

Pollution of the Sydney coast

A failed legal and policy response

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Legal and policy failures obstruct the effort to clean up Sydney's coastal environment.

When hazardous wastes or polluting effluents are discharged into a water body, polluters reduce their costs by taking advantage of the 'commons'. The problem with this is that the polluter's use of common property effectively reduces the use of that property by other groups of individuals. The problem is how to reduce the level of pollution in a manner that is efficient, equitable and effective. With regard to coastal water pollution, it has been recently noted that the disposal of sewage by off-shore outfalls into the ocean is one of the principal human impacts on the coast that is of concern all around Australia and is the major source of pollution of coastal waters.¹ In each capital city (except Canberra) ocean outfalls are used to dispose of either primary or secondary treated sewage,² which often contains industrial and toxic wastes. Concern in the community over the use of such outfalls has arisen in Hobart, At Black Rock along the south western Victorian coast, at Ninety Mile beach in East Gippsland, at Coff's Harbour, Byron Bay and most significantly in Sydney.³

In New South Wales, a variety of initiatives has been taken by the Government in response to the beach pollution problem and pollution generally. Included among them are enacting the *Environmental Offences and Penalties Act 1989*, setting up an Environmental Protection Authority, adopting a \$400 million upgrading strategy for the ocean outfall plants, instituting 'tougher' trade waste agreements with industry and more aggressive prosecution policies. Various claims have accompanied these responses which reflect a view that all is well with the world of beach pollution and that all the necessary steps have been taken. It is appropriate that in this 'turn around decade' these responses should be

examined to determine whether they accord with the principles of ecologically sustainable development.

The policy response

With the enactment of the *Clean Waters Act 1970*, industrial polluters in New South Wales were encouraged by the State Pollution Control Commission (SPCC) to connect to the sewerage system, with the aim of cleaning up Sydney's river system. By mixing industrial waste with sewage effluent and failing to install pre-treatment pollution management practices the regulatory authorities (the SPCC and the Water Board) became entwined in a control strategy that centred on tailoring standards to the capacity of the polluter. Together with the minimal form of treatment the sewage underwent prior to discharge through the outfalls, the results of this strategy became evident during 1989: bioaccumulation of heavy metals in certain species of fish; the Water Board breaching conditions in its discharge licences; serious health risks associated with bathing; authorities not revealing the health risks to the public; the blocking of more stringent discharge rules; industrial pollution in breach of licences; failure of authorities to prosecute industrial polluters; and doubts over the capacity of the new extended ocean outfalls to eliminate pollution. The response of the authorities to these facts will now be examined.

Pre-disposal

The Sydney Water Board adopted a new Trade Waste Program on 1 July 1988 which was subject to evaluation by international experts, Camp Dresser McKee, who were assigned to evaluate the whole beach pollution issue. Whilst their report noted that the program was competently designed and managed, it stated clearly that there was a need to tighten limit-setting procedures such that trade waste quality is more clearly connected to the overall objective of pollution control.⁴ However, since then it has been reported that one of Sydney's largest chemical producers, ICI, has in fact negotiated a new trade waste agreement that allows *more* pollutants to be disposed of through the sewerage system.⁵ Beder argues that there are hundreds of tonnes of heavy metals still being discharged to the ocean annually⁶ and furthermore, the use of medians rather than averages by the Water Board significantly downplays the actual quantities disposed.⁷ Beder also argues that the Water Board has used seasonal variations in the flow

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of industrial waste to argue that it has reduced the overall amount of wastes going into the sewers.⁸

The argument that tighter pollution control standards prior to disposal will automatically result in higher costs to industry and subsequent plant closures⁹ ignores extensive overseas experience with new 'no waste' technologies and their concomitant savings.¹⁰ Arguments concerning the difficulty in monitoring industrial waste disposal are invalid given overseas experience and the current technology employed by the La Trobe Valley Water and Sewerage Board in Victoria.¹¹

Licensing

The pollution of any waters in New South Wales is illegal except with a licence (s.16 *Clean Waters Act* 1970). Thus, for the Water Board to dispose of its effluent through its ocean outfalls, each of its sewerage treatment plants has to be licensed by the SPCC. The licences are issued according to criteria set out in the SPCC's Environmental Design Guide WP-1 *Design Criteria for Ocean Discharge*. In 1987 the SPCC wished to upgrade these guidelines because it felt they were inadequate in view of increased public expectations and environmental concerns but was prevented from doing so by the Water Board. The new 1990 draft design criteria impose limits on restricted substances significantly looser than those originally proposed in the 1987 draft. Again, the concentrations permitted are expressed in medians which allows the limits to be exceeded 50% of the time over any six month period.¹² Furthermore, the standards proposed for bathing waters have been reduced.¹³

