the best" in net benefit terms.

(ii) Requiring a comprehensive and explicit cost benefit analysis of the proposal.

(iii) Requiring consideration of alternatives to the Meridian site.

(iv) Denying Meridian a fair hearing by virtue of the process it adopted when reaching its decision.

(v) Arrving at conclusions when there was no evidence to support those conclusions and/or disregarding evidence that conflicted with those conclusions.

(vi) Failing to take into account the Court's ability to impose conditions to avoid, remedy or mitigate certain effects.

An order setting aside the Environment Court decision and granting the consents is sought. Alternatively Meridian seeks to have the matter referred back to the Environment Court for reconsideration, preferably by a different division of that Court.

[4] CODC and ORC support Meridian's appeal. It is opposed by the third to ninth respondents. Mr Sullivan, the tenth respondent, has cross-appealed in relation

[1] *Maniototo Environmental Society Incorporated & Ors v Meridian Energy Limited & Ors* C103/2009, 6 November 2009 at [757].

to the Environment Court's approach to climate change. His argument before us was limited to that issue.

Background

[5] The Meridian site (which is also referred to as the Hayes site and Hayes Project) is approximately 70 kms to the north west of Dunedin, 40 kms to the south of Ranfurly and 15 kms west of Middlemarch. It comprises the uplands section of five high country stations (of which one is now owned by Meridian). The site is generally more than 900 m above sea level. In total the site envelope of the proposed wind farm is about 135 km^2. This land is zoned rural under the operative District Plan and is used for low level sheep and cattle grazing.

[6] Meridian's proposed wind farm would have up to 176 wind turbines which, depending on the type of turbine finally selected, would be capable of generating up to 630 megawatts of electricity. This would be sufficient to supply power for 280,000 average homes. Each turbine would have a maximum height of 160 metres to the tip of the rotor. Five sub stations would be required to connect the wind turbines to the transmission grid. Electricity produced by the wind farm would be fed into the existing transmission line that runs across the southern end of the site. The estimated cost of the project is $2 billion.

[7] On 12 July 2006 Meridian applied to CODC for land use consents to construct and operate a wind farm of up to 176 turbines and related infrastructure on the Meridian site. This was the company's fourth application for development of a wind farm in New Zealand. It had already commissioned a wind farm in Manawatu, obtained consent for another project in Southland, and had made application for a further project near Wellington.

[8] At the time the application was made the CODC Proposed District Plan had passed the stage where it could be subject to submissions or references. Thus it was regarded as the primary district planning instrument. The Proposed Plan became operative on 1 April 2008 (shortly before the Environment Court hearing began). Under that Plan the proposed activity is an unrestricted discretionary activity.

[9] Outstanding landscapes are identified in the Plan that became operative on 1 April 2008. It is common ground that the Meridian site does not come within the landscapes identified in the Plan.

[10] During the hearing before the Environment Court Plan Change 5 was notified by CODC. This proposed Plan Change did not alter the status (discretionary) of the wind farm. However, it adds to the description of features and landscapes in the District Plan by identifying a number of landscapes which are areas of "extreme or high sensitivity". These constitute outstanding natural landscapes in terms of s 6(b) of the RMA. The Meridian site does not come within these areas.

[11] Plan Change 5 also identified landscapes of "significant sensitivity". Under the proposed Plan Change these landscapes are protected from the adverse effects of inappropriate subdivision, use and development. The Lammermoor range, which includes the Meridian site, is a landscape of significant sensitivity in terms of this Plan Change.

[12] On 1 November 2006 Meridian sought consents from ORC pursuant to the Regional Council's Water Plan which had become operative on 1 January 2004. In broad terms these consents related to construction activities that were capable of affecting water bodies. Land use consents, discharge permits, and water permits to take and divert water were sought. These proposed activities fell to be considered (depending on the particular activity) as controlled activities, restricted discretionary activities or unrestricted discretionary activities.

[13] We pause to note that after these applications had been lodged, and before they were considered, TrustPower (a competitor of Meridian) lodged an application with the Clutha District Council and ORC for consent to establish a wind farm (the Mahinerangi wind farm) at the southern end of the Lammermoor Range. At its closest point the Mahinerangi site is 15 kms from the Meridian site. It was proposed that the Mahinerangi wind farm would have up to 100 turbines. A District Council decision granting consent for that wind farm was released about a month before the District Council decision granting consent for the Meridian wind farm.

Subsequently the Mahinerangi consents were confirmed by the Environment Court (not the same division that heard the Meridian appeal).

[14] Returning to the Meridian applications, the two consent authorities appointed five Commissioners to hear and determine the applications. The applications were supported by an "all of Government" submission by the Minister for the Environment and opposed by the third to tenth respondents. On 30 October 2007 the Commissioners released their decision granting the consents, subject to conditions. The chairman, Mr J G Matthews, dissented. He would have refused consent primarily because of the effect of the activity on the landscape.

[15] The third to tenth respondents then appealed to the Environment Court. In addition several parties, including the Minister for the Environment, gave notice pursuant to s 274 of the RMA that they intended to appear.

[16] Parties to the appeal were required to specify the issues they wished to pursue on appeal and those issues were recorded in a Minute issued by Judge Jackson on 31 January 2008. A further Minute issued on 10 April 2008 required each party to lodge a memorandum finalising its list of experts and the issues on which they were to give evidence. On 8 August 2008 (part way through the hearing) leave was granted for further evidence to be called, following which there was an exchange between Counsel for Meridian and Judge Jackson as what evidence the Court was seeking in relation to efficiency in terms of s 7(b). We mention these matters because they are relevant to Meridian's fourth ground of appeal alleging that it was denied a fair hearing.

[17] The hearing before the Environment Court commenced on 19 May 2008. It occupied three blocks of time totalling more than seven weeks and concluded on 17 February 2009. Site inspections were also undertaken. Numerous witnesses, many of them expert, were called.

Environment Court decision

[18] The Environment Court's decision was delivered on 6 November 2009. Except for [34] below, we confine this summary to the judgment of the majority which occupies 348 pages divided into eight chapters.

[19] After providing an introductory background and description of the facts in the first two chapters, the Court addresses "The Law" in Chapter 3. Obviously this chapter is particularly relevant. Having addressed s 104(1) of the RMA, provisions of the District Plan, and various other matters, the Court focused on Part 2 of the Act, especially s 6(b) - the protection of outstanding features and landscapes - and s 7(b) - the efficient use and development of natural and physical resources.

[20] The Court was critical of earlier Environment Court decisions which had reasoned that because wind energy is presently an untapped resource, use of that resource to produce electricity by a non polluting process is an efficient use of the resource in terms of s 7(b). Having indicated[2] that it was uncomfortable with "a cherry-picking approach to efficiency", the Court said that it preferred to follow *Lower Waitaki River Management Society Incorporated v Canterbury Regional Council*[3] in which it was stated:

> [196] ... efficiency in section 7(b) of the RMA requires a consent authority to consider the use of all the relevant resources and, preferably, their benefits and costs. It is nearly meaningless to consider the benefits of only some of the resources involved in the proceeding because the artificial weighting created by sections 5 to 8 of the Act will not be kept within the statutory proportions if the only matters given the 'particular regard to' multiplier (see *Baker Boys Limited v Christchurch City Council*) in section 7(b) are those which are not identified elsewhere in section 7. Further, it is very helpful if the benefits and costs can be quantified because otherwise the section 7(b) analysis merely repeats the qualitative analysis carried out elsewhere in respect of sections 5 to 8 of the Act.

Then the Court focussed on two matters: first, how efficiency in terms of s 7(b) is to be determined; secondly, whether alternative locations are relevant.

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[2] At [226]

[3] Decision C380/2009. This decision was issued by the Environment Court on 24 September 2008 after the Meridian hearing had concluded. Judge Jackson also presided in the *Lower Waitaki* case.

[21] As to the first matter the Court said that for economic reasons the "specific costs and benefits of a proposal should be examined and if possible quantified", especially where a matter of national importance is raised under s 6.[4] It concluded:

> [230] While in an engineering sense efficiency means the ratio of outputs to inputs, in economic terms it is not an absolute but a relative concept. We hold that under section 7(b) of the Act there are two questions to answer when determining the efficiency of the use of resources:
>
> (1) is the value achieved from the resources utilised the greatest benefit that could be achieved from those resources?
>
> (2) could that same benefit be produced utilising resources of lower value if they were organised differently, or if a different set of resources was used?
>
> The first point is about maximising the benefits achieved from the resources being utilised; and the second is about minimising the resource costs of achieving a given benefit. ...

This analysis, coupled with [242], which is mentioned in the next paragraph, has given rise to the first ground of appeal alleging that the Court adopted a "new test" requiring an applicant to demonstrate that its project is "the best" in net benefit terms.

[22] Then the Court considered the second point - whether alternative locations are relevant. After discussing relevant case law the Environment Court summarised its conclusions:

> [242] ... section 7(b) requires a comprehensive and explicit cost-benefit analysis of the proposal. In that analysis:
>
> (a) where market valuations are not available, non-market techniques maybe used; and
>
> (b) where the values of the market are different from those of society, alternative societal values may be applied.
>
> The idea behind the cost-benefit analysis is to assess, firstly, whether the proposal has a positive net benefit, and then whether there are credible alternative uses of the resources, or credible alternative resources that could produce the desired output, which have a greater net benefit. In doing so, we need to have regard for whether (environmental) compensation is being given, and the adequacy of that

[4] At [229]

> compensation. The outcome of this assessment of efficiency is then one matter in the overall assessment under section 5. We hold that alternatives can be considered where section 6 matters are concerned. It is possible, but we do not decide, that alternatives should also be considered in other cases where there are significant environmental effects.

The statement that s 7(b) requires a comprehensive and explicit cost benefit analysis gives rise to the second ground of appeal. And the conclusion reached later in the judgment that in this case alternatives should have been considered by Meridian has triggered the third ground of appeal.

[23] Chapter 4 is devoted to a detailed analysis of landscape issues. As already mentioned, the District Plan specifically identified outstanding landscapes within its district and it is common ground that the Meridian site does not fall within the areas so identified. Nevertheless the Environment Court decided that it was not bound by the categorisations in the District Plan and concluded that the site was part of an outstanding natural landscape for the purposes of s 6(b) of the RMA. In that respect the Court's decision is consistent with the decision of this Court in *Unison Networks Limited v Hastings District Council*[5]. Meridian accepts this finding, and does not seek to challenge it in this appeal.

[24] The next chapter addresses potential effects (both positive and negative) of the proposed wind farm. Positive effects in terms of meeting the demand for more electricity, placing downward pressure on electricity prices, reducing carbon emissions, complementing hydro-power, and providing employment (during the construction phase) were accepted. On the negative side the Court saw the effect of the proposed wind farm on the landscape as "[p]ossibly the most important single question in these proceedings".[6] It considered that the wind farm "is so large that it will have the effect of creating a new, not unattractive, wind farm landscape of much less naturalness than the larger landscape ..."[7] and that the wind farm could not be absorbed into the landscape.[8] The Court also considered that the visual effects on the amenities of the users of the landscape would be major and that the proposed

[5] HC WN CIV 2007-485-896 11 December 2007, Potter J
[6] At [424]
[7] At [492]
[8] At [493] – [500]

wind farm would have a significant negative impact on the heritage surrounding or associated with the area.[9]

[25] In chapter 6 the Environment Court attempts to quantify the potential costs and benefits of the Meridian proposal. The Court summarised the "measured net benefit" of the wind farm:[10]

- A regional benefit from construction activity with a medium likelihood of being about $800m (one-off), and a very likely regional benefit of about $13m/year from on-going operation, although these have no net benefit at a national level.

- A one-off cost to the economy of upgrading the electricity grid in the lower South Island very likely to be about $100m.

- A benefit to the economy very likely to be about $107m/year from the generation of electricity, and from reduced CO_2 emissions with a medium likelihood of being about $20m/year, for the 30 year life of the wind farm.

- A cost to the economy with a medium likelihood of about $16m/year to accommodate the variability of wind energy.

