

Ready Reference to Relevant Planning Principles

This list of planning principles are those that seem to be most at issue with development applications on the Peninsula.

These principles are taken from cases listed on the Planning Principles page of the NSW Land and Environment Court website, <https://www.lec.nsw.gov.au/practice-and-procedure/principles/planning-principals.html>.

The court web page provides a more extensive list and has links to the full wording of the judgements involved.

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Aesthetics

Architects Marshall v Lake Macquarie City Council [2005] NSWLEC 78

Planning principle: weight given to expert opinion on architectural design

38 The weight given by the Court to expert opinion on architectural style, form or character should be tested against two main criteria, ie:

- whether the opinion is mandated by a design code, such as the Residential Flat Design Code or the Burra Charter, or alternatively reflects the subjective preferences of a local community expressed in a local policy, such as a development control plan, and/or
- whether the opinion is a widely accepted professional view, or at least a view held by a sizable group of professionals, rather than one individual opinion.

39 Most design codes and guidelines do not give advice on architectural style. Their content tends to be generalised. For example, such codes may emphasise the need for compatibility with the context of a site, leaving the question open whether or not compatibility requires adopting the architectural style and materials of the surrounding buildings.

40 In contrast, some development control plans are quite specific about the desired architectural character of the area to which they relate. Since these plans have been subject to exhibition and community comment, they should be the starting point from which the proposal is considered. The approach must be consistent with that prescribed by the Court of Appeal in *Zhang v Canterbury City Council* [2001] NSWCA 167; [2001] 115 LGERA 373.

41 The majority of development control plans, however, are silent on architectural style and character. In such cases the only evidence before the Court is that of one or more architects or urban designers. It is not always easy to decide when an aesthetic opinion represents a widely accepted professional view rather than an individual opinion. However, generally held professional views tend to be expressed in articles, publications or policies of professional institutions. Experts criticising the architectural design of a building should, where possible, refer to these for validation, in order to demonstrate that the criticism amounts to more than a statement that the expert would have designed it differently?

42 Applying the above principles, I find that Mr Vickas' criticism of the proposal's architectural style is an individual's opinion rather than a view shared by the design profession. It is not mandated by a development control plan expressing the subjective preferences of the Rathmines local community. Consequently I do not give it major weight.

Building envelope

PDE Investments No 8 Pty Ltd v Manly Council [2004] NSWLEC 355 (6 July 2004)

Planning Principle – Floor Space Ratio and Building Envelope

48 The question of whether a building envelope can be filled when the FSR control would produce a smaller building is one that arises from time to time in Court proceedings. The following planning principles are therefore of assistance:

- i. FSR and building envelope controls should work together and both controls and/or their objectives should be met.
- ii. A building envelope is determined by compliance with controls such as setback, landscaped area and height. Its purpose is to provide an envelope within which development may occur but not one which the development should necessarily fill.
- iii. Where maximum FSR results in a building that is smaller than the building envelope, it produces a building of lesser bulk and allows for articulation of the building through setbacks of the envelope and variation in building heights.
- iv. The fact that the building envelope is larger than the FSR is not a reason to exceed the FSR. If it were, the FSR control would be unnecessary.

Compliance

Dayho v Rockdale City Council [2004] NSWLEC 184 (16 July 2004)

Planning principle: monitoring of compliance

7 Where conditions of consent relate to the operation of a use, and it is proposed to monitor compliance with those conditions, it is preferable for the council (rather than the applicant or the operator of the use) to appoint the persons responsible for the monitoring and to choose the time at which the monitoring is to be carried out. While the council arranges for the monitoring, the applicant or the operator of the use is responsible for its cost.

8 Condition 17 (agreed to by the council as well as the applicant) sets out the method of monitoring in accordance with the above principle. The council is responsible, at the applicant's full cost, for commissioning a suitably qualified person to certify whether or not the plant is operated in accordance with the conditions of consent. While the condition may not satisfy the objectors, it seems to me that, short of refusing the application, there is no better way of ensuring that the plant will operate in the way in which the experts suggested that it should.

DCPs and Council policies

Stockland Development Pty Ltd v Manly Council [2004] NSWLEC 472 (3 August 2004)

86 The role of a development control plan was recently considered by the Court of Appeal in *Zhang v Canterbury City Council* [2001] NSWCA 167; (2001) 115 LGERA 373 at 386-387. The correct approach to consideration of, and the weight to be given to, a development control plan is assisted by the express inclusion of a reference to development control plans in s 79C of the Environmental Planning and Assessment Act 1979. In the early days of planning law in this State, that approach was defined by the decisions of the Land and Valuation Court and there are many decisions which deal with the role of development control plans and policies in the decision with respect to an individual development proposal. Some of them were considered by Lloyd J in *Segal v Waverley Council* [2004] NSWLEC 363: see *Re Drake and Minister for Immigration and Ethnic Affairs (No 2)* [1979] AATA 179; (1979) 2 ALD 634 at 640-645; *Hunter District Industries Pty Ltd v Newcastle City Council* (1957) 2 LGRA 240 at 248-249; *Shellcove Gardens Pty Ltd v North Sydney Municipal Council* (1961) 6 LGRA 93 at 102; *Crusade Construction Co Pty Ltd v Sutherland Shire Council* (1961) 6 LGRA 372 at 376-377; *Foreman v Sutherland Shire Council* (1964) 10 LGRA 261 at 269; *Boyce v Burwood Municipal Council* (1964) 10 LGRA 280 at 282-283; *Regent Project (No 6) Pty Ltd v Hornsby Shire Council* (1970) 20 LGRA 316; *Leeroy Television Service Pty Ltd v Leichhardt Municipal Council* (1970) 21 LGRA 40 at 42-43; *JOL Pty Ltd v Waverley Municipal Council* (1971) 22 LGRA 152 at 155; *Willoughby Municipal Council v Manchil Pty Ltd* (1974) 29 LGRA 303 at 309-310; *Smith v Wyong Shire Council (No 2)* (1980) 41 LGRA 202 at 212-214.

87 Consideration was also given to the approach to be adopted to a development control plan by the Court of Appeal in *North Sydney Council v Ligon 302 Pty Ltd* (1995) 87 LGERA 435 and in the later decision *North Sydney Council v Ligon 302 Pty Ltd (No 2)* (1996) 93 LGERA 23. These decisions, and others, provide the principles relevant to consideration of development control plans. In summary they are:

- A development control plan is a detailed planning document which reflects a council's expectation for parts of its area, which may be a large area or confined to an individual site. The provisions of a development control plan must be consistent with the provisions of any relevant local environmental plan. However, a development control plan may operate to confine the intensity of development otherwise permitted by a local environmental plan.
- A development control plan adopted after consultation with interested persons, including the affected community, will be given significantly more weight than one adopted with little or no community consultation.
- A development control plan which has been consistently applied by a council will be given significantly greater weight than one which has only been selectively applied.
- A development control plan which can be demonstrated, either inherently or perhaps by the passing of time, to bring about an inappropriate planning solution, especially an outcome which conflicts with other policy outcomes adopted at a State, regional or local level, will be given less weight than a development control plan which provides a sensible planning outcome consistent with other policies.

- Consistency of decision-making must be a fundamental objective of those who make administrative decisions. That objective is assisted by the adoption of development control plans and the making of decisions in individual cases which are consistent with them. If this is done, those with an interest in the site under consideration or who may be affected by any development of it have an opportunity to make decisions in relation to their own property which is informed by an appreciation of the likely future development of nearby property.

88 The Environmental Planning & Assessment Act 1979 gave statutory recognition to development control plans. However, there was before that Act, and there remain, many cases where a council adopts statements of policy for its area, or part of it, which are not included in development control plans. They relate to many matters and may include master plans for sites or parts of a council area. They may be adopted after considerable public participation, detailed research and describe fundamental expectations of the relevant council. When there is a relevant policy which is not a development control plan, the question arises as to the approach to that policy and the weight to be given to it in the decision of the relevant council and in an appeal, if any, to this Court.

89 In *Terrace Tower Holdings Pty Ltd v Sutherland Shire Council* [2003] NSWCA 289; (2003) 129 LGERA 195, Mason P discussed the role of policy in the consideration process. The President emphasised that environmental planning instruments are not “the only means of discerning planning policies or the ‘public interest’” (at LGERA 210).

90 The public interest is expressly acknowledged as a relevant consideration in s 79C(1)(e) of the Environmental Planning and Assessment Act. It was similarly acknowledged in s 91 of the Act in its original form. It must extend to any well-founded detailed plan adopted by a council for the site of a proposed development either alone or forming part of a greater area, even if it is not formally adopted as a development control plan.

91 In my opinion, the weight to be given to a detailed policy will depend upon a number of matters. If the policy has been generated with little, if any, public consultation and was designed to defeat a project which is known to be under consideration by a developer for a particular site, it may be given little weight. Of course, the intrinsic attributes of the policy may be given significant weight, but that weight is not dependent on then being included in a policy. It can be established in other ways. However, the position would be markedly different if the policy is the result of detailed consultation with relevant parties, including the community and the owners of affected land, and reflects outcomes which are within the range of sensible planning options.

92 To my mind, the matters which are relevant when determining the weight to be given to a planning policy adopted by a council are as follows:

- the extent, if any, of research and public consultation undertaken when creating the policy;
- the time during which the policy has been in force and the extent of any review of its effectiveness;
- the extent to which the policy has been departed from in prior decisions;
- the compatibility of the policy with the objectives and provisions of relevant environmental planning instruments and development control plans;

- the compatibility of the policy with other policies adopted by a council or by any other relevant government agency;
- whether the policy contains any significant flaws when assessed against conventional planning outcomes accepted as appropriate for the site or area affected by it.

93 Evaluation of the evidence in the present case leads to the conclusion that the controls expressed in the Urban Design Controls must be given significant weight. Relevant matters include:

- Firstly, the fact that they were adopted after a detailed process of consultation with the local community, including the owner of the site.
- Secondly, not only have the controls not been departed from but, where appropriate, amendments have been made to the Manly Local Environmental Plan to give effect to them.
- Thirdly, the controls were expressed to be, and are, complementary to the Council's adopted Business Development Control Plan.
- Fourthly, the controls allowed for a relaxation of the Business Development Control Plan in relation to the height of the high rise section of the development.
- Fifthly, the controls provide an appropriate planning outcome having regard to the scale of the development contemplated, the relationship with adjoining development, and, although marking the significance of the site, do not significantly alter the character of the surrounding area. The planning outcome provided by the Urban Design Controls was appropriate for a district as opposed to a regional shopping centre.
- Sixthly, the Urban Design Controls and Urban Design Plan were consistent with Council's adopted residential strategy.
- Finally, they are compatible with the environmental planning instrument and development control plans, including the Residential Development Control Plan, which controls residential development to the north. The controls in the Urban Design Controls allow for effective integration of the development on this site with the residential development to the north.

ESD principles

BGP Properties Pty Limited v Lake Macquarie City Council [2004] NSWLEC 399 (12 August 2004)

Ecologically Sustainable Development

82 Before considering the evidence in relation to each issue and its significance to the decision in this appeal, it is necessary to resolve the approach to be taken to the evaluation of some matters. The evidence raises for consideration a number of complex issues relating to the potential impact of the development on threatened species and ecological communities or their habitats. When such issues are raised, there is often difficulty in arriving at absolute conclusions as to the existence of a relevant species, community or habitat and their disposition on a given site. Even greater difficulties can arise in identifying the impacts from the development, particularly when the proposal accepts that impacts will occur but seeks to ameliorate them by carefully designing the development and providing for ongoing operation or maintenance within an environmentally sensitive framework.

83 In the present case, the site is in part low lying and is located in an area of undoubted environmental sensitivity. That sensitivity is marked by its proximity to the area identified as Jewells Wetland, which is to the west and northwest of the site. The site contains the threatened species known as the Wallum Froglet (*Crinia tinnula*) and the threatened population *Tetratheca juncea*. It also contains the threatened ecological communities known as the Sydney Freshwater Wetland and the Sydney Coastal Estuary Swamp Forest. The general disposition of these species and communities are shown on the map figure "E" in these reasons (map not reproduced).

84 In these circumstances, senior counsel for the respondent submitted that the correct approach to evaluation of the evidence in relation to these matters was to apply the body of principles known as "ecologically sustainable development." This would include the approach to decision-making reflected in the "precautionary principle".

85 The EP&A Act was amended in 1998 to include within its objects the encouragement of "ecologically sustainable development" (s 5(a)(vii)). However, the phrase was not defined and, accordingly, it is necessary to understand the intention of the Parliament when making the amendment.

86 The inclusion of a reference to "ecologically sustainable development" in the EP&A Act can be contrasted with the Protection of the Environment Administration Act 1991 (NSW). Under the latter Act, an objective of the Environment Protection Authority is stated to be "to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development" (s 6(1)(a)). That reference to "ecologically sustainable development" is described in s 6(2) in the following terms:

"(2) For the purposes of subsection (1) (a), ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

(a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(ii) an assessment of the risk-weighted consequences of various options,

(b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:

(i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.”

