St.Helens Council

CONTAMINATED LAND INSPECTION STRATEGY

ENVIRONMENTAL PROTECTION ACT 1990

ST. HELENS COUNCIL

REVISED January 2017

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In common with other areas, St. Helens has a legacy of land contamination arising from industrial development and other related operational practices.

Under contaminated land provisions contained within Part 2A of the Environmental Protection Act 1990, each Council has a duty to inspect its area to identify land which meets the statutory definition of contaminated land and ensure that it is managed in an appropriate manner.

The Part 2A legislation adopts the "suitable for use" approach in order to ensure that remedial action is taken only where contamination presents an unacceptable risk to human health or the wider environment assessed in the context of the current use and circumstances of the land.

Under Part 2A, 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 2A definition of contaminated land.

This Strategy document, now in its second review, sets out how St. Helens Council proposes to implement its inspection duties under Part 2A. It describes the framework within which land which merits detailed inspection will be identified in a rational, ordered and efficient manner, identifying the most serious problems first and concentrating resources on the areas where contaminated land is most likely to be found.

The identification and remediation of contamination within the Borough is a long and continuous process. The speed of progress during the implementation of this Strategy continues to be dependent on the resources available.

The Council has the primary regulatory role in the implementation of Part 2A but wherever necessary the Council will work in partnership with others, particularly the Environment Agency which has a key supporting role and a number of specific regulatory functions under the contaminated land regime.

Through implementation of the Strategy the Council's aims are:

- to adopt a strategic risk based approach to the periodic inspection of the Borough to identify land which presents unacceptable risks to human health or the wider environment;
- to ensure that available resources are effectively targeted;
- to ensure that all those affected by, and involved in, the inspection process have the same clear understanding of the rationale for inspection, how this will be carried out and over what timescale;
- by effective communication of the authority's intentions, to encourage voluntary action by polluters or other appropriate persons;

- to assist regeneration, improvement of the environment and protection of the Green Belt through effective links with wider Council and regional policies;

Key objectives and, where possible, timescales for meeting the above aims have been set out within the Strategy document.

It is recognised that sites where urgent action is required may be identified at any time; these will be dealt with as a priority as they arise.

Progress to date is summarised below:

(i) Development of all modules in the Contaminated Land Information Management system (CLIMS) has been completed and all modules are integrated and fully functional;

(ii) Collection of all core data sets for input into CLIMS has been completed. This process is also on-going as new information comes to light;

(iii) Efficient liaison and information exchange mechanisms have been established with key partners;

(iv) The initial site prioritisation algorithm run by the CLIMS Analysis module produced an inspection list of over 9105 sites requiring further inspection by the Council;

(v) A rolling programme of Detailed Inspections commenced in 2006;

(vi) Six sites have been investigated and/ or remediated and removed from the inspection list via Part 2A. With two of the sites containing a total of 270 and 38 properties respectively;

(vii) The planning process continues to be the primary mechanism for identifying and remediating sites from the inspection list. A total of 3000 sites have been removed from the inspection list via the planning process since 2001;

(viii) In parallel with progressing priority sites, the Council is currently progressing decisions on low priority sites in the form of academic research projects; these sites are currently at the desk top study inspection stage. Where the authority inspects land and finds little evidence to suggest that it is contaminated land, a written statement will be produced to conclude that land does not meet the definition of contaminated land under Part 2A. Further information is provided in Section 7.1.

(ix) Table 1 below provides a summary of the progress made to date including specific reference to the 40 highest priority sites and actions taken to address them through both Part 2A and the planning process.

Table 1: Progress with assessment of contaminated land in St Helens

St Helens potential contaminated land (total borough area of St Helens = 135.9 km^2)			**Part2A**		**Planning**
			(a)Sufficient information available to establish SPOSH or not SPOSH	**(b) Sites determined under Part2A as contaminated land or categorised as NOT contaminated land**	**(c)Hold sufficient information to remove from inspection list**
			No. of Sites	**No. of Sites**.	**No. of Sites**
9105 no. sites			3006 sites a=b+c (should be noted that sites may comprise numerous individual properties)	6 sites (Tickle - 34. properties & Jackson 38. properties determined) [1]	3000 sites (on average 200 sites per year from 2001 – 2015 addressed via the Planning process)
40 highest prioritised sites	4.3 km^{2}of the borough	3.2 % of the borough area	36 sites	3 sites [2]	33 (collation of data in progress)
Potential contaminated land = 9105 – 3006 = 6099 no. sites remaining					

[1] Tickle Avenue Estate, Sutton Sankey Brook, Recreation Street Allotments and Jackson Street Estate– other sites that have been investigated and not determined include Wood Street (not SPOSH), Merton Bank (Management Plan).
[2] Tickle Avenue Estate, Sutton Sankey Brook and Jackson/McCulloch Estate.

This second revision of the strategy follows the revision of the Contaminated Land Statutory Guidance published in 2012 by the Department for Environment, Food and Rural Affairs (Defra). This review reflects the changes in legislation and guidance and reports on the progress made to date.

CONTAMINATED LAND INSPECTION STRATEGY

1.0 INTRODUCTION

1.1 General Policy

1.1.1 Local Authority Policies

This Contaminated Land Inspection Strategy has been prepared within the context of wider Council strategies, initiatives and policies.

Complementary strategies, policies and initiatives of significance in this context include the following:

St Helens Plan 2016 -18;
Liverpool City Region Growth Plan and Strategic Economic Plan;
St Helens City Growth Strategy 2008 – 2018;
Mid Mersey Growth Point Initiative 2008 – 2017;
St Helens Local Plan, Core Strategy, Sustainable Development Management Plan Area Action Plans;
Joint Municipal Waste Management Strategy for Merseyside;
Policy for Nature : A Biodiversity Action Plan for St Helens;
St Helens Council Code of Consultation;
Regulatory Services (Environmental Health, Trading Standards and Licensing) Enforcement Policy.

Land contamination has significant social, environmental and economic impacts. These policy areas have a number of important areas of overlap with this Contaminated Land Inspection Strategy through reclamation and regeneration of significant areas of land contamination within the Borough.

Local Plan

In St. Helens the Core Strategy is the principal Local Plan. It contains strategic policies, provides an overall plan of where development should be located and how the needs of the borough will be met. In St. Helens the Local Plan consists of the following documents:

- Core Strategy Local Plan (adopted 31st October 2012);
- Saved policies of the 1998 Unitary Development;
- Joint Merseyside and Halton Waste Plan;
- Bold Forest Park Area Action Plan (in preparation);
- Supplementary Planning Documents.

Policy CP1 of the Core Strategy and saved policy ENV26 of the UDP relate to land contamination issues. The planning regime is the most widely used means of managing

and regulating land contamination; these policies have a direct influence on the implementation of the inspection strategy and are discussed further in Section 10.1.

The Council is currently at the first stage of preparing a new Local Plan (Scoping Consultation stage). The new Local Plan will set out how new development for housing, employment and other uses should take plan in the Borough, where development should take place and policies to be taken account of when assessing planning applications for development.

St Helens Council Code of Consultation

The Consultation Code for St.Helens describes how we engage with our residents and communities. It reflects the importance of actively involving the whole community to ensure that our services meet the needs of our customers. The code also seeks to support strengthened partnership working as well as using more online tools such as social media to capture the opinions of people on local issues and encourage them to get involved.

Enforcement Policy

St. Helens Council's enforcement policy is based on the principles set out below, which reflect the contract of the Enforcement Concordat, the National Regulators Compliance Code (where applicable) and other relevant principles such as those set out in the National Planning Policy Framework (NPPF), the Building Acts and Planning Acts.

- Consistency - to ensure that similar issues are dealt with in the same way;
- Fairness - to ensure a fair and even-handed approach;
- Proportionality - to ensure that action taken relates directly to the actual or potential risk to health, safety, the environment, or to dishonesty or significant economic disadvantage to individuals or business;
- Transparency - to ensure that the enforcement action that will be taken by the Council is easily understood and that clear distinctions are made between legal requirements and advice or guidance about what is desirable but not compulsory;
- Accountability - the Council will be accountable for the efficiency and effectiveness of its activities, while remaining independent in the decisions it makes;
- Targeted - those who deliberately or persistently break the law will be specifically targeted for enforcement action;
- Promotion - to raise awareness about legal standards and promote good practice.

Public Health Policy

The NHS reforms introduced by the Health and Social Care Act 2012 have given the Council a new duty to promote the health of their population. Under the reforms the Council took on a range of Public Health responsibilities. The Director of Public Health

has key responsibilities across three domains of public health – health improvement, health protection and healthcare public health.

Their work will include local initiatives that reduce the public health impacts of environmental risks including Part 2A work and the impacts of contaminated land on people's health.

The reforms have also established a number of public health structures, including Public Health England which has taken over responsibilities to protect and improve the nation's health and well-being, and to reduce inequalities. Public Health England provides toxicological and public health advice to Local Authorities in matters pertaining to land contamination.

Human Rights Act and Equality

St. Helens Council recognises that disadvantages and discrimination exist in society, and that people may experience more than one form of discrimination. The Council is committed to striving to eliminate these inequalities and aims to be fair, reasonable and just in its responsibilities. St. Helens Council values the diversity of its workforce and the people and communities both resident and visiting the Borough. The Council is working towards ensuring its service delivery and employment practices are of the highest possible equality standard.

The Council commits itself to make its services, facilities and resources accessible and responsive to residents and visitors to St. Helens. The Council will work towards ensuring that individual Human Rights are supported within its decisions, policies and practices and that people are not discriminated against on the basis of disability, race, gender, gender reassignment, age, religion or sexual orientation.

1.1.2 Liverpool City Region Context

Owing to the extent and severity of contamination in areas of Merseyside, the Merseyside Districts (St. Helens, Knowsley, Sefton, Wirral and the City of Liverpool) and Halton have a history of working together to address the issue of contaminated land strategically. A Contaminated Land Officers Group (CLOG) was established in 1991 which acts to progress strategic initiatives, exchange information and seek uniform approaches to dealing with contaminated land issues across its area of Merseyside and Halton.

St. Helens is part of the Liverpool City Region with the neighbouring Boroughs of Knowsley, Sefton, Wirral, Halton and the City of Liverpool. Tackling the historic legacy of contaminated land through the regeneration process is a sub-regional priority. Its importance is being flagged up through joint working arrangements at the sub-regional level including:

- Liverpool City Region Combined Authority and its future delivery of a Spatial Framework covering the City Region;
- The Local Enterprise Partnership (LEP);
- City Region Growth Strategy (LEP);
- EU Investment Plan 2014-2020 (LCR EU Structural and Investment Funds Strategy 2014-2020);
- Local Nature Partnership.

1.1.3 Government Objectives

The overarching objectives of the Government's policy on contaminated land and the Part 2A regime are:

- To identify and remove unacceptable risks to human health and the environment.
- To seek to ensure that contaminated land is made suitable for its current use
- 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.
- For Part 2A legislation to be used only when no appropriate alternative solution exists. For example, redevelopment of the land through the planning process.

1.2 Regulatory Context

1.2.1 Background and Definition

Part 2A of the Environmental Protection Act 1990, inserted by Section 57 of the Environment Act 1995, introduced a new regime for the identification and remediation of contaminated land. The contaminated land regime is set out in primary legislation, Statutory Guidance provided by the Secretary of State and Regulations. The responsibility for administering and enforcing these provisions lies with the local authorities and Environment Agency, but also involves input from several other organisations.

Part 2A adopts the "suitable for use" approach in order to ensure that remedial action is only taken where contamination presents an unacceptable risk to human health or the wider environment assessed in the context of the current use and circumstances of the land. Liability for the remediation of contaminated land is to be established, where feasible, in accordance with the polluter pays principle. The regime incorporates a risk-based approach to assessing the significance of contamination and provides the statutory definition of contaminated land.

Under Part 2A contaminated land is defined 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;

(a) Significant harm is being caused or there is a significant possibility of such harm being caused; or

(b) Significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused."

The Council must follow guidance provided by the Secretary of State in applying the above definition for the identification and determination of contaminated land.

It should be noted that all future references to contaminated land within the strategy document, unless otherwise stated, refer to the statutory definition shown above.

It is important to note that the statutory definition of contaminated land does not necessarily include all land where contamination is present. Land which does not fall within the statutory definition of contaminated land may be subject to contamination relevant in the context of other regimes. For example, land may contain substances with the potential to cause harm if the use of the land is changed. Indeed, the planning regime will continue to be the most widely used method of regulating land contamination. Part 2A is intended to deal with the legacy of contamination that is not progressed through the Planning Regime.

Under Part 2A, 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 2A definition of contaminated land.

Significant Harm and Significant Possibility of Significant Harm to Human Health (SPOSH)

Section 78A(4) of the Environmental Protection Act 1990 defines "Harm" as meaning 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. However, the term significant is not defined in the 1990 Act; guidance of the assessment of significance is provided within the Statutory Guidance.

This guidance states that the local authority should consider any decision on whether land is contaminated in the context of the broad objectives of the regime and Government policy. In deciding whether land is contaminated land on the basis of SPOSH, the guidance places contaminated sites into four categories as described below. The guidance also highlights that as the decision is a positive legal test the starting assumption should be that land does not pose a significant possibility of significant harm unless there is reason to consider otherwise.

Category 1 sites are those where the Local Authority considers that there is an unacceptably high probability, supported by robust scientific based evidence that significant harm would occur if no action is taken to stop it.

Category 2: these are sites where there is a strong case for considering that the risks from the land are of sufficient concern in respect of a significant possibility of significant

harm, with all that this might involve. Category 2 may include land where there is little or no direct evidence that similar land, situations or levels of exposure have caused harm before, but nonetheless the authority considers on the basis of the available evidence, including expert opinion, that there is a strong case for taking action under Part 2A on a precautionary basis.

Category 3: these are sites where the strong case described in Category 2 does not exist, and therefore the legal test for significant possibility of significant harm is not met. This may include land where the risks are not low, but nonetheless the authority considers that regulatory intervention under Part 2A is not warranted as it is recognised that placing land in Category 3 would not stop others, such as the owner or occupier of the land, from taking action to reduce risks outside of the Part 2A regime if they choose.

Category 4 sites are those where there is no or low risk that the land poses a significant possibility of significant harm. This would include land where no relevant contaminant linkage has been established, where there are only normal levels of contaminants in soil, where contaminant levels do not exceed relevant generic assessment criteria (GAC's), or other relevant technical tools or advice that may be developed in the future.

Category 4 Screening Levels (C4SLs) have been developed to help decide when land is suitable for use and definitely not contaminated land. Further detail is given in Section 5.8 Site Specific Risk Assessment and Guideline Values.

The Statutory Guidance also includes equivalent guidance on Categories 1 to 4 relating to the assessment of the significance of risks to controlled waters.

Figure 1 shows the procedure to be adopted for inspection of sites under Part 2A of the Environmental Protection Act 1990. Further details are provided in Sections 5.0 to 7.0.

Significant pollution of controlled waters and significant possibility of such pollution

Section 78A(9) of the Environmental Protection Act 1990 defines "pollution of controlled waters" as the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter. In deciding whether significant pollution of controlled waters is being caused, Statutory Guidance advises that local authorities should consider that this test is only met where it is satisfied that the substances in question are continuing to enter controlled waters; or that they have already entered the waters and are likely to do so again in such a manner that past and likely future entry in effect constitutes ongoing pollution. In deciding whether the possibility of significant pollution of controlled waters is significant the statutory guidance advises that local authorities should bear in mind that Part 2A makes the decision a positive legal test. Authorities therefore need reasonably to believe that there is a significant possibility of such pollution, rather than to demonstrate that there is not. The statutory guidance advises that the following factors should be considered;

a) The estimated likelihood that the potential significant pollution of controlled waters would become manifest; the strength of evidence underlying the estimate; and the level of uncertainty underlying the estimate.
b) The estimated impact of the potential significant pollution if it did occur. This should include consideration of whether the pollution would be likely to cause a breach of European water legislation, or make a major contribution to such a breach.
c) The estimated timescale over which the significant pollution might become manifest.
d) The authority's initial estimate of whether remediation is feasible, and if so what it would involve and the extent to which it might provide a solution to the problem; how long it would take; what benefit it would be likely to bring; and whether the benefits would outweigh the costs and any impacts on local society or the environment from taking action.

The statutory guidance advises that the authority should then decide which of the following categories the land falls into. Categories 1 and 2 would comprise cases where the authority considers that a significant possibility of significant pollution of controlled waters exists. Categories 3 and 4 would comprise cases where the authority considers that a significant possibility of such pollution does not exist.

Category 1 (Water): This covers land where the authority considers that there is a strong and compelling case for considering that a significant possibility of significant pollution of controlled waters exists. In particular this would include cases where there is robust science-based evidence for considering that it is likely that high impact pollution would occur if nothing were done to stop it.

Category 2 (Water): This covers land where: (i) the authority considers that the strength of evidence to put the land into Category 1 does not exist; but (ii) nonetheless, on the basis of the available scientific evidence and expert opinion, the authority considers that the risks posed by the land are of sufficient concern that the land should be considered to pose a significant possibility of significant pollution of controlled waters on a precautionary basis, with all that this might involve (e.g. likely remediation requirements, and the benefits, costs and other impacts of regulatory intervention). Among other things, this category might include land where there is a relatively low likelihood that the most serious types of significant pollution might occur.

Category 3 (Water): This covers land where the authority concludes that the risks are such that (whilst the authority and others might prefer they did not exist) the tests set out in Categories 1 and 2 above are not met, and therefore regulatory intervention under Part 2A is not warranted. This category should include land where the authority considers that it is very unlikely that serious pollution would occur; or where there is a low likelihood that less serious types of significant pollution might occur.

Category 4 (Water): This covers land where the authority concludes that there is no risk, or that the level of risk posed is low. In particular, the authority should consider that this is the case where: (a) no contaminant linkage has been established in which

controlled waters are the receptor in the linkage; or (b) the possibility only relates to types of pollution that should not be considered to be significant pollution; or (c) the possibility of water pollution similar to that which might be caused by “background” contamination.