Against those measured benefits, the Court said it had to put "the very real, but unmeasured, costs in terms of landscape, heritage and recreation and tourism that will not be remedied or mitigated".[11] Although the Court accepted that there was a net benefit, it considered that the unmeasured costs were significant and that the net benefit was not nearly as substantial as the numbers might indicate.

[26] The next chapter (Chapter 7) is also important to most, if not all, the grounds of appeal. It addressed the issue: "Should the power generation facility be approved under the operative district plan?"

[27] After a detailed discussion of the objectives and policies of the District Plan, the Regional Policy Statement, the decision of the hearing Commissioners, and "other matters" under s 104(1)(c) of the Act, the judgment provides a summary to that point:

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[9] At [507] and [532]
[10] At [649]
[11] At [650]

> [693] If the matters in the previous sections of this chapter were all we had to consider we would agree with the planner called by the District Council ... that we should grant consent to Meridian ...

But the Court then found it necessary to further assess the proposal under ss 5-8 of the Act (the purpose and principles in Part 2). It did so under three heads: whether the proposal would be an efficient use of resources in terms of s 7(b); "other matters" that the Court was required to have particular regard to under s 7; and, finally, a weighing of all relevant matters.

[28] As to whether the proposal would be an efficient use of resources in terms of s 7(b), the Court found[12] that the evidence on the benefits and costs to recreation "was inadequate" and for tourism was "minimal"; there was an absence of evidence "quantifying the value of the landscape ... or of the costs of the project to the heritage values of the Old Dunstan Road"; there were "large gaps" in the Court's cost benefit analysis; it was extraordinary that in a $2 billion project more effort had not been made by Meridian and the two government departments "to value more of the costs and benefits much more thoroughly"; and given the scale of the project the Court would have expected proportionate evidence "on what were clearly always going to be key issues – the potential adverse effects on heritage and, especially, landscape values".

[29] Then the Court discussed[13] whether it should consider alternatives when assessing efficiency in terms of s 7(b). It concluded that alternatives needed to be considered in this case because costs in terms of landscape and heritage values had not been "internalised" to Meridian, there was no "competitive market" and "an outstanding natural landscape and historic heritage" constituted "matters of national importance" which the Court was obliged to "recognise and provide for".

[30] Having reached that conclusion the Court then considered whether alternatives existed. It decided that realistic alternatives to Meridian's wind farm "do exist and should have been considered" and that failure to do so would be taken into account later in the judgment.[14] The Court noted that New Zealand is a "wind

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[12] At [697] and [701]
[13] At [702] - [704]
[14] At [706]

rich country" with "many 'untapped' wind resources of specific places" as shown on a plan attached to the judgment.[15] Given that the proposal affected matters of national importance under s 6(b) and the concept of stewardship under s 7(aa), the Court considered that the Meridian proposal should be "put on hold until other wind resources with lesser potential effects on landscape and heritage have been considered" and that the "failure to consider alternatives properly is a factor going towards turning the proposal down".[16] The Court commented that on the evidence before it the question "is the proposal an efficient use of resources?" could not be answered.[17]

[31] Several s 7 matters were then addressed by the Court:[18] stewardship under s 7(aa); maintenance and enhancement of amenity values under s 7(c); intrinsic values of eco-systems under s 7(d); maintenance and enhancement of the quality of the environment under s 7(f); any finite characteristics of natural and physical resources under s 7(g); and the effects of climate change and the benefits of renewal energy under s 7(i) and (j). The weight attached to each factor was indicated. The evaluation by the Court was truncated in part by the fact that some of these criteria had already been incorporated in its s 7(b) analysis.[19]

[32] Then the Court concluded its analysis by weighing all matters. It found that the Meridian proposal achieved the District Plan policy for development of power generation facilities.[20] However, it did not meet a District Plan policy seeking to reduce the environmental impact of power generation.[21] Proposed Plan Change 5 was seen as neutral, as were the provisions of the Otago Regional Policy Statement.[22] Although substantial weight was given to the likely contribution to the national grid, it was "not as much as we would if we had been given a thorough cost

[15] At [707]
[16] At [709]
[17] At [710]
[18] At [711] – [722]
[19] At [717] – s 7(c), [720] – s 7(f), [722] – s 7(i) and (j)
[20] At [653] and [725]
[21] At [654] and [725]
[22] At [728] – [729]

benefit analysis".[23] Other positive effects were given weight according to their net contribution.[24]

[33] On the negative side, effects on the landscape in terms of s 6(b) were a "very large factor against the proposal" and were given "very substantial weight".[25] This reflected the Court's assessment that the Lammermoor was "nearly unique"[26] within New Zealand and "worthy of protection".[27] The need to protect heritage values under s 6(f) was also taken into account on the negative side, albeit to "a much lesser extent".[28]

[34] Those considerations led the majority to the conclusion that the scales came down on the side of refusing consent.[29] While the dissenting member of the Court agreed with the majority that Meridian's s 7(b) analysis was inadequate, his overall assessment favoured granting the application "by a small margin".[30]

[35] We only need to make brief reference to chapter 8 at this stage. It records the conclusion of the majority that the Meridian project was inappropriate in the outstanding natural landscape and did not achieve sustainable management in terms of s 5.[31] That reflected the majority's view that the positive benefit of supplying a very large quantity of renewable energy was outweighed by five adverse consequences: substantial impact on the outstanding natural landscape; uniqueness of the landscape; possibility of alternative sites not located in outstanding natural landscapes; the site is nearly surrounded by public land; and failure to put full evidence before the Court in respect of the efficient use of all the natural and physical resources and the likely benefits and costs of "reasonable" alternatives.[32]

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[23] At [732]
[24] At [732]
[25] At [734]
[26] At [739]
[27] At [746]
[28] At [744]
[29] At [750]
[30] At [763]
[31] At [757]
[32] At [757]

The Meridian appeal

[36] As set out in paragraph [3] of this judgment, Meridian has advanced six grounds of appeal. Oral argument was dominated by grounds (ii) and (iii), centering on the Environment Court's conclusion in paragraph [242] of its decision which is quoted at [22] above. This is the Court's finding that s 7(b) requires a comprehensive and explicit cost benefit analysis of the proposal and that alternatives can be considered where s 6 matters are involved. Ground (i) arises from that paragraph and paragraph [230] which is set out in at [21] above. In relation to that ground Meridian claims that it was required to demonstrate to the satisfaction of the Court that its project was "the best" in net benefit terms.

[37] The second, but lesser, part of the oral argument focussed on the contention that Meridian was denied a fair hearing. This was in three respects. First, no opponent raised the issue of alternatives in its appeal or notice of issues. Secondly, the Court applied the efficiency test developed in the *Lower Waitaki* case even though that decision was delivered after the Meridian hearing had concluded and without Meridian being warned that the Court intended to adopt the *Lower Waitaki* approach. Thirdly, the way the Environment Court applied the consent granted for the Mahinerangi wind farm.

[38] There was little to no argument on the fifth and sixth grounds of appeal.

First three grounds of appeal

[39] We have grouped these grounds because they are interwoven. But we find it convenient to alter the order. After considering a number of preliminary matters we will address the issue of alternatives (ground (iii)), then consider the issue of the cost benefit analysis (ground (ii)), and conclude by considering Meridian's allegation that it was required to demonstrate that its project was "the best" (ground (i)).

Respondents' primary arguments in relation to all three grounds

[40] The third to ninth respondents' principal argument is that it should not be the role of the High Court in an appeal on points of law to revisit issues which are primarily contested factual matters upon which the Environment Court has made findings. They argue that the Meridian appeal does not identify specific points of law. Rather, Meridian's argument is essentially a complaint about losing consents that Meridian believes it should have secured. The respondents argue that in reality the case was decided on factual landscape issues.

[41] Inasmuch as there might be any legal errors in the application of the efficiency consideration in s 7(b), the respondents' overarching case is that the errors do not matter. They say the Environment Court found the Hayes landscape to be such an outstanding landscape, and the proposed "huge" wind farm to be so adverse to that landscape, that the landscape was worthy of protection on its own merits. Their submission is that even if this Court found that Meridian was not obliged to provide a more thorough net benefit analysis or to have canvassed alternatives, that conclusion would not be material because the Court's evaluation was driven by the need to protect this landscape.

[42] With specific reference to the issue of alternative sites, the respondents contend that the Environment Court did not find that alternatives must, as a matter of law, be considered. Rather it found that they *could* be considered. Although the Court received some evidence about other sites that Meridian had investigated, in the end the Court was unable to test possible alternatives meaningfully because Meridian elected not to provide any contestable evidence about the portfolio of sites it had evaluated.

[43] As to the cost benefit analysis, the respondents claim that Meridian has misconstrued what the Court actually did. They say that the Court properly weighed the landscape matters against other positive factors. Sustainable management, rather than efficiency, ultimately guided the Court's decision. Rather than laying down any hard and fast approach, the Court was indicating a preferred approach. And in the circumstances of Project Hayes there was no reason in law why a cost benefit

approach could not be utilised under s 7(b) to ensure that the "negative" side of the ledger was properly weighed.

[44] Finally, the respondents deny that the Environment Court required Meridian to demonstrate that its site was "the best". They say that nowhere in its judgment did the Court enunciate or apply that test.

The Environment Court's summation

[45] In support of their argument the respondents rely on the Environment Court's summation in paragraph [757] of its decision:

> [757] After weighing all the relevant matters identified in earlier chapters, we judge that the Meridian project is inappropriate in the outstanding natural landscape of the Eastern Central Otago Upland Landscape and does not achieve sustainable management of the Lammermoor's resources in terms of section 5 of the Act. That is principally because the nationally important positive factors of enabling economic and social welfare by providing a very large quantity of renewable energy are outweighed by the most important adverse consequences, that:
>
> (1) a wind farm with a site envelope of about 135 km^2 with 176 turbines each up to 160 metres high spread over a length of over 20 kilometres must on most objective measures have a substantial impact on the outstanding natural landscape of the Lammermoor and the heritage surroundings of the Old Dunstan Road across it. We have found it is likely to create its own wind farm landscape, which will be within 17 kilometres of, and sometimes visible with, another (approved) wind farm (Mahinerangi);
>
> (2) the Eastern Central Otago Upland Landscape is one of the very few places in New Zealand where citizens can experience a wide, high peneplain under a big sky (a relatively common experience in Australia and on other continents) in a highly natural and near endemic environment that also contains a heritage trail;
>
> (3) wind farms are in their comparative youth in New Zealand and there may still be many potential sites which are not located in outstanding natural landscapes. We consider that it would be preferable for current wellbeing and for future generations and would give effect to the RPS if other sites were to be investigated more fully first. In the regional context it would also be preferable for the communities of Otago if sites which have a resource consent and do not affect section 6 values were implemented first – especially the Mahinerangi site;

> (4) the Meridian site is nearly surrounded by the public land we identified in Chapter 2.0, especially the Rock and Pillar Conservation Park and its recent extensions, the Logan Burn Reservoir, Te Papanui and the various Taieri River reserves, so the effect of the wind farm on landscape and amenities is even more important than it would have been if surrounded by private land;
>
> (5) As we have analysed in detail Meridian, the Central Otago District Council, and the Crown failed to put full evidence before the Court in respect of the efficient use of all the relevant natural and physical resources of the Lammermoor. Such an examination not only of all the benefits of the proposal (which we did receive) but also of all the costs would have further increased the objectivity of this decision, as would have an analysis of the likely benefits and costs of reasonable alternatives to the Meridian proposal.

Is Meridian's appeal simply revisiting issues of fact?

[46] For a number of reasons it is appropriate to deal with this, one of the respondents' key arguments, at the outset. First, it is potentially determinative of the appeal, for there is a longstanding policy not to set aside decisions for errors of law which are not material. Secondly, it is the principal argument in opposition to the appeal. It reflects, we think, an implicit acknowledgment that the Environment Court's approach to the s 7(b) efficiency criterion was novel and potentially in error of law. Finally, whether or not that approach is in error of law is in itself a question of considerable complexity and importance. Such an issue should not be examined and pronounced on by this Court if it is essentially a moot point because of immateriality. Rather, in that situation such issues should await a day when they are clearly going to be central to the determination of the appeal.

