23 DISPOSAL OF WASTE TO SEWERS

OVERVIEW

We continue to deal with disposals of waste to the sewerage system in a self-contained chapter. The main reason for this is because it is a separate form of waste disposal with its own particular and unique regulatory regime. The treatment of wastes at sewage works is an integral part of general policies on waste management and disposal and protection of the natural environment. The alternative to such disposal (waste minimization apart) is often some form of direct discharge to the environment, so sewage treatment offers an important weapon in the search for the best practicable environmental option (BPEO).

Before reading this chapter, you should be aware of the regulation of water pollution and water quality (Chapter 17), the general roles of the Environment Agency and Ofwat, and the functions of sewerage undertakers (Chapter 4), and in particular the specific provisions in the Environmental Permitting (England and Wales) Regulations 2016 which govern discharges of sewage effluent (see Chapter 14).

At the end of this chapter you will be able to understand:

- The respective roles of the Environment Agency and the economic regulators.
- How discharges to sewers are controlled and paid for.
- How EU water quality law affects sewerage undertakers.

Sewage disposal and environmental protection

In addition to the introductory points made above, there are other links with environmental protection that justify detailed consideration of sewage disposal. Sewage treatment is only an intermediate step in the ultimate disposal of waste and the operators of sewers and sewage works must dispose of their own wastes. This will often (though not always) be after a treatment process and will involve a combination of liquid discharges into watercourses or the sea, the spreading of sludge on land and incineration. Indeed, sewage works have been responsible for the low quality of many of our inland and coastal waters. The Government announced a commitment to phase out the dumping of sewage sludge at sea by 1998 at the Third International Conference for the Protection of the North Sea in March 1990 (an obligation later contained in the Urban Waste Water Treatment Directive (91/271) and greater attention is now paid to treating sewage effluent and disposing of it safely on land or in inland watercourses.

Sewerage and sewage treatment have always been closely related with the water industry and most books have tended to treat discharges to sewers as a part of the law on water pollution. This can be explained on the grounds that discharges to sewers are liquid and that most sewage works themselves discharge into watercourses, but it also relates to the historical institutional connections. Sewerage, public water supply, and the prevention of water pollution have often been carried out by the same bodies, most notably between 1974 and 1989 when the 10 regional water authorities in England and Wales carried out all functions in relation to water and sewage on an integrated basis. This included regulating discharges both to the sewers and to surface waters.

Since 1 September 1989 there has been a reversion to a system of split responsibilities for liquid effluent. Private sewerage undertakers own and operate the sewerage network and the sewage works, as well as regulating discharges to sewers, whilst the Environment Agency regulates discharges to the natural environment and has responsibility for combating surface water pollution.

Trade effluent discharges

The sewerage undertaker plays its most important environmental protection role in the regulation of trade effluent discharges, although certain dangerous discharges are regulated by the Environment Agency (see below). Measured in terms of pollutant load, a far greater quantity of liquid industrial effluent is discharged into the sewers than directly into surface waters or by any other disposal route.

The regulatory regime relating to discharges to sewers is an old and somewhat rudimentary one, though there have been periodic developments designed to bring it more up-to-date. It involves a rather basic system of individualised consents set by the operators of the sewers, involving little input from other bodies or from the public at any of the various stages of policy-making, standard-setting, consent-setting, or enforcement. The legislation is contained in the Water Industry Act 1991, to which all section numbers refer.

It is a criminal offence to discharge any trade effluent from trade premises into sewers unless a trade effluent consent is obtained from the sewerage undertaker (s. 118). 'Trade effluent' and 'trade premises' are defined widely in section 141 to include all liquid discharges from industry, shops, research establishments, launderettes and agriculture, except for domestic sewage. The Secretary of State has a power in effect either to widen or narrow the definitions of 'trade effluent' and 'trade premises' so that certain discharges can, by order, either be included or excluded where there is reason to do so (s. 139).

It is also an offence to breach the terms of a consent. This is a unique system of control in that it is the only example in this country of a private body exercising regulatory functions with regard to environmental protection.

Applying for a trade effluent consent

The discharger applies for a trade effluent consent by serving a trade effluent notice on the sewerage undertaker at least two months prior to the commencement of the discharge. This notice is effectively an application and must state the nature and composition of the proposed effluent, the maximum daily volume and the maximum rate of discharge in order to enable the sewerage undertaker to establish its likely effect. The Water Act 2003 contains a provision which would require that the notice must set out the steps that the discharger proposes to take, for example, by pre-treatment, to minimize the polluting effects of the discharge both on any controlled waters, and on sewerage services (s. 119(2)(ab)), but this has never been brought into force.