87 This description of "ecologically sustainable development" is utilised by many other NSW Acts, where the object is to ameliorate the impact of government or private actions on the natural or built environment. The relevant legislation includes the following: Agricultural Tenancies Act 1990 (s 3), Coastal Protection Act 1979 (s 3), Contaminated Land Management Act 1997 (s 3), Energy Services Corporations Act 1995 (s 5), Fisheries Management Act 1994 (s 3), Gas Supply Act 1986 (s 3), Landcom Corporation Act 2001 (s 6), Local Government Act 1993 (s 7), National Parks and Wildlife Act 1974 (s 2A), Native Vegetation Conservation Act 1997 (s 3), Pesticides Act 1999 (s 3), Plantations and Reafforestation Act 1999 (s 3), Protection of the Environment Operations Act 1997 (s 3), Rural Fires Act 1997 (s 3), State Owned Corporations Act 1989 (s 8, s 20E), Sydney Water Act 1994 (s 21), Sydney Water Catchment Management Act 1998 (s 14), Threatened Species Conservation Act 1995 (s 3), Transport Administration Act 1988 (s 5, s 18B, s 19D, s 20), Water Avoidance and Resource Recovery Act 2001 (s 3), Waste Recycling and Processing Corporation Act 2001 (s 5), Water Management Act 2000 (s 3), Western Lands Act 1901 (s 2). Elsewhere in this and other legislation, "ecologically sustainable development" is also said to be a factor for consideration in certain circumstances and/or by certain persons, including in the Coastal Protection Act (s 37A, s 38(1)(b1), s 39(4)(a1), s 44(a1), s 54A), Contaminated Land Management Act (s 10), Fisheries Management Act (s 220S(2), s 221A(1)(c), s 221Q), Independent Pricing and Regulatory Tribunal Act 1992 (s

15(1)(f)), Local Government Act 1993 (s 89(1)(c) and (2)), Natural Resources Commission Act 2003 (s14(a)), Plantations and Reafforestation Act 1999 (s 15(6)), Rural Assistance Act 1989 (s 18(4)), Rural Fires Act 1997 (s 9, s 48(3), s 51(2), s 100J(3)(a)), Sporting Venues Management Act 2002 (s 7), Sydney Harbour Foreshore Authority Act 1998 (s 15), Threatened Species Conservation Act 1995 (s 44, s 97), Waste Avoidance and Resource Recovery Act 2001 (s 6(3)), Waste Recycling and Processing Corporation Act 2001 (s 6(5), s 15(1)), Water Management Act 2000 (s 14(3), s 292(3), s 372(4)).

88 Of particular significance because of its impact upon the decision-making processes of councils are the relevant provisions of the Local Government Act 1993. They include s 7(e), s 8(1), s 82(3B), s 89(1)(c), s 89(2), s 430(2).

89 Counsel for the applicant submitted that without an express definition of "ecologically sustainable development" in the EP&A Act, it was doubtful whether the reference to "ecologically sustainable development" in the objects included the precautionary principle. He contrasted the EP&A Act with other legislation where the definition of "ecologically sustainable development" in the Protection of the Environment Administrative Act 1991 was expressly incorporated.

90 The principles which are now commonly understood to be incorporated within the description "ecologically sustainable development" are derived from the Rio Declaration, which was devised at the United Nations Conference on Environment and Development, the "Earth Summit", held in Rio de Janeiro in June 1992. Of course the principles had been under consideration by many people before the Summit and had been given significant impetus by the Report of the World Commission on Environment and Development, Our Common Future, known as the Brundtland Report after its chairman, the then Prime Minister of Norway. The Commission was established by the United Nations.

91 The Rio Declaration provided 27 principles to guide the international community in achieving sustainable development, one of which was the precautionary principle. It was incorporated as Principle 15 as follows:

"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 prevent environmental degradation."

92 On 1 May 1992 the Commonwealth, the State of New South Wales, the Australian Local Government Association and other parties entered into an agreement known as the Inter-Governmental Agreement on the Environment. Although not bound by the Inter-Governmental Agreement on the Environment, local government expressed through the Australian Local Government Association an intention to adhere to its objectives. The Agreement reflects the policy which should be applied unless there are cogent reasons to depart from it: *Re Drake and Minister for Immigration and Ethnic Affairs (No 2)* [1979] AATA 179; (1979) 2 ALD 634 at 641, 645.

93 As foreshadowed in the Inter-Governmental Agreement on the Environment, a National Strategy for Ecologically Sustainable Development was developed with the co-operation of Commonwealth, State and local government (the "ecologically sustainable development strategy"). As with the Inter-Governmental Agreement on the Environment, the endorsement by the Local Government Association of the "ecologically sustainable development strategy" does not legally bind local government authorities to observe the terms of the strategy, but a proper exercise of their powers would mean that local government authorities (and the Court

on appeal) would apply the "ecologically sustainable development strategy" unless there were cogent reasons to depart from the policy.

94 Under the Inter-Governmental Agreement on the Environment, the parties have agreed that the development and implementation of environmental policy and programmes by all levels of government should be guided by the considerations and principles set out in Section 3 of the Agreement: cl 3.1. The considerations and principles in Section 3 relate to ecologically sustainable development. In cl 3.5, the parties agree that the principles of ecologically sustainable development should inform policy making and programme implementation. The four well-known principles of ecologically sustainable development – the precautionary principle, intergenerational equity, conservation of biological diversity and ecological integrity, and improved valuation, pricing and incentive mechanisms – are set out in cl 3.5 in the same terms as in the Protection of the Environment Administration Act (POE Act), the Environmental Planning and Assessment Regulation 1994 (NSW) and the TSC Act.

95 The schedules to the Inter-Governmental Agreement on the Environment deal with specific areas of environmental policy and management and form part of the Inter-Governmental Agreement on the Environment. They set out the ways in which the principles of ecologically sustainable development can be implemented by all levels of government. The schedules relevant to the exercise of powers under the EP&A Act to determine development applications for development that may have an effect on the conservation of biological diversity, such as in the present case, are Schedules 2 (Resource Assessment, Land Use Decisions and Approval Processes), 3 (Environmental Impact Assessment), 6 (Biological Diversity), and 9 (Nature Conservation).

96 The core objectives and guiding principles of the "ecologically sustainable development strategy" are set out on pp 8-9. The Strategy then examines the application of ecologically sustainable development principles to various sectors. The "ecologically sustainable development strategy" then considers inter-sectoral issues in Part 3. Sections 9, 11, 13 and 15 in Part 3 are relevant.

97 Section 9 deals with biological diversity. Section 11 deals with native vegetation. Of relevance to this case is the challenge and objective of protecting native vegetation on private land. Section 13 deals with land use planning and decision-making. The challenge and objectives are to ensure land use decision-making processes and land use allocations in all levels of government meet the overall goal of ecologically sustainable development. Section 15 deals with environmental impact assessment. The challenge and objective is to ensure that the guiding principles of ecologically sustainable development are incorporated into environmental impact assessment processes.

98 It is true, as the applicant emphasises, that the EP&A Act makes particular reference to considering the principles of ecologically sustainable development in relation to some matters (see s 79B(5)(g), s 112D(1)(g), 112E (1)(f) and s 115H). Each of these provisions relate to consideration by others of matters relevant to the administration of the EP&A Act where other bodies have concurrence or consultative roles. The objects of the EP&A Act would not inform the decision of the other body creating the necessity to expressly identify it in the EP&A Act.

99 The EP&A Act now provides in s 79C for the matters to be considered when a development application is determined. Section 79C(1) provides as follows:

“(1) Matters for consideration—general

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:

(a) the provisions of:

(i) any environmental planning instrument, and

(ii) any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority, and

(iii) any development control plan, and

(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),

that apply to the land to which the development application relates,

(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

(c) the suitability of the site for the development,

(d) any submissions made in accordance with this Act or the regulations,

(e) the public interest.”

100 In *Carstens v Pittwater Council* [1999] NSWLEC 249; (1999) 111 LGERA 1, Lloyd J was required to consider whether s 79C(1) was an exhaustive statement of the matters to be considered. His Honour held that it was not and, in coming to this conclusion, he confirmed that the discretion in s 79(C) was to be informed and exercised in a manner which promotes the objects of the Act. With respect to principles of ecologically sustainable development, his Honour said (at LGERA 25):

“The Commissioner’s decision contains the following statements:

‘The Act requires that the principles of ecologically sustainable development (ESD) must be a factor in an assessment of the impact on the environment of a combined Development Application and Construction Certificate ...

To achieve the objects of the Act and in particular ESD principles, a balance needs to be struck between the man-made development and the need to retain the natural vegetation.’

Mr Tomasetti submits that the Commissioner erred in holding that the Act required that the principles of ecologically sustainable development (ESD) must be a factor in the assessment of the impact; it is not a factor which is set out in s 79C(1), neither is the phrase defined in the Act.

Mr Preston submits that having regard to (a) the express object in s 5(a)(ii) of the EP&A Act of encouraging ESD; (b) the fact that one of the central issues in determining the development application concerned the likely effect on a threatened ecological community; (c) the desirability of an administrative decision-maker

exercising discretionary statutory powers in a way which promotes the objects of the Act; (d) the fact that the principles of ESD are relevant to many of the s 79C(1) generic categories of matters; (e) the fact that the principles of ESD have been accepted internationally, nationally and within New South Wales as relevant to environmental decision-making; and (f) the absence of any provision in s 79C(1) or elsewhere which states that ESD is an extraneous consideration, the Court should not conclude that ESD is an irrelevant consideration. Mr Preston refers to a number of cases in the Court and elsewhere in which ESD principles have been applied.

I have previously discussed under ground (1) above the relationship between the objects of the EP&A Act described in s 5 and the matters to be taken into consideration in determining a development application set out in s 79C(1). In the light of that discussion and for the reasons which I have there stated, I concluded that s 79C(1) sets out the matters that must be taken into consideration, but that subsection does not exclude from consideration matters not listed and which may be of relevance to the particular development application and which further the objects of the Act. That is to say, it is not an irrelevant consideration for the decision-maker to take into account a matter relating to the objects of the Act. One of those objects is to encourage ecologically sustainable development (s 5(a)(vii)). Moreover, one of the considerations expressly mentioned in s 79C(1) is '(e) the public interest'. In my opinion it is in the public interest, in determining a development application, to give effect to the objects of the Act. For these reasons I do not accept the submission that the Commissioner erred in holding that the principles of ESD must be a factor in the consideration of a combined development application and construction certificate."

101 I respectfully agree with his Honour's conclusion.

102 In *Terrace Tower Holdings Pty Ltd v Sutherland Shire Council* [2003] NSWCA 289; (2003) 129 LGERA 195 the Court of Appeal was required to consider the breadth of matters which could be considered under s 79(C). Mason P, with whom Spigelman CJ and Ipp JA agreed, said (at LGERA 209-210):

*"In any event, matters relevant to the public interest touching a particular application are not confined to those appearing in published environmental planning instruments, draft or final. Obviously such instruments carry great and at times determinative weight, but they are not the only source of information concerning the public interest in planning matters. The process of making such instruments is described by Beazley JA in *Save the Showground for Sydney Inc v Minister for Urban Affairs and Planning* (1997) 95 LGERA 33 at 42-44. Nothing in the *Environmental Planning and Assessment Act* stipulates that environmental planning instruments are the only means of discerning planning policies or the 'public interest'. For one thing, the government is not the only source of wisdom in this area. A consent authority may range widely in the search for material as to the public interest (see generally *Shoalhaven City Council v Lovell* (1996) 136 FLR 58 at 63; *Patra Holdings Pty Ltd v Minister for Land & Water Conservation* [2001] NSWLEC 265; (2001) 119 LGERA 231 at 235."*

103 Although the weight to be given to any particular matter is for the decision-maker to determine, it may be that if a matter of great significance is not given appropriate weight, the decision will be invalid (see *Minister for Aboriginal Affairs v Peko Wallsend Ltd* [1986] HCA 40; (1986) 162 CLR 24 at 41).

104 In *Conservation Council of South Australia v Development Assessment Committee and Tuna Boat Owners Association (No 2)* [1999] SAERDC 86, the Environmental Resources and Development Court of South Australia considered the role of ecologically sustainable development in a decision with respect to a proposal to establish tuna farms in the waters of South Bay in the Spencer Gulf.

105 The court said (at [20]-[25]):

“20. In this matter, it was submitted that the Court should have regard to the precautionary principle, in assessing whether the development would be ecologically sustainable. As each proposed development is fundamentally identical, we will use the singular term. In these reasons, we will refer to the principles of ESD as they are set out in the IGAE, because of the greater detail in that document.

21. To understand the precautionary principle, it is necessary to look at little at the history of its development. It is common knowledge that it has resulted from increasing world-wide concern about the consequences of damage to the environment. The principle has been developed through international fora and declarations with respect to action to limit and minimise environmental damage in the interests of all. An understanding of the precautionary principle and its effect is essential to an understanding of the term ‘ecologically sustainable’ as it is applied to development. We were not referred by counsel to any authorities or articles with respect to the meaning and consequences of the application of the precautionary principle. We have relied on our own researches and had regard, inter alia, to the following articles:

- 1. Gunther Handl, Environmental Security and Global Change: The Challenge to International Law 1Yb. Int’l Env. L (1990);*
- 2. James Cameron, The Precautionary Principle – Core Meaning, Constitutional Framework and Procedures for Implementation (1993), Paper presented at the Precautionary Principle Conference, Institute of Environmental Studies, University of New South Wales, September 1993;*
- 3. Warwick Gullett, Environmental Protection and the ‘Precautionary Principle’: A Response to Scientific Uncertainty in Environmental Management (1997) EPLJ 52;*
- 4. Owen MacIntyre & Thomas Mosedale, The Precautionary Principle as a Norm of Customary International Law 9 J Env. L 221 (1998); and*
- 5. Charmian Barton, The Precautionary Principle in Australia: Its Emergence in Legislation and as a Common Law Doctrine 22 Harv. Envtl.L.Rev 509 (1998).*

Generally, the precautionary principle in its various formulations has been said to be ‘preventive’ (Cameron), and to involve the minimisation of consequential environmental impact (MacIntyre & Mosedale), and the taking of remedial action upon evidence of a significant but not necessarily provable risk of environmental harm (Handl).

