
LIABILITY OF WATER CHEMISTS

BY

TREVOR ADAMS

**(Lecturer at the College of Law, Chester, and formerly
Senior Associate in the Environmental Law Group of Allen & Overy, Solicitors)**

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1. INTRODUCTION - A RANGE OF ACTIVITIES AND A RANGE OF JURISDICTIONS

The title "Water Chemist" could apply to people in a wide range of activities. They could be employers or employees or self-employed. They could be employed as consultants or analysts or as regulators. The purpose of this briefing note is to give Water Chemists an overview of the major pitfalls which could face them in the course of their professional activities. Obviously, such a briefing cannot be comprehensive nor cover all employment situations nor does it constitute legal advice.

The European Community (EC) is the source of much legislation in the environmental field. This will affect water chemists working in the UK as and when such legislation comes into effect at national level. An obvious example is the standards for drinking water which come from Directive 80/778/EEC but which are of course being revised at the time of writing.

The range of activities which water chemists could be involved with include: entering premises to take samples or to give advice, occupying premises as an employer or a consultant, analysing the samples, and giving oral or written reports. Each one of these involves a host of related activities. For example, analysing samples focuses attention on health and safety matters and the storage of chemicals.

This note deals with the law of England and Wales. Company law in Scotland and Northern Ireland will be broadly similar, though the reader should note that, for example, the Scots law of contract is different from its English equivalent. Once outside the UK, however, this note may be of limited relevance to the reader. In any event, it should not be construed as advice on any particular situation and is only intended to be illustrative of the broad nature of the problems facing water chemists in their professional duties. In the event of a specific problem, it is important to seek legal advice from a lawyer in the relevant jurisdiction.

It is important to realise that not all law is contained on the pages of Acts of Parliament. Large areas of law are "common law" - that is they have been created by judges over the centuries in cases they have decided. Also, interpretation of Acts by judges is the only interpretation that is legally valid.

2. THE DIFFERENCE BETWEEN CRIMINAL AND CIVIL LIABILITY

2.1 Criminal liability

In criminal matters, it is usually the state prosecuting the defendant before a magistrate, or a judge and jury in the Crown Court. The basic assumption in criminal liability is that there is both a mental element and physical element to the offence. For example, theft involves "dishonestly" which is a question of mental attitude, and "appropriating" which is a physical act. The burden of proof for criminal offences is that of "beyond reasonable doubt". It should be realised that various offences in relation to, for example, road traffic law or environmental law have been so structured that the "mental element" is in fact not required for a conviction. This has been as a matter of public policy to make it possible to obtain convictions which otherwise would be very difficult. The penalties for criminal offences are fines and imprisonment, as well as other non-custodial punishments.

2.2 Civil liability

Civil liability gives a person rights to obtain redress from another person e.g. the ability to sue for damages for personal injury. There is also the right to obtain an injunction. For there to be an award of damages, the injured party has to have suffered an actual loss, be it personal injury, damage to property, or financial loss. The burden of proof is "the balance of probability" which is much lower than for criminal matters.

If there has been a relevant criminal conviction in a particular matter, then the burden of proof in any related civil action is reversed, so that the defendant has to prove he is not liable. An example of this would be a conviction of a company for breach of health and safety legislation, followed by the injured employee suing the company for damages for personal injury.

A disincentive to suing is that the losing party pays the winners costs. In fact, this works out as a substantial proportion of the costs, rather than 100%, so a successful plaintiff has his award of damages diminished in practical terms. As a matter of public policy, it is not possible to have an enforceable insurance policy in relation to criminal penalties.

2.3 Professional indemnity insurance

Water chemists working otherwise than as employees (e.g. working as independent consultants) should take out professional indemnity insurance policies to protect themselves from the cost of litigation and also to pay any damages awarded. It is important that the insurance policy selected covers the policyholder for environmental damage, as many recent policies have excluded it. In any event, failure to protect oneself can result in financial ruin and the loss of all personal assets, including house and savings. An important protection mechanism is to conduct one's business through a limited company, either through forming one's own (see section 6.2.3 below) or by acting as a sub-contractor or employee.

3. STATUTORY DUTIES AND POWERS

Under the Water Resources Act 1991, the Environment Agency has wide ranging duties and powers. Broadly these are to protect water resources, prevent pollution, erect flood defences and ensure the conservation of the natural beauty and amenity of inland and coastal waters. In order to implement these functions, water chemists employed by the Environment Agency have the power to enter land, take samples, readings and measurements, compile reports and, in certain instances, bring prosecutions on the basis of their findings.

