



# **CONTAMINATED LAND STRATEGY**

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## **REFERENCES**

## **EXECUTIVE SUMMARY**

Part IIA of the Environmental Protection Act 1990 came into force in Scotland in July 2000. It placed new responsibilities on local authorities to address contaminated land within each authority area. Under the legislation each local authority has a statutory duty to formally adopt and publish a strategy document which is to be kept under review. This document is the first revision of Aberdeenshire Council's Contaminated Land Strategy first published in 2001.

It is important that the sites requiring the most immediate attention are identified first and this strategy indicates how Aberdeenshire Council is to go about this task. Specifically the document details how potentially contaminated land is being identified and prioritised for inspection; how inspection and risk assessment are being carried out; and how and when remedial works are secured.

The implementation of the strategy is a long term program and Section 4 details the various timescales and stages involved. Each Local Authority has a unique strategy, its implementation dependent upon previous industrial activities, geography, geology and proximity of receptors as detailed in the Statutory Guidance which is associated with Part IIA.

Aberdeenshire Council's priority is to deal with sites which have a predominant impact on public health with a weighting given to impacts on the wider environment such as the water environment. In addition to its own data collection Aberdeenshire Council will address sites brought to its attention by other regulatory bodies or the public where there is evidence that a significant pollutant linkage is likely to be present.

Aberdeenshire does not have a legacy of heavy industry. There is an expectation that the most significant contamination will be associated with former landfills and gasworks. These sites are numerous with over two hundred closed landfills and some thirty former gas works identified. At the time of writing resources are being targeted at these particular former land uses.

Other sites such as fuel storage depots, military establishments and ad hoc industrial land are being investigated as and when they are brought to the Local Authority's attention.

Contaminated land is a material planning consideration. Many sites which fall outside the current scope of the Local Authority's inspection strategy are dealt with through development control in accordance with the guidance issued in PAN33 "Development of Contaminated Land".

Aberdeenshire Council works closely with the Scottish Environment Protection Agency and other appropriate agencies. SEPA are responsible for dealing with Special Sites and the Local Authority takes into account their guidance on the water environment and policy on the protection of groundwater.

The Local Authority also liaises closely with all relevant parties, including previous site operators and owners in order to secure voluntary remediation of

sites, in accordance with Scottish Government guidance. Detailed working procedures will be produced to ensure the Strategy is implemented in a consistent manner.

Formally identified contaminated land is detailed on the Public register of Contaminated Land. This is available to view as hardcopy at Gordon House, Inverurie, and Woodhill House, Aberdeen, and electronically on the Aberdeenshire Council website.

The strategy links to other Local Authority policies and procedures in respect of contaminated land, most importantly being the Planning process.

The Environmental Health Service within Infrastructure Services is the lead in terms of Strategy Implementation. Working links have been developed with other Local Authority Services to provide advice on contaminated land as required, in particular where the Aberdeenshire Council is disposing or acquiring land which may be contaminated. Links with other Local authorities and SEPA have also been developed.

This document is a revision of the original strategy first published in October 2000. The original draft was put out to consultation to a wide number of stakeholders and relevant public bodies.

## **1.0 BACKGROUND AND LEGISLATION**

### **1.1 Introduction**

**1.1.1** Part IIA of the Environmental Protection Act 1990 (hereinafter referred to as ‘the 1990 Act’) came into force in Scotland in July 2000. It provides a system for the identification of land that poses an unacceptable risk to health or the wider environment and for securing remediation as considered appropriate. The legislation is aimed at the legacy of land which has been contaminated in the past, for example from waste disposal and industrial activities. The overall objectives of Part IIA and other legislation dealing with contaminated land can be summarised as follows:

- To identify and remove unacceptable risks to human health and the environment;
- To seek to bring contaminated land/brown field sites back into beneficial use preferably by encouraging voluntary remediation;
- To ensure costs faced by individuals/consumers are fair and in proportion to the seriousness of the contamination of the site; and
- To ensure Local authorities adopt a strategic, transparent and consistent approach.

**1.1.2** Estimates from early performance indicators returned by Local Authorities to the Scottish Government indicate some 67,000 potentially contaminated sites in Scotland. Some twenty percent of these sites have been inspected and a further twenty percent may have been dealt with as a result of planning applications. A total of 807 sites (1864 ha) are estimated to have been remediated voluntarily or through development control. It was always anticipated that only a small proportion of these potentially contaminated sites would be the subject of formal identification under the 1990 Act and indeed of the these 67,000 sites only thirteen formal determinations have been made (SEPA 2009).

**1.1.3** The legislation focuses on the ‘suitable for use’ approach as each site is unique and a risk assessment should be undertaken accordingly. The 1990 Act also follows the ‘polluter pays’ principle with the onus on the local authority to determine liabilities.

**1.1.4** The 1990 Act interacts with other legislative systems, most importantly being Planning controls. The main impact of the 1990 Act is that it places a duty on local authorities to be proactive in dealing with contaminated land. Local authorities in Scotland must have a strategy indicating how they intend identifying potential contaminated sites and prioritising these for further detailed investigation.

### **1.2 Regulatory Context**

**1.2.1** Additional legislation and guidance are provided in:

- The Contaminated Land (Scotland) Regulations 2000. These regulations make provision for the identification of special sites, remediation notices, compensation and the public register.
- The Contaminated Land (Scotland) Regulations 2005. These Regulations amend the primary legislation and the Contaminated Land (Scotland) Regulations 2000 in light of the Water Environment and Water Services (Scotland) Act 2003. Specifically the term 'controlled waters' is no longer in use and is replaced by 'the water environment'. Further changes introduce a test of significant harm or the possibility of significant to the water environment to prevent disproportionate legislation being applied to trivial levels of contamination.
- The Radioactive Contaminated Land (Scotland) Regulations 2007 and the Radioactive Contaminated land (Scotland) Amendment Regulations 2009. These Regulations extend the contaminated land regime to most radioactively contaminated land.
- Statutory Guidance: Edition 2, May 2006, Paper SE/2006/44. The Scottish Executive issued Statutory Guidance in July 2000 to accompany the 1990 Act. This was revised in 2005 following the Contaminated Land (Scotland) Regulations 2005.

**1.2.2** Both local authorities and the Scottish Environment Protection Agency are enforcing authorities under Part IIA of the 1990 Act. Local authorities have been given the primary regulatory role and the task of developing and implementing a strategy for their area. SEPA have an enforcement role in terms of sites considered to be Special Sites (Appendix 1).

**1.2.3** The main objective underlying the introduction of Part IIA is to provide an improved system for the identification and remediation of land where contamination is causing an unacceptable risk to human health or the wider environment assessed in the context of the current use and circumstances of land. The suitable for use approach underpins the legislation ensuring that land is suitable for its current use. The main duties of local authorities under Part IIA are:-

- To cause their areas to be inspected to identify contaminated land.
- To determine, in consultation with SEPA, whether any contaminated land is required to be designated a special site.
- To act as the enforcing authority and secure the remediation of all contaminated land which is not designated as a Special Site (for which SEPA is the enforcing authority).

**1.2.4** The Local Authorities and SEPA have four main tasks:-

- To establish who should bear responsibility for the remediation of land designated as contaminated
- To decide after consultation what remediation is required in any particular case and to ensure that such remediation takes place
- Where a remediation notice is served or the authority itself carries out the works to determine who should bear what proportion of the liability for meeting the costs of the works
- To record certain prescribed information about their regulatory actions

on a public register.

**1.2.5** In addition to the above, SEPA have four principal roles:-

- Provision of advice to local authorities, on request, in relation to the identification and designation of special sites
- Issue site specific advice to local authorities on contaminated land in relation to pollution of the water environment
- Act as the enforcing authority for any land designated as a special site
- Publication of periodic reports on contaminated land.

**1.2.6** In terms of the 1990 Act and the associated Statutory Guidance, Local Authorities are required to consider advice from SEPA in terms of pollution of the water environment and whether there is the potential for land to become a Special Site.

**1.2.7** Liaison arrangements have been established between local authorities and SEPA. Standard forms are used for exchange of information and the Local Authority has regard to SEPA's approach to the water environment and its groundwater protection policy. The North of Scotland Pollution Group, established by the Royal Environmental Health Institute of Scotland comprises local authorities and SEPA representatives and is a forum that seeks to adopt a consistent approach in the North of Scotland. Links are maintained with all relevant agencies such as Scottish Natural Heritage and Historic Scotland to ensure effective communication exchange. Aberdeenshire Council is a member of several e-fora dedicated to contaminated land, including the Scottish Contaminated Land Regulatory Officers Network within the Communities of Practice for Public Service website<sup>1</sup>.

**1.2.8** Full regulatory and enforcement powers/duties are contained within Part IIA of the 1990 Act, the Contaminated Land (Scotland) Regulations 2000 and the Statutory Guidance. Local authorities must adhere to the Statutory Guidance issued by the Scottish Executive under Part IIA dealing with aspects of identification and remediation of contaminated land. Details of receptors and what constitutes significant harm are given in Appendix 2. This strategy document does not however discuss these provisions in any detail. In terms of Section 78A of Part IIA, contaminated land is: any land which appears to the local authority in whose area it is situated to be in such a condition by reason of substances in, on or under the land that:-

- (a) Significant harm is being caused or there is a significant possibility of such harm being caused; or
- (b) Pollution of the water environment is being or is likely to be caused.

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<sup>1</sup> <http://www.communities.idea.gov.uk/c/1490918/home.do>

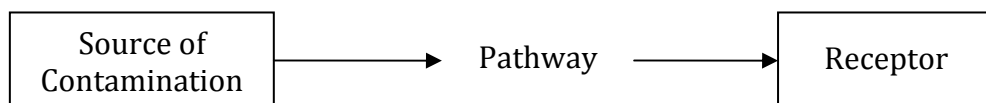


It should be noted that in terms of the Planning process the definition of contaminated land has a wider scope compared to Part IIA.

**1.2.9** An important aspect in securing the remediation of contaminated land is through the planning process. Planning Advice Note 33, 'Development of Contaminated Land', indicates that the principles enshrined within Part IIA of the 1990 Act should be taken into account in the redevelopment of brown field sites. PAN33 deals with sites which are not statutorily determined as contaminated land under Part IIA but are identified by the local authority as having the potential to be contaminated. The current Aberdeenshire Local Plan states that "Development for the reuse of contaminated land will be approved, in principle, if satisfactory site investigations, risk assessments and remedial actions are taken to address any actual or potential significant risks to public health and safety and the environment arising from the proposals." This policy conforms to the guidance issued in Planning Advice Note 33. The aim of the policy is to support new development on contaminated land, thereby effectively reducing the number of such sites in Aberdeenshire whilst ensuring public health and safety is not compromised. As a matter of routine, if the current or previous site use has the potential to have caused contamination, developers are asked to carry out an assessment prior to Planning Permission being granted.

**1.2.10** In accordance with the legislation and statutory guidance, land can only be designated as contaminated land upon establishment that there is a pollutant linkage. This linkage consists of three elements.

- (a) A contaminant in, on or under the land which has the potential to cause harm or to cause pollution of the water environment;
- (b) A receptor (as detailed in the statutory guidance);
- (c) A pathway which has one or more routes or means by or through which a receptor is being exposed to or affected by a contaminant or could be so exposed or affected.



**1.2.11** The definition of contaminated land is based upon the principles of risk assessment which are used to establish the likelihood of the existence of a pollutant linkage. The first step in this assessment is for the local authority to satisfy itself that all three elements of the linkage have been identified with respect to that piece of land. Secondly, it has to be established that the pollutant linkage is resulting in significant harm, or presents a significant possibility of significant harm, or is resulting in pollution of the water environment or is likely to result in the pollution of the water environment.

**1.2.12** The aim of this risk based approach is to protect human health and the environment (in its wider context) without unnecessarily incurring expense on cleaning up sites. Sites will be considered on a site-specific risk assessment basis.

