Legal Issues on Groundwater and Sustainability in Ireland

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Introduction

Groundwater can be defined as water occurring beneath the surface of the land filling the pore spaces of rock material where it is found. The upper limit is called the groundwater table. An aquifer is an underground layer of rock, sand or gravel from which significant quantities of subsurface water can be produced. About 30% of people in Ireland are dependent on groundwater for drinking water supplies. This percentage is likely to increase as sources of surface water dry up or are exploited.

The purpose of my paper is to outline some of the legal issues involved when trying to ensure the sustainable use and development of groundwater. This is a vast topic so only an outline can be given of elements of the relevant legal framework. At the outset it must be stressed that the common law on groundwater is very uncertain. Most of it developed in the 19th century when conditions were every different to today and most of it is English law. It is not at all certain that our courts would follow some of the English precedents.

Who owns groundwater?

Water in defined channels

Running water is ownerless. There are two reasons for this:

[1] I have gratefully relied on the work of Brendan Slattery, Solicitor, Arthur Cox, and Rory Mulcahy B.L. in preparing this paper. The structure of the paper, cases cited and many of the ideas on the common law in it are shamefully derived from Bryan Clark's excellent article, "Water Use Reform in Scotland: a critical analysis" *19 Journal of Environmental Law* 376 – 406.

- water us an essential life resource and many consider that should not be owned,
- practicality, how can one assign ownership of individual molecules in a flowing stream?

However, although water is not owned, some people have property rights in water and rights to use water. The law also makes a clear distinction between water flowing in defined and known channels and water flowing in undefined and/or unknown channels. The former type of water, whether flowing on the surface or beneath it is subject to riparian rights. Riparian rights are described as natural rights, and a riparian owner is entitled to the use of water flowing on his land. However, it is clear that no riparian rights exist in relation to water flowing in undefined and unknown channels. At common law, landowners have unfettered rights to exploit water resources flowing in defined channels under the ground for domestic purposes. If the defined channel is underground, the person must prove this because there is a legal presumption that all underground water is percolating.[2] This right can be limited by servitude, liability considerations and by statute. There is no absolute right to exploit water for industrial purposes but a reasonable amount can be abstracted. There must be enough left for the uses of inferior proprietors[3] unless industrial abstraction rights have been acquired by prescription i.e. long use.

Percolating water

There are no riparian rights to percolating water in undefined channels but a landowner may abstract as much of this water as he likes even if it deprives others of water.[4] So in *Chasemore v Richards* the question was whether the Plaintiff had any cause of action against the Defendant, the local Board of Health, in circumstances where the Defendant in abstracting water from a well to supply water to the local town had caused the Plaintiff, a mill-owner, to lose the use of a stream which was fed by percolating underground water, and which had been used in the course of the mill-owner's business for over sixty years. The House of Lords held unanimously that he did not have any cause of action. Indeed a landowner may even abstract water

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[2] *Black v Ballymena Township Commissioners* (1886) 17 LR Ir 459 at 474-475 per Chatterton VC

[3] *Marquess of Breadalbane v West Hightland Railway* [1885] 22 R 307 per Lord Ordinary (Wellwood) at 310.

[4] The authority for this proposition is the case of *Chasemore v Richards* [1859] 7 HLC 349, a case which Lord Wensleydale described in his judgment as "of the greatest importance. No question that has occurred in my time has been so worthy of the most careful consideration."

maliciously. This happened in *Bradford v Pickles*[5] where a landowner drained percolating groundwater so that it did not reach another landowners well in an attempt to force the other to sell his land. The court found that the defendant's motive was irrelevant. Indeed although it found that Pickle's motives were "churlish", "selfish and grasping" and "shocking to the moral philosopher", it refused to prevent him exercising what it considered to be his property rights. *Chasemore* has been followed in this jurisdiction in a number of cases.[6] More recently, *Chasemore* has been applied by the High Court in England in the case of *Rugby Joint Water Board v Walters*[7], but, in so far as I am aware, there have been no similar cases in this jurisdiction.

There was some reference to the effect that development might have on water rights in *Scott v An Bord Pleanála* [1995] 1 ILRM 423. In *Scott*, the Court held that development within the meaning of the Local Government (Planning and Development) Act 1963 meant the carrying out of works on the land and not merely the consequences of those works, and therefore any adverse effects that the proposed development might have on the applicant's water rights did not constitute a basis for challenging the decision to grant planning permission for a lead and zinc mine.

Why these rules?