Persons undertaking similar functions but who are, for example, employed by an environmental consultancy or an industrial company will face similar problems but without any of the statutory protection available to the Agency and its employees. This briefing sets out below some of the problems facing water chemists, be they regulators, employees, consultants or analysts.

4. WHAT CAN YOU BE LIABLE FOR AND WHY?

4.1 Negligence

Liability for negligence is a civil, not a criminal, matter. It is for the victim to prove that the defendant owed them a "duty of care", that that duty was breached, and that they have

sustained either foreseeable harm or economic loss as a consequence of the negligence alleged. If successful, the victim will be awarded damages assessed on the basis of the harm caused or loss sustained.

In practice this means that a water chemist must avoid any act or omission which would adversely affect those whom he should reasonably expect could be so affected. This is a far-reaching duty.

For example, a water company digging a hole in order to lay pipes beneath a pavement should protect the hole against the possibility of not only a normal pedestrian falling into it but also a blind person doing so. Another example is analysing a sample so poorly that a wrong result is obtained, someone acts in reliance of that result and suffers damage, perhaps by not taking action that would otherwise have been taken.

4.2 Contractual matters

All business relationships involve a mass of contracts. These can include contracts of employment, leases, buying stationery, and of course contracts for professional services. Failure to perform a contract can lead to an action for breach of contract. If successful, the outcome could be an award of damages and/or an injunction and/or an order for specific performance (an order to perform the contract). It is therefore very important before entering into any contract to consider the terms of it in detail. It is no defence to an action for breach of contract to say that you did not read the terms of the contract.

Another aspect of the problem is that the law implies terms into certain types of contract and, on the other hand, forbids other types of clauses from being enforced. For example, in a contract for the supply of services there is an implied term that the services will be undertaken with reasonable skill and care. An example of an illegal provision is a term excluding liability for causing personal injury or death.

It is also important not to be intimidated because the contract comes as a supposedly "standard" set of terms and conditions printed, for example, on the back of an order form. It is vital to remember that once you have signed a document that you are committed to all the terms of it, subject to the provisos above.

Of course, the same incident can give rise to an action both for breach of contract and for negligence.

Evidence is important in any dispute. From your own viewpoint, it is important to be able to prove that a client gave you instructions to do the work in question. This would usually be a letter from the client to you, or an order for services to be provided.

4.3 Saying the wrong thing

When writing reports or other documents, attention must be paid to the possibility of causing harm to an entity through either negligent or fraudulent misstatement, or defamation (libel). More details are given in section 5.7 below. It should be borne in mind that in defamation trials the burden of proof is reversed, so that the defendant has to prove that his statement was

true. There are some defences available, such as for the contemporary reporting of court proceedings.

4.4 Taking other people's property

While visiting premises for any authorised purpose it is a criminal offence (theft) to remove ANYTHING "dishonestly" (or in a manner that could be so misinterpreted) save in certain circumstances, e.g. spoil resulting from diverting a water course. Plants belong to the person in whose soil they grow. An exception to this are things growing wild such as fruit, flowers or mushrooms, unless they are to be sold for profit. Obtaining consent to removing the item or sample is a wise course of action. See also section 4.5 below.

A civil right of action would also be relevant under the tort of "conversion of goods". The persons whose goods had been taken could sue for recovery of the goods or the value thereof.

4.5 Entering premises or going on to land

4.5.1 Access to premises - trespass to land

Trespass to land consists of entering on to someone else's land or remaining there or placing an object on the land. Even persons who have statutory rights of entry will sometimes need to obtain a warrant or court order to enter premises or go on to land but there are exceptions.

Trespass is not, in itself, criminal. There is an assumption of consent to be on the land if a visitor is going up to the front door of the premises, for example, but such consent can be revoked verbally. An occupier can ask the trespasser to leave by the shortest route. Refusal to do so, or continuing trespass by way of personal entry or leaving things on the occupier's land do, however, constitute a criminal offence for which the trespasser may be prosecuted.

The Criminal Justice and Public Order Act 1994 introduces the criminal offence of aggravated trespass. This occurs if a person trespasses on land and does anything which is intended to intimidate, disturb or disrupt people in adjoining land, in which case the trespasser can be removed by police. Re-entering the site as a trespasser then becomes a further offence.

4.5.2 Statutory rights permitting entry to premises

The Water Resources Act 1991 and the Water Industry Act 1991 list a number of grounds under which an authorised person (typically an employee of the Environment Agency) may enter any premises or vessel.

4.5.3 Damage to property

The principal criminal offences of damage to property are governed by the Criminal Damage Act 1971. Damage need only be very slight for the Act to apply. For instance, crops can be damaged by trampling them down, or fences damaged by distorting the wire. However, liability will depend on the owner being able to show that the perpetrator either intended to damage property or else was reckless as to whether damage resulted. Damage resulting from powers of entry granted under the Water Resources Act 1991 will constitute a lawful excuse to a charge of criminal damage, but it is the duty of the Environment Agency, under the Act, to

make full compensation to any person who has sustained loss. Similarly, if damage has been done to gain access to premises, the site must be left as secure as when found.