### **1.3 Strategic Approach**

**1.3.1** Local authorities are required to adopt a strategic approach to the identification of land which merits further detailed inspection. As stated in the Statutory Guidance, the approach is required to:-

- *be rational, ordered and efficient*
- *be proportionate to the seriousness of any actual or potential risk*
- *seek to ensure that the most pressing and serious problems are located first*
- *ensure that resources are prioritised on investigating areas where the authority is most likely to identify contaminated land.*
- *ensure that the local authority efficiently identifies requirements for the detailed inspections for particular areas of land.*

**1.3.2** This Strategy details the particular characteristics of Aberdeenshire, the Local Authority's aims and objectives and in particular how the Strategy is to be implemented, taking into account the above elements.

### **1.4 General Policy of Aberdeenshire Council**

**1.4.1** The Contaminated Land Strategy will help Aberdeenshire Council meet the outcomes contained within Aberdeenshire Council's Strategic Priorities:

- *Community Wellbeing: that people in Aberdeenshire enjoy the best quality of life in safe, friendly and lively communities.*
- *Jobs and the Economy: Aberdeenshire is the best area, where the Local Authority works with partners to create and sustain the best quality of life for all. We achieve this through an enterprising, adaptable economy, that is the location of choice for high value employment, for smaller expanding businesses and for social enterprises.*
- *Sustainable Environment: Aberdeenshire is the best Council always looking to the future, finding new and more efficient ways of doing things. We raise awareness in others to secure measurable behaviour change by individuals, communities, business and public sector partners. Aberdeenshire will be a sustainable and carbon neutral region in the medium term e.g. by the year 2030.*
- *Developing our Partnerships: Aberdeenshire is the best Council in Scotland, where the community planning framework and joint working with communities, private and voluntary sector partners ensures that people are involved, listened to and empowered and where excellent services are provided for all.*
- *Corporate Improvement: Aberdeenshire Council is the best council. It is a modern, effective organisation aiming to provide excellent services by finding new and more efficient ways of doing things. The focus is on*

*continuous improvement of the quality, efficiency and level of services provided for all.*

The Strategy will help sustain and improve the environment, support economic activity and attain to achieve best value. Implementation of Part IIA of the 1990 Act can be viewed not only in the context of protecting the environment but also in economic terms as land remediation will allow redevelopment.

**1.4.2** As part of its commitment to improving the natural and manmade environment the Local Authority launched a new Sustainability Charter in 2008. Although not specifically mentioned, the Contaminated Land Strategy, and in particular the remediation of contaminated land, links with a number of aspects within the Charter.

**1.4.3** Contaminated land is a consideration within the draft Aberdeenshire Local Development Plan which is expected to be adopted in 2012. Similar policies are included in the current Plan.

- Policy LSD10 Contaminated Land: *We will approve development on land that is contaminated, or suspected of contamination, subject to other policies, if: 1) the necessary site investigations and assessments are undertaken to identify any actual or possible significant risk to public health or safety or to the environment, including possible pollution of controlled waters, that arise from the proposals; AND 2) effective remedial action is taken to ensure the site is made suitable for the new use, in scale with the nature of the proposal.*
- Policy LSD9 Hazardous Development: *We will refuse development, if: 1) it would cause pollution, precipitate flooding, create a significant nuisance or present an unacceptable hazard to the public or the environment; OR 2) the proposed site is in close proximity to existing hazardous development facilities or infrastructure that could cause significant pollution, precipitate flooding, create a nuisance or present a hazard to the public. In any circumstances where development of this kind is, on balance, considered acceptable by the appropriate authorities, satisfactory steps must be taken to mitigate any residual negative development impacts.*

**1.4.4** Contaminated Land is a material consideration under planning legislation. Planning Advice Note 33 (PAN33) Development of Contaminated Land requires that any risks to human health or the wider environment are dealt with prior to development or occupation. In effect, land which has been redeveloped since PAN33 was issued in October 2000, should not be a candidate at a later date for determination as contaminated land.

**1.4.5** The public will have access to information pertaining to land identified as contaminated land as required by the 1990 Act. Other land quality information will be available on request unless exempted by the Freedom of Information (Scotland) Act 2002 or the Environmental Information (Scotland) Regulations 2004 relevant. All information will be provided

according to a standard procedure which ensures a high level of service to the public and business sector.

- 1.4.6** The Local Authority has a policy of adopting procedures which are open and transparent and carries out consultation with the public on a variety of issues. Aberdeenshire Council's public register of contaminated land is published on the Local Authority website<sup>2</sup> together with information and guidance for the public and professionals charged with the investigation of land which may be contaminated.
- 1.4.7** Within Aberdeenshire the Environmental Health Service has the primary role in implementing the Contaminated Land Strategy.

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<sup>2</sup> <http://www.aberdeenshire.gov.uk/environmental/strategy/PublicRegisterofContaminatedLandIndex.pdf>

## **2.0 CHARACTERISTICS OF ABERDEENSHIRE**

### **2.1 Population and Economy**

- 2.1.1** The Contaminated Land Strategy is required to be specific to the character and history of the Local Authority's area. Previous economic activity, population density, drinking water extraction, ecology, archaeology, geology, hydrogeology, hydrology, soil type and all have a bearing on the nature of a Local Authority's strategy. These are discussed in detail within this Section.
- 2.1.2** Aberdeenshire is a predominantly rural area of 6,300 square kilometres, occupying the North East shoulder of Scotland. The physical landscape ranges from the coastlines of the North Sea and Moray Firth, to the gently undulating and rich farmland of east Aberdeenshire and the Grampian Mountains and Cairngorms in west Aberdeenshire. It has a population of 236,260 (2006 census) (4.6% of the Scottish total) and a population density of 37 persons per square kilometre (Table 1). The population has risen 25% since 1981 and 55% since 1971. Recent population growth has been accommodated in the smaller towns and villages and over the past ten years the population in some of the larger towns has fallen slightly. Most of the population is contained within towns and villages in the coastal areas and river valleys, with much of the hinterland sparsely populated.
- 2.1.3** Aberdeenshire, once economically dependant on primary sector industries of agriculture, fishing and forestry and related processing businesses, has diversified in the last 40 years with the oil industry and tourism having a major impact on the economy (Table 1). The primary sector, however, remains of major significance. Aberdeenshire is Scotland's foremost fishing area with 58% of total landings in Scotland and 29% of Scotland's fishery related employment. Agriculture in Aberdeenshire accounts for 9% of Scotland's total area. There are no major urban or industrial centres. Apart from the last 40 years there has been little in the way of major urban or industrial development in Aberdeenshire.
- 2.1.4** The service sector accounts for 73% of employment, manufacturing 11%, construction 7%, oil and gas 4%, with agriculture, forestry and fishing 1% (Scottish Government, 2009). In the north of Aberdeenshire the primary industries of farming and fishing are still prevalent. The spread of employment by sector varies markedly depending upon the proximity to Aberdeen with areas close to the City closely influenced by its economy.

**Table 1: Population and Economy**

<b>Area</b>	<b>Population</b>	<b>Density</b>	<b>Main Town (Population)</b>	<b>Economy</b>
<b>Banff &amp; Buchan</b>	35,000	59 persons/km <sup>2</sup>	Banff Fraserburgh (12,370)	Largely based on traditional industries of fishing and agricultural, together with associated businesses such as food processing, boat building and support services. There are major ports at Macduff and Fraserburgh.
<b>Buchan</b>	40,000	68 persons/km <sup>2</sup>	Peterhead (17,450)	The foundation of the Buchan economy has traditionally been based on fishing and agriculture. Since the 1970's this has broadened and there has been a substantial impact by the oil and gas industry. The St Fergus Gas Terminal is a major complex within the Area. Peterhead is the largest white fish landing port in Europe and has associated businesses in the town.
<b>Formartine</b>	40,000	47 persons/km <sup>2</sup>	Ellon (9,910) Turriff	The south Formartine area is closely linked to Aberdeen's economy, whilst the north has a more traditional rural economy.
<b>Garioch</b>	50,000	86 persons/km <sup>2</sup>	Inverurie (11,030) Westhill (11,100)	Closely linked to Aberdeen's economy, but also support services to agriculture. The large paper mill located in Inverurie is now closed.
<b>Marr</b>	37,000	13 persons/km <sup>2</sup>	Huntly Banchory Alford Ballater	Traditional rural economy based on agriculture, livestock farming, forestry, marginal hill farming and also tourism. The area to the east is closely linked to Aberdeen's economy.
<b>Kincardine &amp; Mearns</b>	41,000	54 persons/km <sup>2</sup>	Stonehaven (10,760)	The area to the north is closely linked to Aberdeen's economy, whilst to the south it is mainly agricultural based and also tourism.

2.1.5 Administratively, Aberdeenshire comprises six Areas which were established following Local Government Reorganisation in 1996 (Figure 1):

- |                |                     |
|----------------|---------------------|
| Banff & Buchan | Kincardine & Mearns |
| Formartine     | Marr                |
| Garioch        | Buchan              |

Figure 1: Aberdeenshire Administrative Areas



Based on Ordnance Survey mapping. © Crown copyright reserved. Aberdeenshire Council LA09022L 2011

## **2.2 Topography, Geology, Hydrogeology, Hydrology, Soils**

### **2.2.1 Topography**

2.2.1.1 The topography of the North East of Scotland consists of stepped plateaux rising from the coast to the Cairngorm Massif in the west.

2.2.1.2 The Buchan plateau bordering the North Sea and Moray Firth is gently undulating and generally 60-150m above sea level. The area is drained by the rivers Don, Ythan and Deveron. Coastal lowlands bordering the Buchan plateau are rather narrow and are best developed in the extreme north east. The coastline is often low, sandy and dune fringed, except where interrupted by cliffs.

2.2.1.3 The Buchan plateau is separated from the upland Grampian Plateau by an abrupt step e.g. hills of Bennachie, Hill of Fare and in places is terminated by a cliff coastline, in others by a narrow coastal plain. Hills are in the range of 750 to 900 metres in altitude.

2.2.1.4 The Grampians also comprise lowland basins towards the East, drained by the Rivers Dee and Don. To the north, the basins are less extensive, with remnants of the Grampians persisting at decreasing altitudes in places almost to the coast. Beyond the Grampian Plateaux lie the Cairngorms reaching to a height of over 1200m. They comprise the highest topographical area in Aberdeenshire and are drained by the River Dee. In the southern part of Aberdeenshire, the Highland Boundary Fault separates the Grampians from the Scottish Midland Valley (Strathmore). The Fault is evident at Stonehaven and extends south west to Loch Lomond. The Valley is relatively flat but is separated from the sea by a narrow low range of hills.

### **2.2.2 Geology**

2.2.2.1 The geology of Aberdeenshire is so locally variable that generalisation in terms of contaminated land would be misleading. Geology can represent a pathway or a receptor and even a source. Most of Aberdeenshire forms the eastern part of a structural block bounded to the south by the Highland Boundary Fault and to the northwest by the Great Glen Fault. Part of southern Aberdeenshire lies within the Midland Valley, located between the Highland Boundary Fault and the North Sea coast.

2.2.2.2 Geological strata have a distinct Northeast/southwest trend, most evident in terms of the Highland Boundary Fault. The majority of rocks in Grampian are the metamorphics of the Dalradian supergroup. There are also large areas of granite, particularly in central Aberdeenshire, Deeside and Buchan. Basic igneous rocks are also present in areas of North Aberdeenshire. The area known as Strathmore forms the northern end of the Midland Valley, in south Aberdeenshire and comprises Old Red Sandstone, with narrow areas of volcanic lavas near the coast.