The law relating to the ownership of groundwater owes much to the Victorian notion that property rights are sacrosanct. It was also developed for practical reasons. Judges found it impracticable to have the same rule for percolating water and water in defined streams because of the difficulties in proving the nature and extent of percolating water.[8] Groundwater was too "unknowable" and "occult" in its

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[5] [1895] A.C. 587 HL.

[6] *Ewart v Belfast Poor Law Guardians* (1882) 9 LR (Ir) 172 and *Black v Ballymena Town Commissioners* (1886) 22 LR (Ir) 459 are often cited as Irish authority for the proposition put forward in *Chasemore*.

[7] [1967] Ch 397

[8] Lord Cranworth picturesquely described the rationale for distinguishing between the situation of water percolating underground and that of water flowing in defined channels "The right to running water has always been properly described as a natural right, just like the right to the air we breathe; they are the gifts of nature, and no one has the right to appropriate them There is no difficulty in enforcing that right, because running water is something visible, and no one can interrupt it whether he does or does not do injury to those who are above or below him. But if the doctrine could be applied to water merely percolating, as it is said, through the soil, and eventually reaching some stream, it would be always a matter that would require the evidence of scientific men, to state whether or not there had been an interruption, and whether or not there had been injury. It is a process of nature not apparent, and therefore such percolating water has not received the protection which water running in a natural channel on the surface has always received. If the argument of the Plaintiff were adopted, the consequences would be that every well that ever was sunk would have given rise, or might give rise, to a cause of action." (at p. 381)

hydrological aspects. Determining the directional flow and volumes of groundwater was at that time impossible. So the easiest thing was to make a black and white rule that all would know and which would avoid litigation involving the unknowable. There were clear rules and a minimisation of disputes. The judges were reluctant to have "men of science" debating issues in their courts. Another reason was the court's desire to facilitate rapid industrialisation in the 19th century - it would have placed enormous obstacles in the way of the developers of roads, railways, mines, and reservoirs if they could be made responsible for drawing away water from other landowners.

The problem with common law rules

The common law rules are based on scientifically ignorant assumptions. It is wrong to distinguish percolating from surface water in hydrological terms because they are inextricably linked. The common law rules can be unfair to other water users who may have begun abstracting before a new abstrator who interferes with their abstraction. The common law rules may also operate inequitably because they have no regard to the needs or difficulties of other abstractors. Even the riparian approach (which has some regard to downstream users by not giving *carte blanche* to industrial abstractions who have not got prescriptive rights), can result in depriving a downstream user when too much water is abstracted for domestic uses. Moreover, the common law rules have no regard to the requirement of sustainability: a landowner can abstract without regard to the fact that he may be exhausting a groundwater source.

If groundwater resources are to be protected from depletion, the law must, as Clark has argued, move from "property absolutism to property obligationalism."

The position elsewhere

The majority of countries today designate their water resources as being in public ownership, with government having the overall responsibility for resource management. The right to abstract (or divert) and use water (including groundwater) is granted to individuals, public entities or private corporations, under certain terms or conditions, and such rights are generally issued by the water resources authority or by the law courts directly. A 'water right' usually constitutes the right to use (but not

ownership of) the water itself. Lawyers call this a 'usufructuary right'. Grants to abstract and use groundwater are instrumented through permits, licenses, concessions or authorisations, generally called here 'water rights'.1 A system of groundwater rights (permits to abstract and to use groundwater) is often first introduced as a means to reduce interference, avoid counterproductive conflicts and resolve emerging disputes between neighbouring abstractors. However, the development of a stable system of water rights has far wider benefits because it provides a sound foundation for the development and protection of water

Ireland post the Water Framework Directive

Obligations under the Water Framework Directive may soon require Ireland to legislate to prevent depletion of groundwater resources. Article 1 of the Directive seeks to prevent the further deteoriation of groundwater (something which will happen if the resource is depleted beyond its regenerating capacity) and it promotes the sustainable use of groundwater based on long-term protection of available water sources. Article 4 requires the achievement of good groundwater status by 2015. For the first time quality and quantity of surface and groundwater will be considered together. Article 11 requires Member States to establish controls over the abstraction of groundwater including a register of groundwater abstractions and a requirement of prior authorisation for abstractions and impoundments. Member States can exempt abstractions and impoundments which have no significant impact on water status. Current Irish law does not meet all of these requirements.