The injured party could also sue in civil law for damage to his property.

4.6 Nuisance - use of land and enjoyment of land - noise, smell and escaping substances

In law, "nuisance" is taken to mean disruption of private rights to the enjoyment of land. Nuisances are divided into public and private.

4.6.1 Public nuisance

Public nuisance is one which materially affects the comfort and convenience of life for a significant number of people in the vicinity. Public nuisance is a criminal offence. For instance, if work is carried out resulting in obstruction of a public highway and there was no statutory permission for the work, prosecution may result if sufficient numbers of people have been inconvenienced by it.

4.6.2 Private nuisance

A claim for a private nuisance can only be brought by an occupier of the land affected. Private nuisance is a civil matter. An individual may bring a civil action where the use of his property is continuously or recurrently affected by a "disturbance". This may be a smell, noise or an escape of effluent, for example. Notwithstanding that many nuisances are the result of public bodies acting under statutory powers, this only absolves the relevant body of liability if they can show that the nuisance was the inevitable consequence of the work and that the work was carried out with all reasonable care. Therefore, a water chemist performing a repetitive operation likely to cause a nuisance must be sure that (a) they have the necessary statutory authority to do so, where relevant, and (b) do so as professionally as possible and with the minimum disturbance to the locality.

The leaking of substances on to neighbouring property, for example from a heating oil or fuel oil tank, would constitute nuisance. The owner of the polluted property would have a right to sue the polluter. Nuisance is of wide application in environmental law, not least as no negligence is required on the part of the offending party and it is thus easier to prove.

Statutory nuisance under sections 79 to 83 of the Environmental Protection Act 1990 is a simplified procedure for requiring an offending party to cease - that is to "abate the nuisance".

4.7 Occupation of premises

4.7.1 Liability for dangerous things

Where dangerous things are brought onto land, care is required to prevent accidental escape. In civil law, a person is answerable for all the damage that is the consequence of the escape. This would include, for example, the consequences of flooding downstream if a dam should give way through poor siting or construction, or dangerous substances escape and cause pollution or injury.

This is quite distinct from duties under statutory law. The Environmental Protection Act 1990 covers liability for the deposit or accumulation of waste on land and the Radioactive Substances Act 1993 addresses liability for radioactive waste located on premises. Violation of environmental statutes may well result in prosecution (i.e. a criminal offence would have been committed). Also, orders can be made under the 1990 Act to require the removal of waste.

There is legislation concerning the safe storage of flammable substances. Advice on requirements can be obtained from the Health and Safety Executive.

4.7.2 Safety of Premises

Under the Occupiers Liability Acts 1957 and 1984, it is an occupier's responsibility to ensure that visitors to premises will be reasonably safe in using the premises. In practice this means displaying sufficient warning signs, ensuring that premises are in safe repair and, where necessary, accompanying the visitor while they remain on the premises. In addition, any proprietor also owes a common duty of care to those using or visiting his premises. The Defective Premises Act 1972 covers premises that have been leased. The landlord has a duty to protect all who might reasonably be expected to be affected by defects in the state of repair of the premises.

The duty of care covers not only invited visitors but extends, in a diminished form, to include trespassers. The law here does not require the owner to take nearly such stringent protective measures. So long as the owner displays prominent warnings and takes no measures designed to inflict wilful harm on a trespasser, he will have effectively discharged his duty.

There are various requirements concerning fire precautions in work premises which have to be complied with, primarily under the Fire Precautions Act 1971 and associated regulations.

4.8 Health and Safety at Work

The Health and Safety at Work Act 1974 (HSWA) governs the provisions necessary for securing the health, safety and welfare of people at work including controlling the storage and use of dangerous substances. The HSWA imposes general duties on employers. Under section 2, an employer is to safeguard the health and safety of his employees. Under section 3, there is an equivalent duty to contractors and members of the public.

All employers must provide and maintain a safe place of employment, with adequate facilities for their employees' welfare, and implement all necessary procedures and training for the safe use and handling of dangerous articles. The requirement for the premises to be safe and without risk to health extends also to non-employees.

Employers with five or more employees must prepare a written statement of their policy regarding health and safety at work.

Regulations which have come into force since 1974 concern a vast range of activities including manual handling operations, display screen equipment, work equipment and personal protective equipment. Under the Management of Health and Safety at Work Regulations 1992, an employer is required to assess risks to health and safety which arise in connection with his work and take any necessary preventative measures. The Control of Substances Hazardous

to Health Regulations 1994 (COSHH) require that an employer assess the risks to employees from exposure to specified substances.