- 2.2.2.3 Large parts of Aberdeenshire are designated as Radon Affected Areas as a consequence of the extensive areas of granite. The areas exhibiting the highest levels are generally in the Deeside Area. The British Geological Society's map of "Radon Potential Based on Solid Geology" details potential radon levels based on the underlying geology and also the effect of unconsolidated deposits. A new atlas detailing more extensive areas affected by radon is to be published by Health Protection Scotland later in 2011.
- 2.2.2.4 Metamorphic rocks are predominantly those of the Dalradian Group and include schists, slates, and conglomerates. Small outcrops of limestone occur along the Dee Valley. The Dalradian rocks are largely meta-sediments from the Grampian Orogeny, 700 to 550 million years ago, an early phase of the Caledonian mountain building event of 550 - 450 million years ago.
- 2.2.2.5 Two main types of igneous activity in the region are the Newer Gabbros evident in the vicinity of Rhynie, Inch and Huntly and east Aberdeenshire (490 million years) and Newer Granites (410 million years). The northeast is known for its abundant granites, evident in much of Buchan and central Aberdeenshire, including Deeside. These are Silurian to Devonian in age and were intruded into the Caledonian mountain belt after the Dalradian rocks had been folded, metamorphosed, cooled and uplifted.
- 2.2.2.6 The Highland Boundary Fault is a major feature of Scottish geology, running from Arran to Garron Point near Stonehaven on the Aberdeenshire coast. This fault is the northern margin of a graben which allowed the Midland Valley to the south to descend by as much as four kilometres. The fault line a complex zone of movement with local exposure of altered serpentinites, gabbros, pillow lavas, cherts and jaspers, quartzite, sandstones, conglomerates and limestones. The major exposures of sedimentary rocks in Aberdeenshire are found in the Vale of Strathmore, a small part of the Midland Valley. Rocks comprise Old Red Sandstone from the Lower Devonian and a small area of Upper Devonian around St Cyrus. Old Red Sandstone rocks were deposited as thick continental sediments, at the end of the Caledonian mountain building episode, derived from the erosion of the young high mountains in the north and laid on top of the eroded Dalradian landscape. Rocks include sandstones, calcareous mudstones, conglomerates, siltstones and shales. A narrow strip of extrusive igneous rocks separates the Old Red Sandstone from the sea. North of the Highland Boundary Fault, Old Red Sandstones also occur in isolated outliers in the Turriff and Rhynie areas.

### **2.2.3 Hydrogeology**

- 2.2.3.1 Precambrian to lower Palaeozoic Basement rocks underlie the whole of Scotland. Within most of the area north of the Highland Boundary Fault, the basement is exposed to form the Grampians and Cairngorms. The basement comprises crystalline metamorphic and igneous rocks. Their

water bearing potential is limited, with permeability derived almost entirely from cracks and joints. Such areas are not good aquifers (classified as weakly permeable), although they are significant with regard to baseflow and useful for small domestic water supplies. On the other hand, the Midland Valley (Strathmore) is one of only two major groundwater provinces in Scotland, the other being the Caithness and Moray Firth Province. In Aberdeenshire, the Valley comprises Devonian sediments - almost entirely Lower Devonian; groundwater in Lower Devonian deposits depends on the presence of cracks and joints in both the mudstones and sandstones. According to the Groundwater Vulnerability Map of Scotland, the aquifer is classified as Highly Permeable. In terms of the Contaminated Land Regulations 2000 contaminated sites affecting this aquifer have the potential to be classed as Special Sites subject to various provisos. Public water supplies are extracted to the south of Aberdeenshire and there are a significant number of private supplies. There are outliers of Old Red Sandstone around Turriff and Rhynie, which are exploited for public water supply purposes; the aquifer is classified as Moderately Permeable. Sand and gravel deposits throughout Aberdeenshire form Moderately and Weakly Permeable aquifers. Groundwater is frequently contained in superficial deposits and is often important in terms of supplying base flow to rivers.

- 2.2.3.2 There are approximately 8,500 private water supplies serving over 11,000 properties in Aberdeenshire, the largest number for any local authority area in Scotland. The effect of potential contaminated sites on private water supplies will be an important factor to take into account vis a vis human health in determining whether to designate a site as contaminated land. Many supplies are relatively shallow and more prone to contamination than deeper ones.

## **2.2.4 Hydrology**

- 2.2.4.1 The main river basins within Aberdeenshire are the Deveron, Ugie, Ythan, Dee and Don. These rivers and other surface waters are monitored regularly by SEPA as part of their Surface Water Classifications. River abstractions, providing public water supplies are located on the Dee and Deveron whilst there are several springs and other surface waters exploited by the North of Scotland Water Authority. The EC Water Framework Directive will significantly impact on the area's water environment and how such resources are managed and maintained. Effective implementation of the Contaminated Land Strategy will be vital in this respect. The Local Authority will liaise closely with SEPA regarding common issues, including SEPA's involvement in coastal water matters. Within Aberdeenshire there are eight 'Identified Bathing Waters' which are regularly monitored by SEPA. In addition, there are a further five bathing waters which are monitored by SEPA.

- 2.2.4.2 The River Ythan Catchment has been designated a Nitrate Vulnerable Area, under the EU Nitrates Directive because of high nitrate levels resulting in eutrophication in the estuary. The designation was made in

May 2000 on the basis of elevated nitrate levels affecting the Ythan Estuary, which forms part of the Forvie Nature Reserve. An Action Programme commenced in 2001 in an attempt to reduce nitrate levels; SEPA and the Scottish Executive Rural Affairs Department are responsible for enforcing the Programme.

## **2.2.5 Superficial Geology and Soils**

2.2.5.1 Superficial deposits conceal the bedrock over much of Scotland. They were laid down in glacial, lacustrine, fluvial, aeolian or marine environments. Landforms of preglacial age are widespread - most important being the chemically weathered rock which mantles the area, and the gravels of Buchan. During the Quaternary Ice Ages, there were two distinct types of glaciers - ice sheets and corrie glaciers. Ice Age glaciers covered all of the north east with a cover of glacial drift of which there are three main components - glacial till (a mixture of boulders and sand or boulders and clay), meltwater deposits (sand/gravel) and lake deposits (fine silts and clays). There are three main series of glacial drift in Aberdeenshire:

- Inland Series, covering all of Aberdeenshire except the coastal areas
- Red Series - covering North Sea coastal zone
- Blue-Grey Series - along the Moray coast.

2.2.5.2 Soil types which have developed since the Ice Age arise from the interplay of a number of factors, principally parent rock type, climate and topography. Parent rocks are mostly Dalradian schists and Caledonian granites with gabbros and Old Red Sandstone making up the remainder. Soils are predominantly derived from acid parent materials. Around three quarters of the land area is occupied by nine soil associations out of 56 associations, covering the Eastern Scotland Soil Survey Map. In the lowlands north of the Highland Boundary Fault, acid podzolic soils predominate. In Strathmore in the Midland Valley, Old Red Sandstone forms the parent material and brown forest soils are widespread on till deposits. In the Grampians, glacial drift is widespread and thick in valleys whilst hillsides are covered in a thin stoney veneer of local drift. Heather moorland is indicative of the dominating podzolic soils. Quaternary sands and gravels are found in several locations, predominantly near coasts, Strathmore and river valleys. Soil properties have an important impact on the movement and attenuation of contaminants.

## **2.3 Protected Locations**

2.3.1 In terms of Table A of the Statutory Guidance, only ecological systems/living organisms specified in the Statutory Guidance can be classed as receptors. Ecosystems not specified within the Guidance are not covered by the 1990 Act. There are a wide variety of such ecosystems throughout Aberdeenshire, with most sites being in East Aberdeenshire, although the largest areas are in the west. Sites of Special Scientific Interest comprise 6.3% of the area of Aberdeenshire, with the majority

being in west Aberdeenshire, largely distant from any potential contaminated sites. Of major importance is the Cairngorms National Park, established in 2003, part of which is in Aberdeenshire. Neither Aberdeenshire Council nor Scottish Natural Heritage are aware of any of these particular type of ecosystems being affected by contaminated land.

**2.3.2** Details are provided below (*Table 2*) with regard to the number of ecological systems, as referred to in the Statutory Guidance, in Aberdeenshire Some sites have multiple designations.

**Table 2: Protected Locations<sup>3</sup>**

Sites of Special Scientific Interest (SSSI) under Section 28 of the Wildlife and Countryside Act 1981	82
National Nature Reserves under Section 35 of the Wildlife and Countryside Act 1991	6
Marine Nature Reserve under Section 36	0
Area of special protection for birds under Section 3	0
Any European site within the meaning of Regulation 10 of the Conservation (Natural Habitats etc) Regulations 1994 (ie Special Area of Conservation and Special Protection Areas)	30
Any candidate special areas of conservation or potential special protected areas given equivalent protection	1
Any habitat or site afforded policy protection (ie candidate special areas of conservation, potential special protection areas and listed Ramsar sites	4
Any Local Nature Reserve established under Section 21 of the National Parks and Access to the Countryside Act 1949	2
Any National Parks designated under the National Parks (Scotland) Act 2000	1
Biogenetic Reserve	2

## **2.4 Aberdeenshire’s Built Environment**

**2.4.1** One of the specified receptors detailed in the Statutory Guidance is “property in the form of buildings”. It should be noted that in terms of a Scheduled Ancient Monument, in addition to considering whether there is substantial damage/interference making the building incapable of being used, the local authority also has to consider whether the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest for the reason of which the monument was scheduled. Aberdeenshire has a wealth of historic buildings and monuments, dating from ancient times, such as stone circles, to the first and Second World Wars. The Archaeology Service has a vast data set, including historic aerial photographs that will be referred to as part of the implementation of the Strategy.

**2.4.2** The historic environment in Aberdeenshire consists of traces of human impact on the landscape from earliest times, c 9000 years ago, to late 20<sup>th</sup>

<sup>3</sup> <http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/>

Century. It includes ancient monuments, historic buildings, designed landscapes as well as many ecological systems classed as receptors. These last are of significance to the built and cultural heritage because many are the product of previous human choices and practices, whether heather moorland or semi-natural woodland. Monumental prehistoric features such as stone circles or burial cairns co-exist with scatters of flint, cropmarks, important carved stones, fine castles, ancient cairnfields, medieval cultivation, as well as churches and historic burghs.

- 2.4.3 Much of this material is recorded in the Aberdeenshire Council Sites and Monuments Record which currently holds c 19,209 records, of which 647 are scheduled under the *Ancient Monuments and Archaeological Areas Act 1979* as of national importance. Any works on these monuments require the consent of Scottish Ministers, per Historic Scotland. Proposals for the remaining 95% of sites will be treated by the Local Authority in terms of the policies for the historic environment in the Structure and Local Plans and the provisions of the Scottish Planning Policy (SPP), Planning Advice Note 42 (PAN 42) and the Scottish Historic Environment Policy (SHEP).
- 2.4.4 It is conceivable that certain features of the historic environment have the potential to be classed as contaminated land, in particular, historic defence sites. Aberdeenshire Council's participation in the Defence of Britain Project has identified many such features, ranging from Cold War monitoring stations to traces of first World War airship stances. These are all recorded in the Aberdeenshire Sites and Monuments Record and plotted on the Local Authority's GIS potentially contaminated sites database.
- 2.4.5 Certain quarries, such as those for slate or granite are of heritage importance, as is the sparse evidence of small-scale mining (eg lead, diatomite), albeit on a limited basis.
- 2.4.6 There are 3550 historic buildings in Aberdeenshire listed under the *Planning, Listed Buildings and Conservation Areas (Scotland) Act 1997* as well as 23 Conservation Areas.
- 2.4.7 Remediation work on any part of the historic environment will require careful assessment and a strategy for mitigation which will involve either preservation *in situ* or preservation by record.

## **2.5 Historical Industrial Activities**

- 2.5.1 In general terms, there have been few industrial activities which have left a legacy of contamination in Aberdeenshire. There have been no activities such as deep mining, and few heavy industrial activities. Historically, the North East of Scotland has relied on the primary industries of agriculture, forestry and fishing. The last 30 years have however seen an expansion of oil related industries but these are not thought to have contributed significantly to contamination of land in Aberdeenshire. Extraction of granite, sand and gravel and also slate have been prevalent but these have not resulted in contamination, other than use of quarries/sand pits for

subsequent activities such as waste landfill. There have however been industrial/commercial activities on a relatively small scale that have led to contamination, e.g. port related activities, engineering works, commercial garages, gas works, timber treatment. It has previously been considered unnecessary for Aberdeenshire Council and its predecessor Councils to implement specific policies relative to large scale regeneration of derelict and contaminated sites.

- 2.5.2** Remediation of contaminated sites has so far largely been driven by Development Control as part of the Planning process. Information on individual development sites is held by Infrastructure Services.

### **3.0 AIMS AND OBJECTIVES OF THE STRATEGY**

#### **3.1 Aims and Objectives**

**3.1.1** Land contamination is a significant issue in terms of public health, the environment, the economy and planning. All these issues have to be taken into account in considering the aims and objectives of the Local Authority's Strategy and objectives within the Planning Policy guidelines.

