



Community Services

Contaminated Land Inspection Strategy

July 2001
Revised July 2010
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Reviewed July 2018

EXECUTIVE SUMMARY

Under the Contaminated Land (England) Regulations 2000, which came into force on the 1st April 2000, a duty was placed on the Council to inspect land in its District for contamination. A strategy of how it intends to do this, and the timescale for carrying out such an operation, had to be submitted to the then Department of Environment, Transport and the Regions by July 2001. The approach the authority had to take had to be rational, ordered and efficient.

The 2000 Regulations have since been revoked and superseded by the Contaminated Land (England) Regulations 2006 which extended the regulatory framework to include radioactivity.

The Council's priorities in dealing with contaminated land will be:

1. To protect human health
2. To protect controlled waters
3. To protect designated ecosystems
4. To prevent damage to property
5. To prevent any further contamination of land
6. To encourage voluntary remediation
7. To encourage re-use of brownfield land

Following an initial desktop study of information held, all areas of land identified as being potentially contaminated had to be inspected. This had to be done in a descending order of priority. To ascertain the order in which to carry out these inspections the Council purchased a risk ranking computer system 'GroundView', to run in conjunction with its Geographical Information System (GIS).

The City Council is the lead regulator on contaminated land but, wherever necessary, the Council will work in partnership with other organisations particularly the Environment Agency. Detailed consultation was undertaken with Parish Councils as well as all statutory consultees prior to July 2001.

The regulations set clear criteria that must be met before land can be formally designated as contaminated land. The Council must also maintain a public register that will contain information on land that has been identified as contaminated land, and how and when that land has been remediated.

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1. INTRODUCTION

1.1 Corporate aims

This strategy sets out how Canterbury City Council (CCC) proposes to identify contaminated land within its district. This is the initial stage in a process to ensure that any associated unacceptable risks to human health or to the wider environment are addressed in an appropriate and cost-effective manner. CCC is committed to effective implementation of the new regime and to ensure proper protection of human health and the environment.

Land contamination is not a new issue to CCC. It is already taken into account under planning control. For example, any developer wishing to redevelop former industrial/commercial (brownfield) land has to satisfy CCC, as the planning authority, that any land contamination has been properly defined and dealt with appropriately (making the land suitable for the proposed use and addressing any wider environmental risks).

The new regime complements the existing planning system. It represents a more pro-active and strategic approach to identifying contaminated land and a risk-based approach to securing remedial action that may be needed to return the land to such a condition that unacceptable risks to human health and the environment are prevented. The first stage, however, is to identify contaminated land. This Strategy sets out how CCC proposes to carry this out.

1.2 Regulatory Framework

Part IIA of the Environmental Protection Act 1990 (inserted by Section 57 of the Environment Act 1995) introduced a new statutory regime for the identification and remediation of contaminated land. This was effective from 1 April 2000 and the Contaminated Land (England) Regulations 2000, made under the 1990 Act, came into effect at that time. These have now been superseded by the Contaminated Land (England) Regulations 2006 which extended the regulatory framework to include 'radioactivity'. Statutory Guidance forms an essential part of the new regime and is contained in DEFRA Circular 01/2006 (which superseded circular 2/2000), along with other guidance on the new regime.

1.3 The role of the City Council and the Environment Agency

Local authorities have been assigned the lead role in the identification of contaminated land and, for most sites, establishing the appropriate person(s) to bear responsibility for any remediation required, deciding the nature of that remediation and recording regulatory actions. Box 1 summarises these responsibilities. For certain classes of site, identified by the local authority as special sites, the regulatory role is to be transferred to the Environment Agency following identification. There are also requirements for the local authority to liaise with other bodies such as the Environment Agency (particularly where controlled waters may be at risk of pollution or where a site is considered a special site) and with English Nature, English Heritage and the Department of Environment Food and Rural Affairs (DEFRA).

The duty to identify contaminated land is established in Section 78B of the Environmental Protection Act 1990 as follows:

78B every local authority shall cause its area to be inspected from time to time for the purpose -

- (a) of identifying contaminated land; and*
- (b) of enabling the authority to decide whether any such land is land that is required to be designated as a special site.*

Box 1 Key Duties of Local Authorities Under Part IIA

- Prepare a strategy to identify contaminated land
- Implement the strategy
- Consult various other parties
- Identify special sites (for regulation by the Environment Agency)
- Prepare and serve notifications of contaminated land (these effectively start the consultation process on what remediation is necessary)
- Serve a remediation notice where appropriate (voluntary agreed action being preferred)
- Determine exclusion from, and apportionment of, liability for remediation and address cost recovery)
- Compile and maintain a register

The Environment Agency will have four principal roles with respect to contaminated land under Part IIA. It will:

- assist local authorities in identifying contaminated land, particularly in cases where water pollution is involved;
- provide site-specific guidance to local authorities on contaminated land;
- act as the enforcing authority for any land designated as a 'special site'; and
- publish periodic reports on contaminated land.

The Agency has also inherited the contaminated land research programme previously run by the then Department of the Environment. They will continue to carry out technical research and, in conjunction with the Department of Environment, Food and Rural Affairs (DEFRA) publish scientific and technical advice.

1.4 Pollutant linkage

Contaminated land is defined in relation to:

- (a) significant harm is being caused or there is a significant possibility of such harm being caused: or
- (b) pollution of controlled waters is being, or is likely to be, caused.

The mere presence of contamination is not sufficient for land to be determined as

contaminated. Before a local authority can determine that any land appears to it to be contaminated land, it should be satisfied, as a first step, that a 'contaminant', a 'pathway or pathways' and a 'receptor' have all been identified with respect to that land.

In the statutory guidance, these terms have explicit definitions as given in Box 2. The statutory guidance states: '*...the relationship between a contaminant, a pathway and a receptor is termed a 'pollutant linkage' and the contaminant in a pollutant linkage is referred to as a 'pollutant'. Without the identification of all three elements of a pollutant linkage, land should not be identified as contaminated land*'.

The identification process is necessarily 'probabilistic' in the sense that the objective of the new regime is not to prove the status of each plot of land. Instead, in accordance with the DEFRA Circular, it is to adopt an approach that is rational, ordered and efficient with proportionality between the local authority activity and the potential threat being addressed.

For a site to meet the definition of contaminated land, a significant pollutant linkage must be established. A pollutant linkage consists of three parts:

- I. A source of contamination in, on or under the ground
- ii. A pathway by which the contaminant is causing significant harm or pollution of controlled waters is being, or is likely to be caused (or which presents a significant possibility of such harm being caused)
- iii. A receptor of a type specified in the regulations.

Box 2 Definitions from Statutory Guidance for Sources, Pathways and Receptors

A contaminant is a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of controlled waters.

A receptor is either:

- (a) a living organism, a group of living organisms, an ecological system or a piece of property which:
 - (i) is one of the types of receptor listed in Table A of the statutory guidance and
 - (ii) is being, or could be harmed by a contaminant; or
- (b) controlled waters which are being, or could be, polluted by a contaminant.

A pathway is one or more routes or means by or through which a receptor:

- (a) is being, or could be, exposed to, or affected by, a contaminant; or
- (b) could be so exposed or affected'.

It is possible for a pathway to be identified for this purpose on the basis of a reasonable assessment of the general scientific knowledge of the nature of the contaminant and the circumstances of the land in question. Direct observation of the pathway is not necessary.

The identification of each of these three elements is linked to the identification of others. A pathway can only be identified if it is capable of exposing an identified receptor to an identified contaminant. That particular contaminant should likewise be capable of harming, or in the case of controlled waters, polluting that particular receptor.

1.5 Risk assessment

A statutory definition of contaminated land is also introduced for the first time in s78A (2), based on the likelihood of significant harm or the pollution of controlled waters as follows:

78A (2) *‘Contaminated Land’ is any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that –*

- (a) significant harm is being caused or there is a significant possibility of such harm being caused; or*
- (b) pollution of controlled waters is being, or is likely to be, caused.*

The interpretation of contaminated land needs to take account of the statutory guidance that incorporates risk assessment considerations. In essence, however, the issue is to identify unacceptable risk to human health or to the environment for current land use. Significant harm includes human health effects as defined, specified harm to protected ecological systems, substantial damage to or failure of buildings, and specified damage to or loss of crops or livestock.