22. There would appear to be general agreement amongst the authors of articles on the precautionary principle that it was developed in response to the recognition, based upon observation, that the environment could not assimilate all the

consequences of activities impacting upon it. Implicit in this recognition is an acknowledgment that science and the scientific method have limitations. Because of the limitations, it is unlikely that the full consequences of the impact of a particular act or activity upon the environment can be known in advance. The scientific process involves deriving knowledge from the testing of a hypothesis. A number of biases have been identified in the process, giving rise to comments such as 'the normal process of scientific reasoning is not as logically water-tight as one might imagine' (Fisk, David *Environmental Science and Environmental Law* 10 J Env.L 3 (1998)). The scientific method does not necessarily give the quality of certainty to the opinion or assessment of a scientist. Indeed, one writer has suggested that a scientific opinion might be best evaluated for reliability by testing it against seven types of uncertainty he identified as being likely to be found in any scientific assessment or opinion, namely conceptual uncertainty, measurement uncertainty, sampling uncertainty, mathematical modelling uncertainty, causal uncertainty, testing uncertainty and communicative and cognitive uncertainty (P.Brad Limpert, *Beyond the Rule in Mohan: A New Model for Assessing the Reliability of Scientific Evidence* 54 Univ Toronto L Rev. (1998)). Thus, the inherent uncertainty or bias in the scientific method combined with (generally speaking) a perennial lack of resources and a consequential lack of data to assist scientists, leads inevitably to the conclusion that there is likely to be an incomplete understanding of the full extent of the environmental impacts of any particular act or activity proposed. That prospect, supported by empirical observations gathered world-wide, led to the development of the precautionary principle as a commonsense approach to avoid or minimise serious or irreversible harm to the environment.

23. There have been and are various formulations of the precautionary principle around the world. That which has been adopted by the Government of South Australia through being a party to the IGAE, and which is reflected in the legislation of the State Government (the Environment Protection Act 1993) is broad and non-specific. It is the same formulation set out in the Rio Declaration on Environment and Development (1992), to which Australia is a signatory. We have set it out above.

24. The question arises as to who has the onus of satisfying us that the proposed development would be carried out in an ecologically sustainable way, and located, sited, designed, constructed and managed to be ecologically sustainable. It is well accepted in the literature, and it stands to reason, that the proponent needs to satisfy us that the development would be ecologically sustainable. In the matter before us, is the proponent called upon to prove this, only when the appellant has proved, on the balance of probabilities, that there is a threat of serious or irreversible damage to the environment? That cannot be the case. It is our task, as it was that of the relevant authority, to assess the proposed development against the relevant provisions of the Development Plan. The development should be ecologically sustainable in the terms of Objective 35 and Principle of Development Control 12. The onus lies on the proponent to show that the development would meet the policy set out in the Development Plan. In any event, it cannot be the case that the appellant must prove that the development will threaten serious or irreversible environmental damage, for another reason. Because of the inherent uncertainty in a scientific opinion, an appellant is unlikely to be able to show that a particular development would be likely to result in serious or irreversible damage to the environment. In reasoning thus, we have taken 'threat' to mean 'likelihood' or 'probability': see the relevant word meanings in the Macquarie Dictionary (second edition). However, the appellant must be mindful of its status as appellant and the provisions of Section 17(4) of the Environment, Resources and Development Court Act 1993 and thus would need to

show that there is a prospect of serious or irreversible damage to the environment, should the proposed development proceed. If that is shown, the burden of proof switches to the proponent and it will be necessary for the proponent to show, in order to have his or her development classified as ecologically sustainable, the following:

- *the measures that the proponent will take (within the limits of practicability) to avoid serious or irreversible damage to the environment; and*
- *that the risk-weighted consequences of the development assessed together do not suggest that serious or irreversible environmental damage would be sustained.*

The above is derived from the IGAE, which recorded the agreement of the parties as to the process for reaching decisions, in the application of the precautionary principle (see above).

25. The proponent would have to satisfy the burden of proof by evidence as to the likely consequences of the proposal, including scientific evidence (with its limitations), evidence as to the proposed management regime and measures, and evidence to assist the Court in the assessment of the risk-weighted consequences of the proposal.”

106 The matter later went on appeal to the South Australian Full Court [2000] SASC 238; (110 LGERA 1) where it was submitted that the Environmental Resources and Development Court had wrongly imposed an onus on the applicant to justify the grant of consent. The Chief Justice rejected the submission and said (at LGERA 6-7):

“I disagree. It is true that generally there is no onus on an applicant for development consent to establish that the development consent should be granted. The relevant authority must simply assess the proposed development against the relevant Development Plan. But in this case, the DP contains an objective and principle that invokes the concept of ESD. That in turn, in a case like the present, invites the use of the precautionary principle, simply because all of the consequences of the proposed development are not known and fully understood.

In such a case, assessing the proposal against the DP requires a consideration of whether it is a development which is ecologically sustainable. As the longer term consequences of the proposed development are not known, it is appropriate to require measures that will avert adverse environmental impacts that might emerge.

That was the ERD Court’s approach. It was open to it to so proceed. The Court did not wrongly impose an onus on the Association in relation to the assessment of the proposal against the DP. The approach of the Court simply reflected what was inherent in one of the matters that the Court had to consider, the issue of ESD.

There can be no hard and fast rules about what is required in a case such as this. Everything will depend upon the circumstances of the particular case, especially the level of knowledge about the environmental impacts of the particular proposal. I agree broadly with what the Court said:

‘The proponent would have to satisfy the burden of proof by evidence as to the likely consequences of the proposal, including scientific evidence (with its limitations), evidence as to the proposed management regime and measures,

and evidence to assist the Court in the assessment of the risk-weighted consequences of the proposal.'

This should not be taken as a proposition of law, but simply as an expression in the particular case of what, in general terms, was required before the ERD Court could properly find for the Association when considering whether the development would be managed so as to be ecologically sustainable."

107 The Chief Justice also considered the context of the precautionary principle. Emphasising that the principle did not claim that consent should not be granted if all of the consequences of the proposal could not be ascertained, the Chief Justice said (at LGERA 8):

"I do not accept that in reaching the conclusion it did the ERD Court has, in effect, taken the view that the proposed development will not be consented to because all of the consequences that might flow from it are not known. That is not what the Court decided. Obviously, one must take care not to drift into that position. It is clear enough that the ERD Court was saying no more than that it would consent to the proposed development only if there was a monitoring regime that would detect emerging adverse impacts and a scheme of conditions which would enable an appropriate authority to require those impacts to be averted if and when they emerged."

108 The role of the precautionary principle in environmental decisions was considered by this Court in *Leatch v National Parks and Wildlife Service & Anor* (1993) 81 LGERA 270. The proceedings raised a challenge to the grant of licence to take or kill endangered fauna. Describing the precautionary principle as "a statement of commonsense", Stein J said (at LGERA 282):

"... has already been applied by decision-makers in appropriate circumstances prior to the principle being spelt out. It is directed towards the prevention of serious or irreversible harm to the environment in situations of scientific uncertainty. Its premise is that where uncertainty or ignorance exists concerning the nature or scope of environmental harm (whether this follows from policies, decisions or activities), decision-makers should be cautious."

109 In *Greenpeace Australia Ltd v Redbank Power Company Pty Ltd & Anor* (1994) 86 LGERA 143, Pearlman J said (at LGERA 154):

"The application of the precautionary principle dictates that a cautious approach should be adopted in evaluating the various relevant factors in determining whether or not to grant consent; it does not require that the greenhouse issue should outweigh all other issues."

110 In *Nicholls v Director-General of National Parks and Wildlife & Ors* (1994) 84 LGERA 397, Talbot J was apprehensive about the role of the precautionary principle in environmental decisions. Describing it as being "framed appropriately for the purpose of a political aspiration," his Honour said that "its implementation as a legal standard could have the potential to create interminable forensic argument" (at LGERA 419). With respect, I do not share his Honour's perspective. In *Murrumbidgee Ground-Water Preservation Association v Minister for Natural Resources* [2004] NSWLEC 122 I said that statutory recognition of the precautionary principle has made it:

“... a central element in the decision making process and cannot be confined. It is not merely a political aspiration but must be applied when decisions are being made under the Water Management Act and any other Act which adopts the principles.” (at [178])

111 In the present case, the respondent argues that “decisions which pay heed to the (precautionary) principle must now not only seek to avoid irreversible damage but to treat conservation of biodiversity as a fundamental consideration.” Although it was suggested that there is a “presumptive onus” on the party threatening irreversible damage to the environment, it was accepted by senior counsel that “where the development proposes a permanent input on a complex and dynamic ecosystem that principle will have an important operation.”

112 The submission was reinforced by recognition of the fact that, in appropriate cases (of which the present is one), the development must be accompanied by a species impact statement prepared in accordance with Division 2 of Part 6 of the TSC Act and with regard to the obligation imposed on the concurrence authority to take into consideration the principles of ecologically sustainable development (s 79B(g) EP&A Act). Furthermore, on appeal, the Court is required to have regard to the views of any concurrence authority (see *Michel Projects Pty Ltd v Randwick Municipal Council* (1982) 45 LGERA 410 at 414-415 and *Byron Shire Council v Chrestal Pty Ltd* (1983) 49 LGRA 88) which will include the principles of ecologically sustainable development (see s 79B(5)(g) EP&A Act).

113 In my opinion, by requiring a consent authority (including the Court) to have regard to the public interest, s 79(C)(e) of the EP&A Act obliges the decision-maker to have regard to the principles of ecologically sustainable development in cases where issues relevant to those principles arise. This will have the consequence that, amongst other matters, consideration must be given to matters of inter-generational equity, conservation of biological diversity and ecological integrity. Furthermore, where there is a lack of scientific certainty, the precautionary principle must be utilised. As Stein J said in *Leatch*, this will mean that the decision-maker must approach the matter with caution but will also require the decision-maker to avoid, where practicable, serious or irreversible damage to the environment.

114 Consideration of these principles does not preclude a decision to approve an application in any cases where the overall benefits of the project outweigh the likely environmental harm. However, care needs to be taken to determine whether appropriate and adequate measures have been incorporated into such a project to confine any likely harm to the environment.

ESD and the precautionary principle

Telstra Corporation Limited v Hornsby Shire Council [2006] NSWLEC 133 (24 March 2006)

Ecologically sustainable development

107 The issue of the effect of RF EME emitted from the proposed base station raises the question of the ecological sustainability of the development, and in particular the applicability of the precautionary principle to the development. I will first outline the basic concept of ecologically sustainable development and then its applicability to the determination of development applications under the EPA Act. I will next focus on the precautionary principle and its applicability to the proposed development in this case.

108 Ecologically sustainable development, in its most basic formulation, is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”: World Commission on Environment and Development, *Our Common Future*, 1987 at p. 44 (also known as the Brundtland Report after the Chairperson of the Commission, Gro Harlem Brundtland). More particularly, ecologically sustainable development involves a cluster of elements or principles. Six are worth highlighting.

109 First, from the very name itself comes the principle of sustainable use - the aim of exploiting natural resources in a manner which is “sustainable” or “prudent” or “rational” or “wise” or “appropriate”: P Sands, *Principles of International Environmental Law*, 2nd ed, Cambridge University Press, 2003 at p. 253. The concept of sustainability applies not merely to development but to the environment. The Australian National Strategy for Ecologically Sustainable Development makes this explicit in defining ecologically sustainable development as “development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends”: National Strategy for Ecologically Sustainable Development, Australian Government Publishing Service, 1992 at p. 8.

110 Secondly, ecologically sustainable development requires the effective integration of economic and environmental considerations in the decision-making process: see the chapeau to the definition of ecologically sustainable development in s 6(2) of the Protection of the Environment Administration Act 1991 (NSW) adopted by s 4(1) of the EPA Act and Principle 4 of the Rio Declaration on Environment and Development. This is the principle of integration it was the philosophical underpinning of the report *Our Common Future*. That report recognised that the ecologically harmful cycle caused by economic development without regard to and at the cost of the environment could only be broken by integrating environmental concerns with economic goals.

111 The principle of integration ensures mutual respect and reciprocity between economic and environmental considerations. The principle recognises the need to ensure not only that environmental considerations are integrated into economic and other development plans, programmes and projects but also that development needs are taken into account in applying environmental objectives: see P Sands, *Principles of International Environmental Law*, 2nd ed, Cambridge University Press, 2003 at p. 253.

112 The principle has been refined in recent times to add social development to economic development and environmental protection. The Plan of Implementation of the World Summit

on Sustainable Development held in Johannesburg, 2002, notes that efforts need to be taken to:

“promote the integration of the three components of sustainable development – economic development, social development and environmental protection – as interdependent and mutually reinforcing pillars. Poverty eradication, changing unsustainable patterns of production and consumption and protecting and managing the natural resource base of economic and social development are overarching objectives of, and essential requirements for, sustainable development”: at paragraph 2.

113 Thirdly, there is the precautionary principle. There are numerous formulations of the precautionary principle but the most widely employed formulation adopted in Australia is that stated in s 6(2)(a) of the Protection of the Environment Administration Act 1991 (NSW). This provides:

“...If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(ii) an assessment of the risk-weighted consequence of various options”.

See also s 3.5.1 of the Intergovernmental Agreement on the Environment, 1992.

114 Principle 15 of the Rio Declaration on Environment and Development is expressed in similar terms.

115 This is the particular principle of ecologically sustainable development invoked by the Council and the residents in this case in aid of their opposition to the proposed base station. I will return to it shortly.