**3.1.2** In general terms, the aims of Aberdeenshire Council's Strategy are as follows:-

- To ensure the public, environment, property and the water environment are protected from the effects of land that is statutorily determined as contaminated land, or could be so determined, with particular emphasis on the protection of public health
- To ensure that procedures are in place to secure appropriate remediation, principally through voluntary agreement
- To ensure procedures and policies are in compliance with Part IIA of the Environmental Protection Act 1990, Contaminated Land (Scotland) Regulations 2000 and the Statutory Guidance, thereby ensuring that land is safe for its current or intended use
- To ensure that site prioritisation is carried out in such a manner that high priority sites are addressed first
- To ensure there are effective liaison and consultation arrangements in place involving SEPA, Scottish Natural Heritage, owners, other appropriate persons, and other relevant bodies
- To ensure the Local Authority deals with any problems on land in which it has an interest in the same manner that other sites are handled

**3.1.3** The specific objectives of the Strategy are:-

- To identify potential contaminated sites and prioritise these according to a rational and defensible procedure in order that the highest priority sites are addressed first
- To identify receptors and the water environment that may be affected by sources of contamination
- To identify likely ways by which receptors may be affected by contaminants
- To carry out a site specific risk assessment to ascertain the likelihood of receptors being affected by contaminants
- To maintain an effective GIS database to co-ordinate the Strategy
- To ensure that the Aberdeenshire Council's overall approach to contaminated land is in accordance with the Strategy
- To ensure there are clear lines of communication between the Local Authority and SEPA
- To ensure owners and occupiers are involved fully in the consultation procedure in relation to individual sites
- To ensure Planning Officers have access to the GIS contaminated land

database and that advice is provided to the Planning Service for all applications which may be affected by statutorily contaminated or potentially contaminated land

- To ensure the public have access to appropriate information
- To ensure mechanisms are in place to review the Strategy
- To ensure planning applications are addressed in a manner consistent with the approach undertaken in terms of Part IIA

**3.1.4** An essential aspect of the Strategy is that effective liaison is maintained with SEPA. Aberdeenshire Council will consult with SEPA at an early stage for any site which may impact the water environment. Where the site is a priority site to be inspected by Aberdeenshire Council the standard forms, produced through the COSLA Task Groups (Convention of Scottish Local Authorities) in conjunction with SEPA, will be used to initiate the consultation. Where the site is the subject of a planning application the local SEPA team will be consulted. In dealing with pollution of the water environment, the local authority will take into account SEPA's policy on the water environment and groundwater protection, and any site specific advice which may be offered through the consultation process.

**3.1.5** The Environmental Health Specialist Officer will monitor the implementation of the Contaminated Land Strategy. Throughout the course of implementation the Strategy will be reviewed as the need arises.



## **4.0 IDENTIFICATION AND PRIORITISATION OF POTENTIALLY CONTAMINATED LAND**

### **4.1 Introduction**

**4.1.1** Section 78B of the 1990 Act states that every local authority shall cause its area to be inspected from time to time for the purposes:-

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

**4.1.2** Section 78B of the 1990 Act also states that local authorities shall act in accordance with the guidance issued by the Scottish Ministers. As indicated previously, local authorities are required to adopt a strategic approach to the identification of land which should be in accordance with Section B.9 of the Statutory Guidance.

**4.1.3** This section of the Strategy details how this strategic approach is to be applied to Aberdeenshire. The Local Authority has now considered Aberdeenshire as a whole and has developed methodologies for prioritising potentially contaminated sites for inspection. The approach is designed to be as transparent as possible and ensures that flexibility so as to be adaptable to changing circumstances. The Strategy makes allowances for sites which come to the Local Authority's attention and require immediate action.

**4.1.4** The Strategy has taken into account Government guidance (Scottish Executive, 2001; DETR, 2001). Though Aberdeenshire is largely rural and does not have a legacy of serious industrial pollution, the very size and nature of the area brings its own particular problems in devising a strategy and prioritising areas and sites for detailed investigation. The Strategy has been developed in the following stages:

- A Consultation on the draft strategy
- B Prioritisation of geographical areas
- C Identification of potential contaminated sites
- D Initial prioritisation of identified potential contaminated sites
- E Further prioritisation of identified potential contaminated sites
- F Detailed site investigations
- G Remediation
- H Review of Strategy Implementation

**4.1.5** The Strategy takes into account the role of SEPA, with particular attention to the liaison arrangements that have been developed with Local Authorities. Sites that may be classed as Special Sites necessitate the involvement of SEPA at the earliest possible stage. The Strategy has also been influenced by discussions involving adjacent local authorities.

## **4.2 Strategy Implementation**

### **4.2.1 Stage A - Draft Strategy**

The Draft Strategy was the subject of consultation with SEPA, SNH, Historic Scotland and other agencies between June and September 2001. SEPA, in particular, provided detailed comments. A copy of the draft strategy was sent to the Scottish Executive for information.

### **4.2.2 Stage B - Prioritisation of Geographical Areas**

4.2.2.1 Aberdeenshire covers an area of 6300 km<sup>2</sup>, with a population of 243,510 (2009 estimate). There is therefore a large land area and fairly dispersed population.

4.2.2.2 The geographical areas have been prioritised based on the Ordnance Survey Grid taking each whole or part ten by ten kilometre grid square as a unit, giving ninety-one in total. These units have been prioritised according to the presence of receptors:

- Residential property
- The water environment
- Ecological systems

Other receptors in the form of property are present over most of Aberdeenshire and therefore it was not considered necessary to include these in the initial prioritisation.

4.2.2.3 Details of the prioritisation are provided in Appendix 3. Scores were allocated for each unit for population density, aquifer permeability, groundwater abstraction, surface water abstraction, and presence of a protected location (section 2.3). No scoring system is completely objective and suitable scheme was chosen to give an even spread of high priority units across the six administrative areas of Aberdeenshire.

### **4.2.3 Stage C - Identification of Potentially Contaminated Sites**

4.2.3.1 Potentially contaminated sites are logged on a GIS database. This work commenced in 2001 and is ongoing as new information comes to light. The database currently contains some 8,500 records.

4.2.3.2 Historic maps are vital to the initial identification of sites. All available maps have been purchased, totalling twenty-nine data sets, some of which give only partial coverage.

4.2.3.3 The ten kilometre grid squares are searched on each map, in the prioritised order identified in Stage B to ensure that high priority sites in high priority areas are captured at an early stage.

- 4.2.3.4 Information on land use has been gathered from Local Authority records, local knowledge, SEPA, trade directories, digitised historic and current mapping and aerial photography.
- 4.2.3.5 All land which may have had a potentially contaminative use is being recorded. This includes all land with a current or former industrial use; all known landfills; all quarries and water features which have or may have been infilled with waste; sheep washes; under ground and above ground commercial fuel storage tanks.
- 4.2.3.6 The majority of sites recorded are not scheduled for inspection within the foreseeable future. A major use of the database is as a tool for screening planning applications to ensure that the necessary investigations and remedial works are carried out prior to redevelopment in accordance with Planning Advice Note 33.
- 4.2.3.7 Within the Local Authority relevant information is available from many sources:
- Local knowledge within Environmental Health
  - Planning Development Control files detailing historic redevelopment of potentially contaminated sites
  - Local Authority Archaeologist and Archivist
  - Consumer protection petroleum licence files provide information on the size and location of fuel storage tanks
  - Property files contain site investigation and risk assessment reports carried out on Local Authority land
  - Libraries and Heritage Societies

#### **4.2.4 Stage D – Initial Prioritisation of Potentially Contaminated Sites**

- 4.2.4.1 Potentially contaminated sites number in the thousands and resources dictate that up to ten can be investigated in detail in any one year. Many of these potential sites are expected to contain only trivial amounts of contamination and it is therefore important that resources are directed at the small number of sites which are significantly contaminated.
- 4.2.4.2 In order to direct resources efficiently sites with a former high risk land use are given highest priority.
- 4.2.4.3 This initial prioritisation is carried out according to research by the consultancy Enviro which ranks industries as having high, moderate, slight or low potential to cause significant contamination (Appendix 4).
- 4.2.4.4 Within Aberdeenshire only gasworks and landfills fall into the high risk land use category. In the absence of other pressing sites brought to the Local Authority's attention these sites are subject to further prioritisation and subsequently detailed investigation ahead of sites in other land use categories.

4.2.4.5 To date twenty-six former gasworks and over three hundred landfills have been logged. Of the landfills some fifty are regulated by SEPA and therefore largely fall out of the scope of contaminated land legislation.

4.2.4.6 Once work is complete on the high risk sites resources will be focussed on the medium risk sites. This category includes a wide range of industries and therefore far more candidates than the high risk category.

#### **4.2.5 Stage E – Further Prioritisation of Potentially Contaminated Sites**

4.2.5.1 The procedure for this stage of prioritisation is detailed in Appendix 5. Resources are currently directed at sites in the high risk land use category.

4.2.5.2 Prioritisation software has been considered however there is very little choice for the GIS system used by Aberdeenshire Council. The available software has been found to be time consuming and ineffective.

4.2.5.3 In broad terms sites are prioritised on the basis of risk to: human health, the water environment, designated ecosystems and property. Sites are assigned an initial priority, HIGH, MEDIUM, LOW or VERY LOW, according to Appendix 6. Where two sites are identified as having a similar high priority the site most likely to impact human health will take priority.

4.2.5.4 Sites are further prioritised following brief desk study and site walkover giving consideration to size, visual evidence of contamination, proximity of receptors and development activity on adjacent and nearby land. The priority is adjusted taking into account the additional information.

4.2.5.5 Sites which are assessed as LOW or VERY LOW risk following desk study and site walkover are not subject to intrusive site investigation whilst other potentially higher risk sites are pending, including those in a lower risk land use category.

4.2.5.6 Where two sites are identified as having a similar high priority the site which is of most concern to the public will take priority.

4.2.5.7 Following the assessment of those sites with a former high risk land use inspection of those sites falling into the moderate risk category will commence. This category includes a large number of types of land use common in Aberdeenshire. Further consideration will be given to the use of a prioritisation tool at this stage.

4.2.5.8 Site inspection will remain flexible. If a site not currently scheduled for inspection is brought to the attention of the Local Authority and there is specific evidence that it is impacting a receptor it will be included in the inspection programme at an early date. In particular any sites judged to require immediate or urgent attention will be given the necessary priority.

#### **4.2.6 Stage F – Detailed Site Investigation**

4.2.6.1 Sites with a former high risk use are, unless preliminary investigation dictates the actual risk to be LOW or VERY LOW, subject to detailed inspection ahead of sites from a lower risk land use category.

4.2.6.2 Site investigation is carried out in accordance with current guidance:

- BS 10175:2011 'Investigation of potentially contaminated sites – Code of practice'
- CLR 11 'Model Procedures for the Management of Land Contamination' Environment Agency and DEFRA 2004
- Site investigation will be carried out by suitably trained Local Authority staff or external consultants.

4.2.6.3 Site investigation is carried out in accordance with relevant health and safety requirements. The Service's Environmental Health Specialist Officer (Health & Safety) will be consulted in this respect. External contractors are subject to the Aberdeenshire Council's health and safety guidelines.

4.2.6.4 Risk assessment will be carried out in accordance with current guidance. The Local Authority will ensure that key staff remain up to date with current initiatives and publications.

4.2.6.5 Risk assessment modelling will be used to quantify the impact of contamination on receptors. This will include calculation of exposure to the population; calculation of expected concentrations of contaminants in ground and surface waters; impact on ecological receptors.

4.2.6.6 The Local Authority will ensure that key staff remain up to date with current developments in risk assessment and are trained in the use of appropriate software.

4.2.6.7 Internal and external consultations, as required by the 1990 Act, will be undertaken before any land is determined as contaminated land.

4.2.6.8 If upon investigation a site is not determined as contaminated land, the site will be 'parked' and will remain on the database. It may be reassessed subsequently in the light of the introduction of new receptors or pathways or provision of new information.

#### **4.2.7 Stage G – Remediation**

4.2.7.1 Where detailed site investigation identifies a significant pollutant linkage Aberdeenshire Council will work in a timely fashion to ensure that remedial works are carried out in accordance with the 1990 Act.

