

[LAND AND ENVIRONMENT COURT OF NEW SOUTH WALES]

GREENPEACE AUSTRALIA LTD v REDBANK POWER
COMPANY PTY LTD AND SINGLETON COUNCIL

Pearlman CJ of Land and Environment Court

5-8, 9, 12-13 September, 10 November 1994

Development consent — Power station — Objector appeal — Impact of air emissions — “Greenhouse” effect — Precautionary principle — Balancing of planning and environmental issues — Appeal dismissed — Land and Environment Court Act 1979 (NSW), s 98 — Intergovernmental Agreement on the Environment (1992), cl 3.5.1.

Section 98 of the *Environmental Planning and Assessment Act 1979 (NSW)* provides a third party objector right of appeal to the Land and Environment Court against development consent for designated development. “Designated development” means any class or description of development that is declared pursuant to s 29 or s 158 to be designated development for the purposes of the Act. It includes power stations.

In May 1992 the governments of the Commonwealth, the States and Territories and the Australian Local Government Association signed an Intergovernmental Agreement on the Environment which provides, amongst other things, for the establishment of a National Environmental Protection Agency (NEPA). The NEPA is to be a ministerial council chaired by the Commonwealth and having the authority to set national environment protection measures. Clause 3.5.1 contains a definition, in the following terms, of what is commonly called the “precautionary principle”:

“Where 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.”

In March 1994 Singleton Council granted to Redbank Power Company Pty Ltd development consent for the construction of a power station and ancillary facilities at Warkworth in the Hunter Valley. Greenpeace Australia Ltd objected pursuant to s 98 of the *Environmental Planning and Assessment Act 1979* contending that the impact of air emissions from the project would unacceptably exacerbate the “greenhouse effect” in the earth’s atmosphere and that the Court should apply the precautionary principle and refuse development consent for the proposal.

Held: (1) The application of the precautionary principle dictated that a cautious approach should be adopted in evaluating the various relevant factors in determining whether or not development consent should be granted, but it did not require that the greenhouse issue should outweigh all other issues.

Leach v National Parks & Wildlife Service (1993) 81 LGERA 270, referred to.

(2) Balancing all relevant planning and environmental factors the proposal should, subject to several conditions, be allowed to proceed.

APPEAL

This was a third party objector appeal under s 98 of the *Environmental Planning and Assessment Act 1979* against a grant of development consent for a power station and ancillary facilities. The facts are set out in the judgment.

J B Simpkins, for the applicant.

B J Preston, for the first respondent (Redbank Power Company Pty Ltd).

J R Connors (solicitor), for the second respondent (Singleton Council).

Judgment reserved

10 November 1994

PEARLMAN J.

Introduction

This is an appeal by Greenpeace Australia Ltd (Greenpeace) brought under s 98 of the *Environmental Planning and Assessment Act 1979* (NSW) against a development consent granted to the first respondent, Redbank Power Company Pty Ltd (Redbank) by the second respondent, Singleton Council (the Council).

The development application which is the subject of these proceedings, No 183/93, was lodged with the Council together with an amended environmental impact statement on 8 November 1993. In the development application, the development is described as “generating works involving the construction of a 120 MWe nominal rated fluidised-bed combustion power plant”, and is said to involve the construction of a “power station and ancillary [sic] facilities including overland pipes carrying slurry and water”.

The power plant is to be located at Warkworth, in the Hunter Valley, between Jerrys Plains Road (MR 213) and Long Point Road adjacent to the Warkworth Mine. Land use is controlled by the Singleton and Patrick Plains Planning Scheme Ordinance, under which the land on which the plant is to be sited is zoned non-urban 1(a), and the slurry pipelines are within land zoned non-urban 1(a) and non-urban 1(b). The development falls within the definition of “generating works” in the planning scheme ordinance. Generating works within those zones are innominate column IV uses, and may be carried out with consent.

By notice dated 23 March 1994 the Council notified Redbank of the determination of the development application by the grant of consent subject to a number of conditions. On 15 April 1994, Greenpeace commenced these proceedings. Its statement of issues filed in the proceedings is as follows:

“1. The impact of the proposed development on the environment

Particulars

- (a) The emission of carbon dioxide from the proposed development and its contribution to the human enhanced greenhouse effect.

2. The need for the development

Particulars

- (a) The absence of any current need for the increased capacity for generating electric power

- (b) the availability of alternative means of addressing future energy needs which have lower or zero emissions of carbon dioxide.”

The proposed development (the project)

The environmental impact statement proposes the development of a fluidised-bed combustion power plant. It is intended to utilise coal washery tailing as fuel, replacing a current method of tailing disposal.

Tailing is a waste product which results from the mining and washing of coal. The tailing, mixed with water, emerges from the washing process as a slurry. The present method of disposal of that slurry is to pipe it to specially constructed tailing dams. The slurry is deposited into these dams and considerable time, sometimes years, is required to allow the solid material to settle out.

Tailing is to be supplied to the project directly from the coal washery plants at the Warkworth and Lemington mines. It is to be transferred by a slurry pipeline to the site. Tailing from dams may also be used to supplement the fuel stockpile when required.

The energy produced by the project is intended to be sold under a 30 year contract to Shortland Electricity. The project is to produce 120 MW of which the net output (approximately 100 MW), enough to supply approximately 100,000 homes, will be sold.

The gaseous emissions from the boiler stacks of the project will include primarily water vapour and carbon dioxide and small amounts of oxides of sulphur, oxides of nitrogen and carbon monoxide. The project would also emit small particles containing metals and fluorides.

Greenpeace's concern in this appeal is with the carbon dioxide (CO₂) which will be emitted by the project when it is fully operational. Carbon dioxide is a natural product of combustion of fossil fuels, and is a contributor to the enhanced greenhouse effect, to which I will return in more detail later in this judgment.

Sulphur dioxide (SO₂) is one of the contributors to a problem known as acid rain. Acid rain forms when SO₂ reacts with atmospheric water vapour to create sulphuric acid. In the project, SO₂ emission is proposed to be controlled through the introduction of limestone directly into the fluidised-bed combustor. The limestone breaks down into calcium oxide which reacts with the SO₂ to form calcium sulphate, a dry material which collects together with ash. A significant feature of the fluidised-bed combustion design is that SO₂ is captured directly during the combustion.

As to nitrous oxides (NO_x), the boilers are designed to operate at a relatively low combustion temperature (900°C) which is lower than that of conventional coal fired boilers (1100°C). Nitrous oxide emissions will be controlled by maintaining a limited range of fuel-to-air ratios, low excess air, long combustion gas times and an oxidising environment. In these conditions and with a lower combustion temperature, it is not possible for significant amounts of NO_x to form.