116 Fourthly, there are principles of equity. There is a need for inter-generational equity - the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations: see s 6(2)(b) of the Protection of the Environment Administration Act 1991; s 3.5.2 of the Intergovernmental Agreement on the Environment; and Principle 3 of the Rio Declaration on Environment and Development.

117 There is also a need for intra-generational equity. This involves considerations of equity within the present generation, such as use of natural resources by one nation-state (or sector or class within a nation-state) needing to take account of the needs of other nation-states (or sectors or classes within a nation-state): P Sands, *Principles of International Environmental Law*, 2nd ed, Cambridge University Press, 2003 at p. 253 and E Brown Weiss, “Intergenerational Equity: a legal framework for global environmental change” in E Brown Weiss (ed), *Environmental Change and International Law: New Challenges and Dimensions*, UN University Press, 1992, p. 385 at pp. 397-398. It involves people within the present generation having equal rights to benefit from the exploitation of resources and from the enjoyment of a clean and healthy environment: B Boer, “Institutionalising Ecologically

Sustainable Development: The Role of National, State and Local Governments in Translating Grand Strategy into Action” (1995) 31 Willamette Law Review 307 at 320.

118 Fifthly, there is the principle that conservation of biological diversity and ecologically integrity should be a fundamental consideration: s 6(2)(c) of the Protection of the Environment Administration Act 1991; s 3.5.3 of the Intergovernmental Agreement on the Environment; and Bentley v BGP Properties Pty Ltd [2006] NSWLEC 34 (6 February 2006) at [58]-[63].

119 Sixthly, ecologically sustainable development involves the internalisation of environmental costs into decision-making for economic and other development plans, programmes and projects likely to affect the environment. This is the principle of the internalisation of environmental costs. The principle requires accounting for both the short-term and the long-term external environmental costs. This can be undertaken in a number of ways including:

- (a) environmental factors being included in the valuation of assets and services;
- (b) adopting the polluter pays (or user pays) principle, that is to say, those who generate pollution and waste should bear the costs of containment, avoidance or abatement;
- (c) the users of goods and services paying prices based on the full life cycle of the costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste; and
- (d) environmental goals, having been established, being pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems: see s 6(2)(d) of the Protection of the Environment Administration Act 1991 and s 3.5.4 of the Intergovernmental Agreement on the Environment 1992.

120 These principles do not exhaustively describe the full ambit of the concept of ecologically sustainable development, but they do afford guidance in most situations. These principles, if adequately implemented, may ultimately realise a paradigm shift from a world in which the development of the environment takes place without regard to environmental consequences, to one where a culture of sustainability extends to institutions, private development interests, communities and individuals: B Boer, “The Globalisation of Environmental Law” [1995] MelbULawRw 8; (1995) 20 Melbourne University Law Review 101 at 111.

121 The principles of ecologically sustainable development are to be applied when decisions are being made under any legislative enactment or instrument which adopts the principles: Murrumbidgee Ground-Water Preservation Association v Minister for Natural Resources [2004] NSWLEC 122 (7 April 2004) at [178]; and Bentley v BGP Properties Pty Ltd [2006] NSWLEC 34 (6 February 2006) at [57].

122 The EPA Act is one such legislative enactment. It expressly states that one of the objects of the EPA Act is to encourage ecologically sustainable development: s 5(a)(vii). The Act defines ecologically sustainable development as having the same meaning as it has in s 6(2) of the Protection of the Environment Administration Act 1991.

123 Section 79C(1) of the EPA Act, which sets out the relevant matters which a consent authority must take into consideration, does not expressly refer to ecologically sustainable development. Nevertheless, it does require a consent authority to take into account “the public interest” in s 79C(1)(e). The consideration of the public interest is ample enough, having regard to the subject matter, scope and purpose of the EPA Act, to embrace ecologically sustainable development.

124 Accordingly, by requiring a consent authority (or on a merits review appeal the Court) to have regard to the public interest, s 79C(1)(e) of the EPA Act obliges the consent authority to have regard to the principles of ecologically sustainable development in cases where issues relevant to those principles arise: *Carstens v Pittwater Council* [1999] NSWLEC 249; (1999) 111 LGERA 1 at 25; *BGP Properties Pty Ltd v Lake Macquarie City Council* [2004] NSWLEC 399; (2004) 138 LGERA 237 at 262 [113]; and *Port Stephens Pearls Pty Ltd v Minister for Infrastructure and Planning* [2005] NSWLEC 426 (15 August 2005) at [54].

The precautionary principle

The precautionary principle explored

125 I have set out in the preceding section on ecologically sustainable development, the formulation of the precautionary principle in s 6(2) of the Protection of the Environment Administration Act 1991 which is adopted by s 4(1) of the EPA Act: see paragraph 112 above.

126 A number of decisions in this Court have established that the precautionary principle is to be considered in making determinations of development applications under the EPA Act: *Carstens v Pittwater Council* [1999] NSWLEC 249; (1999) 111 LGERA 1 at 25; *Hutchison Telecommunications (Australia) Pty Ltd v Baulkham Hills Shire Council* [2004] NSWLEC 104 (26 March 2004), [26]; *BGP Properties Pty Ltd v Lake Macquarie City Council* [2004] NSWLEC 399; (2004) 138 LGERA 237 at 262 [113]- [114]; *B T Goldsmith Planning Services Pty Ltd v Blacktown City Council* [2005] NSWLEC 210 (1 July 2005) at [73]; *Port Stephens Pearls Pty Ltd v Minister for Infrastructure and Planning* [2005] NSWLEC 426 (15 August 2005) at [54]; *Providence Projects Pty Ltd v Gosford City Council* [2006] NSWLEC 52 (17 February 2006) at [68], [76] and [108]; and *Gales Holdings Pty Ltd v Tweed Shire Council* [2006] NSWLEC 85 (27 February 2006) at [56]-[61].

127 However, there has not yet been, in the decisions of this Court, a detailed explanation of the precautionary principle or the procedure for application of it. Hence, it is necessary to refer to other sources of information on the precautionary principle, including judicial decisions of other jurisdictions and the academic literature on the precautionary principle. Drawing on these sources, the following guidance can be offered on the concept of the precautionary principle and its application.

Conditions precedent or thresholds to application of the precautionary principle

128 The application of the precautionary principle and the concomitant need to take precautionary measures is triggered by the satisfaction of two conditions precedent or thresholds: a threat of serious or irreversible environmental damage and scientific uncertainty as to the environmental damage. These conditions or thresholds are cumulative. Once both of these conditions or thresholds are satisfied, a precautionary measure may be taken to avert the anticipated threat of environmental damage, but it should be proportionate: *N de Sadeleer, Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 155.

Threat of serious or irreversible damage

129 Two points need to be noted about the first condition precedent that there be a threat of serious or irreversible environmental damage. First, it is not necessary that serious or irreversible environmental damage has actually occurred – it is the threat of such damage that is required. Secondly, the environmental damage threatened must attain the threshold of being serious or irreversible.

130 Threats to the environment that should be addressed include direct and indirect threats, secondary and long-term threats and the incremental or cumulative impacts of multiple or repeated actions or decisions. Where threats may interact or be interrelated (for example where action against one threat may exacerbate another threat) they should not be addressed in isolation: see “Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management”, R Cooney and B Dickson (eds) *Biodiversity and the Precautionary Principle, Risk and Uncertainty in Conservation and Sustainable Use*, Earthscan, 2005 at p. 302, Guideline 6.

131 Assessing the seriousness or irreversibility of environmental damage involves consideration of many factors: see, for example, the suggested process of analysis in A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at pp. 25-31; and the discussion in N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at pp. 163-165. The factors might include:

- (a) the spatial scale of the threat (eg local, regional, statewide, national, international);
- (b) the magnitude of possible impacts, on both natural and human systems;
- (c) the perceived value of the threatened environment;
- (d) the temporal scale of possible impacts, in terms of both the timing and the longevity (or persistence) of the impacts;
- (e) the complexity and connectivity of the possible impacts;
- (f) the manageability of possible impacts, having regard to the availability of means and the acceptability of means;
- (g) the level of public concern, and the rationality of and scientific or other evidentiary basis for the public concern; and
- (h) the reversibility of the possible impacts and, if reversible, the time frame for reversing the impacts, and the difficulty and expense of reversing the impacts.

132 The assessment of whether the threats are serious or irreversible will be enhanced by broadening the range of professional expertise consulted and seeking and taking into account the views of relevant stakeholders and rightholders. The former is important because of the inter-disciplinary nature of the questions involved. The latter is important because different judgments, values and cultural perceptions of risk, threat and required action play a role in the assessment process: see “Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management” in Appendix A to R Cooney and B Dickson (eds) *Biodiversity and the Precautionary Principle, Risk and*

Uncertainty in Conservation and Sustainable Use, Earthscan, 2005 at p. 301, Guideline 4; and A Deville and R Harding, Applying the precautionary principle, Federation Press, 1997 at p. 26.

133 The assessment involves ascertaining whether scientifically reasonable (that is, based on scientifically plausible reasoning) scenarios or models of possible harm that may result have been formulated: World Commission on the Ethics of Scientific Knowledge and Technology, The Precautionary Principle, UNESCO, Paris, 2005 at p. 31.

134 The threat of environmental damage must be adequately sustained by scientific evidence. As was held in *Monsanto Agricoltura Italia v Presidenza del Consiglio dei Ministri*, European Court of Justice, Case C-236/0 (13 March 2003) at [138]:

“not every claim or scientifically unfounded presumption of potential risk to human health or the environment can justify the adoption of national protective measures. Rather, the risk must be adequately substantiated by scientific evidence”.

135 In *Daubert v Merrell Dow Pharmaceuticals* [1993] USSC 99; 509 US 579 (1993) at 589-590; [1993] USSC 99; 125 L Ed 2d 469 (1993) at 481, the United States Supreme Court held that in a case involving scientific evidence, the evidence must pertain to scientific knowledge. The adjective “scientific” implies a grounding in the methods and procedures of science and the word “knowledge” connotes more than subjective belief or unsupported speculation. The requirement that expert evidence pertain to scientific knowledge establishes a standard of evidentiary reliability.

136 In *Gabcikovo-Nagymaros (Hungary v Slovakia)* [1997] ICJ Rep 7, the International Court of Justice held that Hungary had not established that there existed a state of necessity justifying the suspension of its treaty obligations with the former Czechoslovakia. A state of necessity has to be occasioned by an essential interest of the State and the interest must have been threatened by a grave and imminent peril (a concept equivalent to a threat). The International Court of Justice did not accept that Hungary had established the objective existence of a grave and imminent peril and hence a component element of a state of necessity was absent. The Court noted:

“The word ‘peril’ certainly evokes the idea of ‘risk’; that is precisely what distinguishes ‘peril’ from material damage. But a state of necessity could not exist without a ‘peril’ duly established at the relevant point in time; the mere apprehension of a possible ‘peril’ could not suffice in that respect”: at [54].

137 Determining the existence of a threat of serious or irreversible environmental damage does not involve, at the stage of assessing the first condition precedent, any evaluation of the scientific uncertainty of the threat. That evaluation comes in the following steps of analysis.

138 If there is not a threat of serious or irreversible environmental damage, there is no basis upon which the precautionary principle can operate. The precautionary principle does not apply, and precautionary measures cannot be taken, to regulate a threat of negligible environmental damage: N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 163.

139 This was the conclusion in *Alumino (Aust) Pty Ltd v Minister administering the Environmental Planning and Assessment Act 1979 (NSW)* [1996] NSWLEC 102 (29 March 1996) where the evidence established that the development could be operated in a way

which would not have any significant environmental consequence: at pp. 15-16. So too in *Hutchison Telecommunications (Australia) Pty Limited v Baulkham Hills Shire Council* [2004] NSWLEC 104 (26 March 2004), where compliance of a development with the relevant standard for the protection of public health and safety by a significant margin meant that there was no threat of serious or irreversible damage to public health and safety from the development, and hence no basis on which to apply the precautionary principle: at [27].

Scientific uncertainty

140 The second condition precedent required to trigger the application of the precautionary principle and the necessity to take precautionary measures is that there be “a lack of full scientific certainty”. The uncertainty is as to the nature and scope of the threat of environmental damage: *Leatch v National Parks and Wildlife Services* (1993) 81 LGERA 270 at 282.

141 Assessing the degree of scientific uncertainty also involves a process of analysis of many factors: see A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at pp. 31-37. The assessment of the degree of uncertainty might include consideration of the following factors:

- (a) the sufficiency of the evidence that there might be serious or irreversible environmental harm caused by the development plan, programme or project;
- (b) the level of uncertainty, including the kind of uncertainty (such as technical, methodological or epistemological uncertainty); and
- (c) the potential to reduce uncertainty having regard to what is possible in principle, economically and within a reasonable time frame.

142 One issue that the formulation of the precautionary principle raises is how much scientific uncertainty must exist. On a literal reading, the threshold is crossed whenever there is a lack of “full” scientific certainty. Yet, such a literal interpretation of the principle would render this condition meaningless.

143 Certainly, “full” scientific certainty as to the threat of environmental damage would be an unattainable goal: *Nicholls v Director-General of National Parks and Wildlife* (1994) 84 LGERA 397 at 419. It is impossible to be completely certain about the threats of environmental damage: C Barton, “The status of the precautionary principle in Australia: Its emergence in legislation and as a common law doctrine” (1998) 22 *Harvard Environmental Law Review* 509 at 518.