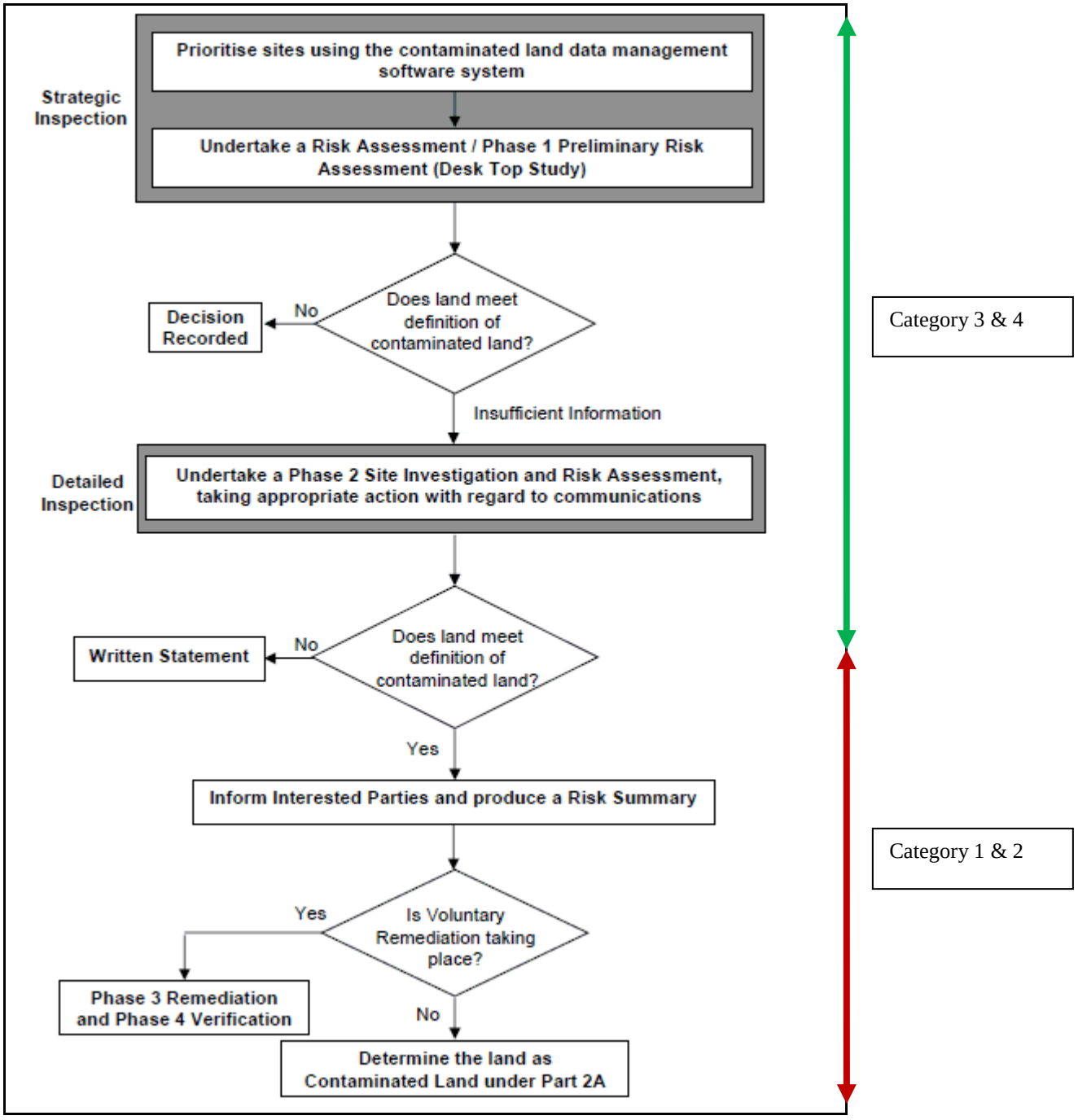

Figure 1 Procedures for Inspection of sites under Part 2A

1.2.2 Role of St. Helens Council

The primary regulatory role under Part 2A rests with the local authorities, reflecting existing functions under the statutory nuisance regime and complementing their role as the local planning authority. In outline the statutory duties of the local authority under the Part 2A regime are:

- to prepare a strategy for inspection of their area;
- to inspect the Borough from time to time to identify contaminated land;
- to determine whether any particular site meets the statutory definition of contaminated land;
- to establish whether sites should be designated as "Special Sites" and thus become the responsibility of the Environment Agency;
- to act as enforcing authority for all contaminated land which is not designated as a "Special Site", for which the Environment Agency will be the enforcing authority;
- to transfer Special Sites to the Environment Agency;
- to consult the Environment Agency on sites where there is pollution of controlled waters and where the Local Authority considers that land meets the definition of a Special Site;
- to maintain a public register of sites for which a remediation notice has been served, or where a remediation statement or declaration has been published;

Special Sites are a particular category of contaminated land for which the Environment Agency rather than the local authority is the enforcing authority for the purposes of the Part 2A regime. The descriptions of the types of land which are required to be designated as Special Sites are set out in The Contaminated Land (England) Regulations 2006.

1.2.3 Role of the Environment Agency

The Environment Agency has a key supporting role to local authorities, involving provision of information and advice, and a number of specific regulatory functions. In summary, the Environment Agency has seven principal roles with respect to contaminated land under Part 2A:

- custodians of data (website) and provision of information in response to specific requests;
- to assist local authorities in identifying contaminated land, particularly in cases of water pollution;
- to provide site specific guidance to local authorities on contaminated land with specific reference to water pollution;
- to undertake inspections of Potential Special Sites at request and on a priority basis;
- to act as enforcing authority for any land designated as a Special Site;
- to maintain a register of Special Sites remediation;
- to publish periodic reports on the State of Contaminated Land.

1.2.4 Role of Enforcing Authorities

Enforcing authorities have four main tasks:

(a) to establish who should bear responsibility for the remediation of land;
(b) to decide, after consultation, what remediation is required and ensure that such remediation takes place either through agreement or by serving a remediation notice. In certain circumstances the local authority may need to undertake the remediation;
(c) where a remediation notice is served or the authority carries out the work, to determine who should bear what proportion of the costs for the work; and
(d) to record certain prescribed information regarding regulatory actions on a public register.

Enforcing Authorities should seek to use Part 2A only where no other appropriate solution exists.

1.2.5 Principles of Risk Assessment

The approach adopted in the UK to the assessment and management of contaminated land is based on the principles of risk assessment. These principles also underlie the legislative requirements of Part 2A. The approach is based on the source-pathway-receptor relationship or contaminant linkage. For there to be a risk there must be a source of contamination, one or more receptors that could be harmed and pathways along which the contaminants can reach the receptors. Without a source-pathway-receptor contaminant linkage, there is no risk and the land in question cannot be determined to be contaminated land. The purpose of remediation of contaminated land is therefore to break the contaminant linkages by removing or treating the contaminant, removing or blocking the pathway or removing or protecting the receptor.

Receptors are defined within the Statutory Guidance as 'something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property, or controlled waters.' Relevant types of receptors relating to ecological system effects and property effects are listed with Tables 1 and 2 of the Statutory Guidance.

The Part 2A regime is aimed at dealing with cases where the risk is sufficient, given the existence of a contaminant linkage or linkages, to justify remedial action without waiting for any future development of the land. The regime is therefore complementary to considerations under the planning system where contaminated land or the possibility of it (both in terms of the statutory definition and in its wider context) is considered a material planning issue.

1.2.6 Uncertainty

All risk assessments of potentially contaminated land involve a degree of uncertainty given the variety of influencing parameters, assumptions made and the scientific uncertainty over the effects of contaminants.

St. Helens Council will seek to minimise uncertainty as far as it considers relevant, reasonable and practicable however there is a need to recognise any remaining uncertainty and be aware of the effects that the many assumptions and estimates that underlie the risk assessment process will have on its conclusions.

In fulfilling their duties under Part 2A, Local Authorities are required to use judgement to form a reasonable view of the risks on the basis of robust assessment. Whilst it is recognised that different suitably qualified people may reach different conclusions, it remains the responsibility of the local authority to determine land as contaminated land.

1.2.7 'Normal' Levels of Contamination

The Statutory Guidance states that the Part 2A regime should not apply to land with levels of contaminants in soil that are commonplace and widespread throughout England and for which in the majority of cases there is no reason to consider that there is an unacceptable risk.

Normal levels of contaminants should not be considered to cause land to qualify as contaminated land, unless there is a particular reason to consider otherwise. Normal levels of contaminants in soil may be the result of the presence of contaminants caused by low levels of diffuse pollution and common human activities other than past industrial uses. The historic use of leaded petrol is one such example.

1.2.8 Strategic Approach to Inspection

Statutory Guidance requires that local authorities adopt a strategic approach to the inspection of their areas for the identification of contaminated land.

This document, adopted by St. Helens Council, sets out how the Council intends to implement the inspection duties required by Part 2A, taking into consideration local circumstances. The document provides the framework by which land which merits detailed individual inspection may be identified in a rational, ordered and efficient manner, identifying the most serious and pressing problems first.

1.2.9 Consideration of Socio-Economic Effects and Cost Benefits

The Council will use its judgment to strike a reasonable balance between dealing with risks associated with contaminated land and the benefits of remediating land to remove or reduce those risks. The potential impacts of regulatory intervention including financial costs, property blight and burdens on affected people will be taken into consideration.

The Council will take into account the following, as appropriate:

- The likely indirect and direct health benefits and impacts of regulatory intervention;
- The benefits of reducing or removing the risk posed by contamination;
- Risks from contaminants being mobilised during remediation;

- Stress related health effects that may be experienced by affected people;
- Whether health benefits outweigh health impacts;
- An estimate of what remediation may involve;
- How long remediation would take;
- The benefits of remediation;
- Whether the benefits outweigh the financial and economic costs;
- Any impacts on local society or environment from taking action.

Consideration will be given to the various benefits and costs of taking action, with a view to ensuring that the regime produces net benefits taking account of local circumstances.

1.3 DEVELOPMENT OF THE STRATEGY

In the development of this Strategy St. Helens Council has adopted a joint working approach with two adjacent Merseyside Districts, Knowsley and Sefton. Production of the Strategy was undertaken by the Merseyside Environmental Advisory Service (Merseyside EAS), with support from internal teams.

The approach adopted is considered to be the most efficient and cost effective means of meeting the Council's statutory obligation to produce, publish and implement the Contaminated Land Inspection Strategy.

The Strategy has been developed in accordance with relevant legislation and Guidance and with reference to wider Council policies.

The Strategy will be periodically reviewed as a working document at least every five years. Amendments may be made and these will be communicated to the statutory consultees as and when they are implemented. Revised versions of the Strategy will be available for viewing on the Council's website. Hard copies will also be available from the Environmental Protection Department on request.

This second review of the Strategy has been produced to take account of the revised Statutory Guidance and to update the document as appropriate.

1.4 OBJECTIVES OF THE STRATEGY DOCUMENT

The primary objectives of this document are:

- To meet the requirement to produce and publish a Contaminated Land Inspection Strategy;

- To set out the framework within which St. Helens Council intends to implement the inspection duties of the Council under Part 2A and demonstrate compliance with the Statutory Guidance;

- To set out clearly how the inspection for contaminated land will be undertaken such that all those affected by, and involved in, inspection have the same clear understanding of the rationale for inspection, how this will be carried out and over what timescale;

- To identify the how this regime will interact with other regulatory regimes relevant to the management of land contamination and how the Council proposes to conduct liaison both internally and with external agencies and individuals.

2.0 CHARACTERISTICS OF ST. HELENS METROPOLITAN BOROUGH

2.1 Geographical Location

The Borough of St. Helens lies in the North-West region of England and is situated 12 miles east of Liverpool and 23 miles west of Manchester. The Borough is adjoined by the Metropolitan Districts of Knowsley and Wigan, the District of West Lancashire, within the County of Lancashire, and the Districts of Warrington and Halton.

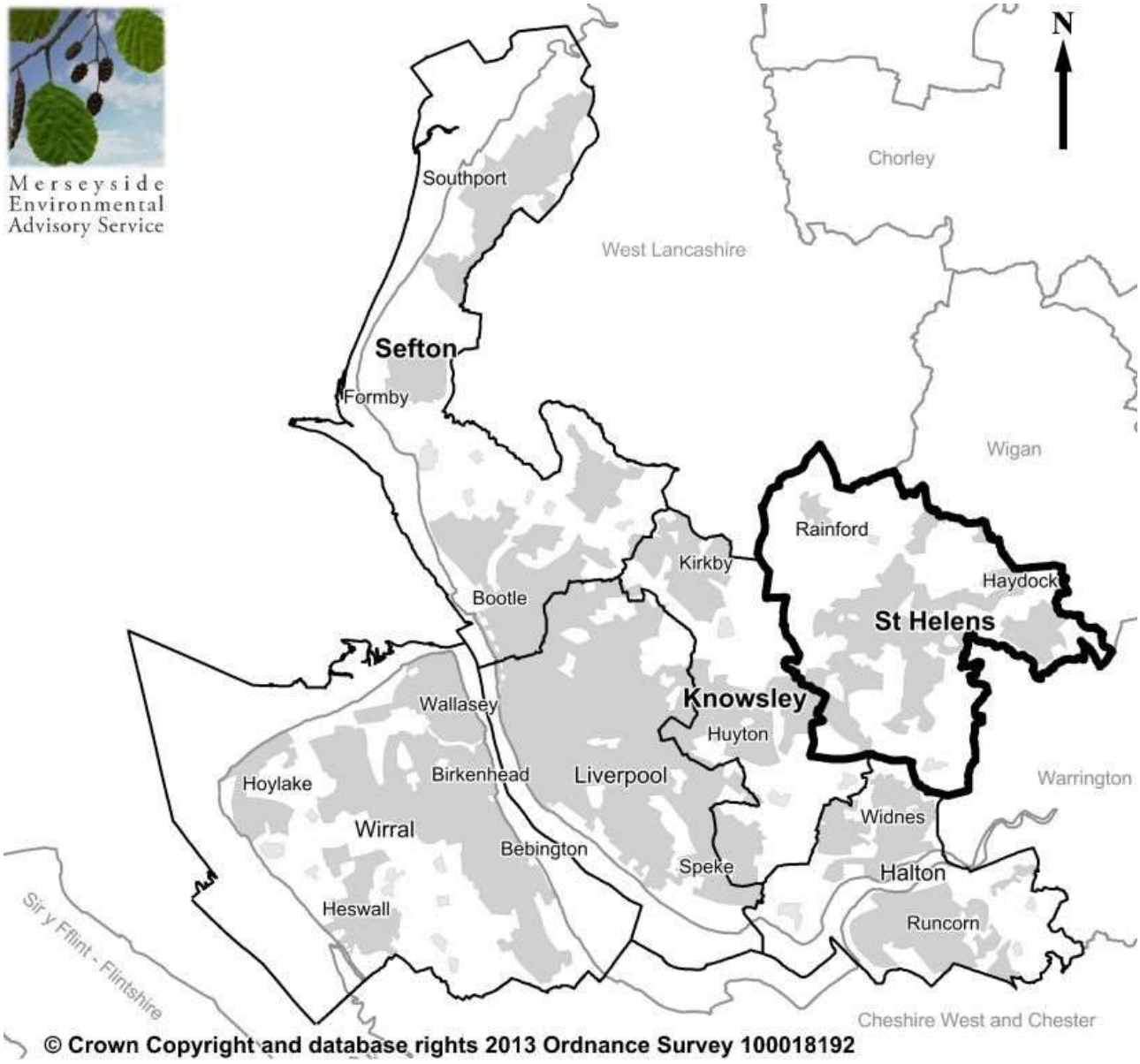

Figure 2 Location of the Borough of St Helens

2.2 Size and population distribution

The total area of the Borough is 135 km^2. The total population of the Borough was estimated to be 176,221 in 2013 (data from St Helens Analysis & Research Exchange).

2.3 Land Owned by St. Helens Council

Land in Council stewardship includes schools, office accommodation, leisure centres, libraries, youth centres, adult social care and health properties, car parks, industrial land, potential development sites, parks and open spaces, playing fields, allotments, agricultural land and depots.

Within its overall strategic approach to the inspection of the Borough, the Council will consider the likelihood of current and former land holdings being contaminated.

2.4 Current Land Use Characteristics

The current land use of the Borough is diverse, including urban development, agriculture, woodland and areas of wildlife interest.

Approximately two-thirds of the Borough area is countryside, most of which lies in the Merseyside Green Belt. Much of this land, particularly to the north of the Borough, is agricultural land of the highest quality. St. Helens also supports a diverse collection of habitats; many sites of wildlife interest are closely linked with the Borough's industrial heritage.

The main areas of industrial/commercial land use are predominantly in the area to the south of the East Lancashire Road. These include industrial areas to the north of St. Helens Town Centre at Gerards Bridge and Cowley Hill, to the south west at the Ravenhead Industrial Area and to the south at Abbotsfield Industrial Estate. Industrial areas to the east include Sankey Valley Industrial Park, Deacon Trading Estate and Haydock Industrial Estate.

Predominantly residential areas include areas surrounding St. Helens Town Centre, Eccleston, Sutton, the well-established settlements of Newton-le-Willows and Haydock and housing areas surrounding the village centres of Billinge, Rainford, Rainhill and Garswood.

The Borough contains substantial areas of land affected by former mineral working activities.

Within the built up area, there is a range of open spaces ranging from large formal parks to small playgrounds.

2.5 Protected Locations

- Two Sites of Special Scientific Interest (SSSI) designated under Section 28 of the Wildlife and Countryside Act 1981;
- Six Local Nature Reserves (LNR) designated under The National Parks and Access to the Countryside Act 1949 (Section 21);
- 118 Sites of Community Wildlife Interest;
- 11 Local Geological Sites.

In addition to the above there are numerous areas that are of importance due to the presence of priority habitats and species in addition to areas of ancient woodland that help connect the wider ecological network. Such 'functionally linked land' is therefore of significant importance to protected locations.

2.6 Key Property Types

The Borough has a rich heritage of archaeological sites, there are:

- 145 Listed Buildings;
- 12 Scheduled Ancient Monuments;
- 10 designated Conservation Areas.

Archaeological information for over 2300 sites in St. Helens is held on the Merseyside Historic Environment Record (HER) which is updated as new information comes to light.