When it came to issuing the actual licences in 1989 the SPCC at first set maximum concentration limits for the effluent from the Board's three ocean outfalls. When these interim licences were renewed in July 1989 for the following year the SPCC had changed the licences so that rather than setting a maximum limit for toxic material a median level was used. This means that only half of the total flow has to be below the limit specified. Beder notes:

This use of a median or 50 percentiles is incomprehensible in terms of environmental protection. Bioaccumulation of these substances in marine life depends on total volumes being discharged and yet a median limit only regulates the less worrying half of the total flow.¹⁴

The actual limits imposed in the current licences for the Board's plants have

also been reduced. For the Malabar plant, the limit for mercury was increased by four times (to accommodate the agreement with ICI discussed above) and at North Head the current licence allows more grease, oil and solids. The only heavy metal at present regulated in the licences is mercury and that limit has been loosened.¹⁵ The absurdity of this policy is made clear by the unequivocal opinion of scientists¹⁶ and the recommendations of the Government's own experts.¹⁷

Treatment options

The decision to proceed with the deep-water ocean outfalls was taken on the basis of reports prepared for the Water Board by its consultants Caldwell Connell. That decision was made despite serious reservations concerning the choice of models used and assumptions adopted about how the effluent would behave once released. Further studies have cast doubt on the Water Board's initial claim that the outfalls would solve Sydney's beach pollution problem forever, such that the Board finally had to admit that the outfalls will not entirely solve the problem.¹⁸ In response to pressure for enhanced treatment prior to disposal through the outfalls, the Water Board, at the end of January 1991, announced that they would upgrade treatment at the three main outfalls. The treatment technologies chosen¹⁹ have already been criticised:

These technologies are no more than enhanced primary treatment technologies in that they merely separate some of the solids from the liquids and do not treat the liquids. They would not be legal substitutes for secondary treatment in the United States.²⁰

It has been argued that these alternatives have been chosen because they are tolerant of industrial wastes going into the sewers.²¹ Furthermore, the Water Board has described these technologies in its promotion material calling them level 2, which has no specific meaning, in an attempt to convince the public that they are the equivalent of the engineering term of secondary treatment, which they are not.²²

The legal response

The legal response of the New South Wales Government to pollution has been to enact the *Environmental Offences and Penalties Act* 1989 (*EOPA*), to propose a new classification system under the *Clean Waters Act* 1970 and the *Clean Waters Regulations* 1972 and to set up a new Environmental

Protection Authority. Each will now be viewed in turn.

The *EOPA* has been subject to widespread criticism by commentators from both a philosophical and technical point of view. It has also proved difficult to enforce with only a small number of successful prosecutions to date. The importance of pollution control law with respect to illegal trade waste disposal was recognised by the Camp Dresser McKee Report:

The Review believes that this new legislation [the *EOPA*] is a critically important enhancement to the board's enforcement tools. If, as stated above, the economic incentives are not sufficient to control trade waste pollution, then the acceptance standards, as applied through the service agreements, will become the Board's primary tools for controlling wastes. Having effective tools to enforce these standards will become critical.²³

The *EOPA* was enacted amid a storm of publicity, with the Government heralding its million dollar fine and seven years gaol provisions as the ultimate weapon against what the Minister termed 'the sleazy end of the market place'. However, it soon became evident that the Act was fundamentally flawed and, following a few failed attempts at prosecution, the Act was amended in 1990. Yet much of the criticism directed at the Act remains valid. Although there are opportunities to institute civil proceedings through s.25 to restrain or remedy a breach or apprehended breach of any law if the breach is causing or is likely to cause harm to the environment, the emphasis of the *EOPA* is on criminal law enforcement through a fine/gaol term strategy. This reliance on the criminal law has been questioned by numerous commentators. Farrier argues that the criminal provisions are too broad, offer little appreciation of what can be realistically achieved through the criminal law and fail to articulate consistent objectives.²⁴ Franklin considers that the harsh fine approach serves neither to redirect corporate or bureaucratic behaviour nor to provide sufficient flexibility in sentencing options.²⁵ Fisse takes the same view and also notes that fines convey the impression that offences are purchasable commodities whereas the conventional understanding of serious offences is that they are unwanted even if a given offender is prepared to pay for them in cash.²⁶ He also notes that fines are an indirect method of achieving sanctioning impacts on managers and other personnel in a position to control

corporate behaviour and thus may have little impact on the supposed targets and yet may inflict substantial loss on shareholders, workers, consumers and bystanders.