144 It cannot be unequivocally stated that a particular phenomenon will never cause adverse effects. This is because a null hypothesis can never be proven through processes of inductive logic. Indeed, this point is made in the Australian Standard RPS3 at p. 41. Karl Popper, the eminent scientific philosopher, has also explained why it is impossible to prove, with certainty and finality, a scientific theory. No matter how many positive instances of a generalisation are observed, it is still possible that the next instance will falsify it. However, a sound and reliable scientific theory will be one which, while being capable of being falsified, has been put to the test and has resisted falsification whenever it is put to the test: see K Popper, *Conjectures and Reputations*, 5th ed, Routledge, London, 1989, p 37 and *Daubert v Merrell Dow Pharmaceuticals* [1993] USSC 99; 509 US 579 (1993) at 593; [1993] USSC 99; 125 L Ed 2d 469 (1993) at 482-483. See also B J Preston, “Science and the Law: Evaluating evidentiary reliability” (2003) 23 *Australian Bar Review* 263 at 271, 280-282 and 287.

145 Once it is accepted that the threshold is something less than full scientific certainty, the question becomes how much less? Or turning the question around, how much scientific uncertainty need there be as to the threat of environmental damage before the second condition precedent to trigger application of the precautionary principle is fulfilled?

146 Cordonier Segger and Khalfan suggest that the magnitude of environmental damage is usually inversely proportionate to the likelihood of risk in order for precaution to be triggered. That is to say, where the relevant degree or magnitude of potential environmental damage is greater, the degree of certainty about the threat is lower. They suggest that for a formulation of the precautionary principle which uses the threshold of “serious or irreversible” environmental damage, the correlative degree of certainty about the threat is “highly uncertain of threat”. This would contrast with a formulation of the precautionary principle which sets a lower degree of potential harm such as “potential adverse effects”, where the correlative degree of certainty about the threat would be higher, namely “highly certain of threat”: M-C Cordonier Segger and A Khalfan, *Sustainable Development Law: Principles, Practices and Prospects*, Oxford University Press, 2004 at pp. 145-146.

147 The World Commission on the Ethics of Scientific Knowledge and Technology, in its 2005 report on the precautionary principle, postulated that one of the conditions that must be present for the precautionary principle to apply is that “considerable scientific uncertainty must exist”: World Commission on the Ethics of Scientific Knowledge and Technology, *The Precautionary Principle*, UNESCO, Paris, 2005 at p. 31.

148 de Sadeleer posits a threshold test of “reasonable scientific plausibility,” or where a threat or risk of environmental damage is considered scientifically likely. de Sadeleer explains his test of reasonable scientific plausibility as follows:

“That condition would be fulfilled when empirical scientific data (as opposed to simple hypothesis, speculation, or intuition) make it reasonable to envisage a scenario, even if it does not enjoy unanimous scientific support.

When is there ‘reasonable scientific plausibility’? When risk begins to represent a minimum degree of certainty, supported by repeated experience. But a purely theoretical risk may also satisfy this condition, as soon as it becomes scientifically credible: that is, it arises from a hypothesis formulated with methodological rigour and wins the support of part of the scientific community, albeit a minority.

*The principle may consequently apply to all post-industrial risks for which a cause-and-effect relationship is not clearly established but where there is a ‘reasonable scientific plausibility’ that this relationship exists. This would be particularly appropriate for delayed pollution, which does not become apparent for some time and for which full scientific proof is difficult to assemble”: N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 160.*

See also A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at p. 33.

149 If there is no, or not considerable, scientific uncertainty (the second condition precedent is not satisfied), but there is a threat of serious or irreversible environmental damage (the first condition precedent is satisfied), the precautionary principle will not apply. The threat of serious irreversible environmental damage can be classified as relatively certain because it

is possible to establish a causal link between an action or event and environmental damage, to calculate the probability of their occurrence, and to insure against them. Measures will still need to be taken but these will be preventative measures to control or regulate the relatively certain threat of serious or irreversible environmental damage, rather than precautionary measures which are appropriate in relation to uncertain threats: A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at p. 31 and 34; J Cameron, "The precautionary principle: Core meaning, constitutional framework and procedures for implementation" in R Harding and E Fisher (eds), *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 29 at p. 37; and N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at pp. 74-75 and 158.

Shifting of the burden of proof

150 If each of the two conditions precedent or thresholds are satisfied – that is, there is a threat of serious or irreversible environmental damage and there is the requisite degree of scientific uncertainty – the precautionary principle will be activated. At this point, there is a shifting of an evidentiary burden of proof. A decision-maker must assume that the threat of serious or irreversible environmental damage is no longer uncertain but is a reality. The burden of showing that this threat does not in fact exist or is negligible effectively reverts to the proponent of the economic or other development plan, programme or project.

151 The rationale for requiring this shift of the burden of proof is to ensure preventative anticipation; to act before scientific certainty of cause and effect is established. It may be too late, or too difficult and costly, to change a course of action once it is proven to be harmful. The preference is to prevent environmental damage, rather than remediate it. The benefit of the doubt is given to environmental protection when there is scientific uncertainty. To avoid environmental harm, it is better to err on the side of caution.

152 The function of the precautionary principle is, therefore, to require the decision-maker to assume that there is, or will be, a serious or irreversible threat of environmental damage and to take this into account, notwithstanding that there is a degree of scientific uncertainty about whether the threat really exists: see J Cameron and J Aboucher, "The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment" (1991) 14 *Boston College International and Comparative Law Review* 1 at 22; B Boer, "Implementing Sustainability" (1992) 14 *Delhi Law Review* 1 at 17; B A Weintraub, "Science, International Environmental Regulation, and the Precautionary Principle: Setting Standards and Defining Terms" (1992) 1 *NYU Environmental Law Journal* 173 at 204-207; W Gullett, "Environmental Protection and the 'Precautionary Principle': A Response to Scientific Uncertainty in Environmental Management" (1997) 14 *Environmental Planning Law Journal* 52 at 59-60; C Barton, "The status of the precautionary principle in Australia: Its emergence in legislation and as a common law doctrine" (1998) 22 *Harvard Environmental Law Review* 509 at 519 and 549-551; D Farrier, "Factoring biodiversity conservation into decision-making processes: The role of the precautionary principle" in R Harding and E Fisher (eds), *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 99 at pp. 107-110; *Conservation Council of South Australia v Development Assessment Committee and Tuna Boat Owners Association* (No. 2) [1999] SAERDC 86 (16 December 1999) at [24]-[25]; M Parnell, "Southern Bluefin Tuna Feedlotting: ESD, the Precautionary Principle and Burden of Proof" (1999) 9 *Journal of International Wildlife Law and Policy* 334; *Tuna Boat Owners Association of SA Inc v Development Assessment Commission* [2000] SASC 238; (2000) 110 *LGERA* 1 at 6[27]-7[30]; *Vellore Citizens Welfare Forum v Union of India* AIR 1996 SC 2715 at 2720 [11] – 2721; *AP Pollution Control Board v Prof. M V Bayadu* AIR 1999 SC 812 at 821 [27]-[39]; *Narmada Bachao Andolan v Union of India* AIR 2000 SC

3751 at 3803[15]-3804; and M-C Cordonier Segger and A Khalfan, Sustainable Development Law: Principles, Practices and Prospects, Oxford University Press, 2004 at pp. 144 and 150.

153 An illustration of this function of the precautionary principle can be found in *Providence Projects Pty Ltd v Gosford City Council* [2006] NSWLEC 52 (17 February 2006) in which there was scientific uncertainty as to whether a proposed development would cause serious or irreversible environmental damage to a threatened ecological community, the Umina Coastal Sandplain Woodland (UCSW). This scientific uncertainty stemmed from uncertainty as to whether the threatened ecological community was widely distributed over the site. The function of the precautionary principle was to shift the burden of proof in relation to this question. Bignold J held:

“The application of the precautionary principle in the present case justifies an approach which avoids the risk of serious or irreversible environmental damage by assuming the existence of the wide distribution of UCSW over the development site”: at [77].

154 It should be recognised that the shifting of the evidentiary burden of proof operates in relation to only one input of the decision-making process – the question of environmental damage. If a proponent of a plan, programme or project fails to discharge the burden to prove that there is no threat of serious or irreversible environmental damage, this does not necessarily mean that the plan, programme or project must be refused. It simply means that, in making the final decision, the decision-maker must assume that there will be serious or irreversible environmental damage. This assumed factor must be taken into account in the calculus which decision-makers are instructed to apply under environmental legislation (such as s 79C(1) of the EPA Act). There is nothing in the formulation of the precautionary principle which requires decision-makers to give the assumed factor (the serious or irreversible environmental damage) overriding weight compared to the other factors required to be considered, such as social and economic factors, when deciding how to proceed: D Farrier, “Factoring biodiversity conservation into decision-making processes: The role of the precautionary principle” in R Harding and E Fisher, *Perspectives on the Precautionary Principle*, Federation Press, 1999 at p. 108.

155 This was the conclusion in *Greenpeace Australia Ltd v Redbank Power Company Pty Ltd and Singleton Council* (1994) 86 LGERA 143 where Pearlman J held at 154 that:

“The application of the precautionary principle dictates that a cautious approach should be adopted in evaluating the various relevant factors in determining whether or not to grant consent; it does not require that the greenhouse issue should outweigh all other issues”.

Precautionary principle invokes preventative anticipation

156 The precautionary principle permits the taking of preventative measures without having to wait until the reality and seriousness of the threats become fully known: *Pfizer Animal Health SA v Council of the European Union* [2002] ECR II–3305 (11 September 2002), European Court of First Instance (11 September 2002) at [139]; 15 *Journal of Environmental Law* 372 at 378; *Monsanto Agricoltura Italia v Presidenza dei Consiglio dei Ministri*, European Court of Justice, Case C-236/01 (13 March 2003) at [111]. This is the concept of preventative anticipation: T O’Riordan and J Cameron, “The History and Contemporary Significance of the Precautionary Principle” in T O’Riordan and J Cameron (eds),

Interpreting the Precautionary Principle, Earthscan Publications, 1994, p. 12 at p. 17; and P Sands, Principles of International Environmental Law, 2nd ed, Cambridge University Press, 2003 at p. 269.

Zero risk precautionary standard inappropriate

157 The precautionary principle should not be used to try to avoid all risks. As the United States Supreme Court said in *Industrial Union Department, AFL-CIO v American Petroleum Institute* [1980] USSC 152; 448 US 607 (1980) at 656 [1980] USSC 152; (1980); 65 L Ed 2d 1010 (1980) at 1064:

“Some risks are plainly acceptable and others are plainly unacceptable”.

158 A zero risk precautionary standard is inappropriate: see *Analysis on Pfizer Animal Health SA v Council of the European Union* by W Th Douma (2003) 15 *Journal of Environmental Law* 394 at 401. The Advocate General, in his opinion in *National Farmers' Union v Secretary Central of the French Government*, European Court of Justice, Case C-241/01 (2 July 2002) at [76] stated:

“the precautionary principle has a future only to the extent that, far from opening the door wide to irrationality, it establishes itself as an aspect of the rational management of risks, designed not to achieve a zero risk, which everything suggests does not exist, but to limit the risks to which citizens are exposed to the lowest level reasonably imaginable”.

See also *EFTA Surveillance Authority v Norway*, European Free Trade Association (EFTA) Court, Case E-3/00 (5 April 2001) at [32].

159 Rationality dictates that the precautionary principle and any preventative measure cannot be based on a purely hypothetical approach to the risk, founded on mere conjecture which has not been scientifically verified: *Pfizer Animal Health SA v Council of the European Union* [2002] ECR II-3305 European Court of First Instance (11 September 2002) at [145]; (2003) 15 *Journal of Environmental Law* 372 at 378 and *EFTA Surveillance Authority v Norway*, European Free Trade Association (EFTA) Court, Case E-3/00 (5 April 2001) at [29]. Rather, a preventative measure may be taken only if the risk, although the reality and extent of the risk have not been “fully” demonstrated by conclusive scientific evidence, appears nevertheless to be adequately backed up by the scientific data available at the time when the measure was taken: *Pfizer Animal Health SA v Council of the European Union* [2002] ECR II-3305, European Court of First Instance (11 September 2002) at [145]; (2003) 15 *Journal of Environmental Law* 372 at 379; and *Monsanto Agricoltura Italia v Presidenza de Consiglio dei Ministri*, European Court of Justice, Case C236/01 (9 September 2003) at [113].

160 de Sadeleer expresses this approach in the following passage:

“Adherence to the adage ‘when in doubt, do nothing’ should not overshadow the complementary wisdom that ‘there’s such a thing as being too careful’. To avoid having the best become the enemy of the good, the [precautionary] principle’s field of application must exclude those risks characterised as residual, that is, hypothetical risks resting on purely speculative considerations without any scientific foundation. Speculation, conjecture, intuition, warnings, denunciations, or implications should not suffice in and of themselves to justify an attitude of precaution”: N de Sadeleer,

Environmental Principles: From Political Slogans to Legal Rules, Oxford University Press, 2005 at p. 158.

Degree of precaution required

161 The type and level of precautionary measures that will be appropriate will depend on the combined effect of the degree of seriousness and irreversibility of the threat and the degree of uncertainty. This involves assessment of risk in its usual formulation, namely the probability of the event occurring and the seriousness of the consequences should it occur. The more significant and the more uncertain the threat, the greater the degree of precaution required: A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at p. 37; and J Cameron, "The precautionary principle: Core meaning, constitutional framework and procedures for implementation" in R Harding and E Fisher, *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 29 at pp. 37-38; and Commission on Environmental Law of IUCN (the World Conservation Union), *Draft International Covenant on Environment and Development*, 3rd ed., Environmental Policy & Law Paper No. 31, Rev. 2, 2004 at p. 45.

