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Air pollution – challenges for courts

Justice Nicola Pain

Land and Environment Court of New South Wales

Is air pollution a problem in NSW?

The NSW Government is presently considering its future clean air policy and released a consultation paper at the end of 2016 seeking public comment.¹ NSW has generally good air quality by world standards but some areas are recognised as having particular air quality issues. There is certainly no basis for complacency and that is reflected in the consultation paper. Even with reasonable air quality by world standards the discussion paper identifies the public health impacts and costs of air pollution and the benefits of reducing exposure to air pollution in NSW as follows:

- 520 premature deaths and 6,300 cumulative years of life lost in Sydney annually²
- 1,180 hospital admissions in Sydney in 2007³

This paper would not have been possible without the assistance of Max Newman (Tipstaff 2017) and Brigitte Rheinberger (Tipstaff 2018).

¹ NSW Government, "Consultation Paper: Clean Air for NSW", (2016) NSW Environment Protection Authority and Office of Environment and Heritage on behalf of the State of NSW, Sydney, NSW, available at <<http://www.epa.nsw.gov.au/resources/air/clean-air-nsw-160415.pdf>>.

² Morgan, G, R Broome and B Jalaludin, "Summary for policy makers of the health risk assessment on air pollution in Australia", (2013) prepared for the National Environment Protection Council, Canberra, ACT, available at <<https://www.environment.gov.au/system/files/pages/dfe7ed5d-1eaf-4ff2-bfe7-dbb7ebaf21a9/files/summarypolicy-makers-hra-air-pollution-australia.pdf>>.

³ Broome, RA, N Fann, TJ Navin Cristina, C Fulcher, H Duc and G Morgan, "The health benefits of reducing air pollution in Sydney, Australia", (2015) available at <<http://dx.doi.org/10.1016/j.envres.2015.09.007>>.

- an estimated \$6.4 billion (2015) in health costs in the NSW Greater Metropolitan Region (GMR)⁴

Factors that contribute to public health risk include:

- the type of pollutant and the harm caused at levels experienced in NSW
- regions and locations experiencing cumulative impacts and higher concentrations of harmful pollutants
- areas where population exposure is high and the risk is increasing as population and densities increase⁵

The three major human-made sources of air pollution in NSW are coal mining, residential wood heating and electricity generation. In combination, these sources emit approximately 19,000 tonnes of 26,000 tonnes of particulate emissions each year. Sources such as diesel vehicle exhaust, metal manufacturing and other mining, shipping and car brake and tyre wear also contribute to air pollution, but to a significantly lesser degree.⁶

National/state co-operative government efforts to combat air pollution in Australia

Most pollution control legislation occurs at the state level in Australia as state governments are principally responsible for regulating point source pollution from industrial sources, motor vehicle emissions (separately from setting national fuel quality standards) and domestic sources such as wood smoke heaters. Local government also has an important role to play in regulating more localised pollution.

National instruments play a role. National air quality standards for some air pollutants are determined by the National Environment Protection Council (NEPC). The NEPC was established under the *National Environment Protection Council Act 1994* (Cth)

⁴ Department of Environment and Conservation, "Air pollution economics – health costs of air pollution in the Greater Sydney Metropolitan Region", (2005) available at <www.environment.nsw.gov.au/resources/air/airpollution05623.pdf>.

⁵ NSW Government, above n 1, p 10.

⁶ Ibid. p 20

and is a cooperative state and national governmental body. The NEPC is responsible for establishing National Environmental Protection Measures (NEPM). Two NEPMs are particularly relevant to air pollution. The National Environment Protection (Ambient Air Quality) Measure came into force on 8 July 1998 and was varied on 15 December 2015 to include standards for particle pollution. This NEPM establishes specified ambient standards to be achieved within 10 years for six particulates, namely:

- carbon monoxide
- nitrogen dioxide
- photochemical oxidants (e.g. ozone)
- sulphur dioxide
- lead and
- particles

The National Environment Protection (Air Toxics) Measure, which came into force on 20 December 2004, provides a framework for monitoring and reporting hazardous compounds such as heavy metals and aldehydes.

It is the responsibility of each state to implement the NEPMs. In NSW the *Protection of the Environment Operations Act 1997 (POEO Act)* s 11(3) provides that a protection of the environment policy (PEP) may be made for the purpose of implementing a NEPM. Section 11(4)(h) further provides that a PEP may be made in respect of any matter for which a NEPM may be made. Section 13(1)(d) requires the Environmental Protection Authority (EPA) to have regard to any NEPMs it considers relevant in preparing a PEP. No PEPs have been made in NSW concerning air quality. The Clean Air for NSW consultation paper identifies the levels of air pollutants for which there are national standards and that measurements are taken to assess whether these are met in NSW.

In December 2015, the National Clean Air Agreement was finalised by federal, state and territory environment ministers. It called for the introduction of:

- product emission standards for new outdoor power equipment and marine engines
- measures to reduce pollution from wood heaters and
- strengthened ambient air quality reporting standards for particle pollution

The *Product Emissions Standards Act 2017* (Cth) came into force on 15 September 2017. The Act allows the Minister for the Environment and Energy to prescribe certain products and make rules relating to them. The first products to be prescribed under the Act include lawn mowers, ride-on mowers and generators. Spark engine products such as these can emit high levels of air pollution and “at peak times can contribute up to 10% of air pollution in urban areas.”⁷ The standards under the Act will only apply to the import or supply of new products and not to engines or equipment people already own or have purchased second hand.

Regulation of air pollution in NSW

There are three key instruments which regulate air pollution in NSW. I will address each in turn.

Protection of the Environment Operations Act 1997

The *POEO Act* defines air pollution broadly as the emission into the air of any air impurity. Part 5.4 of the Act regulates air pollution, with Division 1 providing five general offences where air pollution is caused by:

- failing to maintain or operate an industrial plant or equipment in a proper and efficient manner⁸
- failing to do maintenance work on a plant in a proper and efficient manner⁹

⁷ House of Representatives, *Parliamentary Debates* (Hansard), 10 August 2017 at 8039.

⁸ *POEO Act* s 124.

⁹ *POEO Act* s 125.