Others have criticised the lack of a broad standing provision similar to s.123 of the *Environmental Planning and Assessment Act 1979* to allow any person to restrain or remedy a breach of the Act, overlaps in the legislation and the lack of requirements for polluters to notify the relevant authorities of any dangerous spills or leakages which makes it difficult to restrain the extent of the pollution.²⁷ In addition to these defects the prosecution policy of the SPCC/EPA should be reviewed in the light of the variety of civil remedies open to both the SPCC and local government through the Class 4 jurisdiction of the Land and Environment Court (see s.23 *Land and Environment Court Act 1979*).

The SPCC has recently undertaken a review of the classification system for waterways under the *Clean Waters Act 1970* and its regulations and proposed a system that not only offers lower standards of environmental protection but is also not legally enforceable. The old system set out in plain terms the standards of water quality that were applicable for each classified waterway. Under the new system those standards have been replaced by goals which are defined by the relative assimilative capacity of each waterway and what is 'realistically achievable', which is in turn defined by economic considerations. For example, the old system set out in plain terms the standards of water quality for ocean outfall waters in the regulations, which, if those waters were classified (they were not as the standards could not be met by the Water Board) they were legally binding. Under the proposed system, those standards have been replaced by a bewildering array of numerical factors which are only guidelines for water authorities and which do not give the same level of protection for the waterway.²⁸ For example, the only basis used in the new criteria for health protection is faecal coliform which has been known for 20 years to be a poor indicator of health risks in polluted waters.²⁹ But perhaps the most perplexing feature of the whole proposed new system is that it is in direct conflict with statements of the Minister for the Environment, Tim Moore, that the regulations relating to ocean outfall waters were not going to be changed at all!³⁰

The *Environmental Protection Administration Act 1991* was passed by both Houses of the New South Wales Parliament in mid-December 1991. The Act commenced on 1 March 1992. It sets out the administration of the EPA, its objectives, functions and powers in relation to current environmental protection legislation. The need for the new EPA not only to enforce the legislation effectively but to be seen to do so is borne out by the criticism that has been levelled at its predecessor the SPCC, which was considered by some to tailor its standards to the current capacities of polluters, rather than enforce standards that ensured protection of the environment. It can be argued that the administration of the EPA as set out in the Act does not lend itself to overcoming this problem. First, all of the positions in the Board and the Committees are appointed by the Minister, rather than the various groups that compose them electing their own members, thus leading to the possibility that the strategies of the EPA could reflect the priorities of the government of the day rather than the priorities of the environment. Second, the Consultation Forum, whose function is to advise the Authority on community concerns and attitudes about environmental matters, is to be composed of three members each of industry, conservation bodies, public authorities and local government, which is arguably a composition that is unlikely to reflect the public interest since the vested interests of the majority of the forum could be clearly in conflict with more stringent environmental standards.

Conclusion

Australia's coastal population concentration and the fragility of coastal ecosystems requires a concerted effort to control coastal water pollution, not only by relevant public authorities, but by industry and the community, in order to reverse current trends and maintain water quality well into the next century. In regard to point source coastal pollution, the example of Sydney provides a salient lesson to other governments and authorities around Australia. The strategies of the Sydney Water Board and the New South Wales Government since 1989 remain fundamentally flawed, despite the rhetoric, and have the potential to seriously undermine the recognised goal of ecologically sustainable development.