2.7 Known Information on Contamination

The Council holds some significant information on contamination in the Borough. The following sources of information have and continue to be investigated. The Council has identified and reviewed all identified internal sources of information. Specific details are recorded on the Contaminated Land Information Management System (CLIMS). This allows efficient access to appropriate information during the various stages of the implementation of this Inspection Strategy.

- Site investigation reports, primarily submitted as part of the development control process. Planning records will form a valuable resource. In addition, investigations have taken place as a result of various programmes undertaken by or on behalf of the Council or partner organisations;
- Waste Management Sites;
- Information associated with the Environmental Permitting Regulations 2010;
- Information provided by the Environment Agency and other regulatory bodies;
- Locations of Petrol Station Sites;
- Metals Survey;
- BGS Survey and information.

2.8 Current and Past Industrial History

The historical development of the St. Helens area is a critical element in shaping the Inspection Strategy. The following provides a brief overview of the industrial history of St. Helens. A more detailed description of the history of the borough can be found within Appendix II.

Prior to the Industrial Revolution in the eighteenth century the predominant activities in the area were likely to have comprised farming and small scale peat and coal working.

The Industrial Revolution saw a rapid growth of St. Helens from a small hamlet into a significant industrial town. The local availability of certain raw materials, particularly coal, its geographic position in relation to the Cheshire saltfield and the Port of Liverpool and significant improvements in transport based initially on the canals and later the railways, were of foremost importance in St. Helens expansion.

The industrial heritage of St. Helens includes numerous collieries, the extraction of other minerals (including glass sand, sand and gravel, marl, clay and sandstones and pebble beds), glass works, copper smelting, alkali manufacture, and iron works. Other activities which are known to have taken place in the Borough include: brewing, pottery-makingand town gas production.

Whilst providing significant economic growth, many of the industries crucial to the industrial development of St. Helens had the potential to have caused contamination of the land they occupied. Furthermore, the majority of these industries produced waste materials which were deposited, either on the ground surface or in former mineral workings, together with the refuse from the growing urban population.

The past 100 years has seen a decline in the traditional industries of mining and manufacturing and expansion of service industries.

The most significant influences in terms of the legacy of potential contamination are described in more detail in Appendix II, these are:

- Coal mining;
- Glass manufacture;
- Alkali manufacture;
- Copper smelting;
- Iron works;
- Landfill;
- Railway and ancillary land.

2.9 Broad Geological and Hydrogeological Characteristics

Extracts from relevant geological mapping is provided in Figures 3 and 4 below.

2.9.1 Solid Geology

The solid geology of the Borough is outlined in the following simplified order of strata:

PERMIAN AND TRIASSIC STRATA	Wilmslow Sandstone Formation Chester Pebble Beds Formation Kinnerton Sandstone Formation Manchester Marls Formation Collyhurst Sandstone Formation
CARBONIFEROUS STRATA	Westphalian D Westphalian C Westphalian B Westphalian A

Carboniferous Strata

Within the St. Helens area Westphalian Strata dominate the area of outcrop of the Carboniferous Rocks.

Grey mudstones with irregular beds of sandstone form the bulk of the Westphalian Strata up to and including the Westphalian C. Westphalian A to Westphalian C rocks are collectively known as the “Productive Coal Measures”. Westphalian D (Ardwick Group) comprises a lower sequence of red and green mudstones and sandstones with thin coals, overlain by purple or grey-green mudstones with grey limestone, sandstones and occasional coals.

The Westphalian strata underlying St. Helens are dissected by major fault systems.

Rocks of the Millstone Grit Series occur in a small area in the north around Billinge.

Permian Strata

To the east of the Borough the Collyhurst Sandstone, a yellow aeolian sand, overlies the Westphalian Strata. It is in turn overlain by the Manchester Marl, which is a mudstone unit. There is a small outcrop of Collyhurst Sandstone around Sutton.

The lower boundary of the Kinnerton Sandstone Formation is transitional with the Manchester Marl Formation and consists mainly of a red brown fine to medium grained sandstone with beds of coarser well rounded sand grains.

Triassic Strata

Permian Rocks are succeeded in the east by thick sandstones of the Sherwood Sandstone Group. The Sherwood Sandstone Group may be divided into four major units, as follows;

i) Kinnerton Sandstone Formation;
ii) Chester Pebble Beds Formation;
iii) Wilmslow Sandstone Formation;
iv) Helsby Sandstone Formation overlies the Wilmslow Sandstone Formation to the South of the River Mersey.

The youngest Pre-Pleistocene rocks exposed in the St. Helens area are the Triassic Chester Pebble Beds and the Wilmslow Sandstone Formation.

The Chester Pebble Beds crop out over much of the southern part of the area. They consist of medium to coarse grained sandstones with rounded pebble inclusions.

The Wilmslow Sandstone Formation consists predominantly of fine to medium grained sandstones. This formation does not outcrop in the area due to the cover of drift deposits, it is however known to underlie parts of the extreme south eastern corner of the Borough, to the west of Bold Heath.

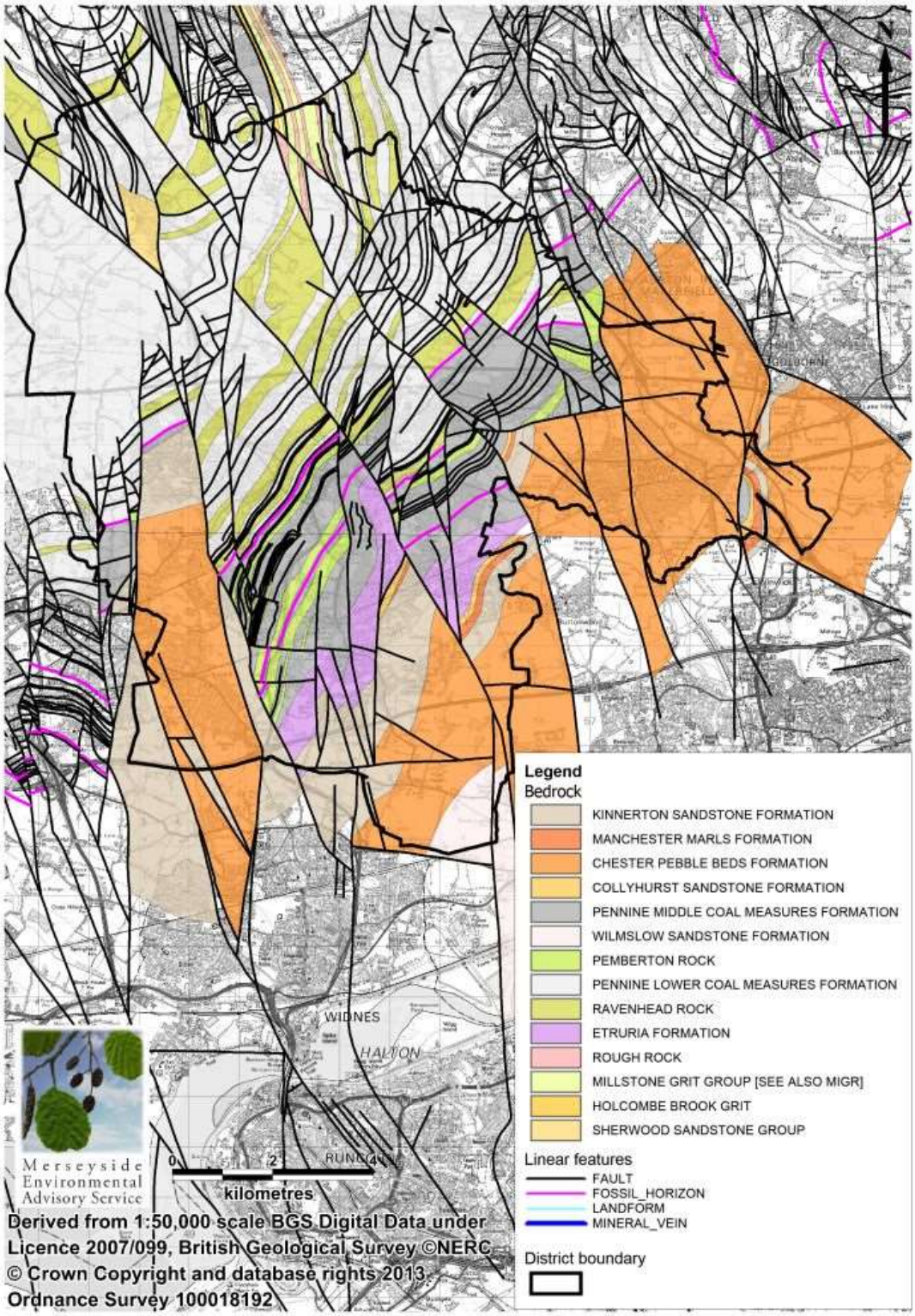

Figure 3: Map showing Solid Geology

2.9.2 Superficial Geology

Much of the natural landscape of the area has been shaped by the processes of the Pleistocene glaciations.

Glacial Till
With the exception of a few areas of outcrop, the solid bedrock is overlain by a variable thickness of glacial drift throughout the Borough.

To the south of the Borough till is typically brown stony sandy clay with thin layers of sand and gravel. The average thickness of this till layer is in the range 10 to 25 metres. The glacial drift is thicker (up to 35 metres) within the Sankey Trough.

Glacial Sand and Gravel
Small isolated patches occur north of the River Mersey. The main occurrences are west of Eccleston Park and to the south west of Rainhill.

Late Glacial Deposits – Shirdley Hill Sand
A widespread belt of windblown sand covers the underlying glacial deposits and bedrock over parts of the central area of the Borough and an extensive but discontinuous area to the north.

Recent Deposits

i) Peat deposits overly impermeable glacial deposits, bedrock and the Shirdley Hill Sand Formation, notably at Moss Farm and Parr Moss.
ii) Alluvium occurs in several of the valley floors, for example Sankey and Sutton Brooks and consists of water lain clays, silts, sands and gravels.

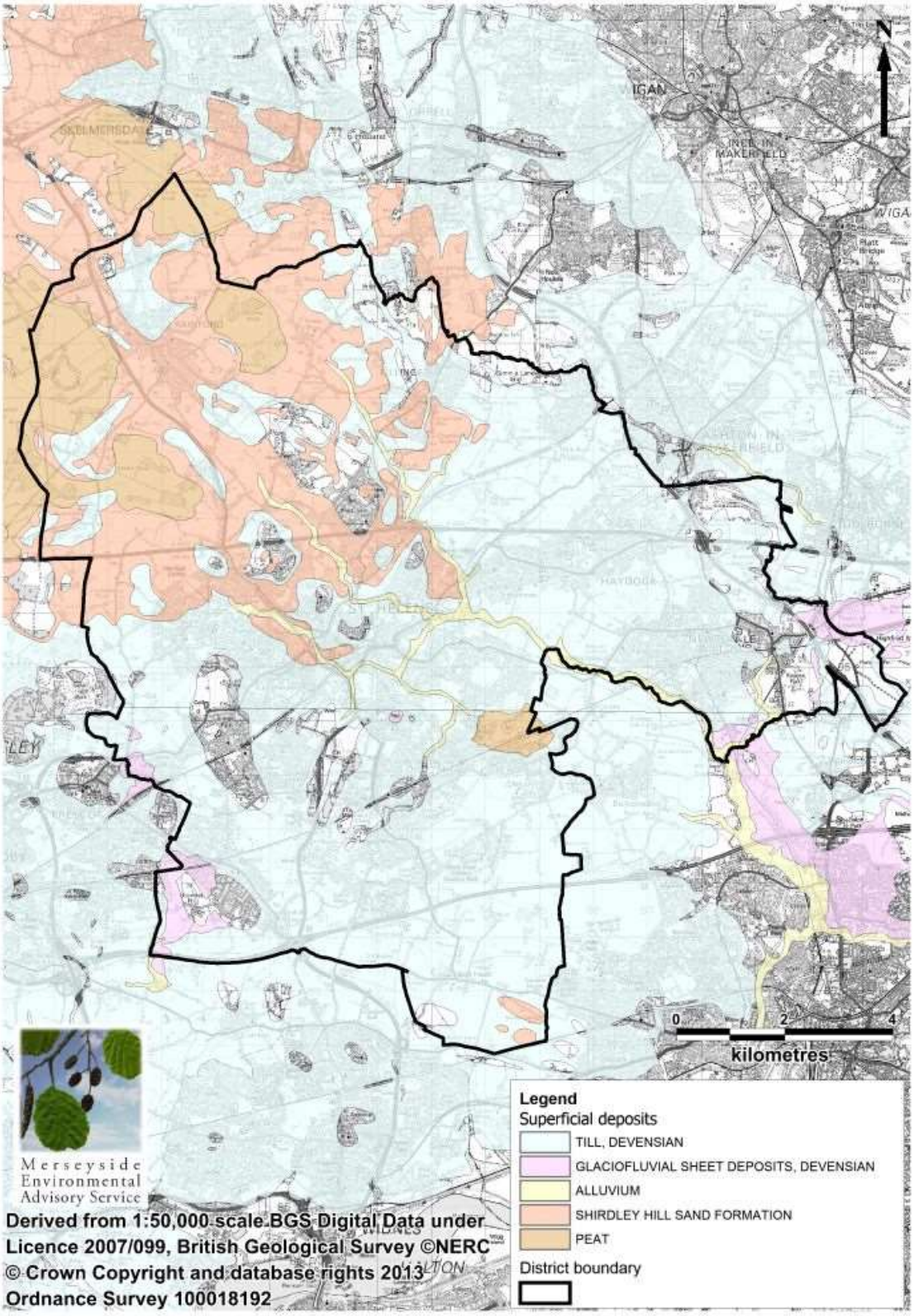

Figure 4: Map showing Superficial Geology

2.9.3 Local Hydrogeology and Use of Groundwater

A number of water bearing units occur within the area giving rise to a range of aquifers within both the bedrock and the superficial deposits. Generally, across north Merseyside, groundwater levels are rising with implications for potential pollution.

Principal Aquifers

The principal aquifer within the Borough is the Permo-Triassic Sandstone (including the Sherwood Sandstone Group). The sandstone outcrops in the south east of the region and in an isolated outcrop south of Rainford, and forms part of a much larger outcrop comprising the Lower Mersey Basin aquifer unit.

There are a number of major abstractions with designated Source Protection Zones[1] located in and around St. Helens Borough. Concentrations of abstractions occur around Whiston, Eccleston, Cronton, Haydock and Newton-le-Willows. Collectively, the Source Protection Zones for these abstractions encompass almost the entire aquifer outcrop in the Borough. The aquifer also supports a number of small-scale abstractions and provides baseflow to watercourses. Historical over-abstraction has resulted in falling groundwater levels and the up-flow of very old saline waters from depth. Although a recent reduction in demand has led to a recovery of groundwater levels, licensed abstraction exceeds long term recharge.

The majority of the sandstone unit in the Borough is covered with a complex sequence of drift, often of considerable thickness. The drift composition is heterogeneous with silts, sands and gravel present but the most widespread type is boulder clay. Where impermeable drift is thickly developed it will inhibit aquifer recharge and thereby decrease the vulnerability of the groundwater to pollution from surface activities. However, where drift deposits are more permeable and sandy they should be considered capable of transmitting water to the aquifer beneath. Areas of sandstone with little or no drift cover, for example Blundell Hill and the outcrop near Rainford, will be particularly vulnerable to pollution from surface activities.

Secondary A Aquifers

Secondary A aquifers within the Borough area are dominated by the rocks of Carboniferous age, comprising the Coal Measures and Millstone Grit Series. These underlie the remainder of the Borough, to the north of the principal aquifer outcrop. The more permeable superficial deposits also form localized Secondary A aquifers.

Superficial deposits are found throughout the area overlying the solid rocks beneath. Although much of the area is covered with glacial boulder clay, other more permeable deposits can be classified as Secondary A aquifers and have some potential for

[1] Source Protection Zones provide additional protection for water sources. They are designated zones around public water supply abstractions and other sensitive receptors that signal there are particular risks to the groundwater source they protect. The zones are periodically reviewed to ensure they are kept up to date as licence conditions change or knowledge of local hydrogeology improves.

localised exploitation. These include blown sand to the north and west of the Borough, glacial sand and gravel to the south west of Rainhill, and alluvium along Sankey Brook. Peat is also found on the mosses surrounding Rainford. These deposits occur as complex or mixed drift sequences which, whilst reducing the vulnerability of the underlying aquifer, should be considered as capable of transmitting water to it. Groundwater levels in the superficial deposits will generally be close to ground level with flow ultimately towards surface waters. Groundwater quality in the drift deposits is variable and may be highly susceptible to surface pollution.

Secondary B aquifers

The only solid rock Secondary B aquifer in the Borough is the Bold Formation (a lateral extension of Manchester Marl) which is a stratum separating the Sherwood Sandstone Group above from the Collyhurst Sandstone below. Outcrop of this unit is very limited, confined to a very small area close to the Permo-Triassic Sandstone in the south east of the Borough.

Where low permeability strata such as glacial boulder clays are thickly developed and laterally extensive they may also be considered as non-aquifers.

2.10 Surface Waters

Much of the St. Helens area is drained by two north-west to south-east flowing tributary streams: Sankey Brook and Whittle Brook. Many smaller tributaries feed Sankey Brook, the most notable being Hardshaw and Sutton Brooks, Black Brook, Rainford Brook and Newton Brook.

In addition to water courses there are also a number of significant other surface water bodies within the Borough including dams, reservoirs and ponds.

The Water Framework Directive (WFD) provides the mechanism to return all water bodies to Good Ecological Status. In St. Helens this is being implemented via the North West River Basin Management Plan[2] (NWRBMP). This sets out a number of objectives and actions to alleviate pressure on water bodies. Through the WFD and the NWRBMP, plans and actions have been highlighted to return water bodies to good ecological status.