- failing to deal with materials in a proper and efficient manner¹⁰ and/or
- engaging in an activity or operating a plant so as to emit pollution in excess of prescribed rates or concentrations¹¹
- prohibiting an occupier of premises at which scheduled activities are carried on with an environment protection licence (EPL) from causing or permitting the emission of any offensive odour¹²

Section 129(1) creates an offence for the emission of an offensive odour from licensed premises. It is a defence if the odour was emitted in accordance with any licence conditions directed at minimising the odour or the people affected by the odour were employed at the licensed premises.

Division 2 covers air pollution from fires. Section 133 allows the EPA to make an order prohibiting the burning of fires where the weather conditions warrant such an order. Section 135 creates an offence for failing to comply with such an order without reasonable excuse.

Division 3 addresses domestic air pollution, which concerns excessive smoke from residential chimneys. In instances where excessive smoke is emitted from chimneys, the EPA may issue a smoke abatement notice.¹³ Failure to comply with an abatement notice is an offence.¹⁴

Part 5.8 of the *POEO Act* is also relevant to air pollution and addresses the sale of motor vehicles. It is an offence to sell a motor vehicle which emits excessive air impurities¹⁵ or which is not fitted with an anti-pollution device.¹⁶ It is also an offence to remove, disconnect or impair an anti-pollution device on a motor vehicle.¹⁷

¹⁰ *POEO Act* s 126.

¹¹ *POEO Act* s 128.

¹² *POEO Act* s 129

¹³ *POEO Act* s 135B.

¹⁴ *POEO Act* s 135C(1).

¹⁵ *POEO Act* s 155.

One of the key methods of regulating pollutants in NSW is through the environmental licensing scheme created by the *POEO Act*. It is an offence under s 64(1) of the *POEO Act* to contravene a condition of an EPL.

Protection of the Environment Operations (Clean Air) Regulation 2010

The Protection of the Environment Operations (Clean Air) Regulation 2010 (POEO (Clean Air) Regulation) supports the *POEO Act* by addressing more specific sources of air pollution. Part 2 specifies requirements for solid fuel heaters. Part 3 aims to control air pollution caused by burning either outdoors or in incinerators. This part does not apply to burning for the purpose of bushfire hazard reduction work, the destruction of prohibited drugs or the burning of animals that have died.

Part 4 targets the ownership of vehicles which emit excessive impurities. This is in contrast to the *POEO Act* which targets the sale of such vehicles. Clause 16 makes it an offence to own a motor vehicle which emits excessive impurities, except in cases where the vehicles are for motor racing or off-road motor sports. The equivalent clause in the Protection of the Environment Operations (Clean Air) Regulation 2002 (2002 Regulation) resulted in a number of the “smoky vehicle” cases which will be discussed later. Clause 17 specifies the types of anti-pollution devices referred to in s 156 of the *POEO Act*.

The Regulation also addresses air pollution from treatment plants, volatile organic liquids and cruise ship fuels.

Protection of the Environment Operations (General) Regulation 2009

The Protection of the Environment Operations (General) Regulation 2009 (POEO (General) Regulation) is relevant to air pollution in two respects. Firstly, it creates the risk-based or load-based licensing scheme responsible for regulating pollution from major industrial premises. The licensing scheme is “risk-based” as the degree of regulation is based on the level of environmental risk the activity poses. Factors such

¹⁶ *POEO Act* s 156.

¹⁷ *POEO Act* s 157.

as the nature of the emissions, pollution control measures in place and the proximity of the activity to sensitive environmental areas are taken into account in assessing risk.

Secondly, the POEO (General) Regulation establishes the Upper Hunter Air Quality Monitoring Network and the Newcastle Local Air Quality Monitoring Network. The Upper Hunter Network was completed in 2012 in response to the growing population of the area and mining emissions. The network has 14 stations which monitor particle pollution. The stations in Singleton and Muswellbrook also monitor sulphur dioxide and nitrogen dioxide levels as they are two of the major population centres in the region.¹⁸ The Newcastle Network was established in 2014 and has stations in Carrington, Mayfield and Stockton.¹⁹ All three stations monitor particle pollution, with Carrington and Stockton monitoring sulphur dioxide and nitrogen dioxide.

Civil enforcement of air pollution under the Protection of the Environment Operations Act 1997 /Access to Court

Section 252 of the *POEO Act* provides that any person may bring proceedings in the Land and Environment Court (the Court) for an order to remedy or restrain a breach of the Act or regulations. Proceedings can be brought whether or not proceedings have been instituted for an offence against this Act or the Regulations. Proceedings can be brought whether or not any right of the person has been or may be infringed by or as a consequence of the breach.

A person can bring proceedings on their own behalf or on behalf of another person. A body corporate or unincorporate (with the consent of its committee or other controlling or governing body), having like or common interests in those proceedings can also commence proceedings. If satisfied that a breach has been committed or will be committed, the Court may make such orders as it thinks fit to remedy or restrain the breach. Breach includes a threatened or apprehended breach.

¹⁸ A Morison and L Graham, "EPA management of air quality in the Hunter Region" (2014) 48(4) Air Quality and Climate Change 45, 46.

¹⁹ <http://www.environment.nsw.gov.au/topics/air/monitoring-air-quality/lower-hunter-and-central-coast>

More broadly again, under s 253 of the *POEO Act* any person may bring proceedings in the Court for an order to restrain a breach (or a threatened or apprehended breach) of any other Act, or any statutory rule under any other Act, if the breach (or the threatened or apprehended breach) is causing or is likely to cause harm to the environment. Such proceedings may be brought whether or not any right of that person has been or may be infringed by or as a consequence of the breach (or the threatened or apprehended breach).

If the Court is satisfied that a breach, or a threatened or apprehended breach, will be committed or be likely to be committed, it may make such orders as it thinks fit to restrain the breach or other conduct of the person by whom the breach is committed or by whom the threatened or apprehended breach is likely to be committed.

Interestingly, few cases have been commenced using these provisions. In *McCallum v Sandercock*²⁰ a neighbour commenced proceedings against another neighbour operating a quarry alleging breaches or threatened breaches of the *POEO Act* relating to air pollution amongst other complaints. Mr McCallum brought the action under s 253, and also complained that the pollution complaints may have constituted an anticipated breach under s 252. Pepper J found that air pollution had not been caused and therefore did not grant relief under ss 252 or 253. Pepper J also found that while both water pollution and noise pollution had been caused, Mrs McCallum had been unable to demonstrate that the breach or threatened breach was causing harm to the environment and therefore declined to grant relief under ss 252 or 253.