The sewerage undertaker then has a discretion whether to grant or refuse consent, though if the sewerage system can cope with the discharge, it is normal for consent to be granted subject to conditions. The scope of these conditions is laid down in section 121. They may include such matters as the place of discharge, the nature, temperature, and composition of the discharge (including requirements as to the elimination or maximum concentration of any specified constituent), the rate and timing of discharges, and ancillary matters such as the fixing of meters to register the volume of the discharge, the monitoring of the nature and volume of the discharge, and the keeping of records. Mirroring the prospective changes to s. 119, s. 121(1)(ba) also allows conditions to be set regarding pre-treatment, but these, made by the Water Act 2003, have also not been brought into force. Most importantly, conditions on the payment of effluent charges will also be included. Conditions must be imposed to meet the requirements of schedule 4 to the Urban Waste Water Treatment (England and Wales) Regulations 1994, although it appears in practice that there is little discretion in doing so. In line with the changes made to the application procedure which we covered earlier, mitigation measures may also be included as consent conditions.

It is not usual to attach conditions which require the fitting of specified treatment plant. The normal practice has been to specify the effluent standards that must be met and to leave it to the discharger to determine how to meet those standards, albeit often with advice from the sewerage undertaker. One reason for this has been a widespread belief that most effluent is better and more efficiently treated at the sewage works than at each factory, but it also reflects the policy of preserving some element of choice for producers. This may be the reason why the changes made under the Water Act 2003, discussed earlier, while they may in a reflexive way encourage dischargers to undertake more pre-treatment, do not fundamentally change this practice and have never been brought into force. An impact of the Urban Waste Water Treatment Directive, however, is that the increased cost of treating effluent to the higher standards required is being reflected in much higher trade effluent charges; as a result, many more firms are likely to do more pre-treatment work at their sites to lower their costs.

How are consents set?

Since discharges to sewers are distinct from other discharges in being to an artificial environment, the matters that are taken into account in setting a consent differ from other consents and licences. In particular, environmental protection is only one factor.

The objectives of trade effluent control are set out clearly in a booklet produced by the industry association, Water UK,entitled *Trade Effluent Discharged to the Sewer: Guidelines for Control and Charging*.[1] They are that the system of control seeks:

(1) To prevent discharges to sewers causing:
- (a) harm to the sewerage system and the personnel who work in it;
- (b) interference with sewage works and their efficient operation (for example, most sewage works operate by a biological process and care has to be taken not to neutralise that process);
- (c) unacceptable effects on water resources generally from the residues and effluent of the sewage treatment process; and
- (d) unacceptable storm sewage discharges to watercourses.

(2) To provide data on discharges to be kept, so that dischargers can know how to improve their trade effluent control and sewerage undertakers can plan for future sewerage provision and operate the treatment process efficiently.
(3) To ensure that traders pay reasonable charges, bearing in mind the sewerage undertakers costs.

With these factors in mind, the consent will in general be set by reference to the receiving capabilities of the sewer and sewage works. If the works are already overburdened, the consent may be refused or subject to tight limits, whereas if there is spare capacity at the works, the limits will be much more generous. Certain pollutants, such as heavy metals or persistent chemicals, may be unsuitable for sewage treatment and may be banned from the discharge. The discharger may then have to pre-treat the effluent to remove these constituents, or find an alternative method of disposal. Other relevant matters are taken into account, such as the sewerage undertaker's own potential liability for discharges from the works under the Environmental Permitting Regulations 2016 and the requirements of EU law.

The sewerage undertaker has a power to vary a consent unilaterally by giving two months' notice to the discharger (s. 124). This enables it to take steps to meet the terms of the consent for the sewage works set by the Environment Agency. Variation is a fairly common occurrence, as sewerage undertakers have renegotiated consents inherited from the regional water authorities and established a more uniform system for their areas and also as, formerly, the NRA and now the EA tightened consents (now, environmental permits) relating to discharges from sewage works. It should be noted, however, that there is no power for the sewerage undertaker to revoke a consent.

Variation of a consent is, however, possible only after two years have elapsed from the grant of the consent or the last variation. Exceptionally, a variation may be made within this period if it is necessary to provide proper protection for people likely to be affected by the discharge. In this situation, compensation will be payable to the discharger unless the variation was necessary as a result of a change of circumstances unforeseeable at the time of the grant of the consent or its last variation (s. 125). A variation can be made on environmental grounds to comply with the Urban Waste Water Treatment Regulations 1994 (reg. 7(6)). In this case, no compensation is payable.

