

ENVIRONMENT, RESOURCES AND DEVELOPMENT COURT (SA)

**Thornton and Others v Adelaide Hills Council and Others**

[2006] SAERDC 41

Trenorden J, Mosel and Agnew CC

29-31 March, 10 April, 6 June 2006

*Environmental Impact Assessment — Requirement for adequacy — Flower farm — Construction of shed housing coal fired burner — Scientific models assist in assessment of environmental impacts — Theoretical construction and limitations of scientific models — Need to ensure relevancy and regard for model — Operational and environmental conditions — Need to ensure inputs fairly represent operational and environmental conditions that would exist if facility commissioned.*

*Ecologically Sustainable Development — Environmental impact assessment — Requirement for adequacy — Flower farm — Construction of shed housing coal fired burner — Scientific models assist in assessment of environmental impacts — Theoretical construction and limitations of scientific models — Need to ensure relevancy and regard for model — Operational and environmental conditions — Need to ensure inputs fairly represent operational and environmental conditions that would exist if facility commissioned.*

*Development Assessment — Amenity — Flower farm — Construction of shed housing coal fired burner — Volume and frequency of deliveries to site would not create nuisance or diminution of amenity — No conflict with provisions of development plan regarding emissions — No evidence of increase in emission of greenhouse gases — Appeal dismissed.*

*Development — Ancillary development — Existing flower farm — Flowers cultivated in greenhouses — Construction of shed housing coal fired burner — Reasonably incidental to existing lawful use of existing flower farm.*

*Evidence — Expert evidence — Scientific models assist in assessment of environmental impacts — Theoretical construction and limitations of scientific models — Need to ensure relevancy and regard for model — Operational and environmental conditions — Need to ensure inputs fairly represent operational and environmental conditions that would exist if facility commissioned.*

The respondent council granted provisional Development Plan consent for the construction of a shed that would house a 4 megawatt capacity coal-fired boiler

and associated bunded concrete pad for coal storage. The land was within a Watershed (Primary Production) Zone. The development was related to an existing flower farm which cultivated flowers in greenhouses. The consent included a number of conditions to satisfy the requirements of the council and the Environment Protection Authority.

*Held:* (1) The proposed development was not a separate use of the land. It was not in any sense an industry. The proposed development was reasonably incidental to the existing lawful use of the land.

(2) The provisions of the Development Plan regarding water quality were adequately addressed. In particular, this was due to the way in which stormwater was to be collected and re-used or directed to swales, that the coal was to be stored so as to be protected from moisture and that no point of the shed or coal storage area was to be situated within 25 metres of a nearby creek.

(3) The combined volume and frequency of deliveries to the site would not create nuisance or a diminution of amenity to the extent that would place the proposed development in conflict with the Development Plan.

(4) The Court in many instances relied on the results obtained from the use of scientific models to assist it in the assessment of environmental impacts. Nevertheless, models were a theoretical construction of the real world and have limitations. There was a need, therefore, to ensure that the model was relevant and respected as a tool, and the inputs fairly represented the operational and environmental conditions that would exist if the facility in question was commissioned.

(5) The proposed development would not be in conflict with the principles of the Development Plan and objectives of the zone concerning emissions that might detrimentally affect the character or amenity of its locality or cause nuisance to the community

(6) There was no evidence that there would most likely be an increase overall in the emission of greenhouse gases by the proposed development. Thus, the proposed development would not be rejected on this ground.

#### **Cases Cited**

*Telstra Corp Ltd v Hornsby Shire Council* (2006) 146 LGERA 10.

*Tuna Boat Owners Association of SA Inc v Development Assessment Commission* (2000) 77 SASR 369; 110 LGERA 1.

#### **Appeal**

The appeal concerned a decision of the respondent council to grant provisional development plan consent to the construction of a shed that would house a 4 megawatt capacity coal-fired boiler and associated bunded concrete pad for coal storage. The facts are set out in the judgment

Applicants in person.

*J Hilditch*, for the first respondent.

*S Henry*, for the second respondent.

*Cur adv vult*

6 June 2006

#### **The Court**

##### **The Court delivered the following judgment:**

1 This appeal arises from the decision of the Adelaide Hills Council (the Council) to grant Provisional Development Plan Consent to a Category 3

development, being the construction of a shed that would house a 4 megawatt capacity coal-fired boiler and associated bunded concrete pad or “bunker” for coal storage, on land adjacent to the township of Forreston. The consent is encumbered by a number of conditions to satisfy the requirements of the Council and the Environment Protection Authority (the EPA).