Particulates are to be removed from the flue gases by use of fabric filter baghouses. These filters are expected to lead to an overall removal rate of 99 per cent of particulate materials. Fluoride contained in the flue gases would also be removed through a reaction with dust contained in the filter which

converts the gaseous fluoride into a particulate fluoride and traps those particles in the filter.

The section 90 considerations

The project raised a number of relevant matters for consideration under s 90 of the *Environmental Planning and Assessment Act*. These include air emissions, noise, water, flora and fauna, visual amenity, social and economic impact.

All these matters were addressed in the development application and environmental impact statement and were considered by the Council in its assessment of the development application.

About 75 submissions were received from individuals and groups. The concerns which they raised were addressed by Redbank and considered in the Council's assessment. Copies of those submissions and Redbank's responses to them were tendered in evidence.

The Council sought and took into consideration advice on the proposed development from 12 government authorities, and obtained advice from an independent consultant.

However, the only issue which is raised in this appeal is the impact of air emissions from the project. The task of the Court, then, is to consider that impact as well as all other relevant factors in determining whether or not to grant development consent.

The greenhouse effect and governmental response

It is necessary to outline briefly the policy background concerning the greenhouse effect.

Earth's atmosphere, while composed mainly of nitrogen and oxygen, also contains a number of trace gases such as CO₂, methane (CH₄) and ozone. Over the past 200 years the global concentrations of a number of these gases have increased due to human activities such as the burning of fossil fuels, deforestation and large scale farming. These naturally occurring gases, together with synthetic chemicals such as chlorofluorocarbons (CFCs), have the capacity to absorb radiation and there is concern that their increased concentrations in the atmosphere is resulting in a change in global temperatures.

The Environment Protection Authority in its report entitled "New South Wales State of the Environment 1993" (exhibit 9) discussed global warming. It stated at p 5 of that report that CO₂ "has been estimated to account for over half of the global warming phenomenon ...". The report continued as follows:

"... Australia's CO₂ emissions represent approximately 1.4 per cent of the world total. However on a per capita basis, it is estimated that Australia is the world's fourth-largest contributor."

The report went on to discuss other major greenhouse gases — CH₄, nitrous oxide and CFCs — as well as the question of CO₂ sinks (that is, absorbers of CO₂), the two major natural ones of which are the ocean and forests.

Due to the intrinsically global nature of the problems associated with the human enhanced greenhouse effect, an international instrument was created in an attempt to co-ordinate a response. The United Nations Framework Convention on Climate Change (exhibit 10, the Framework Convention) was

opened for signature in May 1992. Australia ratified the Framework Convention and it entered into force on 21 March 1994. Article 2 of the Framework Convention states as its objective the following:

“The ultimate objective of this Convention ... is to achieve ... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system ...”

To that end, the parties to the Framework Convention made certain commitments in Art 4A. These commitments include, among others:

“1(f) [To t]ake climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions ...

2(a) [To] adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs ...”

While the Australian Government is now bound to act generally in accordance with its international obligations under the Framework Convention, there is no national legislation yet in place aimed at specifically implementing any of its obligations. What there is, however, is the Intergovernmental Agreement on the Environment (exhibit 11, the Intergovernmental Agreement). This document (entered into by the Federal Government, all State and Territory Governments, and the Australian Local Government Association) is designed to enable a “cooperative national approach to the environment”.

The Intergovernmental Agreement contains general provisions related to its operation and principles to be applied by the parties. In a number of schedules, it deals with specific areas of environmental policy and management. Schedule 5 is entitled “Climate Change”. This schedule discusses the need for Australia to be part of an international response to the problem of greenhouse-enhanced climate change and details the creation of a National Greenhouse Response Strategy. It also adopts an interim planning target in the following terms:

“to stabilise greenhouse gas emissions ... based on 1988 levels, by the year 2000, and reducing these emissions by 20% by the year 2005 ... subject to Australia not implementing response measures that would have net adverse economic impacts nationally or on Australia’s trade competitiveness, in the absence of similar action by major greenhouse gas producing countries.”

In accordance with Sch 5 of the Intergovernmental Agreement, the National Greenhouse Response Strategy (exhibit H) was produced and endorsed by the Council of Australian Governments in December 1992. The key elements of the National Greenhouse Response Strategy are stated to include, amongst other things:

- * a set of general principles underlying all response measures;
- * a set of sectoral objectives and sectoral strategies;
- * a phased plan of action.

The first phase response measures will concentrate on “no-regrets” actions. No-regrets actions are those that address the problem of the enhanced greenhouse effect while producing a net benefit (or, at least, no net loss). First phase response measures will also include a number of “insurance”

measures to reduce uncertainties about climate change impacts and the viability of response measures, chiefly involving research and review studies.

The phased approach is discussed in greater detail in appendix C to the National Greenhouse Response Strategy. At p 88 the National Greenhouse Response Strategy states:

“Adoption of more interventionist response measure than the no-regrets and insurance measures in the first phase could have net adverse economic impacts nationally or on Australia’s trade competitiveness, especially in the absence of similar action by our major trading partners and competitors. Governments agree that it is too early at this time to determine the extent to which action beyond no-regrets measures will be required.”

To this end, first phase measures will be designed to cause “minimal disruption to the wider community, any single industry sector, or any particular geographical region”.

The National Greenhouse Response Strategy contains specific sectoral strategies, starting with the energy supply sector. The strategy outlined includes improving the efficiency of the market, developing cost-competitive energy generation with lower greenhouse gas emissions and co-ordinating supply side and demand side action.

The National Greenhouse Response Strategy provides that that strategy for the energy sector is designed to achieve the following objective:

“limit greenhouse gas emissions arising from energy production and distribution wherever economically efficient by minimising greenhouse gas emissions per unit of each type of energy supplied to end users, and by promoting alternative energy sources that have the potential to lower greenhouse gas emissions per unit of energy supplied.”

There is an important aspect to note in relation to both the Intergovernmental Agreement on the Environment and the National Greenhouse Response Strategy. In both documents the Australian Local Government Association is represented as a party. However, both documents expressly recognise that local government authorities cannot be bound to observe the terms of either (Intergovernmental Agreement cl 1.11 or National Greenhouse Response Strategy p 5).