[47] We are left with no doubt that paragraph [757] accurately summarises the reasons behind the Environment Court's decision that the various consents and permits should be cancelled. We infer that points (1) and (2) listed by the Court are at the forefront of its summary because for it they loomed largest. We therefore accept the respondents' underlying argument that the case was primarily decided upon landscape issues, which were factual and evaluative.

[48] That said, we think that the third conclusion that there might be other potential sites was of considerable importance to the Environment Court's final determination. Moreover, on the face of that Court's decision this issue assumed such importance that on appeal this Court could not responsibly conclude that it was an immaterial consideration. As the Court said in its decision,[33] alternatives properly was a factor going towards turning the proposal down. If errors of law are embedded in a significant aspect of the Court's reasoning they must be addressed. And if they are upheld they will provide grounds for at least sending the case back to the Environment Court for further consideration.

[49] Point (4) effectively supports the first and second points and does not warrant any further comment. On the other hand, the fifth point reflects the many criticisms recorded earlier in the Court's decision about the failure of Meridian to provide a comprehensive cost benefit analysis, including an analysis of alternative sites. It is not just an afterthought. Indeed, the topic of alternative sites/cost benefit analysis occupies a significant part of the 348 pages of reasoning. Again, it cannot be dismissed as immaterial to the decision.

Was it an error of law for the Environment Court to call for a consideration of alternative locations?

[50] We turn then to the contentions of legal error, starting with whether or not the Environment Court erred in law by severely criticising Meridian for not providing evidence about alternative locations. (As a separate issue, we will later consider Meridian's subordinate argument that, if it was obliged to consider alternative locations, there was a breach of natural justice because the Court did not adequately inform Meridian, before the Court reached its decision, that this was considered to be a requirement.)

[51] Section 104(1) of the RMA sets out the matters that consent authorities are obliged to have regard to when considering applications for resource consents:

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[33] At [709]

> **104 Consideration of applications**
> (1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to-
> (a) any actual and potential effects on the environment of allowing the activity; and
> (b) any relevant provisions of-
> (i) a national environmental standard:
> (ii) other regulations:
> (iii) a national policy statement:
> (iv) a New Zealand coastal policy statement:
> (v) a regional policy statement or proposed regional policy statement
> (vi) a plan or proposed plan; and
> (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application. ...

This section does not require a consent authority to have regard to alternatives to the proposed activity. However, s 104(1)(c) enables a consent authority to have regard to any other matter that it considers relevant and reasonably necessary to determine the application.

[52] Before a consent authority can consider any application for a resource consent under s 104, the application must comply with the requirements of s 88 which relevantly provides:

> **88 Making an application**
>
> …
>
> (2) An application must—
>
> …
>
> (b) include, in accordance with Schedule 4, an assessment of environmental effects in such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.
>
> …

From this point in the judgment we will refer to the assessment of environmental effects as the "AEE".

[53] In the present context cl 1(b) of Schedule 4 has particular significance. It provides:

> **1 Matters that should be included in an assessment of effects on the environment**
>
> Subject to the provisions of any policy statement or plan, an assessment of effects on the environment for the purposes of section 88 should include -
>
> …
>
> (b) Where it is likely that an activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:

We note the imperative is "should", in the sense of imposing an obligation. The sub-paragraph contains within it a judgment as to whether "it is likely" that the activity will result in "any significant adverse effect on the environment". If so, a description of any possible alternative locations or methods for undertaking the activity should be included.

[54] Section 92 of the RMA enables the consent authority to request further information (in addition to that supplied with the application for a resource consent):

> **92 Further information, or agreement, may be requested**
>
> (1) A consent authority may, at any reasonable time before the hearing of an application for a resource consent or before the decision to grant or refuse the application (if there is no hearing), by written notice, request the applicant for the consent to provide further information relating to the application.

Subsection (3) of that section requires the consent authority to notify the applicant in writing of the reasons for its request. Unless the applicant refuses to provide the information, subs (3A) requires the information to be provided no later than 10 days before the hearing.

[55] An applicant is permitted by s 92A(1)(c) to refuse a request for further information:

> **92A Responses to request**
>
> (1) An applicant who receives a request under section 92(1) must, within 15 working days of the date of the request, take 1 of the following options:
>
> …

> (c) tell the consent authority in a written notice that the applicant refuses to provide the information.
>
> …

Even if the applicant refuses to provide the information sought, the consent authority is nevertheless obliged to consider the application: subs (3).

[56] With the benefit of that summary of the statutory background we turn to the requests for further information in this case.

[57] In the AEE accompanying its application Meridian made three key points with reference to alternatives (as summarised to us by its counsel):

> (a) In terms of site selection, the most important factor is high and consistent wind speeds, which at the Hayes site are exceptionally good even by world standards. Over time, Meridian has collected extensive wind meteorological monitoring mast data throughout New Zealand. This data indicates that there are few (if any) alternative sites available to any applicant to match Project Hayes in terms of wind speed, duration and scale.
>
> (b) Wind speed is not the only criterion that is applicable to the development of a viable wind farm. Other factors include: a smooth laminar air flow (low turbulence); proximity to the local electricity grid; site accessibility; proximity to load centre; availability of privately-owned, cleared, freehold land with supportive landowners; national landscape classifications; and elevation.
>
> (c) Once these factors are considered in total, the Project Hayes site is one of the few areas within the Otago region which is appropriate for development and in Meridian's assessment (not contradicted in evidence) the best.

After considering Meridian's application and the accompanying AEE, CODC made two s 92 requests for further information.

[58] The first request noted that alternatives were only briefly discussed in the AEE and asked Meridian to address alternative methods for renewable energy generation and alternative locations for wind farms "elsewhere in New Zealand". Meridian responded, stating (relevantly):

Response

Meridian advises pursuant to section 92A(1)(a) and (c) that it refuses to provide this information to the extent it is not provided below.

Comment

Meridian, as above, cannot see how this request is relevant to undertaking an assessment of this proposal. The RMA envisages that an applicant may seek consent for any particular proposal. That proposal must then be considered by a consent authority. A comparative assessment of hypothetical alternatives that are not being pursued by the applicant is of no assistance, nor are the details of such "alternatives" known to the consent applicant or Council. In the abstract it is impossible to provide a meaningful assessment of the effects of such hypothetical alternatives.

In addition, Meridian considers it is incorrect to describe other locations as "alternatives" to the present proposal. There is a substantial and increasing demand for electricity in New Zealand, including the South Island and there needs to be generation of electricity from many renewable energy sources.

Where a potential wind farm site has all of the necessary attributes for consenting it is able to be progressed through the consent process. Where another site has attributes that also make it suitable for consenting it cannot be described as "an alternative" site – it is in fact "another" potential site.

This response led to the second request. It asked Meridian to provide an explanation of its process of evaluation and site selection, and to give the reason why the Hayes site was preferred to others.

[59] In its response to the second request Meridian emphasised three points:

(a) Meridian would provide further elaboration of the process it followed to identify potential sites and how those sites are selected and shaped for development;

(b) Meridian would include an outline of the key factors in the selection and development of Project Hayes; and

(c) There was no obligation on an applicant to provide a consent authority with alternatives.

Several attachments were forwarded with this response. Attachment 1 relates to the consideration of alternative locations and the suitability of the Project Hayes site. This was presented in the form of a short report (the Report).

[60] The Report provided an overview, outlining the following key points:

(a) Over 17 years of investigating and evaluating the potential for wind generation in New Zealand, Meridian has investigated over 100 sites and holds data from 90 historic wind monitoring masts and approximately 30 existing masts throughout New Zealand.

(b) Meridian is currently carrying out detailed analysis on approximately 25 sites with the best generation potential known to Meridian. Some or all of these will be progressively advanced through to consent based on a detailed assessment of their performance against a range of parameters including constructability, commercial viability and consentability. The decision to advance Project Hayes was made against this background of knowledge arising from all sites known to Meridian over New Zealand;

(c) Proposals were advanced based on the results of that analysis coupled with further assessments of the environmental and factors associated with each site. Meridian advanced the sites that were expected to perform most highly across this range of environmental, social and economic factors; and

(d) Project Hayes had a number of characteristics (quality of wind resource, proximity to transmission and scale) that in combination made it the best site Meridian is aware of in the South Island for wind energy generation.

These points were supplemented by a history of studies involving the Project Hayes site and reference to a number of additional parameters that led Meridian to conclude that the Project Hayes site was “exceptional” in the South Island.

[61] However, at no time did Meridian specifically provide information about alternative locations. In this respect Meridian effectively refused the first request by CODC for further information. Arguably, however, Meridian complied with the second request.

[62] The failure to provide information about alternative locations was not significantly addressed by Meridian's evidence in the Environment Court. Mr Muldoon, the wind development manager of Meridian whose role included the evaluation of other locations, acknowledged that an evaluation of the other locations was not referred to in his brief of evidence. Nor was this information included in the evidence of other witnesses called by Meridian, or, for that matter, by opponents of the application.

[63] Having concluded[34] that alternatives could be considered, the Environment Court ultimately decided[35] that they should have been considered in this case and that failure to do so was a factor going towards turning down the application. Was the Environment Court entitled to call for consideration of alternative locations in this case?

[64] Meridian contends that if an applicant refuses to provide further information pursuant to s 92A then its application will stand or fall on the evidence before the consent authority. It says that in this case there was evidence that Meridian had considered alternative locations before deciding on the Hayes site and that its application should have been determined on the strength of that evidence. That approach, which Mr Smith described as a "trust us" approach, was challenged by the respondents. They contend that the Environment Court was entitled to test the validity of Meridian's assessment of alternative locations and that it could only do so by obtaining further information about the alternative locations.

[65] In our view the critical issue is whether, in terms of s 104(1)(c), consideration of alternative locations was "relevant and reasonably necessary to determine the application". Given the history and circumstances of the Meridian application,

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[34] At [242]
[35] At [702] – [704]

including the size of the project, we are satisfied that the issue of alternative locations came within those words. We will now explain how we have arrived at that conclusion.

[66] Upon receiving Meridian's application CODC was entitled to proceed on the basis that for the purposes of cl 1(b) of the Fourth Schedule it was likely that the wind farm would result in a significant adverse effect on the environment and that under those circumstances the AEE should have included a description of any possible alternative locations for undertaking the activity. Thus it was entitled to make a s 92 request for the applicant to supply "a description of any possible alternative locations ... for undertaking the activity".[36] Even though this request was effectively refused by Meridian, CODC was nevertheless required by s 92A(3) to consider Meridian's application under s 104, and it did so.

[67] Once the matter was appealed to it, the Environment Court had the same powers and discretions as CODC: s 290(1). Consequently it was entitled to revisit the alternative locations issue. Having done so, it was open to the Court to conclude that the Meridian application triggered cl 1(b) of the Fourth Schedule and that under those circumstances the Court could seek a description of any alternative locations under s 92(1). Given that context further information about alternative locations was both relevant and reasonably necessary to determine the application in terms of s 104(1)(c).

[68] We are therefore satisfied that, subject to a qualification we are about to mention, the Environment Court did not err in law when it called for consideration of alternative locations. A qualification is that as a creature of statute the Court was confined to the powers conferred by the RMA. With reference to alternative locations, cl 1(b) of Schedule 4 (in conjunction with s 104(1)(c)) only permitted the Court to seek from Meridian *a description* of any possible alternative locations. We will have more to say about this later in the judgment.

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[36] For reasons that will we will give later at [93] we believe that CODC overstepped the mark when it asked for alternative locations "elsewhere in New Zealand", but that is of no immediate moment.

[69] However, the point of law raised by Meridian in relation to alternatives has a different focus. It challenges the Court's approach to alternatives *in the context of s 7(b)*.

Was it an error of law for the Environment Court to call for an analysis of alternative locations as part of its examination of the efficiency criterion in s 7(b)?