Failure to comply with the provisions of the HSWA may result in the HSE or Local Authorities issuing an improvement notice for a specific defect to be remedied, or a prohibition notice to stop all activities, and/or bringing a prosecution. If the offence was committed with the knowledge of a Director or a Manager, both the organisation and the individuals concerned face possible prosecution.

An employer has duties for maintaining a safe place of work under common law as well as under the HSWA. The requirements are broadly similar. The employer's duty of care to his employees is to act as a reasonable and prudent employer. Failure to meet this requirement renders the employer negligent. The employer may, furthermore, be responsible for the negligent acts or omissions of managers acting beneath him if it can be shown that the manager was following the employer's established practice when harm resulted.

When an employer appoints staff to managerial positions, their promotion should be accompanied by appropriate training to ensure that the manager is able to discharge his health and safety duties effectively. Employers must have competent assistance to help them meet the provisions of health and safety legislation. This may mean employing approved experts from outside, or training employees. If the competent person fails to provide necessary services the responsibility for complying with legal requirements still lies with the employer who should have ensured that the person was competent.

Duties under health and safety legislation are wide and are not confined to the safety of the work premises.

5. PRACTICAL PROBLEMS

5.1 Being in court

If a water chemist is involved in court proceedings he or she should be careful not to commit perjury by knowingly swearing a false statement concerning the disputed matter. This can either be in a statement made prior to the commencement of court proceedings or during the hearing itself. Equally, it is an offence to instruct or procure someone else to commit perjury.

Discussing the evidence you will give in court with another witness, e.g. a colleague, can lead to your evidence being rendered inadmissible because of "collusion" between witnesses.

See section 5.4 below on contempt of court.

5.2 The Evidence - is it admissible in court?

Evidential matters are extremely complex and detailed advice must be sought in specific situations. There is a general prohibition in accepting hearsay evidence in court. Hearsay is a statement which is "offered as evidence of the truth of its contents", other than a statement made by a witness in the relevant proceedings. In effect this means that the only non-hearsay evidence is those matters which the witness personally saw or experienced. Original documents (not copies) constitute documentary evidence and are therefore also admissible. In

practice, there are various exceptions to the hearsay rule, including the use of photographs, though if the provenance of the photograph is disputed, it is advisable to be able to prove that the negative was from the film that was in the camera at the relevant time. The photographer's identity needs to be recorded, assuming that it was not an unmanned camera.

In any matter which is likely to be used in litigation, it is essential that ALL documentation is retained including "rough" books. Chain of custody procedures should be followed for samples. All laboratory and other record books should be signed and dated, preferably on each page. Contemporaneous notes and documents can be relied upon by a witness in giving evidence in order to refresh his memory, so it is important to create such documents at the operative time. For example, police officers are trained to record details of incidents in their pocket notebooks and can refer to these when giving evidence.

5.3 Taking samples - evidential problems

When taking samples which may later be used as evidence in court, section 209 of the Water Resources Act 1991 must be complied with. This has been amended by the Environment Act 1995 in recognition of the case of CPC(UK) v Harcross Timber where a result from a probe in a river was held to be admissible evidence even though the "tripartite" sample procedure could not be followed. The "tripartite" sampling procedure is therefore no longer necessary.

Failure to comply with evidential requirements may not only lead to an unsuccessful prosecution but, conceivably, could leave the prosecuting body (and the individual) open to a charge of obstructing the course of justice or wasting court time if proceedings then fail. However, the most likely outcome is an order to pay the other side's costs.

There is also the problem that unauthorised taking of a sample could be theft or conversion of goods, see section 4.4 above, or trespass to land.

5.4 Legal proceedings - contempt of court

No material should be made publicly available, whether intentionally or otherwise, which risks offering comment on matters which are set to go to court or are already there.

Parties involved in court proceedings should also avoid doing anything that risks constituting a contempt of court. There are two types of contempt of court, civil and criminal. Civil contempt is anything that plainly shows a disregard for the authority of the court, for example an open insult or disobedience to a judge's orders. Criminal contempt, on the other hand, is conduct that is either likely or intended to obstruct or prejudice the course of justice, for example by publishing material that may adversely affect the open mind of the jury, or the witnesses. Both perjury and contempt of court are punishable by imprisonment.