2 The appellants reside or own land within Forreston. Broadly speaking, the appellants are concerned about the potential for the deliveries to, and the operation of, the coal-fired boiler to adversely affect their environment. Having been notified about the proposed development (s 38 *Development Act 1993* (SA)) they, among many, voiced their concerns to the Council. Neither the conditions of consent nor the conference (s 16 *Environment, Resources and Development Court Act 1993* (SA)) satisfied their concerns. When the matter came to hearing Mr Thornton (assisted by Mr Ralph) represented the appellants, while the other parties were represented by counsel.

3 The land, the subject of the proposed development, is depicted on Maps AdHi/3 and 5 in the Development Plan for the Adelaide Hills Council (the Plan). It is a large parcel of land (28.06 ha) situated on the western side of Forreston Road (a secondary arterial road) and is formally described as Lot 46 Deposited Plan 56874. The land is within the Watershed (Primary Production) Zone. The relevant version of the Plan is dated 11 December 2003.

*The land and development proposal*

4 The Jong family have used the land for a flower farm since 1984. Flowers for the “cut flowers” market are grown in long low buildings commonly referred to as “greenhouses”. In evidence Mr Richard Jong said that the variety of flowers cultivated is very limited and specialised to those most suited to the local conditions. He said that demand for better quality product, more production capacity, stable prices and cost control were the key factors in successive investment in the improvement to the technology employed in the business. During the view of the land and the general area within which it is situated, the Court was shown the way in which computer controlled ventilation, thermal screening and heating systems presently operate and the existing LPG gas-fired boiler which circulates hot-water throughout the greenhouses. Heating is necessary to enable flowers to be cultivated out-of-season.

5 The proposed boiler will be additional to the existing LPG gas-fired boiler system. Once the new facility is operational, the LPG gas facility will be used for soil sterilization and as back-up to the proposed boiler.

6 In evidence, Mr Jong said the choice of fuel (coal) for the new boiler was determined entirely by the need to reduce operational costs. It is fair to say that we were surprised at the coal/LPG cost differential. Although the economic aspect of the proposal played no part in our decision, Mr Jong’s evidence about the factors considered when costing the alternative fuel was uncontested and appeared to support his claim.

7 The proposed development involves the construction of a shed the length, width and height being 6.4 metres × 12 metres × 5.5 metres respectively. Inside will be placed a “Harewood” 4 megawatt coal-fired tube boiler with mechanical coal feed. Linked to the boiler is a multi-cyclone grit arrestor (to filter out particulates) and a 14 metre high, 760mm diameter flue (or stack). When the proposal was first put to the Council and the EPA it was intended that the coal

be stored in a concrete “bunker” measuring 12 metres × 12 metres × 1 metre (high). After delivery of the coal the bunker was intended to be covered with a protective tarpaulin.

8 We have had to rely on rough hand-drawn sketches of the boiler and associated facilities. It would have been helpful for the Court and all parties to have received professionally produced literature and specifications. In addition, the quality of the site plans and elevations left much to be desired. As a consequence of the Court’s request for clarification, amended plans were prepared. The plans and explanatory letter prepared by Mr R Gibbs BE MBA CP Eng, were received by the Court as Exhibits E and F respectively. We have attached some of the plans comprising Exhibit E as a convenient means of depicting the proposed development [not included in this publication].

9 We do not consider the amended plans raise any jurisdictional difficulties. The amendments are a minor lateral shift in the position of the facility, a smaller but higher storage area (creating about the same storage capacity) and a motorised sliding roof. The plans also showed clearly the location of the facility in relation to Millers Creek, access arrangements for delivery vehicles and stormwater collection and disposal.

