

What is waste?

Introduction

The question of 'what is waste?' is a crucial issue in the jurisdictions with which I am most familiar in Australia. It is also central to the waste regulatory framework in the European Community where it has been the subject of a significant amount of litigation and academic analysis. And, it seems, the debate is also on in New Zealand following the introduction by the Greens into the New Zealand Parliament of the private member Waste Minimisation (Solids) Bill. It is also not a straightforward issue. As the New Zealand Waste Strategy recognizes 'waste is not a uniform substance; it is created in many ways and can be difficult to define'.¹

I am an Australian environmental lawyer and will restrict my comments to recent changes in waste legislation in New South Wales. I will also consider some of the decisions of the New South Wales and European Courts which have engaged in an extended and ongoing debate about the meaning of waste.

Why does the definition matter?

Why then is the definition so important? In jurisdictions like the EC and New South Wales, whether a material or substance is 'waste' is the trigger for regulation, and its attendant prohibitions on unlawful disposal, requirements for licensing, and controls on transport. Definitions of waste also includes recovery processes, but when in a recovery process does waste cease to be waste and become a raw material available for a beneficial use? The arguments about waste turn on this issue.

For example, the definition of 'waste' was at issue in the recent case of *Environment Protection Authority v Hardt*² before the Chief Judge of the NSW Land and Environment Court. In that case, Mr Hardt had an access problem to his land at Wyee in the hinterland of the Central Coast of New South Wales. He decided to construct a road across a gully on his land which required great quantities of fill. Large quantities of waste were brought onto and disposed of on the defendant's land by various demolition and waste companies, including one trading under the slightly obvious name of 'Skip the Tip'. A survey estimated the filled area was about 300 meters long and up to 33 meters wide. The area covered by fill was nearly 5000m² with a total volume of up to 8,600m³ and was raised up to 15 meters from the gully floor. The fill comprised a large variety of waste materials including oil containers, bottles, batteries, sheeting, pipes, metal, plastic, fibrosheeting, bricks, cut vegetation, building timber, car bodies and municipal wastes.

¹ Ministry for the Environment *The New Zealand Waste Strategy* (March 2002), 6

² *Environment Protection Authority v Hardt* (unreported, NSW Land & Environment Court, Preston Cj, 19 July 2006)

Mr Hardt was charged and convicted of committing an offence under the NSW *Protection of the Environment Operations Act 1997* of permitting land that cannot lawfully be used as a waste facility, to be used as a waste facility.³ Mr Hardt did not hold an environment protection licence or other lawful authority to use his land as a waste facility. The meaning of waste and the defendant's belief about the nature of materials he permitted to be dumped on his land as base material for the road was relevant to whether he had lawful authority to do so and whether he could make out a defence of honest and reasonable mistake of fact to this strict liability offence. In the result, the Court found the material clearly to be waste and there was a mistake of law, rather than fact, which did not give rise to this defence.

Consider another NSW example which concerned the proper classification of waste. In *Environment Protection Authority v Australian Waste Recyclers 1 Pty Ltd*⁴ the defendant, AWR, pleaded guilty to an offence under section 64(1) of the NSW *Protection of the Environment Operations Act 1997* in that it breached a condition of its environment protection licence in that it caused hazardous waste generated at the former BHP Steelworks at Newcastle to be received at its St Marys premises for storage, treatment, processing, re-processing and/or disposal.

AWR received at its premises 6449 tonnes of coal tar waste generated by BHP at the BHP Steelworks site at Mayfield, Newcastle which it was not licensed to receive. BHP, as generator and consignor of the coal tar waste classified the waste in accordance with the NSW EPA's Waste Classification Guidelines as 'hazardous' based on its high concentrations of PAHs (known to be carcinogenic). Brambles then contracted with BHP to remove the hazardous waste; Brambles contracted with Enviro Seen to dispose of the waste; and Enviro Seen contracted with the defendant AWR to receive the waste at its St Marys premises.

It appears that one of AWR's employees took the view that the only reason the waste was classified as 'hazardous' was as a precaution and that 'hazardous' was the classification Brambles wanted for the waste leaving the Newcastle site for commercial reasons and that was why it was so classified on the waste data forms. AWR took the view that the waste was bitumen or asphalt and could be classified as 'inert waste'. AWR received nearly \$2.5M for the receipt of this waste, at a profit in excess of \$1M. The Court found the conduct of AWR deliberate, calculated and undertaken for financial gain with complete disregard for public safety or the environment. The Court imposed a penalty of \$150,000 (based on a maximum of \$250,000) plus a daily penalty totaling \$127,000 for its continuing breach of its licence.