In contrast civil enforcement of planning law by private citizens and community and environmental groups as well as regulators has occurred on many occasions in NSW.

In other states in Australia private citizens have tried to enforce pollution control laws focussed on air pollution where in their view the regulator is not adequately controlling air pollution. Unsurprisingly their success depends in large part on the statutory regime which applies. The issue of standing to sue can arise as the case of

²⁰ (2011) 183 LGERA 399; [2011] NSWLEC 175

*Onesteel Manufacturing Pty Ltd v Whyalla Red Dust Action Group Inc*²¹ in South Australia demonstrates. The citizens group the Whyalla Red Dust Action Group sought to restrain a large manufacturing plant from causing environmental harm through fugitive dust emissions from its large pellet manufacturing plant.

The first issue to arise was whether the action could be brought at all. Section 104(7) of the *Environment Protection Act 1993* (SA) provided that an application can be made by any person whose interests are affected by the subject matter of the application, or by any other person with the leave of the court. The court must be satisfied of certain matters before it gives leave, such as the proceedings are not an abuse of court process and there is a real and significant likelihood that the requirements for the making of an order restraining activity contravening the Act will be made.

The orders sought by the applicant group were:

1. Restraining the company from causing, permitting or suffering environmental harm through fugitive dust emissions from the plant.
2. That the company be ordered to monitor ambient air quality for particulate matter of a specified size at specified locations.
3. That the company pay damages to any persons whether members of the applicant association or not who have suffered injury loss or damage to property as a result of dust pollution from the plant.

At first instance a single judge of the specialist Environment Court in South Australia held, firstly, that the applicant was a person whose interests were affected by the subject matter of the application as the Act provided and, secondly, that the manufacturing plant had a case to answer. The company appealed to the Supreme Court of South Australia.

²¹ (2006) 94 SASR 357; 145 LGERA 415.

On appeal to a single judge of the Supreme Court of South Australia the issues were whether the applicant association was a person whose interests are affected by the subject matter of the application and whether the company had a case to answer. The members of the association were identified as living, working or owning property in areas affected by dust from the plant. Its numerous activities directed to improving the quality of the environment in Whyalla were identified as the commissioning of technical reports on public health and amenity issues associated with particulate pollution from the plant. The appeal judge found that he was unable to identify any interest which is affected by the subject matter of the application other than an intellectual or emotional interest in the protection of the environment. Its objects confirmed that it was a public interest group which advocated for protection of the environment in Whyalla. It did not point to any loss, injury or damage to it or its members as a consequence of the emissions targeted in the proceedings. The decision of the High Court of Australia in *Australian Conservation Foundation Inc v Commonwealth*²² that a special interest means more than a mere intellectual or emotional concern was referred to. The association could not satisfy the court that it had the requisite interest as required by the statute.

Criminal enforcement of air pollution

The *POEO Act* classifies offences including air pollution offences as either tier 1, 2 or 3 offences. Tier 1 offences are those under Part 5.2, namely:

- wilfully or negligently disposing of waste in a manner that harms or is likely to harm the environment²³
- wilfully or negligently causing any substance to leak, spill or otherwise escape (whether or not from a container) in a manner that harms or is likely to harm the environment²⁴

²² [1980] HCA 53; (1980) 146 CLR 493.

²³ *POEO Act* s 115.

²⁴ *POEO Act* s 116.

- wilfully or negligently causing any controlled substance (within the meaning of the *Ozone Protection Act 1989*) to be emitted into the atmosphere in contravention of that Act and in a manner that harms or is likely to harm the environment²⁵

The maximum penalties for tier 1 offences committed by corporations are \$5,000,000 for an offence committed wilfully or \$2,000,000 for an offence committed negligently. The maximum penalty for individuals is not to exceed \$1,000,000 or seven years' imprisonment or both for an offence that is committed wilfully or \$500,000 or four years' imprisonment or both for an offence that is committed negligently.

All other offences under the *POEO Act* are tier 2 offences. Tier 2 offences attract penalties of differing degrees. Relevantly for air pollution, the maximum penalties for committing an air pollution offence under Part 5.4 Division 1 or for contravening a licence condition are \$1,000,000 (and \$120,000 per day for a continuing offence) for a corporation and \$250,000 (and \$60,000 per day) for individuals. Tier 3 offences are tier 2 offences that may be dealt with by way of penalty notice under Part 8.2 of the *POEO Act*.

Many of the offences created under the *POEO Act* are strict liability so that no mental element such as intention to commit a crime need be proved as an element of an offence. This leads to very high numbers of guilty pleas in pollution cases before the Court.²⁶

The primary enforcement of pollution control legislation in NSW is by a government regulator whether at state or local government level through prosecutions for pollution offences.

²⁵ *POEO Act* s 117.

²⁶ In 2014, 75% of Class 5 proceedings involved a guilty plea. Land and Environment Court, "Class 5: criminal proceedings"
<http://www.lec.justice.nsw.gov.au/Pages/types_of_disputes/class_5/class_5.aspx> accessed 21 March 2018.

Remedies in criminal cases

In addition to imposing a penalty, or prison sentence in the case of tier 1 offences, there are wide powers under the *POEO Act* to make orders addressing air pollution offences which judges of the Court can apply. Some of these orders include:

245 Orders for restoration and prevention

The court may order the offender to take such steps as are specified in the order, within such time as is so specified (or such further time as the court on application may allow):

- (a) to prevent, control, abate or mitigate any harm to the environment caused by the commission of the offence, or
- (b) to make good any resulting environmental damage, or
- (c) to prevent the continuance or recurrence of the offence.

The Court has made orders under s 245 on numerous occasions. Examples include orders to remove used tyres from an unlawful waste facility (*Environment Protection Authority v Obaid* [2005] NSWLEC 171), to compact and cap a waste stockpile with clay (*Environment Protection Authority v Hardt* [2007] NSWLEC 284) and to construct a wash bay and chemical filling and emergency storage facility (*Environment Protection Authority v Warringah Golf Club Ltd (No 2)* (2003) 129 LGERA 211; [2003] NSWLEC 222).