162 Prudence would also suggest that some margin for error should be retained until all the consequences of the decision to proceed with the development plan, programme or project are known. This allows for potential errors in risk assessment and cost-benefit analysis. Potential errors are weighted in favour of environmental protection. Weighting the risk of error in favour of the environment is to safeguard ecological space or environmental room for manoeuvre: T O'Riordan and J Cameron, "The History and Contemporary Significance of the Precautionary Principle" in T O'Riordan and J Cameron (eds), *Interpreting the Precautionary Principle*, Earthscan Publications, 1994, p. 12 at p. 17; and C Barton, "The status of the precautionary principle in Australia: Its emergence in legislation and as a common law doctrine" (1998) 22 *Harvard Environmental Law Review* 509 at 520.

163 One means of retaining a margin for error is to implement a step-wise or adaptive management approach, whereby uncertainties are acknowledged and the area affected by the development plan, programme or project is expanded as the extent of uncertainty is reduced: M D Young, "The precautionary principle as a key element of ecologically sustainable development" in R Harding and E Fisher, *Perspectives on the Precautionary Principle*, Federation Press, 1999, 127 at 140.

164 An adaptive management approach might involve the following core elements:

- " monitoring of impacts of management or decisions based on agreed indicators;
- promoting research, to reduce key uncertainties;
- ensuring periodic evaluation of the outcomes of implementation, drawing of lessons, and review of adjustment, as necessary of the measures or decisions adopted; and
- establishing an efficient and effective compliance system": see "Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management" in Appendix A to R Cooney and B Dickson (eds), *Biodiversity and the Precautionary Principle, Risk and Uncertainty in Conservation and Sustainable Use*, Earthscan, 2005 p. 304, Guideline 12.

165 An adaptive management approach was required in *Port Stephens Pearls Pty Ltd v Minister for Infrastructure and Planning* [2005] NSWLEC 426 (15 August 2005). Talbot J held that application of the precautionary principle required that consent should only be granted if there was a monitoring regime that would detect emerging adverse impacts and enable the appropriate regulatory authority to require them to be addressed if and when they emerged: at [58]. See also *Tuna Boat Owners Association of SA Inc v Development Assessment Commission* [2000] SASC 238; (2000) 110 LGERA 1 at 8[35].

Proportionality of response

166 The precautionary principle embraces the concept of proportionality. The concept of proportionality is that measures should not go beyond what is appropriate and necessary in order to achieve the objectives in question. Where there is a choice between several appropriate measures, recourse should be had to the least onerous measure and the disadvantages caused should not be disproportionate to the aims pursued.

167 In applying the precautionary principle, measures should be adopted that are proportionate to the potential threats. A reasonable balance must be struck between the stringency of the precautionary measures, which may have associated costs, such as financial, livelihood and opportunity costs, and the seriousness and irreversibility of the potential threat: see “Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management” in Appendix A to R Cooney and B Dickson (eds), *Biodiversity and the Precautionary Principle, Risk and Uncertainty in Conservation and Sustainable Use*, Earthscan, 2005 at p. 304, Guideline 10.

168 The European Commission states in its Communication on the Precautionary Principle:

“Measures based on the precautionary principle must not be disproportionate to the desired level of protection and must not aim at zero risk, something which rarely exists”: European Commission, *Communication from the Commission on the Precautionary Principle, 2000, part 6.3.1.*

169 Considerations of practicability need to be taken into account: see the definition of the precautionary principle which requires “careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment” in s 6(2)(a)(i) of the Protection of the Environment Administration Act 1991. One consideration of practicability is the cost of precautionary measures.

170 There must be proportionality of response or cost effectiveness of margins of error to show that the selected precautionary measure is not unduly costly: T O’Riordan and J Cameron, “The History and Contemporary Significance of the Precautionary Principle” in T O’Riordan and J Cameron, *Interpreting the Precautionary Principle*, Earthscan Publications, 1994, p. 12 at p. 17; and *National Farmers Union v Secretary General of the French Government*, European Court of Justice, Case C-241/01, (Opinion of the Advocate General) at [78].

171 The cost consequences of increasing levels of precaution must be evaluated. As O’Riordan notes:

“There are some dangers with getting too carried away with the application of precaution at any cost. In the absence of comparative risk assessment, the consequences of curtailing potentially beneficial activity and creating another set of unforeseeable risks for an unprepared society could be greater than proceeding step

by step with prudent precaution": T O'Riordan "The Precaution Principle in Environmental Management" in R Ayres and U E Simonis (eds), *Industrial Metabolism: restructuring for sustainable development*, UN University Press, 1994.

See also A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at pp. 43-44; and J Cameron "The precautionary principle: Core meaning, constitutional framework and procedures for implementation" in R Harding and E Fisher (eds), *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 29 at p. 42.

172 The selection of the appropriate precautionary measures to regulate the identified threat of serious or irreversible environmental damage with its identified uncertainty, requires assessment of the risk-weighted consequences of various options: see the definition of the precautionary principle in s 6(2)(a)(ii) of the Protection of the Environment Administration Act 1991. The available options to address the threat should be identified and the likely consequences of these options and of inaction should be assessed: see "Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management" in Appendix A to R Cooney and B Dickson (eds), *Biodiversity and the Precautionary Principle: Risk and Uncertainty in Conservation and Sustainable Use*, Earthscan, 2005 at p. 303.

173 The process of assessment of the risk-weighted consequences of options for precautionary measures has been suggested to involve a form of cost-benefit analysis with risk aversion assumed: see generally, R Posner, *Catastrophe: Risk and Response*, Oxford University Press, 2004; C Gollier, B Jullien, N Treich, "Scientific progress and irreversibility: an economic interpretation of the 'Precautionary Principle'" (2000) 75 *Journal of Public Economics* 229; and *R v Secretary of State for Trade and Industry; Ex Parte Duddridge*, UK Queens Bench Division, Farquharson LJ and Smith J (4 October 1994); (1995) 7 *Journal of Environmental Law* 224 at 230; [1995] *Env LR* 151.

174 However, there are difficulties in the application of the traditional form of cost-benefit analysis used in economics. First, traditional cost-benefit analysis tends to squeeze out qualitative soft values in favour of quantifiable hard values: see L Tribe, "Ways not to think about Plastic Trees: New Foundations for Environmental Law" (1974) 83 *Yale Law Journal* 1315; and N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 199. This is what occurred in *Leatch v National Parks and Wildlife Service* (1993) 81 *LGERA* 270 at 286, where environmental factors were not included in the cost-benefit analysis.

175 Secondly, traditional cost-benefit analysis has difficulty in correctly internalising all externalities in the context of uncertainty. There are no simple or comprehensive rules in economic analysis for integrating risk and uncertainty into decision-making: see D Pearce, "The Precautionary Principle and Economic Analysis" in T O'Riordan and J Cameron (eds), *Interpreting the Precautionary Principle*, Earthscan Publications, 1994 at p. 140; and N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 170. There is a difficulty in translating risks into monetary equivalents: C R Sunstein, "Cost-Benefit Analysis and the Environment" (2005) 115 *Ethics* 351 at 369 and 384; and C R Sunstein, *Laws of Fear: Beyond the Precautionary Principle*, Cambridge University Press, 2005, pp.7 and 131.

176 One solution suggested is to combine economic and non-economic measures by way of multi-criteria analysis. Multi-criteria analysis is a tool for integrating different types of monetary and non-monetary decision criteria. It deals with situations where decisions must be made taking into account multiple objectives, which cannot be reduced to a single

dimension. Usually, multi-criteria analysis is clustered into three dimensions: the ecological, the economic and the social. Within each of these dimensions certain criteria are set so that decision-makers can weigh the importance of one element in association with other elements. Monetary values and cost-benefit analysis measures can be incorporated as one of the criteria to be considered, and weighted against the other criteria in decision-making: L Emerton, M Greig-Gran, M Kallesoe and J MacGregor, "Economics, the Precautionary Principles and Natural Resource Management: Key Issues, Tools and Practices" in R Cooney and B Dickson (eds), *Biodiversity and the Precautionary Principle: Risk and Uncertainty in Conservation and Sustainable Use*, Earthscan, 2005, p. 253 at p. 265.

177 The selection of the appropriate precautionary measures must involve examining both sides of the ledger: the costs associated with the project, process or product (which tends to increase the degree of precaution) as well as the benefits of the project, process or product (which tends to decrease the degree of precaution commensurate with realising the benefit). As Sunstein notes:

"Advocates of precaution often emphasise the costs associated with a product or process, without seeing that it may have benefits as well; and sometimes those benefits involve the environment itself. Why should regulators examine only one side of the ledger?" C R Sunstein, "Cost - Benefit Analysis and the Environment", (2005) 115 Ethics 351 at 366.

See generally C R Sunstein, *Laws of Fear: Beyond the Precautionary Principle*, Cambridge University Press, 2005.

178 In assessing the proportionality of a precautionary measure, consideration needs to be given to non-targeted risks that might arise. Efforts to eliminate all of the targeted risks might cause other adverse consequences. One adverse consequence may be that in addressing ever smaller target risks, the importance of countervailing risks relative to the target risks is likely to grow: F B Cross, "Paradoxical Perils of the Precautionary Principle" (1996) 53 *Washington and Lee Law Review* 851 at 860, 898, 906, and 924; and N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at pp. 171-172.

Precautionary principle does not necessarily prohibit development

179 The precautionary principle, where triggered, does not necessarily prohibit the carrying out of a development plan, programme or project until full scientific certainty is attained: P Stein, "A cautious application of the precautionary principle" (2002) 2 *Environmental Law Review* 1 at 10; *Vertical Telecoms Pty Ltd v Hornsby Shire Council* [2002] NSWLEC 172 (10 August 2000) at [68]; *Telstra Corporation Limited v Pine Rivers Shire Council & Ors* [2001] QPELR 350 at 380-381 [119]; *BGP Properties Pty Ltd v Lake Macquarie City Council* [2004] NSWLEC 399; (2004) 138 *LGERA* 237 at 262 [114]; A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at 44; and M D Young "The precautionary principle as a key element of ecologically sustainable development" in R Harding and E Fisher, *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 127 at p. 138. See also *Greenpeace Australia Ltd v Redbank Power Company Pty Ltd and Singleton Council* (1994) 86 *LGERA* 143 at 154-155; and *Port Stephens Pearls Pty Ltd v Minister for Infrastructure and Planning* [2005] NSWLEC 426 (15 August 2005) at [56].

180 If the precautionary principle were to be interpreted in this way, it would result in a paralysing bias in favour of the status quo and against taking precautions against risk. The precautionary principle so construed would ban "the very steps that it requires": C R

Sunstein, *Laws of Fear: Beyond the Precautionary Principle*, Cambridge University Press, 2005 at pp. 4, 14 and 26. It must be recognised that “precautions against some risks almost always create other risks”: C R Sunstein, *supra* at p. 53.

181 The solution is to assess the risk-weighted consequences of various options and select the option that affords the appropriate degree of precaution for the set of risks associated with the option.

Precautionary principle in context of other ESD principles

182 The precautionary principle is but one of the set of principles of ecologically sustainable development (highlighted earlier in the judgment). It should not be viewed in isolation, but rather as part of the package. This means that the precautionary measures that should be selected must not only be appropriate having regard to the precautionary principle itself, but also in the context of the other principles of ecologically sustainable development including inter-generational and intra-generational equity and the conservation of biological diversity and ecological integrity: see A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at p. 43. In some circumstances these other principles may strengthen the case for precautionary action, while in others the precautionary principle may need to be weighed against the other principles as well as other human rights such as food, water, health and shelter: see “Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management” in Appendix A to R Cooney and B Dickson (eds), *Biodiversity and the Precautionary Principle: Risk and Uncertainty in Conservation and Sustainable Use*, Earthscan, 2005 at p. 301, Guideline 2.

183 In *Northcompass Inc v Hornsby Shire Council* [1996] NSWLEC 213; (1996) 130 LGERA 248, the proposed development was a bioremediation plant which took green wastes away from diminishing landfill and provided value added end products. This was consistent with the principle of sustainable use of resources and the principle of intergenerational equity. However, the proposed development infringed the precautionary principle. The Court emphasised the need to consider all of the principles of ecologically sustainable development: at 246-247.

Floor Space Ratio (FSR)

Salanitro-Chafei v Ashfield Council [2005] NSWLEC 366 (8 July 2005)

Planning principle: relationship of density and residential character

23 The Ashfield planning controls are not unusual in that they do not contain a maximum FSR for dwelling houses; very few planning instruments control the density of detached housing. The question arises: is there an upper level of density above which it is hard to achieve compatibility with the character of typical single-dwelling areas?

24 As early as 1972 a publication of the then State Planning Authority of NSW described the FSR of low-density residential areas as under 0.35:1; the FSR of low medium density areas as between 0.35:1 to 0.55:1; and the FSR of medium density areas as between 0.55:1 and 0.9:1 (Technical Bulletin 3 - Planning Control of Residential Development November 1972).

25 A later publication by the Authority's successor, the Department of Environment and Planning (Technical Bulletin 15 – Residential Development Standards, July 1982) suggested that

“...a control over building bulk in the form of a floor space ratio of the order of 0.5:1 should be included in planning instruments where a suburban open character is sought.” (p 16).

26 The standard of 0.5:1 FSR has found expression in numerous planning instruments and policies whose aim is to integrate increased density housing into low-density residential areas without destroying the existing open character. The Seniors Living State Environmental Planning Policy adopts a FSR of 0.5:1 as a “deemed to comply” standard. State Environmental Planning Policy 53 – Metropolitan Residential Development adopts it as the maximum permissible density in relation to dual occupancy. Many local planning instruments and policies guiding dual occupancy development in suburban areas also contain a maximum FSR control of 0.5:1.