³ Section 144(1) of the *Protection of the Environment Operations Act 1997* (NSW)

⁴ *Environment Protection Authority v Australian Waste Recyclers 1 Pty Ltd* (unreported, NSW Land & Environment Court, Cowdroy J, 22 December 2005)

Definitions of waste

Definitions of waste generally start with the notion of 'discarding' or 'disposing'. For example, the New Zealand Waste Strategy defines waste as 'any material, solid, liquid or gas, that is unwanted and/ or unvalued, and discarded or discharged by its owner'. In the EC, the definition in the Waste Framework Directive is 'any substance or object... which the holder discards or intends to discard'. In NSW, the definition of waste in the Dictionary of the *Protection of the Environment Operations Act 1997* includes 'any substance (whether solid, liquid or gas) which is discharged, emitted or deposited' and any discarded, rejected, unwanted, surplus or abandoned substance'. The definition under the Victorian *Environment Protection Act 1970* also includes these words.

However, the definition does not stop there. It extends to the reuse, recovery and recycling of waste. The New Zealand Waste Strategy, for example, states, in relation to its definition of waste, that 'this definition recognises that what one person or organisation regards as waste can be a useful resource when used again for a beneficial purpose'. In New South Wales, the definition states that 'a substance is not precluded from being a waste for the purposes of this Act merely because it can be reprocessed, reused or recycled'. The definition extends to 'any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale, recycling, processing, recovery or purification by a separate operation from that which produced the substance' and has recently been extended further. But we will come to that later.

In the EC, the definition of waste in Article 1 of the Directive contains two elements. The first comprises 'any substance or object... which the holder discards or intends or is required to discard'. The second is the requirement that the substance or objects falls into categories set out in Annex I. These categories are of a type that are likely to be discarded, such as residues, off-specification and date-expired products, contaminated products and so on. Article 4 requires Member States to ensure that waste is recovered or disposed of without threat to human health or the environment. Disposal and recovery operations are listed in Annex II and indicate the processes that are intended to be subject to Article 4. The Directive contains two different regulatory objectives. First, there is an attempt to define waste based on its potential danger to the environment and for which specific legislation will be required to accommodate a wide range of situations in which waste might occur or require controlled handling (Article 1 and Annex I). Second, the Directive specifies certain waste-handling processes that Member States must regulate in accordance with the general principles in the Directive (Article 4 and Annex II).

The interpretation of the Directive involves a tension between the apparent need to rely on the ordinary meaning of the word 'discard' in the absence of legislative definition and the difficulty of reconciling that ordinary meaning with the evident intention of the Directive to impose a

regulatory framework on both disposal and recovery procedures.⁵ This tension has been evident in the decisions of the European and New South Wales Courts.

Some questions

How far then should the definition of waste extend? How far down the waste processing and recovery process? When does waste cease to be unwanted, unvalued, discarded or discharged and become a valued resource which can be used again for a beneficial purpose? When is a recovery operation complete and waste ceases to be a waste? What should be the trigger for this change from 'waste' to 'not waste'?

This matters in those jurisdictions where the definition of waste triggers regulation and its attendant civil penalties and criminal offences, fees costs and administrative burdens. Evidence that it matters is clear from the fact that this issue has generated over 15 cases before the Courts in the EC since 1990 and a similar number before the NSW Land & Environment Court, where the definition has been at issue. It also matters because there is a risk that over-regulation of waste may create a disincentive for businesses involved in the reuse, recovery and recycling of waste. Good regulation should aim to avoid placing excessive costs on both the regulated and the regulators in the course of achieving its objective.⁶

As one academic in the UK has put it:

'The problem with defining 'waste' is the extent to which a definition which appears to turn on the 'unwanted' nature of the substance or object will exclude substances which are still capable of being put to use even if unwanted or not primarily wanted by the producer. In such circumstances their treatment or reuse may still represent a potential threat to the environment.

...