1.6 Radioactively Contaminated Land

DEFRA Circular 01/2006 describes changes to the definition of contaminated land to include ‘radioactively contaminated land’ and came into force on the 4th August 2006.

The main features of the extension of the Part IIA regime to radioactivity are:

- A modification of the definition of contaminated land where radioactive contamination is concerned. Section 78A (2), as modified, defines contaminated land as “any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:
 - (i) harm is being caused, or
 - (ii) there is a significant possibility of such harm being caused”

the definition of ‘harm’ attributable to radioactivity in respect of human beings is based upon the wording of the Directive. ‘Harm’ is defined as “lasting exposure to any person resulting from the after-effects of a radiological emergency, past practice or past work activity”. ‘Harm’ should be regarded as being caused where lasting exposure gives rise to radiation doses equal to or in excess of prescribed values set out in the statutory guidance Annex 3. Lasting exposure is not defined in the Directive but the Government considers it to be exposure that could take place over a protracted period as a result of the nature of the contamination and the use to which the land is put.

- The duty of a local authority to inspect its area will be restricted to circumstances where there are reasonable grounds for believing land

- may be contaminated by virtue of radioactivity.
- Any land determined as contaminated by virtue of radioactivity will be a special site with the Environment Agency acting as the enforcing authority rather than the local authority. Where there is a mixture of radioactive and non-radioactive contamination on a particular site, the Environment Agency will act as the enforcing authority for all the pollutant linkages.
- When considering what remediation is reasonable, where remediation includes an intervention, the enforcing authority must consider the cost and harm (including social cost) of any intervention, whether the benefit of the intervention justifies the adverse effects caused by the intervention, and how the intervention can be optimised so that the net benefit can be maximised.
- The Environment Agency as the enforcing authority must exercise its power to remediate in certain circumstances where it is necessary for the purposes of the Directive and where there is no other person liable for the remediation.

An intervention is defined as “a human activity that prevents or decreases the exposure of individuals to radiation from sources which are not part of a practice or which are out of control, by acting on sources, transmission pathways and individuals themselves”. It is therefore a type of remedial treatment action as defined in Part IIA and ensures that land is suitable for its current use.

1.7 Development of the strategy

Local authorities are required by the statutory guidance to take a strategic approach to the identification of contaminated land which:

- is rational, ordered and efficient;
- is proportionate to the potential seriousness and seeks to locate the most serious problems first;
- focuses on where contaminated land is most likely to be found;
- establishes an effective framework for detailed inspection;
- involves consultation with the Environment Agency and other relevant bodies;
- is documented, adopted, published, implemented and periodically reviewed.

Local authorities are also required to reflect local circumstances and local factors shown in Box 3.

The contents of the strategy are also specified and include aspects such as objectives; local characteristics and their bearing on the strategy; approach proposed; timescales and resources; liaison arrangements; handling information received; review and update. These are all reflected in this strategy.

Box 3 Local Factors to be considered in the Strategy

- the distribution of specified receptors across the district (e.g. housing, ecological receptors) and the extent to which receptors are likely to be exposed to a potential pollutant;
- the history, scale and nature of industrial activities

- the nature and timing of past development;
- current information on land contamination;
- existing evidence of significant harm and pollution of controlled waters
- previous remediation carried out and any remediation that is expected to be carried out in the context of pending redevelopment
- related studies carried out by other authorities

1.8 Consultation on this Strategy

The following were consulted during the preparation of this strategy:

- internal departments within Canterbury City Council, namely Environment and Street Scene, Development Control, Housing, Leisure and Cultural Services, Land Charges, Property Services, and Legal;
- neighbouring Councils;
- the Environment Agency, English Nature, English Heritage and DEFRA (to obtain relevant information) and the Food Standards Agency.

1.8.1 Environment Agency

A copy of the draft strategy was sent to the Environment Agency for comment, and a copy of the finalised strategy forwarded to the Agency as required by the guidance. Notification of the identification of contaminated land and of any remediation notices issued will also be forwarded to the Environment Agency.

The Council will take account of any general guidance issued by the Environment Agency, and will seek to establish effective liaison with the area contact within the Environment Agency. The Council will also need to consult with the Environment Agency if land that may be contaminated land would be:

- i. so classified by virtue of any pollution of controlled waters; or
- ii. a special site.

If during any investigation it appears that the land might be a special site as described in the Contaminated Land (England) Regulations 2006 then the Council will decide whether the land is to be designated a special site. The effect of designating land a special site is that the Environment Agency takes over as enforcing authority for that site.

Specific information available from the Environment Agency will be incorporated within the identification process. Information provided by the Agency will include:

- information on groundwater vulnerability, source zone protection maps;
- information on surface water quality, abstraction licenses and specific pollution incidents;
- information on the location of closed landfill and currently licensed waste management sites;
- details of sites of a type that, if contaminated, would be categorised as Special Sites (including current and historic IPC authorised sites).

Much of the data provided has been in the electronic form and as such has

been incorporated into the GIS system of the local authority.

1.8.2 English Nature

English Nature was contacted requesting any relevant information that it may hold. This should include the acquisition of datasets relating to ecological receptors of relevance in considering significant harm.

1.8.3 Department of Environment Food and Rural Affairs

DEFRA were also contacted requesting any relevant information they may hold.

1.8.4 Food Standards Agency

The Food Standards Agency is responsible for food safety including the safety for consumers of any food that may be affected by contaminated land. This includes food produced in domestic gardens and allotments and food collected from the wild as well as commercially produced food. In line with the guidance issued by DEFRA, these are all matters to be addressed by this strategy.

2. CHARACTERISTICS OF CANTERBURY CITY COUNCIL

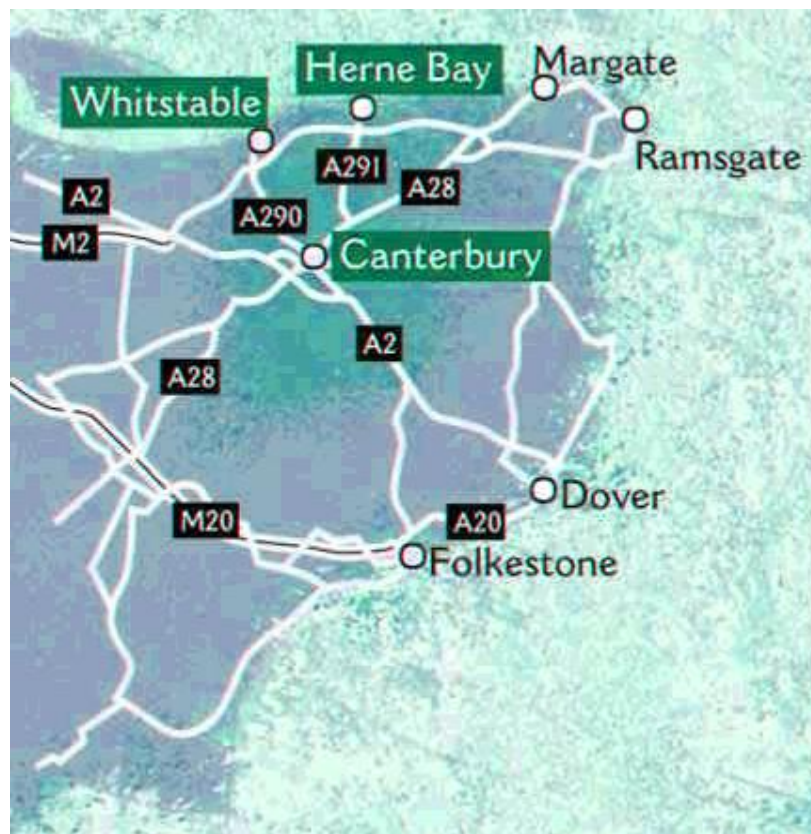
2.1 Geographical location

Canterbury District is located in north-east Kent. As well as the historic city, it comprises the coastal towns of Whitstable and Herne Bay, attractive countryside, high quality agricultural land and some 35 villages.

2.2 Brief Description/History

2.2.1 Canterbury

The town of Canterbury has played an important role in the history of this country as its religious centre. There has been continuous occupation in Canterbury since prehistoric times. The Romans then established Canterbury as a Roman cantonal capital and regional administrative centre. The influence of Christianity on the development of the City began in 597AD when Augustine founded his cathedral



on the site of an early church used by the Roman Christians.