4.2.7.2 If urgent remediation is required, for instance if it is demonstrated that significant harm is being caused to human health, the Local Authority will use the provisions of the legislation to instruct immediate works.

4.2.7.3 For non urgent works the Local Authority will, in the first instance, seek to achieve voluntary remediation carried out by and at the expense of the appropriate person or persons. Where this cannot be achieved within an acceptable time frame, for any reason whatsoever, remediation will be secured following formal identification of the land as contaminated land.

#### **4.2.8 Stage H - Review of Strategy Implementation**

4.2.8.1 Several thousand sites have been identified for inspection and whilst, following a preliminary investigation, many of these will be found to be of low risk current resources dictate that a maximum of ten can be the subject of detailed investigation in any one year. Strategy implementation is therefore a long term project. Inevitably review will be necessary to ensure that unforeseen practicalities, changes in legislation, changes in technology, new information, new Service structures and funding availability are taken into account.

4.2.8.2 The Strategy will be reviewed on an ongoing basis and also when:-

- there are legislative changes
- experiences of other Councils are brought to light
- there are revisions to generic standards and risk assessment processes
- each stage of prioritisation is completed

4.2.8.3 The Review will be undertaken by the Scientific Officer in consultation with the Environmental Health Specialist Officer.

#### **4.2.9 Procedures and Timescales**

4.2.9.1 Table 3 provide an outline of work completed and ongoing. Appendices 3, 4, 5 & 6 detail the prioritisation and inspection process.

**Table 3: Timescales**

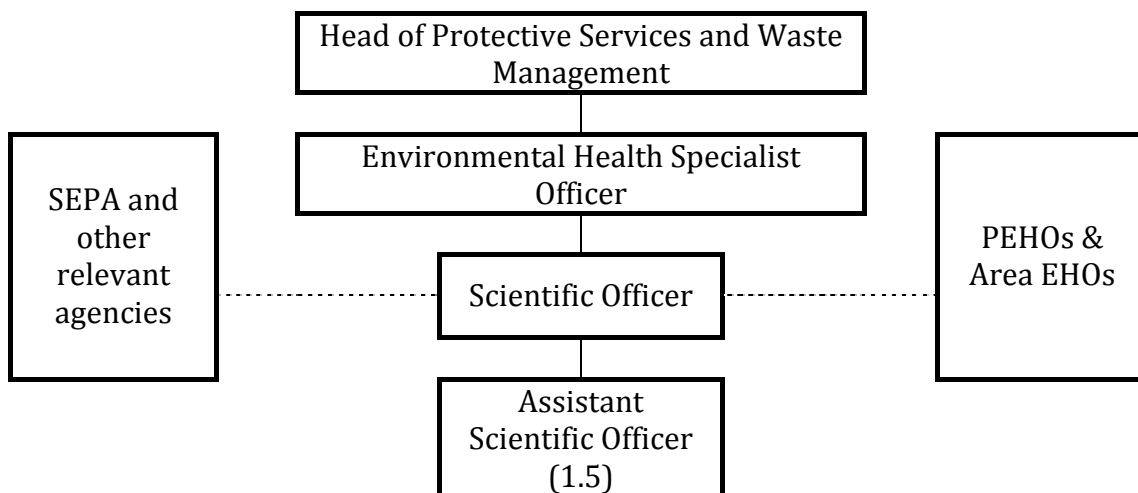
<b>Stage</b>	<b>Progress</b>
A Consultation on the draft strategy	Completed October 2001
B Prioritisation of Geographical Areas	Completed February 2002
C Identification of Potentially Contaminated Sites	Ongoing
D Initial Prioritisation of Potentially Contaminated Sites	Completed 2002
E Further Prioritisation of Potentially Contaminated Sites	Ongoing
F Detailed Site Investigations	Ongoing
G Remediation	Ongoing

- 4.2.9.2 The stages within the Strategy overlap but ensure that, where possible, high priority sites are dealt with first. Sites will be identified as contaminated land at any stage in the procedure once there is sufficient information to take a decision.
- 4.2.9.3 It is expected that there will be high priority sites which go unnoticed because of a lack of information which may cause them to be wrongly classified. These sites may present by being brought to the attention of the Local Authority by a third party or may be investigated following a planning application.

## 5.0 LOCAL AUTHORITY PROCEDURES AND INFORMATION MANAGEMENT

### 5.1 Administration and Funding

**5.1.1** Implementation of the Contaminated Land Strategy is being undertaken by Planning & Environmental Services. Environmental Health has the primary responsibility in terms of identification, remediation and assessment of sites. The Strategy, however, is not just about the identification and remediation of sites in terms of Part IIA of the 1990 Act, but recognises the role of the planning process, both development and strategic roles. There are close working relationships with all relevant Local Authority Services. The main links in strategy implementation are:-



**5.1.2** The Strategy will be overseen by the Infrastructure Services Committee. The Committee has responsibility for adoption of the Strategy. The Policy & Resources Committee has responsibility for funding and staffing issues. Development and implementation of the Strategy is also one of the objectives contained within the Service Plan of Infrastructure Services.

**5.1.3** The Scientific Officer has the main responsibility in terms of strategy implementation, including co-ordinating the identification and subsequent remediation of sites. He is also the first point of contact for requests for information and advice from both within and outwith the Local Authority.

**5.1.4** Capital funding is provided by the Scottish Government under the single outcome agreement and this is expected to be maintained in future years. The funding is not ring fenced and allocation to the contaminated land budget is the responsibility of each Local Authority. Within Aberdeenshire Council £68,000 has been allocated annually since 2000. The amount of funding allocated to each Local Authority remains based



on an early return to the Scottish Vacant and Derelict Land Database despite an initiative to move to a performance based allocation.

## **5.2 Local Authority Interest in Land**

5.2.1 The Local Authority is a major property owner within Aberdeenshire. The vast majority of the Local Authority's holdings will be unrelated to activities which may result/have resulted in contamination. There will however, be sites used for such purposes as landfill, garaging, workshop activities which will require to be assessed. Details of activities, addresses etc are held by the Transportation & Infrastructure Service and have been passed to Environmental Health.

5.2.1 The Local Authority and its predecessor authorities have been involved in leasing land from landowners for landfill and other purposes. Consequently there is the potential for the Local Authority to have responsibility in terms of being the polluter as well as the owner.

5.2.2 The following aspects are fundamental in considering land which the Local Authority has/had an interest.

- Land owned by the Local Authority
- Land occupied or previously occupied by the Local Authority
- Whether the Local Authority is an appropriate person in terms of the remediation requirements

5.2.3 The prioritisation procedure detailed in the previous section will take all sites equally into consideration - Local Authority and privately owned. Sites will be prioritised in terms of their potential to be statutorily determined as contaminated land and Local Authority land will be assessed in the same way as privately owned land. Aberdeenshire Local Authority will undertake works of remediation if it is deemed to be responsible for the contamination, whether by ownership or as a polluter.

## **5.3 Sources of Information**

5.3.1 A variety of data sources are used to facilitate the identification of potential sources, pathways and receptors and form part of the risk assessment of sites. Table 3 gives examples of the main information currently held.

**Table 4: Information Held**

<b>Data</b>	<b>Source of Data</b>
Part A and Part B Processes/PPC Waste Management Sites Surface and Coastal Water Classifications	SEPA
Archaeological/Historical Data	Local Authority Archaeological Service
Ecological Information	Scottish Natural Heritage
Planning Applications, Waste Management Sites, Ancient Monuments, Protected Eco Systems etc	Aberdeenshire Council's Geographic Information System
Former land use data	Environmental Health Records
Vacant and Derelict Land	Scottish Vacant and Derelict Land Survey/Local Authority records
Local Authority Property	Transportation & Infrastructure Services/Environmental Health
Private Water Supplies	Local Authority records
Water Abstraction Points	Scottish Water
Built Environment	Archaeologist, National Trust and SNH, Historic Scotland
Radon Affected Area	Environmental Health
Trade Directories	Libraries
Petroleum licensed sites	Consumer Protection
Individual Site Information	Environmental Health
Digitised Historic and Current Maps – 1865 to present day	Landmark/Ordnance Survey
Aerial photography 1975 and 1988	Hard copy available from Archaeology
Digitised recent aerial photography	Aberdeenshire Council's Geographic Information System
Geological and Hydrogeological Data	British Geological Society

All relevant sources of information and appropriate agencies will be approached to obtain necessary data.

## **5.4 Information Management**

- 5.4.1** The Local Authority's GIS system is the primary tool used to co-ordinate information relating to contaminated land. A contaminated land database linked to GIS has been established. The database is used to co-ordinate site inspection; to record the status of all potentially contaminated sites within the inspection process; and contains all information relating to the public register.
- 5.4.2** In addition to the above sources of information, members of the public, developers, consultants, environmental organisations may bring potential contaminated sites to the Local Authority's attention. Complaints will be addressed in accordance with Aberdeenshire Council's Service Standards and will be handled in a confidential manner. Members of the public submitting a complaint are asked to give details in writing. The urgency of the complaint will be assessed by the Local Environmental Health Officer and a visit scheduled accordingly. Most environmental complaints are visited within one day of receipt and will be dealt with as appropriate. Complaints are logged within the FLARE software system and will also be entered onto the GIS Contaminated Land Database. Discretion will be exercised in terms of anonymously supplied complaints.
- 5.4.3** A further source of information will be submission of reports from landowners, developers and consultants detailing proposed remediation of sites which are not the subject of a planning application or Part IIA. The information will be assessed in an appropriate timescale, dependant upon whether there are known pollutant linkages or potential linkages, with particular reference to public health.

## **5.5 Evaluation of Information**

- 5.5.1** In order for a site to be determined as contaminated land, a pollutant linkage has to be established. The collection of data as detailed above will provide information pertaining to sources of contamination and receptors. Generally speaking, it will not give information directly about pathways and it will not assess the risk or the degree of risk to receptors.
- 5.5.2** Standards and guidelines appropriate to a site will be utilised to evaluate the degree or the extent to which a receptor, including the water environment, will be affected. There is however no single set of guidelines that can conveniently be used. Several contaminated land exposure assessment models are available including CLEA which has been developed by the Environment Agency and staff will remain abreast of new developments in order to carry out the most appropriate assessment.
- 5.5.3** Risk assessment can be expressed in a qualitative manner i.e, low, moderate, high risk, etc, comprising an assessment of the pollutant linkages and comparison of observed contaminant concentrations with suitable generic guidelines.

- 5.5.4** Caution needs to be exercised when using generic criteria: the context of the development of these values and the site specific circumstances must be taken into account in reaching a conclusion. Aberdeenshire Council will not rely on these generic standards alone. Where generic criteria are exceeded, site-specific, quantitative, assessments based on a conceptual site model will be used. Where the Local Authority is assessing contaminated land reports submitted by external contractors, the same principles will apply and such contractors will be required to ensure a site-specific risk assessment is undertaken. Risk assessments will be done in a consistent manner.
- 5.5.5** Quantitative assessments require the use of software models to calculate the likely amount of contaminant impacting a receptor.
- 5.5.6** In the case of the water environment reference will be made to SEPA's policies and to any standards set for groundwater and surface water affected by the site. Where it appears to the Local Authority that the water environment is being significantly impacted SEPA will be consulted.
- 5.5.7** In the case of human health the threshold of unacceptable risk may be less clear cut and indeed such considerations have a political element. Risk assessment is dependent on the interpretation of complex data. This requires a thorough understanding of exposure conditions, toxicological effects and technical uncertainties. Health Protection Scotland will be consulted where any site appears to pose a risk to human health.