10 We have found it necessary to give consideration to the proper characterisation of the proposed use because, inter alia, the appellants made reference to the provisions for industrial development in the Plan. The present use of the land falls squarely within the definition of “horticulture” (Sch 1, *Development Regulations 1993* (SA)):

“horticulture” means the use of land for market gardening, viticulture, floriculture, orchards, wholesale plant nurseries or commercial turf growing;

11 The proposed development is not a separate use of the land. It is not in any sense an “industry” as defined in the aforementioned Schedule. There is no “processing” being or to be carried out on the land in the sense used in the definition of “industry”. We are of the view that the proposed development is reasonably incidental to the existing lawful use of the land. Nothing was put to us to suggest that the proposal is any other than consistent with those provisions of the Plan that urge the maintenance of rural productivity. We reject the appellants’ assertion that the proposed development should be assessed against the provisions for industrial development. However, we acknowledge that the maintenance of or improvement to rural productivity is a goal that is sought to be achieved side by side with environmental protection (Council Wide Objectives 65 and 69).

*A context for the assessment*

12 We consider it necessary to establish the planning context within which our assessment is to be made. As stated previously, the land is within the Watershed (Primary Production) Zone. It is not situated in a Policy Area within that Zone. Insofar as the issues in this appeal are concerned, Objective 5 for the Zone is the most relevant of all its objectives. This Objective urges the “enhancement of the amenity of residents and visitors in the Southern Mt Lofty Ranges”. There are other relevant provisions that we will identify later.

13 Secondly, the township of Forreston, itself within the Country Township (Forreston) Zone, comprises a few streets and 40 or so dwellings. It is to the east of the land. The appellants’ properties are 300-400 metres distant from that

part of the land upon which the shed, boiler and coal storage bunker will sit. The second respondent and other members of his family also reside in the township.

14 Thirdly, the land sits near the base of a valley that runs southward generally from the township toward Gumeracha. The township of Forreston is on the eastern side of the valley. The locality plan prepared by the Council's expert witness, Mr Green (a qualified and experienced planner), which we accept, indicates that the dwellings along the eastern edge of the township are 25-30 metres above that part of the base of the valley within the land. It is fair to say that the impact of emissions from the boiler, having regard to the topography of the local area, are major factors in the appellants' case. The amenity of the area around Forreston is, not surprisingly, high.

15 Fourthly, on Mr Henry's submissions, were it not for the need to house the boiler within a new building, authorisation under the provisions of the *Development Act* would not be required for the boiler to be commissioned (accepting as we do the possibility that a change to coal alone might be of interest to the EPA in respect of its relevant guidelines). It is arguable, therefore, that our assessment of the suitability of the proposed use of the building – and, in particular, the amenity consequences of using a coal-fired boiler to heat greenhouses – arises only because of the requirements for the building in which the boiler is to be housed to be approved under the *Development Act*, but the proposed use of the building and its impacts must be taken into account. We accept the appellants' submission and the evidence of Mr Green that the appearance of the proposed building and flue does not offend the relevant provisions of the Plan.

16 Fifthly, the proposed development was forwarded by the Council to the EPA in accordance with s 37(1)(a) of the *Development Act*. The heat release specification of the boiler renders it the subject of Sch 21 of the Development Regulations (an activity of environmental significance). In its report to the Council, the EPA identified the emissions (specifically ground level concentrations of sulphur dioxide, nitrogen dioxide and particulate matter) and odour from the flue of the boiler as possible sources of nuisance to residents. It also identified the potential for the proposal to compromise the quality of the water in Miller Creek. After consideration of a report prepared by Dr D'Abreton of Pacific Air and Environment Pty Ltd the EPA concluded thus:

The modelling conducted by the consultant (Pacific Air & Environment) predicts that the atmospheric pollutants from the proposed coal fired boiler will be adequately dispersed by the proposed stack. While odours will occasionally occur, they are not expected to cause an environmental nuisance.

The proposed storage of coal in a concrete, banded and covered area is considered an acceptable means of preventing coal from washing into the creek. However, care will also need to be given to avoiding coal spillage during truck deliveries and containment of ash to prevent its entry into the water resources.

17 Conditions 13 to 17 inclusive of the consent are in the nature of management conditions intended to ensure the appropriate standards of environmental performance are met.

18 We have considered our approach to the assessment of the proposed development on the amenity of the residents of Forreston and the general locality with which it is situated. This task is, invariably, in part a subjective evaluation of quantitative and qualitative data. Often, as in these proceedings,

the Court is assisted by the identification of the principal factors (in this case air emissions and water quality) that bear upon amenity and the quality of the environment and the emission criteria established by a recognised authority (in this case the EPA) against which some of the potential impacts can be evaluated. In the absence of any compelling evidence to the contrary the Court is entitled in its assessment of the amenity impacts of air emissions to place some weight on the recognised criteria. We include in the criteria the national standard for particulate matter, which emission type is not covered by the EPA criteria.