246 Orders for costs, expenses and compensation at time offence proved

- (1) The court may, if it appears to the court that:
 - (a) a public authority has incurred costs and expenses in connection with:
 - (i) the prevention, control, abatement or mitigation of any harm to the environment caused by the commission of the offence, or
 - (ii) making good any resulting environmental damage, or
 - (b) a person (including a public authority) has, by reason of the commission of the offence, suffered loss of or damage to property or has incurred costs and expenses in preventing or mitigating, or in attempting to prevent or mitigate, any such loss or damage, order the offender to pay to the public authority or person the costs and expenses so incurred, or compensation for the loss or damage so suffered, as the case may be, in such amount as is fixed by the order.

- (2) An order made by the Land and Environment Court under subsection (1) is enforceable as if it were an order made by the Court in Class 4 proceedings under the Land and Environment Court Act 1979.

...

An example of orders made under s 246 for third-party clean-up costs occurred in *Environment Protection Authority v Buchanan (No 2)* (2009) 165 LGERA 383; [2009] NSWLEC 31 where the defendant, the sole director of a company operating a hazardous industrial waste treatment facility, was ordered to pay the clean-up costs of the EPA (\$88,000) and the owners of the land leased by the defendant (\$376,000).

Under s 248 investigation costs can be claimed by a prosecutor.

One provision which is worth mentioning although no order has yet been made pursuant to it by the Court is s 249 which provides for monetary benefit orders. This was amended in 2005 to refer to the satisfaction of the Court on the balance of probabilities.

249 Orders regarding monetary benefits

- (1) The court may order the offender to pay, as part of the penalty for committing the offence, an additional penalty of an amount the court is satisfied, on the balance of probabilities, represents the amount of any monetary benefits acquired by the offender, or accrued or accruing to the offender, as a result of the commission of the offence.
- (2) The amount of an additional penalty for an offence is not subject to any maximum amount of penalty provided elsewhere by or under this Act.
- (2A) The regulations may prescribe a protocol to be used in determining the amount that represents the monetary benefit acquired by the offender or accrued or accruing to the offender.
- (3) In this section:

monetary benefits means monetary, financial or economic benefits.

the court does not include the Local Court.

No protocol has been made under s 249(2A) to date.

Under s 250 additional orders can be made by the Court. The Court can order an offender to:

- publicise the offence
- take action to notify specified people of the offence and its environmental consequences, for example, publication in an annual report
- carry out a specified project for the restoration or enhancement of the environment in a public place or for the public benefit
- carry out a specified environmental audit of activities carried on by the offender
- pay a specified amount to a specified organisation for a specified project for the restoration or enhancement of the environment
- attend, or cause employees or contractors of the offender to attend a training course
- establish, for employees or contractors of the offender, a training course of a kind specified by the Court
- if the EPA is a party to the proceedings, order the offender to provide a financial assurance to the EPA, if the Court orders the offender to carry out a specified work or program for the restoration or enhancement of the environment
- carry out any social or community activity for the benefit of the community or persons that are adversely affected by the offence (a restorative justice activity) that the offender has agreed to carry out
- the Court can fix a period for compliance with any order

As can be seen from the terms of these sections a wide range of orders can be made by judges of the Court which enable them to respond to air pollution and other offences before them. Orders under s 250 have been made on many occasions by the Court.

An example of the breadth of sentences available under s 250(1) can be found in the decision of *Environment Protection Authority v Nulon* [2015] NSWLEC 153. Nulon pleaded guilty to an offence under s 64(1) of the *POEO Act*. Nulon manufactured lubricants and coolants and breached a condition of its EPL when the contents of a blending tank became overheated and gave off a pungent sulphur-like smell. Approximately 37 kilograms of the blended substance was lost, 17-20 kilograms of which was emitted into the atmosphere. A number of employees from a nearby company had to be sent home sick because of the smell. Moore AJ raised with the parties that the CEO of Nulon should write to each adversely affected employee to apologise for the impact, in addition to the publication order made under s 250(1)(b), a \$120,000 payment to the Environmental Trust and paying the Prosecutor's costs. No such order had been made before, but was appropriate in this instance as there was a readily identifiable group of people who had been harmed.

Recent air pollution prosecutions in the Land and Environment Court

An overview of a few of the interesting cases in the area of air pollution in the last few years follows.

The first two cases concern s 128 of the *POEO Act* which at the time of both cases stated:

128 Standards of air impurities not to be exceeded

- (1) The occupier of any premises must not carry on any activity, or operate any plant, in or on the premises in such a manner as to cause or permit the emission at any point specified in or determined in accordance with the regulations of air impurities in excess of:
 - (a) the standard of concentration and the rate, or
 - (b) the standard of concentration or the rate, prescribed by the regulations in respect of any such activity or any such plant.

- (2) The occupier of any premises must carry on any activity, or operate any plant, in or on the premises by such practicable means as may be necessary to prevent or minimise air pollution if:
 - (a) in the case of point source emissions—neither a standard of concentration nor a rate has been prescribed for the emissions for the purposes of subsection (1), or
 - (b) the emissions are not point source emissions.
- (3) A person who contravenes this section is guilty of an offence.

The section was amended in 2014 to include subs (1A) which provides:

- (1A) Subsection (1) applies only to emissions (*point source emissions*) released from a chimney, stack, pipe, vent or other similar kind of opening or release point.

Environment Protection Authority v Unomedical Pty Ltd (No 3) (2010) 79 NSWLR 236; [2010] NSWLEC 198 (not guilty hearing); Environment Protection Authority v Unomedical Pty Ltd (No 4) [2011] NSWLEC 131 (sentence hearing)

Unomedical pleaded not guilty to an offence under s 128(2) of the *POEO Act* of failing to take adequate measures to prevent standards of air impurities being exceeded. Unomedical manufactured single-use medical equipment and used Ethylene Oxide (ETO) to sterilise the equipment. ETO is a carcinogenic substance and was being released into the atmosphere after sterilisation had been completed. Unomedical purchased an abatement system which turned the ETO emissions into carbon dioxide and water vapour. There was no standard or rate prescribed for ETO under NSW legislation at [9]. However, evidence was given of generally accepted standards within the medical community at [56] and of international standards at [91].

