Thanet District Council

Contaminated Land Strategy 2018-2023

Introduction

This strategy outlines how Thanet District Council (the council), will meet its statutory duties to investigate potentially contaminated land in the District as laid out under Part IIA of the Environmental Protection Act 1990 and the Contaminated Land Statutory Guidance, April 2012 (DEFRA); referred to as the statutory guidance.

This strategy should be read in conjunction with the statutory guidance which contains the legal and scientific detail behind the strategy and alongside Thanet's Draft Local Plan (July 2018-2031) Policies (SE01-SE04). This strategy reflects the financial constraints that the council is now facing and will continue to face over the coming years.

Thanet District Council's Corporate Aims

The requirements relating to contaminated land as set out within Part IIA of the Environmental Protection Act 1990 are consistent with Thanet's 2015-2019 Corporate Priority 1 – 'A clean and welcoming environment' and Thanet District Council's Corporate Vision 2030, in particular the Council's role in transforming Thanet:

"The Council is recognised for the quality of the services it provides, its attentiveness to the needs of residents, and for always keeping the needs of those who are less able to help themselves to the fore".

Land contamination has impacts on both the environment and local economy. The Government is committed to maximising the re-use of previously developed land. Directing new development towards previously developed land will also help towards the Thanet Local Plan 2018 Policy of Sustainable Development.

The Council aims to be at the forefront of good practice and provide a high standard of efficient and effective services. To achieve this aim it will be necessary to engage as many people in the community as possible.

The Council recognises that with the increased demand for housing, and the resulting need to redevelop old Brownfield sites that this brings, the importance of ensuring that the land is suitable for its intended use and the risk of harm is even greater now than at any time in the past.

The Council intends to work in partnership with appropriate persons, providing guidance and information, to ensure contaminated sites are remediated to an acceptable standard. Where appropriate persons demonstrate a continual willingness to take voluntary remediation action, the Council will refrain from serving a remediation notice.

The following sections outline how the Council intends to fulfil its statutory role as regulator and enforcing authority for the identification, designation, and remediation of Contaminated Land. The Authority will refer to regulatory and statutory guidance at all times when carrying out inspections and assessments under its duties specified in Part IIA Environmental Protection Act 1990, as outlined in this strategy document.

Objectives

The main objective of introducing Part IIA of the Environmental Protection Act (EPA) 1990 is to provide an improved system for the identification and remediation of land where contamination is causing unacceptable risks to human health or the wider environment given the current circumstances and use of the land.

The Government's intention is that Part IIA will;

- Improve transparency and focus of regulatory controls
- Ensure regulators take a strategic approach to land contamination problems
- Allow all contamination problems to be dealt with as part of the same process
- Increase consistency in regulatory approaches
- Provide a more tailored regulatory mechanism, including liability rules, that is better able to reflect the complexity and range of circumstances found on individual sites

The Act is supported by statutory guidance, which contains much of the detailed advice to regulators and others on how Part IIA is to be implemented. The cessation of Defra's Capital Funding programme in March 2017 means that the funding burden for detailed assessments falls to the local authority. Work will therefore only the be undertaken on a site specific basis; where alternative avenues have been explored and senior management have agreed that investigation works should be conducted for specific high priority cases.

Legislation

The primary legislation which underpins the UK contaminated land regime is contained within Part IIA of the Environmental Protection Act 1990, which was inserted via Section 57 of the Environment Act 1995.

The regime was brought into force in England via a Statutory Instrument in April 2000, with detailed Statutory Guidance (SG), being implemented simultaneously. The statutory guidance, updated in 2012, provides further details of how the regime must be enforced and, although certain aspects of it have been revised since the original version (including the addition of 'normal' background levels), the requirements relating to how land should be determined as "contaminated" based on risks to human health have remained unchanged.

Section 78A of Part IIA defines contaminated land as:

"Any land which appears to the local authority in whose area the land 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 (SPOSH) being caused; or**
>
> **(b) pollution of controlled waters is being, or is likely to be, caused".**

Harm is defined within Section 78A as:

“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, includes harm to his property.”

In terms of the overall assessment process for land suspected of being contaminated, the guidance associated with the contaminated land regime states the following:

“The definition of contaminated land is based upon the principles of risk assessment. For the purposes of the guidance, “risk” is defined as the combination of:

> (a) the probability, or frequency, of occurrence of a defined hazard (for example, exposure to a property of a substance with the potential to cause harm); and
>
> (b) the magnitude (including the seriousness) of the consequences.”

The following should be regarded as “significant harm” to humans:

“Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned.”

In order for land to be determined as contaminated land on the grounds of SPOSH to human health, the local authority must be satisfied that:

“The amount of the pollutant in the pollutant linkage in question which a human receptor in that linkage might take in, or to which such a human might otherwise be exposed, as a result of the pathway in that linkage, would represent an unacceptable intake or direct bodily contact, assessed on the basis of relevant information on the toxicological properties of that pollutant.”

Further details are not provided in the guidance on what should be regarded as an “unacceptable intake”, although any assessment of its likelihood should take into account:

> “the likely total intake of, or exposure to, the substance or substances which form the pollutant, from all sources including that from the pollutant linkage in question;
>
> the relative contribution of the pollutant linkage in question to the likely aggregate intake of, or exposure to, the relevant substance or substances;
>
> and the duration of intake or exposure resulting from the pollutant linkage in question.”

It is also noted that:

“The question of whether an intake or exposure is unacceptable is independent of the number of people who might experience or be affected by that intake or exposure. Toxicological properties should be taken to include carcinogenic, mutagenic, teratogenic, pathogenic, endocrine-disrupting and other similar properties.”

Taken together, Part IIA and the statutory guidance provide a clear legal need for regulators to act in accordance with, what constitutes an unacceptable intake of a given substance, in order to determine land under Part IIA on the basis of Significant Possibility of Significant Harm (SPOSH).

The statutory guidance should be read and applied with Part IIA and the following points in mind:

England has a considerable legacy of historical land contamination involving a very wide range of substances. On all land there are background levels of substances, including substances that are naturally present as a result of our varied and complex geology and substances resulting from diffuse human pollution. On some land there are greater concentrations of contaminants, often associated with industrial use and waste disposal. In a minority of cases there may be sufficient risk to health or the environment for such land to be considered contaminated land.

Part IIA provides a means of dealing with unacceptable risks posed by land contamination to human health and the environment, and enforcing authorities should seek to find and deal with such land. Under Part IIA the starting point should be that land is not contaminated land unless there is reason to consider otherwise. Only land where unacceptable risks are clearly identified, after a risk assessment has been undertaken in accordance with the statutory guidance, should be considered as meeting the Part IIA definition of contaminated land.

The overarching objectives of the Government's policy on contaminated land and the Part IIA regime are:

(a) To identify and remove unacceptable risks to human health and the environment.

(b) To seek to ensure that contaminated land is made suitable for its current use.

(c) To ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development.

Enforcing authorities should seek to use Part IIA only where no appropriate alternative solution exists. The Part IIA regime is one of several ways in which land contamination can be addressed. For example, land contamination can be addressed when land is developed (or redeveloped) under the planning system, during the building control process, or where action is taken independently by landowners. Other legislative regimes may also provide a means of dealing with land contamination issues, such as building regulations; the regimes for waste, water, and environmental permitting; and the Environmental Damage (Prevention and Remediation) Regulations 2009, as amended.