*The appellants' case addressed*

19 The appellants assert that the installation of a coal-fired boiler will have detrimental impacts on the local environment to such an extent as to be in conflict with particular provisions of the Plan. In the broadest of terms, the appellants are concerned that:

- (a) pollution of water catchment areas is likely to occur as a result of the location and method of coal storage; and
- (b) their amenity will be detrimentally affected or they will suffer nuisance as a consequence of emissions from the stack and the noise generated by delivery trucks.

The appellants also expressed a concern about the release of greenhouse gases into the atmosphere.

*Water quality*

20 The Plan speaks with some force to the protection of the quality of water particularly in that part of the Mt Lofty Ranges in which the land is situated. The following provisions of the Development Plan encapsulate the overall objectives for water quality.

Watershed (Primary Production) Zone

*Objective 2:* The enhancement of the Mount Lofty Ranges Watershed as a source of high quality water.

...

Principles of Development Control

4 Development should be located at least 25 metres from the banks of a watercourse unless flood risk indicates a requirement for a greater distance.

...

34 Development should take place in a manner which will not interfere with the utilisation, conservation or quality of water resources and protects the natural systems that contribute to natural improvements in water quality.

Council Wide

*Objective 10:* Development designed and located to protect stormwater from pollution sources.

Surface water (inland, marine, estuarine) and ground water has the potential to be detrimentally affected by water run-off from development containing solid and liquid wastes. Minimising and possibly eliminating sources of pollution will reduce the potential for degrading water quality and enable increased use of stormwater for a range of applications with environmental, economic and social benefits.

...

*Objective 69:* The extension of the economic base of the Mount Lofty Ranges Region in an environmentally sensitive and sustainable manner.

...

Development must be balanced between meeting social, environmental and economic goals and can be more flexible in the Primary Production Zone than in the Watershed.

The Mount Lofty Ranges Watershed is used for a range of purposes including, living and rural primary production. Sometimes these uses can be in conflict and can lead to degradation in water quality of the Watershed.

The Watershed Area is of critical importance to South Australia as it provides 60 percent of Adelaide's water supply. Maintenance and enhancement of the water quality of the Watershed and prevention of pollution is of high priority.

A lowering of water quality has been linked to the cumulative effects of a large number of small pollution sources. It is important that any activities allowed in the Watershed are only approved subject to stringent environmental performance criteria and the policies ensure that the overall number, size and scale of development is limited.

21 Subject to particular conditions being met, we have reached the conclusion that the foregoing provisions have been adequately addressed. Our conclusion is based on the development proceeding as described in Exhibits E and F. In particular we are satisfied with the way in which stormwater is to be collected and re-used or directed to swales, that the coal is to be stored so as to be protected from moisture and that no point of the shed or coal storage area will be situated within 25 metres of Millers Creek. However, we consider it necessary to ensure that coal ash does not enter the stormwater disposal system and that the run-off from the roof of the coal storage bunker is directed to that system.

22 We have also considered the amendments to the design of the coal-storage bunker particularly in light of the advice of the EPA. We are satisfied that its capacity is, overall, the same as that originally proposed. We note that the bunding arrangements are in conflict with Condition 14 of the Council's consent. However, we are satisfied that the purpose of the bund as expressed in that condition is met in the amended design by the proposed surface drain that would drain into the concrete pit P2 and then P1.

*Amenity and nuisance*

23 Council Wide Principle 15 is a relevant consideration in our assessment. The relevant aspects of this principle are expressed thus:

15 Development should not detrimentally affect the character or amenity of its locality or cause nuisance to the community:

(a) by the emission of noise, vibration, odour, fumes, smoke, vapour, steam, soot, ash, dust, grit, oil, waste water, waste products, electrical interference or light; or

...

(e) traffic generation; or

...

24 This principle is applicable to the whole of the Council area. The relevance of Principle 15 to the subject locality is reinforced by the fact of the provisions under the heading "Rural Development", the purpose of which is to keep

separate those rural activities that might cause nuisance to townships. In so saying, we are not implying that the proposed development is a rural industry of a “factory-type”, which term is to be found in Principle 177.

