

inter.noise 2000

*The 29th International Congress and Exhibition on Noise Control Engineering
27-30 August 2000, Nice, FRANCE*

I-INCE Classification: 6.7

THE LEGAL IMPEDIMENT TO ENVIRONMENTAL JUSTICE IN AUSTRALIA - A CASE STUDY INVOLVING TRAFFIC NOISE

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Keywords:

COURT, JUSTICE, TRAFFIC, NOISE

ABSTRACT

This paper is an account of a legal case heard in the NSW Land and Environment Court brought against the NSW Roads and Traffic Authority (RTA) by a community group affected by traffic noise from a road-widening project. The case shows how the judgement placed the legality of the action in widening the road above the merits of the proposal; a process based on an English legal precedent. The judgement failed to take into account the merit argument that when the widened road became part of a strategic route, particularly for heavy vehicle traffic, the costs of noise borne by residents needed to be properly considered against the benefits to road users. The case emphasizes the need for reform of the jurisdiction.

1 - INTRODUCTION

In October 1995 a decision was made by the NSW Roads and Traffic Authority (RTA) to upgrade Abbott Road from two to five lanes, creating part of a strategic link between two motorways in the Sydney region, the M2 and the M4 and bypassing two population centers namely Blacktown and Seven Hills (see Figure 1). To justify the decision, the RTA prepared a document known as a Review of Environmental Factors (REF) [1] based on an evaluation by the Authority itself that the activity was unlikely to significantly affect the environment. Having prejudged the environmental impact, the RTA proceeded with the work in April 1996. The affected community along Abbott Road took the matter to the Land and Environment Court and obtained an injunction [2] against the RTA to stop most of the work. Two arguments were used by the appellant *Residents of Blacktown and Seven Hills Against Further Traffic Inc.* to support the claim for an injunction.

First, it was not reasonable for the RTA to treat the activity to widen Abbott Road as a stand-alone project, because the clear aim of the proposal was to create more effective continuity between two major motorways the M2 and the M4. Second, increased heavy vehicle traffic on Abbott Road, would significantly increase noise at night. Also there would be a corresponding economic cost that had to be considered in terms of the cost of noise insulation, activity disruption such as sleep disturbance and reduced home values.

A full hearing of the case took place on 16-19 September 1996 [3]. The Judge stated that it was not the role of the Court to review the environmental merits of the decision made by the RTA to widen Abbott Road, but only to review on limited grounds the exercise of the RTA's power. Only if the decision to proceed is so unreasonable that no reasonable authority could have made it, can the Court set the decision aside. This type of judgement follows the *Wednesbury* precedent [4] derived from English case law. To the author's knowledge the insistence that merits are off-limits to the Courts has never been satisfactorily explained by legal authorities. However it is clear that by ignoring merits very wide discretion was available to the Judge. The unsatisfactory nature of this administrative approach to environmental justice that can facilitate a predetermined outcome is now described.

2 - TRAFFIC ANALYSIS AND THE SEGMENTATION OF ROAD PROJECTS

Two expert witnesses appeared before the Court to testify about traffic analysis and the appropriateness of project segmentation. The first witness, W. R. Blunden [5] appeared on behalf of the applicant and