Unomedical raised two defences. Firstly, it argued that there had been an honest and reasonable mistake of fact that it was taking all necessary measures to minimise air pollution. Unomedical believed that the level of ETO being emitted was minimal and would therefore not cause harm to human health or the environment. Unomedical further believed that the absence of a prescribed rate for ETO emissions meant it would necessarily be in compliance in any event. Unomedical also raised the defence of officially induced error of law, a defence not recognised at common law in Australia. With respect to the first defence, Pepper J held that Unomedical's mistake was one of law, not fact, in thinking there was no prescribed limit for ETO emissions. Even if this was a mistake of fact, it was not based on reasonable grounds. With

respect to the second defence, Pepper J held that the defence of officially induced error of law was not available to Unomedical. Unomedical submitted that the defence was consistent with a presumption of regularity in official acts. However, Pepper J found the presumption to be of little assistance to Unomedical as the presumption generally only applied in the context of challenging the validity of an administrative act. There was no such act in this case. Unomedical was found guilty.

The decision provides authority for interpreting the phrase, “such practicable means as may be necessary” in s 128(2). Pepper J described the drafting of the provision as “fraught” in that it required compliance with a general duty to “prevent or minimise pollution”, including where there may not be prescribed standards for a particular pollutant. In determining what comprises “such practicable means”, Pepper J found this to involve “common sense and specialist knowledge” which “will vary in any set of given circumstances.” A determination of whether “practicable means” were taken will be underscored by a consideration of reasonableness in the circumstances. In determining “practicable means” regard should also be had to:

- the nature of the risk
- the cause of the risk
- the state of the scientific and engineering knowledge and learning at the relevant time
- the means by which the air pollution could have been prevented or minimised

The second part of the phrase “as may be necessary” imposed a mandatory duty to take practicable means to prevent or minimise air pollution. It did, however, import a discretion in determining which “practicable means” may be appropriate in the circumstances.

The sentencing decision in 2011 was notable for its consideration of potential harm to the environment at [57]. The concept of potential or likely harm to the environment is particularly relevant to air pollution offences, given the often incremental and cumulative nature of air pollutants. While there was no “tangible immediate harm”,

the Court was still minded to take into account the potential for environmental harm caused by the discharge “in the absence of any knowledge or information as to its possible dispersion once it was emitted” at [64]. Unomedical was fined \$90,000, in addition to a publication order and an order to pay the Prosecutor’s costs.

Environment Protection Authority v Ravensworth Operations Pty Ltd [2013] NSWLEC 92 (appeal from Local Court of NSW)

Ravensworth further considered the issue of what standards should apply under s 128. *Ravensworth* was an appeal by the EPA against a dismissal of a charge by Singleton Local Court. Ravensworth had pleaded not guilty to a charge under s 128(2) of the *POEO Act* relating to dust caused by dragline operations at its mine site near Ravensworth in the Hunter region. Ravensworth had allegedly failed to wet mining devices and implement dust suppression standards. The Local Court had to consider whether a standard of concentration prescribed by the 2002 Regulation in relation to the emission of dust in this context existed. The EPA charged Ravensworth under the broader provision of s 128(2) on the basis no standard was specified. Ravensworth argued that a standard did exist under the 2002 Regulation and accordingly s 128(1) should apply rather than s 128(2). The Magistrate accepted Ravensworth’s submission and dismissed the charge.

At issue on appeal was whether the Magistrate had erred in law. This turned on whether the test methods under the 2002 Regulation could inform how s 128 operated. The EPA submitted that s 128 applied to all activities capable of emission. Section 128(1) applied where there was a measurable standard for the emission and s 128(2) applied where no such standard existed. The test method prescribed by the 2002 Regulation could only test for emissions from stationary sources. The dragline operations in question were not a stationary source, meaning no offence under s 128(1) would be made out. The EPA submitted that this justified charging Ravensworth under s 128(2).

Ravensworth argued that the table of General Standards of Concentration in Schedule 4 of the 2002 Regulation provided standards which could be applied to dragline operations as it provided standards for solid particles emanating from “[a]ny activity or plant (except as listed below)”. As a dragline operation could come within

the broad term of “any activity”, the general standard applied. The fact that the EPA chose Test Method 15 (TM-15), which cannot measure fugitive dust pollution, should have no bearing on how the provisions in the Act are construed. Indeed, “the administrative process of selecting a test method, which measures only stationary/point sources, cannot be used to confine the ambit of the relevant sections of the POEO Act, and the Clean Air Regulation” at [94]. The *POEO Act* and 2002 Regulation were unambiguous. It was not appropriate to start with the delegated legislation, the 2002 Regulation, in interpreting how s 128 should operate. Ravensworth further submitted that if the phrases “any activity” or “any plant” in s 128(1) were read down as only applying to stationary sources as the EPA contended, s 128(2) would necessarily have to be read down in the same way. Such a construction would import words into the section which had remained largely unchanged since the 1960s and was unwarranted at [84]-[85]. Sheahan J accepted Ravensworth’s submissions and the appeal was dismissed.

Section 64(1) POEO Act- breach of licence condition

A number of air pollution issues arise in prosecutions for breach of licence conditions.

Environment Protection Authority v Orica Australia Pty Ltd (the Ammonia Incident)
[2014] NSWLEC 107

Orica was charged with several offences under the *POEO Act* relating to events at Kooragang Island between October 2010 and December 2011 in which Orica pleaded guilty to all charges. The principle judgment was *Environment Protection Authority v Orica Australia Pty Ltd (the Nitric Acid Air Lift Incident)* (2014) 206 LGERA 239; [2014] NSWLEC 103 which concerned a charge under s 120(1) for water pollution. This was caused by a pipe failure in the air lift at one of Orica’s nitric acid plants on Kooragang Island which resulted in the release of nitric acid into surrounding water. Other incidents included:

- *Evaporator Incident*: ammonium nitrate released into the atmosphere owing to the failure of a pneumatic control valve at the ammonium nitrate plant

- *Jackhammer Incident*: ammonia released into the atmosphere due to a worker rupturing a pipe at the ammonia plant
- *Hexavalent Chromium Incident*: hexavalent chromium released during routine maintenance procedures at the ammonia plant
- *Ammonia Incident*: addressed below and
- *Ammonium Nitrate Solution Spill Incident*: overflow of weak ammonium nitrate beyond containment systems.

In *the Ammonia Incident* Orica pleaded guilty to breaching a condition of its EPL under s 64(1) of the *POEO Act* of failing to operate a plant and equipment in a proper and efficient manner at its ammonia plant on Kooragang Island. Orica released 285 kilograms of ammonia into the atmosphere over a 24 hour period as the tanks storing ammonia on its sites had been taken offline due to the Hexavalent Chromium Incident (see *Environment Protection Authority v Orica Australia Pty Ltd* [2014] NSWLEC 106). A number of workers in surrounding businesses and residents in the area experienced negative health effects, although none were particularly serious at [92]. Orica had to pay \$175,000 to the OEH for the Tomago Wetland Rehabilitation Project, in addition to a publication order and an order to pay the Prosecutor's costs.