25 Objective 5 for the Watershed (Primary Production) Zone is also relevant. It reads as follows:

*Objective 5:* The enhancement of the amenity and landscape of the south Mount Lofty Ranges for the enjoyment of residents and visitors.

26 We will first deal with the matter of traffic generation. The evidence indicates that deliveries of LPG for the LPG powered boiler will continue, but at a much reduced rate. The present delivery rate at peak times is every five to eight days. When the proposed system is commissioned LPG deliveries will decrease to four to five deliveries per year.

27 We note with some concern the variability of the estimates for the deliveries of coal. In oral evidence, Mr Jong said the use of the coal-fired boiler as the primary heating source will, in peak periods, require deliveries to be made every seven to 10 days. Mr Gibbs in, Exhibit F, indicates that deliveries during the coldest two to three weeks of the year will be at three day intervals and typically at five to seven day intervals during winter. We have based our assessment on the deliveries cited in Exhibit F. We do not know why the discrepancy exists. The generation of traffic to and from the land has always been a “live” issue so far as we know. It is incumbent on parties when coming to this Court in support of their proposed development to provide accurate information and forecasts based on the best available evidence.

28 We listened very carefully to the evidence of Mr Thornton about his concerns of noise from traffic. We do not accept that the combined volume and frequency of deliveries will create nuisance or a diminution of amenity to the extent that would place the proposed development in conflict with Principle 15(e). In so concluding we have taken into account the evidence of Mr Green, our observations of the proximity of the principal access to the land in relation to the Forreston township and the fact that the township and environs form part of a large rural region within which the movement of large transport vehicles along major transport routes, including secondary arterial roads, would not be uncommon.

29 We turn now to the matter of emissions from the flue. Principle 15(a) is relevant. Dr D’Abreton appeared in the case for the second respondent. He is a consultant meteorologist specialising in meteorological modelling, atmospheric dispersion modelling and impacts evaluation. Dr D’Abreton has a PhD in Atmospheric Science.

30 Dr D’Abreton’s statement of evidence was received by the Court as Exhibit D. Among other things, Dr D’Abreton’s report predicts and evaluates against EPA and national standards the likely emissions from the coal-fired boiler, by applying an air dispersion model. In large measure, the appellants’ case rested on a series of questions and criticisms of the assumptions upon which Dr D’Abreton’s model and evaluations were based. No alternative scientific evidence was offered by the appellants.

31 The emission guidelines adopted for air quality by Dr D’Abreton were identified in Exhibit D in the following terms:

The South Australian (SA) EPA has adopted design ground level concentrations (DGLCs) which are based on protecting public health, public amenity and other

sensitive environmental factors where these are an issue (SA EPA, 2003). Safety factors have been built into the DGLCs to provide additional protection for sensitive members of the community, such as children and the elderly.

The DGLCs given in Table 2-1 must be met at all times. No ground level concentrations calculated through dispersion modelling can exceed the DGLC (SA EPA, 2003). There is no guideline for particulate matter, so the national standard for particulate matter with a diameter less than 10 microns (PM<sub>10</sub>) has been used in this assessment (DEH, 1998).

TABLE 2-1: AMBIENT AIR QUALITY GUIDELINES FOR SOUTH AUSTRALIA

Pollutant	Guideline/Standard		Time Average	Allowable exceedances per year
Sulphur dioxide (SO <sub>2</sub> ) <sup>a</sup>	450 µg/m <sup>3</sup>	0.17 ppm	1-hour	None
Nitrogen dioxide (NO <sub>2</sub> ) <sup>a</sup> (outside Adelaide metro area)	158 µg/m <sup>3</sup>	0.075 ppm	1-hour	None
Particulate matter (PM <sub>10</sub> ) <sup>b</sup>	50 µg/m <sup>3</sup>	—	24-hour	5 days a year

Sources:

a – SA EPA (2003)

b – DEH (1998)

32 These standards are relevant considerations when addressing such provisions as Principle 15(a). Dr D’Abreton summarised his conclusion thus:

- For SO<sub>2</sub>, the South Australian guideline for 450 µg/m<sup>3</sup> will not be exceeded at any point even under the most conservative (strictest) assumptions.
- Similarly for NO<sub>2</sub>, the South Australian guideline of 158 µg/m<sup>3</sup> will not be exceeded at any point.
- For PM<sub>10</sub>, the national standard of 50 µg/m<sup>3</sup> will not be exceeded at any point even under the most conservative assumptions.