The WFD status of rivers in St. Helens is generally poor to bad and this is reflected by both the ecology and physico-chemistry. Most water bodies suffer from physical modification (flood defence, urbanisation and land drainage) and are adversely impacted by both point and diffuse urban and agricultural sources. A particular problem affecting some water bodies, for example Hardshaw Brook, is leachate from alkali waste contaminated land. There is a need to tackle these pollutant sources if the quality of water is to improve. Another issue is pollution as a result of historical mining (spoil heaps and old mine workings). A number of contaminated waters have already been

[2] Environment Agency (December2015) River Basin Management Plan North West River Basin District

improved through Coal Authority schemes but further improvement is needed. A nationally prioritised remediation list by the Coal Authority has resulted in improvements in St. Helens. Though there have been many improvements as a result of the United Utilities Asset Management Programme (AMP) there are still sources within the current round of AMP improvements including several schemes to combined sewer outflows. Contaminated land and sewage are significant causes of poor water quality in the borough.

2.11 Natural Contamination

There are a number of potential sources of naturally occurring contamination which may be of concern within St. Helens Borough, these being naturally occurring methane gas released from underground coal workings and peat deposits, and radon gas. The potential for presence of such naturally occurring contamination will be obtained from appropriate sources including the British Geological Survey, Soil Survey and Land Research Group, and for Radon gas, Public Health England.

Defra and the British Geological Survey have produced Technical Guidance sheets for normal levels of contaminants in English Soils. Natural Background Concentrations (NBC) have been established for seven contaminants including contributions from both natural and diffuse anthropogenic sources, based on samples which have been collected systematically across England. NBCs for the St. Helens area will be taken into account when considering the significance of contaminant concentrations under the Part 2A regime. Recent guidance suggests that NBCs can be used as a line of evidence, along with other criteria (e.g. site investigation data and risk assessments) to decide whether land is contaminated land as defined by Part 2A.

2.12 Redevelopment History

St. Helens and the numerous surrounding small hamlets have grown continuously from the beginning of the Industrial Revolution, with many coalescing into the urban area now constituting St. Helens. Industries have grown and contracted during this period, with subsequent new industry or alternative uses of the land such as housing, recreation or open space occupying some or all of the land subject to previous contaminative usage. Some industries such as coal mining have moved in location over time, exploiting new and deeper seams as technology advanced, leaving behind an inheritance of dereliction. Some land has therefore been subject to several different potentially contaminative uses over time.

The use of land remained largely unregulated until the introduction of the Town and Country Planning Act 1947. Even following this date, there was little understanding of the impact of past contamination, and, except in the most severe of cases, little consideration was given to the issue.

Since the early 1990s the majority of redevelopment schemes, on areas of land which have previously been subject to potentially contaminative industrial or commercial

usage, have been subject to an assessment for the potential impact of contamination within the development process. Such sites have been addressed by the imposition of contaminated land conditions requiring site assessment and, if necessary, subsequent remedial works (see Section 10.1 below).

2.13 Action already taken to deal with Land Contamination

Much of the action taken to deal with land contamination has been development-led, through the planning and development management process. For example, the long outstanding remediation of the former Lyme / Wood Pits on the Haydock / Newton-le-Willows boundary, one time Merseyside's largest derelict site, continues to be treated through the process of landfill operations and subsequent restoration to a Country Park.

Within St. Helens, contamination is widespread due to the area's industrial heritage and the nature of its past industries. Inevitably, contamination has featured as a remediation issue, to a greater or lesser extent, requiring to be tackled within most projects to enable their intended use to be realised.

In the past, the Council had a Strategic Land Reclamation Programme to provide a coherent approach to the treatment of derelict and neglected land. However over recent years, this has mainly been superseded by the St.Helens City Growth Strategy (CGS) (2008-18) which has been one of the major drivers in carrying forward the economic development of the Borough during the last decade. It has a business-led Board and is based on St. Helens successful track record of delivering innovative regeneration initiatives and commitment to public / private partnership working. The projects are consistent with the Council's overall development plan and priority areas.

In accordance with the existing Inspection Strategy, the Council has also undertaken reactive work in response to identified problems including site investigation and remediation schemes funded through Defra's Contaminated Land Capital Grants Programme. Inspection of housing areas at Tickle Avenue and Jackson Street are recent examples. But some sites remain difficult to address for a variety of reasons. Some, such as the Sankey Valley Industrial Estate, Earlestown, are employment sites still relatively well occupied, with low land values perhaps reflecting both the commercial attraction of such sites but also the site's characteristics with underlying contamination issues.

The Council continue to engage positively with the Homes and Community Agency (HCA), formerly English Partnerships, on contaminated land issues. The HCA are responsible for the upkeep of the National Land Use Database (NLUD), a national inventory of the stock of brownfield sites and the Local Authority are keen to provide accurate annual returns on the situation in St.Helens.

3.0 OVERALL AIMS OF THE STRATEGY

3.1 Aims of the Strategy

Through implementation of the Strategy, the Council's aims are:

- to adopt a strategic risk based approach to the periodic inspection of the Borough for the purposes of identifying land which presents unacceptable risks to human health or the wider environment. Further, that such inspections are undertaken in an appropriate order, in compliance with the Statutory Guidance and in accordance with good practice;

- to ensure that available resources are effectively targeted;

- to ensure that all those affected by, and involved in, the inspection process have the same clear understanding of the rationale for inspection, how this will be carried out and over what timescale;

- by effective communication of the authority's intentions;

- to encourage voluntary action by polluters or other appropriate persons;

- to assist regeneration, improvement of the environment and protection of the Green Belt through effective links with wider Council and regional policies;

- to encourage, where appropriate having due regard to ecological importance, the re-use and remediation of brownfield land through the planning regime in accordance with the National Planning Policy Framework (NPPF) to ensure that new developments are suitable for use.

Throughout the implementation of the Inspection Strategy, priority will be given to the identification of unacceptable risks to human health. Risks to other receptors will be assessed in consultation with internal departments and external organisations as appropriate.

3.2 Objectives

Within the broad aims of the Strategy, the Council has identified a number of specific objectives which it aims to undertake within certain timescales. The identification of definitive timescales for the entire inspection process is not possible at this stage as it will be highly dependent on the number and type of cases identified and available resources. On-going work areas and, where possible, anticipated timescales are identified in Appendix III. Completed activities are also shown in Appendix III. .

Sites where urgent action is required may be identified at any stage during the implementation of the Inspection Strategy and therefore detailed inspections may be

carried out on some areas of land before the preliminary inspection of the Borough is complete. The need to take action on such sites may influence the rate of progress in the overall programme.

Within the implementation of this Strategy, to achieve the Council's overall aims, there is a need for a flexible approach, addressing the sites which present the most serious risks as quickly as possible whilst balancing the requirement to assess the entire Borough area with available resources.

4.0 LOCAL AUTHORITY PRIORITY ACTIONS AND TIMESCALES

4.1 Priorities

Within the overall strategic approach to the inspection of the Borough, the Council has identified the following priorities.

- **Identification of unacceptable risks to Human Health**

  Sites causing or which pose an imminent risk of harm will be dealt with as a priority.

- **Sites causing significant harm or significant pollution of controlled waters**

  Sites which are causing or pose an imminent risk of harm or water pollution may be identified at any point in the inspection process. Such sites will be dealt with as a priority.

- **Assessment of sites identified by other regulatory bodies**

  As directed by the Statutory Guidance, the activities of, and information gathered by, other regulatory bodies will be taken into account when considering relative priorities.

- **Assessment of land in the currently or formerly owned or occupied by the Borough Council**

  The Council recognises that there may be sites within the Borough for which it may have particular responsibilities through current or former ownership. Such sites will be dealt with in order of priority relative to all potential sites in the Borough.

- **Assessment of land allocated for sensitive uses within the Local Plan and Saved Policies of the UDP.**

4.2 Timescales

Potentially contaminated sites will be inspected in priority order as budgetary resources, staffing levels and service priorities allow. The time taken to progress this work cannot be accurately predicted and so preparing a timetable for the completion of various tasks or number of inspections cannot realistically be undertaken. Work on development of the Contaminated Land Information Management System, collection of information on sources, pathways and receptors has been completed together with evaluation of this information to prioritise sites has been completed. These will be updated as new information becomes available. As noted above, detailed inspections have also been undertaken on a number of sites.

It is not possible to set a timetable for determining sites as contaminated land as each site will be individual and the time taken can vary considerably from site to site; however in carrying out the work, the Council will have regard to current Statutory Guidance. The inspection programme will remain flexible as new information comes to light. If urgenct action is indicated or there are changes in legislation or guidance, or if resource issues change, then it is likely that the inspection programme will also change.

It should be emphasised that a significant number of the sites identified as potentially contaminated are very likely to be suitable for there current use whilst others may have already been or are being dealt with through the planning process.

4.3 Measuring Progress

Using the Contaminated Land Information Management System (CLIMS) the number of potentially contaminated land sites (sites that may be affected by contamination - Priority List of Potentially Contaminated Sites) is cross referenced with the number of contaminated land sites inspected, and remediated via the planning process or under Part2A. All sites inspected and remediated, and consequently deemed suitable for use are removed from the full Priority List of Potentially Contaminated Sites, thus reducing the overall number. Further details are provided in Table 1 above.

5.0 PROCEDURES

5.1 Introduction

The Statutory Guidance recognises that there are two types of inspection likely to be carried out by the local authorities under Part 2A; strategic inspection and detailed inspection. Figure 1 shows the overall procedure for inspecting sites under Part 2A.

The key stages of the strategic inspection of the borough are listed below. Further details relating to each of the key stages are provided in this section and Section 6.0 below. Further information relating to detailed inspection is provided in Section 6.3.

- Information collection;
- Information evaluation;
- Prioritisation;
- Risk Assessment;
- Programme for carrying out detailed inspections.

5.2 Information Collection

Information has been obtained by the Contaminated Land Team from a variety of sources, which include internal Departments, other regulatory bodies and organisations. The identification of further sources of information is an on-going process; further datasets and information sources may, therefore, be identified in the future. The list of sources of information consulted are included within Appendix IV.

5.3 Merseyside Contaminated Land Information Management System

The Council has developed a GIS based Contaminated Land Information Management System (CLIMS) in partnership with other members of the Merseyside Contaminated Land Officers Group (CLOG) with technical input and support from the Merseyside Information Service (MIS) / Mott Macdonald. The use of a common system across Merseyside provides significant advantages for data sharing and resulted in economies of scale in system development and support.

The CLIMS comprises a computer application developed in MapInfo which has the capability to capture, hold, analyse and display all the information required to implement the inspection duties of the Council. Further details on Information Management are presented in Section 9.0.

5.4 Information Evaluation

The primary aim of the information evaluation procedure is to enable the Council to identify areas of land which merit detailed inspection and to prioritise them such that they may be dealt with in an appropriate order.

In keeping with the aim of maintaining consistency on a Merseyside basis the Council, in partnership with other members of the Merseyside Contaminated Land Officers Group and the Merseyside Information Service, developed information evaluation and risk prioritisation procedures utilising CLIMS.

5.5 Prioritisation Methodology

A summary of the approach and general principles to be adopted is set out below. Figures 5 to 7 (Appendix V) comprise the Development, Surface Water and Groundwater algorithms respectively used within the prioritisation methodology.

The aim of the methodology is to identify areas of land which could pose a threat to human health or the environment and subsequently to prioritise these areas such that further more detailed investigations and assessments may be planned in a systematic and efficient way. The approach is based on recognised good practice and guidance[3].

The initial prioritisation procedure within CLR 6 (Part I Assessment) has been extended to include consideration of a wider range of receptors, as required by the Statutory Guidance and adapted to allow for classification and prioritisation of both the source and receptor datasets.

The methodology is based on the source-pathway-receptor (contaminant linkage) approach to contaminated land risk assessment. Potential contaminant linkages are identified through assessment of the spatial correlation between potential contamination sources and receptors. The correlation may be one of coincidence (occupying the same space) or influence (within an assumed or known zone of influence).

Information on pathways will be obtained as part of the information collection process. However, since pathways will often be difficult to accurately define in the absence of detailed site investigation information, the initial prioritisation procedure will rely on the confirmation of two parts of the contaminant linkage, the source and receptor(s). The prioritisation methodology may be further refined to take account of pathways in the future should suitable datasets become available.

The first stage in the procedure was to collect and classify both source and receptor datasets. The source and receptor datasets are those identified in Appendix IV. Part

[3] Contaminated Land Research Report No. 6London: Department of the Environment (1995) Prioritisation and Categorisation Procedure for Sites which may be Contaminated

of this stage involved the digitisation of contaminative land uses from OS base mapping for use within CLIMS and this work is now complete; the datasets will be refined, added to and/or modified as new relevant datasets are identified.

With regard to classification of source datasets, three priority classes (High, Medium and Low) have been identified based on the likelihood of contaminative substances being present at concentrations which may result in 'significant harm' being caused or may result in pollution of controlled waters.

The classes were established using formalised professional judgement based on the potentially contaminative land uses considered. Particular reference has been made to work undertaken by Paul Syms of Sheffield University,[4] the Department of the Environment Industry Profiles[5] and the classification of contaminating industries as outlined in the 1991 DOE Consultation Paper on Public Registers of contaminative uses[6].

The classes were incorporated into a definitive keycode list (maintained by Merseyside EAS) of the relative risks associated with potentially contaminating industries for use within CLIMS. Those industries not listed in the sources referenced above have been categorised within the keycode list based upon a comparison with industries of similar polluting potential. The keycode list is presented in Appendix VI.

With regard to classification of receptors, the highest priority is given to the assessment of risks to human health. Risks to all receptors required by the Statutory Guidance will, however, be addressed in an order appropriate to the apparent seriousness of the potential harm or pollution. The methodology adopted thus allows resources to initially be concentrated on the sites that pose the greatest risk to human receptors.

Application of the prioritisation model places sites in one of three groups. Sites are placed into Group A, B or C in accordance with the highest grouping from each of the algorithms (Development, Surface Water and Groundwater). Sites placed in Group A (the highest priority sites) are subject to further more detailed assessment first, followed by sites in Group B, and then those in Group C (the lowest priority sites).

Within each group the GIS system automatically allocates a 'Hazard Ranking' number of 1 to 48 which further prioritise sites for further more detailed assessment. The Hazard Ranks used within the prioritisation process are also presented in Appendix VI.

[4] Paul Syms, Desk Reference Guide to Potentially Contaminative Uses, IVSA (1999)
[5] Department of the Environment, Industry Profiles, 47 Volumes, DOE (1996)
[6] Department of the Environment, Public Registers Of Land Which May Be Contaminated A Consultation Paper, DOE (1991)

The outcome of the information evaluation procedure is a prioritised list of sites where it is possible that a contaminant linkage exists. Further work in the form of a detailed inspection (which may include detailed desk study, site walkover, limited sampling or intrusive investigation and site specific risk assessment) will generally be needed to determine whether or not the land actually appears to be contaminated land. The first stage of any further assessment is the collation and assessment of additional relevant information. This review can lead to the refinement of the initial prioritisation. Arrangements for carrying out detailed inspections and criteria for selecting individual sites are detailed in Section 6.0.

Determination of the need for and the degree of site inspection is based on available information. Any further information obtained, either through liaison with the site owner or through site inspection, will be assessed through the information evaluation procedures. The prioritisation factor may then be revised accordingly. The precise nature of the detailed assessments varies from site to site depending on the specific circumstances.

5.6 Additional Considerations

When evaluating the coincidence of sensitive receptors with known potential areas of contamination, to establish the likelihood of land meriting detailed inspection, consideration is given to any actions which have already been taken to deal with contamination. Any additional information that specific remediation or further remedial action has taken place by landowners, the local authority or others is taken into account.

When considering relative priorities, the Council takes account of the activities and information gathered by other regulatory bodies for example the Environment Agency in respect of issues relating to controlled waters and Natural England with respect to protected habitats. To this end, site specific advice is sought from other regulatory bodies as appropriate.

If during the course of information evaluation it becomes apparent that actual harm or pollution of controlled waters is being caused the Council will initiate procedures for determining that land is contaminated land.

This methodology may be updated in the light of the future publication of relevant best practice guidance.

5.7 Site Specific Risk Assessment and Guideline Values

The Council take a risk-based approach to the assessment and identification of contaminated land.

There are a number of methodologies available for assessment of the potential health and environmental impacts of land contamination including those described below.

Decisions on the most suitable technique or range of techniques are determined on a site specific basis.

The Council will ensure that risk assessment models and guideline values are suitable for the purpose for which they are being used and are appropriately applied.

5.8 Human Health

Methodologies and guidance values available for estimation of potential risks to human health include the following.

Contaminated Land Exposure Assessment (CLEA) Framework

The current version of the CLEA framework was published by the Environment Agency in January 2009 with the aim of helping in the assessment of potential risks to human health from long-term exposure to land contamination. It comprises the Contaminated Land Exposure Assessment model and associated guidance.

The Environment Agency also published Soil Guideline Value (SGV) reports and associated TOX reports for eleven substances in 2009.

Category 4 Screening Levels (CASLs) were published for six contaminants in 2014. These screening levels are based on modifications to the CLEA model including changes to a number of input parameters and toxicological approach. As noted above, the primary purpose of the C4SLs is to help decide when land is suitable for use and definitely not contaminated land.

Generic Assessment Criteria (GACs) have also been produced by organisations such as the Environmental Industries Commission (EIC), Association of Geo-environmental and Geotechnical Specialists (AGS), Contaminated Land: Applications in Real Environments (CL:AIRE) and Land Quality Management (LQM)/Chartered Institute of Environmental Health (CIEH).

The guidance documents are intended to provide regulators, developers, land owners and other interested parties with relevant, appropriate, authoritative and scientifically based information and advice on the assessment of risks arising from the presence of contamination in soil.

It is important to note that SGVs and C4SLs do not represent the trigger for an unacceptable intake; they are based on minimal risks and low levels of risk to health respectively. These values represent trigger values above which there might be a significant possibility of significant harm (SPOSH), with the significance linked to the margin of exceedence, the duration and frequency of exposure and other site and contaminant specific factors that the enforcing authority may wish to take into account. In all cases further investigation and evaluation of risk will be required.

Other Generally Accepted Guidelines

In addition to CLEA guidelines reference may also be made to other accepted sources including:-

- Occupational exposure levels issued by the Health and Safety Executive;
- Environment Agency site specific pollution prevention guidelines from authoritative sources;
- Guidance issued by the Construction Industry Research and Information Association (CIRIA);
- Other risk assessment tools such as, RBCA, RISC and SNIFFER.