[70] Meridian's argument challenges the underlying purpose behind the Environment Court seeking an assessment of alternatives, namely, for use as part of a cost benefit analysis under s 7(b). We should explain at the outset why we accept that the Court was seeking the information for the purpose of applying s 7(b) notwithstanding the references it had made to s 6.

[71] The Environment Court started with the proposition at both [234][37] and [242][38] that "alternatives can be considered where s 6 matters are concerned".[39] Later this was interpreted by the Court on two occasions. First, at [696] the Court referred to "the requirement we identified in chapter 3.0 to look at alternative sites under s 7(b)" and at [702] it said "in chapter 3.0 (The law) we decided that in certain circumstances s 7(b) leads to a requirement to consider alternatives". Thus it is clear that by the time the Court came to applying s 7(b) it did so on the basis that in the circumstances of this case it was *required* to consider alternatives, the existence of a s 6 matter (outstanding natural landscape) having been one of the triggers for that requirement.

[72] Thus we are brought squarely to Meridian's principal complaint, that the Environment Court fell into error of law in the way it sought to apply the efficiency criterion contained in s 7(b), which provides:

> **7 Other matters**
>
> In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

[37] which we quote at [75]
[38] which we quoted at [22]
[39] At [242]

…

(b) The efficient use and development of natural and physical resources:

While that alleged error of law has two interwoven dimensions (cost benefit analysis and alternative locations), the discussion that follows will be confined to the issue of alternative locations.

[73] We begin our discussions by examining the Court's reasoning.

[74] Under the sub-heading "Are alternative locations relevant?", the Court explained its starting point:

> [234] We note what the Environment Court recently stated in *Lower Waitaki River Management Society Incorporated v Canterbury Regional Council*[40]:
>
> > Economic efficiency generally requires that all credible alternatives to a proposal should be identified and included within a cost-benefit analysis[41] to reduce the risk of choosing projects ahead of alternatives that contribute more to society. Not only should the benefits of a project be greater than the costs, but the least cost way of producing those benefits should be implemented[42]. However, there is a real issue as to whether that is required by the RMA.
>
> The Court then went on to find that the RMA does require consideration of alternatives in certain circumstances. It concluded[43]:
>
> > … it is not usually necessary to consider alternative uses of the resources in question, or the use of alternative resources to obtain a similar benefit. However, there are at least three exceptions:
> >
> > (1) where the costs cannot be fully internalised to the consent holder;
> >
> > (2) where there is no competitive market (e.g., in congestion on roads where the relevant resource is the land near those roads; we also note there is a very limited market in water permits); or
> >
> > (3) where there is a matter of national importance in Part 2 of the Act involved and the cost benefit analysis requires comparing measured and unmeasured benefits and costs (as is usually the case) so that the consent authority has to rely principally on its qualitative assessment, e.g. *TV 3 Network Services Limited v Waikato District Counci*l.

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[40] *Lower Waitaki River Management Society Incorporated v Canterbury Regional Council* Decision C80/2009 at para [197].

[41] Kahn, James R. The Economic Approach to Environmental & Natural Resources, 3rd ed. Thompson South-Western, Ohio, USA. (2005) p. 155.

[42] Kahn, James R. (2005) pp 154-155.

[43] *Lower Waitaki River Management Society Incorporated v Canterbury Regional Council* Decision C80/2009 at para [201].

> We take that as a starting point, but in these proceedings we heard rather more legal argument on the issue. So we now turn to consider the case law.

Although the *Lower Waitaki* case was described as the starting point, it effectively became the finishing point as well.

[75] The next paragraph of the decision under appeal refers to cl 1(b) of Schedule 4 and then goes on to cite *TV3 Network Services Limited v Waikato District Council*[44] to support the proposition that where matters of national importance are raised, the question whether there are viable alternative sites for the prospective activity can be relevant. After discussing some other decisions the Environment Court commented "if an alternative site does not raise any matter of national importance then a fine grained analysis may not be necessary",[45] which suggests that the Court was looking for a "fine grained" analysis on this occasion. Later Meridian was criticised for not providing such an analysis. Ultimately the Court concluded[46] that Meridian should have provided an analysis of "the likely benefits and costs of reasonable alternatives to the Meridian proposal".

[76] We find it significant that the Environment Court approached the issue of alternatives on the basis that if any of the three situations described in *Lower Waitaki* arise, s 7(b) imposes *a requirement* to consider alternatives. Thus the Environment Court has superimposed on s 7(b) an imperative that alternatives *must* be considered if any of the three situations arise. For the following reasons we consider that this interpretation of s 7(b) is erroneous in law.

[77] First, it seems to us that the Environment Court's approach is incompatible with the approach to alternatives expressly adopted by the RMA. We consider that by imposing a requirement to consider alternatives in terms of *Lower Waitaki*, the Environment Court has not paid sufficient regard to the scheme of the Act. On each occasion the RMA has imposed an obligation on a consent authority to consider alternative locations or methods, that obligation has been carefully spelled out in the Act. We will now make brief reference to those occasions.

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[44] *TV 3 Network Services Limited v Waikato District Council* [1997] NZRMA 539: [1998] 1 NZLR 360 (HC).
[45] At [241]
[46] At [757] which we quoted at [45] above.

[78] We have already quoted cl 1(b) of Schedule 4[47] which states that an AEE should include a description of any possible alternative locations or methods for undertaking the activity when it is likely that the activity will result in any significant adverse effect on the environment. This is a very precise statement of the circumstances triggering the requirement (where it is likely that an activity will result in *any significant adverse effect on the environment*) and what is required (*a description* of any possible alternative locations or methods for undertaking the activity). That can be contrasted with the three triggers adopted by the Environment Court in *Lower Waitaki* (and in this case) and the requirement for a "fine grained" analysis of the likely benefits and costs of reasonable alternatives.

[79] Another example is s 105(1)(c) which requires that in the case of discharge or coastal permits the consent authority must, in addition to the matters in s 104(1), have regard to:

> (c) Any possible alternative methods of discharge, including discharge into any other receiving environment

Once again there is a very precise description of the circumstances triggering the obligation (an application for a discharge or coastal permit) which can be contrasted with the triggers used by the Environment Court. We also find it significant that the legislature has spelled out that this requirement is in addition to the matters in s 104.

[80] Section 107A provides a further example. It imposes restrictions on the granting of resource consents that will, or are likely to, have a significant adverse effect on a recognised customary activity. Under s 107A(2)(f) the consent authority must consider whether an alternative location or method would avoid, remedy or mitigate any significant adverse effects. Again we note the precise description of the circumstances where the obligation arises and the matters are to be considered.

[81] Next we have ss 168A(3) and 171(1)(b) concerning designations. These are mirror provisions and it will suffice if we quote the relevant parts of s 171(1)(b):

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[47] See [53] above

> **171 Recommendation by territorial authority**
>
> ...
>
> (1) When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to—
>
> …
>
> (b) whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if—
>
> (i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or
>
> (ii) it is likely that the work will have a significant adverse effect on the environment; and ...

Over time the Courts have taken a relatively narrow approach to this provision. If the Environment Court is called upon to review the decision of the territorial authority, it is required to consider whether alternatives have been properly considered rather than whether all possible alternatives have been excluded or the best alternative has been chosen. See, for example, the decision of this Court in *Friends and Community of Ngawha Inc v Minister of Corrections*.[48]

[82] Finally, there is s 32 which carries the heading "Consideration of alternatives, benefits, and costs". We will discuss that section in greater detail with reference to the requirement for a cost benefit analysis.

[83] The second matter that counts against the Environment Court's interpretation is the wording of s 7(b) itself. The section requires particular regard to be had to "the efficient use and development *of natural and physical resources*" (our emphasis) which are defined in s 2:

> **Natural and physical resources** includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures

[48] [2002] NZRMA 401 at [20]

While the definition is not exhaustive, it clearly focuses on *tangibles.* Thus the issue is whether there will be an efficient use of the (tangible) natural and physical resources involved in the application, namely, the wind and land.

[84] This analysis can be contrasted with what we perceive to be the Environment Court's approach. When criticising Meridian for failing to provide an analysis of the likely benefits and costs of reasonable alternatives, landscape values (which the Environment Court saw as possibly the most important single question in the proceeding)[49] were clearly at the forefront of the Court's thinking. We infer that the Court was expecting an analysis that would include a comparison of intangible landscape values. In our view this misconstrues the intended focus of s 7(b).

[85] The third matter concerns earlier Court decisions. We were not referred to any decisions supporting the proposition that s 7(b) requires consideration of alternative locations in the circumstances envisaged by the Environment Court. Clearly the Environment Court's approach on this occasion is novel.

[86] Of the decisions cited, *TV3 Network Services* probably offers the greatest support for the Environment Court's approach. In that case Hammond J accepted that as "a matter of commonsense" consideration of alternatives "strikes me" as a fundamental planning concern.[50] He went on to say:

> I can understand Mr Brabant's practical concern that an applicant for a resource consent should not have to clear off all the possible alternatives. But I do not think that that is what the Court was suggesting. It is simply that, when an objection is raised as to a matter being of "national importance" on one site, the question of whether there are other viable alternative sites for the prospective activity is of relevance.[51]

Those observations did not reflect any analysis of the RMA and in our view they fall well short of supporting the proposition that a consent authority is *obliged* to consider alternative locations as part of its efficiency analysis under s 7(b) in the circumstances envisaged by the Environment Court. Indeed, s 7(b) was not in issue. We will have more to say about the *TV3 Network Services* decision later.

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[49] At [424]
[50] At 373
[51] At 373

[87] A decision of the Court of Appeal, *McLaurin v Hexton Holdings Ltd*,[52] was used by the Environment Court[53] to support the proposition that the Court of Appeal appeared to be comfortable with alternatives being looked at in RMA proceedings. We make two observations. First, that case involved questions of access to landlocked land and can have little, if any, relevance to the situation under consideration. Secondly, at best that case supports the proposition that alternatives *can* be looked at in some situations, not that they *must* be used as part of the s 7(b) analysis if any of the three situations described in *Lower Waitaki* arise.

[88] On the other side of the ledger, and at odds with the Environment Court's approach, are the other Environment Court decisions concerning wind farms.[54] We make the following observations about those decisions. First, none interpreted s 7(b) in the way that it was interpreted in the Meridian appeal. Secondly, there were no less than five different Environment Court Judges involved in those cases. Thirdly, in most of the cases there were landscape issues. Fourthly, on the occasions that s 7(b) has been specifically addressed, efficiency was considered with reference to the otherwise wasted wind resource, and on some occasions with reference to the underlying use of the land. So the s 7(b) efficiency criterion came down to a relatively straightforward exercise in all of those cases.

[89] The question of alternative locations was only considered in three of the wind farm cases. In *Genesis Power* the Court considered that the issue of alternatives was "not really an important issue in the present case".[55] The Court accepted that Meridian had "clearly explored" alternative locations in *Meridian Energy Limited*[56] and did not seek to examine that aspect any further. A similar approach was adopted

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[52] [2008] NZCA 570
[53] At [239]
[54] *Genesis Power Ltd v Franklin District Council* [2005] NZRMA 541 (EnvC), Judge Whiting; *Unison Networks Limited v Hastings District Council ("Unison Stage One")* W058/2006 (EnvC), Judge C J Thompson; *Outstanding Landscape Protection Society Inc v Hastings District Council ("Unison Stage Two")* [2008] NZRMA 8 (EnvC), Judge C J Thompson; *Meridian Energy Limited v Wellington City Council* W31/2007 (EnvC), Judges Kenderdine and Thompson; *Motorimu Wind Farm Limited v Palmerston North City Council* W067/2008 (EnvC), Judge B P Dwyer; *Upland Landscape Protection Society Incorporated v Clutha District Council ("Mahinerangi")* C85/2008 (EnvC), Judge J A Smith; *Unison Networks Ltd v Hastings District Council* W011/2009 (EnvC), Judge R J Bollard; and *Rangitikei Guardians Society Inc v Manawatu-Wanganui Regional Council ("Central Wind")* [2010] NZEnvC 14 (EnvC), Judge B P Dwyer
[55] At [211]
[56] At [341]

in *Unison Networks Limited* with the Court accepting the evidence of the Unison chief executive that the company had "duly investigated possible alternatives to the present site".[57] It should be added that alternatives were not considered as part of the s 7(b) analysis in any of those cases.