33 It can be concluded that emissions from the proposed boiler at Jong’s Flowers will not result in any exceedance of the South Australian air quality, despite the assessment being based on a number of conservative assumptions, namely, operations throughout the year and a conservative background value.

34 Dr D’Abreton’s choice and use of the air pollution and dispersion models to predict the likely emission levels from the flue and his conclusions were the subject of considerable examination during the hearing. The Court in many instances in the past has relied on the results obtained from the use of scientific models to assist it in the assessment of environmental impacts. Nevertheless it acknowledges that models are a theoretical construction of the real world and that they have limitations. There is a need, therefore, to ensure that the model is relevant and respected as a tool, and the inputs fairly represent the operational and environmental conditions that would exist if the facility in question was commissioned.

35 Having listened carefully to all of the evidence of Dr D’Abreton we accept his findings for the following reasons:

- The air pollution and emission dispersion models employed by Dr D'Abreton are accepted by the EPA as an appropriate method by which air emissions are evaluated against its guidelines in the circumstances within which the land is situated. There is no reliable evidence before the Court that brings into question the reliability of those models as a predictor of emissions concentrations.
- There is no evidence upon which we can rely that calls into question the relevance of input data such as meteorological conditions and topography. The data sources, in our view, were relevant to the circumstances. We have reached the conclusion that any discrepancies in topographical data identified by the appellants will make very little difference (if any) to the result of the emission dispersion modelling. We have reached the same conclusion when considering the appellants' submissions about the use of long term climate input data.
- There is no evidence to support the appellants' assertion that adverse weather conditions (ie a temperature inversion) will cause conflict with Principle 15(a). We do not challenge the appellants' assertion that Forreston and its environs are subject from time to time to particular meteorological phenomena that appear to be temperature inversions, notwithstanding the absence of data. However Dr D'Abreton's evidence that the flue will, in any event, elevate the emissions plume to a height of 260 metres above ground level before lateral dispersion occurs is sufficient for us to conclude that dispersion will occur above the level at which inversions are likely to occur.
- We are of the view that the background emission assumption (using readings taken at Kensington) is a very conservative approach and has the effect of elevating the total emission predictions beyond that which is likely. We have reached this conclusion after observing the intensively developed and trafficked area of Kensington (relative to that of Forreston and environs). Furthermore, the adverse consequences to air quality that the appellants say will result from the particulate emissions from the boiler when coinciding with forest burn-off is, at best, speculation. There is, quite simply, no evidentiary basis to support the appellants' claim.

36 Our considered view is that the air dispersion modelling is based on very conservative assumptions. A modelling error – which Dr D'Abreton acknowledges can occur – will still place the resultant emissions well within the accepted standards. There are no other aspects of the proposed development of which we were made aware that would cause us to conclude that Dr D'Abreton's findings are anything other than an adequate measure when assessing it against the relevant aspects of the Plan which deal with amenity impacts. In other words, when all things are considered we find that the proposed development will not be in conflict with Council Wide Principle 15 and Objective 15 for the Watershed (Primary Production) Zone.

37 In so concluding we have not ignored the possibility of odours occurring from time to time, although no specific evidence on this aspect of air emission was put to the Court. We have before us the report of the EPA on this topic. That report (p 79 of Exhibit R1) stated as follows:

A coal fired appliance has a propensity to produce some odour, particularly when starting. It is considered that this will be minimised by the predicted good

dispersion of gases and the good design of the boiler. It should therefore be able to meet the criteria for odour emissions as described in the EPA Guidelines for Odour Assessment (number 373/03). The boiler must be maintained and operated with a view to obtaining optimum performance, particularly at times of lighting.

38 In the absence of any other evidence, we accept that the level of any odour emitted will fall within acceptable standards.

*The release of greenhouse gases*

39 Mr Thornton expressed a concern on behalf of the appellants with the proposed development that can best be described as asserting that the development is not ecologically sustainable because the burning of coal gives rise to greenhouse gases. In the absence of any specific provision in the Development Plan there is an issue as to whether the principles of ecologically sustainable development can be taken into account.