27 The above suggests that there is a general acceptance by the planning profession that an open suburban character is most easily maintained when the FSR of buildings does not exceed 0.5:1. The question raised above may therefore be answered thus:
The upper level of density that is compatible with the character of typical single-dwelling areas is around 0.5:1. Higher densities tend to produce urban rather than suburban character. This is not to say that a building with a higher FSR than 0.5:1 is necessarily inappropriate in a suburban area; only that once 0.5:1 is exceeded, it requires high levels of design skill to make a building fit into its surroundings.

28 The proposed building has a FSR significantly in excess of 0.5:1. It does not exhibit any special design skills. This is one of the explanations why it appears so incongruous in its surroundings.

General impact

Davies v Penrith City Council [2013] NSWLEC 1141 (31 July 2013)

Revision of the Planning Principle in Pafburn

116. As noted immediately above, Mr Davies' case is, in part, based on what is described as the necessity for the structure as his wife is suffering from muscular dystrophy. In the submissions on this point, the planning principle that was established by Roseth SC concerning, inter alia, "necessity" was raised as potentially relevant. That planning principle, set out in Pafburn v North Sydney Council [2005] NSWLEC 444 at [26], is in the following terms:

Planning principle: criteria for assessing impact on neighbouring properties

26 The following questions are relevant to the assessment of impacts on neighbouring properties:

- *How does the impact change the amenity of the affected property? How much sunlight, view or privacy is lost as well as how much is retained?*
- *How **necessary and/or** reasonable is the proposal causing the impact?*
- *How vulnerable to the impact is the property receiving the impact? Would it require the loss of reasonable development potential to avoid the impact?*
- *Does the impact arise out of poor design? Could the same amount of floor space and amenity be achieved for the proponent while reducing the impact on neighbours?*
- *Does the proposal comply with the planning controls? If not, how much of the impact is due to the non-complying elements of the proposal?*

Emphasis added

117. The particular words that are of concern to me are "necessary and/or" contained in the second dot point.

118. Whilst I accept that, in some fundamental terms, some matters may be "necessary" for a development (such as potable water supply and proper sanitation, for example, for a residence), it seems to me that these would, in any event, be taken into account in assessing the reasonableness of any proposal.

119. The present language, in my view, raises the risk - through the separation of necessity from reasonableness - of an anthropocentric interpretation of this element of the planning principle.

120. It is long established law that proper planning decisions are not made on such a basis. Development consents run with the land and proposals for consent are to be assessed in that light rather than by consideration of what might be "necessary" for any present or proposed occupants or the beneficiaries of any consent.

121. I have, therefore, undertaken the internal consultation process for consideration of the establishment of a new planning principle or the revision of an existing planning principle. As a result of that consultation, it is appropriate to refine the published planning principle to delete the words "necessary and/or" so that the revised planning principle will, in future, read:

Revised planning principle: criteria for assessing impact on neighbouring properties

The following questions are relevant to the assessment of impacts on neighbouring properties:

- How does the impact change the amenity of the affected property? How much sunlight, view or privacy is lost as well as how much is retained?
- How reasonable is the proposal causing the impact?
- How vulnerable to the impact is the property receiving the impact? Would it require the loss of reasonable development potential to avoid the impact?
- Does the impact arise out of poor design? Could the same amount of floor space and amenity be achieved for the proponent while reducing the impact on neighbours?
- Does the proposal comply with the planning controls? If not, how much of the impact is due to the non-complying elements of the proposal?

Height, bulk and scale

Veloshin v Randwick Council [2007] NSWLEC 428 (13 July 2007)

32 Because of the frequency with which height, bulk and character are matters in contention, it is useful to establish planning principles to guide how they may be assessed.

Planning principle: assessment of height and bulk

- The appropriateness of a proposal's height and bulk is most usefully assessed against planning controls related to these attributes, such as maximum height, floor space ratio, site coverage and setbacks. The questions to be asked are:
 - Are the impacts consistent with impacts that may be reasonably expected under the controls? (For complying proposals this question relates to whether the massing has been distributed so as to reduce impacts, rather than to increase them. For non-complying proposals the question cannot be answered unless the difference between the impacts of a complying and a non-complying development is quantified.)
 - How does the proposal's height and bulk relate to the height and bulk desired under the relevant controls?
- Where the planning controls are aimed at preserving the existing character of an area, additional questions to be asked are:
 - Does the area have a predominant existing character and are the planning controls likely to maintain it?
 - Does the proposal fit into the existing character of the area?
- Where the planning controls are aimed at creating a new character, the existing character is of less relevance. The controls then indicate the nature of the new character desired. The question to be asked is:
 - Is the proposal consistent with the bulk and character intended by the planning controls?
- Where there is an absence of planning controls related to bulk and character, the assessment of a proposal should be based on whether the planning intent for the area appears to be the preservation of the existing character or the creation of a new one. In cases where even this question cannot be answered, reliance on subjective opinion cannot be avoided. The question then is:
 - Does the proposal look appropriate in its context?

Note: the above questions are not exhaustive; other questions may also be asked.

33 The above principles are supplementary to, and consistent with, the principles established in Stockland Development Pty Ltd v Manly Council [2004] NSWLEC 472.

Non-statutory regional planning policies

Direct Factory Outlets Homebush v Strathfield Municipal Council [2006] NSWLEC 318 (9 June 2006)

Planning principle: the role of non-statutory regional planning policies vis-à-vis statutory local plans

25 The role of regional planning policies is to guide the development of a region, such as the Sydney metropolitan area. One of their functions is to inform and influence statutory plans for the local areas of a region. Regional planning policies provide a sense of purpose and direction to local plans; they are, as it were, the glue that binds local plans together. The fact that they are non-statutory is not an indication of their subservience to statutory plans. Planning policies usually do not lend themselves to statutory expression because they do not relate to specific parcels of land and do not contain numerical development standards. This fact, however, does not mean that they have no relevance to individual development applications, particularly those that have impacts extending beyond the local area.

26 Where the provisions of an environmental planning instrument are clear, unequivocal and do not require value judgment (for example numerical development standards or zonings where the character of a use is not in dispute), they take precedence over non-statutory regional planning policies. However, where those provisions can be applied only on the basis of value judgments (for example, where the character of a use is in dispute, a development standard is to be varied, or where imprecise terms like “appropriate”, “significant”, “detrimentally affect” or “ecological sustainability” need to be given meaning in the context of a development application, non-statutory regional planning policies provide the background against which those value judgments should be made.

Open Space

Seaside Property v Wyong Shire Council [2004] NSWLEC 600 (5 November 2004)

Planning principle: location of communal open space or landscaped area

30 Where a planning instrument, policy or guideline requires the provision of communal open space or landscaped area, that space should be provided principally at ground level, unless the instrument, policy or guideline states otherwise or the proposal is in a high-density urban context where buildings are built to the boundary, for example the CBD.

Plans of management

Renaldo Plus 3 Pty Limited v Hurstville City Council [2005] NSWLEC 315 (12 July 2005)

53 Management Plans (or similarly named documents) provide further details on the operation of a particular use that may not necessarily be appropriate as conditions of consent. Management Plans are a well known concept in environmental law (Transport Action Group Against Motorways Inc v Roads & Traffic Authority [1999] NSWCA 196 at par 122) and can be used in a range of different circumstances. Often, and is the case in this application, the contents of a Management Plan are critical to the decision of whether a development application should be approved or refused.

54 In considering whether a Management Plan is appropriate for a particular use and situation, the following questions should be considered:

1. Do the requirements in the Management Plan relate to the proposed use and complement any conditions of approval?
2. Do the requirements in the Management Plan require people to act in a manner that would be unlikely or unreasonable in the circumstances of the case?
3. Can the source of any breaches of the Management Plan be readily identified to allow for any enforcement action?
4. Do the requirements in the Management Plan require absolute compliance to achieve an acceptable outcome?
5. Can the people the subject of the Management Plan be reasonably expected to know of its requirements?
6. Is the Management Plan to be enforced as a condition of consent?
7. Does the Management Plan contain complaint management procedures?
8. Is there a procedure for updating and changing the Management Plan, including the advertising of any changes?

55 It is appropriate that each of these questions are addressed individually.

Privacy

Meriton v Sydney City Council [2004] NSWLEC 313 (2 July 2004)

Planning principle: protection of visual privacy

45 When visual privacy is referred to in the context of residential design, it means the freedom of one dwelling and its private open space from being overlooked by another dwelling and its private open space. Most planning instruments and development control plans acknowledge the need for privacy, but leave it to be assessed qualitatively. Numerical guidelines for the separation of dwellings exist in the Australia-wide guideline, AMCORD; as well is in the NSW-specific Residential Flat Design Code attached to SEPP 65. AMCORD recommends a separation of 9m between habitable rooms. The Residential Flat Design Code recommends increasing separation between buildings as they get taller. For buildings up to three storeys, it suggests 12m between habitable rooms and balconies, 9m between a habitable and non-habitable room, and 6m between non-habitable rooms. For tall buildings (such as the proposal) it suggests 24m between habitable rooms, 18m between habitable rooms and non-habitable rooms, and 12m between non-habitable rooms.

46 Generalised numerical guidelines such as above, need to be applied with a great deal of judgment, taking into consideration density, separation, use and design. The following principles may assist.

- The ease with which privacy can be protected is inversely proportional to the density of development. At low-densities there is a reasonable expectation that a dwelling and some of its private open space will remain private. At high-densities it is more difficult to protect privacy.
- Privacy can be achieved by separation. The required distance depends upon density and whether windows are at the same level and directly facing each other. Privacy is hardest to achieve in developments that face each other at the same level. Even in high-density development it is unacceptable to have windows at the same level close to each other. Conversely, in a low-density area, the objective should be to achieve separation between windows that exceed the numerical standards above. (Objectives are, of course, not always achievable.)
- The use of a space determines the importance of its privacy. Within a dwelling, the privacy of living areas, including kitchens, is more important than that of bedrooms. Conversely, overlooking from a living area is more objectionable than overlooking from a bedroom where people tend to spend less waking time.
- Overlooking of neighbours that arises out of poor design is not acceptable. A poor design is demonstrated where an alternative design, that provides the same amenity to the applicant at no additional cost, has a reduced impact on privacy.
- Where the whole or most of a private open space cannot be protected from overlooking, the part adjoining the living area of a dwelling should be given the highest level of protection.
- Apart from adequate separation, the most effective way to protect privacy is by the skewed arrangement of windows and the use of devices such as fixed louvres, high and/or deep sills and planter boxes. The use of obscure glass and privacy screens, while sometimes being the only solution, is less desirable.
- Landscaping should not be relied on as the sole protection against overlooking. While existing dense vegetation within a development is valuable, planting proposed in a landscaping plan should be given little weight.

- In areas undergoing change, the impact on what is likely to be built on adjoining sites, as well as the existing development, should be considered.

Privacy

Super Studio v Waverley [2004] NSWLEC 91 (16 March 2004)

Planning principles

5 Several planning principles are relevant to the determination of this appeal. The first is that the acceptability of an impact depends not only on the extent of the impact but also on reasonableness of, and necessity for, the development that causes it. For example, the privacy impact of a second-storey side window in an area of two-storey buildings should be accorded a higher threshold of acceptability than the impact of a second-storey balcony in a house that already has three other balconies. Applying this principle to the present case, I note that the approved proposal already has three outdoor areas. The surrounding houses do not have roof terraces, so a roof terrace would be a new element in the area. This does not mean that it is inappropriate, only that its impact should be assessed with heightened sensitivity. A roof terrace would be acceptable only if its impact were minor or negligible.

6 The second principle is that where proposed landscaping is the main safeguard against overlooking, it should be given minor weight. The effectiveness of landscaping as a privacy screen depends on continued maintenance, good climatic conditions and good luck. While it is theoretically possible for a council to compel an applicant to maintain landscaping to achieve the height and density proposed in an application, in practice this rarely happens.

7 The third principle relates to the extent to which an approval for this application would be used as a precedent in favour of approving other applications for roof terraces. The possibility that an approval may constitute a precedent has not been a factor in my decision. Other roof terraces would have different impacts from those of the current proposal.

Setbacks

Galea v Marrickville Council [2005] NSWLEC 113 (17 March 2005)

Planning principle: building on the boundary in residential areas

17 To test whether building on the boundary is appropriate, the following questions should be asked:

- Is the street characterised by terrace housing?
Building to the boundary is likely to be appropriate in streets where the existing form of development is terrace houses or villa homes, ie where building to the boundary follows the existing pattern of development.
- What is the height and length of the wall on the boundary?
Short lengths of single storey walls (such as garages) are usually acceptable on the boundary.
- Has the applicant control over the adjoining site(s) or the agreement of their owners?
Where the applicant has control over the development of the adjoining sites or their owners agree to a wall on the common boundary, such walls are likely to be appropriate.
- What are the impacts on the amenity and/or development potential of adjoining sites?
Building to the boundary may be appropriate, even where the above tests are not answered favourably, provided it can be shown that a wall on the boundary does not diminish the amenity or the development potential of the adjoining site.
- Are there arrangements in place for the maintenance of the wall or gutters?
The question of maintenance should be considered at the time of the development application to avoid disputes later.

Site dimensions

CSA Architects v Randwick City Council [2004] NSWLEC 179 (27 April 2004)

Planning principle: development on small or narrow sites

15 Where the council has a policy for small or narrow sites, the Court should, where reasonable, apply that policy. (This is a valid principle for all matters before the Court.) In the absence of a council policy, the assessment of a proposal on a site that is below the preferred area or width should be considered both as a development on its own site as well as in the context of possible developments on neighbouring sites. The following questions should be asked:

- Would approval of the application result in the isolation of neighbouring sites?
- Would it render the reasonable development of neighbouring sites difficult?
- Can orderly, economic and appropriate development of the subject site as well as neighbouring sites be achieved?