Constitutional Issues- property rights and groundwater protection

Ideally, for proper control, all groundwater should be in State ownership. This would be impossible however because Article 10 of the Constitution vests in the State "all natural resources, including the air and all forms of potential energy.....subject to all estates and interests therein for the time being lawfully vested in any person or body." Interests in groundwater are lawfully vested in landowners. Articles 40.3 and 43 acknowledge an individual's right to hold property and the State is mandated to protect that right. But nothing in the Constitution confers property rights where none

[1]Hector Garduño1 Stephen Foster, Charles Dumars, Karin Kemper Albert Tuinhof: *Groundwater Abstraction Rights from theory to practice*

existed before. Nonetheless *Webb v Ireland* and various statutory provisions (e.g. Minerals Development Acts 1940 – 1979, Planning and Development (Strategic Infrastructure) Act 2006, s.48) imply that restrictions can be placed on certain property rights for environmental and other reasons which, broadly speaking, can be termed the common good. Action to promote sustainable development is undoubtedly an objective (indeed one of the most compelling objectives) for the common good. One approach adopted in the Planning and Development (Strategic Infrastructure) Act 2006 was for the State to legislate a presumption that that the ground under 10 meters has a nil value unless the landowner could establish otherwise. Another adopted in the Minerals Development Act 1979 was to vest the right to work minerals in the Minister for Energy and to except existing mining operators currently or just about to exercise the right. [9]I am not sure that these particular kind of provisions would survive a challenge under the European Convention on Human Rights but to date nobody has challenged their constitutionality.

There is a reference in section 213 of the Planning and Development Act 2000 to "water-rights" and provision for compulsory purchase of such rights. However, the reference cannot be read as creating a right to water which did not exist prior to the coming the Act. In this regard, the Act merely empowers a local authority to acquire an existing water right, which must relate to an existing property right.

Section 61 of the Public Health (Ireland) Act 1878 gives an urban authority the power to provide water within its district and the power to

"Construct and maintain waterworks, dig wells, and do any other necessary acts,...."

The power to compulsorily acquire land includes acquisition for the purpose of supplying water. The Water Services Act 2007 also provides explicit powers for the acquisition of land by a water services authority for the purpose of performing any of its functions under that Act, including the provision of water supplies. Where the proposed abstraction rate is above a particular threshold, an EIS must be prepared. If the EIS does not establish that an abstraction complies with the principles of

[9] Minerals Development Act 1979, ss12,13, 14.

sustainable development, the planning authority will usually insist on mitigation measures or refuse permission.

Tentative controls over water consumption

Under the Water Services Act 2007, each water services authority is has powers to prohibit or restrict the use of a water supply, where necessary, to protect public health or the environment. It is envisaged that those powers could be applied either to follow up a water quality incident or at times of drought to protect the integrity of the water supply and related ecosystems. The Act places a new duty of care on owners and occupiers regarding the sustainable use of water services on their premises. Section 70 specifically obliges occupiers and owners to maintain water treatment systems in such condition as to avoid nuisance or risk to human health or the environment. Section 56 provides extensive new powers for the purpose of conserving water supplies. An authorised person is enabled to direct the owner or occupier of premises to take corrective action to prevent water from being wasted or consumed in excessive amounts. Such officers will also have powers of direction regarding the restriction of water use. Exercise of those powers will be subject to appeal to the District Court, except in times of emergency, and the authorised person will have power to cut off or restrict supply pending compliance.

At present sanitary authorities can charge non domestic users for water supplied to them. The exemption of domestic users is widely regarded as ill advised. However, there is an emerging human right to a sufficient quanity of water for domestic uses and it may be that there is some justification for limited exemptions from the obligation to pay for a minimum quantity of water for personal uses.

The statutory position on abstractions

Information on abstractions

In Ireland we have no legislation to ensure the sustainable use and environmental protection of groundwater holistically and realistically. Statute law does not explicitly regulate the right to abstract. Nonetheless there are some controls. So a local authority has power under section 23 of the Local Government (Water Pollution) Act 1977, as substituted in 1990, to serve a notice on any person abstracting waters in its area requiring specified information in relation to water abstraction activities or practices within a specified period which must not be less than 14 days. Failure to comply with

this notice is a criminal offence punishable by a maximum fine of £1,000 and/or six months imprisonment. If an IPPC licence is involved, the EPA must exercise the powers of the local authority under this section.[10]

Registers on abstractions

Section 9 of the Local Government (Water Pollution) Act 1977 and Part V of the Local Government (Water Pollution) Regulations 1978-92, require local authorities and sanitary authorities to keep registers of water abstractions other than abstractions which do not exceed 25 cubic metres in any 24 hour period. The register must be in a prescribed form and contain specified prescribed particulars and it must be made available for public inspection at all reasonable times. Fees are payable for a copy of any entry in the register.

However there is no explicit control over water abstractions. There are a number of provisions in various pieces of legislation that may operate to do this somewhat indirectly including legislation relation to pollution.