Greenpeace’s case

In the light of this background, Mr Simpkins, counsel for Greenpeace, submitted that significant weight should be attached to the greenhouse issue in the Court’s consideration of the factors to be taken into account in determining whether or not to grant consent to the proposed development. He outlined the matters which should lead to significant weight being so attached:

(1) There is a host of documents which study, review and record the impact of CO₂ emission in relation to the greenhouse effect. Apart from the documents I have already mentioned, Mr Simpkins relied upon a number of reports prepared by the Intergovernmental Panel on Climate Change which were tendered as exhibit 5 and which, he submitted, form the scientific basis upon which the international community and national governments should make policy decisions.

All these documents demonstrate, so Mr Simpkins submitted, that there is

considerable international and national concern about the enhanced greenhouse effect.

(2) While there is no scientific certainty about the enhanced greenhouse effect, there is a widespread concern that it is likely to have a major impact upon health, agriculture, ecosystems, sea levels, rainfall, and snow cover.

(3) The energy sector is a major contributor to the enhanced greenhouse effect.

(4) Greenhouse response measures are still being developed and when developed are likely to be relevant to the project.

(5) The National Greenhouse Response Strategy contains an objective to which the energy sector is required to conform which is designed to limit greenhouse gas emissions by, first, minimising those emissions, and secondly, promoting alternative energy sources.

Mr Simpkins submitted that the grant of development consent in this case would be inconsistent with that objective.

(6) The proposed contract between Redbank and Shortland Electricity for the supply of electricity for 30 years would have the effect of rendering Redbank immune from any further response measures that may be adopted, unless there was legislative intervention or adverse financial consequences.

Mr Simpkins' submission was that attaching significant weight to the greenhouse issue in this case would necessarily lead to a refusal of consent, unless it could be shown that the emission of CO₂ was no worse than CO₂ emission from existing sources, and that there was a demonstrated demand for further energy supply.

It was Greenpeace's case that the evidence showed that CO₂ emissions from the proposed development would increase the total quantity of CO₂ emitted, and that there is no demand for further energy supply. It was thus contended that the Court should take into account the development of the response measures contemplated by the National Greenhouse Response Strategy and the precautionary principle, and as a consequence refuse to grant consent to the proposed development.

Redbank's case

Redbank's case was that, in weighing up the factors to be taken into account in determining whether or not to grant consent, the Court ought to take into account two significant matters:

(1) The principal reason for the project is to implement an environmentally responsible method of tailing disposal; and

(2) the fluidised-bed combustion system which is to be operated in the project has the environmentally beneficial effect of reducing SO₂ and NO_x emissions in comparison with conventional power stations.

In 1991, the Office of Energy released a consultant's report entitled "Coal Washery Rejects for Power Generation" (exhibit J). The purpose of the report, as outlined in its preface, was to examine whether "... combustion of reject for electricity generation represents an economically and environmentally attractive solution" to two problems — first, the problem of loss of energy potential due to the inefficiency of coal washing systems, and, secondly, the problem of tailing disposal.

In examining the characteristics of coal industry reject (which comprises coarse reject and tailing), the report noted a number of problems associated with tailing disposal. In the author's opinion, "with the exception of

municipal sewage, coal washery tailing would constitute Australia's largest water-borne waste disposal problem". One of the problems is the large land area required for tailing dams. The report noted the potential of coal reject-fired power plants to reduce land requirements, and estimated that, by the turn of the century, the adoption of 1,400 MW of coal reject-fired power generation capacity instead of a similar quantity of major coal-fired capacity should reduce the net area of land alienated in New South Wales by 600 hectares annually.

The report recognised other problems associated with tailing disposal. Tailing is impermeable to water, and tailing dams do not dry out. A solid-looking crust forms on the dam which prevents further evaporation, but is not strong enough to take any substantial weight, such as that of heavy machinery. Another problem is the acidification of water as a result of oxidation of pyrite and other sulphur compounds contained in the tailing. In order to prevent the escape of acidified water into the surrounding soils, tailing dams have been designed with impermeable walls. They may, however, overflow or the walls may be breached, discharging waters with a high acid content and containing high concentrations of toxic heavy metal ions.

The report also noted that, in 1989-1990, reject represented one-quarter of all coal mined in New South Wales, and in the Hunter Valley, tailing can frequently account for as much as 50 per cent of total reject.

It also asserted that the disposal of ash from a coal reject-fired power station would present fewer problems than unburnt reject, principally because ash is more hospitable to plant life.

Redbank said that this report was the catalyst for the development application which it has made. The report recommended the utilisation of coal reject-fired power plants, which is what is contemplated by the development application.

As to improved SO₂ and NO_x emissions, Redbank relied on the improved control that the fluidised bed combustion system permits and which I have already described, namely, that limestone is injected directly into the bed combustor so that SO₂ is captured before it is emitted into the atmosphere, and that the relatively low combustion level results in relatively low NO_x emission.

The expert evidence

Redbank called two expert witnesses to give evidence.

The first of them was Mr Thor Hibbeler, whose expert report was exhibit M. He is a consulting engineer in the employ of National Power Company of Oakland, California, which is one of the joint venturers involved in Redbank, and he has had considerable environmental consulting experience. Mr Hibbeler was responsible for the preparation of the environmental impact statement and wrote portions of it.

In his report, Mr Hibbeler gave evidence that the use of fluidised bed boilers to combust tailing fuel will result in low levels of SO₂ and NO_x, and that the use of tailing as a fuel would have land use benefit as well as a more efficient use of energy resources. He also noted the fact that the project would emit CO₂, and produced calculations to show that the CO₂ emission rate would range between 1,250 and 1,290 kg/MWh.

Mr Hibbeler was cross-examined about his knowledge of the problems

arising from tailing disposal at the Warkworth and Lemington mines and while he knew only a little about specific problems at these particular sites, he remained firm in his conviction that the utilisation of tailing as fuel in the project would have an environmentally beneficial effect at those mines and remained as the justification for the project in the broader context of the coal industry in the Hunter Valley.

The second expert was Mr Roy Alper.

Mr Alper is the co-founder and executive vice president of National Power Company, and has had extensive experience in electricity resource planning and policy. His report was tendered in evidence as exhibit N.

In his report, Mr Alper gave his opinion that the project is an example of ecologically sustainable development, and that it will be consistent with the National Greenhouse Response Strategy. In addition, he dealt with the need for the project. He noted the fact that the need for new generating capacity in New South Wales is likely to arise between 1998 and 2005, and that the project is not likely to start operation before 1997 or 1998. He conceded that this might be a few years in advance of a precise date of need for new capacity, but was of the opinion that in view of the small size of the project, and its extended life of 30 years, its timing was reasonable. He pointed out that Redbank's "primary mission" is not the production of power, but the utilisation of tailing in order to reduce its environmental consequences and to recover energy value lost in discarded tailing. He explained that his company had been approached by the consultant to the Office of Energy in New South Wales when that consultant was investigating alternative methods of tailing disposal for the report entitled "Coal Washery Rejects for Power Generation" and that his company had had extensive subsequent consultations with the Office of Energy and the Department of Mineral Resources.