*The basic problem is that, the more the words are interpreted as requiring an intention to abandon or that substances or objects are excluded if they are still capable of being of being put to a use, the more processes and activities will be excluded even though they need to be controlled because of their potential risk of damage.'*⁷

⁵ Cheyne, Illona 'The Definition of Waste in EC Law' 14 *Journal of Environmental Law* 61, at 66

⁶ Cheyne, Illona 'The Definition of Waste in EC Law' 14 *Journal of Environmental Law* 61, at 63

⁷ Illona Cheyne and Michael Purdue 'Fitting the definition to purpose: The search for the satisfactory definition of waste' 7(2) *Journal of Environmental Law* 149 at 152

Some examples

Lets consider the following examples, all of which have been before the Courts in either Australia or the EC. Are the following 'wastes' which should be the subject of regulatory control? Obviously the answer turns, in part, on the interpretation of the particular legislation, but these examples still illustrate the challenge of getting the definition of waste right.

- diesel product and other fuel products recovered from diesel oil and lubricating oils removed from Navy establishments in Sydney and used for fuelling waste transport trucks and for sale (*Farrell v A.L.Y.P Enterprises Pty Ltd*⁸)

This material was held not to be waste. This was an early decision where waste was simply defined as 'effluent garbage or trade waste'. The Defendant was prosecuted for breach of the NSW Waste Disposal Act 1970 for occupying a waste disposal depot which had not been the subject of a certificate of registration. The Court accepted that what was stored at the Defendant's premises was not relevantly 'waste', but reclaimed or recycled product eg. diesel fuel for use by the Defendant's transport trucks or paint or grease or detergent for use by the Defendant in its business or for sale by the Defendant. The Court commented that 'it would appear logically and legally possible for material that originates as waste to become non-waste eg. by virtue of some reclaiming, recovery or recycling process'.

- blast furnace slag from Port Kembla steelworks sold and used as permeable material suitable for the construction of base course and drainage blanket for engineering works such as road making, pavement and heavy filling (*Wollongong City Council v Australian Iron and Steel Pty Ltd*)⁹;

This material was held to be waste. The proceedings related to a declaration of the meaning of a development consent condition which require permission to be obtained before the transport of waste materials. 'Waste materials' was the term used in a development consent condition and it was given its ordinary meaning (of anything unused, unproductive or not properly utilised) but was interpreted in the context of the development consent. The fact that the material had a useful purpose was held to be coincidental and of no consequence from the point of view of environmental control and protection to which the conditions were being directed.

⁸ *Farrell v A.L.Y.P Enterprises Pty Ltd* (unreported, NSW Land & Environment Court, Bignold J, 12 July 1991)

⁹ *Wollongong City Council v Australian Iron and Steel Pty Ltd* (unreported, NSW Land & Environment Court, Holland J, 22 September 1988)

- construction and demolition material which by a process of crushing, grinding and separating was made suitable as structural fill and used for particular rehabilitation works for the rehabilitation of the Huntley Colliery (*Environment Protection Authority v HTT Huntley Heritage Pty Ltd*¹⁰)

This case concerned a prosecution for breach of licence condition. The defendant submitted that from the defendant's perspective the construction and demolition material was neither surplus or unwanted under the definition of waste in the Act. It was, instead, engineering material, required for the rehabilitation of the premises. Senior Counsel for the defendant submitted that the definition must be applied from the vantage point of the defendant, in other words 'one man's trash is another man's treasure'. The Court did not agree and found that the construction and demolition material character as waste remained even though it was material which was capable of being reprocessed, reused or recycled.

- recovered paper solids, waste paper sludge and other waste produce derived from the process of pulping timber product used as a soil conditioner on agricultural land in Shoalhaven NSW (*Ryan & Anor v Jarret & Anor*¹¹)

This case concerned a challenge to the use of these materials without a development consent and environmental impact statement. The Respondent argued the material was not waste because it was not discarded or refuse material, meaning unwanted material which results from a process. The Court did not agree, as the relevant definition of waste in Schedule 3 of the Environmental Planning and Assessment Regulation 2000 included any material which results from a process which itself can be used.