40 In our view, the well recognised (nationally and internationally) principles of ecologically sustainable development should be taken into account by a relevant authority when assessing a proposed development under s 33 of the *Development Act*, particularly if the relevant authority is a council.

41 In the *Development Act* “council” in ss 33 and 34 means a municipal or district council. A council is constituted under the provisions of the *Local Government Act 1999* (SA) and is either a district or municipal council. The *Local Government Act* sets out the role, functions and objectives of councils: ss 6, 7 and 8. Among the objectives of a council set out in s 8 are the following:

The Council must, in the performance of its roles and functions —

...

(d) give due weight, in all its plans, policies and activities, to regional, State and national objectives and strategies concerning the economic, social, physical and environmental development and management of the community;

...

(f) seek to facilitate sustainable development and the protection of the environment and to ensure a proper balance within its community between economic, social, environmental and cultural considerations;

...

42 Thus there is an obligation on a council to facilitate development that is sustainable. This obligation is in addition to a council’s obligations under the *Development Act: Local Government Act* ss 6(e), 7(k) and 8.

43 It is well recognised that the combustion of fossil fuels (including coal) is the greatest source of greenhouse gases in the world, particularly carbon dioxide. Greenhouse gases concentrate in the atmosphere, enhancing the natural greenhouse effect and contributing to global warming. The consequences of global warming have already been and are continuing to be observed. They include major impacts on physical and biological systems worldwide, with consequential impacts on human systems. While there will be some seemingly beneficial impacts, generally the impacts will depend on the adaptive capacity of systems to adjust, with some inevitable negative consequences for human life and health and social and economic well-being. So much was reported in the Third Assessment Report of the International Panel on Climate Change (2001). In 2002, Australia’s national greenhouse gas emissions per capita were the highest of all industrial nations: [www.climatechange.sa.gov.au/greenhouse/greenhouse\\_3.htm](http://www.climatechange.sa.gov.au/greenhouse/greenhouse_3.htm).

- 44 The CSIRO report *Climate Change in South Australia* (March 2003) noted in the executive summary, the following observed climate trends in South Australia:
- Over the period spanning 1910 to 2000, Australia's average temperature increased by 0.76% (0.08°C per decade), with the minimum temperature increasing by 0.96°C (0.11 per decade) and maximum temperature by 0.56°C (0.06°C per decade). The rate of increase has been more rapid in the period since 1950 (0.13°C per decade for maximum temperature and 0.21°C per decade for minimum temperature. The frequency of extremely warm days and nights has increased while that of extremely cool days and nights has decreased since 1957.
  - Since 1950, South Australia's average maximum temperature has increased by 0.17°C per decade. Thus, compared to national trends, South Australian maximum temperature indicates a faster rate, while minimum temperature shows a slower rate.
  - Sea surface temperatures in the region have risen at about half the rate of the land-based temperatures.
  - Trends in South Australian annual rainfall since 1910 are generally weaker than other parts of the continent. Most of the northern half of the state has experienced an increasing rainfall trend while southern coastal regions around the Eyre Peninsula and the far south-east of the State have experienced drying trends since 1950.
- 45 According to the Australian Greenhouse Office, burning coal emits substantially more carbon dioxide than burning LPG. Accordingly, the question is asked as to whether the proposed development is appropriate in the interests of the protection of the environment and the maintenance of a proper balance within the community between economic, social and environmental considerations.
- 46 The *Environment Protection Act 1993* (SA) imposes an environmental duty upon all members of the community not to pollute the environment without taking all practical and reasonable efforts to minimise harm to the environment: s 25. Whether "pollution" includes emitting a greenhouse gas is arguable. Most members of the community contribute to the emission of greenhouse gases daily by travelling in petrol or diesel fuel vehicles and using coal-generated electricity. There is no law or policy that specifically precludes a business from increasing its contribution to the greenhouse effect. While such action does not seem to be in the community interest, given the predictions of the consequences of climate change and having regard to prevailing government strategies, it is for the individual business to determine whether it is in its interests (as a member of the community) having regard to the economic consequences (both at the micro and macro levels) to make changes to its system that will increase its contribution to the greenhouse effect and therefore, climate change. The choice is, in one sense, no different from the choices each of us makes about our own contribution to greenhouse gases through, for example, our use of motor vehicles and choice of holidays.
- 47 Increasing the emission of greenhouse gases is not consistent with the principles of ecological sustainable development, including as it does, the principle of intergenerational equity and the precautionary principle: see *Telstra*

*Corporation Ltd v Hornsby Shire Council* (2006) 146 LGERA 10 [for a thorough discussion of the concept of ecologically sustainable development and the precautionary principle].