5.9 Controlled Waters

The Council will seek the advice of the Environment Agency when assessing risks to controlled waters..

5.10 Other Receptors

When assessing the risk to ecological receptors (including those listed in section 2.5) the Council will work closely with Natural England. The Council will also work with other relevant specialist organisations (including Building Control Departments, Historic England, the Food Standards Agency and Defra) when assessing the risks to ecological, animal, crop and building receptors to achieve consistent application of the regime.

6.0 PROGRAMME FOR INSPECTION

6.1 Criteria for Selecting Individual Sites For Inspection and Activities

Following the procedures outlined in Figure 1, site inspection will be considered for areas of land where it is identified that a possible contaminant linkage exists. The primary objective of the inspection of land is to collect sufficient information to determine whether or not the land appears to be contaminated land, in accordance with the Statutory Guidance on determination. A secondary objective of inspection is to identify any contaminated land which is required to be designated a special site.

Determination of the need for and the degree of site inspection will be based on available information. Any further information obtained, either through liaison with the site owner or through site inspection, will be assessed with reference to the procedures set out within this Strategy and appropriate technical guidance.

6.2 Timetable

Inspection will be undertaken as part of a rolling programme subject to annual review. Further details are provided in Section 4.2.

Sites where urgent action is required may be identified at any stage during the implementation of the inspection strategy. The need to take action on such sites may influence the rate of progress in the overall programme.

There is a need for a flexible approach to inspection; sites which present the most serious risks will be addressed as quickly as possible whilst balancing the requirement to assess the entire Borough area with available resources.

6.3 Detailed Inspections

Where sites are identified where it is considered that there is a reasonable possibility that a contaminant linkage exists, detailed inspection will be undertaken to obtain sufficient information to decide whether it is contaminated land.

Detailed inspection may include any or all of the following:

- The collation and assessment of documentary information, or other information from other bodies;
- A site visit for the purposes of visual inspection and, in some cases, limited sampling;
- Intrusive site investigation of the land involving the sampling and analysis of soils and/or groundwater.

Investigations will be undertaken in accordance with the Statutory Guidance and appropriate technical procedures. The nature and degree of investigation will be determined on a site specific basis. However, in all cases the principles and practices contained within Defra and Environment Agency sponsored technical guidance and other good practice publications will be adopted.

In conducting site investigations, all reasonable precautions will be taken to avoid harm, water pollution or damage to natural resources or features of historical or archaeological interest; the advice of appropriate regulatory authorities will be sought.

In accordance with recognised good practice, appropriately phased site investigations will be undertaken. If at any stage the results of such investigations demonstrate that there is no longer a reasonable possibility that a contaminant linkage exists, no further detailed inspection will be undertaken with respect to that contaminant linkage.

6.4 Inspection using statutory powers of entry

Under Section 108 of the Environment Act 1995, the Council has been granted powers of entry to carry out detailed inspections. Such inspections are termed “inspections using statutory powers of entry”.

Before carrying out any inspection using statutory powers of entry the Council will be satisfied, on the basis of available information that;

- In the case of site reconnaissance (visual inspection and/or limited sampling) there is a reasonable possibility that a pollutant linkage exists. Any sampling will be limited to that necessary to verify the pollutant linkages already identified; and
- In the case of intrusive investigation, that it is likely that both contaminants and receptors are present.

The Council will not carry out any inspection using statutory powers of entry which takes the form of an intrusive investigation if:

- It has already been provided with detailed information which provides an appropriate basis upon which the Council can determine, in accordance with statutory guidance, whether or not the land is contaminated land; or
- A person offers to provide appropriate information within a reasonable and specified time and then provides it within the agreed timescale.

Further details on site specific liaison are set out below.

6.5 Site Specific Liaison

The Council will endeavour, where possible, to consult owners, occupiers and other interested parties to establish whether appropriate information already exists on the condition of the land or whether such information could be made available. Where information is provided by third parties, it will be assessed to determine its adequacy.

Prior to any inspection being carried out, the Council will inform owner(s)/occupier(s) of the land and any other relevant persons that an inspection is required to take place. At this stage, details will be provided on what inspection entails and the indicative timescale for the investigation.

The permission of the owner(s)/occupiers of the land will be requested, in writing, to enter the land for purposes of detailed inspection under Part 2A. The letter will advise the owner(s)/occupier(s) of the powers conferred on the local authority under Section 108 of the Environment Act 1995 in the event that permission is not granted.

Section 108 (6) provides that, except in an emergency, if the premises to be inspected are residential, or if the inspection necessitates the use of heavy

equipment, at least seven days notice will be given, unless there is an immediate risk to human health or the environment. In an emergency, these powers of entry can be exercised forthwith.

General liaison and communication strategies are set out in Section 11.0.

6.6 Health and Safety Procedures

Prior to conducting any detailed inspections consideration will be given to the potential health, safety and environmental hazards which may arise. Risk assessments will be undertaken to identify any potential hazards and precautions will be taken to control the associated risks to an acceptable level.

Appropriate health and safety procedures will be adopted to protect both site investigation personnel and the general public. Good practice guidance will be followed and relevant legislative requirements will be met in full.

6.7 Inspection of Potential Special Sites

Before authorising or carrying out any inspection consideration will be given to whether, if the land were found to be contaminated land, it would meet any of the descriptions of land given in the Contaminated Land (England) Regulations 2006 as requiring to be designated a Special Site.

Where there is evidence to suggest that a particular site would be designated a Special Site, if identified as contaminated land, the Environment Agency will be asked to undertake the detailed inspection.

Before undertaking any detailed inspection, the Environment Agency will satisfy itself that it agrees that the site is a potential Special Site and that the requirements of the statutory guidance have been met. Where necessary, the Council will authorise a person nominated by the Agency to use the powers of entry conferred by Section 108 of the Environment Act 1995. The same conditions for using statutory powers of entry apply as for detailed inspection undertaken by the Council as detailed above.

If the Environment Agency agrees that a particular site is a potential Special Site it will provide notification in writing. The Environment Agency will, subject to the statutory conditions for detailed inspection having been met, undertake the inspection on behalf of the Council.

Following inspection, information on the condition of the land and an opinion on whether significant contaminant linkages are present will be provided to the Council. Determining whether land appears to be contaminated land is the sole responsibility of the Council; this also applies were the detailed inspection is undertaken by the Environment Agency.

If the Environment Agency disagrees that a particular site is a potential Special Site it will provide notification in writing giving reasons.

6.8 Arrangements for the Appointment of Consultants/Contractors

At various stages in the implementation of this Strategy it may be necessary to appoint specialist consultants and contractors.

The Council has existing procedures for procuring such works and these will be utilised, where necessary. It is considered vital that any such works are well specified and managed.

6.9 Funding

Local authorities are required to investigate potentially contaminated sites in accordance with the Statutory Guidance and, where necessary, at their own expense. Where sufficient evidence is obtained to conclude that sites are Contaminated Land, the ”polluter pays” principle will apply, should more investigations, prevention or remediation be necessary. Where the polluter cannot be found or is otherwise not liable, the current owner/occupier may become liable. Where no responsible person(s) can be found, the local authority may be required to undertake this work at their own expense.

Prior to April 2014, local authorities were able to apply for Department for Environment, Food & Rural Affairs (DEFRA) funding from the Contaminated Land Capital Grants Scheme in such situations. However, funding has been reduced in recent years, from £17.5m in 2009/10 to £2m for 2013/14 and DEFRA have now ceased supporting these costs altogether (although a total of £0.5m is accessible annually for absolute emergencies up until 31st March 2017).

DEFRA has advised that they expect the vast majority of Contaminated Land to be remediated through the planning process, where (after remediation) as a minimum, land should not be capable of being determined as Contaminated Land under Part 2A.

However, the Council still has a statutory duty to investigate and, where necessary, remediate Contaminated Land. Consequently, should any relevant sites now come to the Council’s attention, and should investigation and/or remediation by the local authority be required under Part 2A, this will need to be funded from the Council’s existing budgets.

The Council may be able to recover some or all of the costs of remediation from the polluter or current owner/occupier of the land, in accordance with the guidance, on a case by- case basis and avoiding undue hardship.

The Council will minimise unnecessary burdens on the taxpayer, businesses and individuals by encouraging voluntary action to deal with land contamination issues as far as reasonable and practicable

7.0. PROCEDURES – DETERMINATION AND REMEDIATION

7.1 Determining that Land is not Contaminated Land

Following the procedures outlined in Figure 1, where the authority has inspected land and found little evidence to suggest that it is contaminated land, a written statement will be produced to conclude that land does not meet the definition of contaminated land under Part 2A to minimise unwarranted blight.

7.2 Determining that Land is Contaminated Land

St Helens Council will produce a risk summary for land where the authority considers it likely that the land may be determined as contaminated land. The risk summary will explain the authority's understanding of the risks and must be understandable to all members of the public. The risk summary will be produced prior to formal determination of land as contaminated land.

St Helens Council has the sole responsibility for determining whether any land appears to be contaminated land. In making such decisions the Council may rely on information or advice provided by another body such as the Environment Agency, or a suitably qualified experienced practitioner appointed for that purpose. Before making any determination, the Council will have identified one or more significant contaminant linkage(s), and carried out a robust, appropriate, scientific and technical assessment of all the relevant and available evidence. In the case of any land which, following determination as contaminated land, would be likely to meet one or more of the descriptions of a "Special Site" set out in the Contaminated Land Regulations 2006, the Council will consult the Environment Agency before deciding whether or not to determine the land (see Section 6.7). The Agency's views will be taken into full consideration.

The four grounds for determination of land as contaminated land are set out in Section 1.2.1.

7.2.1 Making determinations in Urgent Cases

If the Council consider there is an urgent need to determine particular land, the determination will be made in a timescale considered appropriate to the urgency of the situation.

7.2.2 Informing interested parties

Details of arrangements for communication with owners, occupiers and other interested parties are provided in Section 11.0.

7.2.3 Postponing determination

The Council may postpone determination of contaminated land if the land owner or some other person undertakes to deal with the problem without determination, and the Council are satisfied that the remediation will happen to an appropriate standard and timescale. If the Council choose to do this, any agreement entered into will not affect the Council's ability to determine the land in future (e.g. if the person fails to carry out the
remediation as agreed).

The Council may postpone determination of contaminated land if a significant contaminant linkage would only exist if the circumstances of the land were to change in the future within the bounds of the current use of the land (e.g. if a more sensitive receptor were to move onto the land or a temporarily interrupted pathway were to be reactivated). In such case, the status of the land will be kept under review and reasonable measures will be taken to ensure that the postponement does not create conditions under which significant risks could go unaddressed in future.

Alternatively the Council may decide to determine the land but postpone remediation.

7.2.4 Written record of the determination of contaminated land

The Council will prepare a written record of any determination that land is contaminated land. The record will identify the location, boundaries and area of the land in question and will be made publicly available.

The record will explain why the determination has been made, including:

- The risk summary - a relevant conceptual model comprising text, plans, cross sections, photographs and tables and a summary of the relevant assessment of this evidence.
- A summary of why we consider that the requirements of relevant sections of the Statutory Guidance have been satisfied.

7.2.5 Reconsideration, revocation and variation of determinations

The Council will reconsider any determination that land is contaminated land if it becomes aware of further information which it considers significantly alters the basis for the original decision. In such cases the Council will decide whether to retain, vary or revoke the determination in accordance with the Statutory Guidance.

7.3 Remediation of contaminated land

Once land has been determined as contaminated land (and where St Helens Council is the enforcing authority), the Council will consider how it should be remediated and, where appropriate, will issue a remediation notice to require such remediation.

7.3.1 Remediation techniques

The broad aims of remediation are:

- To remove identified significant contaminant linkages, or permanently to disrupt them to ensure they are no longer significant and that risks are reduced to below an unacceptable level; and/or
- To take reasonable measures to remedy harm or pollution that has been caused by a significant contaminant linkage.

Remediation may involve a range of treatment, assessment and monitoring actions, sometimes with different remediation actions being used in combination or sequentially to secure the overall remediation of the land.

In cases where the aim of remediation is to remove or permanently disrupt significant contaminant linkages, remediation treatment should involve demonstrable disruption or removal of the significant contaminant linkage(s) that led to land being determined as contaminated land, in order to reduce or remove unacceptable risks to receptors. This might involve one or more of the following:

- Reducing or treating the contaminant part of the linkage (e.g. physically removing contaminants, treating the soil or water to reduce levels of contaminants, altering the chemical or physical form of the contaminants);
- Breaking, removing or disrupting the pathway parts of the linkage (e.g. removing or reducing the chance of exposure of receptor to contaminants, for example by installing gas membranes, or by sealing land with clay or concrete);
- Protecting or removing the receptor (e.g. changing the land use or restricting access).

Assessment or monitoring actions may also be required as part of remediation.

7.3.2 Securing remediation without a remediation notice

The Council cannot serve a remediation notice if any of the following apply:

- There is nothing by way of remediation which could be specified in a remediation notice served on that person;
- The Council is satisfied that appropriate things are being, or will be, done by way of remediation without the service of a remediation notice on that person;
- The person on whom the notice would be served is St Helens Council; or St Helens Council has the power to undertake remediation itself.

The Council will assume that appropriate measures are being taken if:

- The Council is satisfied that steps are being taken that are likely to achieve a standard of remediation equal to, or better than, what would otherwise have specified in a remediation notice;
- The Council is satisfied that the timescale in which remediation is planned to take place is appropriate;
- The Council will actively consider the merits and likelihood of achieving remediation without recourse to a remediation notice before issuing a remediation notice.

7.3.3 Standard of remediation

The Council may only require (or undertake) actions in a remediation notice which are reasonable with regard to the cost and the seriousness of the pollution or harm. This requirement is in addition to the broader responsibility on the Council as a public regulator to act in a reasonable manner.

In cases where the aim of remediation is to remove or permanently to disrupt significant contaminant linkages, the Council will aim to ensure that remediation achieves a standard sufficient to ensure the land no longer poses sufficient risk to qualify as contaminated land. In using powers under Part 2A, the Council will not require a higher standard of remediation. The appropriate person or some other person might choose to carry out remediation to a higher standard (e.g. to increase the value or utility of the land, or to prepare it for redevelopment) but it will not be required by the Council.

Where the Council considers that it is not practicable or reasonable to remediate land to a degree where it stops being contaminated land, the Council will consider whether it would be reasonable to require remediation to a lesser standard. The broad aim will be to manage or remediate the land in such a way that risks are minimised as far as is reasonably practicable.

In cases where the purpose of remediation is to remedy harm or pollution that has already been caused, the Council will decide what is a suitable standard of remediation having regard to the guidance on reasonableness.

7.3.4 Reasonableness of remediation

The Council may only require remediation action in a remediation notice if it is satisfied that those actions are reasonable. In deciding this, the Council will consider various factors, having particular regard to:

- Practicability, effectiveness and durability;
- Health and environmental impacts of the chosen remedial options;
- Financial cost;
- The benefits of remediation with regard to the seriousness of the harm or pollution of controlled waters in question.

The Council will regard a remediation action as being reasonable if it is satisfied that the benefits of remediation are likely to outweigh the costs of remediation. In some cases it might be that there is more than one potential approach to remediation that would be reasonable. In such cases the Council will choose what they consider to be the “best practicable technique” having regard to the factors above.

Unless there are strong grounds to consider otherwise, the best practicable technique in such circumstances is likely to be the technique that achieves the required standard of remediation to the appropriate timescale, whilst imposing the least cost on the persons who will pay for the remediation.

7.3.5 Revision of remediation notices

The Council will consider revising a remediation notice if they consider it is reasonable to do so. In particular this would apply to cases where new information comes to light which calls into question the reasonableness of an existing remediation notice. For example, this might be the case where information that comes to light during remediation shows that some remediation actions are no longer necessary, or that additional or alternative actions are necessary.

If a remediation notice has been issued but the person concerned later proposes an alternative remediation scheme, the Council will consider whether to amend or revoke the remediation notice subject to being satisfied that the standard of remediation and the timescale in which it would take place are in line with the Statutory Guidance.

7.3.6 Verification

Any remedial treatment action should include appropriate verification measures. In arranging for such measures, the Council will ensure that the person responsible for verification is a suitably qualified experienced practitioner.

7.4 Liability

The main provisions for the establishment of liability are set out in Part 2A and the statutory guidance. To summarise:

Exclusion - where two or more persons are liable to bear the responsibility for any particular thing by way of remediation, the Statutory Guidance deals with the questions of who should be excluded from liability, and how the cost of each remediation action should be apportioned between those who remain liable after any such exclusion (section 78F(6) and (7) of the 1990 Act).

Paying for remediation – the Council will identify persons responsible for paying for remediation actions. The Council will first look for persons who caused or knowingly permitted each linkage ("Class A" persons). If no Class A persons can be found, the Council will identify the owners or occupiers of the land ("Class B" persons), although not for pollution of controlled waters where this is the only linkage.

Orphan linkage - if no Class A or Class B persons can be found liable for a linkage.

7.5 Financial circumstances and cost recovery decisions

The financial circumstances of those concerned have no bearing on the application of the procedures for exclusion, apportionment and attribution. The financial circumstances of those concerned are taken into account in the separate consideration under section 78P(2) on hardship and cost recovery.

The Council will have regard to the Statutory Guidance when making any cost recovery decision and will have regard to the circumstances of each individual case, having regard to the following general principles:

- The Council will aim for an overall result which is as fair and equitable as possible to all who may have to meet the costs of remediation, including national and local taxpayers;
- The "polluter pays" principle will be applied: where possible, the costs of remediating pollution will be borne by the polluter.

8.0 INTERNAL MANAGEMENT ARRANGEMENTS FOR INSPECTION AND IDENTIFICATION

8.1 Responsibilities of Internal Departments

The responsibilities within the Council for inspection and identification are as follows:

Environmental and Trading Services Department

The Environmental and Trading Services Department has the lead role in the implementation of the Contaminated Land Inspection Strategy through the work of a number of services.