- scrap metal including unsheathed copper left over from the manufacturer of copper windings, fragments of cable, ferrous material, ferrous scrap and mixed scrap collected and transported for sale on the commodity market, marble rubble and debris, pitch obtained from emissions produced by electro-static filters used in cooking ovens, to be disposed of by burning, and 'Sansa' (olive oil residues) (*Tombesi and Others*¹²)

All were considered by the European Court of Justice to be waste. The argument made on behalf of the transporters of scrap metal was that the producer or holder of a substance does not discard or intend to discard it if he treats it as if it were part of the normal commercial cycle. Where items of scrap metal are a perfect substitute for a raw material such as raw copper or

¹⁰ *Environment Protection Authority v HTT Huntley Heritage Pty Ltd* (unreported, NSW Land & Environment Court, Pearlman J, 11 April 2003)

¹¹ *Ryan v Jarret* (unreported, NSW Land & Environment Court, Pain J, 13 April 2006)

¹² *Tombesi and Others* [1998] Env.L.R 59

raw iron they did not constitute waste, and it should make no difference whether they reach the smelter either directly or through one or more specialist intermediaries who do not alter their composition. The Court disagreed and held that where a residue cannot be used in a normal industrial process without undergoing a recovery operation it must be regarded as waste until such time as it is recovered. The Court however acknowledged that

'the distinction between recovery of waste and normal processing of raw materials is somewhat fragile. In economic terms waste destined for recovery and use as a substitute raw material in an industrial process is a raw material even before it is recovered. It is, for example conceivable that a producer might, depending on commercial conditions, switch to the use of a substitute raw material and even adapt his process to accommodate a residue or by-product directly, integrating the 'recovery' operation into the normal process. Equally a manufacturer may need to treat or refine a naturally occurring primary raw material before he uses it in a production process, yet this would presumably not be considered a recovery process.'

The potential extension of the argument is that all residual products that are not the primary goal of a production process constitute waste. However, waste regulation in EC and in Australia does not seek to regulate the processing, transport and storage of all products which may be harmful to the environment - it merely regulates waste, ie. substances or objects which are disposed of or which under a recovery process.

- recycling of scrap metal by processes including sorting, separating, fragmentising, cutting, shearing, crushing, compressing and baling and then used as feedstock in a furnace without any further processing (*Mayer Parry Recycling Limited v Environment Agency*¹³)

Scrap metal in its various processed forms was held to be waste under the Directive 91/156 and the domestic legislation that implemented it in the UK, the Environmental Protection Act 1990 and the Waste Management Licensing Regulations 1994. The Court found that once the material was restored to a form which was suitable for sale as raw material to steelworks or other manufacturers, the presumption was that the task of recovery was complete and the material ceased to be waste. The plaintiff placed weight on the meaning of 'discard' in the definition of waste and argued that materials at each stage of the recovery process were not discarded as they were an integral part of the commercial metal recycling industry and should not be considered waste. Although this argument was not accepted, the Court recognised the difficulty in drawing a clear line between the recovery operations and the industrial operations for which the recycled scrap is to be used as a raw material.

¹³ *Mayer Parry Recycling Limited v Environment Agency* [1999] Env.L.R. 489

- LUWA bottoms result from a distillation process, the bottoms being left at the bottom of the distillation column. They have a high calorific value, comparable to that for first-grade coal and are used as a fuel in the cement industry (*ARCO Chemie Nederland Ltd et al v Minister van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer*¹⁴)

- wood residues from the construction and demolition of buildings containing toxic substances reduced to wood chips, then ground into powder which was finally used for fuel to generate electricity - (*ARCO Chemie Nederland Ltd et al v Minister van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer*)

- solvent and liquids derived from waste sources reprocessed to make a fuel (Cemfuel) for use by the cement industry as an alternative fuel to coal and then burnt in a cement kiln (*Castle Cement v The Environment Agency*¹⁵).

The UK High Court of Justice, Queens Bench Division found Cemfuel to be a waste and not recovered until it is used as fuel or other means to generate energy. That operation does not take place until Cemfuel is so used by a cement producer. The Court found that Cemfuel is a waste for the purposes of the Directive irrespective of the processes used to produce it from substances which are indisputably waste and irrespective of the differences between it and its constituent substances. Its constituent elements are not 'recovered' until the Cemfuel is incinerated. Following the precedent of the European Court in Arco, the Court stated that 'the carrying out of a 'complete' recovery operation, whatever that may be, does not necessarily result in the substance ceasing to be a waste. In Arco, the Advocate-General commented that 'if waste material is recovered or reprocessed with the result that a substance is produced that no longer poses a danger typical of waste and therefore does not pollute the environment any more than, but at most in the same way as, a primarily raw material, that substance probably does not have to be regarded as waste in the sense that it must be monitored or that its re-use must be authorised'. However, the Brunston J queried what is 'the danger typical of waste' and how does one select the primary raw material with which the comparison is to be made?