[90] Supporting those wind farm cases is the decision of this Court in *The Dome Valley District Residents Society Incorporated v Rodney District Council*.[58] In that case Priestley J said that he was not aware of any authority suggesting that "as part and parcel of the consideration of a resource consent application, alternative sites have to be considered or cleared out".[59] And when refusing leave to appeal[60] he repeated that both he and the Environment Court rejected the proposition that there was any obligation on Skywork (the applicant for a resource consent in that case) to search for and clear out alternative sites.[61]

[91] Our fourth matter arises from the observations of Greig J in *NZ Rail Ltd v Marlborough District Council*.[62] With reference to Part 2 of the RMA his Honour stated at 86:

> This Part of the Act expresses in ordinary words of wide meaning the overall purpose and principles of the Act. It is not, I think, a part of the Act which should be subjected to strict rules and principles of statutory construction which aim to extract a precise and unique meaning from the words used. There is a deliberate openness about the language, its meanings and its connotations which I think is intended to allow the application of policy in a general and broad way.

It is difficult to reconcile the Environment Court's approach of superimposing an alternative location factor on s 7(b) with the approach to Part 2 matters described by Greig J.

[92] Finally, we are troubled by the wider implications of the Environment Court's approach. It seems that the analysis of "reasonable" alternatives the Court was expecting would not be restricted to the CODC district. The Court said:

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[57] W011/2009 at [70]
[58] [2008] NZRMA 534.
[59] At [98]
[60] At HC Auckland CIV 2008 404 587, 8 December 2008
[61] At [33]
[62] [1994] NZRMA 70

> [671] The Commissioners concluded that if a wind farm was not allowed on this site '…[we] find it hard to see where in Central Otago a wind farm' might locate. That is despite having as evidence a report from the Planner for the CODC – Mr Whitney – in which he wrote that he considered there were potentially suitable sites "elsewhere in the Central Otago District **and elsewhere in Otago** including in locations south and west of the Clutha River" ... (Our emphasis)

Later[63] the Court concluded that realistic alternatives to the Meridian wind farm did exist and should have been considered. It then went on to say that "New Zealand is a wind rich country and that there are still many untapped wind resources of specific places as shown on attachment 'B'".[64] That attachment is a wind resources study for the whole of the South Island.

[93] Given that the functions of territorial authorities listed in s 31 are "for the purpose of giving effect to this Act *in its district*" (our emphasis) we do not think that Parliament intended that applicants could be called upon to describe alternative sites beyond the relevant district. We should also add that while we doubt that the Environment Court had in mind that alternatives throughout the country would have to be considered, if that was in fact the intention there would be further problems. For a company like Meridian seeking a major wind farm site *in the South Island* (because the bulk of its customers are located in that island) a comparison of alternative sites in the North Island would be largely meaningless.

[94] We therefore conclude that the Environment Court erred in law when it decided that in this case s 7(b) required alternatives to be considered. In our view no such requirement can be lawfully superimposed on that provision. Now we turn to the other component of Merdian's argument based on s 7(b).

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[63] At [706] and [707]
[64] At [707]

Was it an error of law for the Environment Court to call for a comprehensive and explicit cost benefit analysis of the proposal as part of its examination of the efficiency criterion in s 7(b)?

[95] Building on the formulation in *Lower Waitaki* that economic efficiency generally requires all credible alternatives to a proposal to be identified and included within a cost benefit analysis, the Court decided:

> [242] ... section 7(b) requires a comprehensive and explicit cost-benefit analysis of the proposal. In that analysis:
>
> (a) where market valuations are not available, non-market techniques may be used; and
>
> (b) where the values of the market are different from those of society, alternative societal values may be applied.
>
> The idea behind the cost-benefit analysis is to assess, firstly, whether the proposal has a positive net benefit, and then whether there are credible alternative uses of the resources, or credible alternative resources that could produce the desired output, which have a greater net benefit. …

According to Meridian that interpretation of s 7(b) is not only novel, it is also wrong in law.

[96] It is not, of course, an error of law to adopt a novel approach. It can take many years for a statute to be fully understood. While the approach adopted by the Environment Court in this case can be described as novel, we are also aware that divisions of the Environment Court chaired by Judge Jackson have been pursuing the underlying theme for some time, but with less specificity. Evolution of this thinking can be traced back to *Baker Boys Ltd v Christchurch City Council*.[65]

[97] The fact that other divisions of the Environment Court have not endorsed that approach does not mean, or demonstrate, that the Meridian decision involves an error of law. Indeed, counsel for Meridian could not point to any cases examining and despatching this approach as an error of law. So we need to examine whether the Environment Court's proposition that s 7(b) requires a comprehensive and explicit cost benefit analysis is in conformity with the Act.

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[65] [1998] NZRMA 433

[98] A theme of seeking to maximise the *quantification* of values through s 7(b) can be traced through the Environment Court's decision. The Court explained:

> [226] We are uncomfortable with a cherry-picking approach to efficiency. We prefer to follow the decision of the Court (slightly differently composed) in *Lower Waitaki River Management Society Incorporated v Canterbury Regional Council*[66]:
>
> > We consider that efficiency in section 7(b) of the RMA requires a consent authority to consider the use of all the relevant resources and, preferably, their benefits and costs. It is nearly meaningless to consider the benefits of only some of the resources involved in the proceeding because the artificial weighting created by sections 5 to 8 of the Act will not be kept within the statutory proportions if the only matters given the 'particular regard to' multiplier (see *Baker Boys Limited v Christchurch City Council*[67]) in section 7(b) are those which are not identified elsewhere in section 7. **Further, it is very helpful if the benefits and costs can be quantified because otherwise the section 7(b) analysis merely repeats the qualitative analysis carried out elsewhere in respect of sections 5 to 8 of the Act** (Emphasis added).

In the *Lower Waitaki* case the Court had gone on to say in the next paragraph that "the potential power of s 7(b) is in giving a relatively more objective measure of the efficiency of the proposal."[68]

[99] Later in its judgment in this case[69] the Environment Court recorded an acknowledgment by Dr Layton (a Meridian expert witness) that the impact of the wind farm on recreational activities and the loss of flora, fauna, heritage sites and landscape values would not be revealed by markets and that the value of these impacts could only be inferred indirectly by non-market techniques. Dr Layton had described such techniques. The Court also noted that Dr Layton had stated such techniques are "complex and often contentious" and that he had not made any attempt to utilise the non-market techniques he had identified.

[100] Then the Court went on to lament the lack of quantitative evidence, including: "... in the absence of any quantitative assessment of the costs to recreation, tourism and the environment in general we can only make a qualitative

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[66] *Lower Waitaki River Management Society Incorporated v Canterbury Regional Council* Decision C80/2009 at [196].
[67] *Baker Boys Limited v Christchurch City Council* [1998] 433 at para [98].
[68] At [197]
[69] At [623]

assessment ...";[70] "The qualitative assessments by Meridian's experts should have been supported by the quantitative assessments of the costs through the methods that Dr Layton identified are available";[71] "There are significant costs that we have not been able to quantitatively assess due to lack of appropriate evidence (costs in terms of recreation and tourism) and others that are less amenable to quantitative assessment (heritage and intrinsic landscape costs)";[72] and "We neither read evidence in chief nor heard further evidence quantifying the value of the landscape in which the proposed wind farm is to be placed, or of the costs of the project to heritage values …".[73]

[101] Finally, when deciding whether the wind farm should be approved under the operative District Plan the Court said:

> [745] The most objective way of testing whether the wind farm would be sustainable management of the Lammermoor's resources is whether it would be an efficient use of those resources under section 7(b) of the Act. On the evidence that has been presented, we find that the use of the wind resource is efficient, but consider it of at least medium likelihood that addressing the evidential deficiencies identified would lead us to conclude that a wind farm on the Lammermoor was not an efficient use and development of natural and physical resources. Further, Meridian has also failed in the backup to that, in that it has not sufficiently analysed relevant alternatives.

The application was refused. In part this reflected the Court's view that Meridian, CODC and the Crown had failed to put full evidence before the Court about all the costs of the proposal which "would have further increased the objectivity of this decision".[74]

[102] The Environment Court's comments at [745] provide considerable insight into the Court's thinking. Clearly its desire for quantification and objectivity had significantly influenced its approach to the s 7(b) efficiency criterion (and to the ultimate issue of sustainable management). On the evidence actually presented the Court would have found that the use of the Lammermoor wind resource *was efficient*. Nevertheless the Court decided that if the evidential deficiencies (which

[70] At [625]
[71] At [639]
[72] At [649]
[73] At [697]
[74] At [757] (5)

we interpret as the lack of evidence applying the non-market techniques and alternative societal values mentioned by Dr Layton) had been remedied there was at least a "medium likelihood" the Court would have concluded that the wind farm was *not efficient*.

[103] This reasoning prompts us to look at Dr Layton's evidence more closely. In his supplementary evidence Dr Layton told the Environment Court:

> 8.24 Because the displacement of recreational activities or other environmental impacts, such as on flora or fauna, are intangible and not traded in markets, the value of such impacts is not revealed in market prices and can only be inferred indirectly through other means. Non-market valuation techniques include:
>
> (a) Cost-based valuation – for example, valuing environmental attributies at the cost of preventing or repairing damage to them;
>
> (b) Revealed preference methods – for example, inferring the value of parks, views or other desirable environmental attributes by identifying a premium in nearby house prices or by analysing the travel costs people incur in visiting a park; and
>
> (c) Stated preference methods – for example, direct questioning of a sample of respondents on how much they would pay to secure a given outcome, as if it could be secured through market transactions.
>
> 8.25 Non-market valuation techniques are complex and often contentious. Where there are no such valuations available, the weighting of market and non-market impacts is undertaken by consent authorities as part of their broad overall judgement of applications under Part II of the RMA. My understanding is that the relevant experts providing evidence for Meridian Energy have assessed the environmental effects of the wind farm as having an acceptable impact.

No doubt this is the source of the Court's statement at [242][75] that the comprehensive and explicit cost benefit analysis it had in mind should use non-market techniques where market values are not available and that alternative societal values could be applied when the values of the market differ from those of society.

[104] As the Environment Court noted, Dr Layton had not carried out a cost benefit analysis utilising non-market techniques. Nor had any other expert witness. When

[75] Quoted at [22] above

Judge Jackson questioned Dr Layton about paragraph 8.24 of his evidence with reference to recreational and landscape values Dr Layton said:

DR LAYTON:	The answer in this particular method and you will notice I have not pursued them because they all end up contentious.
HIS HONOUR:	Yes.
DR LAYTON:	Are complex and often contentious what I describe them as, because people will say, "well, is that really the value?"

Given that the Environment Court appears to have been relying on Dr Layton to justify its call for a cost benefit analysis utilising non-market valuation techniques, Dr Layton's answers (coupled with paragraph 8.25 of his supplementary evidence) must call into question the potential utility of such evidence, had it been presented.

[105] On the evidence before it, the Court had extensive *qualitative* evidence from various experts about the potential adverse effects of the wind farm. But it did not have the *quantitative* evidence that it would have liked. Obviously this counted heavily against Meridian when the Court came to apply the s 7(b) efficiency criterion. In our view this approach to s 7(b) was not in conformity with the RMA, as we will now explain.

[106] Section 32 of the Act is the only section expressly requiring a cost benefit evaluation (of proposed policies or other methods before a decision is made on a plan or plan change). Subsections(3) and (4) of s 32 are of particular relevance:

> **32 Consideration of alternatives, benefits, and costs**
>
> …
>
> (3) An evaluation must examine—
>
> (a) the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and
>
> (b) whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.
>
> ...