The discharger has a right of appeal to the Water Services Regulation Authority (Ofwat) against a refusal or variation of consent or the imposition of conditions, except that there is no appeal against trade effluent charges (ss. 122, 126). An appeal against a deemed refusal may also be brought if no decision is given on the trade effluent notice within two months. As with planning appeals, an appeal is effectively a rehearing and Ofwat may make any decision that the sewerage undertaker could have made. There is a further right of appeal to the High Court on a matter of law. The right of appeal being to the economic regulator emphasizes the essentially commercial nature of the arrangement. The vast majority of appeals are facilitated without formal resolution.

[1] Available via www.water.org.uk (revised January 2008)

An alternative to seeking a consent is for the discharger and the sewerage undertaker to reach an agreement for the reception or disposal of trade effluent under section 129. Such an agreement may provide for the discharger to pay for works necessary to treat the wastes, such as an extension to a sewage works.

Trade effluent charges

Trade effluent charges are levied for discharges to sewers and a charges scheme may be made under the Water Industry Act 1991, s. 143. (Under their terms of appointment, sewerage undertakers must always have such a scheme in force; under the Water Act 2014 schemes need not be approved by Ofwat but must be made in accordance with Ofwat rules.) A common formula is used in which charges are calculated according to the volume and strength of the effluent, as measured by the chemical oxygen demand (COD) and the solids content.[2] Charges are set by each undertaker on a regional basis, and therefore reflect average costs rather than the cost of treating a specific discharge at a specific treatment works. Dischargers are therefore advised to consider whether their processes can be changed so as to minimise wastes, and thus costs. No extra charges are currently levied by the sewerage undertakers in relation to metals or other hazardous items: undesirable levels of these are controlled by the consent limits rather than by charging mechanisms. However, levels of charges are rising fast as a consequence of the fact that sewerage undertakers are themselves liable for charges for their own discharges from sewage works. Implementing the Water Framework Directive (2000/60/EC) may also drive costs upwards. The charging system thus operates in tandem with the consent system to reduce discharges. To a limited extent it encourages the reduction of pollution, although it does not make dischargers fully responsible for the environmental costs of their discharges. It remains to be seen whether a system of incentive charging will be introduced in this area: that would require legislation.

Public participation

Public rights in relation to the trade effluent system are very limited. There is no right for a member of the public to be informed of an application for a trade effluent consent and no right to participate in the decision whether to grant one, or in any appeal. Under the Water Industry Act 1991, s. 196, all consents, variations, agreements and directions by the sewerage undertaker or the Director General, and all decisions by the Secretary of State (effectively the Environment Agency in this context) must be placed on a public register.

However, this is a limited right, since there is no public right to information on any samples taken. Indeed, it is a criminal offence under section 206 for an employee of the sewerage undertaker to disclose information furnished under the Act. There is also no right of private prosecution for breach of a consent, except by a 'person aggrieved' or with the consent of the Attorney-General.

The Environmental Information Regulations 2004 regime clarifies the point that private bodies like sewerage undertakers are subject to disclosure rules when they are engaged in public functions. However, the Regulations use rather imprecise definitions of 'environmental information' and what amounts to a 'public administrative function'. The matter went to the Court of Justice of the EU in Case C-279/12 *Fish Legal v. the Information Commissioner* [2014] QB 521 [see Ch. 9) which set out geenral tests, and these were subsequently applied in *Fish Legal v. Information Commissioner* [2015] UKUT 0052 (AAC). Putting these two decisions together is not easy. But to the extent that sewerage undertakers hold information which relates to the provision of public services, this is covered by the Environmental Information Regulations.

'Red List' substances

In order to ensure compliance with EU directives, such as the Water Framework Directive, an additional control has been introduced for specified dangerous substances. The Secretary of State is empowered to prescribe certain

[2] This is known as the Mogden formula, a formula agreed between the water industry and the CBI; the current formula is available in *Trade Effluent Discharged to the Sewer: Guidelines for Control and Charging* (2008), paras 18ff (available via www.water.org.uk). See also http://www.ofwat.gov.uk/wp-content/uploads/2016/12/December-2016-charges-scheme-rules.pdf: the Mogden formula, a reasonable variation of it, or something whch is demonstrably more cost-reflective must be used.

substances or processes for which the EA is effectively made the consenting body. Currently 24 such substances are listed in schedule 1 to the Trade Effluents (Prescribed Processes and Substances) Regulations 1989 as amended, and five processes involving asbestos or chloroform are listed in schedule 2. The 24 prescribed substances consist of the 'Red List' (a dangerous substance list similar to the EU hazardous substances list but with origins in the OSPAR treaty regime), plus carbon tetrachloride.