FIGURE 1. MAP OF CANTERBURY CITY COUNCIL DISTRICT

The murder of Archbishop Thomas Becket in 1170 shocked the whole Christian

world and the subsequent shrine that was established attracted pilgrims from all over Europe. The Pilgrimages reached their height in the latter part of the 14th century and this Pilgrimage was regarded as second only in importance to the shrine of St James at Santiago de Compostella.

The arrival of the railway led to the development of several large breweries and paper mills, corn mills and clay pipe factories although no extensive industrialisation in the 19th century. Milling was an important industry with numerous mills being located along the river Stour.

During the Second World War a series of German air raids destroyed part of the historic core of the town. This area was later redeveloped with more modern buildings.

Canterbury continues to be an important City for visitors with the main attractions being its history, the Cathedral and now the new 'Whitefriars' Shopping Centre.

2.2.2 Herne Bay and Whitstable

Herne Bay in contrast, originally developed from a sheltered landing stage for small coastal craft trading between north east England, Kent and London. During the 19th century Herne Bay became a popular Victorian seaside resort particularly following the construction of the railway providing links to London. In the early 1830's Samuel Hacker devised a plan for a new town at Herne Bay based on a grid iron with linked squares. This basic street pattern still exists today.

Whitstable is situated at the mouth of the Swale Estuary and the layout of the old town has evolved around the sea defences namely the construction of three sea walls over time. In the 18th and 19th centuries Whitstable grew into a busy fishing town and port and became the foremost oyster-producing town in the country. It retains much of this character today with it's still, busy working harbour.

The area between the coast and the City is largely covered by the Blean Woods. This woodland complex is the most extensive area of nearly continuous woodland in south east England. The Blean is an important habitat for rare species such as the Heath Fritillary butterfly.

To the south of the City the landscape is shaped by the North Downs ridge of chalk that stretches from the Strait of Dover to the outskirts of London. Most of the area outside the three main urban areas are farmed extensively for arable and horticultural crops, orchards and hops and largely retains its agricultural character.

2.3 Size

The Canterbury District covers a much wider area than just the City itself. The district has an area of 31,980ha or 320 square kilometres or 124 square miles.

2.4 Population Distribution

The population for the Canterbury district at the 2001 census was 40,835 for Canterbury; 35,188 for Herne Bay; 30,979 for Whitstable and 28,276 for the Rural areas. In total 135,278 people.

2.5 Land owned by the City Council

The Council is a major property owner within the district with a certain percentage of the acreage being directly or indirectly controlled by the Council. There are significant Council property holdings not only in Canterbury, but also at the coastal towns of Herne Bay and Whitstable. The property holdings are of strategic importance to the Council and assist in delivering services to the public.

2.6 Current land use characteristics

Canterbury has an important economic role to play as a regional business and shopping centre for East Kent. It is also a major tourist centre of international significance, and education also plays an important part in its economy.

Canterbury has an important agricultural sector being surrounded by good quality agricultural land, Grades 1 and 2. Industrial activity is generally concentrated on industrial estates within or on the outskirts of the three towns.

2.6.1 Protected locations

The District has a wide variety of important landscapes and some are of national and international importance. They include coastal marshes, cliffs, ancient woodland, river valleys, grasslands, and chalk downland. There are a variety of designations for both landscapes and habitats at various levels.

2.6.2 Important landscapes - National, County, Local

At the National level - Kent Downs Area of Outstanding Natural Beauty designated in 1968 - covering an area of 8,564 ha which equates to 27% of the District.

At the County level - Special Landscape Areas. There are three within the District:

- North Downs SLA
- Blean Woods SLA
- North Kent Marshes SLA

At local or District level there are two areas of High Landscape Value that are important locally. One is the Canterbury AHLV that seeks to protect the setting of the City and the second is the Wantsum Channel AHLV, which recognises the importance of the former sea channel to East Kent.

2.6.3 Important Habitats - International, National and Local

RAMSAR/SPA - Stodmarsh, Thanet Coast and Swale - designated as Wetlands of International importance as Waterfowl habitat under the Ramsar Convention. The area was also designated as a Special Protection Area (SPA) under Article 4 of the European Community Directive of April 1979, on the conservation of wild birds (EC/79/409).

Marine Special Areas of Conservation (SAC) - Thanet coast is also designated as a marine special area of conservation.

Other candidate SAC's are Blean Woods, Ellenden Woods, Stodmarsh and East Blean Woods.

Sites of Special Scientific Interest (SSSI) - There are 15 some of which are also RAMSAR Special Protection Areas for Birds, & SAC's.

SNCI's - over 50, managed by the Kent Wildlife Trust.

National Nature Reserves - Stodmarsh, East Blean Woods and Blean

There are eight local Nature Reserves - Bishopstone cliffs, Larkey Valley Woods, Seasalter levels, Bust Company Island, Foxes Cross Bottom, Curtis Wood and Whitehall Meadows.

The District also boasts a significant amount of semi-natural ancient woodland.

2.7 Key Property types

A World Heritage Site was designated in 1987 by ICOMOS (UK) for UNESCO and comprises of three areas - the Cathedral and Cathedral Close, St Augustine's Abbey and St Martin's Church.

In 1984 the centre of Canterbury was designated an Area of Archaeological Importance (AAI) because of the wealth of surviving below ground archaeology.

There are: 95 Conservation Areas
 2891 Listed Buildings and a further 752 locally listed
 53 Scheduled Ancient Monuments

In addition there are a number of historic parks and gardens associated with large country houses such as Bourne Park, Charlton Park and Broome Park.

2.8 Known Information on contamination

In 1990 Kent County Council co-ordinated the collection of historical information about closed landfill sites and produced the first version of the 'Kent Landfill Atlas'. This has enabled the authority to identify the location of all closed landfill sites within its district and helped in the consideration of the implications of landfill gas upon the built environment.

Other sources of information include a register of land contamination drawn up by the authorities Planning Department during the 1990's. In some cases site investigation reports are also required as part of a Planning application. Planning records will therefore form a valuable resource during the investigation process.

The Environment Agency holds some information of known or suspected water pollution, including pollution incidents, or other relevant evidence.

All information held or obtained is to be incorporated into the Council's geographical information system (GIS).

2.9 Current and past industrial history

Before the Industrial Revolution the River Stour was a major source of power and at one time as many as a dozen mills made use of the water for their power. Some of these mills and associated workings are still evident today.

Coal mining took place within the District to the east of Canterbury at Hersden during the 1900's. Hersden is a former mining village that was developed as part of Abercrombie's Regional Plan for East Kent to provide housing for miners at Chislet Colliery in 1900's. It was originally designed for 1000 homes by architect J Skipper. The colliery closed in 1969 with only part of the planned village being realised.

Gravel extraction has occurred in the District particularly in the floodplain of the River Stour. Many of these workings have been retained as water areas after the mineral workings have ceased, and now provide important wildlife areas.

Tanning - there has been a tannery at Canterbury for centuries - the site in Stour Street was established in 1789 and expanded in 1884 by the Williamson family. Now closed the site has been redeveloped for housing and commercial uses. This redevelopment required an extensive remediation programme to be devised and executed as part of the planning process.

Education is an important employment sector in Canterbury and the City contains a wide range of educational establishments with both state and independent schools, the University of Kent, Canterbury Christ Church University College, Canterbury College and the University College for the Creative Arts.

As previously stated tourism and retailing also play an important part in Canterbury's Industrial history.

2.10 Broad Geological Characteristics

Canterbury is located at the foot of the North Downs where the dip slope peters out and the clay cap of the Blean Begins. The floodplain and the valley side of the River Stour divide these areas.

To the south, Canterbury is an area of upper chalk overlain with deep well drained fine silty soils. To the north there is an extensive area of London Clay that covers the area known as the Blean.

Running from west to east between these geological bands is an area of Thanet Beds and river terrace gravels associated with the river valley of the Great Stour. Alluvial deposit to the west and east of the district at Seasalter Levels and Graveney Marshes, and the Chislet marshes associated with the former Wantsum Channel.