> (4) For the purposes of the examinations referred to in subsections (3) and (3A), 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.
>
> …
>
> (Emphasis added)

Section 32(4)(a) does not carry any mandatory requirement for all the benefits and costs to be quantified in economic terms, and no such requirement can be reasonably inferred.

[107] The issue whether s 32 requires a strict economic theory of efficiency or a more holistic approach was raised before Woodhouse J in *Contact Energy Limited v Waikato Regional Council*.[76] He declined to interfere with the Environment Court's conclusion that while economic evidence can be useful, a s 32 analysis requires a wider exercise of judgment. This reflects that it is simply not possible to express some benefits or costs in dollar or economic terms. For example, the loss of an ecosystem such as a wetland hosting a large bird population which is going to be overwhelmed by land reclamation may not be capable of expression in dollar terms.

[108] Likewise it would be difficult, if not impossible, to express some of the criteria within Part 2 of the Act (ss 5 – 8) in terms of quantitative values. We take by way of example the following paragraphs in s 7:

> (c) The maintenance and enhancement of amenity values:
>
> (d) Intrinsic values of ecosystems:
>
> (f) Maintenance and enhancement of the quality of the environment:

If any of these matters are relevant, the consent authority "shall have particular regard to" them even if they are only capable of expression in *qualitative,* as opposed to *quantitative,* terms. As Dr Layton said, in this situation it is necessary for the

consent authority to weigh market and non-market impacts as part of its broad overall judgment under Part 2 of the RMA. We have not been referred to any provision stating that this process should be exercised or expressed in dollar terms or by some other economic formula.

[109] While it is true that resource consent decisions under the RMA might be described as subjective, that is inherent in the statutory process. In this respect we note that in *Canterbury Regional Council v Banks Peninsula District Council*[77] the Court of Appeal said:[78]

> ... the Act provides what may be described as a hierarchy of instruments, to the extent that regional policy statements must not be inconsistent with national policy statements and certain other instruments (s 62(2)), and district plans must not be inconsistent with national policy statements and the other instruments, nor with a regional policy statement or regional plan (s 75(2)). It does not follow, however, that there can be no overlap between the functions of regional authorities and territorial authorities. The functions of the latter are set out in section 31, and there is no need to read that section in any restricted way. To the extent that matters have been dealt with by an instrument of higher authority, the territorial authority's plan must not be inconsistent with the instrument. Beyond that, the territorial authority has full authority in respect of the matters set out in section 31. …

Decisions relating to resource consents are within the "full authority" vested in territorial authorities.

[110] Such decisions involve an evaluation of the merits by committees of elected councillors, or a panel of commissioners (as here), and, if there is an appeal, by the Environment Court. A degree, even a relatively high degree, of subjectivity is virtually inevitable. It needs to be kept in mind that the scheme of the RMA is that decisions are made by a number of persons acting together. Persons on the Regional or District Council, or Committee, or panel of the Environment Court, discuss these "subjective" evaluations and reach a consensus. The outcome is not one person's evaluation, except in simple cases of delegation to a single commissioner.

[111] Parliament has not mandated that the decisions of consent authorities should be "objectified" by some kind of quantification process. Nor does it disparage, as a

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[76] (2007)14 ELRNZ 128 at [47] – [51] and [88] – [92]
[77] [1995] 3 NZLR 189

lesser means of decision making, the need for duly authorised decision makers to reach decisions which are ultimately an evaluation of the merits of the proposal against relevant provisions of policy statements and plans and the criteria arrayed in Part 2. That process cannot be criticised as "subjective". It is not inferior to a cost benefit analysis. Consent authorities, be they councillors, commissioners or the Environment Court, and upon appeal the High Court Judges, have to respect that reality and approach decision making in accordance with the process mandated by the statute. It is not a good or bad process, it simply is the statutory process.

[112] Before leaving this cost benefit issue we should briefly comment on the Environment Court's approach to internalising costs. The Court found[79] that costs in terms of landscape and various other matters had not been internalised to Meridian.

[113] With this concept of internalisation comes the notion that external costs arising from the private use of natural and physical resources should be internalised and reflected in the cost and benefit analysis. Externalities are those consequences, both beneficial and adverse, which flow from the use of the resources. Regulatory statutes controlling private use of land developed from the common law of nuisance, which has long understood and responded to the fact that private use of land can cause a nuisance to the neighbourhood. Reforms culminating in the RMA are discussed in this Court's decision *Wilson v Selwyn District Council*.[80]

[114] The underlying purpose of internalising these externalities is to enable all the benefits and costs to be quantified so that a net benefit or net loss, as the case may be, can be calculated. The problem is that where all the benefits and costs are not the subject of market transactions there is no readily quantifiable financial sum reflecting the demand or price to be paid for such benefits or the imposition of detriments. To put dollars on them requires some sort of imputing of demand. Sometimes this can be achieved by way of surveys: "*How much would you pay to visit a national park*?" Sometimes it is not possible to put dollar terms on them.

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[78] At 194
[79] At [703]
[80] [2005] NZRMA 76 at [66] to [68]

[115] But it is all very controversial, as Dr Layton confirmed. We cannot accept that it was within the contemplation of the RMA that failure to fully internalise costs would carry the consequences that the Environment Court contemplated.

[116] While we can understand the Environment Court's desire to maximise objectivity in the decision making process, it is our view that the Court went too far when it decided that s 7(b) required a comprehensive and explicit cost benefit analysis in this case. We believe this resulted in s 7(b) being overplayed. Rather than dominating any other relevant Part 2 criteria, s 7(b) was intended to be weighed and balanced alongside them. In particular Parliament did not intend other criteria in s 7 to receive a truncated evaluation because the subject matter had already been evaluated in the s 7(b) analysis.

Did the Environment Court require Meridian to demonstrate that its project was "the best" in net benefit terms, and if so was this an error of law?

[117] When discussing alternatives the Environment Court said:

> [230] While in an engineering sense efficiency means the ratio of outputs to inputs, in economic terms it is not an absolute but a relative concept. We hold that under section 7(b) of the Act there are two questions to answer when determining the efficiency of the use of resources:
>
> (1) is the value achieved from the resources utilised the greatest benefit that could be achieved from those resources?
>
> (2) could that same benefit be produced utilising resources of lower value if they were organised differently, or if a different set of resources was used?
>
> The first point is about maximising the benefits achieved from the resources being utilised; and the second is about minimising the resource costs of achieving a given benefit.

As we have already said, Meridian contends that this concept was applied in a way that required it to demonstrate that its project was "the best" in net benefit terms and that this was wrong in law.

[118] The RMA is a regulatory statute restraining full rights of private property ownership and freedom of contract. Amongst other things the Act limits the exercise

of those rights by requiring certain conduct to have resource consents. But it would be extremely surprising if the statute granted to agencies, be they elected councils or the Courts, the power to impose upon owners of resources and parties to contracts some duty to make *the best use* of the subject resources, as construed by a council or Court.

[119] We think the correct interpretation of the RMA is that it is up to individuals and groups of individuals to decide what they want to do with their resources (where those resources are in private hands). However, that right is tempered by the fact that private use of resources can impose adverse effects on neighbours and upon the wider community. Hence the justification for the national, regional and district planning instruments, and the associated concept of resource consents, all of which lie at the heart of the RMA.

[120] In addition to those matters are the principles and purposes in Part 2 of the Act, including s 7(b). However, we do not think s 7(b) (or Part 2 generally) was intended to give to decision makers under the RMA the power to make judgments about whether the value achieved from the resources that are being utilised is the greatest benefit that could be achieved from those resources or whether greater benefits could be achieved by utilising resources of lower value or a different set of resources. To go that far would be to assert a planning function beyond the scope of the RMA. The Act effectively represents a compromise between values of planning and respect for private developments.

[121] Having concluded that as a matter of statutory interpretation it was not open to the Environment Court to require Meridian to demonstrate that its project was "the best" in net benefit terms, we have to decide whether the Environment Court actually imposed that requirement on Meridian. We agree with the respondents that this ground has not been made out. Nowhere in the judgment has the Court stated in explicit terms that it expected Meridian to demonstrate that the Hayes site was the best. Nor can this be safely inferred from the judgment as a whole. While the question of alternative sites loomed large in the Court's reasoning, we do not believe the Court has gone as far as Meridian contends.

[122] This ground has not been made out.

Summary

[123] In the circumstances of this case the Environment Court was, subject to the qualifications mentioned in this judgment, authorised to call for a description of alternative sites as part of its s 104 analysis. But it erred in law when it went further and proceeded on the basis that s 7(b) required consideration of alternative locations and an explicit and comprehensive cost benefit analysis. These errors led the Court to apply s 7(b) in a way that was not intended by Parliament. This resulted in the Court not analysing the merits of the application in the way intended by Parliament. The issue of relief will be addressed shortly.

Fourth ground

[124] As already mentioned, this ground of appeal alleges that the Environment Court denied Meridian a fair hearing by virtue of three matters: the issue of alternatives was not raised by opponents; there was no forewarning that the Court intended to apply *Lower Waitaki*; and the Court took into account the Mahinerangi wind farm consent. Given that the first matter is effectively a component of the second, we will go straight to the second matter.

Did the Court's application of Lower Waitaki impose an obligation to hear further from Meridian?

[125] It was in the *Lower Waitaki* decision that the Environment Court first specifically advanced the proposition that s 7(b) might require a cost benefit analysis. That proposition was then utilised in the case under appeal, with the Court reasoning:

> [702] In Chapter 3.0 (The law) we decided that in certain circumstances section 7(b) leads to a requirement to consider alternatives. After considering the submissions and cases, we held that we should follow the

recent Waitaki North Bank Tunnel Concept decision[81] where the Court concluded[82]:

> … that the consideration of alternative uses of resources, or the use of alternative resources to achieve the same or similar benefit, is not usually required under the RMA, and, secondly that there are at least three exceptional situations where considerations of efficiency under section 7 (b) may require consideration of alternatives. These situations are:
>
> 1. where the costs cannot be fully internalised to the consent holder;
>
> 2. where there is no competitive market for the relevant resources; or
>
> 3. where there are matters of national importance in Part 2 of the Act involved and the cost benefit analysis requires comparing measured and unmeasured benefits and costs, such that the consent authority has to rely principally on a qualitative assessment.

Although the consideration of alternatives may be required, this does not necessarily mean that alternatives should be considered in all cases. The Waitaki NBTC decision stated[83] that whether and which alternatives should be considered can only be decided in the context of the specific facts of each case.

[703] Considering the extent to which the situations 1-3 above apply to a Lammermoor wind farm we find:

1. The costs in terms of landscape, heritage in respect of the Old Dunstan Road and the heritage surroundings in which it sits, and recreation and tourism have not been internalised to the consent holder. There may be some possible remedy or mitigation in respect of recreation and tourism, although none has been proposed to us. The evidence before us was that the landscape and the Old Dunstan Road heritage costs could not be remedied or mitigated. Therefore they have not been (and in respect of landscape and the heritage of the Old Dunstan Road, cannot be) internalised to the consent holder.

2. There is no competitive market for the landscape or heritage resources. The 'market' for recreation or tourism resources has not been adequately explored by the applicant. The issue of alternative recreational opportunities was mentioned in evidence and discussed (briefly) in cross-examination. The issue of tourism was barely mentioned.

3. There are two matters of national importance involved: an outstanding natural landscape[84] and historic heritage[85] –

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[81] *Lower Waitaki River Management Society Incorporated v Canterbury Regional Council* Decision C80/2009.
[82] *Lower Waitaki River Management Society Incorporated v Canterbury Regional Council* Decision C80/2009 para [201].
[83] Decision C80/2009 para [548]
[84] Section 6(b) of the Act.
[85] Section 6(f) of the Act.

> which we must recognise and provide for their protection from inappropriate use and development.
>
> We have considered whether in the interests of fairness we should hear from the parties further on the issue of categories 2 and 3 since the *Lower Waitaki* decision has only recently been issued. However, we have decided that there is no need to do so because *TV3 Network* applies – matters of national importance are raised – and we heard argument about that.