5.5 Drinking water supplies

The supply of drinking water to the general public is the responsibility of the water undertakers (the water companies) under section 6 of the Water Industry Act 1991. The Drinking Water Inspectorate enforces standards for drinking water under section 18 of the Water Industry Act. Sections 18 to 21 deal with the procedure to be followed if a contravention of the drinking water standards has taken place. Thus, an enforcement order can be served on a

water undertaker. If the order is breached and loss or damage is caused, then this is actionable in civil law under section 22. There are various rights of entry in relation to these powers.

Sections 71 to 84 of the Water Industry Act deal with various problems in water supply, including contaminating a water supply or wasting or misusing water.

5.6 Powers of entry for sampling and other purposes

Sections 71 to 84, 168, 170, 171 and 172 confer powers of entry upon persons designated by the water or sewage undertaker, as the case may be. These powers only relate to the activities specified in the above sections. Under section 173 there is an offence of impersonating a person entitled to entry. Schedule 6 contains supplemental provisions relating to rights of entry. Part I includes a general prohibition on exercising powers of entry to non-business premises unless 24 hours notice has been given. It also deals with serving notice for entry on occupiers of non-business premises, warrants to obtain entry and conditions of issue, obstruction of persons having a right of entry or who hold an entry warrant, and maintaining confidentiality in regard to manufacturing processes and trade secrets. Part II deals with further aspects including exercise of rights of entry without a warrant (on 24 hours, or 7 days notice, depending on the case, or in an emergency), use of identification, duty to secure premises afterwards and compensation.

Under the Water Resources Act 1991, there are equivalent powers of entry under sections 169, 170, 171 and 172. Schedule 20 covers the requirement to serve a notice before exercising any of the powers of entry available otherwise than in an emergency, and deals with allied matters though there is no equivalent of Part I of Schedule 6 of the Water Industry Act dealing with non-business premises, presumably as such access was thought to be less of a problem for issues of water resources.

Taking samples from a highway or public path can also have its problems. In the case of Hickman v Maisey an injunction was granted to prevent a horse tipster from loitering on a public highway to spy on the horses in training. The basis for this is that the right to use a highway or path is for the purposes of transport, or allied ones such as having a "breather", and not for anything else.

5.7 Compiling reports and keeping records

Care should be taken when compiling reports. When doing so the following should be taken into consideration, as well as section 5.8.1 on copyright.

5.7.1 Negligent misstatement

Reports, especially if inaccurate, are capable of causing loss to a business. An untrue statement may be made either carelessly, (that is without due concern for its truth), or fraudulently, (where the author either knew the statement to be false or was reckless as to its truth). Ambiguous statements may fall into either camp, depending upon whether the statement was honestly, though ineptly, used or, on the other hand, phrased so as to be intentionally misleading. If the report is relied upon by the person to whom it is addressed, and causes either that person or a third party to suffer harm or loss, the author is potentially liable

in an action for damages. In a situation where the information contained within a report was true at the time it was made, but which, subsequently, becomes false, the author has a duty to correct or update the information before it is relied upon. This makes it important for those supplying information to keep both themselves, and those relying on it, current with developments in their field of expertise.

5.7.2 Defamation

Statements that could injure the reputation of a company or a person risk being defamatory if conveyed to a third party, whether in writing (libel) or in spoken words (slander). Generally, for a case to succeed, the words or statements must be maliciously published and refer, whether explicitly or implicitly, to a particular person, company or group of people. It is, however, a defence to an action for defamation if the statement is true or a fair comment on a matter of public interest. Accordingly, great care should be taken to substantiate anything which is potentially defamatory before it is in any way published or broadcast. Defending defamation proceedings can be very expensive, even if done so successfully.

5.7.3 The correct analysis?

In the unfortunate event of a water chemist deliberately putting down the wrong result of his analyses, or omitting results, there are various possible consequences.

As regards the general law, creating a document which is inaccurate (eg even wrongly dated), could result in the creator being charged with forgery under the Forgery and Counterfeiting Act 1981, if done other than as an innocent mistake. If the chemist's superior ordered or pressured him to taking such action, the superior could be charged with inciting the offence, or conspiracy with the chemist if that were in fact the case.

In section 5.1 above, the problem of perjury is mentioned. There is also the offence of suborning perjury if a superior pressurised a chemist into giving a false sworn statement, in court or otherwise.

Under the legislation specifically dealing with water, there are powers for the regulators to obtain information from anyone concerning various matters impinging on the operations of a water or sewerage undertaker, or concerning pollution incidents (respectively ss203, 207 Water Industry Act 1991, and ss202, 206 of the Water Resources Act 1991). In both cases, there are penalties for failing to comply with the order to supply the information and with supplying false information. Omitting to include relevant information is taken to be included in the concept of supplying false information. If anyone was foolish as to record incorrect results or omit results, and there was a demand for the relevant information to be supplied, then the individual could be subject to an unlimited fine in the Crown Court.