Under Part IIA , the enforcing authority may need to decide whether and how to act in situations where such decisions are not straightforward, and where there may be unavoidable uncertainty underlying some of the facts of each case. In so doing, the authority should use its judgement to strike a reasonable balance between: (a) dealing with risks raised by contaminants in land and the benefits of remediating land to remove or reduce those risks; and (b) the potential impacts of regulatory intervention including financial costs to whoever will pay for remediation (including the taxpayer where relevant), health and environmental impacts of taking action, property blight, and burdens on affected people. The authority should take a precautionary approach to the risks raised by contamination, whilst avoiding a disproportionate approach given the circumstances of each

case. The aim should be to consider the various benefits and costs of taking action, with a view to ensuring that the regime produces net benefits, taking account of local circumstances.

Part IIA requires that local authorities cause their areas to be inspected with a view to identifying contaminated land, and to do this in accordance with the Statutory Guidance.

The statutory guidance recognises that there are two broad types of "inspection" likely to be carried out by local authorities: (a) strategic inspection, for example collecting information to make a broad assessment of land within an authority's area and then identifying priority land for more detailed consideration; and (b) carrying out the detailed inspection of particular land to obtain information on ground conditions and carrying out the risk assessments which support decisions under the Part IIA regime relevant to that land. The guidance refers to the former as "strategic inspection" and the latter as "detailed inspection".

Strategic Inspection

The government advises that the local authority should take a strategic approach to carrying out its inspection duty under section 78B(1). This approach should be rational, ordered and efficient, and it should reflect local circumstances. Strategic approaches may vary between local authorities.

The local authority should set out its approach as a written strategy, which it should formally adopt and publish to a timescale to be set by the authority. Strategies produced in accordance with previous versions of Statutory Guidance should be updated or replaced to reflect the current guidance.

The local authority should keep its written strategy under periodic review to ensure it remains up to date. It is for the authority to decide when its strategy should be reviewed, although as good practice it should aim to review its strategy every five years.

The local authority should include in its strategy:

(a) Its aims, objectives and priorities, taking into account the characteristics of its area.

(b) A description of relevant aspects of its area.

(c) Its approach to strategic inspection of its area or parts of it.

(d) Its approach to the prioritisation of detailed inspection and remediation activity.

(e) How its approach under Part IIA fits with its broader approach to dealing with land contamination. For example, its broader approach may include using the planning system to ensure land is made suitable for use when it is redeveloped; and/or encouraging polluters/owners of land affected by contamination to deal with problems without the need for Part IIA to be used directly; and/or encouraging problematic land to be dealt with as part of wider regeneration work.

(f) Broadly, how the authority will seek to minimise unnecessary burdens on the taxpayer, businesses and individuals; for example by encouraging voluntary action to deal with land contamination issues as far as it considers reasonable and practicable.

When the local authority is carrying out detailed inspection of land in accordance with Part IIA, it should seek to give priority to particular areas of land that it considers most likely to pose the greatest risk to human health or the environment.

The process of strategic inspection, including prioritisation of detailed inspection activities, may give rise to property blight issues. The local authority should seek to minimise or reduce such potential blight as far as it considers reasonable. The authority should also be open to moves by the landowner (or some other interested party) to help resolve the status of the land themselves. For example, the authority may decide that the land is, or is not, contaminated land on the basis of information provided by the land owner or other interested party, provided the authority is satisfied with the robustness of the information.

Inspection Process

The Council has a duty to inspect the land within its boundary with the aim of assessing whether the land is suitable for its current or proposed use. This can be broken down into three main elements:

(a) Assessing whether land is suitable for its current use.

The Council is required to identify any land where contamination is causing unacceptable risk to human health or the environment. The Council reviews each site with the aim of identifying significant pollutant linkages. This involves the identification of one or more contaminants (the Source), one or more vulnerable receptors to this contaminant (e.g. children playing, water protection zone etc.) and a pathway that the contaminant may utilise to reach the receptor. This is the **Source – Pathway – Receptor** principle of risk assessment. Where contamination of this nature is identified, it is the role of the Council to identify the appropriate person(s) responsible for the remediation of the land.

(b) Ensure that land is made suitable for any new use, as planning permission is given for that use.

This requires the site to be risk assessed, taking into account the potential for significant harm from contamination, based on proposed future use and site users. The Council's planning department will consult with the Environmental Protection Team when assessing planning applications that involve sites where actual or potential contamination exists. Applicants will be expected to demonstrate the site's suitability for the proposed use, or how it will be made suitable as part of the development process.

(c) Limit requirements for remediation to the work necessary to bring the level of risk of significant harm to human health or the environment to within acceptable levels, taking into account the current or proposed use. Any change in this current or proposed use may require further remediation.

Therefore, it is within the appropriate person(s) or developer's best interest to identify all current and proposed uses to avoid unnecessary cost and wasting of resources.

It should be noted that the contaminated land regime and legislation is not applicable where contamination has resulted as a result of a specific breach of an environmental license or permit. In

this instance the polluter is required, under the relevant regulatory regime, to remove the contamination completely.

Strategy Objectives

- To take a proportionate approach to the risks raised by contaminated land whilst ensuring that any unacceptable risk to human health or the wider environment is resolved.
- To undertake Identification and Prioritisation of Potential Sites of Concern in Thanet
- All investigations and risk assessments will be site specific, scientifically robust and will ensure only land that poses a genuinely unacceptable risk is determined as contaminated.
- To determine contaminated sites where appropriate and add to a public register.
- To work with the Environment Agency with regards to designations of Special Sites.
- To apportion liability for Remediating Contaminated Land.
- The Council will consider the various benefits and costs of taking action, with a view to ensuring that corporate priorities and statutory requirements are met in a balanced and proportionate manner.
- Communicate effectively with development control, appropriate persons and interested parties.

Area Overview

Geographical Location

The Isle of Thanet is an attractive and pleasant coastal District which lies at the eastern most extremity of Kent, in the southeast of England, and in close proximity to the Continent. Urban development comprising the historic towns of Margate, Ramsgate and Broadstairs has largely covered Thanet's extensive chalk cliff coastline.

Surrounding and penetrating the large urban area is gently undulating open countryside of large open arable fields consisting of some of the highest quality and most intensively farmed agricultural land in Kent and England. Thanet also has a number of interesting coastal and rural villages.

Thanet is connected to the rest of Kent via a constantly evolving road network with the most recent change being the construction of the East Kent Access Road. Ramsgate port and London Manston airport may provide the area with links to the European mainland.

Brief description and History

Up to the mid 1800's, the Thanet area was predominantly a commercial arable farming community with some seafaring activities. In particular, the Margate docks monopolised the corn trade to London in the 1850's. Broadstairs in the 18th and 19th century was known for its shipbuilding. Around this time, the area became popular for its seaside activities, in particular visitors from London. This popularity increased with the development of the train network to the area. Today tourism remains important but like other seaside resorts, this sector has suffered because of cheap holidays abroad.

In modern times, there is a predominance of light industrial employment with small to medium size firms, although heavier industry did take place. These are predominantly grouped on purpose built

and historic industrial parks, but many are isolated amongst other urban development. The Council has identified the majority of these areas as part of its Local Plan.

Size and Population Distribution

The area within the Council's boundary is 10,322 hectares (25,505 acres), and has a population of approximately 140,000 people. 95% of the population live in the main urban centres of Ramsgate, Broadstairs, Margate and Birchington. The remaining 5% reside in the surrounding villages.

Council Ownership of Land

The Council has extensive land ownership within the district. The majority of this land is in the coastal areas with some isolated areas throughout the remaining district. Land use includes primarily beach and holiday facilities, offices, business parks and housing. The Council has created a GIS system that holds details of all Council owned land, size and use; as the former paper based records were labour intensive.