In cross-examination, Mr Alper admitted that he had no direct knowledge of the Warkworth and Lemington mines, and that his conclusions as to the impact of the project and its need were based on his general understanding of the problems associated with tailing disposal.

Two experts were called by Greenpeace.

The first of these, Mr Edward Johnstone, was not of great assistance to the Court for a number of reasons. First, he was hostile and argumentative in the witness box, which reduced the credibility of his evidence. Mr Simpkins conceded in his submissions that there was an "element of tension" when Mr Johnstone was being cross-examined. Secondly, Mr Johnstone's expert report (exhibit 2) was made up of three pages of expert comment, and 11 pages of curriculum vitae, which raised some doubt on its face as to whether it was truly a report of expert testimony. When one turns to the report itself, it appears merely to be expert opinion in contradiction of the evidence of both Mr Hibbeler and Mr Alper, and a large part of it merely criticises Mr Alper's reference to problems occurring in the United States.

There was thus little in Mr Johnstone's evidence which is of any real assistance. This is exacerbated by the fact that Mr Johnstone admitted, in cross-examination, that he had not been specifically involved in any projects in the Hunter Valley concerned with tailing disposal, although he had been involved in an environmental impact assessment for coal washery reject emplacement at Hexham. His main involvement in the Hunter Valley had been with water systems in various mines in that location, over a period of

about 14 years ending in 1986, which meant that he was not able to recall specifics.

The last expert to be called was Dr George Wilkenfeld, who has had extensive experience in energy analysis, public policy and administration and urban and environmental studies. He has also had a wide experience in consulting in the planning, supply or use of energy and related services. His report became exhibit 3.

Dr Wilkenfeld's report set out, as background, the public policy issues of ecologically sustainable development and the greenhouse effect, and discussed the national and international responses to this issue, through the National Greenhouse Response Strategy and the Framework Convention. His main concern, in the light of this background (which I have earlier generally described) was whether there is a need for the project, and the project's impact on greenhouse gas emissions. With the qualification that his analysis depended upon a large number of assumptions, Dr Wilkenfeld made the following points:

- * Electricity generation in New South Wales is dominated by fossil fuels, coal plants accounting for nearly 78 per cent of installed capacity;
- * there is at present an excess capacity of 56 per cent; New South Wales will probably not need new electricity generation before 2005, and there will be an impact from energy efficiency programmes in place following the National Greenhouse Response Strategy;
- * the net output of electricity from the project will displace existing power station output as long as there is excess capacity;
- * when the excess capacity is absorbed (that is, by 2005 or thereabouts), the project will have the effect of deferring or displacing other means of supplying energy services since Redbank's contract with Shortland Electricity will continue in operation until about 2026;
- * the other means of energy supply which are likely to come into operation after 2005 include such means as more modern conventional coal plants; advanced coal plants; gas-fired combined cycle plants; the substitution of natural gas for electricity at the point of use; gas cogeneration; the substitution of renewable energy forms in electricity generation; and the substitution of renewable energy forms for electricity at point of use.

Annexed to Dr Wilkenfeld's report is a report furnished to the Office of Energy by IPC Worldwide Pty Ltd assessing greenhouse gas emissions for the project. In order to assess whether the project will increase or decrease the overall greenhouse gas emissions released by the New South Wales energy sector, IPC Worldwide made three estimates:

1. The amount of CO₂ likely to be emitted from the project;
2. The amount of CO₂ likely to be emitted from existing power stations which the project is likely to displace;
3. The amount of CO₂ and CH₄ emission which is likely to be avoided because the project will not need to mine the extra coal which would be necessary to supply existing power stations to produce an equivalent quantity of electricity.

The result of the IPC Worldwide analysis was that the project was "most likely" to emit 19 per cent more greenhouse gas emissions than an equivalent production from existing coal-fired power stations. This would result in a net

increase in overall CO₂ emissions from power stations in New South Wales of approximately 0.47 per cent.

These results are indicative only, because there are many uncertainties in the assumptions and information upon which they are based. For example, IPC Worldwide accepted a figure of 1,302 kg/MWh furnished by Redbank as representing the amount of CO₂ emission from the project. Dr Wilkenfeld believed this to be an underestimate, and thought a figure of 1,380 kg/MWh would be more accurate. Mr Hibbeler gave evidence of refinements in the calculations of fuel composition, leading to an estimate of the amount of CO₂ emission of between 1,250 and 1,290 kg/MWh.

Conclusion

The evidence establishes that the project will emit CO₂, which is a greenhouse gas, and will contribute to the enhanced greenhouse effect, a matter of national and international concern. Greenpeace contended that this issue, the greenhouse issue, should outweigh all other factors to be taken into account in assessment of the project and it should lead to a refusal of consent.

I accept that there is national and international concern with the enhanced greenhouse effect, and with the energy sector's contribution to it. I also note that responses designed to mitigate that effect are still in the process of development. I take into account the objective of the energy strategies which the National Greenhouse Response Strategy enunciates and which I have earlier quoted. But these matters, and the greenhouse issue generally, must be considered in the light of the policy background.

The Framework Convention, the Intergovernmental Agreement on the Environmental and the National Greenhouse Response Strategy outline policy objectives and responses to the problem of enhanced greenhouse effect, but they stop short of expressly prohibiting any energy development which would emit greenhouse gases. They are policy documents only, and they expressly provide that they do not bind local government. There is nothing in those documents, or any other background documents which were tendered in evidence, which requires the Court to refuse to grant consent or which would prohibit the development of power stations per se. Whether they should be prohibited is, of course, a matter of government policy and it is not for the Court to impose such a prohibition. It is for State and national governments to take into account the competing economic and environmental issues raised by the enhanced greenhouse effect and to set policy in the light of those issues. Thus far, governmental policy has been to set first phase responses, and more response measures are intended to be developed over time by national and international policy-makers.

It is important also to bear in mind that the Framework Convention, the Intergovernmental Agreement on the Environment and the National Greenhouse Response Strategy do not constrain individual action. There are as yet no specific directives or obligations cast upon individual operators in the energy field. This may come, as a result of the development of further response measures, but thus far the response to the enhanced greenhouse effect is in the realm of governmental policy.