5.8 Intellectual property

When using material produced by others, care should be taken to avoid infringing any intellectual property rights. The different types of rights are dealt with below.

5.8.1 Copyright

This could be important for those dealing with written material, including as an author of reports. Copyright will exist automatically in any report or letter or other document from the moment of its creation.

Copyrighted material may not be reproduced in whole or in part without the author's consent (though in the case of published material the author will have assigned or licensed his rights to his publisher). There are certain exemptions for fair dealing. Copyright for most documents and photographs lasts for 70 years from the author's death. It is equally a breach of copyright to make a copy of a computer program.

Authors of reports should be careful to ensure that their terms of engagement by the client do not give the client unrestricted rights to copy the report, or at least the author's consent is required under such circumstances. For employees, copyright will normally rest with their employer.

5.8.2 Patents

A patent is intended to protect the inventive idea of a product by affording a 20 year monopoly for a patented product or process. During this time no one else can sell, manufacture or use the process without permission. To do so may result in the object being seized and destroyed and damages being sought, unless the user can show that they had no grounds for supposing that the product was patented.

5.8.3 Trade marks

A trade mark is any device, brand, heading, label or ticket which gives a product unique distinctiveness (e.g. "Coca Cola", "BMW"). The owner of a trade mark has a right to stop others from using it. This is deemed to be infringed by anyone using an identical or very similar mark. It is unlikely that a water chemist will have much responsibility in this area, but care should be exercised when devising any new logo or name for a product, agency or company.

5.8.4 Design Rights

Many products have design features added which are protected by design rights. These fall into two categories: unregistered and registered. Unregistered design rights arise automatically and protect the general aspect, shape and configuration of an object giving the owner of the design right the exclusive right to reproduce the design for commercial purposes. Anyone plagiarising the design may be liable for damages, unless they can show that they reached the same design independently. Registered design rights are similar but confer stronger rights for products which display a degree of ornamental or artistic 'eye appeal'. As above, it is unlikely that design rights will impinge on a water chemist's day to day work, but he should be aware of them not only to avoid infringing those of others but also to protect his own.

5.9 Vicarious Liability

A negligent act committed by an employee of an organisation in the normal course of his or her work will render that organisation liable because it is the employer of the individual responsible. This is termed vicarious liability. The situation arises, firstly, because persons,

when acting for their employer are considered to be an embodiment of it. Secondly, it is generally possible to obtain higher awards from organisations than individuals, making the former more attractive to sue.

In the case of an employee acting on their own behalf and committing a crime or a civil wrong (for example, theft or infringing computer software copyright) the employer is not vicariously liable.

5.10 Personal liability of directors and managers

There is a standard clause which appears in virtually all modern Acts of Parliament for personal liability of directors and managers. They can be personally charged where an offence has been committed by a company, and the individual has contributed to the offence by consenting to it, or it happened because of his neglect. Examples are section 157 of the Environmental Protection Act 1990 and section 37 of the Health and Safety at Work Act 1974. The penalties are the same as for the company.

6. RUNNING A BUSINESS

6.1 Business Organisations

A water chemist may be operating as an employee but could alternatively be operating in another capacity. Thus, a water chemist could operate as a sole trader (e.g. as a consultant), in a partnership (two or more chemists working together), in a private limited company (e.g. "Water Consultants Limited"), or as an employee of a public limited company (e.g. Thames Water plc). A few points concerning each should be noted.

6.1.1 Sole Trader

A sole trader is a single person who holds all the assets of a business and has the right to make all decisions affecting it. He or she also bears unlimited liability for the debts and obligations of the business. There are a number of tax advantages of being self employed. Tax can be claimed back for goods and services used or purchased for the business (e.g. office equipment, petrol or telephone charges) and special rules apply in the opening and closing years of the business. Individual tax returns must be submitted annually.

6.1.2 Partnership

In a partnership two or more persons together share the assets of the business and the right to make all decisions affecting it. They also share the responsibility for paying any debts or obligations of the business (although if one partner cannot pay then the other must pay the defaulter's share). Typically the partners will draw up a partnership agreement between themselves (in the absence of which the provisions of the Partnership Act 1890 apply), covering such things as salaries, shares in income and losses, withdrawing money from the business and the ownership of assets. Partners should be aware that a deal struck with a third party by one partner, whether for better or worse, is usually binding upon the partnership as a whole.

6.1.3 Private limited company

A business owned as a "private limited company" is one owned and operated by the company itself. The advantage of using a company structure is that it provides a shield for the entrepreneur. Thus, if the company becomes insolvent, the personal assets of the director or shareholder are protected.