Current Land Use Characteristics

Thanet District is divided between 30% urban and 70% rural land uses (by area). With the exception of the seven villages, the majority of the rural area is in agricultural use, primarily for intensive arable production.

The main urban area is located around the coast. The main industrial areas are located at the centre of this urban zone, in and around the Westwood area. The former airport is a major and prominent land use feature in its own right, comprising of more than 300ha.

Protected Locations (Natural Habitats Etc.)

Thanet is a unique and vibrant coastal area, with an attractive environment and a number of unique features. Much of the coast is recognised for its internationally important habitats, including coastal chalk and significant populations of coastal birds.

Most of the Thanet Coast (with the exception of Viking Bay, Broadstairs, and some areas around Ramsgate harbour) is covered by statutory nature conservation designations. This is reflected in the coast's designation under international and national legislation, including Sites of Special Scientific Interest, Special Areas of Conservation, and a Marine Conservation Zone. These areas are protected by legislation to prevent harm to them from development change and other human activity.

Certain parts of the district are also designated as Sites of Nature Conservation Interest (of county importance) and Landscape Protection Areas.

Key Property types

As well as its rich natural environment, the district has a rich historic environment with approx. 2,000 Listed Buildings, 12 Scheduled Ancient Monuments, and 27 Conservation Areas.

Water Resources

The Isle of Thanet has nearly 26 miles of coastline, which are characterised by a distinctive and rare combination of chalk cliffs and extensive sandy beaches. The district also contains large areas of low lying land, most comprising the former flood plain of the river Wantsum. Key water resource areas include those designated as of local, regional or national importance e.g. Sites of Special Scientific Interest.

Abstraction and water storage sites, along with groundwater source protection zones (SPZ's) comprise the remaining key water resource areas. Southern Water supply the majority of the District's drinking water.

Information on Contamination in the District

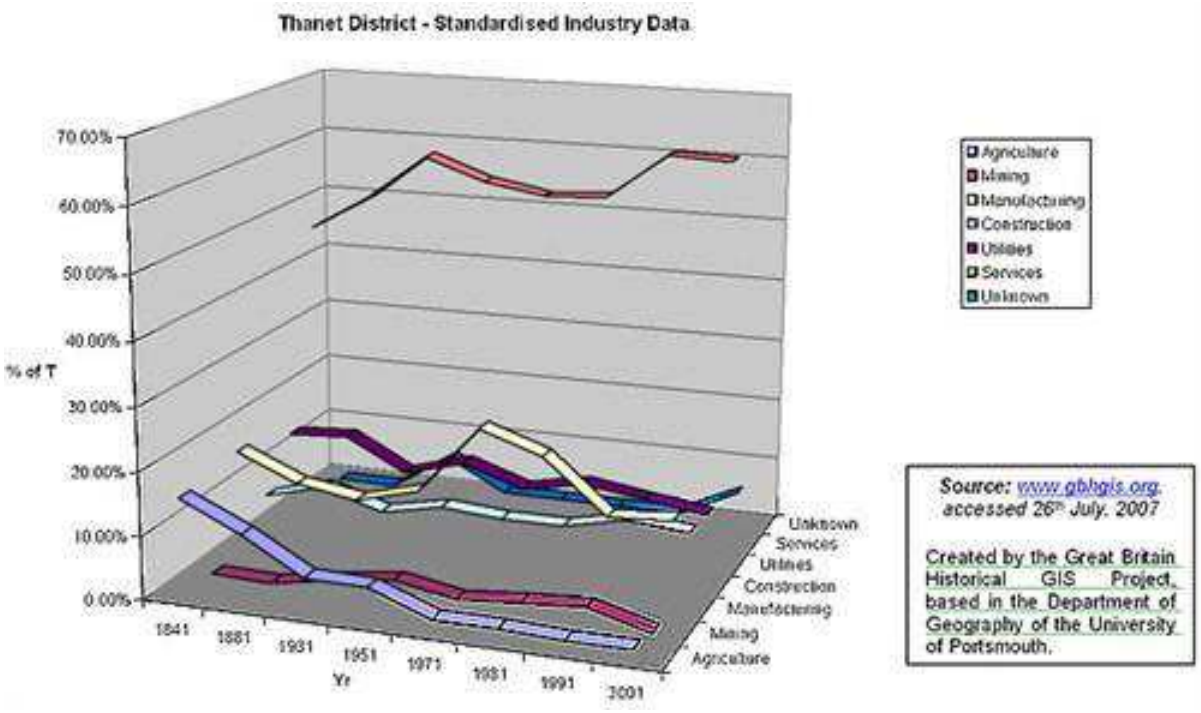
Known information on contamination in the district is primarily limited to previous industrial sites and redeveloped sites adjacent to the urban area. If development is proposed on an area of land where past use may have resulted in contamination, the Council may have requested a site investigation as part of a planning condition. If development proceeded on these sites, remedial works will often have been carried out to improve the site conditions. Planning records will therefore form a valuable resource during the investigation process.

Current and Past Industrial History

There is a limited industrial legacy in the district. The main historical industrial activities included town gas production, electricity generation (former Richborough Power Station) and small scale metal processing. Historically the main land use was agricultural with some marine associated activities (e.g. boat building and shipping) carried out at the main coastal areas. Tourism later emerged for a time as a significant land use activity and employer.

In common with many other parts of the country, Thanet's legacy of industrial activity dates back over the last few hundred years. During this time, Thanet has been home to numerous industries, including mining, manufacturing, construction, farming, gas works, chemical works, military activities and aviation. The Manston Airport site still has an existing use for aviation and is subject to a DCO-NSIP process following its closure in May 2014. If a DCO for aviation use at the site is granted, this would require a partial review of the Thanet Local Plan in relation to housing land supply provisions, aviation and environmental policies and other related matters.

The infilling of former clay and sand pits has also taken place in Thanet. The following graph gives an indication of the prevalence of these types of industrial activity over the past 150 years.



In the past there were far fewer restrictions on industry than are in place today and many facilities operated with little regard to their impact on the environment. These former industrial activities may have left contamination in the ground, which if not properly dealt with can pose a risk to public health or the environment. The type of contamination can vary substantially from site to site, but some of the more common causes for concern include heavy metals (e.g. mercury and lead), hydrocarbons (e.g. oils, fuels and solvents) and domestic and industrial wastes (e.g. landfill, dry cleaners).

Geological / Hydrogeological Characteristics

The Thanet Peninsula is predominantly upper chalk beds that plunge underground in the south. In the past, this layer was covered by a thin layer of younger rocks known as the Thanet Beds. Today these beds are only present in the south of the peninsula. In the southern most areas of the peninsula are some scattered deposits of drift or alluvium (silt). The chalk beds are not large aquifers but there are large areas of groundwater reservoirs that are used for mains water supply and agriculture. These groundwater reservoirs make up the bulk of the Environment Agency's groundwater source protection zones. Some clay beds exist in the former Wantsum Channel. The formations of rocks in Kent underlying Thanet and of key relevance to the fate and transport of contaminants in the ground are Upper Cretaceous Chalk and Lower Cretaceous Sandstones.

Chalk forms the underlying rock throughout the Isle of Thanet, as can be clearly seen from the chalk cliffs forming the coastlines. Not only does it determine the distinctive scenery in the area, but also, through the influence of geology on drainage patterns and soil types, it in turn effects vegetation patterns, farm practices, and population distributions. Its influence on architectural and building practices is also seen in the use of flints extracted from the chalk as a building material. Geographical areas underlain by the chalk are characterised by distinctive landscape features such as dry valleys and coombs, and also by spectacular coastlines.