2.11 Broad Hydrogeological Characteristics

The higher ground of the North Downs lying to the south of the district is composed largely of permeable chalk. There is no surface run-off and almost all

the rainfall that does not subsequently evaporate infiltrates and recharges the chalk. Consequently, with the exception of the Great Stour, no major streams enter the district. By contrast, the impermeable London Clay that covers the greater part of the district permits very little infiltration and gives rise to surface run-off as many small streams. The widespread alluvial material that occurs along the Wantsum'; west of Whitstable and on the Isle of Sheppey, is drained by a largely artificial network.

Average annual rainfall within the district is approx. 600 mm. The general lack of large streams has led to a traditional use of groundwater for supply purposes. The chalk is the principal aquifer and primary source of water supply. The flow regime within the chalk takes place almost entirely through fissures that may have been enlarged by solution processes. Good yields from the chalk are dependant upon the well intercepting major water bearing fissures so that large diameter bore holes, shafts and adits have been constructed.

FIGURE 2. GROUNDWATER VULNERABILITY

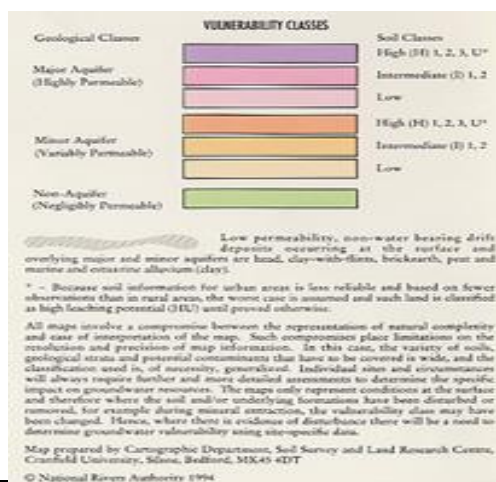
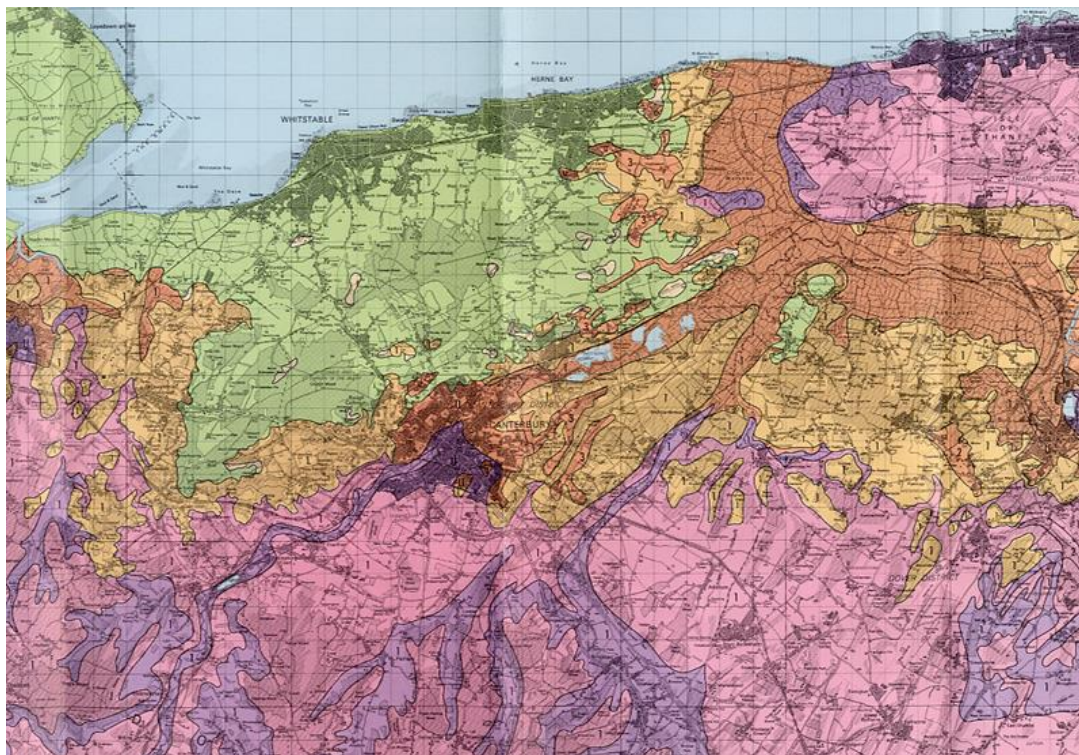