Environmental Health
In co-operation with other Council Services and external agencies as appropriate, the Environmental Health Section is responsible for all aspects of the implementation of the Contaminated Land Inspection Strategy. These include:

- Information collection and evaluation and prioritisation;
- Liaison and communication;
- Carrying out detailed inspections;
- Making determinations;
- Reviewing decisions and the Strategy;
- Carrying out any necessary enforcement actions;
- Responsible for bidding for funds for inspection and remediation;
- Project management;
- Production and maintenance of a Public Register.

Planning
The Planning Section deals with planning applications for development where issues of land contamination must be considered. The majority of contaminated land issues are currently addressed through the planning regime, where contamination is a material planning consideration. Any remediation agreed as a planning condition will be dealt with under planning controls and not under Part 2A.

Building Control
The Building Control Section has a duty to enforce protection measures in new build projects to mitigate the impact of contamination on property. Activities relevant to the implementation of the Inspection Strategy include:

- Enforcement of protection measures to new buildings;
- Collation and recording of site investigation information;
- Information management in line with agreed procedures;
- Provision of technical advice.

Estates Section
Relevant activities include:

- Liabilities associated with, and action needed with respect to, the Council's own land holdings;
- Review of site designations in relation to potential contamination and practical implications on uptake of sites

Corporate Services Department

Legal Services Section
The Legal Services Section provide legal advice on the complex and wide ranging issues arising from the implementation of the Part 2A regime, including:

- Interpretation of legislation;
- Identification and determination of contaminated land and Special Sites;
- Remediation of contaminated land;
- Exclusion from, and apportionment of, liability for remediation;
- The recovery of costs of remediation and the relief from hardship;
- Contents of, and arrangements for, serving remediation notices;
- Compensation to third parties for granting rights of entry;
- Grounds of appeal against remediation notices, and procedures relating to such appeals;
- Particulars to be contained in registers;
- Information management and provision;
- Advice with regard to Council owned land and other land where the Council may be an appropriate person.

Other Council Services

Other Departments of the Council and all and owning departments will be involved at various stages as providers of information and/or advice and through current and former land ownership.

9.0 INFORMATION MANAGEMENT

9.1 Information and Complaints

Complaints regarding contaminated land will be dealt with through the Council's existing procedures. Investigating officers will undertake appropriate actions and enquiries considered necessary to resolve any complaint having regard to departmental procedures, statutory requirements and professional judgement.

The appropriate level and nature of further investigation will be determined on a case by case basis and will be dependent on a number of factors including; the nature of the complaint, the initial findings and the amount of information already available and an assessment in the context of the overall inspection programme.

Anonymous complaints or information provided anonymously will be evaluated by an investigating officer. Appropriate action will be taken on the basis of the merits of the information received.

9.2 Confidentiality

All complainants will be asked to provide details of their name and address which will remain confidential. There are circumstances where certain information may be required to be made public, for example, during the course of formal legal action. This issue would be discussed in detail prior to taking any such formal action.

9.3 Voluntary Provision of Information

If a person or organisation voluntarily provides information relating to contaminated land that is not directly affecting themselves, their families or their property, this will not be treated as a complaint. The information provided will be recorded and if appropriate allocated to an investigating officer. Investigating officers will take whatever actions and enquiries they consider necessary to follow up such information having regard to departmental procedures, statutory requirements and professional judgement.

9.4 Public Register

The regime provides for a public register, but only of land in respect of which a remediation notice has been issued, or where a remediation statement or declaration has been published. This information will be available for public inspection subject to any exclusions, for example, on the grounds of national security or commercial confidentiality. The details of information to be included on the Public Register are set out in the Contaminated Land (England) Regulations 2006.

The Public Register is available for inspection at Wesley House, Corporation Street, St. Helens.

9.5 Information Requests

Requests made for access to information relating to the inspection process, for example, information on whether land has been inspected, details of any site investigation reports prepared and the condition of land will be dealt with in accordance with procedures for environmental information requests under the Environmental Information Regulations 2004 and the Council's Freedom of Information Policy.

10.0 INTERACTION WITH OTHER REGIMES

There are a number of other regulatory regimes, in addition to Part 2A, which are relevant in the context of the management of land contamination. The Council will liaise with the appropriate regulatory authority where there is potential overlap with the Part 2A regime.

10.1 The Planning Regime and Development Control

Under the Town and Country Planning legislation, the Council's Planning Department already considers the potential implications of contamination when developing planning policy and when it is considering individual applications for planning permission. The planning process will continue to be the primary mechanism to assess risks and set appropriate remediation requirements, on the basis of both the current and proposed land use.

Government guidance for dealing with land affected by contamination under the planning system is set out in the National Planning Policy Framework (NPPF).

The NPPF states that planning policies and decisions should ensure that:

- The site is suitable for its new use taking into account of ground conditions and land instability, including from natural hazards or former activities such as mining, pollution arising from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from after remediation;
- After remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990 and adequate site investigation information, prepared by a competent person, is presented.

When determining planning applications where contaminated land is suspected, the Council will have regard to the advice set out in the NPPF, together with other relevant policies, acknowledged standards and regulations. The Council has a duty to

determine applications in accordance with the St. Helens Local Plan. Part 3 (iv) of Core Strategy Policy CP1 Ensuring Quality Development in St. Helens and Saved Policy ENV26 of the UDP are particularly relevant. These state:

Core Strategy Policy CP1 Part 3 (iv)

All proposals for development within the Borough will be expected, where appropriate, to meet the following standards as a minimum:

iv. Ensure that the site of the proposed development is not contaminated and/or unstable or that provision can be made for its remediation to an appropriate standard, taking into account its intended use and making use of sustainable remediation technologies.

Saved UDP Policy ENV26

"On contaminated sites or sites suspected of being either contaminated or affected by contamination, the Council will require developers to carry out investigations to assess the nature and extent of contamination and to prepare programmes or schemes of works to treat or minimise the problems. Planning permission will normally only be granted subject to conditions requiring appropriate remedial works to be undertaken."

In dealing with planning applications on sites where it is known or suspected that land is affected by contamination and/or the proposed development is sensitive to contamination (for example, residential development, schools and allotments) a minimum of a desk study and site reconnaissance (Phase 1 Report) will be required with the planning application. The Phase 1 Report will assist in determining the need for and scope of further investigations, issues that may require remediation and whether remediation can be secured by means of planning conditions requiring the submission and implementation of a contaminated land investigation, remediation scheme and validation as appropriate.

Where the desk study and site reconnaissance does not provide sufficient information to assess the risks and appraise remediation options, further investigations will be required before the application is determined. A site investigation will also be required prior to determination if a proposed development will introduce a particularly sensitive land use on a potentially high risk site.

A proportion of the redevelopment within the Borough will, however, have taken place prior to the establishment of the controls outlined above. Such developments are unlikely to have been formally assessed for risks associated with potential contamination; this will be taken into consideration in the evaluation of relative priorities for inspection.

In addition to planning controls, the building control regime has also evolved to accommodate greater knowledge of the impact of contamination. Under the Building

Regulations 2010, the Council's Building Control Section (or private sector Approved Inspectors) will also specify measures to be taken during construction, to protect buildings and future occupants from the effects of contamination. Guidance on such requirements is given in Approved Document C (Site Preparation and the Resistance to Contaminants and Moisture), 2004 Edition.

10.2 The Environmental Permitting Regulations 2010 (and subsequent amendments

Under the Environmental Permitting Regulations 2010 where an activity involves the use, production or release of relevant hazardous substances and having regard to the possibility of soil and groundwater contamination, site operators are required to submit a baseline report before starting the operation of the installation or before a permit for the installation is updated for the first time.

Sites regulated under the EP Regulations, which become contaminated will generally be regulated under this power. The Council is precluded from serving a remediation notice if it appears that the powers of the relevant enforcing authority under The EP Regulations can be used. There may, however, be situations where Part 2A powers are needed.

Land determined to be contaminated land which is subject to regulation under the EP Regulations, where the installation is designated for central control (that is by the Environment Agency), is required to be designated as a Special Site.

An exception to the above is that historical contamination, present prior to the permit being issued under EP Regulations, is dealt with under Part 2A powers.

10.4 The Environmental Damage (Prevention and Remediation) Regulations 2009 (SI 2009 No. 153)

The Environmental Damage Regulations 2009 came into force on 1st March 2009, they implement the European Environmental Liability Directive 2004/35/EC. They are based on the polluter pays principle requiring those responsible to prevent and remedy damage.

The regulations only apply where the environmental damage and the activity that caused it has occurred or requires preventing after the regulations came into force and they only apply to operators of economic activities.

Environmental Damage has a specific meaning within the regulations and it only refers to damage to land, water and ecosystems.

Local authorities are the enforcing authority in relation to damage to land; the damage must result in a significant risk of adverse effects on human health. DEFRA have

released non statutory guidance entitled The Environmental Damage (Prevention and Remediation) Regulations 2009, 2nd Update dated November 2009.

Operators of economic activities should be aware that pollution of land may incur a liability under both the Environmental Damage Regulations 2009 and Part 2A of the EPA 1990.

10.5 Statutory Nuisance

The Part 2A regime now replaces the statutory nuisance regime for dealing with nuisance that consists of, or is caused by land "being in a contaminated state". The definition of "land in a contaminated state" covers all land where there are substances in, on or under the land which are causing harm or where there is a significant possibility of such harm being caused.

The statutory nuisance regime will continue to apply to the effects of deposits of substances on land which gives rise to offence to human senses, for example odours.

10.6 The Water Resources Act 1991 (Amendment) England and Wales) Regulations 2009

This Act provides a power for the Environment Agency to carry out anti pollution works and operations to prevent the entry of polluting or waste matter into a controlled water and to remediate the effects of polluting matter that has already entered a controlled water. The Act provides for the Agency to serve a Works Noticerequiring a person responsible for causing such pollution to carry out anti pollution works and operations. There is significant potential for overlap between these powers and the Part 2A regime. The appropriate application of either regulatory regime will need to be determined after consultation between the Local Authority and the Environment Agency.

10.7 Radioactive contamination of land

The 2012 Statutory Guidance does not apply to radioactive contamination of land. Radioactive contaminated land is covered by separate statutory guidance. In the event that land is affected by both radioactive and non-radioactive contaminants both sets of statutory guidance will apply, and the Council will decide what is a reasonable course of action having due regard for the relevant primary legislation and advice from the Environment Agency.

10.8 Other Regimes

There are a number of other regimes which may have implications for land contamination or which may overlap with Part 2A, these include:

- Food Safety (Part I of the Food and Environment Protection Act 1985);

- Health and Safety (Health and Safety at Work Act 1974 and the Construction (Design and Management) Regulations 2007));
- Landfill Tax (The Finance Act 1996) and the Landfill Tax (Amendment) Regulations 2009;
- The Control of Major Accident Hazards Regulations 1999.
- The Conservation of Habitats and Species Regulations 2010

In all cases, the Council will liaise with the appropriate regulatory authority where there is potential overlap of interests with the Part 2A regime.

11.0 COMMUNICATION

11.1 Statutory Consultees

Statutory Guidance requires that specific arrangements be established for liaison with, and responding to, information from other regulatory bodies. The Council will continue to maintain and establish effective communication arrangements with appropriate Statutory bodies whilst implementing its strategy. A list of Statutory consultees and key contacts are set out in Appendix I.

11.2 Owners, occupiers and other interested parties

There are a number of stages within the implementation of this Strategy where it will be necessary, either to meet statutory requirements or as a matter of good practice, for the Council to liaise with site owners, occupiers and other interested parties. These include:

- during the inspection process;
- notification of the determination of contaminated land[7];
- prior to the serving of a remediation notice[8];
- when designating Special Sites.

Throughout the implementation of the Part 2A regime, it is the Council's intention to encourage voluntary action to secure the remediation of contaminated land. This approach requires effective communication with owners, occupiers and other parties. Where possible, the Council officers will seek the co-operation of landowners and occupiers in carrying out their duties.

The Council recognises the importance of making decisions about contaminated land matters that are accepted by the community and are both defensible and transparent. A communication strategy will be developed and implemented for individual sites being investigated under Part 2A. Input will be obtained from relevant sources including Public Health England and the Environment Agency.

If necessary the findings of any inspection will be communicated to the affected community and consultations undertaken on the best way to achieve the successful remediation of the contaminated land problem.

11.3 Risk Communication

Under Part 2A, the Council will be determining the presence of contaminated land using a risk based approach. Decisions on contaminated land may often be very complex and in many cases impact on a variety of stakeholders.

[7] Section 78B(3) and Section 78B(4) of Part IIA Environmental Protection Act 1990
[8] Section 78H(1) of Part IIA Environmental Protection Act 1990

As noted above, public acceptance of any decisions made is very important if contaminated sites are to be managed effectively. Effective risk communication is thus an essential element in the implementation of this Strategy.

St. Helens Council will aim to ensure that all relevant stakeholders are provided with appropriate levels of information during the inspection stage of the Strategy and ensuing remediation of particular sites.

The Council also recognises the importance of the need to prevent needless anxiety and planning blight. A balance will, therefore, need to be achieved concerning when and to whom information is given.

Reference will be made to the SNIFFER publication, "Communicating Understanding of Contaminated Land Risks[9] when developing any specific risk communication strategy for individual sites.

11.4 Trans-boundary Contaminant Linkages

Contaminant linkages may exist across St. Helens administrative boundaries. St. Helens has mutual boundaries with the Metropolitan Boroughs of Knowsley and Wigan, the District of West Lancashire, within the County of Lancashire and the Districts of Warrington and Halton.

Where this situation arises, the Council will work with the neighbouring authority to agree a mutually acceptable method of assessing and, if necessary, remediating the site, with reference to appropriate legislation[10] and Statutory Guidance.

[9]Scotland&Northern Ireland Forum For Environmental Research (SNIFFER) Communicating Understanding of Contaminated Land Risks (May 2010)
[10] Section 78X(2) Part IIA Environmental Protection Act 1990

12.0 REVIEW MECHANISMS

12.1 Triggers for Reviewing Decisions

There will inevitably be situations where changes in the condition or circumstances of the land or the surrounding environment may necessitate a review of the previous inspection findings for a particular area. A number of such triggers have been identified and are set out below:

Triggers for the Review of Inspection Decisions include:

- Significant changes in legislation;
- Internal policy changes;
- Proposed changes in the use of the surrounding land;
- Unplanned changes in the use of the land;
- Unplanned events (e.g. localised flooding, fires, spillages) where the consequences cannot be dealt with through other relevant environmental protection legislation;
- Reports of localised health effects which appear to relate to a particular area of land
- Response to information or complaints from members of the public, businesses or voluntary organisations;
- Information from other statutory bodies, landowners or occupiers and other relevant interested parties;
- Changes in national guidance relating to specific types of site or contaminant.

The Local Authority should reconsider any determination that land is contaminated land if it becomes aware of further information which it considers significantly alters the basis for its original decision. The local authority should decide whether to retain, vary or revoke the determination.

12.2 Review of the Inspection Strategy

The strategy will be periodically reviewed as a working document at least every five years. Electronic versions of the strategy will be available for viewing on the council's website and hard copies will be available from Environmental Protection on request.

Appendix I

Statutory and Non-Statutory Bodies

Table 1: Statutory and Non-Statutory Bodies

Organisation	Contact
Billinge Chapel End Parish Council	The Clerk to the Council
Eccleston Parish Council	The Clerk to the Council
Seneley Green Parish Council	The Clerk to the Council
Bold Parish Council	The Clerk to the Council
Rainford Parish Council	The Clerk to the Council
Windle Parish Council	The Clerk to the Council
Rainhill Parish Council	The Clerk to the Council
Burtonwood Parish Council	The Clerk to the Council
Sefton MBC Wirral MBC Wigan MBC West Lancashire District Council Knowsley MBC Warrington Borough Council Halton Borough Council Liverpool City Council	Neighbouring Authorities Contaminated Land Lead Officers
*The Environment Agency	South Area Contact
*Historic England	Ecologist (Merseyside)
*English Heritage (North West Region)	Land Use Planner
The Coal Authority	Operations Manager
Canal and Rivers Trust	Commercial Manager
Ravenhead Renaissance	General Manager
*English Partnerships	Senior Project Manager
Forestry Commission	Director
Mersey Forest	Director
EAS	Manager
The Groundwork Trust	Acting Strategic Manager (East)
Health & Safety Executive	Health & Safety Officer (Merseyside)
Transco	Manager (Network Records)
Lattice Properties Holdings Ltd	Construction Manager
British Gas	Director
NorwebPlc	Safety and Environment Manager
United Utilities	Project Manager (Contaminated Land)
National Playing Fields Association	Manager
British Pipeline Agency	Environment Manager
Council for the Protection of Rural England	Office Manager
St. Helens&Knowsley Area Health Authority	Director of Public Health
Merseyside Fire and Civil Defence Authority	Chief Emergency Planning Officer
Highways Agency	Land Officer (Manchester)
Newton Le Willows Residents & Friends	Secretary
Railtrack	Environmental Manager
*Ministry of Agriculture, Fisheries and Food	Policy Advisor (Contaminated Land)
Sutton Village Residents Association	Secretary
National Museums and Galleries on Merseyside	Merseyside Archaeological Officer

Banks	Environmental Manager
Manweb	Safety & Environment Manager
*North West Development Agency	Senior Development Manager
*Food Standards Agency	Contaminants Division
North West Regional Assembly	Waste & Contaminated Land Co-ordinator
East Sutton Residents Association	Secretary
NFU Mutual	Agency Office
Objective One Secretariat	Government Office for Merseyside
SRB Managers	Manager
House Builders Federation	Regional Planning Officer
Merseyside Waste Disposal Authority	Acting Director and Treasurer
Mersey Waste Ltd	Manager
Merseyside Chamber of Commerce	Building and Environment Committee
National House Building Council	Head of Engineering
British Telecom	Notice Handling Centre
Pilkington Plc	Head Office
Major Landowners	

* denotes Statutory Consultee

Note: The consultees listed above were consulted on the first version of the Inspection Strategy. Elected members and statutory consultees will be consulted on subsequent versions of the strategy with final versions made available on the Council website.

Appendix II

Current and Past Industrial History

Current and Past Industrial History

The following provides a brief overview of the industrial history of the Borough and in particular describes the nature and scale of activities which may have caused land contamination.