In terms of geological age, the chalk is assigned to the Cretaceous period of the Mesozoic era. The material of the chalk is calcium carbonate ($CaCo_3$), and the rock is essentially a very pure limestone. On microscopic examination, chalk rock has been found to consist mostly of the fossilised remains of a microscopic algae known as coccoliths, mixed with finely fragmented shelly material from a variety of organisms including bivalves and sea urchins, and also the microscopic shells of foraminifera. The entire sequence of the chalk can be up to 300 metres thick, although in Thanet only the top part of the sequence is visible.

The Geological Deposits of Thanet

GEOLOGICAL ERA	GEOLOGICAL SYSTEM	DESCRIPTION	TYPE OF DEPOSITION	CONDITIONS OF DEPOSITION	THICKNESS
Cainozoic-Quaternary		Dark organic clays and silts Gravels	River gravels River alluvium Marine alluvium Marine beach deposits	River terrace River floodplain Marine shoreline	
	Pleistocene (Ice Age) 1ma. - 15,000 BP		Loess	Wind-borne deposits	
			Brickearth	Reworked loess etc.	
		Chalky rubble	Coombe rock	Valley-fill solifluction	
Cainozoic-Tertiary (the lower Tertiaries)	Eocene Period (64-38 ma.)	Stiff dark grey silty clay	The London Clay	Marine	146m.

		Pebbly silty sand. Basal pebble bed	Oldhaven Beds	Marine	2-7m.
		Glauconitic sand and sandy clays	Woolwich Beds	Marine	7-12m.
		Green grey sand and shell beds	Thanet Beds	Marine	18-35m.
Mesozoic	Cretaceous Period (135-64 ma.)	Soft white limestone	Santonian (The Chalk)	Marine sub-tropical	300m.
Palaeozoic	No rocks of this age occur at the surface in this area				

What have we done already?

In 2018 the Council procured new Geo Environ GIS software to replace obsolete software and, as part of the data transfer, undertook a prioritisation exercise in line with current statutory guidance. There are currently approximately 650 sites in our GIS database. The vast majority of these are likely to be low risk sites; for instance where small to medium areas of ground have been in-filled with inert or unknown material over time. These sites will not be investigated further unless they are developed through planning or new information is found. The information in the database is regularly updated as new information becomes available or sites are redeveloped and remediated e.g. through the planning system. The statutory guidance encourages private land owners to carry out their own assessment. The council, if satisfied with the work undertaken, will accept their conclusions and enter them into the database.

What do we need to do?

The Statutory Guidance requires the council to continue to identify and prioritise sites that may be potentially contaminated by their historic or current use. Detailed inspections/investigations of sites where a need for further investigation has been identified will be undertaken through the development process, voluntary action, or by the local authority on a site specific basis, subject to the availability of funding.

How are we proposing to do it?

The council has built a database of potentially contaminated sites across the District. The new Geoenviron software package will rank the sites according to priority based on presence of receptors (e.g. land use, geology, water supplies, rivers, property) and sources (potential or confirmed contaminants present). This database will be updated as new information becomes available. The software enables us to produce a list of sites for detailed inspection according to highest potential risk (priority). The list will be changed as more information is found about different sites, or the risk rating revised or new sites are added. **The list of potential sites is not a public document**. Any land that is formally determined as contaminated and requires that remediation notices are served will be put on the register which is a public a document.

A detailed inspection of a site will establish whether pathways are present between the source (e.g. oil) and the receptors (e.g. people). This is known as a pollutant linkage. For a site to meet the statutory definition of Contaminated Land there needs to be a significant possibility of significant harm to an identified receptor. This is a stringent test.

The detailed inspection of a site will start with a desktop study. The data gathered will be used to update the council's data base of potentially contaminated sites. At this point the council will consider whether and when the funding necessary to undertake further investigation can be released on a site specific basis.

The detailed inspection of a site will not go beyond a desktop study and site walkover unless it is identified that there is a reasonable possibility that a significant pollutant linkage may exist at the site. The council will follow the detailed statutory guidance at all points of the process and will work with the Environment Agency and external experts where appropriate. Where the potential for a significant pollutant linkage is identified, preliminary soil and groundwater tests may be carried out. Where appropriate this will be on verges, public areas, in areas likely to cause least disruption, but may include garden areas. This is likely to be carried out by an outside consultant providing specialist services to the council. All reasonable efforts will be made to contact and inform site owners, tenants, users, and other interested people before starting a detailed inspection of a site.

Only where a significant harm or a significant possibility of significant harm to a qualifying receptor (see statutory guidance) is identified will the site be designated as contaminated land/a special site. Land cannot be identified as 'contaminated land', under Part IIA, unless all three elements of a pollutant linkage have been established. If appropriate the council will proceed to secure satisfactory remediation of the site, identify liable persons and recover costs in accordance with the Act and the statutory guidance.

It is expected that the majority of the investigation and remediation of the sites identified will happen during the development or redevelopment of those sites. Where a "brownfield" site is developed particularly for a more sensitive 'end use' e.g. residential with gardens, the planning system is designed to ensure that it is suitable for its use after the development.

The council will use existing resources to focus on identifying former potentially contaminated sites through "desktop" based work adding to and refining the information that we currently have. Where we establish that a site is of particular concern the responsible officer will present the information to

the council/senior management on site specific basis and, if agreed, funds will be allocated to enable further investigation.

Special Sites

There is a category of contaminated site that is termed a special site. These are sites that meet a specific set of circumstances, generally where the main receptor is some form of controlled water such as a river or an aquifer. The detailed definition is found in the statutory guidance. Where the council thinks that a site might be a special site it will request that the Environment Agency take over as the lead authority for it. The mechanism for this is also within the statutory guidance. The council will then work with the Environment Agency as the site is investigated and remediated if necessary.

Enabling Residents

Where any resident lives on or near a potentially contaminative former land use, they may wish to engage the services of a professional consultant to investigate their property. This circumstance may occur if the site is considered to be of low risk by council, so not scheduled for further inspection in the near future, but a mortgage lender will not lend without clearing any uncertainty. In these cases the council will provide as much assistance as it can to the resident in the form of liaising with any consultants on the scope of proposed investigations, and reviewing any results and reports. Where no contamination is found the council will provide confirmation of this in writing for the use of the resident. If unacceptable levels of contamination are found, the council will revise the priority rating for the site.

What are the possible outcomes of a detailed inspection?

Detailed inspection and risk assessment may show that an unacceptable risk is being caused. If it is, the council will determine the site and place the records on a public register. The council will then decide based upon all of the available information and the statutory guidance if remediation of the site should be carried out. If remediation is carried out this will be only be done where necessary and the council will work with residents to keep them informed and minimise disruption as much as possible.

The statutory guidance describes in detail the possible outcomes of detailed inspection for all receptors. Sites will be assigned categories (1-4). Generally, sites in category 1 will require immediate action (designation as contaminated land); sites in category 2 may require immediate action. Sites in category 3 may not meet the stringent definition of contaminated land but may require observation or monitoring and sites in category 4 are unlikely to meet the definition of contaminated land. For controlled water receptors the council will consult the Environment Agency.

Risk Ratings and Outcomes

The table below shows the categories that sites may be allocated and the action likely to be taken by the council, subject to available resources. Sites will be put into these categories based upon the information known about them. This will begin at the initial prioritisation and if necessary continue through to the remediation of the site. A site could move between categories as more information is found about it and risk assessments revised.