Another important matter to note is the uncertainty in the evidence about the effect of CO₂ emission from the project. In absolute terms, the project will emit CO₂. But what impact that will have on global warming, within the

State, or nationally or internationally, is very uncertain. Redbank argued that the cumulative effect of the CO₂ emission from the project is likely to be minimal. IPC Worldwide calculated that the project would constitute a net increase in overall CO₂ emission from State power stations of approximately 0.47 per cent. Dr Wilkenfeld thought that the project would most likely result in greenhouse gas emissions of between 11.8 and 27.9 million tonnes of CO₂ equivalent over its 30 year life, figures which he considered significant in comparison with total electricity system emissions of 45 million tonnes annually.

Greenpeace's contention was that scientific uncertainty should not be used as a reason for ignoring the environmental impact of CO₂ emission. In other words, the Court should take into account the "precautionary principle". That principle has been the subject of several formulations, but the relevant one for this case is set out cl 3.5.1 of the Intergovernmental Agreement on the Environment in the following terms:

"Where 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."

There are, however, instances of scientific uncertainty on both sides of the issues in this case. For example, Redbank has contended that tailing dams pose environmental problems, whilst Greenpeace has denied that there are serious environmental problems surrounding current methods of tailing disposal. On the other hand, Greenpeace has asserted that CO₂ emission from the project will have serious environmental consequences, whilst Redbank has asserted that there is considerable uncertainty about its consequences. The important point about the application of the precautionary principle in this case is that "decision-makers should be cautious" (per Stein J in *Leatch v National Parks & Wildlife Service* (1993) 81 LGERA 270 at 282). 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.

Greenpeace's further submission was that there was no need for the project. The evidence establishes that there is an excess capacity in the energy system which is likely to last until early into next century. However, the establishment of the project in that circumstance will have the effect of displacing existing power supply, and the expert opinion was generally that this is likely to be energy supplied by the older and least efficient coal-fired power stations. It is possible to conclude that the absence of any current need for an increase in power supply is not a significant factor.

As to future need, it was Greenpeace's argument, based on Dr Wilkenfeld's expert opinion, that, in the long term, when the excess capacity is taken up, the project will displace development of alternative means of supplying energy services which may produce zero or near zero greenhouse gas emissions. But Dr Wilkenfeld conceded, in cross-examination, that the

existence of the project in the long term would not impede the implementation of alternative energy sources.

All these matters lead, in my opinion, to a conclusion that the greenhouse issue should not outweigh all other factors relevant to a determination of whether or not to grant consent, but must be taken into account in the Court's overall assessment of the project. What, then, are the other factors which the Court must take into account in reaching its determination?

Redbank pointed to the beneficial environmental effects of the project. It will use tailing as fuel, thereby avoiding the detrimental environmental effects of tailing disposal in dams. It will produce lower emissions of SO₂ and NO_x in comparison with the coal-fired power stations which it is likely to displace.

There are other beneficial effects as well. The project will reduce the amount of land sterilised by tailing dams. It will convert a waste product into a usable one. It will permit more efficient use of energy resources by recovering coal currently discarded in tailing.

Greenpeace contended that Redbank had not demonstrated a need to utilise the tailing at either the Warkworth or Lemington mines. Mr Simpkins relied on environmental management plans and annual reports of both mines, as well as a report to Lemington Mine from Coffey & Partners International (exhibit 7) to show that tailing disposal had not been flagged as a problem at either mine. I am satisfied, however, from the evidence of Mr Hibbeler and Mr Alper, and from the report of the consultant to the Office of Energy, that there are problems generally perceived in the coal industry in relation to tailing disposal. In any event, the fact that neither the Warkworth mine nor the Lemington mine has adverted to any of those problems cannot lead to a conclusion that the project will not have the environmental benefits it has claimed.

There was no challenge by Greenpeace in relation to any other s 90 considerations. The project was comprehensively assessed by the Council, governmental and other authorities were consulted, and objections addressed.

In taking all these matters into account, I have concluded that the development application should be approved. The question remains as to the conditions which should be imposed on any grant of consent.

Conditions

Greenpeace tendered a set of draft conditions (a copy of which is attached marked "B" at 162) which it contended should be imposed if the Court were minded to grant development consent. There were 14 of them; they were unnumbered, but for ease of reference, I have inserted numbers consecutively from 1 to 14.

The Council, in granting development consent, imposed 47 conditions (the Council conditions). Most of these were not in contention, and I propose to adopt them unaltered. However, three of them, numbered 16, 22 and 47, were indirectly challenged by Greenpeace in that it proposed conditions dealing with the subject of these three and suggested alternatives to them.

In considering the conditions which Greenpeace has proposed (the draft conditions), it is necessary to bear in mind the general requirements for validity of conditions. It is well-established in this Court that the tests of validity enunciated in *Newbury District Council v Secretary of State for*

Environment [1981] AC 578 apply. Those tests require conditions, first, to be for a planning purpose or to relate to a planning purpose; secondly, to fairly and reasonably relate to the subject development, and thirdly, to be such that a reasonable planning authority could properly have imposed. Moreover, subject to some statutory exceptions presently irrelevant, conditions must be final and certain (*Mison v Randwick Municipal Council* (1991) 23 NSWLR 734; 73 LGRA 349).

It will be seen that draft conditions 1 and 14 are directed to essentially the same subject, namely, meeting the interim target for greenhouse emissions enunciated in the National Greenhouse Response Strategy. Mr Simpkins submitted that one or other of these conditions should be imposed because Redbank would be immune to future response measures unless there was legislative intervention or adverse financial consequences. I reject both of these conditions. I do not think it has been established by the evidence that Redbank would be immune to future response measures. Indeed, Dr Wilkenfeld admitted in cross-examination that the existence of Redbank would have no effect on the implementation of alternative energy sources. In addition, condition 1 may well be beyond the power of this Court to impose; and condition 14 is uncertain in its requirement for evidence to show whether or not Australia has met the National Greenhouse Response Strategy interim target.

Draft conditions 2, 3, 9 and 12 are designed to mitigate the effect of greenhouse gas emission from the project by requiring the planting of trees to establish a greenhouse sink, and they are suggested as a substitute for condition 47 imposed by the Council. There was no evidence to establish the number of trees required, the number of tonnes of CO₂ to be sequestered by such trees, nor the precise area of planting that would be required. In the absence of some precision as to these matters, these conditions cannot be said, in my opinion, to fairly and reasonably relate to the subject development, as one of the *Newbury* tests requires. Moreover, each of them raises some doubt as to enforceability — how could it be determined, for example, whether trees have been planted and maintained to maturity, or that the CO₂ emitted from the project is thereby permanently removed from the atmosphere?