Groundwater and the Planning and Development Act 2000

Development plans

Under this Act all local authorities are required to plan for the proper planning and sustainable development of their areas. The Act enables local authorities who are also planning authorities to make provision for waste water services and other matters relevant to water management in development plans[11], to control - through their development plans and otherwise- the location of developments likely to cause water pollution or inimical to water management objectives, and to refuse permission for, or to permit subject to appropriate controlling conditions, developments which may cause water pollution or impair water management objectives.[12]Local authorities are obliged to prepare development plans for their areas and to take such steps within their powers as may be necessary to secure the objectives of development plans and are prohibited

[10] Environmental Protection Agency (Extension of Powers) Order 1994, article 4.

[11] See in particular section 10(2)(b), First Schedule, Part 1, paras 7,10,11; Part 11, paras 6; Part 111,para 2; Part 1V, paras 1, 3.

[12] See in particular Fourth Schedule, paras 1(a)-(d), 3, 6, 9, 10(g), 19, Fifth Schedule, paras 1, 2, 7, 9, 10, 12, 15,16,18, 22.

from carrying out any development which materially contravenes their plans.[13] These must include objectives for the sustainable development of groundwater. Objectives that appear particularly relevant are:

> *- regulating, promoting or controlling the exploitation of natural resources*
>
> *Clause 6(b)*[14]
>
> *- regulating and controlling the provision of water facilities*[15]
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> *- protecting and preserving the quality of the environment, including the prevention, limitation, elimination, abatement or reduction of environmental pollution and the protection of waters, groundwater*[16] ...
>
> *- prohibiting, regulating or controlling the deposit or disposal of water materials ..... the disposal of sewage and the pollution of waters*[17]

Groundwater protection schemes

Local authorities have adopted groundwater protection schemes in development plans and have regard to the need for groundwater protection in their decision-making under the Act.[18] Groundwater schemes subdivide regions into three zones corresponding to regionally important aquifers (Zone 2), locally important aquifers (Zone 3) and poor aquifers (Zone 4). A code of practice lists the generally acceptable and unacceptable activities in each zone. Maps accompanying planning applications must show septic tanks and percolation areas, bored wells and other features on, adjoining or in the vicinity of the structure or land to which the application relates.[19] Applicants for planning permission who will not be connected to a public sewer are almost invariably conditioned to prevent the contamination of groundwater by providing suitable wastewater treatment systems.

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[13] Sections 15 and 178
[14] First Schedule, Part 1,clause 11
[15] First Schedule, Part 1,clause 11
[16] First Schedule, Part 1V, clause 1.
[17] First Schedule, Part 1V, clause 3:
[18] GSI *Groundwater Newsletter*, January 1994, 3-5.
[19] Planning and Development Regulations 2001, article 23(1).

Duty to notify stakeholders of abstractions

Planning authorities are obliged to notify the appropriate Regional Fisheries Board or Waterways Ireland, as appropriate, when they receive applications for development which:

(i) might cause significant abstraction or addition of water either to or from surface or ground waters, whether naturally occurring or artificial,

(ii) where the development might give rise to significant discharges of polluting matters or other materials to such waters[20] or be likely to cause serious water pollution or the danger of such pollution, or

(iii) where the development would involve carrying out works in, over, along or adjacent to the banks of such waters[21], or to any structure in, over or along the banks of such waters, which might materially affect such waters.[22]

Planning Decisions

Planning permission may be refused for any development if it would endanger public health or cause serious water pollution. Compensation is not payable when planning permission is refused because the proposed development would cause serious water pollution.[23] But there does not seem to be any explicit mandate to planning authorities to ensure that groundwater resources are not depleted. Despite this, in practice, planning authorities sometimes have regard to the fact that a proposed development will dewater other lands[24] and sometimes developers volunteer, or are required to ensure, that this does not happen or that alternative water supplies are provided if it does happen. In my

[20] This includes groundwater.
[21] Ibid.
[22] Planning and Development Regulations 2001, article 28(1)(g).
[23] Planning and Development Act 2000, s. 190 and Fourth Schedule, clause 9, Fifth Schedule.
[24] It appears from the case of *State(Boyd) v An Bord Pleanala*, High Court unreported, 18 February 1983, that this is a legitimate concern of a planning authority in making a planning decision although it is also arguable that disputes about water abstraction rights are private law matters which should not be considered by planning authorities.

experience this has happened with mining and quarrying permissions.[25] In this way, groundwater water quality control is to some extent integrated into the physical planning process.