Table showing risk ratings categories.

Category	Description
1	Site strongly suspected to constitute 'Contaminated Land' based on robust evidence – intrusive investigation necessary. Full review of existing site data necessary to develop detailed inspection strategy and conceptual model.
2	Medium risk – intrusive investigation likely required to resolve potential risks. Clean up considered possible under Part IIA and priority action recommended.
3	Low to Medium Risk - intrusive investigation recommended to resolve potential risks. Clean up can not be excluded under part IIA. Initial site investigation will not be funded by the council as this will divert available resources from high risk sites. Site owners will be assisted to undertake their own investigations and risk assessments. Should these assessments indicate that the site should be reassessed as category 1 or 2 the council will re-evaluate the risk.
4	Low risk - likelihood of contamination is considered low and if present the impact is such that clean up could not be reasonably justified. It is highly unlikely that further work will required on these sites. Should residents wish to adopt the same approach to category 3 sites this will be followed.

Please note, the local authority may postpone determination of contaminated land if the land owner or some other person undertakes to deal with the problem without determination, and the authority is satisfied that the remediation will happen to an appropriate standard and timescale. If the authority chooses to do this, any agreement it enters into should not affect its ability to determine the land in future (ie. if the person fails to carry out the remediation as agreed). Where the council is the landowner, a high priority will be given to investigation of the site.

Who pays for all of this?

Central government no longer provides capital support for investigation work. Outside of the development control process or voluntary agreements, the Council must therefore fund any investigation work and the commissioning of specialist services for detailed inspections. Part IIA of the Environmental Protection Act 1990 makes clear that wherever possible the original polluter and/or a developer that knowingly developed a contaminated site without ensuring suitable levels of remediation are completed should pay for any remediation needed in later years. The council will make every effort to ensure that this is the case. However the legal process is time consuming and difficult particularly when pollution and/or development was many years ago, or the people and companies involved no longer exist. Where it is not possible to make the original polluter or developer pay for remediation the legislation makes the current person in ownership (residents) of the land a responsible person for funding remediation. Where this situation occurs the council will work with residents and apply a hardship policy to fairly identify the level of contribution that may be required from all parties and any contribution that can be made by the council.

Following the announcement of £10M funding for dealing with abandoned waste sites in the new 2018 budget, the council will liaise with the Environment Agency regarding applicable criteria and possibilities for applying for funds to remediate any relevant sites in Thanet.

Investigating reports of possible land contamination

If there are reports that a piece of land is or has been contaminated either historically or recently this will be investigated according to standard complaints investigation procedures. If the problem can be resolved directly as a result of the investigation either by giving advice or taking enforcement action this will be done. If not then the results of the investigation will be used to inform the councils overall prioritisation of potentially contaminated sites' database.

What are the wider benefits of this strategy?

As a result of the data collated during the initial prioritisation the council has a searchable layer for specialist officers which links directly to the Planning and Building Control registration. This ensures that the appropriate officers of the council are consulted on any planning application that may be at risk from land contamination. The council is also able to provide an environmental information research requests service (e.g. from solicitors when people are moving house). Please contact: Environmental.Health@thanet.gov.uk for further information and applicable fees.

How will we measure our progress in implementing this strategy?

The strategic inspection process is by nature an iterative process. It is normal that sites will be added and removed from the database as information becomes available. We aim to add more detailed knowledge about sites each year using existing resources. This increased knowledge will enable the council to refine the prioritisation further, reduce the number of sites that need more detailed investigation and identify those that need detailed investigation most urgently.

How does this strategy interact with the planning system?

The statutory guidance and the new National Planning Policy framework (NPPF) both have the concept that potentially contaminated land must be shown to be suitable for its use. As a minimum this means that the site must be incapable of being designated as contaminated land as defined under Part IIA of the Environmental Protection Act 1990. The council, will as a general rule, expect that a standard higher than this minimum level will be achieved. It is considered that someone purchasing a new build home is entitled to a high degree of confidence that if remediation was needed, it has been completed to a better standard than the minimum under this legislation.

For larger developments or where there may be a question over the viability of the application due to contaminated land the council will expect any planning application for land which may be affected by contamination to be accompanied by the report of a desktop study as defined in British Standard BS10175:2011 + A2:2017 "Investigation of potentially contaminated sites – Code of Practice". This report should identify that the site has been assessed as suitable for use or in the event that further works are needed, to detail them and discuss how the site can reasonably be made suitable for the proposed use. All reports should be completed by a suitably qualified "competent" person as defined in the NPPF.

Guidance on what the council expects from developers in relation to contaminated land can be found on the Thanet District Council website under 'Developing on Contaminated Land': https://www.thanet.gov.uk/info-pages/contaminated-land/

Summary

- The council has identified and prioritised a large number of potential sites.
- Most of them are low risk and will not be investigated further.
- A small number will be investigated further to see if they are contaminated and need to be remediated. The primary mechanism for undertaking site investigation works will be through the development process.
- Initial investigation will be undertaken using existing resources.
- Further phases will need site specific funding from the council based upon the specific circumstances at the time.
- Where residents require contaminated land investigations, in cases where the council is not scheduled to do so, it will provide advice and assistance to the appointed contractor.
- Investigations might show that unacceptable risk is being caused. The council will ensure that only land that poses a genuinely unacceptable risk is formally determined. It will then be remediated if that is the most appropriate thing to do.
- The council will work with residents to ensure that they are involved in and informed of any site investigation and remediation that affects them. Officers will work to avoid any unnecessary disruption or distress.
- The council will try to make previous polluters or developers pay for remediation. Where this is not possible, residents will be required to contribute and we will work with them and apply a hardship policy to make sure that this as fair as possible.
- The council will investigate reports of potentially contaminated land and either give advice or take action accordingly.

Contact us

If you would like to talk about this strategy or other matters related to contaminated land in detail please contact the Environmental Protection Team at Environmental.Health@thanet.gov.uk

Review Date

This strategy document was approved by Cabinet on the 29th January 2019.

APPENDIX 1

ECOLOGICAL AND PROPERTY RECEPTOR TABLES

Table 1: Ecological system effects

Relevant types of receptor	Significant harm	Significant possibility of significant harm
Any ecological system, or living organism forming part of such a system, within a location which is: • a site of special scientific interest (under section 28 of the Wildlife and Countryside Act 1981) • a national nature reserve (under s.35 of the 1981 Act) • a marine nature reserve (under s.36 of the 1981 Act) • an area of special protection for birds (under s.3 of the 1981 Act) • a "European site" within the meaning of regulation 8 of the Conservation of Habitats and Species Regulations 2010 • any habitat or site afforded policy protection under paragraph 6 of Planning Policy Statement (PPS 9) on nature conservation (i.e. candidate Special Areas of Conservation, potential Special Protection Areas and listed Ramsar sites); or • any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949.	The following types of harm should be considered to be significant harm: • harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any substantial part of that location; or • harm which significantly affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location. In the case of European sites, harm should also be considered to be significant harm if it endangers the favourable conservation status of natural habitats at such locations or species typically found there. In deciding what constitutes such harm, the local authority should have regard to the advice of Natural England and to the requirements of the Conservation of Habitats and Species Regulations 2010.	Conditions would exist for considering that a significant possibility of significant harm exists to a relevant ecological receptor where the local authority considers that: • significant harm of that description is more likely than not to result from the contaminant linkage in question; or • there is a reasonable possibility of significant harm of that description being caused, and if that harm were to occur, it would result in such a degree of damage to features of special interest at the location in question that they would be beyond any practicable possibility of restoration. Any assessment made for these purposes should take into account relevant information for that type of contaminant linkage, particularly in relation to the ecotoxicological effects of the contaminant.