However, Council condition 47 as drafted seems to me to be very uncertain. A tree-planting programme may be beneficial for a number of reasons. It may have environmental benefits, it may improve visual aspect, it may constitute a greenhouse sink. I have therefore decided to impose a condition requiring a tree-planting programme to the reasonable satisfaction of the appropriate council officer in accordance with s 91(3A) of the *Environmental Planning and Assessment Act*.

Draft conditions 4 and 5 were designed, I think, to limit the effect of CO₂ emission by limiting the life of the project or requiring it to lapse if not commenced within two years. They are a response to condition 22 of the Council's conditions. I can see no advantage in imposing either of these conditions. The evidence was that the project depended on a long-term contract with Shortland Electricity. Its design and capacity were based on that contract, and the project has been assessed in the light of the environmental impact statement which specifies that design and to which Redbank is required to conform by condition 1 of the Council's conditions. Nor was there any evidence to establish when alternative energy sources

might be commercially available, so as to set the time limitations that these conditions propose. In those circumstances, I reject them.

Draft condition 6 is a response to condition 16 of the Council's conditions. I do not think, however, that the draft condition would operate any more effectively than condition 16 to limit the fuel source to tailing from the Warkworth and Lemington mines. Condition 16 requires Council approval before tailing may be obtained from any other mine, and is, in my opinion, a satisfactory condition to impose.

Draft conditions 7 and 8 are designed to impose a limit on the emissions from the project. The difficulty with draft condition 7 is that it sets a limit which, as I have earlier pointed out, is uncertain, and would therefore be unreasonable to impose and difficult to enforce. Condition 8 is superfluous, because condition 1 of the Council's conditions requires Redbank to conform to the matters specified in the environmental impact statement.

Draft condition 10 would, in my opinion, be an unreasonable condition to impose in the absence of any precise evidence as to any alternative tailing disposal methods likely to be available. It is, furthermore, uncertain in its application, there being no precise parameters set for a determination of what are "prudent and feasible alternatives to disposal".

Draft condition 11 is unnecessary. No doubt the project may never come into operation if Redbank fails to conclude a contract with Shortland Electricity. In any event, there is no necessity to require such a contract before development consent operates because the project must be developed in accordance with the environmental impact statement (according to the Council's condition 1) and Redbank's commercial arrangement for disposal of the electricity which it will generate will not have any effect on design or capacity if the plant is built according to the environmental impact statement. Moreover, condition 22 limits the life of the project to 30 years, so that it is unnecessary to impose this condition in order to achieve that time limit.

Draft condition 13 is not, in my opinion, fairly and reasonably related to the project, and it accordingly fails one of the *Newbury* tests. It would, moreover, be unreasonable to impose. Demand side measures are, as the National Greenhouse Response Strategy clearly shows, a matter of government policy and not the responsibility of an individual operator within the energy sector. This condition is also likely to be unenforceable in requiring reduction of CO₂ emissions by 1.26 million tonnes per year.

For all these reasons, I propose to impose the Council conditions.

Orders

In accordance with the foregoing, my orders are as follows:

1. The appeal is dismissed.
2. Development consent is granted to the construction and operation of a 120 megawatt power plant on land being part of lots 1-3 DP 247820 and lots 4-5 DP 247820 at Long Point Road and Jerrys Plains Road, Warkworth, and to the construction of an ancillary slurry pipeline over adjacent land as specified in development application No 183/93, and subject to the conditions annexed hereto and marked "A".

3. The exhibits may be returned.

I make no order as to costs.

"ANNEXURE 'A'

CONDITIONS

Greenpeace Australia Limited v Redbank Power Company Limited and Singleton Council

1. *Scope of Development*
The development being carried out generally in accordance with the Amended Environmental Impact Statement prepared by the National Power Company and ESI Energy Inc dated November 1993 and the additional clarification contained in the responses to comments prepared by the National Power Company and ESI Energy Inc dated 21 February 1994.
2. *Approval of Mine Subsidence Board*
The approval of the Mine Subsidence Board to the proposed buildings, structures and pipelines being obtained prior to the release of any building permit.
3. *Environment Protection Authority*
The applicant shall obtain (before construction commences) and comply with Environment Protection Authority approval under the *Pollution Control Act 1970 (NSW)* and shall obtain and comply with any licences required under the Environment Protection Legislation (as defined in the *Protection of the Environment Administration Act 1991 (NSW)*).
4. *Upgrading of Intersection of Jerrys Plains Road (MR 213) and Long Point Road*
The existing intersection of Jerrys Plains Road and Long Point Road is to be upgraded to a type "ARE" Auxiliary Right Turn Lane RTA Road Design Guidelines, 1991 (Type "B" AUSTRROADS). Plans are to be submitted to the RTA for approval prior to the commencement of work.
5. *Entries to the site off Long Point Road*
The entries to the site off Long Point Road are to be constructed as a Type A Austroads intersection.
6. *Widening of Long Point Road*
Long Point Road is to be upgraded to a 6.0m wide bitumen sealed road with 1.2m shoulders from the existing upgraded pavement approximately under the transmission line easement to the Jerrys Plains Road (MR 213).
7. *Floodlighting of Intersections*
Both the MR 213/Long Point Road and the two Long Point Road/entry road intersections are to be floodlit with the provision of two street lights at each intersection (with the MR 213/Long Point Road intersection being lit to traffic route lighting standard).
A pavement is to be made to Council equivalent to the capitalised contribution for their ongoing running for a five year period, based on a quotation to be provided by Shortland Electricity.
8. *Contribution for Maintenance of Jerrys Plains Road (MR 213)*
An annual contribution of \$5,000 (1994 dollars) is to be paid to Council for the maintenance of the Jerrys Plains Road and Long Point Road. The contribution is to be CPI indexed and is to be reviewed at five yearly intervals.
9. *No direct access off the Jerrys Plains Road (MR 213)*
All vehicular access to the development is to be obtained from Long Point Road. There is to be no vehicular access from the Jerrys Plains Road (MR 213).
10. *Intersection of Jerrys Plains Road and the Warkworth Mine*
Should truck haulage to the Redbank Project from the Warkworth Mine be via the mine's intersection with Jerrys Plains Road then that intersection is to be upgraded to a suitable standard as determined by Council's Subdivision and Design Engineer. Plans are to be submitted to the RTA for approval prior to the commencement of work.

11. *Off Street Parking and Access*

The access to the carpark should be a minimum of 6m wide with sufficient splay to accommodate turning vehicles. Carparking should be sufficient to accommodate all employee and visitor parking on site.