FIGURE3. CANTERBURY CITY COUNCIL CONSERVATION AREAS

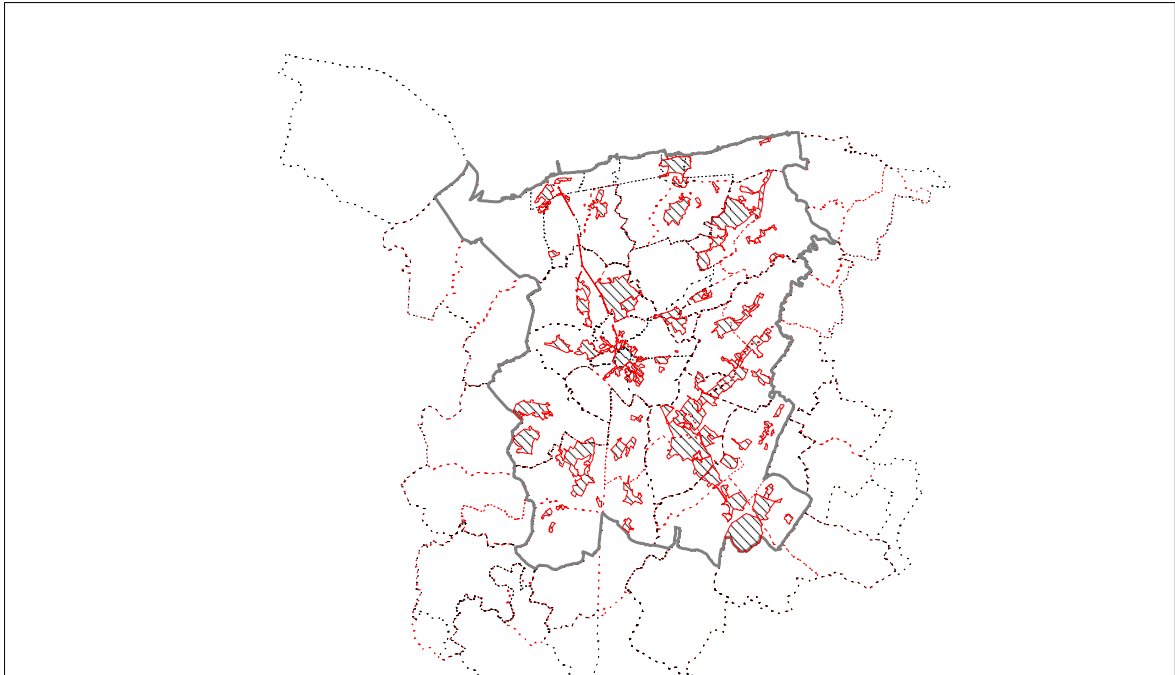


FIGURE4. CANTERBURY CITY COUNCIL RAMSAR SITES

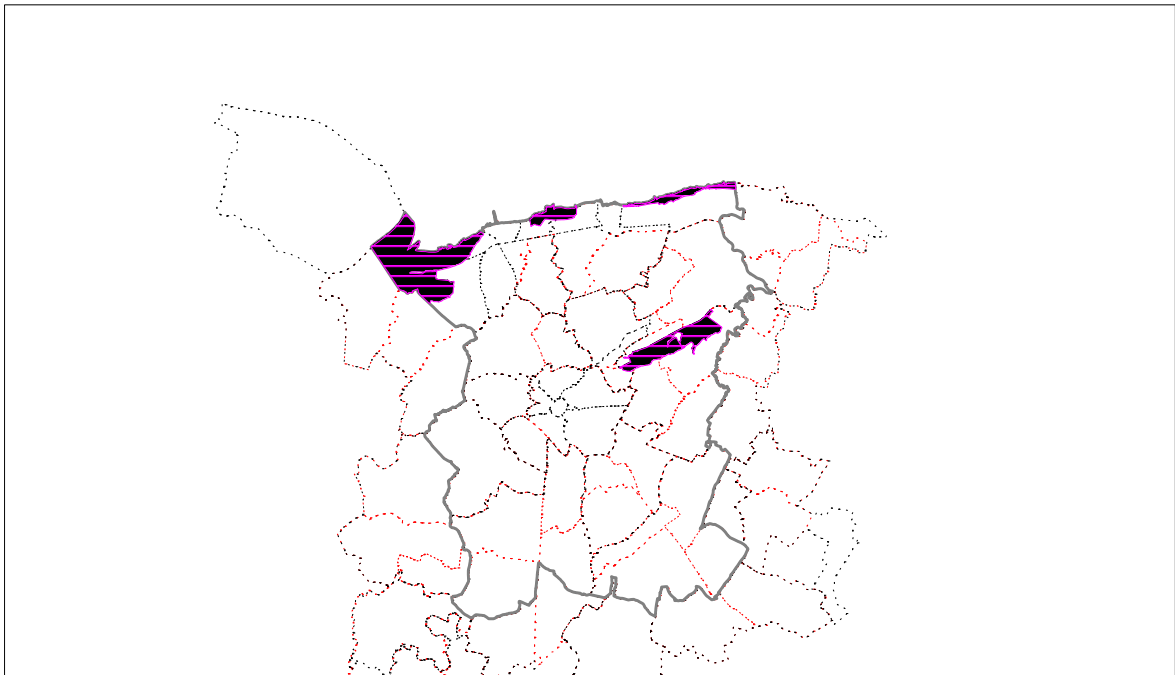


FIGURE 5. CANTERBURY CITY COUNCIL SSSI's

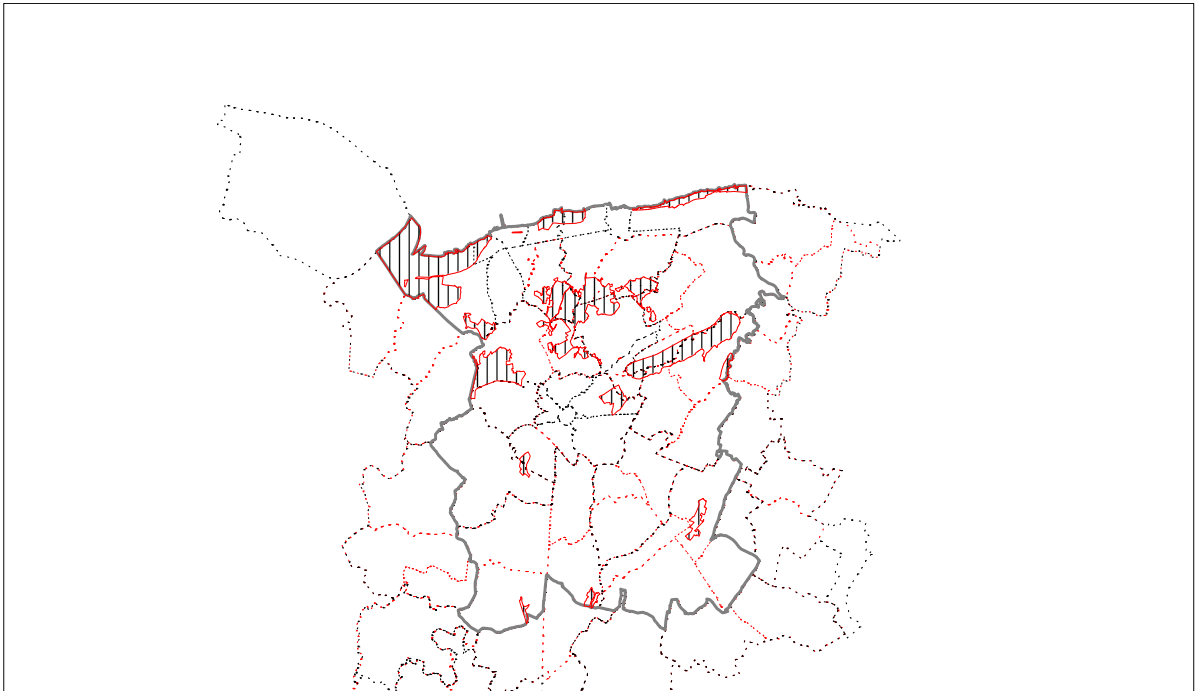
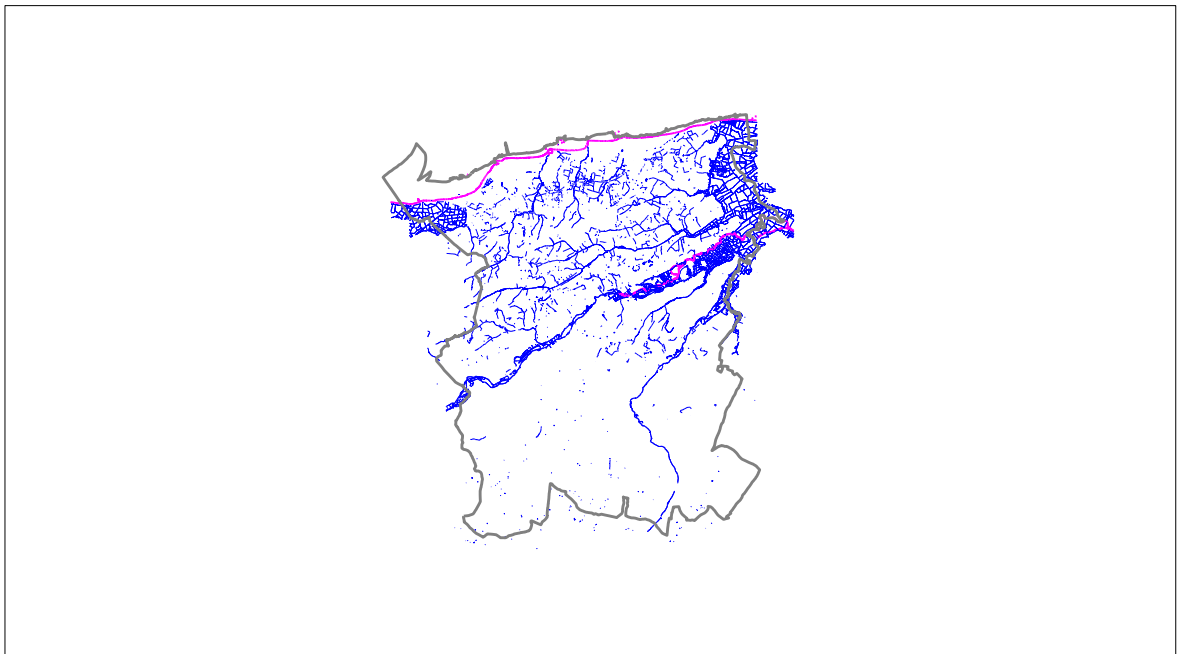


FIGURE 6. WATERCOURSES



3. CCC STRATEGY : OVERALL AIMS

The reason for writing this strategy is to set out the process by which the Council will deal with identifying, prioritising, designating and remediating contaminated land sites.

3.1 The Councils Priorities

Dealing with contaminated land continually throws up complex issues, often where limited information is available. The importance of each site must be balanced in order to move forward in dealing with any problems found. For this reason a list of the Council's aims in priority order, has been devised to aid in the decision making process.

The Council's priorities for dealing with contaminated land will be:

1. To protect human health
2. To protect controlled waters
3. To protect designated ecosystems
4. To prevent damage to property
5. To prevent any further contamination of land
6. To encourage voluntary remediation
7. To encourage re-use of brownfield land

The list is produced in priority order and with regard to significant and likelihood, as required by the regulation.

3.2 Overall Aims

One of the aims of the Council is to use an appropriate management system i.e. a geographical information system (GIS) that will help to identify areas of potential contamination using historical mapping and associated land use data. Datasets on groundwater and sensitive ecosystems will be included within the GIS.

The system will serve as an electronic copy of the register, required to be kept under the regulations, and a working record of all land identified as being contaminated.

The Council has purchased a set of historic ordnance survey maps in a digital format, which can be used with the Councils' GIS, from Landmark Information Group Ltd.

The historic ordnance survey maps are from four separate time periods (or epochs)

- 1843 - 93
- 1891 - 1912
- 1904 - 39
- 1919 - 43
- 1955 - 1990

Additional information already held within the authority with regard to contamination as well as trade directories and other local knowledge, will be used during the identification process. This information will need to be digitised and added to the current GIS.

