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#### FOREWORD

Perth and Kinross Council has a duty under the Contaminated Land (Scotland) Regulations 2000 to implement a strategy to deal with the legacy of sites which, may have through their past use become contaminated by virtue of the processes conducted. The Council has a statutory duty to, "cause its area to be inspected from time to time" and inspect the area to identify sites that have the possibility or the significant possibility of causing harm to human health and the environment.

The regime is designed to prioritise and deal with the sites that pose the worst threat of pollution and causing harm to human health and the environment.

Perth and Kinross by way of its natural heritage, has never been industrialised by the heavily polluting industries like other parts of Scotland during the industrial revolution and the post-war years. The geographical distribution of the towns and villages throughout Perth and Kinross area and it's more rural heritage has perhaps given a reprieve from the legacy of contamination that will have to be dealt with by other Councils that have seen historically, heavier industrialisation.

This does not mean however that we don't have a problem with historical contamination that has to be dealt with through the contaminated land and planning regimes.

With the increasing pressure on Greenfield sites, Perth and Kinross Council must seek to capitalise on the development potential of brownfield sites and where possible promote the re-development of these sites. Through policy development we can realise a sustainable future, reducing the impact of our development needs and sustaining our natural heritage and biodiversity in an area of outstanding natural beauty.

The new regime cannot be viewed in isolation and we are integrating the policies on the strategic platform and dovetailing to provide an integrated approach to deal with not just the sites which are identified through the regime but brownfield sites in general.

This will ensure that we not only capitalise on the value of the land as a resource but also unlock the full economic potential of Perth and Kinross, enhancing, sustainably, our natural and built environment.

# JOHN B MILNE Director of Environment Services

# 1. Introduction

The Contaminated Land Strategy has been produced as a result of responsibilities laid down under Part IIA of the Environmental Protection Act 1990. The provisions of Part IIA came into force on 14 July 2000.

Part IIA provides the necessary legislative framework to identify and remediate Contaminated Land. It aims to address land which has been historically contaminated, and which poses unacceptable risks to human health or to the wider environment.

At present, the extent of contaminated land in Scotland is unknown, and therefore Local Authorities have been tasked with producing Contaminated Land Strategies which begin to identify land that is statutorily contaminated and has a source - pathway - receptor linkage. The strategies will also help identify resources that are required to carry out further investigations and remediation where necessary.

This document establishes the approach that will be taken by Perth and Kinross Council conducting its statutory duty and meeting the requirements of the statutory guidance.

The regime impinges on many other Council Services. In order that a cohesive, transparent strategy is produced reflecting integrated Council policy, an internal working group has been inaugurated to oversee the strategy development, implementation and review. This internal team will review periodically, the performance of the strategy.

#### 1.1 General Policy of the Local Authority

The Contaminated Land Strategy is a high profile piece of work that requires co-ordination of a number of Council Services and partners. As such the Contaminated Land Strategy is an integral part of Perth and Kinross Council's Vision and the Environment Policy.

'A secure, healthy and prosperous community to which all can contribute and in which all can share'.

The Environment Policy is driven by, and is an integral part of the following documents:

- Community Plan
- Quality of Life Strategic Framework (Local Agenda 21)
- Corporate Plan
- Concordat between Perth and Kinross Council and Scottish Natural Heritage

Taken as a whole these documents represent a major step in delivering sustainable development in Perth and Kinross through Council Services, partnership working with other relevant organisations and engaging and promoting community involvement.

In addition each of these documents has specific targets and priorities relating to the environment, and therefore the Contaminated Land Strategy.

#### The Community Plan

• The quality of the local environment is enhanced and settlements are built to a human scale and form in as sustainable a manner as possible.

# Quality of Life Strategic Framework (Local Agenda 21)

• The Council ensures development respects landscape character, provides open spaces to approved standards, and manages and enhances the natural heritage and landscape of Perth and Kinross.

# The Corporate Plan – 'Protect and Enhance the Environment'

• An important role which the Council fulfils is as a regulator. It is entrusted by statute to protect the quality of life and the environment through the enforcement of legislation.....This places challenges on the Council to be an effective regulator and curator of the environment on behalf of its citizens.

# Concordat between Perth and Kinross Council and Scottish Natural Heritage

Scottish Natural Heritage and the Council will share each other's forward planning documents e.g. Department Service Plans, corporate strategies and operational plans.

# 1.2 Environmental Issues and existing policy integration

The Contaminated Land Strategy is an integral part of the Environment Policy. The Contaminated Land Strategy has the same underlying principles of:

- Legal compliance
- Increased Awareness
- Pollution prevention

These principles are the building blocks of the Environment Policy, Environment Strategy and underpin the ideals of Environmental Management.