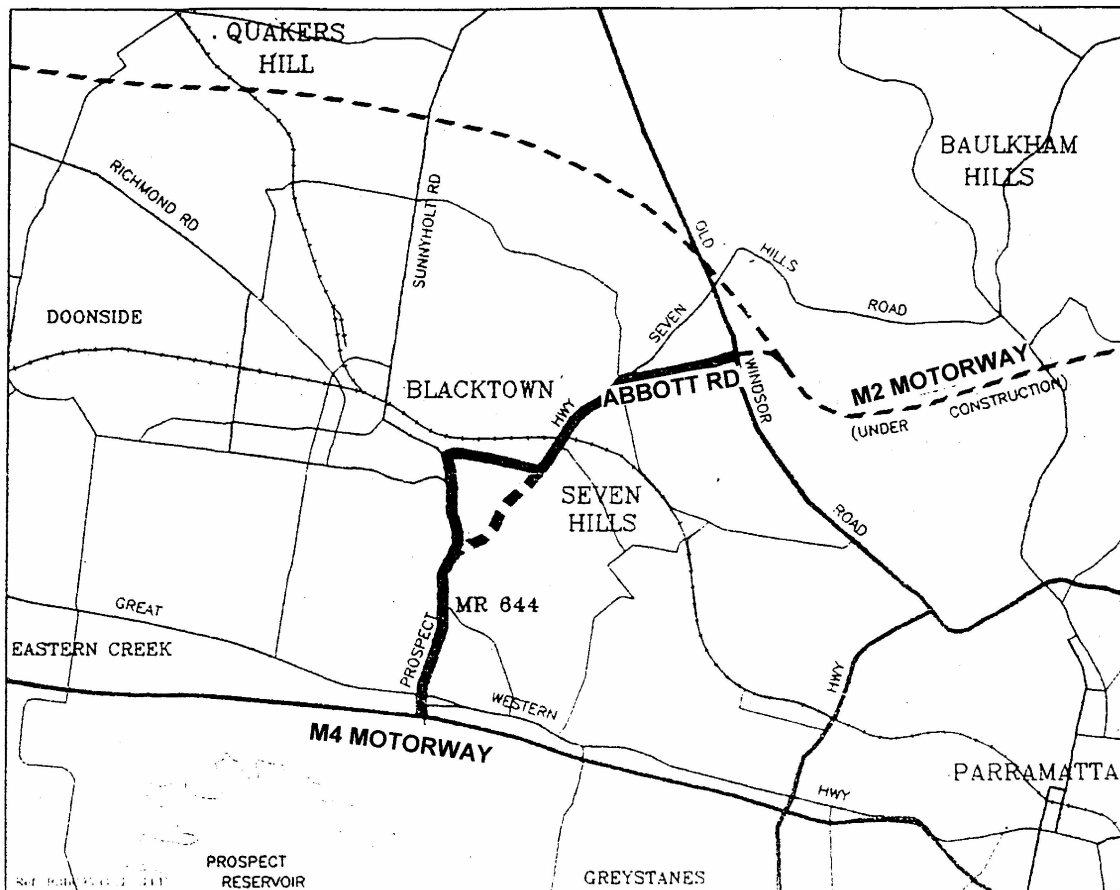


Figure 1: Abbott Road shown as part of the strategic route linking the M2 and M4 motorways (Source: NSW Roads and Traffic Authority).

gave evidence that the widening of Abbott Road could not be considered as a "stand-alone" project. He stated that much of the traffic that will leave the M2 at Old Windsor Road will travel to the M4 via Abbott Road. Moreover, heavy traffic on the M4 close to Sydney would cause traffic to divert to the M2, possibly along Abbott Road. As a consequence the RTA would be forced to carry out further road works to upgrade the Prospect Highway and Seven Hills Road sections of main road 644, or to extend the M2. All these works were in fact part of a major project.

Some evidence about this approach comes from United States case law. The segmentation of road projects into sections too small to allow for environmental matters to be properly considered on a broad scale is a doctrine which has been noted and criticized in a number of Federal court actions against the United States Department of Transport. The total environmental impact that would result from the use of the proposed road segment when used in connection with other segments already built has to be considered [6,7]. In the present case the NSW Land and Environment Court held that there was merit in the argument that transport planning should be integrated, but was silent on the advantages that a segmented approach provided to the defendant such as an understatement of the volume of heavy vehicle traffic.

The second witness, D. K. Johnston [8] testified on behalf of the RTA that *"the widening of Abbott Road will not increase the attractiveness of the route for trucks at night"*. However, the authoritative UK SACTRA report [9] endorses the finding that upgrading a road induces traffic in excess of that expected from conventional traffic analyses. Moreover, the omission of even a small amount of induced traffic can overestimate the economic value of a scheme (Abelson [14] in referring to the SACTRA report in his affidavit, omitted to mention or make use of this key finding).

3 - NOISE AND IT'S ECONOMIC COSTS

In its attempts to understate the noise problem from heavy vehicles, the RTA only considered the likely increase in ambient noise and ignored peak noise levels. The RTA would have been aware from surveys it had commissioned on another major road in the Sydney region, the F3 freeway, that the descriptor LAeq

(24h) correlates poorly with resident opinion [10]. The author [11] gave evidence that the maximum noise level at night measured at a residential facade along Abbott Road was likely to reach 86 dB (A), a value that would correspond to a high probability of sleep disturbance [12]. However, the Court held that the RTA approach was widely followed in other countries. The judge therefore concluded that the RTA had taken into account to the fullest extent possible matters likely to affect the environment, and that the RTA had reasonably reached the decision that the noise impact would not significantly affect the environment. This judgement should be viewed as incompetent. As has been shown [13] the economic cost of noise to an individual is not uniquely represented by housing market values. The economic expert witness P. W. Abelson [14] acting for the RTA quantified the costs of noise only in terms of these values. But, Abbott Road is of value to the community who lives there irrespective of noise and can be thought of as an element in the utility function of each person. Other elements of the utility function are air quality, view, closeness to public transport and schools and so on. These elements may outweigh the disutility due to traffic noise.