Many valuable sources of information are available much of which will be utilised in the more detailed consideration of individual areas. The following section on the industrial heritage of St. Helens draws heavily on Barker and Harris's[11] study of the development of St. Helens between 1750 and 1900 and a study undertaken on the St. Helens area by RendelGeotechnics[12].

Coal Mining

Coal is known to have been worked in the Borough dating back to at least the mid - sixteenth century. It was not a major activity at this time because of the distance between the coalfield and the markets in Cheshire and Liverpool. Mines were small due to technical difficulties and drainage problems and often comprised several workings spread over a number of fields.

During the Industrial Revolution St. Helens was transformed by rapid expansion of mining and the growth of numerous coal-based manufacturing industries.

The initial impetus for this expansion came from construction of a canal link between the coalfields and the River Mersey allowing the cheap transportation of coal to Liverpool and the Cheshire Saltfields. The Sankey Canal, completed in 1757, had a major effect on the coal industry as mines opened up all along its route with colliery expansion being largely governed by proximity to the canal.

In the period prior to 1845, two main groups of collieries were evident, those close to the Sankey Canal and its extensions and the collieries which relied on road transport to Liverpool. The construction of the St. Helens and Runcorn Gap Railway also led to a great expansion of the coal industry in the 1830s and 1840s.

Between 1836 and 1846 there was a threefold increase in coal production with approximately one million tons produced in 1846. The massive expansion of the coal industry was achieved by extending the underground network, sinking new pits and the use of techniques of near or total extraction. As mining techniques developed it was possible to penetrate to deeper coal seams which extended the life of the collieries. By 1860 coal production had risen to two million tons per year.

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[11] Barker, T.C. and Harris, J.R. (1959) St. Helens, a MerseysideTown in the Industrial Revolution, reprinted 1993

[12] RendelGeotechnics for the Department of the Environment (1992) Applied Geological Mapping of the St. Helens Area

In the latter half of the 19th century (post 1845) there was a trend towards the concentration of coal production in four main areas, Gerrard's Bridge, Blackbrook, Peasley Cross and Parr, reflecting the presence of high quality seams.

During the 20th century the number of collieries gradually declined as the industry was rationalised and sites proved uneconomic. By 1927 only a scattering of collieries remained with only the Parr and Ravenhead areas supporting more than four collieries.

Since 1945 open cast working gradually replaced deep mining. It is estimated that 5,000ha of land in the Borough have been worked in this way. This has mainly been in the north east around Old Garswood Park due to the nature of the geology but also to the south west of Sutton Heath and in the Ravenhead area (RendelGeotechnics, 1993).

The significant decline in coal mining during the 1980s had a severe effect on St. Helens. The last collieries to operate in the area were Sutton Manor and Parkside which closed in the early 1990s.

The coal industry has had a major impact on the area and a considerable legacy of derelict land, spoil tips, shafts, adits, coal bed methane, minewater discharge and other potential liabilities remains.

Glass Making

Glass making using Shirdley Hill sands is thought to have begun in the area as early as 1695. With the opening of the first British plate glass making factory at Ravenhead in 1776, St. Helens became an important glass making centre. By the early 19th century the town was noted for the manufacture of plate, window, flint and bottle glass with the famous Pilkington Works having been established in 1827. Throughout the following decades the industry expanded benefiting from the demand for sheet glass during what was a major building boom in England.

The glass industry used locally available cheap coal and high quality wind blown sands found at the surface over parts of the south west Lancashire Plain.

During the 18th century, glass works were concentrated in the Ravenhead area. This concentration was further evident in the 19th century, although glass works were noted to have established in other parts of the Borough largely concentrated along transportation routes.

Waste sand from polishing and grinding processes associated with plate glass manufacture was stored in structures known as Burgy Banks. The only examples in the Borough are to east of Gerard's Bridge and Islands Brow and small residues around plate glass works at Cowley. It is considered likely, however, that given the historical importance of the plate glass industry within St. Helens, further areas exist. In general, the Burgy Banks comprises sand with a high silica content, iron, and aluminium oxides

and calcium carbonate. Due to their chemical and physical nature, Burgy Banks have developed ecological interest.

It is worth noting that during the 19th century many glassworks produced their own salt cake, sodium sulphate produced by the Leblanc process. Alkali wastes arising from the Leblanc process are present in tipped areas, for example, along the banks of Sankey Brook.

The Copper Industry

The Copper industry was attracted to the coalfield by the need for cheap fuel to smelt ores brought in from Anglesey. In 1772 The Warrington Company established a factory at Blackbrook close to a branch of the Sankey Canal. A second factory owned by the Parys Mine Company was built at Ravenhead in 1779.

By the mid-19th century there were eight main copper works in St. Helens. This was the peak of the copper industry in St. Helens, since in the latter part of the 19th century, more and more copper was smelted where it was mined and many of the works in St. Helens closed by 1900.

The last copper works, at Sutton Rolling Mill, was closed in 1982.

Industrial wastes related to by-products of copper smelting (slag composed of iron and sulphur) may be anticipated to be present in areas of man-made ground close to 19th century Copper works.

Chemical Industry

Alkali Industry

An Alkali Industry became established in St. Helens during the early 19th century to supply soda to the Liverpool soap industry. The first factory was built at Gerrard's Bridge using the Leblanc process of making soda by decomposing salt from Cheshire.

Other factories quickly followed and soon St. Helens was a major centre for the manufacture of soda and later bleaching powder. A four-fold increase in soda production in St. Helens was recorded over the period 1845-1865.

The decline of the Leblanc manufacturers followed the development of the Solvay ammonia-soda process in the 1880s which was much more efficient. In an attempt to compete the British Leblanc Soda Manufacturers formed the United Alkali Company in 1890, which shifted its interest away from St. Helens to concentrate on its production at Widnes. As a result, each of the Leblanc works in St. Helens closed during the first three decades of the 20th century. By 1930 the alkali industry of St. Helens had ceased.

The process of alkali production was very inefficient and resulted in large volumes of waste. Much of this alkali waste was deposited on agricultural land where it was often buried, although the most common practice was to leave it in large mounds. Wastes have been identified at a number of locations especially alongside Sankey Canal. It is anticipated that alkali waste could occur close to any of the eleven main 19th century chemical works.

Other

In the Sutton area the British Sidac Ltd works are known to have used carbon disulphide, bleaches and acids to make rayophane packaging films and photographic paper.

Metal Smelting and Founding

Iron founding was established in St. Helens in the form of Lee Watson's Iron Foundry, later to be known as Dalglish's in 1798. Dalglish's Iron Foundry and Engineering Works developed to be an engineering firm of considerable importance both nationally and internationally and remained a major employer in the Borough for well in excess of 100 years. The company finally went out of business in the 1930's as a consequence of the Depression of the 1920s and 1930s. The works was demolished in 1939.

The smelting and founding of metals, including copper, iron and lead, formerly of great importance to the industrial development of St. Helens is now represented by one firm of brass founders. The last iron foundry, the Atlas Foundry, established in 1837 was demolished in 1990.

Industrial wastes associated with smelting and founding include metal slags. The deposit of such materials on and around metal works is to be anticipated.

Sites of Mineral Workings

In addition to coal, over the centuries a number of other extractive industries have been based on glass sand, sand and gravel, marl, clay, sandstone and pebble beds. Whilst the spoil heaps associated with these workings have the potential to cause pollution in their own right, the main significance of these extractive industries is the subsequent backfilling of pits and quarries with waste materials.

The nature and distribution of these former mineral workings in the St. Helens area are summarised in the table below.

Nature of Former Mineral Workings in St. Helens Area

Material	Distribution	Comments
Glass Sand	Within the outcrop of Shirdley Hill Sand (concentrated in the north west of the Borough)	Shallow workings to remove sand present beneath soil cover. Used in glass industry. Quickly restored for agriculture.
Sand and grave	Occasional workings in melt out till sequences.	Small scale and shallow. Used for aggregate.
Marl	Numerous, widespread especially south of Eccleston, Windle, Sutton and Parr. Almost entirely situated on occurrences of melt out till.	Small scale, shallow (<1m) winning of calcareous subsoil to improve topsoil. Many pits now backfilled. Backfill may need investigation
Clay	Clay pits were common especially around Thatto Heath, Croppers Hill, Peasley Cross, Parr, Parr Stocks and Ravenshead. Working sandy clays from melt out tills and occasionally weathered clays (fireclays) from underlying mud rocks.	Pits often small although some larger pits (near Ravenshead up to 375 ha and up to 20m deep). Most now backfilled. Mainly used for the manufacture of mugs, stoneware, bottles, sanitary pipes and bricks. Possible that a number of pits may not have been recorded due to intermittent mapping. Comparison of Ordnance Survey maps for 1884 and 1892 indicates that pits were rapidly excavated and backfilled. Backfill may need investigation.
Sandstone	35 quarries working both Permo-Triassic (southern area) and Carboniferous Sandstones (northern area) and the Chester Pebble Beds (southern area).	Small bedrock quarries – building stone and aggregate (particular Chester Pebble Beds). Many backfilled. Backfill may need investigation.

Source: Adapted from :RendelGeotechnics, 1993

Landfill

Widespread disposal of industrial and domestic waste has occurred within the Borough over the last 250 years. Potentially hazardous materials from many industries including coal mining, glass making, copper smelting, iron works, alkali manufacture, asbestos manufacture and town gas production have been disposed of at many sites throughout the Borough. There is currently one operational landfill site in the Borough and over thirty four closed landfill sites many of which preceded the waste licensing regime.

Areas subject to waste disposal include:

- the infilling of voids created by mineral extraction including sandstone quarries, clay extraction for brick making, marl and peat extraction. Examples include Billinge Hill Quarry, Buff Quarry and Holiday Moss;
- widespread deposition of alkali wastes on agricultural land;
- prior to the formal regulation of waste disposal, industrial wastes tended to be disposed of within and around the curtilage of factory premises;
- infilling of river channels during straightening works and sections of St. Helens Canal.

Railway and ancillary land

Many of the railways which ran through the Borough are no longer in use and in some areas the track has been removed.

Former railway land may be subject to contamination as a result of its former land use and associated activities. In addition, redundant cuttings provided opportunity for landfill and this process is continuing.

APPENDIX III

Objectives and Timescales

Objective	Provisional Timescale/Target	Action	Output/Record	Possible Consultation (as required)
Development of Information Management System (IMS) Input Module Output Module Evaluation Module and Integration	Complete	Completion of necessary functionality of CLIMS Subject to further development as necessary	CLIMS with required functionality	MIS CLOG
Collection of appropriate Information on Sources, Pathways and Receptors	Ongoing Core/essential dataset list agreed pan Merseyside. Data capture (potentially contaminative land uses) from pre-war maps complete. Data capture from post war maps complete. Data capture and collection of remaining core datasets is complete to date.	Collect appropriate information on sources, pathways and receptors etc See Information Collection Procedure Section 5.2. Subject to ongoing review.	Information collated and stored on the CLIMS Cross reference to information which cannot be stored on the CLIMS	Council Departments Statutory Bodies Others
Establishment of areas of land currently/previously owned or occupied by the Council	Complete (subject to review)	Collate information on land currently or previously owned or occupied by the Council Information held on the Council's Asset Management Register Database.	Information collated and stored on the CLIMS	Council Departments Current owners, occupiers and other interested parties

Establishment of efficient liaison and information exchange mechanisms (i) Internal and (ii) External	Established and ongoing	Develop and Implement procedures for liaison and information exchange – See Communication Section 11.0.	Procedures for liaison and information exchange are in place.	
Objective	**Provisional Timescale/Target**	**Action**	**Output/Record**	**Consultation**
Evaluation of information – initial screen	Complete	See Prioritisation Methodology Section 5.5 Includes land currently or previously owned/occupied by the Borough Council	Initial site prioritisation (High, Medium and Low Priority) Record on CLIMS and related files Identification of possible Special Sites	MIS Environment Agency Other statutory bodies
Further Evaluation to sub-prioritise groupings from initial screen – High and Medium Priority Sites NB For Low Priority sites timescales are highly dependent on the number of potential sites and the outcome of review and rate of progress for higher priority sites. Not possible to determine broad timescales at this stage. Such sites will be kept under review as relative priorities may change with circumstances.	Complete	See Prioritisation Methodology Section 5.5 Includes land currently or previously owned/occupied by the Borough Council	Relative priorities of sites in initial High, Medium (and Low) groupings are kept under review. May result in revision of priority ranking for some sites Record on CLIMS and related files Identification of possible Special Sites	Statutory Bodies Council Departments Owners Occupiers Other Interested Parties External contractors

Commence Detailed Inspections	A rolling programme commenced in 2009 with Annual Review For sites where urgent action is needed- immediate and on-going. Inspection of urgent sites may be required at any time in the process	See Programme for Inspection Section 6.0	Determination whether site is contaminated land or not Appropriate details on file/CLIMS Appropriate details on Register	Statutory Bodies Council Departments Owners Occupiers Other Interested Parties External contractors

Appendix IV

Sources of information

Information on Receptors

Receptor	Land Use Type	Sources of Information include:
Human Beings	Allotments Residential with gardens Residential without gardens Schools or nurseries Recreational/Parks,Playing Fields, Open Space Commercial or Industrial	UDP OS maps MIS data Internal Departments Planning Section
Ecological Systems and other protected locations	SSSIs National Nature Reserves Marine Nature Reserves Areas of special protection for birds European sites SAC, SPAs Candidate SACs and SPAs Ramsar Sites Local Nature Reserves	UDP MIS EAS Natural England
Property (buildings)	Ancient Monuments Buildings	Historic England Merseyside Sites and Monuments Record (SMR) Merseyside EAS UDP
Property (Other e.g. crops and livestock)	Agricultural land Allotments Forestry areas Other open spaces, rivers lakes etc	Defra Food Standards Agency Agricultural Land Classification maps are held by MEAS Forestry Commission
Controlled Waters	Surface waters Drinking Water Abstractions Source Protection Zones Abstractions (including licensed, unlicensed, potable and non-potable) Groundwater – Major Aquifers	OS map data (except culverts) Environment Agency Environment Agency Environment Agency/Environmental Health Environment Agency

Information on Sources

Information Type	Sources of Information include:
Historical Mapping	Ordnance Survey/Landmark
Potentially Contaminative Land Uses (digitised polygons)	EAS/Internal Departments
Site Investigation Reports	Environmental Health/Planning/other Council Departments/NHBC/SMR
Previous Planning History	Planning
Part A and Part B processes	Internal Departments/Environment Agency
Petrol Stations	Fire Brigade/Internal departments
Pre-licensing Landfill Sites	Environment Agency/Planning/Environmental Health
Waste Management Licences	Environment Agency
Potentially Contaminated Sites Known to the Environment Agency	Environment Agency
Location of Sites Registered Exempt under Schedule 3 paragraphs 9 & 19 of the Waste Management Licensing Regulations 1994	Environment Agency
Location of Sites Registered Exempt under Schedule 3 paragraph 45 of the Waste Management Licensing Regulations 1994 (Exempt Scrap Yards)	Environment Agency
Location of Waste Management Sites that have been surrendered	Environment Agency
Information on Sites affecting/potentially affecting surface waters	Environment Agency
Information on Sites affecting/potentially affecting groundwaters	Environment Agency
Sites Registered under Alkali, & Works Regulations Act 1906	Environment Agency
Quarrying Records	Planning/ Merseyside EAS

Natural Contamination	British Geological Survey/Soil Survey and Land Research Group/Imperial College, London
Aerial Photographs	MEAS
Trade Directories	Public Record Office and Local Libraries
Historical Land Use – specific sites	Merseyside Chief Officers
Agricultural Land Classification Survey	MAFF

Information on Pathways

Information Type	Sources of Information include:
Geology	British Geological Survey
Mining Data	British Geological Survey/Coal Authority/Mineral Valuer/County Record Offices/
Hydrology	Environment Agency/ Ordnance Survey
Controlled Waters	Environment Agency/Environmental Health/OS map data (except culverts)

Note: A number of the data sources fit more than one category, for example geological information may provide information on both “pathways” and “sources”.