## **5.6 Interaction with Other Regimes**

- 5.6.1** Part IIA of the 1990 Act and associated legislation and statutory guidance do not deal with all issues pertaining to contaminated land. Prior to the introduction of Part IIA, contaminated land would have been dealt with under the nuisance provisions of the Environmental Protection Act 1990; these provisions no longer apply. However, there are still a number of other regulatory regimes in addition to Part IIA that interact with the Strategy.
- 5.6.2** **Planning & Development Control**  
Land contamination can be addressed by the Planning system in terms of planning policy and development control for sites being developed for new use. Aberdeenshire Council's Structure and Local Plans set out the strategic policy framework for dealing with issues, including contaminated land. In relation to planning decisions, where appropriate, land contamination may be regarded as a material consideration when individual applications are considered as part of the development control process. Guidance to planning authorities is set out in PAN33 "Development of Contaminated Land" and PAN51 "Planning and Environmental Protection". PAN33 indicates that the principles of Part IIA should be applied to sites which are the subject of a planning application. However, sites statutorily determined as contaminated land will be addressed under Part IIA rather than through Planning controls. Some sites will be impacted by contamination although no receptor is

being affected. Development of such a site may introduce receptors and pathways and therefore it is essential that such proposals are assessed prior to development taking place or approval being awarded. Environmental Health will liaise with Planning in this respect and Planning Officers will have access to the Contaminated Land Database. It is anticipated that the majority of contaminated land issues will be addressed through the planning process. Liaison will also be necessary with Building Control as the Building Regulations require appropriate protective measures for contaminated sites.

**5.6.3 Waste Management Licensing**

Contaminated land issues will arise from landfill sites. However, where contamination arises through a breach of the site licence, this will be dealt with by SEPA under their licensing powers. Where contamination arises from the illegal deposit of waste, Section 59 of the Environmental Protection Act will be used. Part IIA will apply to closed landfill sites.

**5.6.4 Pollution, Prevention and Control (Scotland) Regulations 2000 (P.P.C.)**

Under these Regulations site operators will be required to submit a site assessment survey with an application for a permit to operate an installation so that the condition of the site prior to operation under PPC is established. A site report also requires to be submitted on surrender of a permit in order to establish that there has been no deterioration in site condition. This will supersede the current IPC (Integrated Pollution Control) system and will ensure that new contamination on such sites will not occur. However, contamination on such sites prior to being licensed will still require to be addressed through Part IIA of the Environmental Protection Act 1990.

**5.6.5 Water Pollution**

The Control of Pollution Act 1974 makes it an offence to cause or knowingly permit the entry of poisonous, noxious, polluting or solid waste matter into the water environment. The Anti-Pollution Works (Scotland) Regulations 2003 give SEPA powers to take action to address damage caused by the offence. There will be close liaison between SEPA and the local authority in respect of lead enforcement agency.

**5.6.6 Environmental Liability (Scotland) Regulations 2009**

SEPA is the enforcing authority for these Regulations which require preventative measures or remediation for activities which are deemed to present an imminent threat of environmental damage or which have caused significant damage. The legislation applies to specific circumstances or activities, such as waste management operations, and gives protection to land, water, and habitats and protected species.

**5.6.7 Other**

Other legislation such as: The Food and Environment Protection Act 1985; The Health & Safety At Work Etc Act 1974; Finance Act 1996 (Landfill Tax); and The Control of Major Accident Hazards Regulations 1999, may be referred to in the appropriate circumstances.

## **6.0 GENERAL LIAISON AND COMMUNICATION**

### **6.1 General**

**6.1.1** Aberdeenshire Council will work in association with a number of organisations in implementing its strategy. It is important therefore that lines of communication are clear and that frameworks are established in which discussions and consultations can take place. Procedural documents will be developed to cover both internal and external connections and consultation processes.

### **6.2 Consultation**

**6.2.1** There was extensive consultation the draft strategy as described in 4.2.1.

**6.2.2** A framework document has been established between local authorities and SEPA and local working arrangements have been developed involving the SEPA Regional Contaminated Land Specialist and SEPA teams.

**6.2.3** Links are maintained through the North of Scotland Pollution Liaison Group and the Scottish Pollution Control Co-ordinating Committee to facilitate discussion of common issues and to work towards a uniform approach to contaminated land across Scotland. There may be situations where joint working with adjoining local authorities will be required.

### **6.3 Public Register**

**6.3.1** The Local Authority is required to maintain a public register. This will be held at Gordon House, Inverurie and a copy at Woodhill House in Aberdeen under control of the Environmental Health Specialist Officer. Information will be available on hard copy, within the Aberdeenshire Council's GIS and also on the Aberdeenshire Council's web site. The Contaminated Land (Scotland) Regulations 2000 detail the information that is required to be on the register (see Appendix 7).

### **6.4 Owners/Occupiers and Other Interest Parties**

**6.4.1** Guidance from the Scottish Government indicates that local authorities should seek voluntary remediation before considering service of a Remediation Notice. This is in accordance with enforcement policies adopted by Environmental Health. It is important to involve all relevant parties at an early stage as it is believed that this will achieve more effective action than resorting to use of remediation notices. Owners and previous operators may become involved in discussions with regard to the prioritisation of sites. It is intended that relevant parties are consulted at the earliest possible stage and before sites are designated.

**6.4.2** Appropriate persons will be given adequate advance notice prior to the Local Authority designating a site as contaminated land. Leaflets will be available explaining the legislation and the Councils policy and

procedures. An open and frank exchange of information and views will be encouraged between the Local Authority and appropriate persons.

**6.4.3** Land quality information will be available to the public in accordance with the Environmental Information (Scotland) Regulations 2004. Implementation of enforcement provisions will also take into account relevant legislation such as Human Rights and Data Protection. Procedures re in place to deal with enquiries relating to property sales, general requests for information, and handling consultant's/owners own site reports.

## **6.5 Information to SEPA**

**6.5.1** SEPA will produce periodic reports on contaminated land in Scotland. This report will largely be based on information supplied by local authorities. Systems will be in place to ensure the necessary information is passed to SEPA as and when required.

## **6.6 Risk Communication**

**6.6.1** The complex nature of contaminated land issues does not lend itself to easy explanation to the lay person. Guidance is provided by the document 'Communicating Understanding of Contaminated Land Risks' produced by Scottish and Northern Ireland Forum for Environmental Research. The very mention of contaminated land can raise alarm within the community and it is important that the public have access to Local Authority officers to discuss concerns and that there is effective two way communication. It is important that interested parties understand the reasons for designating a site as contaminated land and are given clear guidance about any risks. Similarly, follow-up remediation strategies are required to be defensible and publicly available. Guidance detailing the Local Authority's role will be produced and made available to the public. It is also important that the powers and roles of local authorities and SEPA are clearly stated and made available. A good working relationship with the Aberdeenshire Council's Public Relations Section will ensure factual information is imported to the media.

## **APPENDIX 1: Special Sites**

### **The Contaminated Land (Scotland) Regulations 2000**

#### **Land Required to be Designated as a Special Site**

2.—(1) Land which has been identified as contaminated within the meaning of Part IIA of the Environmental Protection Act 1990 and which is of the following descriptions is prescribed for the purposes of section 78C(8) as land required to be designated as a special site:—

- (a) land to which regulation 3 applies;
- (b) land which is contaminated land by reason of waste acid tars in, on or under the land;
- (c) land on which any of the following activities have been carried on at any time:—
  - (i) the purification (including refining) of crude petroleum or of oil extracted from petroleum, shale or any other bituminous substance except coal; or
  - (ii) the manufacture or processing of explosives;
- (d) land on which a prescribed process designated for central control has been or is being carried on, other than land which is contaminated land solely as a result of things being done which are required by way of remediation;
- (e) land within a nuclear site;
- (f) land owned or occupied by or on behalf of—
  - (i) the Secretary of State for Defence;
  - (ii) the Defence Council;
  - (iii) an international headquarters or defence organisation; or
  - (iv) the service authority of a visiting force,  
being land used for naval, military or air force purposes;
- (g) land on which the manufacture, production or disposal of—
  - (i) chemical weapons;
  - (ii) any biological agent or toxin which falls within section 1(1)(a) of the Biological Weapons Act 1974; or
  - (iii) any weapon, equipment or means of delivery which falls within section 1(1)(b) of that Act,  
has been carried on at any time; and
- (h) land which—



(i) is adjoining or adjacent to land of a description specified in sub paragraphs (b) to (g) above; and

(ii) is contaminated land by virtue of substances which appear to have escaped from land of such a description.

(2) For the purposes of paragraph (1)(b) above, “waste acid tars” are tars which–

(a) contain sulphuric acid;

(b) were produced as a result of the refining of benzole, used lubricants or petroleum; and

(c) are or were stored on land used as a retention basin for the disposal of such tars.

(3) In paragraph (1)(d) above, “prescribed process” has the same meaning as in Part I of the Environmental Protection Act 1990 and the reference to designation for central control is a reference to designation under section 2(4) (which provides for the processes to be designated for central or local control).

(4) In paragraph (1)(e) above, “nuclear site” means–

(a) any site in respect of which or part of which a nuclear site licence is for the time being in force; or

(b) any site in respect of which, or part of which, after the revocation or surrender of a nuclear site licence, the period of responsibility of the licensee has not come to an end,

and “nuclear site licence”, “licensee” and “period of responsibility” have the meaning given by the Nuclear Installations Act 1965.

(5) For the purposes of paragraph (1)(f) above, land used for residential purposes or by the Navy, Army and Air Force Institutes shall be treated as land used for naval, military or air force purposes only if the land forms part of a base occupied for naval, military or air force purposes.

(6) In paragraph (1)(f) above–

“international headquarters” and “defence organisation” mean any international headquarters or defence organisation designated for the purposes of the International Headquarters and Defence Organisations Act 1964;

“service authority” and “visiting force” have the same meaning as in Part I of the Visiting Forces Act 1952.

(7) In paragraph (1)(g) above, “chemical weapon” has the same meaning as in sub-section (1) of section 1 of the Chemical Weapons Act 1996 disregarding sub-section (2) of that section.

## APPENDIX 2: Categories of Significant Harm

### Environmental Protection Act 1990: Part IIA Contaminated Land Statutory Guidance Edition 2, Table A, A.24

	Type of Receptor	Description of Harm to that Type of Receptor that is to be Regarded as Significant Harm
1	Human beings	<p>Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions.</p> <p>For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned.</p> <p>In this Chapter, this description of significant harm is referred to as a "human health effect".</p>
2	<p>Any ecological system, or living organism forming part of such a system, within a location which is:</p> <ul style="list-style-type: none"> <li>• an area notified as an area of special scientific interest (commonly called a Site of Special Scientific Interest - SSSI) under section 28 of the Wildlife and Countryside Act 1981;</li> <li>• any land declared a national nature reserve under section 35 of that Act;</li> <li>• any area designated as a marine nature reserve under section 36 of that Act;</li> <li>• an Area of Special Protection for Birds, established under section 3 of that Act;</li> <li>• any European Site within the meaning of regulation 10 of the Conservation (Natural Habitats etc) Regulations 1994 (ie Special Areas of Conservation and Special Protection Areas);</li> <li>• any candidate Special Areas of Conservation (see Scottish Office Circular 6/1995) or potential Special Protection Areas given equivalent protection;</li> <li>• any habitat or site afforded policy protection (ie candidate Special Areas of Conservation, potential Special Protection Areas and listed Ramsar sites);</li> <li>• any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949; or</li> <li>• any National Park designated under the National Parks (Scotland) Act 2000.</li> </ul>	<p>For any protected location:</p> <ul style="list-style-type: none"> <li>• harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any substantial part of that location; or</li> <li>• harm which affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location.</li> </ul> <p>In addition, in the case of a protected location which is a European Site (or a candidate Special Area of Conservation or a potential Special Protection Area), harm which is incompatible with the favourable conservation status of natural habitats at that location or species typically found there.</p> <p>In determining what constitutes such harm, the local authority should have regard to the advice of Scottish Natural Heritage and to the requirements of the Conservation (Natural Habitats etc) Regulations 1994.</p> <p>In this Chapter, this description of significant harm is referred to as an "ecological system effect".</p>

3	<p>Property in the form of:</p> <ul style="list-style-type: none"> <li>• crops, including timber;</li> <li>• produce grown domestically, or on allotments, for consumption;</li> <li>• livestock;</li> <li>• other owned or domesticated animals;</li> <li>• wild animals which are the subject of shooting or fishing rights.</li> </ul>	<p>For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage.</p> <p>The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or loss in value is caused by a pollutant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss.</p> <p>In this Chapter, this description of significant harm is referred to as an "animal or crop effect".</p>
4	<p>Property in the form of buildings. For this purpose, "building" means "any structure or erection, and any part of a building including any part below ground level, but does not include plant or machinery comprised in a building".</p>	<p>Structural failure, substantial damage or substantial interference with any right of occupation. For this purpose, the local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended.</p> <p>Additionally, in the case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled.</p> <p>In this Chapter, this description of significant harm is referred to as a "building effect".</p>

### APPENDIX 3: Prioritisation of Geographical Areas

Aberdeenshire is covered by ninety-one whole or partial ten kilometre grid squares.