48 However, no real attempt has been made by the appellants to provide us with the likely increase in greenhouse gas emissions overall by the proposed development, compared with the existing operation. Any attempt at quantifying the difference should also take into account the method of delivery and the frequency of deliveries of coal, compared with the existing situation. There was no evidence put to us to show that there will most likely be an increase overall in the emission of greenhouse gases by the proposed development. Thus, the proposed development will not be rejected on this ground.

Section 17 application

49 At the conclusion of the hearing, Mr Henry for the second respondent submitted that it was open to the Court to dismiss the appeal pursuant to its power under s 17(4)(b) of the *Environment, Resources and Development Court Act*. The provisions of that subsection are as follows:

17(4) Subject to rules of the Court, the Court may, if of the opinion that it is appropriate to do so, on its own initiative or on the application of a party to the relevant proceedings —

...

(b) after hearing the applicant in the proceedings, find in favour of the respondent without hearing the respondent;

50 The basis of this submission, which was supported by reference to *Carey and Bourdon RB Metals v Development Assessment Commission* [1994] EDLR 233, was that the appellants had presented no evidence in support of their contentions, but relied only on an attack on the second respondent's proposal and their evidence in support thereof.

51 It is incumbent on those who would appeal a decision of a relevant authority made under the *Development Act* to point to how it is said that the proposal does not comply with the relevant provisions of the appropriate development plan. That is obvious, having regard to the provisions of ss 33, 38 and 86 of the *Development Act*. As the Honourable the Chief Justice said in *Tuna Boat Owners Association of SA Inc v Development Assessment Commission* (2000) 77 SASR 369; 110 LGERA 1 at [30], what is required in a particular case will depend on the circumstances of that case.

52 It is the duty of the Court to determine an appeal de novo. However, at the same time the Court must be mindful that a person in the position of the second respondent has presented its case to the relevant authority, had its proposal assessed and a consent granted. In some circumstances it may be sufficient for an appellant to point out that a relevant authority made an error in that the proposal does not meet a quantitative requirement of the development plan. In other circumstances it will be necessary for an appellant to show that a second respondent's proposal does not sufficiently meet the assessment criteria; namely the provisions of the appropriate development plan. In the latter cases it is likely that an appellant would have to prove its case with adequate evidence. It is difficult to say any more than s 17(4)(b) could provide power to dismiss an appeal in circumstances where an appellant, by appealing, sought not to

challenge the appellant's opinion or assertions by evidence, but sought to force the applicant to persuade the Court that the relevant authority was correct in its initial decision.

53 In the circumstances of this case we decided it was appropriate to deal with the appeal on its merits and we have done so.

*Conclusion*

54 Having considered all that has been put before us we have concluded that the proposed development (as detailed in the Development Application 473/104/2005 and amended by Exhibits A, C, E and F) is in adequate compliance with the relevant provisions of the Plan. The appeal is disallowed except insofar as is necessary to vary the original conditions of consent. Provisional Development Plan Consent will be issued in respect of the amended proposal, subject to conditions.

55 We were invited to consider the conditions imposed by the Council and the EPA in light of submissions put to us by the appellants and second respondent, and noting that the conditions of the EPA were provided (pursuant to Schs 8 and 21 of the *Development Regulations*) as advice to the Council and not direction. We found it necessary to redraft the conditions, for many of the reasons given by the parties and because of the additional detail provided in Exhibits E and F.

56 Mr Henry requested on 10 May 2006 that, despite the amended plans being tendered, we give consideration to a further modification to the layout to relieve the inconveniences to the operation caused by the amendments. That request was withdrawn in writing dated 26 May 2006, and we were requested to determine the appeal on the basis of the amended proposal set out in Exhibits E and F.

57 The order, a copy of which is attached to these reasons, is now made.

*Appeal disallowed except in relation to conditions*

Solicitors for the first respondent: Griffin Hilditch.

Solicitors for the second respondent: Les Rowe Solicitors.

ANDREW EDGAR