We do not accept that the decision of the High Court in *TV3 Networks Services* put Meridian on notice that the test deployed in *Lower Waitaki* would be utilised in the decision under appeal. This reflects the particular issues in *TV3 Network Services* and the way they were addressed by this Court.

[126] TV3 wanted to install a television translator on a hill on the west side of Raglan Harbour. Its application for a resource consent was granted by the District Council. An opponent, Tainui, then appealed to the Environment Court on the grounds that the hill was sacred to Maori and the presence of the translator would offend Maori heritage and waahi tapu. The Environment Court reversed the Council's decision on the basis that granting the consent would not respond to the strong direction in s 6(c) to recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands and waahi tapu. On the question of alternative sites the Environment Court considered that "other possible translator sites may be nearly as effective even though they may involve greater costs".[86]

[127] An appeal to this Court followed.[87] In support of TV3's appeal Mr Brabant argued that the Environment Court had erred by considering whether the proposed activity might be undertaken on another site where it would not offend a matter of national importance. He argued that the Act is "effects based" and that s 92(1) and Schedule 4 identify when alternative sites can be considered (where it is likely that an activity will result in a significant adverse effect on the environment). Thus, Mr Brabant submitted, it was wrong in law to consider alternative sites when the Court had not found that there were any adverse effects.

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[86] [1998] 1 NZLR 360 at 367
[87] [1998] 1 NZLR 360

[128] Hammond J did not directly respond to Mr Brabant's argument. Rather he proceeded on the basis that the Environment Court was not requiring the applicant for resource consent to clear off all possible alternatives:

> But I do not think that is what the Court was suggesting. It is simply that, when an objection is raised as to a matter being of "national importance" on one site, the question of whether there are other viable alternative sites of the prospective activity is of relevance.[88]

On our reading of the *TV3 Network Services* decision there was nothing in it to alert Meridian to the possibility that the Environment Court would interpret and apply s 7(b) in the way that it did.

[129] Nor had the previous history of the Meridian proceeding foreshadowed that possibility. The issue of alternatives had not been included in the list of issues provided by any of the parties in response to the pre-hearing directions issued by the Court on 31 January 2008 and 10 April 2008. While it is true that there was some cross-examination on the issue of alternatives, we do not consider that this should have alerted Meridian to the s 7(b) test that the Court ultimately adopted.

[130] On 8 August (well into the hearing which had started on 19 May) the Maniototo Environmental Society sought to call further evidence, first, on the cumulative effects of the Mahinerangi wind farm and Project Hayes and, secondly, on efficiency issues. Maniototo's application had been made after another division of the Environment Court released its decision upholding planning consent for the windfarm at Mahinerangi.

[131] When granting the adjournment,[89] the Environment Court concluded with these comments:

> [16] … To the extent that this proceeding is about efficiency, it is about the overall efficiency in terms of section 7(b) and section 7(ba) of the Resource Management Act of Project Hayes, and we ask that the evidence reflects that, …

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[88] At 373
[89] Decision C89/2008, 8 August 2008

Later the following exchange took place between Judge Jackson, and Mr Beatson, counsel for Meridian:

> HIS HONOUR: Mr Beatson, what are your thoughts on the way forward please?
>
> [discussion about how to proceed with aspects of the case not affected by the request to call new evidence]
>
> HIS HONOUR: Thank you. And a timetable?
>
> MR BEATSON: I have not thought about specific dates but I would request a simultaneous exchange giving time for rebuttal rather than a three stage timeframe.
>
> I would seek some further guidance from the Court about the question of efficiency that it is interested in.
>
> HIS HONOUR: Well, we need help from you on that.
>
> MR BEATSON: Well, we have outlined the benefits of the project from a broader perspective and we have signalled that, from Meridian's perspective, it is the next best option available to it. We have had an explanation from the Crown about how the market works and that it is competitive and it is up to generators to make commercially sensible decisions about where they locate next.
>
> And we have talked about the benefits to, or we will be talking about, the benefits to the individual landowners and the benefits to the system as a whole and we have deliberately indicated we think the viability question is one for Meridian but we are saying that there is checks and balances on that as well.
>
> I think there is no (sic) much more than can really be said about transmission either.
>
> HIS HONOUR: Fine, well, if there is no more to be said you do not have to say it, do you?
>
> MR BEATSON: No, but I am seeking some guidance about what it is that that Court is ---
>
> HIS HONOUR: Well, we have said what we have said, I am not going to elaborate.
>
> All right, so you want simultaneous exchange?
>
> MR BEATSON: Yes.
>
> HIS HONOUR: All right, thank you.
>
> …

We do not know how advanced Judge Jackson's thinking on the efficiency test was when that exchange took place.

[132] Had Mr Beatson known about the *Lower Waitaki* decision at this time he would have been alerted to the possibility that the Court might apply that decision. In that event it is likely that Meridian would have responded by providing more evidence about alternative sites and/or legal argument about the scope of s 7(b). As matters developed, however, there was nothing at that stage to alert Meridian to the possibility that the Court would adopt the novel approach to s 7(b) that it did.

[133] We accept that as a matter of fairness the Court should have heard further from the parties after the *Lower Waitaki* decision was delivered. If further information about alternatives was required, the Environment Court should have then provided a reasonable opportunity for further evidence to be presented. Thus we are satisfied that this ground has also been made out. We will shortly address the consequences of this conclusion.

The Mahinerangi issue

[134] For the Environment Court the relevance of the wind farm consent at Mahinerangi was one of cumulative effects:

> [482] We have described how the hearing was further adjourned so that the Court could hear evidence about any impact of a wind farm at Mahinerangi on this proposal. At the 2009 resumption of the hearing Meridian produced some new photosimulations[90] of the area. These included those views in which both a Meridian wind farm and a Mahinerangi wind farm, 15 kilometres apart at the closest points and with some 28 kilometres between their centroids, could both be seen.
>
> [483] There is some doubt as to whether Mahinerangi will proceed. Mr Gleadow said in answer to Mr Todd that TrustPower had been quoted in the media as stating that "… under the present policy settings [it] may well not construct Mahinerangi". That is of course hearsay, and we do not know what current settings are of concern to them. Further, it has taken us so long to finalise this decision that more recent media reports suggest that Mahinerangi is likely to proceed. We make no finding either way: as we stated (in Chapter 3.0) if Mahinerangi proceeds then the Meridian project

[90] Mr C G Coggan, part of his evidence-in-chief [Environment Court document 49].

> may cause accumulative effects, and if it does not then the Mahinerangi site may be an alternative which we should consider.
>
> …
>
> [490] In our view the likely strength of the cumulative effects is somewhere between Mr Rough's and Ms Steven's views. We consider that the addition of the Meridian wind farm to a Mahinerangi wind farm will have a moderate adverse extra effect on the natural qualities of the landscape. Having said that, it is clearly the placement of the huge Meridian wind farm in the landscape which generates the major effects to be considered.

[135] Later the Court returned to Mahinerangi in the context of a permitted baseline analysis:

> [674] In relation to the existing environment there are various suggestions[91] that Meridian may have been disadvantaged because (a different division of) the Court heard and decided the smaller Mahinerangi application by TrustPower Limited first (see *Upland Landscape Protection Society v Clutha District Council*[92]), even though TrustPower's application was lodged with the relevant local authorities later than Meridian's. We consider there is no disadvantage. First, we hope it is unnecessary to point out that this is not a "priority of hearing" case under the principle (first in time, first in right) in *Fleetwing Farms Limited v Marlborough District Council*[93]. From a procedural point of view this case involves different resources within two different districts. Secondly, we consider the point is irrelevant. The possibility of generating energy from wind at Mahinerangi is, for the reasons we stated in Chapter 3.0, relevant as:
>
> - either a part of the existing environment as it falls within the definition allowed by *Queenstown Lakes District Council v Hawthorn Estate Limited*[94] (or as an accumulative effect); or
>
> - an alternative.
>
> [675] We hold that the existing environment must include the potential effects of a wind farm above Lake Mahinerangi. We consider the accumulative effects of adding a wind farm on the Lammermoor to those effects will be at least moderate on the heritage surroundings about the Old Dunstan Road even on the scale of the two landscapes being considered.

With particular reference to paragraphs [674] and [675] Meridian submits that the Environment Court was wrong in law when it declined to apply the *Fleetwing* principle and that it should not have taken the Mahinerangi wind farm into account.

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[91] For example, Mr Todd, submissions 16 February 2009, [Environment Court document 85].
[92] *Upland Landscape Protection Society v Clutha District Council* Decision C85/2008.
[93] *Fleetwing Farms Limited v Marlborough District Council* [1997] 3 NZLR 257; 3 ELRNZ 249; [1997] NZRMA 385.
[94] *Queenstown Lakes District Council v Hawthorn Estates Limited* [2006] NZRMA 424.

[136] The *Fleetwing* principle is that where there are competing applications for a resource the priority of the hearings will be determined in favour of the first applicant to file a complete application. Once the priority of hearings has been determined the application having priority is decided on its merits and without having regard to the other application/s.

[137] The Court of Appeal developed the *Fleetwing* principle on the basis that the members of the Court thought it implicit:

> …[T]hat if another applicant applies for a similar resource consent while the first application remains undecided, that does not justify comparing one against the other and failing to give a timely decision on the first application on its merits and without regard to the other.[95]

Then the Court identified five possible policies which might reflect that implicit policy and concluded that on its reading of the RMA Parliament had used the approach of "first come first served".[96]

[138] As far as we aware the *Fleetwing* principle has never been applied so as to require a consent authority to disregard *an existing* resource consent for the reason that the application resulting in the existing consent was not completed until after the application under consideration. Nor has it been applied as part of a baseline analysis where there are effectively different resources (the Meridian site is 15 kms from the Mahinerangi site).

[139] Currently there is considerable uncertainty surrounding the future of the *Fleetwing* principle. It has been challenged in *Central Plains Water Trust v Ngai Tahu Properties Ltd* [97] and *Central Plains Water Trust v Synlait Ltd*[98] both of which involved competing claims for the same water resource. The Supreme Court granted leave for both decisions to be appealed to it. In *Ngai Tahu Properties* the Supreme Court invited a reconsideration of *Fleetwing* and appointed an amicus curiae. The case then settled. Although leave to appeal *Central Plains Water Trust* was granted,

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[95] [1997] 3 NZLR 257 at 264
[96] [1997] 3 NZLR 257 at 265
[97] [2008] NZCA 71
[98] [2009] NZCA 609

it also settled. There can be little doubt that the Supreme Court wished to hear argument about whether the *Fleetwing* principle is sound.

[140] Under those circumstances we do not think this Court could responsibly extend the ratio of *Fleetwing* in the way sought by Meridian, especially in a novel situation like this. We therefore reject Meridian's proposition that the Environment Court erred in law when it declined to apply *Fleetwing* vis-à-vis the Mahinerangi windfarm consent.

[141] It follows that the Mahinerangi windfarm was potentially a relevant consideration in the baseline analysis. Meridian criticised the Environment Court for relying on post hearing media reports suggesting that the Mahinerangi project might go ahead.[99] We will take that matter up when considering the relief that should be granted.

Grounds 5 and 6

[142] Given the conclusions that we have already reached in relation to grounds (ii), (iii) and (iv) and the directions that will follow in the next section of our judgment, we find it unnecessary to comment further on these grounds.

Relief

[143] Meridian not only seeks to have the Environment Court decision quashed, it also wants the consents and permits originally granted by the Councils to be reinstated by this Court without any further consideration by the Environment Court. We are unaware of this step ever having been taken previously.