NSW Amendments

Before concluding, let me take you back, for a moment, to Australia and the recent amendments to the definition of waste in the NSW *Protection of the Environment Operations Act 1997*. The definition was amended to add the words 'any processed, recycled, reused or

¹⁴ *ARCO Chemie Nederland Ltd et al v Minister van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer* [200] ECR I-4475

¹⁵ *Castle Cement v The Environment Agency* (unreported, High Court of Justice, Queens Bench Divisions, Burnton J, 22 March 2001)

recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations'.

The Waste Regulation 2005 prohibits the application of 'residue waste' to land for the purpose of growing vegetation, including but not limited to land used for agricultural, horticultural, silvicultural, pastoral or environmental rehabilitation purposes. Residue waste is defined as

- '(a) fly ash or bottom ash from any furnace,
- (b) lime or gypsum residues from any industrial or manufacturing process,
- (c) residues from any industrial or manufacturing process that involves the processing of mineral sand,
- (d) substances that have been used as catalysts in any oil refining or other chemical process,
- (e) foundry sands and foundry filter bag residues,
- (f) residues from any industrial or manufacturing process that involves the refining or processing of metals or metallic products,
- (g) any substance that is hazardous waste, industrial waste or Group A waste.'

The Amendment Act also introduced a new offence of land pollution, which as the Second Reading Speech for the Bill explained, 'will ensure that companies will no longer be able to get off on a technicality by arguing that a harmful substance is not waste'.¹⁶ The terms 'land pollution' or 'pollution of land' are defined to mean:

'placing in or on, or otherwise introducing into or onto, the land (whether through an act or omission) any matter, whether solid, liquid or gaseous:

- (a) that causes or is likely to cause degradation of land, resulting in actual or potential harm to the health or safety of human beings, animals or other terrestrial life or ecosystems, or actual or potential loss or property damage, that is not trivial, o
- (b) that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter,

But does not include placing in or on, or otherwise introducing into or onto, land any substance excluded from this definition by the regulations.'

¹⁶ Protection of the Environment Operations (Amendment) Bill, Second Reading Speech, Legislative Assembly, 13.9.2005

As the Second Reading Speech for the Bill explained, these amendments were introduced to 'prevent environmental harm caused by the dangerous reuse of waste, particularly as fill, fertilizer and/or fuel'. This responded to the growth in the land application of food and other wastes as fertilizer and fill material, some of which was contaminated or presented a risk of harm to human health and the environment. The Second Reading Speech also recognized that it is important that appropriate and beneficial reuse and recycling is encouraged and does this by retaining the power to exempt certain materials from the regulation. And so, I think, the debate will continue.

Conclusion

The approach that has developed in the EC and in New South Wales attempts to strike a balance between a definition of waste which is too restrictive (and discourages innovation in the reuse, recycling and recovery of waste) and a definition which is not restrictive enough (and omits new forms of waste generated by and used in recovery processes which may still present a risk to human health and environment). The solution the Court has been developing is twofold. First, the definition of waste must not be too restrictive in scope but the term discard must be retained as an essential condition of classifying substances as waste. Second, the obligation to deal with waste safely must continue throughout the recovery operation and the recovery operation is not complete until the environmental risks in the waste is eliminated. Efforts to define waste purely according to disposal and recovery operations are counterproductive and run the risk of being over-inclusive with the attendant regulatory costs.¹⁷

As I understand it, New Zealand does not have comprehensive legislation dedicated to the management and minimisation of wastes. The New Zealand Waste Strategy recognises the need for legislation to support its programmes and targets. It also acknowledges the limitations of the *Resource Management Act* which has as its focus managing the environment effects of waste (*end of pipe*), rather than regulating how activities are carried out.¹⁸

One of the challenges for New Zealand in debating the Waste Minimisation Bill and the future of waste regulation in this country, is to strike the right balance in the legislative drafting to regulate waste and its potentially harmful environmental and public health outcomes, without discouraging the reuse, recycling and recovery of waste which is, after all, the goal of our waste minimisation and 'zero waste' policies.

Thank you.

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¹⁷ Cheyne, Illona 'The Definition of Waste in EC Law' 14 *Journal of Environmental Law* 61, at 72

¹⁸ Ministry for the Environment *The New Zealand Waste Strategy* (March 2002), 27