It should be emphasised that only a small proportion of sites found to have had a contaminated land use will meet the strict definition of contaminated land. Many of the sites found may contain substances in, on or under the ground, which have the potential to cause harm. However, in order to be determined as contaminated land these sites must have both a pathway through which significant harm or pollution of controlled waters, may be caused and a receptor on which that harm can be inflicted. Should either the pathway or the receptor be missing from the pollutant linkage, the site may be land that contains contaminants but cannot be determined as contaminated land.

3.3 Assessment and Evaluation

Following the desk top study, areas found to be potentially contaminated will be assessed and evaluated with regard to the possible presence of source contaminants and pathways. This will help in determining the impact the identified contaminants may have on any receptors present.

If the risk of harm from the potential contamination is evaluated as significant, or pollution of controlled waters is being, or is likely to be caused, the Council will notify the owner, occupier, appropriate person(s) and any external organisations that may have an interest in the site i.e. Environment Agency.

3.4 Inspections

Where intrusive inspection is required of a particular site in order to make a decision on determination, all relevant parties and or, organisations will be notified in writing, stating the justification for this action. For this action to take place the Council must be confident that there is a significant risk of harm to human health or the environment, or pollution of controlled waters is being, or is likely to be caused.

Where contaminated land may also be a special site, the Council will always seek to make arrangements with the Environment Agency to carry out the inspection of the land on behalf of the Council.

If it is believed that contamination exists but that no pathway or receptor is present, then no further legal action will be taken by the Council. However, it may try to negotiate with the owner, occupier, or appropriate person(s), to carry out further investigation.

3.5 Periodic Review

A periodic review of all sites identified as contaminated land and land found to be in a contaminated state will be undertaken. This is to ensure that any changes that may occur either in, on or around any particular site may be noted. Changes in either pathways or receptors could lead to a change in the land's classification.

3.6 Timescales

Appropriate timescales need to be set for the implementation of each stage of the contaminated land system. These will be assessed annually.

4. PROCEDURES

Procedures detailing how issues of contaminated land will be dealt with within the Council have been drawn up. This section also details the level of service that the business community and members of the public can expect from the Council in dealing with these issues.

4.1 Internal management arrangements for identification and inspection

Within the City Council, the Environment and Street Scene Division of the Environment Department has responsibility for the implementation of Part IIA EPA 1990. As part of the Environmental Protection Section a Senior Environmental Health Officer is the lead officer on Contaminated Land, reporting to the Environmental Protection Manager, the Head of Environment and Street Scene and the Director of Environment.

The Head of Environment and Street Scene will be responsible for serving remediation notices, subject to consultation with the Director of Environment and the Council's Legal Department.

Elected members will be informed at the earliest opportunity of any plans to designate an area of Council-owned land, or land where the Council is the 'appropriate' person and may be liable for the remediation costs.

If the Council considers that any contaminated land might be a special site it will request the advice of the Environment Agency.

Following that advice the Council will decide if the land needs to be designated and give written notice to:

- The Environment Agency
- The owner of the land
- The occupier of the land and any appropriate persons

4.2 Considering local authority interests in land

Investigation of Council-owned land will be carried out alongside the inspection of other prioritised sites. The contaminated land co-ordinator will review the Councils' available land records to compile a list of potentially contaminated land. An in depth desk study into the history of these sites will be carried out along with a walkover inspection.

All Council owned sites that have a potential to introduce contaminants into the surrounding environment, in particular, controlled waters, will be prioritised in line with their potential impact. Sites that may impact adversely on groundwater (particularly Source Protection Zones) or other vulnerable receptors will be prioritised for inspection.

If a site is determined as a site of contaminated land, it will be placed on the register of land contamination. Any identified appropriate person(s), be they Class 'A' person(s) who caused or knowingly permitted the contamination of the site, or Class 'B' person(s) who are the owners or occupiers of the site, and any other

affected or interested parties will be notified of the site investigations and their potential liabilities if any.

Where the Council is the only appropriate person identified it will begin investigations to determine the remediation requirements for the site. Once assessed, remediation of the site to a standard suitable to its current or proposed use will then be carried out.

Site remediation should be to a standard suitable for its current use. Current use can also include any future uses that do not require a new, or amended, grant of a planning permission.

4.3 Information collection

Many sources of information will be required to identify potential sources of contamination and potential receptors. These will include Historical Maps and Literature, Kelly's Trade directories, Ordnance Survey maps, and information generally available from the Environment Agency, District Local Plan, Integrated Pollution Control Register, Council Land Registry records, and discussion with other interested bodies. The Council's GIS will be the primary tool used to manage contaminated land information.

4.4 Information received

Information may be received which is sufficient to identify land as contaminated land directly, or to suggest that a detailed inspection, which may include intrusive investigation, is required. Alternatively following assessment the Council may consider that no action is merited ahead of the systematic analysis as the concern does not appear to be well founded, or that consideration of the presence of receptors is sufficient to determine that land is not contaminated.

The Council's approach in assessing information it receives, and deciding how to proceed will include taking account of the following:

- the strength of evidence already available to suggest that the land is contaminated land (e.g. visual evidence, previous investigations, anecdotal information that is considered likely to be well-founded);
- the urgency of the situation, priority will be given to concerns regarding human health in accordance with the Council's primary duty;
- whether the information was provided anonymously as it would not be possible to ask further questions or test the information further;
- whether the information appears to be driven by commercial consideration. For example, a prospective purchaser seeking to be assured that land they are looking to acquire will not be identified as contaminated land. In this context, the Council will encourage the enquirer to employ their own advisors to make a judgement prior to the Council completing its own identification process, except where the request is consistent with fulfilling the Council's strategy. Where the Council holds information on former uses of the site, this may be available to be consulted.
- the apparent motive of the person supplying the information where there are grounds to suspect that the information may not be well founded.

4.5 Action following the receipt of information

When information is received, the following steps will be taken to keep various parties informed:

- receipt will be acknowledged;
- the anonymity of the originator of the information will be preserved, where appropriate (until such time as legal action may be necessary);
- owners and occupiers of land to which the information relates, or potential appropriate persons, will be advised that it has been received and how it will be dealt with, along with an indication of the timescale involved;
- other regulatory authorities will be informed where the information received relates to matters relevant to other regulatory regimes i.e. The Environment Agency, where powers under the Water Resources Act 1991 may be more appropriately applied;
- advising the person(s) who provided the information as well as the owners/occupiers/appropriate persons previously contacted of the final outcome of the Council's investigations.

4.6 Environmental Information Regulations 2004

For land identified as contaminated land, details will be held on its register. However, the Council may be asked for information about land that has not been identified as contaminated land, whether as part of a 'local search' or for other reasons. The Environmental Information Regulations 2004 (SI 2004/3391) may apply to any information about land contamination such that there may be a duty to disclose information. However, these regulations contain provisions related to confidentiality, national defence and public security. Where information collection and assessment is underway but incomplete, the Council will take account of its own legal advice.

4.7 Risk Assessment

Legislation requires that action to deal with Contaminated Land should be 'proportionate' to the seriousness of any actual or potential risk; and that the most pressing and serious problems are located first.

In order to establish the order of priority the Council will carry out a desk top study of each of its known sites, based on available information. This exercise will concentrate on the identification of potential contamination and pollutant linkages/pathways.

All sites, identified through the preliminary study as containing all three elements (receptor, contaminant and pollutant linkage), or being at significant risk of significant harm due to the potential presence of all three elements have been assessed. This information has been used to agree priorities for more detailed site specific investigation work, and to identify potential 'special sites' for which the Environment Agency may be responsible for enforcing their remediation.

All information on substances in, on or under the ground that may cause significant harm or pollution has been evaluated against current government guidelines.

4.7.1 CLEA and ICRCL guidelines

A new set of guidelines - the Contaminated Land Exposure Assessment or CLEA guidelines, were finalised and published in March 2002.

These consist of the main Contaminated Land Reports (CLRs) 7 – 11, the CLEA 2002 software (to be replaced by CLEA UK when finalised), and the Soil Guideline Values for individual substances (SGVs). These are considered by the Government and the Environment Agency to represent the key instruments for generic assessment of the human health risks from land contamination.

On the advice of the Environment Agency and in consultation with other Government Department, DEFRA withdrew the main DoE technical document previously used to assess land contamination. This was the ICRCL Guidance Note 59/83 (2nd edition), first published in 1983 and updated in 1987.