References

1. See 'The Injured Coastline', Report of the House of Representatives Standing Committee of the Environment, Recreation and the Arts, April 1991, p.6.
2. Primary and secondary treatment are specific engineering terms that denote standards of treatment the effluent receives prior to discharge. The internationally accepted standard for primary treatment is the removal of 60% of suspended solids from the effluent. Secondary treatment refers to a further process that removes suspended solids and uses natural micro-organisms to feed on the effluent and break it down to produce a higher quality effluent. Note that the current state of sewage treatment in Sydney removes barely 20% of suspended solids in dry weather, whilst in wet weather the effluent is little better than raw sewage.
3. For a comprehensive review of the whole demise of Sydney's beaches see Beder, S., *Toxic Fish and Sewer Surfing*, Allen and Unwin, 1989; Beder, S., 'From Pipe Dreams to Tunnel Vision. Engineering Decision Making and Sydney's Sewerage System', Unpublished Ph.D. Thesis, University of New South Wales, 1989. For an analysis of the legal issues involved see Brunton, N., 'Beach Pollution in Sydney: The Legal Issues' (1991) 8 *EPLJ* 232.
4. Camp Dresser McKee, 'Review of Sydney's Beach Protection Programme', September 1989, pp.5-39.
5. Bailey, P., 'ICI permitted to increase pollution', *Sydney Morning Herald*, 16.11.90. Limits for grease were increased from 1233 kg a day to 2050 kg, ammonia increased from 90 kg to 140 kg, iron from 21 kg to 69 kg, and sulphates more than doubled to 3430 kg per day.
6. Beder, S., 'Sewage Update No. 2: A Report to Greenpeace on Sewage Pollution Issues in Sydney', March 1991, p.30, citing figures of 426 tonnes for heavy metals including 6 tonnes of arsenic, 47 tonnes of chromium, 26 tonnes of lead, a tonne of cadmium, and 0.6 tonne of mercury for the Malabar plant. For Bondi the figures cited are half a tonne of arsenic, 20 tonnes of lead, 6 tonnes of nickel and more than half a tonne of cadmium.
7. *ibid.* This is because a median represents the value which is exceeded by one half of the sample group of numbers and which the other half is below it. Thus for a heavy metal that has 10 readings at 0.00 micrograms per litre concentration and two readings at 50 micrograms, the median figure would be 0.00 whilst the average would be 8.175.
8. *ibid.*
9. See Seccombe, M., 'Support for licences to pollute', *Sydney Morning Herald*, 13.8.90; Bailey, P., 'EPA threat to State industry: Chamber', *Sydney Morning Herald*, 21.5.91.
10. See Roystan, M.G., 'Making Pollution Prevention Pay', *Harvard Business Review*, Nov-Dec 1980, p.6.

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debt as a result of the decision to grant can show that he or she has interests that will be affected other than as a member of the general public.¹²

In no reported case has a signatory sought to review a decision to grant special benefit to a migrant, although the decision has come under collateral attack in an appeal on the question of whether the resulting debt should be waived (*Re VXR*).

A signatory who wishes to contest the grant of benefit to a migrant should exercise review rights promptly upon learning of the decision. Once benefits have been paid to a migrant pursuant to a valid decision, the preconditions for a debt to arise in respect to past payments will still exist even if a review body subsequently sets aside that decision. A successful appeal will only prevent further debt accruing.

If the benefit granted is special benefit, the signatory may argue that the migrant is not 'unable to earn a sufficient livelihood' (s.729(2)(e)) because the signatory is willing and able to support the migrant. As special benefit is a discretionary payment, the signatory may also argue that even if the preconditions for grant are satisfied, the residual discretion to refuse the benefit should be exercised as the signatory would otherwise incur a debt. None of these arguments would be available if

the benefit granted is job search or new-start allowance, since these are not discretionary payments.

It is likely that such arguments would fail if the Tribunal found that the migrant had reasonable grounds for declining the support offered by the signatory. For example it is unlikely that benefit would be refused where the offer was conditional upon the migrant returning to live in the signatory's home against a background of inter-personal conflict. In *Re VXR* the AAT accepted that the overcrowded nature of the accommodation offered by the signatory was sufficient ground for her migrant parents to decline her offer of accommodation.

Conclusion

Despite recent changes that will reduce the amount of unsecured debt arising under assurances of support, disputes concerning debts accrued before 20 December 1991 will continue to arise for some time to come. The restriction of the waiver discretion means that difficult questions concerning the recoverability of these debts and the viability of defences will have to be squarely considered.