Table 2: Property effects

Relevant types of receptor	Significant harm	Significant possibility of significant harm
Property in the form of: • crops, including timber; • produce grown domestically, or on allotments, for consumption; • livestock; • other owned or domesticated animals; • wild animals which are the subject of shooting or fishing rights.	For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage. The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or loss in value is caused by a contaminant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss. In this section, this description of significant harm is referred to as an "animal or crop effect".	Conditions would exist for considering that a significant possibility of significant harm exists to the relevant types of receptor where the local authority considers that significant harm is more likely than not to result from the contaminant linkage in question, taking into account relevant information for that type of contaminant linkage, particularly in relation to the ecotoxicological effects of the contaminant.
Property in the form of buildings. For this purpose, "building" means any structure or erection, and any part of a building including any part below ground level, but does not include plant or machinery comprised in a building, or buried services such as sewers, water pipes or electricity cables.	Structural failure, substantial damage or substantial interference with any right of occupation. The local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended. In the case of a scheduled Ancient Monument, substantial damage should also be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled. In this Section, this description of significant harm is referred to as a "building effect".	Conditions would exist for considering that a significant possibility of significant harm exists to the relevant types of receptor where the local authority considers that significant harm is more likely than not to result from the contaminant linkage in question during the expected economic life of the building (or in the case of a scheduled Ancient Monument the foreseeable future), taking into account relevant information for that type of contaminant linkage.

APPENDIX 2

RECEPTOR SCORES Employed by GeoEnviron

Groundwater and Ecology

Zone Id*	Zone Name*	Receptor Type*		Sensitivity Code		Score	Comments
PZ_08	Area of special protection for birds	Land Use	L	VH_LU	Very High - Land Use	6	Directive 79/409 on the Conservation of Wild
PZ_01	SPZ I - Inner Protection Zone	Ground Water	L	VH_GW	Very High - Groundw...	6	Site within a IPZ (defined by a Pollutant trave
PZ_09	Candidate Special Areas of Conservation	Land Use	L	VH_LU	Very High - Land Use	6	Directive 92/43/EEC - Conservation of Natura
PZ_12	Surface Water Body On Site	Surface Water	L	VH_SW	Very High - Surface ...	6	
PZ_07	National Nature Reserve	Land Use	L	H_LU	High - Land Use	5	National Parks and Access to the Countryside
PZ_13	Within 50m of a Water Body	Surface Water	L	H_SW	High - Surface Water	5	
PZ_06	Ramsar Site	Land Use	L	H_LU	High - Land Use	5	Wetland of International Importance, Waterf
PZ_05	Site of Special Scientific Interest (SSSI)	Land Use	L	H_LU	High - Land Use	5	Wildlife and Countryside Act (1981)
PZ_02	SPZ II - Outer Protection Zone (Groundwater)	Ground Water	L	H_GW	High - Groundwater	5	Site within a OPZ (defined by the 400-day po
PZ_03	SPZ III - Total Catchment Zone	Ground Water	L	MH_GW	Medium High - Groun...	4	Site within a TCZ (i.e.area needed to support
PZ_14	Within 100m of a Water Body	Surface Water	L	MH_SW	Medium High - Surfac...	4	
PZ_15	Within 150m of a Water Body	Surface Water	L	M_SW	Medium - Surface W...	3	
PZ_19	Listed Building	Land Use	L	M_LU	Medium - Land Use	3	Planning (Listed Buildings and Conservation A
PZ_20	Scheduled Ancient Monument	Land Use	L	M_LU	Medium - Land Use	3	Ancient Monuments & Archaeological Areas A
PZ_21	Archeaological Site	Land Use	L	M_LU	Medium - Land Use	3	
PZ_10	English Nature Parks & Gardens	Land Use	L	M_LU	Medium - Land Use	3	National Parks and Access to the Countryside
PZ_16	Within 200m of a Water Body	Surface Water	L	LM_SW	Low Medium - Surfac...	2	
PZ_18	Ancient & Semi-Natural Woodland	Land Use	L	LM_LU	Low Medium - Land Use	2	
PZ_17	No Surface Water Body within 200m	Surface Water	L	N_SW	None - Surface Water	0	
PZ_11	No Ecological/Property Receptor	Land Use	L	N_LU	None - Land Use	0	
PZ_04	Not Within Source Protection Zone	Ground Water	L	N_GW	None - Groundwater	0	

Land use and Property

Id*	Current Use Title*		Land Use Sensitivity		Score	Comments
CU15	Allotment Gardens	L	VH_HH	Very High - Human Health	9	
CU10	Farm (residential buildings)	L	H_HH	High - Human Health	8	Farm Dwelling
CU03	Housing with gardens	L	H_HH	High - Human Health	8	Vegetable uptake
CU42	Mixed Use - Residential & School	L	H_HH	High - Human Health	8	
CU37	Hospital/Nursing home	L	MH_HH	Medium High - Human Healt	7	
CU20	Flats with gardens	L	MH_HH	Medium High - Human Healt	7	Vegetable uptake
CU14	Housing no gardens	L	MH_HH	Medium High - Human Healt	7	No vegetable uptake
CU21	Flats with landscaping	L	MH_HH	Medium High - Human Healt	7	No vegetable uptake
CU29	Reservoir	L	M_HH	Medium - Human Health	6	
CU22	Recreation/sports ground	L	M_HH	Medium - Human Health	6	
CU17	Playing fields	L	M_HH	Medium - Human Health	6	School playing field, Childrens play equipment
CU28	Camping Ground	L	M_HH	Medium - Human Health	6	
CU18	Sporting fields	L	M_HH	Medium - Human Health	6	
CU16	Schools	L	M_HH	Medium - Human Health	6	
CU45	Caravan Site	L	M_HH	Medium - Human Health	6	
CU19	Park	L	M_HH	Medium - Human Health	6	General Park
CU09	Farm (outbuildings)	L	LM_HH	Low Medium - Human Healt	5	Outbuildings
CU11	Public open space	L	LM_HH	Low Medium - Human Healt	5	
CU23	Railway Land/ Dismantled Railway	L	LM_HH	Low Medium - Human Healt	5	
CU41	Airport	L	LM_HH	Low Medium - Human Healt	5	
CU07	Right of way	L	LM_HH	Low Medium - Human Healt	5	
CU25	Grazing Land/General farm land	L	LM_HH	Low Medium - Human Healt	5	
CU43	Court/Law Buildings	L	LM_HH	Low Medium - Human Healt	5	
cu47	Garages	L	LM_HH	Low Medium - Human Healt	5	
CU35	Trees and shrubs	L	LM_HH	Low Medium - Human Healt	5	
CU48	Flats - No Gardens or Landscaping	L	LM_HH	Low Medium - Human Healt	5	
CU27	Derelict/Disused Land	L	LM_HH	Low Medium - Human Healt	5	