The company will have a board of directors who are responsible for entering into contracts and the day to day running of the business. The shareholders are the owners of the company. They can alter the company's constitution (e.g. its name or the nature of the business it is authorised to conduct) or appoint and dismiss directors from the board by passing resolutions at shareholder's meetings. Often, in the case of a private limited company, the directors and shareholders will be one and the same people.

Generally, in the absence of misconduct, directors bear no liability for any debts they incur on the company's behalf. A director can, however, be voted out of office and be held personally liable for fraudulent or wrongful trading.

The individual water chemist could thus be a director, shareholder and employee all at the same time.

In order for a company to exist at law it must be properly registered with the Companies Registry. It is then given a registration number by the registrar. It must also comply with the requirements of the Companies Act 1985, including publicising the fact that it is a company so that clients and suppliers know they are dealing with a company. An annual return has to be made to the Companies Registry.

Taxation on a private limited company falls into three categories: the company's profits will be subject to corporation tax, the directors' salaries to income tax, and the shareholders taxed on their dividends.

Some caution is required in relation to loans to small companies, as banks are aware of the nature of the "corporate veil" and will require a personal guarantee from the participants for a loan, e.g. that it is secured on the director's house.

6.1.4 Public limited company

A public company's constitution must state that it is so and the words 'public limited company' or 'plc' must appear after its name. Broadly this indicates that the company is allowed to have its shares listed on the Stock Exchange. Public companies, like private companies, are governed by the Companies Act although there are differences of detail. However, there are several important distinctions in practice which are outside the scope of this briefing.

6.1.5 Other bodies corporate

These include former governmental departments that have been privatised. They often take the form of QUANGOs (Quasi Autonomous Non-Governmental Organisations) which operate akin to private limited companies. They do not have shareholders.

There are also companies limited by guarantee (as opposed to shares) and those created by statute (eg the RSC).

6.2 Establishing a Business

When setting up a business a water chemist should be aware of the following requirements:

6.2.1 Recruitment

When recruiting, an employer has a statutory duty under the Sex Discrimination Act 1975 and the Race Relations Act 1976 not to discriminate on the grounds of sex, race or marital status. Thus, advertising for a Scottish nanny for your children, or offering a better car breakdown service to women could both be illegal. The Equal Pay Act 1970 places a further statutory duty on an employer to provide equal pay for men and women doing comparable work.

6.2.2 Statement of terms of employment

Within 13 weeks of commencement of employment, the employer must give the employee a written statement containing, among other things, the period of employment, pay, hours of work, holiday allowances, sickness benefits and pension schemes. This may, alternatively, take the form of a formal contract of employment.

6.2.3 PAYE/National Insurance

An employer is required to maintain a Pay As You Earn (PAYE) system by which tax is deducted from an employee's pay at source. A sole trader or a partner will pay Class 2 national insurance contributions which are a flat rate and may also pay Class 4 national insurance contributions which are calculated as a percentage of taxable profits. A limited company must also pay the employer's national insurance contribution in relation to each of its employees and must collect and maintain the employee's own Class 1 national insurance contributions.

6.2.4 Health and Safety

An employer must ensure that the health and safety requirements discussed above are met.

6.2.5 Employer's liability insurance

An employer is required to carry insurance against his liability to an employee who is injured or who contracts a disease as a result of his work. The certificate of insurance must be displayed at the place of work.

6.2.6 Value Added Tax

If the annual turnover of the business is expected to exceed, currently, £49,000 the proprietor must register for VAT.

7. Some practical examples

7.1 Access to premises

A water chemist is engaged in taking a sample from a river. He is asked to leave the land on which he is standing, refuses, and is manhandled back to a public highway.

Legal analysis: was the water chemist a trespasser? He may have been unless he had authority to be on the land, including the legal powers accorded to certain persons under the Water Resources Act 1991 and the Water Industry Act 1991. If he was not a trespasser, then it appears he was assaulted and could report the matter to the police who may decide to prosecute, and/or he could take civil action for assault to obtain both damages and an injunction to prevent a repeat incident. However, if the water chemist was present without the consent of the landowner and did not have statutory authority, then it seems that the occupier of the land used reasonable force to eject him from the premises when he refused to leave voluntarily. He therefore has no legal recourse in that case.

7.2 Negligence issues

7.2.1 A product which causes damage

A batch of chemicals which is supposed to protect boilers from corrosion is sold to an industrial operator. In fact, an error has been made in making up this particular batch. The product fails adequately to protect the boiler with the result that it suffers from excessive corrosion.

Legal analysis: the organisation supplying the chemical product is negligent in having supplied a product which does not do what it was supposed to do, and is also probably in breach of the contract between itself and the industrial operator. It is unlikely that there is liability as well under product liability legislation as this is mostly directed to a protection of consumers.