[144] Meridian relies on two findings in its favour which, it contends, demonstrate that the benefits of the project outweigh the costs and that the project is worthy of consent:

> [650] Against these measured benefits must be put the very real, but unmeasured, costs in terms of landscape, heritage and recreation and tourism

[99] See [483] already quoted at [134] above

> that will not be remedied or mitigated. We note that the large regional benefits will be at the expense of some other region that does not gain, at this time, a large electricity construction project if Lammermoor goes ahead. The landscape, heritage and tourism costs of the project will be both national and regional. Although our cost benefit analysis is on a national basis, the regional effects are a part of this. **On balance we conclude that there is a net benefit arising from the Lammermoor wind farm**. However, we consider that the unmeasured costs are significant and that the size of the net benefit is not nearly as substantial as the numbers above might indicate.
>
> ...
>
> [693] **If the matters in the previous sections of this chapter were all we had to consider we would agree with the planner[100] called by the District Council, Mr D R Anderson, that we should grant consent to Meridian**. However, section 104(1) of the RMA begins:
>
> > When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to –
> >
> > …
>
> We now consider whether we should look at Part 2 of the Act. (Our emphasis).

For the respondents Mr Smith claims that these paragraphs cannot be construed as a finding in favour of Meridian justifying reinstatement of the consents/permits by this Court.

[145] We agree with Mr Smith. Paragraphs [650] and [693] cannot be read in isolation. In our view it is too simplistic to say that because the benefits of the project outweigh its costs, the project must therefore be worthy of consent. While that might be a very significant step towards gaining consent, a wider assessment is required. On its wider assessment of the Meridian application the Environment Court concluded that the project did not achieve sustainable management in terms of s 5 of the Act. Under those circumstances the proper course is for the Court to reconsider that conclusion in light of the errors of law that we have identified.

[146] Meridian's alternative submission was that if the case is to be referred back to the Environment Court, it should be referred to a different division of that Court. This suggestion was opposed by the third to ninth respondents. The Councils

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100 Mr D R Anderson, evidence-in-chief [Environment Court document 62].

adopted a relatively neutral stance. We accept that this option would again be most unusual, and that it would impose a considerable burden on the parties opposing the Meridian application. It is our judgment that the appropriate course is to follow normal practice and refer the case back to the same division of the Court that heard the application, with specific directions.

[147] The principal direction must, of course, be to reconsider the matter in the light of our findings as to error of law in the decision. But that is insufficient on its own. It is important that the corollaries to our findings are also taken into account on the reconsideration.

[148] We will therefore set out specific directions for the Environment Court's reconsideration of the matter:

(a) Meridian is to be given a reasonable opportunity to present further evidence on the question of alternative locations. The respondents are also to be given a reasonable opportunity to call evidence in response to Meridian's evidence.

(b) Once any further evidence has been presented all parties are to be given a reasonable opportunity to present further submissions about the evidence referred to in (a) as well as the overall implications of this decision for the findings and conclusions reached by the Environment Court.

(c) Meridian is not obliged to go beyond *a description* of any possible alternative locations for undertaking the proposed wind farm (in terms of cl 1(b) of Schedule 4). As indicated in [93] these locations will need to be within the CODC district. Given the size of the Meridian proposal and its potential impact on the environment, we anticipate that a reasonably detailed description of alternative sites would be provided by Meridian.

(d) Any further evidence concerning alternative locations will form part of the Court's s 104 analysis of the Meridian proposal (not part of the s 7(b) assessment). The inquiry will be whether, if the same or a similar wind farm could be placed on any identified alternative site/s, it would generate less adverse effects on the environment. That consideration will, however, need to be weighed against any diminution in the benefits of the project (e.g. poorer quality of mean wind velocity, distance from the grid etc), and any other relevant considerations such as the availability of the alternative site/s to Meridian.

(e) As the Environment Court acknowledged, and our analysis of the other wind farm cases demonstrates, consideration of alternative sites is relatively unusual. While it will be for the Environment Court to undertake any further analysis of the evidence before it, we emphasise that consideration of alternative sites should not be pushed too far. We have rejected the proposition that Meridian must demonstrate that the Hayes site is "the best". Rather than being a search for "the best" site, consideration of alternative sites is only part of the evaluation of the merits of the application in the context of s 104 and the focus needs to be on the merits of *Meridian's proposal*.

(f) The Court is also to reconsider the application of the efficiency criterion on the basis that s 7(b) requires an assessment of the efficient use and development of the natural and physical resources involved in the application, namely, the wind and the land. In other words, the Environment Court is to apply the s 7(b) test utilised in the other wind farm cases in which s 7(b) has featured.

(g) Given the opportunity that is now available for the Court to receive further evidence about whether the Mahinerangi wind farm project is likely to proceed, the parties will also be entitled to present further evidence to the Environment Court on that topic.

(h) Nothing that we have said is intended to indicate that the Environment Court is precluded from utilising the cost benefit findings that it reached as part of its s 104 evaluation. However, that evaluation is not to penalise Meridian for failing to provide non market valuation evidence in relation to landscape or heritage values.

(i) The parties will also be entitled to make submissions about any conditions that might be lawfully imposed by the Environment Court to avoid, remedy, or mitigate adverse effects on the environment if the application is granted. The Court will also have power to impose such conditions.

[149] We will take the precaution of reserving leave for the parties to seek clarification of any of these directions. Any such request, containing a description of the clarification sought, must however, be filed and served within 28 days of the date of this judgment.

Mr Sullivan's cross-appeal – climate change

[150] In 2004 s 7 of the RMA was amended by requiring all persons exercising functions and powers under the Act to have particular regard to –

...

(i) the effects of climate change;

(j) the benefits to be derived from the use and development of renewable energy;

These amendments were made by the Resource Management (Energy and Climate Change) Amendment Act 2004 (the amendment Act).

[151] Additional definitions were included in the RMA by the amendment Act. At the heart of the cross-appeal is the definition of "climate change":

> **climate change** means a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods

A definition of "renewable energy" was also added by the amendment Act. Energy produced from wind comes within that definition.

Environment Court decision with reference to climate change

[152] When analysing its role in relation to climate change, the Court proceeded on the basis that Parliament had directed persons exercising functions and powers under the Act to assume there is climate change attributable to human causes "and to move on from there".[101] This reflected the Court's analysis of the definition of climate change and its assumption that Parliament intended scientific discussion about the existence and extent of anthropogenic changes (from human activities) was to be avoided.[102]

[153] Then the Court considered whether there was evidence indicating changes to the site envelope and the surrounding area as a result of climate change. It concluded that there was none. On the other hand, the Court accepted that anthropogenic induced increases in carbon dioxide concentrations in the atmosphere contribute to climate change and that using wind generation rather than carbon emitting generation would reduce climate change and its effects. This led the Court to conclude that Meridian's proposal would contribute to reducing the effects of climate change as defined in the Act.[103] Reduction in CO_2 emissions was later factored into the Court's cost benefit analysis.[104]

Mr Sullivan's cross-appeal

[154] Two grounds of appeal were advanced by Mr Sullivan:

> 1. the Environment Court erred in its interpretation of section 7 of the Resource Management Act by determining that section 7 requires the

[101] At [351]
[102] At [221]
[103] At [354]
[104] At [641]

> decision maker to exclude from its consideration and evaluation of the effects of climate change a consideration of the causes of climate change;
>
> 2. the Environment Court erred by ignoring the uncontested evidence of Dr Kesten Green when evaluating the integrity of the IPCC's Climate Models.

His cross-appeal is advanced on the basis that if Meridian's appeal succeeds and the matter is remitted for a rehearing, then at the rehearing the Environment Court should be directed to reconsider the climate change issues "in accordance with the law".

First ground of cross-appeal

[155] For Mr Sullivan, Mr Fisher argued that before a consent authority can have particular regard to the effects of climate change, as required by s 7(i):

> ... it must first determine that it is satisfied in terms of the definition of "climate change" that a party has *reasonably attributed* human activity to alterations in the composition of the global atmosphere that is in addition to natural climate variability observed over comparable periods;

Having failed to take that step, submitted Mr Fisher, the Environment Court had no jurisdiction to take into account the effects of climate change or to include the benefits arising from the savings in CO_2 emissions in its cost benefit analysis.

[156] We are satisfied that the Environment Court did not err in law and that this ground of appeal is untenable. This reflects a number of matters.

[157] First, the definition of climate change. Like the Environment Court we find it significant that Parliament has used the word "attributed" rather than "caused by". We consider that the definition has been framed in this way to reflect the statutory assumption that climate change is occurring. We also agree with the Environment Court's comment[105] that climate change is an extremely complex subject and that in the absence of a clear direction from Parliament the Court should not enter into a discussion of its causes, directions and magnitude.

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[105] At [351]

[158] Secondly, it is significant that the definition of "climate change" comes from the 1992 United Nations Framework Convention on Climate Change (to which New Zealand is a signatory). That Convention is incorporated in the Climate Change Response Act 2002: see the First Schedule to that Act. In that Convention it is abundantly clear that climate change *as defined* is assumed to exist. For example, clause 1 of Article 3 states that "... developed country Parties should take the lead in combating climate change and the adverse effects thereof", and clause 3 of the same Article states that the Parties to the Convention "... should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects". The commitments entered into by the parties under Article 4 includes taking steps "to mitigate climate change".[106] There are numerous other examples.

[159] Thirdly, the stated purpose of the amendment Act is only explicable on the basis that climate change exists:

> **3 Purpose**
>
> The purpose of this Act is to amend the principal Act-
>
> (a) to make explicit provision for all persons exercising functions and powers under the principal Act to have particular regard to-
>
> ...
>
> (ii) the effects of climate change;
>
> ...
>
> (b) to require local authorities-
>
> (i) to plan for the effects of climate change;
>
> ...

[106] Article 1(b)

Similarly the new paragraph 7(i) requiring those exercising functions and powers under the RMA to have particular regard to the effects of climate change only makes sense if the underlying premise is that climate change exists.

[160] Fourthly, we see major practical difficulties with the interpretation advanced on behalf of Mr Sullivan. It would mean that scientific evidence would have to be adduced on the complex issue of climate change every time persons exercising functions and powers under the RMA were obliged to have particular regard to s 7(i). In the context of resource consents an impossible burden would be imposed on applicants. Climate change issues would be endlessly relitigated and inconsistencies would be virtually inevitable. And if a consent authority (or the Environment Court) found that there was insufficient evidence to enable it to have particular regard to effects of climate change, how would it discharge its obligation under s 7(i)?

[161] Finally, Mr Sullivan's argument is not supported by *Genesis Power Ltd v Greenpeace New Zealand Inc*[107] in which William Young P stated when delivering the judgment of the Court:

> [37] Section 7(i) anticipates that there will be climate change and requires regional councils to take into account, in exercising their functions under the Act, the effects of climate change. ...

While that appeal involved a discharge permit and s 7(i) was not directly in issue, the observation of the Court justifies considerable weight.

[162] This ground of cross-appeal fails.

Second ground of cross-appeal

[163] The allegation that the Environment Court overlooked Dr Green's evidence arises from the following paragraph of the Environment Court's decision:

> [133] Evidence on climate change was presented principally by Dr D S Wratt for Meridian and Professor R M Carter for the appellant Mr Sullivan. Others who

[107] [2008] 1 NZLR 803 (CA)

> addressed climate change were Professor C R de Freitas for Mr Sullivan and Mr P F Gurnsey for the Crown.

Given that Dr Green is not mentioned in that paragraph or, as far as we can see, elsewhere it is certainly possible that his evidence was overlooked. In this regard we were told from the Bar that Dr Green's statement of evidence on behalf of Mr Sullivan was admitted by consent and Dr Green did not appear in person.

[164] Dr Green gave scientific evidence about whether forecasts of dangerous manmade global warming are valid. He concluded that they were not valid and there is currently no more reason to believe that temperatures will increase over the coming century than there is to believe that they will decrease. However, even if his evidence has been overlooked, our conclusions in relation to the first ground of appeal means that it could not have materially affected the outcome.

[165] Under those circumstances this ground of cross-appeal must also fail.

Result

[166] Meridian's appeal is allowed. The matter is referred to the Environment Court for reconsideration in accordance with the directions at [148]. The cross-appeal by Mr Sullivan is dismissed.

[167] If agreement cannot be reached as to costs counsel should file and serve memoranda so that that issue can be determined by the Court.

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