CU08	Agriculture	L	LM_HH	Low Medium - Human Healt	5	Crops/livestock
CU12	Recreation/Commercial	L	LM_HH	Low Medium - Human Healt	5	Mixed recreation and commercial
CU06	Woodland	L	LM_HH	Low Medium - Human Healt	5	
CU39	Electricity Sub Station	L	LM_HH	Low Medium - Human Healt	5	
CU30	Shore Line/Beach	L	LM_HH	Low Medium - Human Healt	5	
CU40	Sewage Works	L	L_HH	Low - Human Health	4	
CU02	Industrial - general	L	L_HH	Low - Human Health	4	
CU32	Industrial/Commercial	L	L_HH	Low - Human Health	4	
CU34	Cemetery	L	L_HH	Low - Human Health	4	
CU05	Disused	L	L_HH	Low - Human Health	4	Closed sites
CU24	Open countryside/marshland	L	L_HH	Low - Human Health	4	
CU01	Petrol filling station	L	L_HH	Low - Human Health	4	
CU44	Shopping Centre with Car Park	L	L_HH	Low - Human Health	4	
CU04	Commercial	L	L_HH	Low - Human Health	4	
CU46	Church	L	L_HH	Low - Human Health	4	
CU36	Car Park	L	L_HH	Low - Human Health	4	
CU26	Road and associated pavement/walkway	L	L_HH	Low - Human Health	4	
CU31	Dock/Pier	L	L_HH	Low - Human Health	4	
CU13	Development Site	L	L_HH	Low - Human Health	4	Any site under development
CU33	Verge	L	L_HH	Low - Human Health	4	A grass border along a road
UNK	Unknown	L	N_HH	No Human Health Protectio	0	

APPENDIX 3

HAZARD CRITERIA - RISK SCORES Employed by GeoEnviron

Industry Profile Hazards

CODE	INDUSTRIAL PROFILE	GROUND WATER	SURFACE WATER	HUMAN HEALTH/ECOLOGY
DOE 01	Airports	Medium	Medium	Medium
DOE 02	Animal and animal products processing	MH	MH	MH
DOE 03	Asbestos manufacturing works	Medium	Medium	MH
DOE 04	Ceramics, cement and asphalt manufacturing works	Medium	Medium	Medium
DOE 05	Chemical works : Coatings (paints and printing inks)	High	High	High
DOE 06	Chemical works: Cosmetics and toiletries manufacturing works	Medium	Medium	Medium
DOE 07	Chemical works: Disinfectants manufacturing works	High	High	High
DOE 08	Chemical Works: Explosives, propellants & pyrotechnics	High	High	High
DOE 09	Chemical works: Fertiliser manufacturing works	Medium	Medium	Medium

DOE 10	Chemical Works: Fine chemicals manufacturing works	High	High	High
DOE 11	Chemical Works: Inorganic chemicals manufacturing works	High	High	High
DOE 12	Chemical Works:Linoleum,vinyl & bitumen-based floor covering	MH	LM	High
DOE 13	Chemical Works : Mastics,Sealants,adhesives & roofing felt	MH	MH	MH
DOE 14	Chemical Works: Organic chemicals manufacturing works	mh	mh	mh
DOE 15	Chemical Works: Pesticides manufacturing works	VH	MH	VH
DOE 16	Chemical Works: Pharmaceuticals manufacturing works	MH	VH	MH
DOE 17	Chemical Works: Rubber processing works	LM	MH	Medium
DOE 18	Chemical Works: Soap & detergent manufacturing works	LM	LM	Low
DOE 19	Dockyards and docklands	High	High	VH
DOE 20	Engineering works: aircraft manufacturing works	MH	MH	MH
DOE 21	Electrical & electronic equipment manufacturing works	MH	MH	High
DOE 22	Engineering Works: Mechanical engineering and ordnance works	VH	VH	VH
DOE 23	Engineering Works: Railway engineering works	MH	MH	High
DOE 24	Engineering Works: Shipbuilding , repair and ship breaking	MH	MH	MH
DOE 25	Engineering works: vehicle manufacturing works	High	High	High
DOE 26	Gas works, coke works, coal carbonisation plants	High	High	High
DOE 27	Metal Works : Electroplating and other metal finishing works	MH	MH	High
DOE 28	Metal manufacturing: Iron and steelworks	High	High	High
DOE 29	Metal manufacturing, refining and finishing	MH	MH	MH

	works:Lead works			
DOE 30	Metal Works : Non-ferrous metal works (excluding lead works)	MH	MH	High
DOE 31	Metal Works: Precious metal recovery works	MH	MH	MH
DOE 32	Oil refineries & bulk storage of crude oil and pet.products	MH	MH	MH
DOE 33	Power stations (excluding nuclear power stations)	High	High	VH
DOE 34	Pulp and paper manufacturing works	MH	MH	High
DOE 35	Railway land	MH	MH	MH
DOE 36	Road vehicles: Garages and filling stations	MH	MH	MH
DOE 37	Road Vehicles: Transport and haulage centres	mh	mh	mh
DOE 38	Sewage works and sewage farms	High	High	High
DOE 39	Textile works and dye works	High	High	High
DOE 40	Timber products manufacturing works	MH	MH	MH
DOE 41	Timber treatment works	VH	High	VH
DOE 42	Waste Recycling: Drum and tank cleaning and recycling plants	Medium	Medium	Medium
DOE 43	Waste Treatment: Hazard waste treatment plants	High	High	High
DOE 44	Waste: Landfills and other waste treatment & disposal sites	VH	High	VH
DOE 45	Waste recycling, treatment & disposal: Metal recycling sites	MH	MH	High
DOE 46	Waste recycling,treatment & disposal: Solvent recovery works	Medium	Medium	Medium
DOE 47	Charcoal works	High	High	High
DOE 48	Dry-cleaners	High	high	High
DOE 49	Fibreglass and fibre glass resins manufacturing works	High	High	VH

DOE 50	Glass manufacturing works	High	High	High
DOE 51	Photographic processing industry	High	High	High
DOE 52	Printing and bookbinding works	High	High	High
DOE 99	Unspecified	Medium	Medium	Medium
LM 01	General manufacture	LM	LM	LM
LM 02	Machinery: engines, building & general industrial [manufac]	MH	MH	High
LM 03	Electricity production & distribution [inc large transformers]	lm	MH	High
LM 04	Unknown Filled Ground (Pond, marsh, river, stream,dock etc)	Medium	Medium	Medium
LM 05	Mining & quarrying general	LM	Low	LM
LM 06	Unknown Filled Ground (Pit, quarry etc)	LM	MH	LM
LM 07	Factory or works - use not specified	Medium	MH	Medium
LM 08	Transport support & cargo handling	Medium	Medium	Medium
LM 09	Heap, unknown constituents	Medium	MH	High
LM 10	Pipelines [transport via]	Medium	Medium	Medium
LM 11	Mining of coal & lignite	Low	Low	Medium
LM 12	Food processing - major	Low	Low	Low
LM 13	Cemetery or Graveyard	Low	Medium	Low
LM 14	Area liable to flood	Low	Low	Low
LM 15	Military Land	Medium	Medium	Medium
LM 16	Brewing & malting	Low	Low	Low
LM 17	Disturbed Ground	Low	Low	Low
LM 18	Mineral railway	Medium	Medium	Medium
LM 19	Former Marsh	Low	Low	Low
LM 20	Air Shafts	Low	Low	lm