7.2.2 Advice

A water chemist operating as a consultant advises an industrial operator on the suitable composition of a mixture of chemicals to treat a water-cooled air conditioning system, so as to prevent a build-up of legionella. Some months after the advice is acted on, the water system is tested and the air conditioning system is found to have a high count of legionella. The air conditioning system has to be closed down for cleaning. The factory served by the system has to be closed for two days as it cannot operate without the system.

Legal analysis: it seems that the water chemist has given bad advice. However, it may be that he has given perfectly valid advice but that the factory operator has not fully briefed him. Any liability will therefore rest on the evidence, as it always does. It is important the water chemist gave any advice in writing with appropriate caveats and recording in writing the basis on which his advice was given. He may be liable in negligence. He may also be liable for breach of contract if in fact there is a contract directly between him and the industrial operator - we are not told whether there is or not. If a third party such as a member of the public had been infected by the contaminated water system, then they could have sued the water chemist

in negligence but not in contract, as there is no contractual relationship between that member of the public and the water chemist.

7.2.3 Drilling in the wrong place

In the course of investigating potential pollution of soil and groundwater, a drilling rig goes through an underground line, releasing a toxic substance which requires remediation to be undertaken.

Legal analysis: the operating firm of the drilling rig would seem to be liable in negligence to the owner of the plant. They may or may not be liable in contract, but it seems less likely as presumably the drillers were acting as sub-contractors for an environmental consultancy. There is no direct contractual relationship between them and the plant operator.

7.3 Contractual matters

7.3.1 Failure to pay

Company X engages a water chemist as a consultant to advise him on a specific matter. The water chemist completes the work and submits his written report. However, in spite of various written reminders the company fails to pay him for the work.

Legal analysis: Company X is in breach of the contract between it and the water chemist. The water chemist should be able to prove that a contract existed - e.g. a letter or order on a standard order form. The water chemist should sue the company in the County Court. It should be noted that for sums less than £3,000 (at the time of writing) the small claims court procedure can be used which is much more user friendly than more formal proceedings.

7.3.2 Failure to perform

Company A instructs water chemist Y as a consultant to provide them with specific advice by a specified date. The water chemist is engaged in another matter but even so accepts the contract. He fails to provide the advice by the specified date.

Legal analysis: the water chemist is legally liable to the company in contract as he has failed to provide the services specified. If he has received any advance payment on account then he is legally liable to return it. However, he is also liable for damages if the company has suffered any loss because of his failure to complete the contract. In some cases, the company would not have suffered a loss as they would simply have engaged an alternative consultant.

7.4 Copyright

A water chemist prepares a report and has a chapter of a book re-typed to form an Appendix to the report.

Legal analysis: this is breach of copyright. It does not matter whether the copying is done photographically or by hand, it is still a breach. Also, the copying of a whole chapter would seem to be well beyond any possibly "fair dealing". The liability would be in damages to the owner of the copyright.

7.5 Corporate problems

7.5.1 Fending off liability I

A water chemist gives advice to a client. However, he is employed as a sub-contractor by the consulting company which provided the services to the client. The client believes the advice, acts on it, suffers loss and wants to sue, but who should he sue?

Legal analysis: it is unlikely that there would be any direct contract between the water chemist and the client in the circumstances. It is also unlikely that the client would sue the water chemist alone - it is much more likely that the company would simply be sued. The company itself should be carrying professional indemnity insurance which would pay the legal expenses and damages, up to a limit. They are therefore a better "target" for an aggrieved client. The water chemist could still be sued by the main contractor if it suffers loss.

7.5.2 Fending off liability II

A water chemist operates his own "one-man" limited company. He is sued by a client for breach of a contract and for negligence.

Legal analysis: the company provided the services, so it is the company **alone** which can be sued. It is important that the water chemist does not contract in his own name **as well as** in the company's name, otherwise he could be liable as well as the company.

7.6 False results or no results

A water chemist carries out an analysis of a water sample to test for compliance with a licence. The analysis shows a lack of compliance with one of the conditions in the licence. His superior pressures him in to recording a result which is not the true one, or to alter the recorded result.

Legal analysis: the document in which the untrue result is recorded is a "false instrument". There are various offences under the Forgery and Counterfeiting Act 1981 including making, copying or using a false instrument which could each apply depending on the circumstances. The superior could be liable in any event for inciting each of the offences or conspiring to commit them. If the results were to be used in court proceedings, the offences of perjury and of suborning perjury could be relevant. If the results were required by a regulator then the offences concerning provision of no information or false information under the Water Resources Act 1991 and the Water Industry Act 1991 would also be relevant.