References

1. Formerly regs 20 to 23 *Migration Regulations* 1959. Those regulations were repealed and replaced by regs 163 to 166 from 19 December 1989. The repeal of the former regulations does not affect any accrued liabilities (s.50 *Acts Interpretation Act* 1901 (Cth)).
2. Bayne, P., 'Welfare Rights: A Modest Victory, 1979) 4 *LSB* 146.
3. Relevant sections of the 1991 Act are ss.1227, 1231, 1233, 1229, 1237 and 23 (definition of 'assurance of support debt').
4. *Re Secretary, DSS and Mathias*, (1991) 60 *SSR* 823; *Re Secretary, DSS and Ibarra* (1991) 60 *SSR* 822
5. Moon, G., 'DSS: Beyond Judicial and Ministerial Control?' (1985) 10 *LSB* 230.
6. *Secretary, DSS and VXR*, No. V/90 decided by AAT on 9 December 1991
7. Snedden, M., 'Unfair Conduct in Taking Guarantees and the Role of Independent Advice' (1990) 13,2 *UNSWLJ* 302.
8. *ibid.*
9. *Petelin v Cullen* (1975) 132 *CLR* 355; *Lee v Ah Gee* [1920] *VR* 278; see also Duncan, C.G., 'Migrants' Contracts', (1977) 2 *LSB* 242.
10. Wood, D., 'Deportation, the Immigration Power and Absorption into the Australian Community', (1986) 16(3) *Federal Law Review*, 288.
11. DSS, Benefits Manual para. 24.413.
12. *Re Control Investment Pty Ltd and Australian Broadcasting Tribunal (No 1)* (1980) 3 *ALD* 74.
13. *ibid.*, p.39.
14. *ibid.*
15. See Schultz, T., 'The Role of the Expert in Pollution Prosecutions', Proceedings of the National Environmental Law Association (NSW Division) Conference, 15-16 June 1990, p.7.
16. Camp Dresser McKee, *op. cit.*, pp.9-7.
17. Beder, S., 'Toxic Fish and Sewer Surfing', *op. cit.*, pp.94-110.
18. For North Head — dissolved air flotation; Malabar — magnetite; Bondi — chemically assisted sedimentation with lamella plates.
19. Beder, S., 'Sewage Update', *op. cit.*, p.12.
20. *ibid.*, p.13.
21. *ibid.* See also Camp Dresser McKee, *op. cit.*, pp.4-1 to 4-76.
22. Camp Dresser McKee, *op. cit.*, pp.5-35.
23. Farrier, D., 'Criminal Law and Pollution Control: the Failure of the Environmental Offences and Penalties Act 1989 NSW', 14 *CLJ* 1990, p.317.
24. Franklin, N., 'Environmental Pollution Control. The Limits of the Criminal Law', in (1990) 2 *Current Issues in Criminal Justice*, 1, Journal of the Institute of Criminology, July 1990.
25. Fisse, B., 'Recent Developments in Corporate Criminal Liability and Liability to Civil Monetary Penalties', paper presented to Committee of Postgraduate Studies Seminar Series, Faculty of Law, University of Sydney, 24 October 1990.
26. Brunton, N., 'Beach Pollution in Sydney', *op. cit.*; Lipman, Z. (ed.), *Environmental Law and Government in New South Wales*, Federation Press, Sydney, 1991 pp. 83-118.
27. Beder, S., 'Legislation, Compromise, and Negotiation: Implementing the Clean Waters Act', Pricing Policy and Clean Waters, Environmental Defender's Office Public Seminar, 9 October 1990.
28. Beder, S., 'Toxic Fish and Sewer Surfing', *op. cit.*, pp.37-8.
29. Beder, S., 'Legislation', *op. cit.*, p.8.

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11. The Board operates an automated computer monitoring system of effluents discharged from the industrial plants in the region. At each plant automated sampling of effluent takes place on site and the quality of the effluent is continually monitored. If the readings show the effluent is exceeding specified limits, alarms are activated at the plant, an discharge into the sewerage system is automatically shut off until the problem is rectified. New industries establishing in the region are required to install an automated effluent monitoring system on site, connected to the Board's central office at their own expense. See 'The Injured Coastline', *op. cit.*, p.72.
12. Beder, S., 'Sewage Update', *op. cit.*, pp.44-45.
13. *ibid.*, 'Previously 9 out of 10 samples had to be below 400 organisms [of faecal coliform] per 100 mL. Now only 4 out of 5 samples have to be below 600 organisms per 100 mL. Previously the geometric mean of 5 samples could not exceed 200 organisms per 100 mL. Now the median of 5 samples cannot exceed 150 mL.'