LM 21	Hospitals	Medium	Medium	Medium
LM 22	Outfalls	Medium	Medium	Medium
LM 23	Chemical manufacturing general	MH	High	High
LM 24	Mineral products non-metallic	Medium	Medium	Medium
LM 25	Laboratories	lm	MH	lm
LM 26	Metal Recycling	Medium	High	MH
LM 27	Coal storage and depot	Medium	lm	Medium
LM 29	Air & space transport	Medium	Medium	Medium
LM 30	Batteries, accumulators, primary cells, electric motors, generators & transformers	High	VH	High
LM 31	Disturbed Ground >200m in one dimension -	Low	Low	Low
LM 32	Heap incl. Spoil & Slag	Medium	Medium	Medium
LM 33	Manuf./repair - Ships,Aerospace,Rail Engines & Rolling Stock	Medium	Medium	Medium
LM 34	Manufacture of Cars, Lorries, Buses, Motorcycles, Bicycles	Medium	Medium	MH
LM 35	Rubber natural products manufacture	Medium	Medium	MH
LM 36	Builders Yard	Lm	Lm	Lm
LM 37	Plant Nursery	Low	Low	Low
LM 38	Unknown filled ground (Railway cuttings)	Medium	Medium	Medium
LM 39	Pumping station	Low	Low	Low
LM 40	Sheep Dip	High	High	High
LM 41	Colliery Tips	MH	MH	MH
LM 50	Tank	Medium	Medium	Medium
NONE	NONE	low	Low	low
unk	unk			

Haz Score CATs

Category	Name	Score
Low	Low risk	1
LM	Low to medium risk	2
Medium	Medium risk	3
MH	Medium to high risk	4
High	High risk	5
VH	Very high risk	6

Receptor Sensitivity

CURRENT_USE_ID	CURRENT_USE_NAME	COMMENTS	RECEPTOR_SENSITIVITY_CODE
CU01	Petrol filling station		L_HH
CU02	Industrial - general		L_HH
CU03	Housing with gardens	Vegetable uptake	H_HH
CU04	Commercial		L_HH
CU05	Disused	Closed sites	L_HH
CU06	Woodland		LM_HH
CU07	Right of way		LM_HH
CU08	Agriculture	Crops/livestock	LM_HH
CU09	Farm (outbuildings)	Outbuildings	LM_HH
CU10	Farm (residential buildings)	Farm Dwelling	H_HH
CU11	Public open space		LM_HH
CU12	Recreation/Commercial	Mixed recreation and commercial	LM_HH
CU13	Development Site	Any site under development	L_HH
CU14	Housing no gardens	No vegetable uptake	MH_HH
CU15	Allotment Gardens		VH_HH
CU16	Schools		M_HH
CU17	Playing fields	School playing field, Childrens play equipment	M_HH
CU18	Sporting fields		M_HH
CU19	Park	General Park	M_HH
CU20	Flats with gardens	Vegetable uptake	MH_HH
CU21	Flats with landscaping	No vegetable uptake	MH_HH
CU22	Recreation/sports ground		M_HH
CU23	Railway Land/ Dismantled Railway		LM_HH
CU24	Open		L_HH

	countryside/marshland		
CU25	Grazing Land/General farm land	y	LM_HH
CU26	Road and associated pavement/walkway		L_HH
CU27	Derelict/Disused Land		LM_HH
CU28	Camping Ground		M_HH
CU29	Reservoir		M_HH
CU30	Shore Line/Beach		LM_HH
CU31	Dock/Pier		L_HH
CU32	Industrial/Commercial		L_HH
CU33	Verge	A grass border along a road	L_HH
CU34	Cemetery		L_HH
CU35	Trees and shrubs		LM_HH
CU36	Car Park		L_HH
CU37	Hospital/Nursing home		MH_HH
CU39	Electricity Sub Station		LM_HH
CU40	Sewage Works		L_HH
CU41	Airport		LM_HH
CU42	Mixed Use - Residential & School		H_HH
CU43	Court/Law Buildings		LM_HH
CU44	Shopping Centre with Car Park		L_HH
CU45	Caravan Site		M_HH
CU46	Church		L_HH
cu47	Garages		LM_HH
UNK	Unknown		N_HH

Receptor Scores CATs

CODE	NAME	RECEPTOR_TYPE	SCORE
H_GW	High - Groundwater	W	5
H_HH	High - Human Health	L	8
H_LU	High - Land Use	L	5
H_SW	High - Surface Water	W	5
L_GW	Low - Groundwater	W	1
L_HH	Low - Human Health	L	4
L_LU	Low - Land Use	L	1
L_SW	Low - Surface Water	W	1
LM_GW	Low Medium - Groundwater	W	2

LM_HH	Low Medium - Human Health	L	5
LM_LU	Low Medium - Land Use	L	2
LM_SW	Low Medium - Surface Water	W	2
M_GW	Medium - Groundwater	W	3
M_HH	Medium - Human Health	L	6
M_LU	Medium - Land Use	L	3
M_SW	Medium - Surface Water	W	3
MH_GW	Medium High - Groundwater	W	4
MH_HH	Medium High - Human Health	L	7
MH_LU	Medium High - Land Use	L	4
MH_SW	Medium High - Surface Water	W	4
N_GW	None - Groundwater	W	0
N_HH	No Human Health Protection Zones	L	0
N_LU	None - Land Use	L	0
N_SW	None - Surface Water	W	0
VH_GW	Very High - Groundwater	W	6
VH_HH	Very High - Human Health	L	9
VH_LU	Very High - Land Use	L	6
VH_SW	Very High - Surface Water	W	6

APPENDIX 4

CONTAMINATED LAND CONDITION

The development hereby permitted shall not be commenced until the following components of a scheme to deal with the risks associated with contamination of the site shall have been submitted to, and approved, by the local planning authority:

1. A preliminary risk assessment which has identified:

(i) all previous uses

(ii) potential contaminants associated with those uses

(iii) a conceptual model of the site indicating sources, pathways and receptors

(iv) potentially unacceptable risks arising from contamination at the site

2. Intrusive Investigation

a) An intrusive investigation and updated risk assessment shall be undertaken by competent persons and a written report of the findings shall be submitted to and approved in writing by the Local Planning Authority prior to commencement of the development. It shall include an

assessment of the nature and extent of any contamination on the site, whether or not it originates on the site. The report of the findings shall include:

(i) A survey of the extent, scale and nature of contamination;

(ii) An assessment of the potential risks to:

Human health;

Property (existing or proposed) including buildings, crops, livestock, pets, woodland and service lines and pipes,

Adjoining land,

Ground waters and surface waters,

Ecological systems,

(iii) An appraisal of remedial options and identification of the preferred option(s).

All work pursuant to this Condition shall be conducted in accordance with the DEFRA and Environment Agency document Model Procedures for the Management of Land Contamination (Contamination Report 11).

b) If investigation and risk assessment shows that remediation is necessary, a detailed remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health, buildings and other property and the natural and historical environment shall be submitted to and approved in writing by the Local Planning Authority prior to commencement of the development. The scheme shall include details of all works to be undertaken, proposed remediation objectives and remediation criteria, a timetable of works, site management procedures and a verification plan. The scheme shall ensure that the site will not qualify as contaminated land under Part IIA of the Environmental Protection Act 1990 in relation to the intended use of the land after remediation. The approved remediation scheme shall be carried out in accordance with the approved terms including the timetable, unless otherwise agreed in writing by the Local Planning Authority. The Local Planning Authority shall be given two weeks written notification of commencement of the remediation scheme works.

c) Prior to commencement of development, a verification report demonstrating completion of the works set out in the approved remediation scheme and the effectiveness of the remediation shall be submitted to and approved in writing by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include details of longer term monitoring of pollutant linkages and maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the Local Planning

APPENDIX 5

BEDROCK IN THANET

Visit: http://mapapps.bgs.ac.uk/geologyofbritain/home.html

APPENDIX 6

GROUNDWATER SOURCE PROTECTION ZONES IN THANET