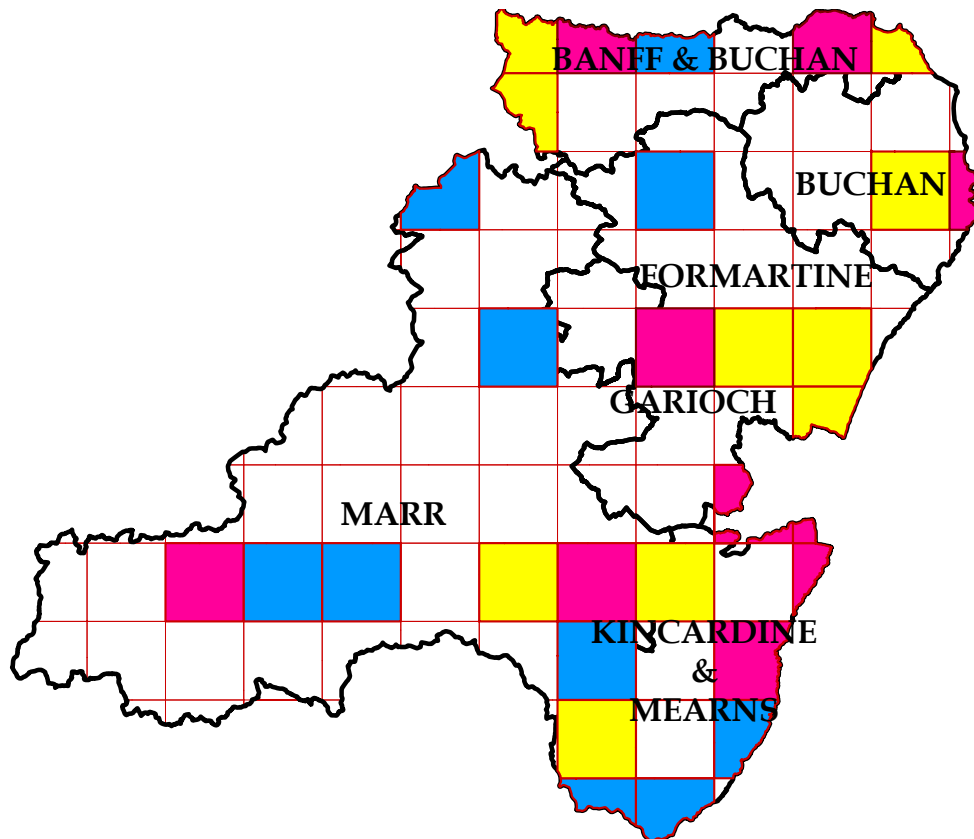
These grid squares have been prioritised in order to focus data collection on those areas with the greatest number of potential receptors first.

The following data were collected for each grid square:

Number of postal addresses per square kilometre	PA
Overall permeability of aquifer	high/medium/low
Groundwater abstraction	yes/no
Surface water abstraction	yes/no
Presence of a protected location (ecological site protected by the statutory guidance)	yes/no

Scores were calculated and totalled for each grid square to provide a ranked list

PA/2	
Groundwater abstraction+high permeability aquifer	10
Groundwater abstraction+medium permeability aquifer	5
No groundwater abstraction or low permeability aquifer	0
Surface water abstraction	20
Protected location	10



*Distribution of prioritised grid units*

Grid Coordinates	Postal Addresses per km <sup>2</sup>	Permeability of Aquifer	Groundwater Abstraction	Surface Water Abstraction	Ecological Site	Pop Score	Gw A Score	Sw A Score	Ecol Score	Total Score
4184	328.04	Moderate	No	Yes	Yes	164	0	20	10	194
3880	203.84	Moderate	No	No	No	101	0	0	0	101
3979	174.64	Moderate	No	No	Yes	87	0	0	10	97
3986	101.25	Moderate	No	No	Yes	50	0	0	10	60
3878	58.43	High	No	No	Yes	29	10	0	10	49
3686	53.23	Moderate	Yes	No	Yes	26	5	0	10	41
3679	18.93	Moderate	No	Yes	Yes	9	0	20	10	39
3782	59.79	Moderate	No	No	Yes	29	0	0	10	39
3980	16.16	Moderate	No	Yes	Yes	8	0	20	10	38
3179	3.40	Moderate	Yes	Yes	Yes	1	5	20	10	36
3484	3.38	Moderate	Yes	Yes	Yes	1	5	20	10	36
3279	1.61	Moderate	Yes	Yes	Yes	0	5	20	10	35
3379	10.70	Moderate	No	Yes	Yes	5	0	20	10	35
3877	28.55	High	No	No	Yes	14	10	0	10	34
3786	48.22	Moderate	No	No	Yes	24	0	0	10	34
3582	4.36	Moderate	No	Yes	Yes	2	0	20	10	32
3678	0.18	High	No	Yes	No	0	10	20	0	30
3776	18.28	High	No	No	Yes	9	10	0	10	29
3784	16.37	Moderate	No	Yes	No	8	0	20	0	28
3676	15.19	High	No	No	Yes	7	10	0	10	27
3981	34.46	Moderate	No	No	Yes	17	0	0	10	27
4086	34.83	Moderate	No	No	Yes	17	0	0	10	27
3585	33.63	Moderate	No	No	Yes	16	0	0	10	26
3677	5.10	High	No	No	Yes	2	10	0	10	22
3579	15.35	Moderate	Yes	No	Yes	7	5	0	10	22
4084	14.43	Moderate	Yes	No	Yes	7	5	0	10	22
3779	25.66	Moderate	No	No	Yes	12	0	0	10	22
3586	24.90	Moderate	No	No	Yes	12	0	0	10	22
3882	21.22	Moderate	No	No	Yes	10	0	0	10	20
3982	19.93	Moderate	No	No	Yes	9	0	0	10	19
3777	17.71	High	No	No	No	8	10	0	0	18
4083	17.22	Moderate	No	No	Yes	8	0	0	10	18
3983	37.38	Moderate	No	No	No	18	0	0	0	18
3482	4.87	Moderate	Yes	No	Yes	2	5	0	10	17
3584	14.32	Moderate	No	No	Yes	7	0	0	10	17
3381	2.57	Moderate	Yes	No	Yes	1	5	0	10	16
4183	13.00	Moderate	No	No	Yes	6	0	0	10	16
3876	12.44	High	No	No	No	6	10	0	0	16
3885	12.09	Moderate	No	No	Yes	6	0	0	10	16
3781	33.53	Moderate	No	No	No	16	0	0	0	16
3881	32.92	Moderate	No	No	No	16	0	0	0	16
3281	0.00	Moderate	Yes	No	Yes	0	5	0	10	15
3483	1.13	Moderate	Yes	No	Yes	0	5	0	10	15
3783	11.55	Moderate	No	No	Yes	5	0	0	10	15
3883	11.51	Moderate	No	No	Yes	5	0	0	10	15
3886	10.36	Moderate	No	No	Yes	5	0	0	10	15

4082	11.39	Moderate	No	No	Yes	5	0	0	10	15
4085	10.89	Moderate	No	No	Yes	5	0	0	10	15
3685	9.79	Moderate	No	No	Yes	4	0	0	10	14
3884	8.36	Moderate	No	No	Yes	4	0	0	10	14
3583	19.49	Moderate	Yes	No	No	9	5	0	0	14
3681	7.50	Moderate	No	No	Yes	3	0	0	10	13
3480	6.55	Moderate	No	No	Yes	3	0	0	10	13
3780	6.68	Moderate	No	No	Yes	3	0	0	10	13
3879	6.64	Moderate	No	No	Yes	3	0	0	10	13
3785	17.35	Moderate	Yes	No	No	8	5	0	0	13
3778	2.94	High	No	No	No	1	10	0	0	11
3577	2.10	Moderate	No	No	Yes	1	0	0	10	11
2978	0.00	Moderate	No	No	Yes	0	0	0	10	10
2979	0.00	Moderate	No	No	Yes	0	0	0	10	10
2980	0.00	Moderate	No	No	Yes	0	0	0	10	10
3077	0.00	Moderate	No	No	Yes	0	0	0	10	10
3078	0.35	Moderate	No	No	Yes	0	0	0	10	10
3079	0.02	Moderate	No	No	Yes	0	0	0	10	10
3080	0.00	Moderate	No	No	Yes	0	0	0	10	10
3177	0.09	Moderate	No	No	Yes	0	0	0	10	10
3178	0.10	Moderate	No	No	Yes	0	0	0	10	10
3180	0.00	Moderate	No	No	Yes	0	0	0	10	10
3181	0.00	Moderate	No	No	Yes	0	0	0	10	10
3277	0.00	Moderate	No	No	Yes	0	0	0	10	10
3278	0.01	Moderate	No	No	Yes	0	0	0	10	10
3280	0.48	Moderate	No	No	Yes	0	0	0	10	10
3377	0.00	Moderate	No	No	Yes	0	0	0	10	10
3380	0.31	Moderate	No	No	Yes	0	0	0	10	10
3382	0.00	Moderate	No	No	Yes	0	0	0	10	10
3478	0.00	Moderate	No	No	Yes	0	0	0	10	10
3479	1.77	Moderate	No	No	Yes	0	0	0	10	10
4185	0.89	Moderate	No	No	Yes	0	0	0	10	10
3680	9.99	Moderate	Yes	No	No	4	5	0	0	9
3984	19.45	Moderate	No	No	No	9	0	0	0	9
3581	16.45	Moderate	No	No	No	8	0	0	0	8
3481	2.31	Moderate	Yes	No	No	1	5	0	0	6
3682	13.97	Moderate	No	No	No	6	0	0	0	6
3384	0.00	Moderate	Yes	No	No	0	5	0	0	5
3985	10.43	Moderate	No	No	No	5	0	0	0	5
3580	6.33	Moderate	No	No	No	3	0	0	0	3
3683	4.12	Moderate	No	No	No	2	0	0	0	2
3684	4.41	Moderate	No	No	No	2	0	0	0	2
3378	0.07	Moderate	No	No	No	0	0	0	0	0
3383	0.00	Moderate	No	No	No	0	0	0	0	0
3578	0.00	Moderate	No	No	No	0	0	0	0	0

## APPENDIX 4: Land Use Ranking

### HIGH RISK SITES

Asbestos and asbestos products manufacture  
Bulk inorganic chemicals manufacture  
Bulk organic chemicals manufacture  
Civilian manufacture & storage of weapons, ammunition, explosives and rockets  
Coal gasification/carbonisation  
Fine chemicals manufacture  
Hazardous waste treatment

Landfill and other waste treatment/disposal including incinerators  
Lead metal ore processing and refining  
Oil refining and petrochemical production  
Pesticide manufacture  
Pharmaceutical manufacture  
Iron and steel manufacturing

### MODERATE RISK SITES

All military establishments  
Areas of mining and single groups of shafts other than coal  
Disturbed or filled ground including quarries  
Docks  
Drum and tank cleaning and recycling  
Electrical equipment manufacture  
Electricity sub-stations  
Electroplating and other metal finishing  
Fertiliser manufacture  
Foundries  
Garages/filling stations  
Gas holders  
Mechanical engineering  
Metal (other than iron or lead) processing/refining  
Mineral processing (bricks, cement, tarmac etc)

Non-ferrous metal ore mining  
Paint and ink manufacture  
Power stations  
Precious metals recovery  
Pulp and paper manufacture  
Research laboratories  
Scrap yards  
Sewage works  
Ship building/breaking  
Spoil/slag heaps  
Tanneries and animal processing works  
Textile production and dyeing  
Tyre manufacture and other rubber processing  
Vehicle manufacture  
Wood preservative production and timber treatment  
Works/factories (use not specified)