However, a method for directly evaluating the disutility of noise to individuals was demonstrated to the Court by another expert witness Ernestine Gross [15] on behalf of the applicant. The method values time lost due to activity disruption in the same way as travel time saved by a motorist. Consider as an example, that due to heavy vehicle noise occurring between the eight hour period from 2200 hours to 0600 hours, an average of 1 person is disturbed for 3 hours in each of the 68 affected houses along Abbott Road. The average hourly wage rate in Australia \$21 per hour is assumed to apply over this disrupted period. The value of the disrupted time is thus $68 \times 1 \times 3 \times 21.0 \times 365/3 = \0.52m for a segment of road 1.5 km long. We now compare this result to the value of the time saved by motorists at the hourly rate of \$14.06 specified by the RTA in its REF document.

The traffic modeling results in the REF showed that the average annual daily traffic taken over 15 years would be about 32 700 vehicles. The average gain in link speed would be about 10 km/h on a base speed of 60 km/h. This assumed gain in link speed would tend to be a serious overestimate because there are five signalized intersections along Abbott Road. The time saved per vehicle would be less than 0.0019 hours (about 7 seconds). The annual value of time saved = $0.0019 \times 14.06 \times 32700 \times 365 = \0.39m . It is usual to increase the travel time savings by 20% and thus include the savings in vehicle operating costs and accident costs. The total annual saving is then estimated not to exceed \$0.46m. In this indicative example, the cost of noise to residents is therefore approximately equal to the cost savings to the motorists who use the widened road. On a cost/benefit basis, without the need to consider present values, it can be seen that the widening of Abbott Road is not economically justified. However, the judge dismissed the above economic argument put on behalf of the applicant in the following terms:

"I conclude therefore that it was not unreasonable for the economic analysis in the REF to omit an economic cost of noise from the calculation of a cost/benefit ratio for the reconstruction of Abbott Road..... I am not prepared to hold that the failure to take into account the economic cost of noise amounted to a failure to take into account to the fullest extent possible a matter likely to affect the environment".

4 - CONCLUDING REMARKS

The Court's decision strongly endorsed the status quo practiced by the RTA which has done little in the past to provide relief for the effects of heavy vehicle noise at night along its main roads. Moreover, the segmentation of large projects into smaller ones to provide a means of avoiding proper environmental impact assessment is likely to continue. The judgement given in the Abbott Road case suggests pre-determination and has created an unfortunate legal precedent that could act as a future legal impediment to environmental justice in Australia. An Inquiry into the Land and Environment Court was announced by the NSW Attorney-General on 6 April 2000, and will provide the opportunity for advocating reform of the jurisdiction.

REFERENCES

1. **NSW Roads and Traffic Authority**, *Proposed reconstruction of Abbott Road Seven Hills. Review of environmental factors*, Roads and Traffic Authority, 1996
2. **NSW Land and Environment Court**, *Residents of Blacktown and Seven Hills Against Further Traffic v RTA.No. 40106/96. Record of hearings before Justice Paul Stein. June, 1996*
3. **NSW Land and Environment Court**, *Record of hearings before Chief Justice Mahla Pearlman, 1996*

4. **Aronson, M. and Nicola Franklin**, *Review of Administrative Action*. Law Book Company, London, pp. 69, 1987
5. **Blunden, W.R.**, *Court Affidavits*. 11 June, 2 July. 1996
6. **Federal Supplement**, *Movement Against Destruction v Volpe*, Vol. 361, pp. 1385, 1974
7. **Federal Supplement**, *Association Concerned About Tomorrow v Dole*, Vol. 610, pp. 1108, 1985
8. **Johnston, D. K.**, *Court Affidavit*, 15 August, 1996
9. **The Standing Advisory Committee on Trunk Road Assessment (SACTRA)**, *Trunk Roads and the Generation of Traffic (HMSO, London)*, 1994
10. **Geoplan.**, *Noise Opinion Surveys. Berowra Wahroonga Freeway F3 Stage 5. Dose-Response Analysis*. Commissioned by the RTA, 1992
11. **Goldberg, J.L.**, *Court Affidavit*, 14 June, 1996
12. **Griefahn, B.**, *Noise Control During the Night*, *Acoustics Australia*, Vol. 20(2), pp. 43–47, 1992
13. **Alexandre, A. and Barde, J.-Ph.**, *The Social Cost of Noise in Road Traffic*, pp. 81, 1975
14. **Abelson, P. W.**, *Court Affidavit*, 12 June, 1996
15. **Gross, Ernestine**, *Court Affidavit*, 12 June, 1996