All discharges where any of these substances is present in more than background concentration, or where a prescribed process is carried on (often known collectively as 'special category effluent'), must be referred to the Environment Agency, which may then issue a direction (against which there is no appeal) to the sewerage undertaker on whether to grant a consent and on any conditions it might impose. Before deciding an application, the Agency must provide the sewerage undertaker and the applicant with an opportunity to make representations. The same procedures apply where more than 30 kg per year of trichloroethylene or perchloroethylene is discharged.[3]

Existing discharges covered by the regulations are also reviewable by the Agency. As with ordinary trade effluent discharges, a review may not normally be made within two years of the previous review. However, review is possible within two years if there has been a contravention of a consent or agreement, to give effect to an international or EU obligation, or to protect public health or aquatic flora and fauna. Compensation is payable in some of these circumstances, unless the review resulted from a change of circumstances unforeseeable at the time of the setting of the consent or the previous review.

Any process discharging significant amounts of 'Red List' substances will normally be part of an installation governed by the Industrial Emissions Directive 2010/75/EU regime and therefore require an environment permit from the Environment Agency (see Ch 14). This is in addition to the trade effluent consent that will also be required. It should be noted that the Industrial Emisions Directive allows the effect of a water treatment plant to be taken into account when determining the emission limit values applying in relation to indirect releases into water, provided that an equivalent level is guaranteed for the protection of the environment as a whole and that this does not lead to higher levels of environmental pollution (Art. 15(1)).

Enforcement

The penalty for the offence of discharging into a sewer without consent, or in breach of a condition, is, on summary conviction, a fine not exceeding £5,000, and on conviction on indictment, an unlimited fine (ss. 118 and 121). It is possible for the same unlawful event to lead both to this offence, and to a water pollution offence under Regs 12 and 38 of the Environmental Permitting Regulations 2016. But only the actual occupier of the premises can be found guilty of the former.

CASE 22.1 *National Rivers Authority v Hickson & Welch Ltd* (1996, unreported)

A large quantity of nitrotoluene was spilt at the defendant's industrial premises. The chemical passed into the sewerage system at the premises and was transmitted by sewers to a treatment works, operated by a sewerage undertaker, Yorkshire Water Services Ltd, resulting in the contamination of settlement tanks. The contamination severely reduced the capacity of the sewage treatment works to deal with effluent; consequently, discharges to controlled waters breached the discharge consent for the treatment works. The undertaker brought proceedings against the defendant for the discharge of matter into a public sewer likely to affect prejudicially the treatment and disposal of its contents (under. s. 111(1)(a)), which resulted in a £35,000 fine. The Agency brought proceedings against the defendant for the offence of causing polluting matter to enter controlled waters (under what is now Reg. 38 of the Environmental Permitting (E and W) Regulations 2016) which also resulted in a fine (£2500; were this to be prosecuted today the fine would almost certainly be much greater, see Ch 8).

[3] Trade Effluent (Prescribed Processes and Substances) Regulations 1992.

There are no 'enforcement notice'-type provisions here. Enforcement of the legislation is by the sewerage undertaker so this would mean one company dictating operational matters to another company. In the past this has led to a conciliatory approach to enforcement, since officials have seen themselves as problem-solvers rather than as police officers. One of the main surveys of enforcement attitudes was a survey of trade effluent control officers.[4]

Discharges from sewage works

Under the Environmental Permitting (England and Wales) Regulations 2016, sewerage undertakers have permits set for their own discharges into controlled waters and may be prosecuted by the Environment Agency or any individual if they breach them. They are responsible for all discharges from their sewers or works, subject only to a defence that the breach was caused by an illegal discharge to the sewer and that they could not reasonably have been expected to prevent the entry of the unlawful discharge into the sewage works (Environmental Permitting Regulations 2016 Sch 21 para 6 and *National Rivers Authority v Yorkshire Water Services Ltd* [1995] 1 AC 444 – see Ch. 17). This means that sewerage undertakers are ultimately responsible if they are unable to treat adequately discharges they have permitted. They thus have an incentive to restrict discharges to those which are treatable.