### SLIGHT RISK SITES

Airports and airfields  
Batteries, accumulators, primary cells, electric motors, generators and transformers  
Building trades products manufacture  
Ceramics - tableware and other  
Dry cleaners  
Glass manufacture

Printing works  
Railway tracks  
Railway yards and sidings  
Road haulage yards  
Saw mills  
Timber products manufacture  
Toiletries, detergents, disinfectants etc manufacture

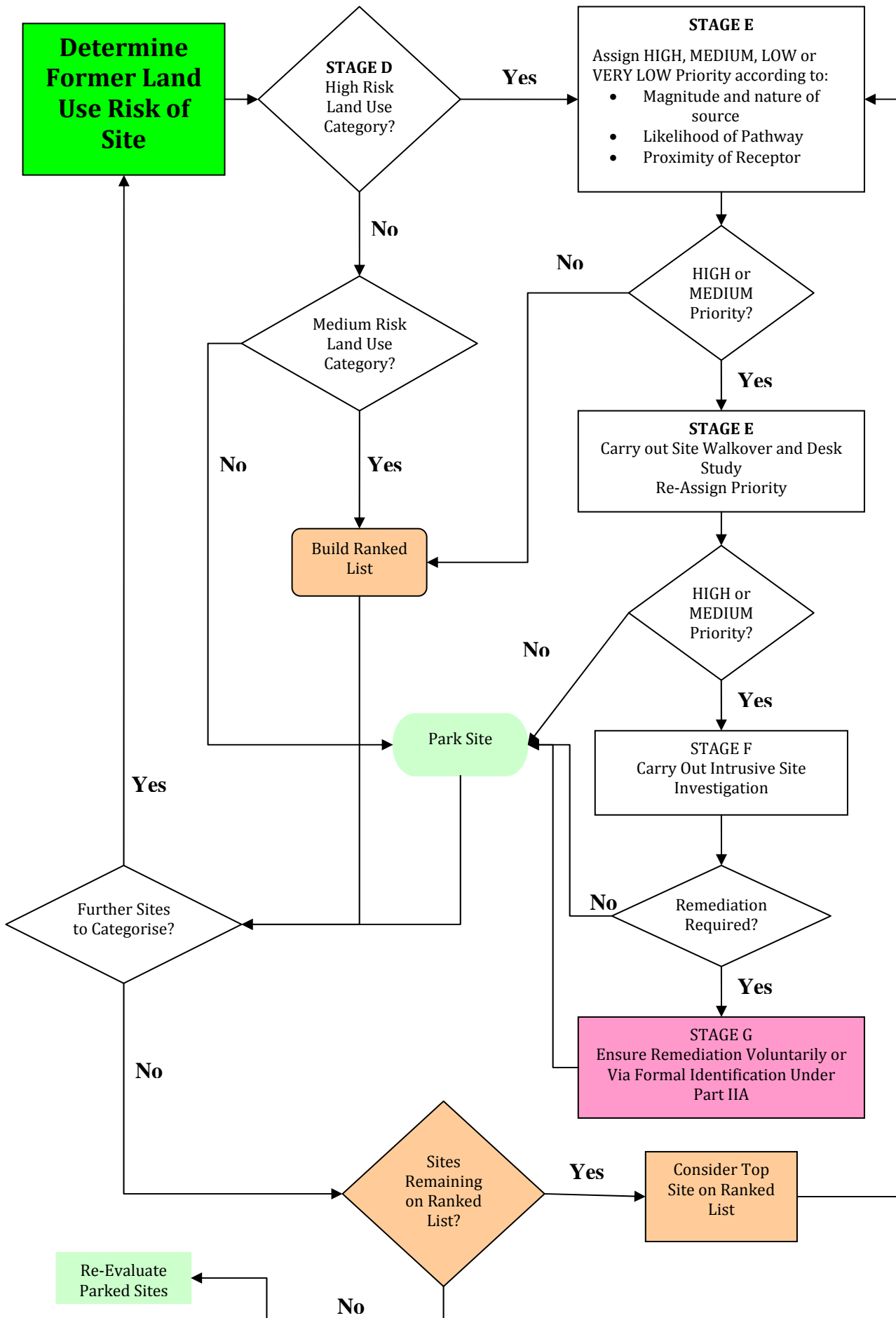
### LOW RISK SITES

Agriculture  
Coal storage depot  
Distilleries  
Extraction of alluvial sediments  
Food preparation/processing including brewing

Smithies (small scale general blacksmith)  
Hospitals  
Mineral railways  
Oil shale and coal mining  
Quarrying of all stone and ores, open cast mines and associated works

**APPENDIX 5: Prioritisation Procedure**





## APPENDIX 6: Priority Categories

<b>HIGH Priority</b>	<p>Site probably or certainly not suitable for present use and environmental setting.</p> <p>Contaminants probably or certainly present and very likely to have an unacceptable impact on statutory receptors.</p> <p>Urgent action needed in the short term.</p>
<b>MEDIUM Priority</b>	<p>Site may not be suitable for present use and environmental setting.</p> <p>Contaminants probably or certainly present and likely to have an unacceptable impact on statutory receptors.</p> <p>Action may be needed in the medium term.</p>
<b>LOW Priority</b>	<p>Site considered suitable for present use and environmental setting.</p> <p>Contaminants may be present but unlikely to have an unacceptable impact on statutory receptors.</p> <p>Action unlikely to be needed whilst site remains in present use or otherwise remains undisturbed.</p>
<b>VERY LOW Priority</b>	<p>Site considered suitable for present use and environmental setting.</p> <p>Contaminants may be present but very unlikely to have an unacceptable impact on statutory receptors.</p> <p>No action needed whilst site remains in present use or otherwise remains undisturbed.</p>

After:

*'Prioritisation and Categorisation Procedure for Sites which may be Contaminated'*, CLR Report No 6, Department of the Environment 1995

## **APPENDIX 7: Content of the Public Register**

### **The Contaminated Land (Scotland) Regulations 2000**

#### **SCHEDULE 4**

#### **REGISTERS**

A register maintained by an enforcing authority under section 78R shall contain full particulars of the following matters:-

##### **Identification notices**

1. Where the authority identifies any contaminated land in its area under section 78B(3), the notice given under that subsection.

##### **Remediation notices**

2. In relation to a remediation notice served by the authority-

- a) the name and address of the person on whom the notice is served;
- b) the location and extent of the contaminated land to which the notice relates (in this paragraph referred to as the "contaminated land in question"), sufficient to enable it to be identified whether by reference to a plan or otherwise;
- c) the significant harm or pollution of controlled waters by reason of which the contaminated land in question is contaminated land;
- d) the substances by reason of which the contaminated land in question is contaminated land and, if any of the substances have escaped from other land, the location of that other land;
- e) the current use of the contaminated land in question;
- f) what each appropriate person is to do by way of remediation and the periods within which they are required to do each of the things; and
- g) the date of the notice.

##### **Appeals against remediation notices**

3. Any appeal against a remediation notice served by the authority, including the name and address of the appellant, and the date of the appeal.

4. Any decision on such an appeal.

### **Remediation declarations**

5. Any remediation declaration prepared and published by the authority under section 78H(6).
6. In relation to any such remediation declaration–
  - a) the location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to a plan or otherwise; and
  - b) the matters referred to in sub-paragraphs (c), (d) and (e) of paragraph 2 above.

### **Remediation statements**

7. Any remediation statement prepared and published by the responsible person under section 78H(7) or by the authority under section 78H(9).
8. In relation to any such remediation statement–
  - a) the location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to a plan or otherwise; and
  - b) the matters referred to in sub-paragraphs (c), (d) and (e) of paragraph 2 above.

### **Designation of special sites**

9. In the case of SEPA, as respects any land in relation to which it is the enforcing authority, and in the case of a local authority, as respects any land in its area–
  - a) any notice given by a local authority under sub-section (1)(b) or (5)(a) of section 78C, or by the Scottish Ministers under section 78D(4)(b), which, by virtue of section 78C(7) or section 78D(6) respectively, has effect as the designation of any land as a special site;
  - b) the provisions of regulation 2 or 3 by virtue of which the land is required to be designated as a special site;
  - c) any notice given by SEPA under section 78Q(1)(a) of its decision to adopt a remediation notice; and
  - d) any notice given by or to the enforcing authority under section 78Q(4) terminating the designation of any land as a special site.

### **Notification of claimed remediation**

10. Any notification given to the authority for the purposes of section 78R(1)(h) or (j).

### **Convictions for offences under section 78M**

**11.** Any conviction of a person for any offence under section 78M in relation to a remediation notice served by the authority, including the name of the offender, the date of conviction, the penalty imposed and the name of the Court.

**Guidance issued under section 78V(1)**

**12.** In the case of SEPA, the date of any guidance issued by it under section 78V(1) and, in the case of a local authority, the date of any guidance issued by SEPA to it under that sub-section.

**Other environmental controls**

**13.** Where the authority is precluded by virtue of section 78YB(1) from serving a remediation notice–

- a) the location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to a plan or otherwise;
- b) the matters referred to in sub-paragraphs (c), (d) and (e) of paragraph 2 above; and
- c) any steps of which the authority has knowledge, carried out under section 27, towards remedying any significant harm or pollution of controlled waters by reason of which the land in question is contaminated land.

**14.** Where the authority is precluded by virtue of section 78YB(3) from serving a remediation notice in respect of land which is contaminated land by reason of the deposit of controlled waste or any consequences of its deposit–

- a) the location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to a plan or otherwise;
- b) the matters referred to in sub-paragraphs (c), (d) and (e) of paragraph 2 above; and
- c) any steps of which the authority has knowledge, carried out under section 59, in relation to that waste or the consequences of its deposit, including in a case where a waste collection authority (within the meaning of section 30(3)) took those steps or required the steps to be taken, the name of that authority.

**15.** Where, as a result of a consent given under Part II of the Control of Pollution Act 1974), the authority is precluded by virtue of section 78YB(4) from specifying in a remediation notice any particular thing by way of remediation which it would otherwise have specified in such a notice–

- a) the consent;
- b) the location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to a plan or otherwise; and
- c) the matters referred to in sub paragraphs (c), (d) and (e) of paragraph 2 above.

## REFERENCES

### Legislation

The Contaminated Land (Scotland) Regulations 2000 (SSI 2000 No. 178)

The Anti-Pollution Works (Scotland) Regulations 2003 (SSI 2003 No. 168)

Environmental Information (Scotland) Regulations 2004 (SSI No. 520)

The Contaminated Land (Scotland) Regulations 2005 (SSI 2005 No. 658)

The Radioactive Contaminated Land (Scotland) Regulations 2007 (SSI 2007 No. 179)

The Radioactive Contaminated land (Scotland) Amendment Regulations 2009 (SSI 2000 No. 202)

The Environmental Liability (Scotland) Regulations 2009 (SSI 2009 No. 266)

### Government Publications

Environmental Protection Act 1990: Part IIA Contaminated Land – Statutory Guidance: Edition 2, May 2006 Paper SE/2006/44

The Radioactive Contaminated Land (Scotland) Regulations 2007 – Statutory Guidance, March 2008

‘Development of Contaminated Land’, Planning Advice Note 33 (PAN 33), Scottish Executive, October 2000

‘Contaminated Land Inspection Strategies: Technical Advice for Local Authorities’, DETR 2001

‘Contaminated Land Inspection Strategies: Advice for Scottish Local Authorities’, Scottish Executive 2001

### SEPA Publications

*‘Dealing with Land Contamination in Scotland’*: a review of progress 2000-2008, May 2009

### Environment Agency Publications

*‘Prioritisation and Categorisation Procedure for Sites which may be Contaminated’*, CLR Report No 6, Department of the Environment 1995

### Aberdeenshire Council Publications

The Aberdeenshire Local Plan 2006, and draft 2011

<http://www.aberdeenshire.gov.uk/planning/finalised/index.asp>

<http://www.aberdeenshire.gov.uk/planning/ldp/index.asp>

Other

*'Model Procedures for the Management of Land Contamination'*, CLR 11, Environment Agency and DEFRA 2004

*'Communicating Understanding of Contaminated Land Risks'*, SNIFFER 2010

*'Investigation of potentially contaminated sites – Code of practice'*, BS 10175, 2011