The various provisions relating to groundwater in the Planning Act imply that the protection of groundwater resources is a relevant planning concern. Unfortunately this concern is not expressed clearly enough and the Act should be strengthened to ensure that groundwater is sustainably developed.

Groundwater Quality

The discussion above discussed quantitive sustainability issues. Sustainable development principles require that groundwater must also be protected from pollutants. This is achieved, to some extent, by a whole range of laws designed to protect beneficial uses of water or, since the Water Framework Directive came into force, to ensure that water attains or maintains good status. It would be too tedious to describe these laws here. Many statutes including the (Planning and Development Act 2000, Local Government (Water pollution) Act 1977-1990, Waste Management Acts 1996 to 2006 and the Environmental Protection Agency Acts 1992 to 2006 seek to control discharges to groundwater in various authorisations granted or by the enactment of bye-laws or the enforcement of protective measures. Regulators have more or less *carte blanche* when imposing groundwater protection controls in authorisations granted. Courts rigorously ensure that decisions are made fairly but they rarely examine whether the decisions themselves are fair. The doctrine in *O'Keeffe v An Bord Pleanala* has more or less ensured that regulatory decisions on groundwater protection are immune from successful challenges unless made in the wrong way. Thus we have many environmental decisions set aside for inadequate publication of public notices, failures to supply information, invalid fees paid, appeals given to doormen not employees of the regulator, addresses not supplied but only about three decisions ever where the courts have found that regulators have used shifting and inconsistent rationales, imposed burdens that appear to have no clear environmental advantage, employed confused and capricious analysis or failed to provide a coherent discussion of the issues. The courts do not want to become

[25] The Minister for Energy may also have regard to this consideration when considering granting authorisations under the Minerals Development Acts

involved when the decisions of regulatory bodies are challenged on substantive grounds. They prefer to leave these matters to the "experts" notwithstanding that An Bord Pleanala or the EPA may be somewhat deficient in experts!

As well as this, there are many voids in water law which until recently has largely ignored nonpoint sources of pollution (such as runoff from agricultural lands or construction sites) and groundwater quality. As a result there has been an ominous spread of groundwater pollutants and deteoriating groundwater quality. The scientific complexities of underground water transport make it difficult for regulators and courts to deal with groundwater problems. It may be hard to identify the real culprits or to confront them when they are identified. There may be multiple groundwater polluters but objectors will campaign only against new potential polluters, usually landfills or quarries. No matter how good the plans of the project planner, no matter that the prospect of pollution is only a cloud on the horizon dominated by the developers good intentions, objectors will pursue him to the last. If action is taken about a potential nuisance the courts will wistfully suggest that if things go wrong, the objectors can sue later.2 And in fact they can. For regulatory regimes have remedied the common law deficit by allowing persons to sue for anticipated polluting events. There are numerous remedies under the Local Government (Water Pollution) Acts 1977 to 1990 and elsewhere that can be used not only to punish groundwater contamination, but to compel the polluter to remediate the pollution and provide alternative sources of water and pay damages to any person who has suffered injury to his person or property. And most of these remedies (except civil remedies) are available to any person regardless of his interest in the matter. So, for example, in *Thornton v Meath County Council* 3Mr Thornton was compelled to provide an alternative water supply to residents whose groundwater had allegedly been polluted by leachate from his landfill. Citizen initiatives to enforce water laws are encouraged by extensive rights to participate in decision-making and to enforce almost all the important statutory controls over groundwater quality.

There are lots of remedies available if groundwater is polluted but the problem is in proving causation. Occasionally causation can be established by a

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2 *McGrane v Louth County* Council High Court, 9 December 1983

3 High Court, 14 February 1994

simple sniff- and- taste test (oil contamination) but more likely the issue will boil down to a battle of the experts. The court will be treated to heated arguments over the direction and flow of groundwater, the slopes of the land, alleged connections between the source of pollution and the polluted groundwater, the existence of impermeable barriers of various kinds, alternatives sources of contamination etc. Sometimes, the court will find a link between the pollution and the alleged polluter relying on circumstantial evidence but then there will be a further problem proving a link between the pollution and the damage suffered. So in one case where a plaintiff successfully linked the contamination of his well to a rock salt storage facility only to fail to prove that his children's' illnesses were caused by the contaminated water.[4]

I hope I have illustrated some of the lacunae and deficiencies in Irish law which militate against the establishment of a robust management system to protect groundwater resources, especially against depletion. It seems that the courts and the legislators should have a great deal more to do with "men and women of science" if the objective of achieving the sustainable development of groundwater resources is to be achieved!

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[4] *Meehan v State of New York*, 95 Misc.2d 678, 684.