The access to the plant should be a minimum of 8m wide with sufficient splay to accommodate turning articulated vehicles with the ingress/egress separated by a median.

All parking and driveways shall be constructed of 200mm consolidated surface quality gravel, 2 coat bitumen sealed or 25mm asphaltic concrete or alternatively of 150mm (minimum) reinforced concrete, to be drained and linemarked to Council's usual standards. Where driveways are used by heavy vehicles the specification is to be appropriate for their estimated volume and loaded weight.

12. *Payment of Development Works Supervision Fee*

Payment of the appropriate Development Works Supervision Fee, for which an invoice will be forwarded by Council upon completion of all required supervision. Such fee will be based on a rate of \$40.00 per hour or part thereof for time spent assessing detailed design plans and inspecting works on site.

13. *Council to Approve Plans for the Intersection of the Development with Long Point Road*

Engineering plans are to be submitted for the proposed intersection of the development with Long Point Road for approval by Council's Subdivision and Development Engineer.

14. *Truck Deliveries*

All truck deliveries to the site are to occur via the Jerrys Plains Road (MR 213) and Long Point Road. No trucks are to access the site via Gouldesville Road except for emergencies and during construction of the Jerrys Plains and Long Point Roads improvements.

15. *Directional Signposting*

Directional signposting to the site is to be provided on the intersection of Long Point Road and the Jerrys Plains Road (MR 213). No directional signposting is to be provided on the intersection of Gouldesville Road and the Jerrys Plains Road (MR 213).

16. *Fuel Source*

At least the majority of the fuel burnt at the power plant in any one year after commercial operation, on a dry tonnes basis, is to be coal washery tailings obtained either directly from the Warkworth and/or Lemington mine washeries or indirectly from tailings storage dams on the Warkworth and/or Lemington mine leases. Coal washery tailings are not to be obtained from mines other than the Warkworth and Lemington Mines without the further approval of Council.

17. *Start Up and Supplementary Fuel*

Start up and supplementary fuel, other than diesel, is to be obtained only from the Warkworth Mine. Alternative sources may be utilised in emergency situations with the approval of the Director Environmental Services.

18. *Project Siting*

The plant is to be sited on Site 2, the centre site, as recommended in the EIS.

19. *Fauna Survey and Assessment*

Further fauna survey and assessment is to be undertaken by the applicant, if required, by the National Parks and Wildlife Service.

20. *Cultural Heritage*

The applicant shall undertake at its own expense and comply with the requirements of the National Parks and Wildlife Service regarding works affecting Aboriginal sites in the area of proposed development.

21. *Stormwater Treatment*

First flush stormwater runoff from the parking area, driveway and vehicular

manoeuvring areas is to be directed through oil and silt arresters of sufficient capacity to contain oil and silt from that area prior to being discharged.

22. *Life of Consent*

This consent shall expire thirty (30) years after commencement of commercial operation of the project. Extension of the consent beyond its expiration shall require the review and approval of Singleton Council.

23. *Limestone injection*

Limestone injection is to be used to control SO₂ and SO₃ to not more than 126 grams per second (g/s) or such other standard as may be determined by the Environment Protection Authority, whichever is the least (most strict).

24. *Flue gas cleaning*

The flue gas from the boilers is to be cleaned of particulate/dust by fabric filter baghouses in accordance with the requirements of the Environment Protection Authority.

25. *Stack Height*

The height of the stack is to be in accordance with the requirements of the Environment Protection Authority.

26. *Continuous monitoring of stack emissions*

There is to be continuous monitoring of sulphur dioxide, oxides of nitrogen and opacity in the stack and other pollutants as required by the Environment Protection Authority.

27. *Provision for monitoring of ambient ground level concentrations of pollutants*

The applicant is to establish and maintain ambient pollution monitoring stations, the number and location of such stations to be determined by the Environment Protection Authority.

28. *Data on Stack Emissions and Ambient Air Quality to be Publicly Available*

Monitoring data on stack emissions and ambient air quality is to be made available to Council at the same time that it is lodged with the Environment Protection Authority.

29. *Appointment of an Environmental Officer*

The applicant is to appoint an Environmental Officer to be responsible for all monitoring and environmental controls. This officer is to be the principal point of contact between the Council and other regulatory authorities.

30. *Use of water carts*

Water carts are to be used to minimise dust during construction activities.

31. *Use of water sprays*

Water sprays or equivalent are to be used to reduce dust emissions from supplemental and start up fuel stockpiles.

32. *Community Consultative Committee*

The applicant is to set up a community consultative committee prior to the commissioning of the plant. The committee is to consist of representatives of Council, the Environment Protection Authority, the power plant and two community representatives approved by Council. The committee is to meet as required by Council.

The committee is to consider any impacts which the power plant may have on residences and the local environment as a result of its operations.

33. *Removal of Ash*

Any proposal to transfer ash by road on a regular basis is to require the separate approval of Council.

34. *Arrangements for Rehabilitation of Ash Emplacement*

Satisfactory arrangements are to be made with the Department of Mineral Resources and Warkworth Mine for the final rehabilitation of ash emplacement.

35. *Monitoring of Ash Leachate, Drainage Water Quality and Soil Properties in the Ash Disposal Areas*
The applicant is to test and/or monitor ash leachate, drainage water quality and soil properties in the ash disposal areas in accordance with the requirements of the Environment Protection Authority.
36. *Accumulating Fund for Decommissioning of the Plant and Site Rehabilitation*
An accumulating fund is to be established beginning with the 16th year after commencement of commercial operation to provide sufficient funds for the decommissioning of the plant and site rehabilitation at the end of its economic life. The anticipated cost of the decommissioning and site rehabilitation in then current Australian dollars is to be documented in the first annual report after the 16th year together with the necessary fixed annual contribution necessary to cover this cost. A reasonable and conservative estimate should be made as to the anticipated average interest rate on the earnings in the fund for the remaining life of the project. This interest rate should also be disclosed in the forementioned annual report. Subsequent annual reports are to include a statement as to the accumulated earnings of the fund.
The Council, on request of the applicant and with its agreement, may vary this condition at any time during the life of the project having regard to current circumstances and projections provided that the broad intent of this condition to ensure plant decommissioning and site rehabilitation at the end of the project life is maintained.
37. *Streams Diversion*
The diversion works for Sandy Hollow Creek and the Eastern Tributary are to incorporate the following:
(a) All diversion channels shall incorporate suitable drop structures to ensure that flow velocities are non-erosive;
(b) All diversion channels shall be stabilised;
(c) Or such other requirements as determined by the Department of Water Resources.
38. *Approval of the Department of Water Resources*
The approval of the Department of Water Resources is to be obtained for the proposed stream diversions under Part 3A of the *Rivers and Foreshores Improvement Act 1948 (NSW)*, prior to work commencing.
39. *Erosion and Sediment Control Plan*
An erosion and sediment control plan for the site is to be prepared prior to work commencing. This is to include both the disturbance phase and surface water management from the operational plant.
40. *Slurry Pipeline*
The slurry pipeline that crosses the Wollombi Brook is to be constructed such that the pipe is located beneath the maximum anticipated scour depth and shall have shutoff (isolation) valves installed at each end of the crossing, which valves shall be under the sole control of Redbank and normally locked open.
Identification markers shall be placed at road and creek crossing points to identify the existence of the pipeline.
41. *Disposal of Water into the Hunter River*
Any disposal of reject water from the evaporative cooling process into the Hunter River is to require the approval of the Environment Protection Authority and the Department of Water Resources. Singleton Council is to be provided with copies of the applications made to those authorities so that it may have the opportunity to comment prior to the issue of any licence approvals.
42. *Disposal of Water into the Warkworth Mine*
A copy of those portions of an agreement or covenant between the applicant and Warkworth Mine and its successors in title which specifies the water return