Consider this

Should the defence given to sewerage undertakers be reformulated so that what matters is whether the undertaker could reasonably have prevented an unlawful discharge from *leaving* a treatment works rather than entering the works? For example, would the defence apply where a sewerage undertaker does not take decisive action against a trader who persistently breaches the terms of its trade effluent consent, and which subsequently discharges a highly toxic liquid into the sewers which passes through the treatment works and pollutes a river?

Domestic sewage discharges

Some discharges are prohibited entirely by the Water Industry Act 1991, s. 111 (although a trade effluent consent is a defence). These are discharges of anything liable to damage the sewer, or to stop its flow, or to prejudice the sewage works treatment; any chemicals, or any liquids over 110 °F, which will be dangerous or a nuisance; and any petroleum spirit, including motor oils. For example, drainage of used car oils is an offence under this section. The maximum penalties are, on summary conviction, a fine of up to £5,000, and, on conviction on indictment, an unlimited fine and/or up to two years' imprisonment.

Otherwise, there is no restriction on discharges of domestic sewage. There is a right of connection to the public sewer conferred on owners and occupiers by the Water Industry Act 1991, s. 106, with very limited powers of refusal. These do not include the potential overloading of the system: as Upjohn J stated in *Smeaton v Ilford Corporation* [1954] Ch 450 (cited with approval by the House of Lords in *Marcic v Thames Water Utilities Ltd* [2004] Env LR 25), 'they [i.e. the sewerage undertakers] are bound to permit occupiers of premises to make connections to the sewer and to discharge their sewage therein'. Indeed, the duty has been held to require connections notwithstanding that the sewer is already overloaded, with obvious consequences (*Tayside Regional Council v Secretary of State for Scotland* [1996] SLT 473, concerning near identical provisions to section 106 in the Sewerage (Scotland) Act 1968, s. 12). The scope of the duty to allow connections was recently the subject of the Supreme Court's decision in *Barratt Homes Ltd v Dwr Cymru Cyfyngedig (Welsh Water)* [2009] UKSC 13 where the Court, by a majority, took the view that restricting the 'mode' of connection, which is allowed under Act, does not allow for restrictions on where the connection to the sewer is made, which can be at a place which suits the developer. The counterpart of this duty is the restriction on criminal liability for water pollution caused by sewage which the undertaker must accept (see earlier). Powers to requisition new sewers for domestic purposes are set out in the Water Industry Act 1991, s. 98.

[4] G. Richardson, A. Ogus, and P. Burrows, *Policing Pollution* (Oxford: Clarendon Press, 1983).

However, it is permissible for the local planning authority to refuse planning permission on the ground that the local sewage works are overburdened or inadequate, since that is a material consideration. Alternatively, it could seek some planning gain in relation to the provision of sewers by the use of conditions or planning obligations under the Town and Country Planning Act 1990. But it is not required to; some loading might not arise from "development"; and sewerage undertakers are not statutory consultees under the DMPO. This was the basic approach taken in *Application by Friends of the Earth for Judicial Review* [2007] Env LR 7 where the High Court held that there was no duty, under the regime implementing the 1991 EU Urban Waste Water Directive, to restrict the connection duty, since this was not required under the Directive and was just a material planning condition.

In *Marcic v Thames Water Utilities Ltd* [2004] Env LR 25, it was held that, in a case where serious sewage flooding arose from an overburdened sewer, the sewerage undertaker was not liable in nuisance, nor under the Human Rights Act 1998, to the affected property owner. In respect of both claims, the House of Lords stressed the statutory framework under which the sewerage undertaker operated, both in terms of its communication duty and the funding formula under which it received money from government to upgrade sewerage infrastructure. These placed it both outside the normal rules governing the measured duty of care owed between neighbouring landowners for naturally occurring hazards, and beyond the protections provided by the Human Rights Act (see further Case 11.7). In *Dobson v. Thames Water Utilities Ltd* [2007] EWHC 2021 (TCC), however, the High Court held that these funding arrangements cannot act as a complete barrier to a private law claim, for example where an undertaker has failed to press for funding to enable it to improve its sewerage facilities.

FURTHER READING

Chapter 11 of W. Howarth and D. McGillivray, *Water Pollution and Water Quality Law* (Crayford: Shaw and Sons, 2001) contains more detail than provided here, especially on the cases cited, as does J. Bates, *Water and Drainage Law* (London: *Sweet & Maxwell*, looseleaf).

WEB LINKS

See the sources at the end of Chapter 17. Further information can be found via Water UK (www.water.org.uk) and Ofwat (www.ofwat.gov.uk).