The offences in question were under s 64(1) (breach of an EPL) and s 120 (prohibiting the pollution of waters) and therefore did not specifically come within the ambit of the air pollution provisions of the *POEO Act*. This shows the interrelated nature of air pollution with other environmental offences. Although the offences were not prosecuted as air pollution offences, the conduct certainly had ramifications for the surrounding air and atmosphere and this was considered by the Court in sentencing.

Environment Protection Authority v Morgan Cement International Pty Ltd [2016] NSWLEC 140

Morgan Cement manufactured cement products and kept concrete slag in a number of silos at their premises in Port Kembla. Morgan Cement pleaded guilty to an

offence under s 64(1) of the *POEO Act* of breaching a condition of its EPL. A flap valve on one of the silos became sealed shut, causing concrete dust to be emitted into the atmosphere and be deposited up to 1.5 kilometres away. The dust settled on cars, rooftops and vegetation in the surrounding area. There was no actual harm to humans. A real risk of respiratory or cardiovascular problems arose. The company was fined \$50,250 and was ordered to publish details of the offence and penalty and pay the Prosecutor's costs.

At par [86], Pepper J cited *the Nitric Acid Air Lift Incident* at [104] saying:

It is difficult to envisage industrial production that would not, having regard to the broad definitions ascribed to the various forms of pollution regulated by the POEOA, give rise to conduct that would otherwise, but for a proscribed licensing regime under that Act, be unlawful. Compliance with licence conditions is the price that entities must pay for permission to engage in potentially polluting manufacturing processes. The conditions imposed in any licence are aimed at maximising beneficial environmental outcomes and minimising environmental harm. They represent a balancing exercise between fostering economic growth and development, on the one hand, and protecting and preserving the environment now and for the future, on the other. Strict compliance with the conditions of any environmental protection licence is therefore necessary to ensure that this balance is achieved and that the objectives of the POEOA are met.

Environment Protection Authority v Steggles Food Mt Kuring-gai Pty Ltd
[2017] NSWLEC 178

Steggles was charged with a breach of an EPL condition under s 64(1) of the *POEO Act*. *Steggles* pleaded guilty to failing to maintain a flange joint in a refrigeration system, resulting in ammonia leaking from the joint. One employee required hospital admission and another was affected temporarily. The person who contravened the licence condition was unknown but was likely to have been an employee of *Steggles'* specialist refrigeration maintenance contractor. *Steggles* acted in conformity with industry practice and there was nothing it could have done to avoid the equipment failure. It determined after the incident to implement stricter measures than was industry practice. *Steggles* was fined \$84,000, was ordered to place and pay for a publication notice and was ordered to pay the Prosecutor's costs.

Tier 1 prosecution

Caltex concerned a spill of 157,000 litres of petroleum into Botany Bay from a storage tank located at *Caltex*'s Banksmeadow terminal in the Port Botany Industrial Precinct resulting in air pollution through emissions of petroleum vapours and odours. *Caltex* was charged with a tier 1 offence and a tier 2 offence. The EPA did not proceed with the tier 2 offence. *Caltex* pleaded guilty to the tier 1 offence under s 116(2) of the *POEO Act* of wilfully or negligently causing a substance to leak, spill or otherwise escape in a manner that harmed or was likely to harm the environment. The offence was caused by an employee who had come to work intoxicated, continued to consume alcohol whilst working and then attempted to make an oil transfer. *Caltex* was ordered place and pay for a publication notice. Additionally, in lieu of a fine *Caltex* was ordered to pay \$200,000 each to the City of Botany Bay Bushcare Project in Sir Joseph Banks Park and to the Department of Primary Industries to enhance recreational fishing opportunities in the area. *Caltex* was also ordered to pay the Prosecutor's costs.

Justice Sheahan considered the harm caused by the offence to be "minor and transient", save for short-term health impacts to an employee involved who chose not to wear appropriate safety equipment at [93]. In considering s 241(1), Sheahan J found subs (b), (c) and (d) to be of most relevance, as *Caltex* knew of the measures it could take to control the harm, it was able to foresee the harm and had control over the events giving rise to the offence. Ultimately, the harm was found to be "limited" and was therefore of moderate objective seriousness.

In cases such as *Steggles* and *Caltex* involving large industrial premises the offences were caused by individual employees or contractors. This shows the importance of maintaining knowledge and training in the work of employees and ensuring that wherever possible contractors are also well aware of their responsibilities in preventing air pollution.

A number of these cases demonstrate the challenge for the Court in considering potential harm to human health (see for example [108]-[110] in *Morgan Cement*). Although there may be no immediate harm to human health, there will generally be

the potential for it, given the fine nature of the particles. This is indeed one of the challenges of regulating air pollution. It is often transient in nature, yet pollutants may never fully dissipate as they may be taken into other media such as the oceans or soil.²⁷

Odour cases in the Land and Environment Court

Some recent prosecutions involving the emission of offensive odours have been heard by the Court. *Nulon* referred to above involved the emission of an offensive odour, but was charged as a breach of licence offence under s 64(1) rather than the offensive odour offence under s 129(1).

In *Environment Protection Authority v Wambo Coal Pty Ltd* [2016] NSWLEC 125, Wambo pleaded guilty to an offence under s 129(1). Wambo caused the emission of odorous fumes from blasting activities at its mine in Warkworth. The fumes travelled in a plume in a north to north-westerly direction from Wambo's premises. In sentencing, Sheahan J took into account the fact there was actual harm caused to six neighbouring residents, as well as potential harm to a further seven neighbouring residents. In both instances the harm was foreseeable but Wambo had no control over the wind carrying the fumes beyond its premises. There were practical measures which Wambo could have easily taken to prevent the harm. The offence was held to be at the low end of the middle range of objective seriousness. Despite Wambo having a prior conviction for a s 129(1) offence, Sheahan J found Wambo to be of good corporate character, to have shown remorse and to have entered an early guilty plea. Wambo was fined \$60,000, ordered to place and pay for a publication notice and to pay the Prosecutor's costs.