ICRCL 59/83 contained 'trigger values' for a series of substances commonly found in contaminated land. Government's view is that the CLEA package along with the SGV and TOX reports, supersede in respect of human health, the work published by the ICRCL. ICRCL is not suitable for assessing the 'significant possibility of significant harm' to human health that the regime calls for.

The new CLEA soil guideline values cover a broadly similar range of contaminants to the ICRCL values, with more in preparation, and they form part of a wider package of technical material specifically designed for use with the current legislation.

4.7.2 Risk assessment for other substances

Not all contaminants have yet been allocated an SGV. Where no SGV has been published CLR7 indicates a risk assessment of the site is carried out using site-specific criteria and refers to CLR9 and 10 in this respect. In this way an appropriate level of site-specific risk assessment can be used to inform the decision making process.

4.7.3 Risk assessment of controlled waters

Advice will be sought from the Environment Agency on risk assessment if controlled waters are the receptor in a particular pollutant linkage. It is anticipated that risk assessments and remediation will be carried out in accordance with Environment Agency guidance as laid down in 'Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources' (EA R&D Publication 20, 1999).

4.8 Interaction with other regulatory regimes

There are other regulatory actions that can be taken to deal with contamination on land. Overlaps with planning, water pollution and IPPC legislation are considered the most important and are addressed in the following paragraphs. Although some Statutory Nuisance provisions have been replaced by Part IIA i.e. contamination causing 'harm' or 'pollution of controlled waters', land contamination causing odours for instance will still be dealt with under the Statutory Nuisance provisions.

The provisions of Part IIA do not apply to any land where a Waste Management Licence is in force, unless the contamination is unrelated to any breaches of licence conditions (Waste Management Licensing Regulations 1994)

4.8.1 Development Control

The vast majority of land contamination issues are currently dealt with through the planning process where contamination is a material consideration. While the introduction of Part IIA will lead to problems of additional sites being addressed, it is anticipated that the redevelopment of brownfield sites, and the associated planning controls, will remain the primary mechanism for dealing with land contamination. Any remediation agreed through the use of planning conditions will continue to be dealt with under planning controls and not Part IIA. A new set of model planning conditions for development on land affected by contamination has been issued by the Department for Communities and Local Government.

The Council's Environmental Protection Section currently work closely with both Development Control and Building Control on all issues relating to pollution.

Planning Policy Statement 23, *'Planning and Pollution Control'*, published by the ODPM, and in particular Annex 2 *'Development on Land Affected by Contamination'* sets out policy and practice in detail, including the relationship with Part IIA.

4.8.2 Water pollution

Sections 161A - 161D of the Water Resources Act 1991 give the Environment Agency powers to serve a 'works notice' to secure remediation where there is pollution of controlled waters from a wide range of possible sources. Where pollution of controlled waters is being, or is likely to be, caused by contaminated land identified under the Part IIA regime, then the duties under Part IIA will normally be used to secure remediation.

Before determining any land as contaminated land on the basis that pollution of controlled waters is being caused, or is likely to be caused, the Council will have regard to any advice provided by the Environment Agency.

The Agency may provide information to the Council relating to land that is causing, or is likely to cause, the pollution of controlled waters. The Council will then determine whether that land appears to be contaminated land in consultation with the Agency.

Guidance for local authorities on aspects of the pollution of controlled waters relevant to Part IIA has been provided.

4.8.3 Integrated Pollution Prevention and Control (IPPC)

Under new legislation to regulate pollution from industrial processes, site operators are required to carry out a site condition survey prior to being issued with a licence to operate. If the site condition is such that areas of land meet the definition of contaminated land, then the submission of the site survey may trigger action under Part IIA. Existing processes have been brought under this legislation

in stages, although it will apply to any new processes or any substantial change to an existing process.

5 COMMUNICATION AND LIAISON

Effective liaison and communication is an essential part of the Contaminated Land Regime. As part of its strategy, the Council will establish communication links with a wide variety of statutory and non-statutory consultees as well as other interested parties to ensure the efficient and effective transfer of information.

5.1 Statutory Consultees

Contacts have already been established with each of the following statutory consultees:

- Environment Agency
- English Nature
- English Heritage
- Food Standards Agency
- Kent County Council
- Department of the Environment, Food and Rural Affairs
- Regional Development Agencies
- English Partnerships

5.2 Non-statutory consultees

There is great scope for members of the public, businesses and voluntary organisations to play an important role in dealing with contaminated land, and in shaping the Councils contaminated land strategy. The following are just some of the organisations that were invited to comment on the consultation draft of the strategy.

- Parish Councils
- General Public by way of a press release
- Other internal Council Departments

A copy of the strategy can be found in each of the three local libraries, as well as on the Council's Website.

5.3 Communicating with owners, occupiers and other interested parties

The Council's approach to its regulatory duty under the contaminated land regime is to seek voluntary action before taking enforcement action. This should in many cases, provide a more effective remediation process. It is recognised that this approach will require effective communication with owners, occupiers and other interested parties. The contaminated land co-ordinator will be the central point of contact within the authority on contaminated land issues and as such will work to keep owners, occupiers and other interested parties informed at each stage of an investigation, regardless of whether there is a formal determination of contaminated land.

Where a formal determination of contaminated land is required, the following actions will be undertaken:

Determination of a site

- Write to the owner and/or occupier of the land at least 5 days prior to the determination, explaining the reason for the determination
- Write to the owner and/or occupier of the land explaining that the land has been determined as contaminated land, seeking appropriate remediation without the service of a notice
- If requested, dispatch a copy of the written risk assessment to the owner and/or occupier within 5 working days of the request
- Notify the owners/occupiers of any neighbouring properties following the determination within 5 working days

Service of a remediation notice

- Issue a written remediation notice to the owner/occupier specifying the action required
- Write to the owner/occupiers of any neighbouring properties informing them of the service of the notice

5.4 Appropriate persons

A person who causes or knowingly permits a pollutant to be in, on or under the land is described as a 'Class A Person'.

A person who is an appropriate person because he is the owner or occupier of the land and no Class A person can be found is described as a 'Class B Person'.

Persons who are appropriate persons with respect to any particular significant pollutant linkage are described as the 'liability group' for that particular linkage.

5.4.1 Orphan linkage

If no Class A persons can be found for any significant pollutant, the Council should consider whether the significant linkage relates solely to the pollution of controlled waters, rather than to any significant harm. If this is the case, there will be no liability group and it should be treated as an 'orphan linkage'.

If the Council can find no Class A or Class B persons in respect of a significant pollutant linkage, there will be no liability group for that linkage and it should be treated as an orphan linkage.

There is one final reason for treating a site as an orphan site and that is if and only if all members of a liability group benefit from one or more of the exemptions listed in the DEFRA Circular 01/2006, chapter D part 5.

Where only one significant pollutant linkage has been identified and that is an orphan linkage, the enforcing authority shall bear the cost of any remediation carried out.

Where there may be two or more significant pollutant linkages, and some are orphan linkages, the enforcing authority will need to consider each remediation action separately.

For any remediation that is referable to an orphan linkage but not referable to any other linkage that has a liability group, the enforcing authority should bear the cost of that action,

Any shared action referable to an orphan linkage and also to a single significant pollutant linkage which has a Class A liability group, shall be attributed to that liability group.

Shared action referable to an orphan linkage and also to two or more significant pollutant linkages for which there are Class A liability groups, the cost of the remediation shall be shared between those groups.

For any shared action that is referable to an orphan linkage and also to a significant pollutant linkage for which there is a Class B liability group the enforcing authority should act as follows:

Where the remediation action is a common action the Class B group should meet the cost of the remediation;

Where the remediation is a collective action the cost will be shared between the authority and the Class B liability group.

5.5 Powers of Entry

Under Section 108(6) of the Environment Act, the Council has been granted powers of entry to carry out investigations. At least seven days notice will be given of proposed entry onto any premises, unless there is an immediate risk to human health or the environment.

5.6 Risk Communication

The complex nature of contaminated land issues does not lend itself to easy explanation to the layperson. Development of effective methods of risk communication is therefore essential.