Appendix V

Development, Surface Water and Groundwater Algorithms

Figure 5: Part I Assessment- Development (refer to Appendix VI)

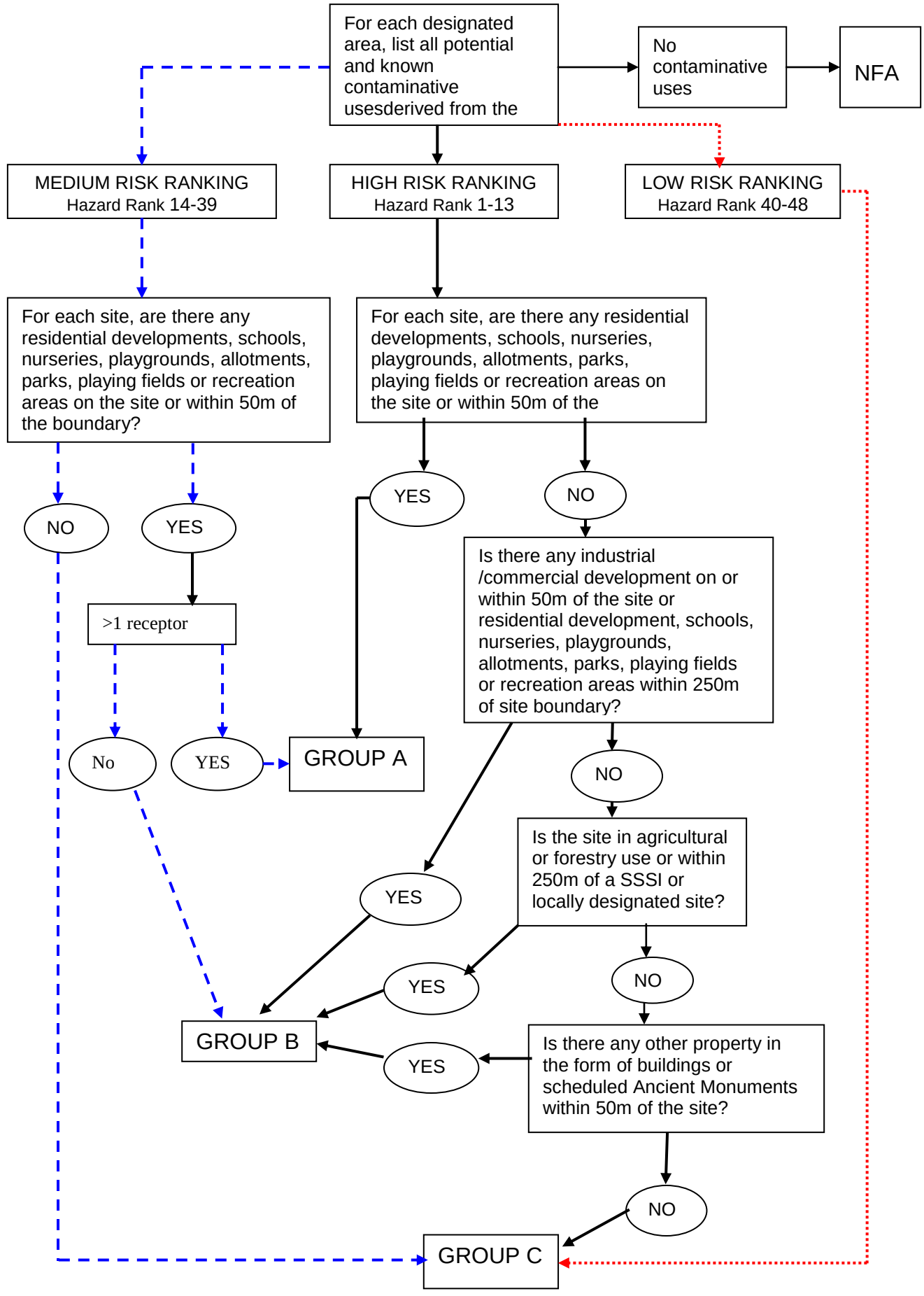


Figure 6: Part I Assessment- Controlled Surface Waters (refer to Appendix VI)

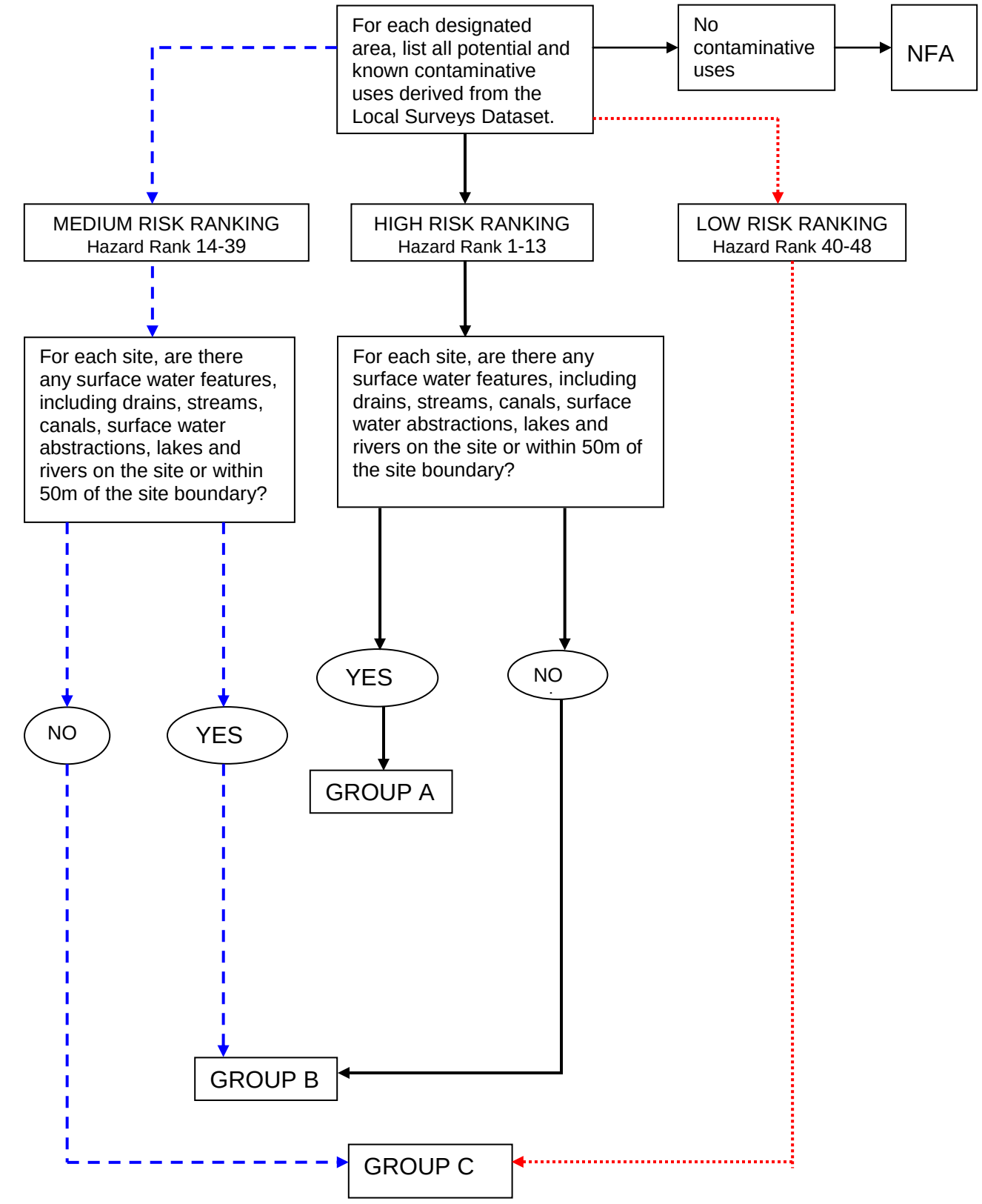
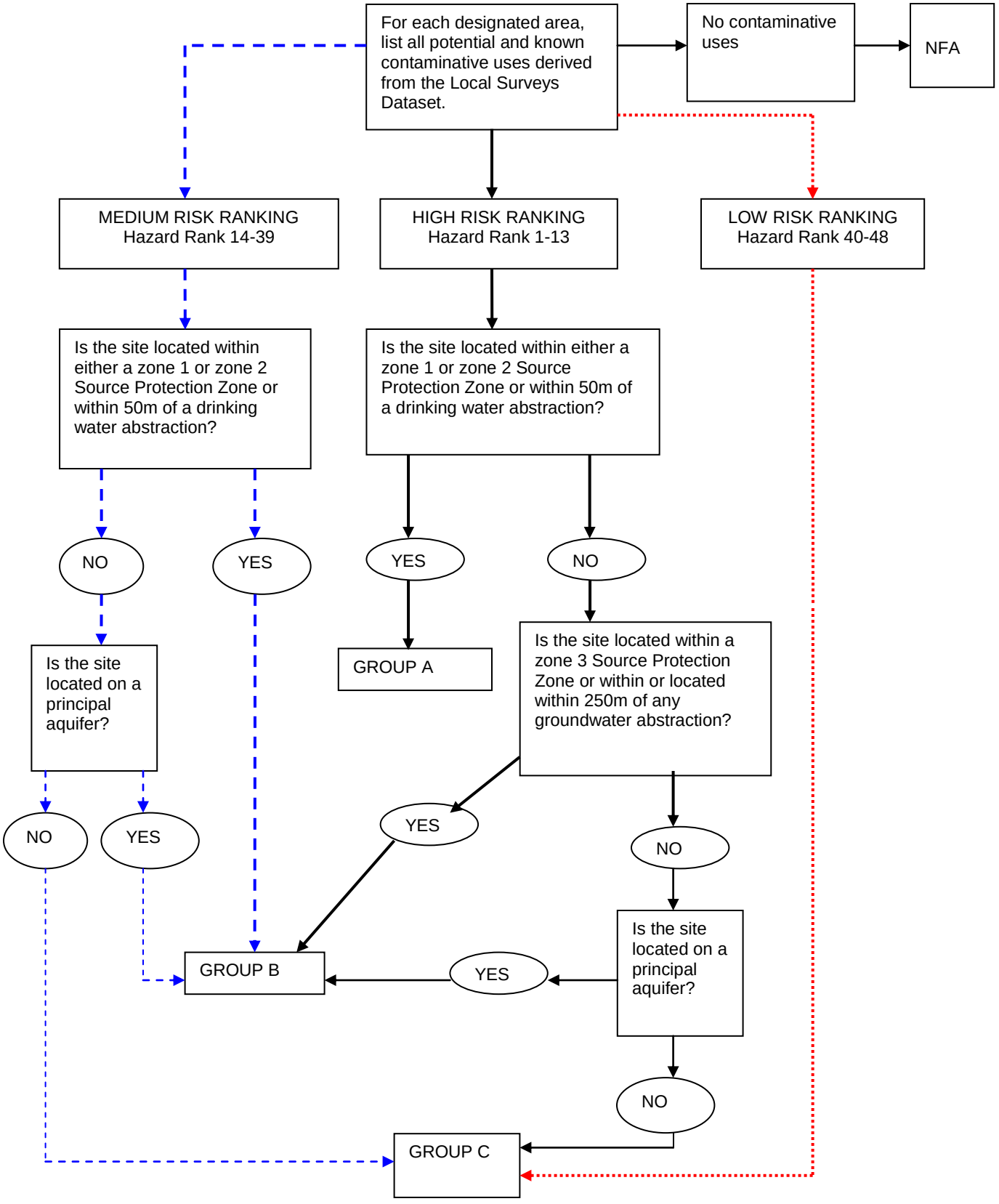


Figure 7: Part I Assessment- Controlled Ground Waters (refer to Appendix VI)



Appendix VI

Revised Merseyside EAS Key Codes and Hazard Rankings

Revised Merseyside EAS Key Codes and Hazard Rankings

Keycodes	**Hazard Rank** *Revised based on professional judgement with reference to Syms (1999) index of Perceived Risk as agreed by the CLOG (Sub) Sub Group on 28/05/02*	**Descriptions**	**Priority Classification** *Revised based on professional judgement as agreed by the CLOG (Sub) Sub Group on 19/04/02 with reference, where appropriate to work undertaken by Syms, Pickford and Landmark*
			HIGH
AS	1	Asbestos Manufacture and use.	HIGH
CH	2	Manufacture of cosmetics, manure, fertilizers & pesticides, detergents, oil, organic-based pharmaceuticals, other incl. glues, gelatines, recording tapes, photographic film	HIGH
RA	3	Storage, processing or disposal of radioactive material	HIGH
GA	4	Gasworks, coke works, coal carbonisation and similar sites. Production of gas from coal, lignite, oil or other carbonaceous material other than waste	HIGH
XI	5	Incinerators-waste management operations	HIGH
XL	5	Landfill waste-the deposit of waste in, on or above land	HIGH
DT	5	Drum and tank cleaning	HIGH
BU	5	Burial of diseased livestock	HIGH
DE	5	Premises housing surface cleaning and degreasing operations	HIGH
OR	6	Oil Refining Petrochemical production and storage.	HIGH
OL	6	Major oil & petrol storage (not including refining or production) and all gasometers which are not in gasworks	HIGH
TA	7	Tar, bitumen, linoleum, vinyl and asphalt works.	HIGH
DY	8	Dye & pigments	HIGH
PA	8	Paints, varnishes, printing inks, mastics, sealants & creosote	HIGH
AB	9	Animal slaughtering and basic processing	HIGH
AN	9	Animal by-products (i.e. animal parts) e.g. soap, candles & bone works	HIGH
TY	9	Tannery, leather goods and skinnery	HIGH
HM	10	Heavy product manufacture-rolling & drawing of	HIGH

		iron, steel & ferroalloys-includes major Tube Works	
FY	10	Furnaces & Metal processing/casting/forges/smelting-Ferro and Aluminum Alloys-Manganese Works, Slag Works & Blacksmiths.	HIGH
PL	10	Electro-plating, Galvanising & Anodising	HIGH
MG	11	Civilian manufacture & storage of weapons, ammunition, explosives & rockets, incl. ordnance	HIGH
MD	11	All Military Establishments incl. Firing Ranges (if not specified as Civilian)	HIGH
SP	12	Recycling of metal waste incl. scrapyards and car breakers	HIGH
TR	13	Timber treatment.	HIGH
MA	14	Manufacturing of engines, building & general industrial machinery, incl. nuts & bolts, gas fittings, wire rope/cable and ordnance accessories	MEDIUM
HT	14	Manufacturing & repair incl. (i)ships (ii)aerospace (iii) rail engines and rolling stock	MEDIUM
LT	14	Manufacture of cars, lorries, buses, motorcycles & bicycles	MEDIUM
MP	15	Constructional steelwork, metal structures & products & building materials	MEDIUM
RB	16	Natural and Synthetic Rubber Products incl. tyres and rubber products	MEDIUM
BK	17	Manufacture of clay bricks & tiles, including assoc. activities e.g. brickfields, also solitary kilns (other than limekilns)	MEDIUM
CR	17	Tableware & other ceramics	MEDIUM
CE	17	Concrete, cement, lime & plaster products, also includes solitary lime kilns	MEDIUM
CC	18	Coal storage/depot	MEDIUM
MN	18	Areas of mining and single or a group of shafts other than coal, or not specified-incl. levels, adits, etc. Also areas assoc. with Mineral Railways	MEDIUM
CY	18	Coal mining. Areas include assoc. surface activities in area but not including spoil heaps or coal mine shafts (this is an EAS modification)	MEDIUM
PT	18	Extraction of alluvial sediments (sand, clay, marl and gravel)	MEDIUM
QU	18	Quarrying of all stone (incl. limestone, gypsum, chalk & slate) and ores, includes all opencast	MEDIUM

		mining & slant workings also slate/slab works, flint works, stone yards	
ML	18	Abrasives, and products (not including Asbestos)	MEDIUM
PW	19	Electricity generation and distribution, incl. large Transfer Stations	MEDIUM
PR	20	Pulp, paper & cardboard manufacture	MEDIUM
PD	20	Paper, card, etc. products (e.g.packaging)	LOW
NW	20	Printing of newspapers	MEDIUM
PN	20	Printing other than News Print	MEDIUM
GL	21	Flat glass and glass products manufacture	MEDIUM
SW	22	Sewerage, septic-tanks, effluent-incl. all filter beds	MEDIUM
SL	22	Storage treatment or disposal of sludge including sludge from water treatment works	MEDIUM
XT	23	Waste transfer stations	MEDIUM
GG	24	Repair & sale of (i) cars & bikes (ii) parts (iii) motorway services	MEDIUM
DP	25	Transport Depot, Road Haulage, Corporation Yards, Commercial vehicle fuelling.	MEDIUM
FU	26	Sale of automotive fuel	MEDIUM
RL	27	Rail sidings, Yards, Rail Wharf, Goods Depot, Station etc.	MEDIUM
RW	28	Railway Tracks-up to 4 tracks wide or 30m.	MEDIUM
MR	29	Mineral Railways also known as 'Tramways' or inclines- incl. urban passenger 'Tramways'	MEDIUM
WR	30	Insulated wire & cable for electrical/telephone purposes	MEDIUM
BT	30	Batteries, accumulators, primary cells, electric motors, generators & transformers	MEDIUM
HE	30	Manufacturing of distribution, telecomms, medical, navigation, metering & lighting	MEDIUM
LE	30	Computers, office machinery, business/industrial electrical goods	MEDIUM
HS	30	Manufacturing of electrical and electronic appliances	MEDIUM
TX	31	Natural and man-made textile manufacture and products including Hemp rope and linoleum	MEDIUM
LY	32	Laundries & dry cleaning (larger scale not usually “high street”)	MEDIUM
OF	33	Outfalls incl. Warm water, industrial effluent, etc. unless directly attached to other feature e.g. end of sewer pipe	MEDIUM
WK	33	Factory & Works-use not specified	MEDIUM
PS	34	All plastic goods, incl. building, packaging, tubing, moulding and extrusion, fibre glass and	MEDIUM

		fibre glass resin and products, excluding the manufacture of Tar, Bitumen & Asphalt	
DK	35	Boat-building, wharf and quays, cargo/transport handling facilities - marine or inland	MEDIUM
FD	36	Major food processing includes large Dairies. Exceptionally large scale Corn/Flour milling	MEDIUM
AF	36	Manufacture of pet foods or animal foodstuffs	MEDIUM
AP	37	Air & space transport	MEDIUM
WD	39	Sawmills and manufacture of wood products (excluding treatment).	MEDIUM
FL	39	Areas 'Liable to Flood'-shown as point features central to flooding area	MEDIUM

			LOW
GV	40	Cemetery, modern burial grounds and grave yards	LOW
HP	41	Must be assoc. with relevant industry-incl. spoil & slag-use symbology and assoc. features to identify heap boundary (except for colliery spoil heap-this is an EAS modification)	LOW
DM	41	Demolition of building, plant or equipment used for any of the activities in the schedule	LOW
DG	41	Disturbed ground >200m in one dimension	LOW
AR	42	Air Shafts	LOW
CS	42	Coal mine shafts	LOW
WA	43	Drainage ditches are often identified by straight parallel lines creating a boundary line of a field or fields	LOW
WC	43	Canals are often identified by OS text (e.g. Leeds & Liverpool Canal)	LOW
WO	43	All other water features on the site incl. marshes, wells, springs, sluices, reservoirs, dams, cisterns etc.	LOW
WP	43	Surface ponds often located within a field surrounded by trees	LOW
WS	43	Surface streams are often identified by irregular parallel lines and an arrow to show directional flow of the stream	LOW
WV	43	Rivers are often identified by OS text (e.g. River Mersey)	LOW
ES	44	Electricity sub-station	LOW
LB	45	Various-technical & environmental testing & analysis	LOW
HL	46	All Hospitals including sanatoriums but not lunatic asylums	LOW
BW	47	Brewing and malting	LOW

DL	47	Spirit distilling & compounding	LOW
PP	48	Above ground pipelines other than sewerage	LOW
PT		Extraction of alluvial sediments (sand, clay, peat, marl and gravel) (not used as conflicts with QU QUARRY-this is an EAS modification)	*
RF		Refuse and waste disposal incl. Incinerators & sanitary depot (not used as not sufficient detail-this is an EAS modification)	*

Appendix VII

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Bibliography/Relevant Information Sources

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