16 The main criterion for assessing the proposal on its own site is whether it meets other planning controls, eg:

- Does the proposal meet density, setback and landscaping controls? The most critical control for small and narrow sites is that for setbacks.
- Is its impact on adjoining properties and the streetscape worse because the development is on a small or narrow site?

17 Where an application meets other planning controls and the area and width of the site does not exacerbate its impacts, the failure of the site to meet the preferred area or width would usually not be a reason for refusal.

Sunlight

The Benevolent Society v Waverley Council [2010] NSWLEC 1082 (14 April 2010)

The planning principle in Parsonage

133 Before turning to the merit issues concerning overshadowing of 22-28 Wellington Street, it is appropriate to discuss the Court's planning principle relating to solar access.

134 The purposes for which the Court publishes planning principles are summarised in material available on the Court's website (as is the list of topics covered by the Court's planning principles together with hyperlinks to the decisions containing them). There are two types of elements contained in planning principles, those that are prescriptive and those that are process oriented. I described the difference between the two in a May 2009 seminar paper entitled The Relevance of the Court's Planning Principles to the DA Process. In this paper, I also discussed the proper role of planning principles and what planning principles are not. This paper is published in the Planning Principle page accessible through the "Quick Links" on the Court's web site.

135 As part of the processes of the Court, from time to time, issues arise where a planning principle may warrant reconsideration. That reconsideration may be of whether, in the light of the Court's experience since the original adoption, it has become apparent that further refinement or expansion was desirable. For example, this was the evolutionary process that has taken place concerning assessment of adverse impacts from extensions of trading hours of licensed premises. The original planning was set out in *Randall Pty Ltd v Leichhardt Council* [2004] NSWLEC 277 with an expanded planning principle on the same topic, adopting and building on *Randall*, being published in *Vinson v Randwick Council* [2005] NSWLEC 142; (2005) 141 LGERA 27.

136 Similarly, a planning principle can be revised and adapted if experience shows that the outcome of the planning principle is either inappropriate or unresponsive to circumstances.

137 In *Parsonage v Ku-ring-gai* [2004] NSWLEC 347; (2004) 139 LGERA 354, Roseth SC published a planning principle concerning access to sun light. The planning principle published in that *Parsonage* is in the following terms:

8 Numerical guidelines dealing with the hours of sunlight on a window or open space usually leave open the question what proportion of the window or open space should be in sunlight, and whether the sunlight should be measured at floor, table or a standing person's eye level. Numerical guidelines should therefore be applied with the following principles in mind, where relevant:

- *The ease with which sunlight access can be protected is inversely proportional to the density of development. At low densities, there is a reasonable expectation that a dwelling and some of its open space will retain its existing sunlight. (However, even at low densities there are sites and buildings that are highly vulnerable to being overshadowed.) At higher densities sunlight is harder to protect and the claim to retain it is not as strong.*
- *The amount of sunlight lost should be taken into account, as well as the amount of sunlight retained.*
- *Overshadowing arising out of poor design is not acceptable, even if it satisfies numerical guidelines. The poor quality of a proposal's design may be*

demonstrated by a more sensitive design that achieves the same amenity without substantial additional cost, while reducing the impact on neighbours.

- *To be assessed as being in sunlight, the sun should strike a vertical surface at a horizontal angle of 22.5o or more. (This is because sunlight at extremely oblique angles has little effect.) For a window, door or glass wall to be assessed as being in sunlight, half of its area should be in sunlight. For private open space to be assessed as being in sunlight, either half its area or a useable strip adjoining the living area should be in sunlight, depending on the size of the space. The amount of sunlight on private open space should be measured at ground level.*
- *Overshadowing by fences, roof overhangs and changes in level should be taken into consideration. Overshadowing by vegetation should be ignored, except that vegetation may be taken into account in a qualitative way, in particular dense hedges that appear like a solid fence.*
- *In areas undergoing change, the impact on what is likely to be built on adjoining sites should be considered as well as the existing development.*

138 The fourth dot point above adopts two numerical elements. As to the first, it pays no regard to the orientation of the glazed surface to the sun and, in my view provides no functional assistance in decision making. It has never been pressed to me in any case where Parsonage has been relied upon by a party.

139 As to the second numerical standard, although, perhaps, perverse and counterintuitive, several experts, including Mr Neustein, have pointed out to me that, for a window that has a degree of solar access but does not satisfy the “half the window” test set out immediately above, the simple way to cure the defect (and ensure compliance) is to retain the area of the window that enjoys solar access but to reduce the total window size (by eliminating part of the area that does not receive such sunlight). The result is that the area of the window, by being made smaller, is made compliant with this element of the planning principle.

140 However, this result is clearly both undesirable and inappropriate. As a consequence, in these proceedings, although this element of the planning principle in Parsonage plays a minor role in the otherwise significant overshadowing impact on the windows and balconies of the central and north-western units of 22-28 Wellington Street by the proposed east-west running wing of the proposed Wellington Street building, I took the opportunity to invite the planning experts and the advocates to make any submissions or comments they considered appropriate on whether and, if so, how, the planning principle in Parsonage should be modified.

141 In final submissions, the positions adopted can be briefly summarised as:

- those representing the Society were of the opinion that these proceedings did provide an appropriate opportunity to revisit this matter and correct the defect in Parsonage; but
- those representing the respondents agreed that there was a defect in Parsonage (as earlier identified) but considered that it was unnecessary to deal with it in the course of these proceedings.

142 Mr Neustein and Mr King, an expert who produced the shadow diagrams contained in the Society's Supplementary Statement of Environmental Effects, combined to reduce a draft of an alternative approach to Parsonage. Their model proposes a fundamental rewrite of the Parsonage principle. I am grateful for their assistance but a fundamental rethink (such as they advocate) going beyond the fourth dot point in Parsonage is not possible given the time constraints on the preparation of this decision.

143 After consideration of the proposal from Mr Neustein and Mr King and consultation within the Court through the process discussed in my paper cited above, I publish below a replacement planning principle on solar access. It adopts Parsonage, except the fourth dot point, and replaces this dot point with two paragraphs that are not numerically prescriptive. It will no longer be appropriate to cite Parsonage as a planning principle.

144 The Court's consolidated and revised planning principle on solar access is now in the following terms:

Where guidelines dealing with the hours of sunlight on a window or open space leave open the question what proportion of the window or open space should be in sunlight, and whether the sunlight should be measured at floor, table or a standing person's eye level, assessment of the adequacy of solar access should be undertaken with the following principles in mind, where relevant:

- The ease with which sunlight access can be protected is inversely proportional to the density of development. At low densities, there is a reasonable expectation that a dwelling and some of its open space will retain its existing sunlight. (However, even at low densities there are sites and buildings that are highly vulnerable to being overshadowed.) At higher densities sunlight is harder to protect and the claim to retain it is not as strong.
- The amount of sunlight lost should be taken into account, as well as the amount of sunlight retained.
- Overshadowing arising out of poor design is not acceptable, even if it satisfies numerical guidelines. The poor quality of a proposal's design may be demonstrated by a more sensitive design that achieves the same amenity without substantial additional cost, while reducing the impact on neighbours.
- For a window, door or glass wall to be assessed as being in sunlight, regard should be had not only to the proportion of the glazed area in sunlight but also to the size of the glazed area itself. Strict mathematical formulae are not always an appropriate measure of solar amenity. For larger glazed areas, adequate solar amenity in the built space behind may be achieved by the sun falling on comparatively modest portions of the glazed area.
- For private open space to be assessed as receiving adequate sunlight, regard should be had of the size of the open space and the amount of it receiving sunlight. Self-evidently, the smaller the open space, the greater the proportion of it requiring sunlight for it to have adequate solar amenity. A useable strip adjoining the living area in sunlight usually provides better solar amenity, depending on the size of the space. The amount of sunlight on private open space should ordinarily be measured at ground level but regard should be had to the size of the space as, in a smaller private open space, sunlight falling on seated residents may be adequate.
- Overshadowing by fences, roof overhangs and changes in level should be taken into consideration. Overshadowing by vegetation should be ignored, except that vegetation may be taken into account in a qualitative way, in particular dense hedges that appear like a solid fence.
- In areas undergoing change, the impact on what is likely to be built on adjoining sites should be considered as well as the existing development.

Views

Tenacity Consulting v Waringah [2004] NSWLEC 140 (7 April 2004)
(Note: A second views principle exists but is not included here.)

25 The notion of view sharing is invoked when a property enjoys existing views and a proposed development would share that view by taking some of it away for its own enjoyment. (Taking it all away cannot be called view sharing, although it may, in some circumstances, be quite reasonable.) To decide whether or not view sharing is reasonable, I have adopted a four-step assessment.

26 The first step is the assessment of views to be affected. Water views are valued more highly than land views. Iconic views (eg of the Opera House, the Harbour Bridge or North Head) are valued more highly than views without icons. Whole views are valued more highly than partial views, eg a water view in which the interface between land and water is visible is more valuable than one in which it is obscured.

27 The second step is to consider from what part of the property the views are obtained. For example the protection of views across side boundaries is more difficult than the protection of views from front and rear boundaries. In addition, whether the view is enjoyed from a standing or sitting position may also be relevant. Sitting views are more difficult to protect than standing views. The expectation to retain side views and sitting views is often unrealistic.

28 The third step is to assess the extent of the impact. This should be done for the whole of the property, not just for the view that is affected. The impact on views from living areas is more significant than from bedrooms or service areas (though views from kitchens are highly valued because people spend so much time in them). The impact may be assessed quantitatively, but in many cases this can be meaningless. For example, it is unhelpful to say that the view loss is 20% if it includes one of the sails of the Opera House. It is usually more useful to assess the view loss qualitatively as negligible, minor, moderate, severe or devastating.

29 The fourth step is to assess the reasonableness of the proposal that is causing the impact. A development that complies with all planning controls would be considered more reasonable than one that breaches them. Where an impact on views arises as a result of non-compliance with one or more planning controls, even a moderate impact may be considered unreasonable. With a complying proposal, the question should be asked whether a more skilful design could provide the applicant with the same development potential and amenity and reduce the impact on the views of neighbours. If the answer to that question is no, then the view impact of a complying development would probably be considered acceptable and the view sharing reasonable.

Zones

BGP Properties Pty Limited v Lake Macquarie City Council [2004] NSWLEC 399 (12 August 2004)

Significance of the zonings

115 The context in which the issues in this case must be resolved includes the history of the use of the land and the contribution which it now makes to the existing natural environment. Although zoned industrial, that zoning was imposed at a time when the community's understanding of the significance of some elements of the natural environment was not as mature as it now is. Consideration of matters of inter-generational equity and the conservation of both biological diversity and the ecological integrity of land were not such significant elements of environmental decision-making as they are today.

116 Notwithstanding the fact that the ecological integrity of the site may be threatened if the major road reservation were utilised for its purpose, I am satisfied that this is not a significant matter in this case. The reservation was also imposed at a time when the ecological significance of the area was unlikely to have been given any, or at least any mature, consideration. It would be inappropriate to make a decision in the present case upon the assumption that construction of the proposed road is inevitable.

117 In the ordinary course, where by its zoning land has been identified as generally suitable for a particular purpose, weight must be given to that zoning in the resolution of a dispute as to the appropriate development of any site. Although the fact that a particular use may be permissible is a neutral factor (see *Mobil Oil Australia Ltd v Baulkham Hills Shire Council* (No 2) 1971 28 LGRA 374 at 379), planning decisions must generally reflect an assumption that, in some form, development which is consistent with the zoning will be permitted. The more specific the zoning and the more confined the range of permissible uses, the greater the weight which must be attributed to achieving the objects of the planning instrument which the zoning reflects (*Nanhouse Properties Pty Ltd v Sydney City Council* (1953) 9 LGR(NSW) 163; *Jansen v Cumberland County Council* (1952) 18 LGR(NSW) 167). Part 3 of the EP&A Act provides complex provisions involving extensive public participation directed towards determining the nature and intensity of development which may be appropriate on any site. If the zoning is not given weight, the integrity of the planning process provided by the legislation would be seriously threatened.

118 In most cases it can be expected that the Court will approve an application to use a site for a purpose for which it is zoned, provided of course the design of the project results in acceptable environmental impacts.

119 However, there will be cases where, because of the history of the zoning of a site, which may have been imposed many years ago, and the need to evaluate its prospective development having regard to contemporary standards, it may be difficult to develop the site in an environmentally acceptable manner and also provide a commercially viable project.

Zones (interface)

Seaside Property Developments Pty Ltd v Wyong Shire Council [2004] NSWLEC 117 (30 March 2004)

25. As a matter of principle, at a zone interface as exists here, any development proposal in one zone needs to recognise and take into account the form of existing development and/or development likely to occur in an adjoining different zone. In this case residents living in the 2(b) zone must accept that a higher density and larger scale residential development can happen in the adjoining 2(c) or 2(d) zones and whilst impacts must be within reason they can nevertheless occur. Such impacts may well be greater than might be the case if adjacent development were in and complied with the requirements of the same zone. Conversely any development of this site must take into account its relationship to the 2(b) zoned lands to the east, south-east, south and south-west and the likely future character of those lands must be taken into account. Also in considering the likely future character of development on the other side of the interface it may be that the development of sites such as this may not be able to achieve the full potential otherwise indicated by applicable development standards and the like.