The Council will treat any concerns raised by a member of the public seriously and with respect, recognising the importance of the issue to the individual. In all instances, the Council will recognise and try to overcome the critical barriers to effective communication:

- **Familiarity** - increased concern about familiar issues
- **Control** - increased concern if the individual is unable to exert any control over events
- **Proximity in space** - increased concern about nearby events
- **Proximity in time** - increased concern about immediate consequences rather than long term effects
- **Scale** - particularly in terms of media coverage, where one large incident appears much worse than several small incidents
- **'Dread Factor'** - lack of understanding can lead to stress and make further explanation more difficult

The Contaminated Land Regulations grant only limited powers to local authorities to deal with materials present in, on or under the ground. Many members of the public believe that any material that is not naturally present in the ground should be removed, especially if it is in the vicinity of their own home. It will be critical to explain that this can only be done where there is a risk of significant harm, and it is to be expected that some members of the public will have difficulty accepting this.

5.7 The Public Register

Schedule 3 of the Contaminated Land Regulations requires the Council to keep a register detailing information regarding contaminated land. The Environment and Street Scene Division at the Council's principal office at Canterbury will hold the register. It will be paper-based (rather than electronic) and be accessible on request by members of the public during normal office hours, Monday to Friday.

The Regulations clearly specify the information that can be recorded on this register. The register will therefore include:

- remediation notices
- details of site reports obtained by the authority relating to remediation notices
- remediation declarations, remediation statements and notifications of claimed remediation
- designation of sites as 'special sites'
- any appeals lodged against remediation and charging notices
- convictions

The public register will **not** include details of historic land use or other records used during investigations of potentially contaminated land. These will be classed as research documents and as such will not be available to the public.

5.8 Provision of information to the Environment Agency

The Environment Agency is required to prepare an Annual Report for the Secretary of State on the state of contaminated land in England and Wales. This report is to include:

- A summary of local authority inspection strategies, including progress against the strategy and its effectiveness
- The amount of contaminated land and the nature of its contamination
- Measures taken to remediate the land

Local authorities are the lead regulators on contaminated land, with the E A regulating only some categories of sites, the national survey will clearly be reliant on information provided by local authorities. A memorandum of understanding has been drawn up between the Environment Agency and the Local Government Association that describes how information will be exchanged between local authorities and the EA. The Council will provide information to the EA following the guidelines agreed through this national forum.

The local authority must also provide information to the EA whenever a site is determined as contaminated land, and whenever a remediation notice, statement

or declaration is issued or agreed. The EA has provided standard forms allowing this information to be provided in a consistent format and the council will adopt these to fulfil its reporting requirements.

6 REVIEW MECHANISMS

This strategy outlines the general approach to be taken in inspecting land in the District for contamination. This chapter describes the instances when inspections will occur outside the general inspection framework, circumstances under which previous inspection decisions should be reviewed and measures to be taken to ensure that the strategy remains effective and up-to-date.

6.1 Triggers for undertaking inspections

There may be occasions where inspections will have to be carried out outside of the general inspection framework. Triggers for undertaking non-routine inspections will include:

- **Unplanned events** - e.g. if an incident such as a spill has occurred
- **Introduction of new receptors** - e.g. if housing is to be built on a potentially contaminated site, designation of a new protected ecosystem, persistent trespass onto a site by young people
- **Supporting voluntary remediation** - e.g. potentially liable party wishing to undertake clean-up before their land has been inspected by the local authority
- **Identification of localised health effects** which appear to relate to a particular area of land
- **Responding to information** from other statutory bodies, owners, occupier, or other interested parties

While these occurrences may trigger non-routine inspections, if this strategy is to prove effective, they must not be allowed to significantly interfere with the milestones laid down in the general inspection framework. It will be important to consider this issue in all strategy reviews.

6.2 Triggers for reviewing inspection decisions

There may be occasions where the findings of previous inspection decisions should be reviewed. These might occur, for example, if there were

- Significant changes in legislation
- Establishment of significant case law or other precedent
- Revision of guideline values for exposure assessment

It is important therefore that all decisions are made and recorded in a consistent manner that allows efficient review.

6.3 Reviewing the Strategy

As part of the overall quality management of this work, it is important to consider the need to review the strategy from time to time. The strategy was finalised following consultation during July 2001 work has now begun on site inspection. It was updated in July 2010 and will be periodically thereafter.

Periodic review in 2016 confirms all inspection work carried out. We have no sites to enter on the register of contaminated land and the majority of clean ups are done through the planning process.

GLOSSARY

DEFRA Circular 01/2006 contains a detailed glossary of terms that provide legal definitions of terms that may be used in this strategy. This glossary provides an interpretation of terms used in the strategy to aid reading.

AONB	Area of Outstanding Natural Beauty
Brownfield Site	A site that has been generally abandoned or under used where redevelopment is complicated by actual or perceived environmental contamination. Only a small proportion of brownfield sites will meet the definition of contaminated Lane
CCC	Canterbury City Council
CLEA	The Contaminated Land Exposure Assessment, model which will provide guideline values for human exposure to a range of contaminants and will constitute a simplified risk assessment tool in relation to risks to human health
Contaminated Land	Any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances, in, on or under the land that: a) significant harm is being caused or there is a significant possibility of such harm being caused; or b) pollution of controlled waters is being, or is likely to be caused
Controlled Waters	These include: a) inland waters (rivers, streams, underground streams, canals, lakes and reservoirs) b) groundwaters (any water contained in underground strata, wells or boreholes) c) territorial waters (the sea within three miles of a baseline) d) coastal waters
Council	For the Canterbury area, Canterbury City Council
DEFRA	Department for Environment Food and Rural Affairs
EA	Environment Agency
Eco-system	A biological system of interacting organisms and their physical environment
GIS	Geographical Information System
Groundwater	Any water contained in underground strata, wells or boreholes
Harm	Harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, include harm to his/her property

ICRCL	Interdepartmental Committee on Redevelopment of Contaminated Land
NNR	National Nature Reserve
Part IIA	Part IIA of the Environmental Protection Act 1990, as inserted by s.57 of the Environment Act 1995
Pathway	One or more routes by which a receptor can be exposed to a contaminant
Pollutant linkage	The relationship between a contaminant, pathway and a receptor
Ramsar Site	A site protected under an international convention on protection of wetlands of international importance, especially as habitats for waterfowl, named after the city in Iran where the convention was signed
Receptor	Sometimes referred to as 'the target'. Any part of the human or wider environment that can be adversely affected by a source contaminant through a pathway
Remediation	The carrying out of works to prevent or minimise effects of contamination. In the case of this legislation the term also encompasses assessment of the condition of land, and subsequent monitoring
Risk assessment	The assessment of the likelihood and consequences of a hazard
SAC	Special area of conservation
Source	A substance in, on or under the ground with the ability to cause harm or pollution
Source protection zone	Protection zones around an underground water aquifer used for abstraction of potable water, certain industrial and private supplies. Within these zones, certain activities and processes are prohibited or restricted
SPA	Special Protection Area for Birds
Special Sites	Contaminated land where the Environment Agency is best placed to be the enforcing authority, including cases as follows: <ul style="list-style-type: none"> ○ Serious pollution of controlled waters including drinking water supplies, surface waters affected by dangerous substances and groundwaters in major aquifers where the pollutants are particularly difficult ○ Past or current industrial activities including waste acid tar lagoons, oil refining, explosives manufacture and Integrated Pollution Control sites ○ The Ministry of Defence (MOD) estate ○ Land adjoining a special site that appears to have been contaminated by substances escaping from the special site.
SSSI	Site of Special Scientific Interest

STATUTORY CONSULTATION CONTACTS

Environment Agency

Orchard House
Endeavour Park
Addington
Kent ME19 5SH

Julie Mossom
Area Contaminated Land Officer

Jonathan Atkinson
Contaminated Land Officer

Jan Hookey
Groundwater Protection Officer

English Heritage

South East Region
Eastgate Court
195-205 High Street
Guildford
Surrey GU1 3EH

DEFRA

Land Quality Team
Marine, Land and Liability Division
3/B4 Ashdown House
123 Victoria Street
London SW1E 6DE

English Nature

Kent Team
Countryside Management Centre
Coldharbour Farm
Wye
Ashford
Kent TN25 5DB

David Rogers
Conservation Officer

Food Standards Agency

Room 707
Aviation House
125 Kingsway
London WC2B 6NH

Dr David Mortimer
Contaminants Branch F

Kent County Council

Sessons House
County Hall
Maidstone
Kent ME14 1XQ

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