and acceptance obligations of the parties in relation to the power plants filtrate water from tailing dewatering, ash conditioning water and any other process waters is to be lodged with Council's Director Environmental Services prior to the release of building plans.

43. *Submission of a Final Water Balance*

The applicant is to submit a final anticipated water balance for the development to Council's Director Environmental Services prior to the release of building plans. The water balance is to indicate anticipated end disposal points and volumes for all reject water including filtrate, ash conditioning water and other process waters.

44. *Sealing of Evaporation Pond*

In an evaporation pond is to be used to evaporate concentrated brine, the pond is to be isolated from groundwater to prevent contamination.

45. *Disposal Arrangements for Deposited Salts*

The applicant is to advise Council of the disposal arrangements for any deposited salts.

46. *Lapsing of Consent*

Consent for the development lapses after five (5) years if substantial commencement of construction has not occurred unless an extension of consent is granted by Council.

47. *Tree Planting*

The applicant shall submit and implement a tree planting programme to the reasonable satisfaction of the Director Environmental Services."

"ANNEXURE 'B'

Greenpeace Australia Ltd v Redbank Power Company Pty Ltd & Singleton Council
DRAFT CONDITIONS FOR REDBANK POWER STATION

s 90(3)

1. That any contract for the supply of power by Redbank to Shortland include a provision that if at the year 2000 the most recent projection submitted by the Australian government pursuant to Article 12 of the Framework Convention on Climate Change indicates that Australia has not achieved a return of anthropogenic carbon dioxide emissions to 1990 levels then Shortland Electricity may terminate that contract without penalty on one years notice.
2. (a) That Redbank plant and maintain to maturity enough trees of the genus Eucalyptus to fix 37.8 million tonnes of Carbon dioxide;
 (b) That such trees be maintained or disposed of only in such a manner that ensures permanent sequestration of the carbon fixed by those trees from the atmosphere;
 (c) That Redbank provide security in the amount of (\$10 million) to Shortland Council for the satisfactory completion of parts (a) and (b) of this condition.
3. Redbank plant and maintain to maturity 340 151 ha of trees of species to be specified by the Director of National Parks and Wildlife and in proportions to be specified by the Director of National Parks and Wildlife and that Redbank prior to the end of the fifth year after the granting of this consent enter a conservation agreement pursuant to the *National Parks and Wildlife Act 1974* (NSW) that ensures those trees are at no time subject to clearing, felling or forestry operations but are maintained in perpetuity.
4. This consent shall expire ten years after commencement of commercial

operation of the project. Extension of the consent beyond its expiration shall require the review and approval of the Court.

5. Consent for this development lapses after two years if substantial commencement of construction has not occurred unless an extension of consent is granted by the Court.
6. Apart from start up fuel the fuel for the plant is to be coal washery tailings obtained either directly from the Warkworth and/or Lemington mine washeries or indirectly from tailings storage dams on the Warkworth and/or Lemington mine leases.
7. The power station shall not produce more than 1290 tonnes of carbon dioxide per megawatt hour of energy sent out or such lesser amount as may be determined, from time to time, by the Office of Energy.
8. The power station shall at all times meet the emission levels indicated in the columns entitled "Stack mass flow rate" and "Stack design concentration" of Table 4.1-3 of the Amended Environmental Impact Statement.

s 91(3A)

9. That Redbank undertake a tree planting programme approved by the Director of the National Parks and Wildlife that will ensure an amount of 37.8 million tonnes of carbon dioxide is fixed during the life of the development consent and that the carbon fixed by the trees planted is permanently removed from the atmosphere.

s 91AA

10. That the operation of the consent be deferred until Redbank satisfies the Court that there are no prudent and feasible alternatives to the disposal other than by of incineration of coal tailings waste produced by Warkworth and Lemington mines. Evidence to satisfy the Court of this condition must be supplied within 12 months.
11. That the operation of the consent be deferred until Redbank satisfies the Court that it has entered into a contract with Shortland Electricity for the supply of power throughout the thirty year period of the development consent. Evidence to satisfy the Court of this condition must be supplied within 12 months.
12. That the operation of the consent be deferred until Redbank satisfies the Court that
 - (a) it can undertake a tree planting programme that will ensure 37.8 million tonnes of carbon dioxide is fixed in perpetuity during the life of the development consent.
 - (b) has the financial capacity to complete the tree planting programme outlined in (a).Evidence to satisfy the Court of this condition must be supplied within 12 months.
13. That the operation of the consent be deferred until Redbank satisfies the Court that it will undertake a programme of demand side energy efficiency within New South Wales that will reduce New South Wales electricity system carbon dioxide emissions by 1.26 million tonnes per year within 5 years of the date of consent and thence throughout the remainder of the life of the consent. Evidence to satisfy the Court of this condition must be supplied within 12 months.
14. That the operation of the consent be deferred until Redbank satisfies the Court that Australia will be able to meet the greenhouse gas emission targets set in the National Greenhouse Response Strategy. Evidence to satisfy the Court of this condition must be supplied within 12 months.

Appeal dismissed

Solicitor for the applicant: Environmental Defender's Office.

Solicitor for the first respondent (Redbank Power Company Pty Ltd):
Mallesons Stephen Jaques.

Solicitor for the second respondent (Singleton Council): *Fitzgerald White
Talbot & Co.*

TFMN