Environment Protection Authority v Hunter Valley Energy Coal Pty Ltd [2015] NSWLEC 120 was also a guilty plea to an offence under s 129(1) in circumstances similar to *Wambo*. Hunter Valley Energy Coal (HVEC) caused fumes to be emitted from blasting activities at its Mt Arthur coal mine near Muswellbrook. Actual harm was caused to both the environment and to people and was largely

²⁷ Arthur Stern (ed), *Fundamentals of air pollution* (2014, Elsevier) at 11.

foreseeable. HVEC implemented a number of measures to control the harm after the incident. As in *Wambo*, HVEC was found to have partial control over the causes of the offence, but did not have control over the wind direction during the incident. The offence was in the mid-range of objective seriousness. HVEC had no prior convictions, showed remorse and entered an early guilty plea. In contrast to *Wambo*, an order under s 250(1)(e) was made requiring HVEC to pay \$58,500 to the Muswellbrook Shire Council for the purpose of the Council's 2016 Wood Smoke Reduction Program. A publication order and an order to pay the Prosecutor's costs were also made.

An interesting civil enforcement case follows. *Lake Macquarie City Council v Australian Native Landscapes Pty Ltd (No 2)* [2015] NSWLEC 114 was a Class 4 matter where the Lake Macquarie City Council (the Council) sought a declaration that Australian Native Landscapes (ANL) had cleared native vegetation for its composting venture in Cooranbong which had caused an offensive odour under s 129(1) inter alia. The Council also sought an injunction restraining ANL from continuing its composting activities pursuant to s 252 of the *POEO Act* until an EPL had been obtained. Biscoe J ultimately made the declaration that ANL had caused the emission of offensive odours but stayed the grant of an injunction to provide ANL an opportunity to implement effective odour management measures.

Cumulative impact of multiple air pollution sources

An obvious but important point to make is that there are myriad sources of air pollution. Managing cumulative impacts is one of the major challenges of environmental law and policy in many areas of pollution.

At a general level one of the limits of environmental regulation and therefore of courts in Australia is that they must consider the individual circumstances of the matter before them. It can be difficult to take into account the cumulative impacts of a number of single point sources of pollution.

“Smoky vehicle” cases in the Land and Environment Court

Whether a judge can consider cumulative impacts will depend on whether evidence is adduced which addresses that issue. One illustrative example of the cumulative impact evidence before the Court in a criminal context was a prosecution for a “smoky vehicle”, *Environment Protection Authority v Bruce Panucci Transport Pty Ltd* (2003) 131 LGERA 119; [2003] NSWLEC 244. The defendant truck owner pleaded guilty to the charge of possessing a truck which emitted in excess of the emissions permitted under the Clean Air (Motor Vehicles and Motor Vehicle Fuels) Regulation 1997. The EPA adduced evidence of air quality generally in the Sydney basin and evidence available from published scientific literature of the health and environmental effects of car emissions particularly diesel emissions. This was taken into account by the sentencing judge. Panucci was fined \$16,500 and ordered to pay the Prosecutor’s costs.

In *Environment Protection Authority v Bowport All Roads Transport Pty Ltd (No 2)* [2009] NSWLEC 180 Bowport pleaded not guilty to five “smoky vehicle” charges under cl 9 of the 2002 Regulation. Bowport was fined \$80,000, had to place and pay for a publication notice and had to pay the Prosecutor’s costs. Building on the decision in *Panucci*, this case considered the cumulative impact of car exhaust when assessing environmental harm in sentencing.

JJ and ABS Investments Pty Ltd v Environment Protection Authority [2011] NSWLEC 199 was an appeal on sentence from the Local Court. JJ and ABS Investments had pleaded not guilty to a “smoky vehicle” offence under cl 9 of the 2002 Regulation. They were found guilty and fined \$8,000. The appellants were permitted to adduce fresh evidence on the appeal of sentence, with Craig J taking into account the limited financial means of the business’ owners. The applicant was ultimately successful and the fine was reduced to \$2,000.

“Smoky vehicle” cases in the Local Court

There have been 81 convictions in the Local Court under the POEO (Clean Air) Regulation 2010 in the last five years. The majority of these have been for “smoky vehicle” offences under cl 16 of the POEO (Clean Air) Regulation 2010.²⁸

Appeals from the Local Court to the Land and Environment Court relating to air pollution have been rare.

Other cumulative impacts – greenhouse gases

Greenhouse gases are not regulated in NSW under the legislation discussed above. They satisfy the broad definition of air pollution in the *POEO Act*. Gerry Bates poses the question in his book *Environmental Law in Australia*²⁹ as whether greenhouse gases are “pollution” under existing law concluding that they are not in part because of the substantial practical hurdles in doing so. The main greenhouse gases are carbon dioxide, methane, nitrous oxide, ozone and chlorofluorocarbons (CFCs).³⁰ Water vapour is also a greenhouse gas, although it is not often included in climate change discussions as it is not generally affected by human activity. The NSW government has implemented other policies which attempt to deal with the problem of greenhouse gases given their link to adverse climate change which is beyond the scope of this paper to outline. Some of these policies are identified in the Clean Air for NSW consultation paper referred to above.

Litigation aimed at limiting greenhouse gases because of their contribution to climate change has occurred in Australia at state and national levels. Australia (with 80 cases) is second to the USA (with 654 cases) in the number of cases concerned with climate change globally according to United Nations Environment Programme

²⁸ Environmental Protection Authority, “POEO Public Register – search for prosecutions and civil proceedings” <<http://app.epa.nsw.gov.au/casesapp/Searchresultprosecution.aspx>> accessed 9 March 2018.

²⁹ Gerry Bates, *Environmental Law in Australia* (9th ed, 2016, LexisNexis Butterworths) at 744.

³⁰ Parliament of Australia, “Greenhouse gases” <https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/Browse_by_Topic/ClimateChangeold/theBasic/greenhouse> accessed 9 March 2018.

(UNEP) in 2017.³¹ It is beyond the scope of this paper to consider comprehensively these types of proceedings in NSW and beyond and there is now extensive literature which does just that.³² By way of example of the types of cases heard in the Court I will refer to a judicial review case and a merit appeal case which considered greenhouse gases.

Gray v Minister for Planning & Ors (2006) 152 LGERA 258; [2006] NSWLEC 720

In *Gray v Minister for Planning* a judicial review challenge which argued that the Director-General of the Department of Planning had failed to take into account ecologically sustainable development (ESD) principles in his decision to accept the environmental assessment of the project under the now amended Part 3A of the *Environmental Planning and Assessment Act 1979* (EPA Act) was upheld. In light of the principle of intergenerational equity and the precautionary principle, ESD considerations required the decision-maker to take into account cumulative impacts including downstream greenhouse gas emissions when assessing a large mine project.

Following this decision, the NSW government introduced the *State Environmental Planning Policy (SEPP) (Mining, Petroleum Production and Extractive Industries) 2007* on 16 February 2007. The SEPP requires consent authorities to consider greenhouse gases when assessing development under Part 4 of the now amended EPA Act.

Hunter Environment Lobby Inc v Minister for Planning [2011] NSWLEC 221

Hunter Environment Lobby Inc v Minister for Planning was a merit appeal under s 75L of the EPA Act against an approval by the Minister for Planning for an

³¹ UNEP, "The status of climate change litigation – a global review" May 2017, 10 as cited in J Peel and H M Osofsky, "Climate change litigation: lessons and pathways" (2017) 29(11) *Judicial Officers Bulletin* 99.

³² For example, J Peel and H M Osofsky, "Climate change litigation: lessons and pathways" (2017) 29(11) *Judicial Officers Bulletin* 99; J Peel and H Osofsky, *Climate change litigation: regulatory pathways to cleaner energy* (2015, Cambridge University Press); B Preston, "Climate Change Litigation in the Land and Environment Court of New South Wales and Other Courts" (Paper presented at ACPECT Conference, Christchurch, New Zealand, 20 August 2009); D Hunter "The implications of climate change litigation: litigation for international environmental law-making" in W Burns and H Osofsky (eds), *Adjudicating climate change: state, national and international approaches* (2009, Cambridge University Press) 357.

expansion of the Ulan coal mine. The Applicant submitted that the principle of ESD, and in particular the principle of inter-generational equity should have been considered in approving the expansion. It ultimately sought conditions requiring an offset for scope 1 emissions (direct greenhouse gas emissions) and scope 2 emissions (indirect emissions from the consumption of electricity produced by coal from the mine) caused by the mine. As a purpose of the *EPA Act* was to protect the environment, the imposition of conditions on the approval to address greenhouse gases was arguably within power. There was agreement in the expert evidence adduced that scope 1 emissions were a direct consequence of the mining activities authorised by the project approval. A condition requiring the offsetting of scope 1 emissions was therefore within the scope of the Minister's power. By contrast, scope 2 emissions resulting from how the coal was used could not be controlled by the mine and was therefore beyond the scope of the development.

Leadership of Supreme Court of India

The genesis for this paper was a presentation at a conference in 2017 hosted by the National Green Tribunal of India. The Indian court experience demonstrates the substantial leadership shown by the Supreme Court of India in numerous cases concerning air pollution.

Each nation has its own legal, political, social and economic structures which can help or hinder the achievement of satisfactory air quality. One striking legal difference between India and Australia is their respective constitutions. A number of the major public interest environmental cases before the Supreme Court of India were enabled by Article 32 of the Constitution of India (1950). This provides the Supreme Court with jurisdiction to determine cases enforcing fundamental rights conferred under the Indian Constitution, such as the right to life. The Australian Constitution lacks such broad rights-based provisions.

In many of the Indian cases the applicant is the great environmental public interest advocate MC Mehta. Examples include the Taj Mahal case³³ determined in 1997.

³³ *M C Mehta v Union of India & Ors (Taj Trapezium matter)* [1997] 2 SCC 353 – Petition responding to the impact of acid rain on the Taj Mahal and other sites in the Taj Trapezium zone and seeking the

More recently, the New Delhi air pollution case³⁴ resulted in orders made in 2015 restraining the use of diesel motor vehicles in parts of New Delhi.

In the cases mentioned the remedies granted by the Indian Supreme Court have been far reaching in effect, requiring substantial actions by many companies and individuals to reduce air pollution. There is no doubt that the Indian Supreme Court leads the way in innovative and wide-ranging remedies to combat the many environmental problems which have come before it. Several of these remedies are measures I can only dream about applying as a state environmental court judge in Australia. The Indian Supreme Court cases also highlight the importance of effective remedies being available to a court to respond to pollution of any sort.

Challenges for courts

There are many factors which determine whether courts can effectively consider and respond to air pollution. A few of these are identified by asking the following questions:

- Does a statute enable adequate criminal enforcement by a regulator?
- Does a statute enable regulator and third party civil enforcement?
- Does a statute provide adequate remedies to respond to air pollution offences?
- Does expert evidence adduced enable the Court to deal with **all** impacts of the air pollution before it?

relocation of polluting factories, particularly those burning coke and coal. The Supreme Court ordered the relocation of 292 factories while the industries that were allowed to continue operating in the area were connected with the natural gas supply network.

³⁴ See originally *M C Mehta v Union of India & Ors (Vehicular pollution matter)* [1991] 1 SCR 866 – Several orders and judgments have been handed down by the Supreme Court since the 1990s restricting the use of lead-based petrol in New Delhi, particularly among buses, and improving access to natural gas for all consumers. As a result of this case New Delhi became the first city in the world whose entire public transport fleet uses compressed natural gas as fuel.

The air pollution cases outlined above demonstrate particular challenges in the Land and Environment Court where difficult issues of statutory construction can arise in a criminal context. Air pollution offences also pose evidentiary challenges in demonstrating in a criminal context the potential for environmental harm for a dispersed pollutant. A related evidentiary challenge is the ability of a prosecutor to adduce evidence which addresses cumulative impact. A prosecutor bears an evidentiary burden of demonstrating matters beyond reasonable doubt and expert evidence adduced must meet that high standard if disputed by a defendant.

The extensive remedies available under the *POEO Act* have been briefly outlined and these have been utilised in a number of cases but not in all. To be adopted successfully requires that the parties confer and bring appropriate orders before the Court at sentencing. One unexplored area to date is monetary benefit orders. Finalisation of a protocol as provided under s 249(2A) would assist prosecutors to consider an application for such orders and inform defendants of what may be sought.

A final observation is that air pollution often arises as a result of other pollution occurring, most obviously water pollution in terms of the cases referred to above. Evidence establishing such important links is necessary to enable the Court to be apprised of all aspects of environmental harm resulting from a pollution incident.