The Environment Policy has been based on themes, namely:

- Participation
- Travel
- Resource Management
- Environmental Protection
- Care of the Natural Environment

And has an Environmental Action Plan (2001-2004) which contains the following section, including the Contaminated Land Strategy:

Action/Task		Target	Timescale
En	vironmental Protection		
1.	Pollution Control Monitoring of local air quality as a key sustainability indicator and to meet statutory objectives	Carry out real-time monitoring for $NO_2$ , $PM_{10}$ , $SO_2$ , and $CO$ by mobile lab and diffusion tube monitoring for $NO_2$ . 12 weeks monitoring annually over 7 sites.	2001/2002
2.	Contaminated Land Regime	Produce a Contaminated Land Strategy for Perth and Kinross Council	October 2001

The Contaminated Land Strategy touches upon three of these themes:

- 1. Participation
- 2. Environmental Protection
- 3. Care of the Natural Environment

# Participation

 The Contaminated Land Strategy has engaged employees from a number of different Services in order to produce a cohesive and transparent policy that provides a cross platform of resource and information management available throughout the Council and to the public.

#### **Environmental Protection**

• Safeguarding the health, welfare and environment of the public and businesses in Perth and Kinross are critical responsibilities for the Council.

#### Care of the Natural Environment

• Perth and Kinross Council, through its Planning Authority role, plays a major role in controlling and regulating development in the natural environment.

In terms of the planning role, the long-term view and guidance for Perth and Kinross is laid out in the Structure Plan. A Key component of the Structure Plan is Sustainable Development, and as such the Environment Themes have been laid down in conjunction with the Environment Policy

Therefore, in the Structure Plan the Contaminated Land Strategy touches upon:

- 1. Environmental Protection
- 2. Care of the Natural Environment, and in addition
- 3. Urban Environmental Quality

Therefore the Structure Plan lays out Sustainable Indicators that incorporate the monitoring of Strategic Planning Objectives. For the Contaminated Land Strategy these include:

Managing the environment and resources - enhancing and protecting the natural environment	Theme	Assessment Criteria Does the strategy	Indicators
Environmental Protection	Care of the natural environment	Threaten or enhance natural habitats or wildlife? Provide development that respects landscape character? Threaten or enhance areas of open land? Create a net gain/loss in trees in the area? Increase the number of people using countryside walks and nature reserves? Maintain or increase the number of designated Local Nature Reserves/RIGS sites? Improve the provision of parks and open spaces in the area? Minimises the use of 'greenfield' land? Impact on the water quality of the area? Groundwater and surface waters.	Net change in the quality and/or quantity of locally important natural/semi natural habitats (e.g. woodland or moorland)The occurrences of one or more characteristic species (to be determined)Number of planning applications approved/refusedNet change in the quality and/or quantity of open landArea or number of trees planted/felled by typeVisitor numbers by activityNumber of notified sitesAmount of public open spacePercentage of new development built on previously developed land (including conversions)Number of prosecutions in area carried out by SEPAMonitoring of surface and groundwater by SEPA
	Urban environment quality	Improve the quality of the urban environment? Enhance the role of town centres? Encourage 'sustainable compactness' (i.e. multifunctional urban communities without town cramming)? Sustain or increase the number of tourists attracted to the area?	Percentage of respondents satisfied with their local area as a place to live Number of residents and visitors using town centre facilities Percentage of new development built within existing settlements Occupancy of tourist accommodation/Number of bed nights

# 1.3 Enforcement

The emphasis of the new legislation covering contaminated land, is to promote voluntary remediation. Environment Services as lead regulator of the new regime will liaise with Legal Services and Planning and Development Services in formulating an enforcement policy which is designed to ensure our actions meet the Government's Enforcement Concordat and are consistent, proportionate, transparent and targeted at activities which create the greatest risk.

# 1.4 Land Contamination More Generally

Perth and Kinross Council have been pro-active in encouraging the re-use of brownfield sites through the Planning process, and in recent years several high profile sites have been redeveloped, most notably the Council's new offices in Kinnoull Street, on the site of Pullar's Dry Cleaning Works.

The extent of contaminated land within Perth and Kinross is at present unknown and until the initial inspection process has been conducted, it is difficult to estimate this.

Land that has been used previously for industrial processes does not necessarily mean that it will meet the strict legal definition of "contaminated land". There may be substances in or on the land that have contaminated the land to an extent but do not pose a significant risk to human health or the wider environment.

There are several sites that are being redeveloped through the planning process. Luncarty Bleachfields operated from 1786 principally as a dye works and latterly a bleachworks through to its eventual closure in 1996. The site has planning permission for 78 residential units. This has been one of the most complex sites in terms of characterisation and protection of groundwater and overall site remediation to ensure its suitability for use.

1.5 Public Access to Information

Perth and Kinross Council strives for openness and transparency in all areas of decision making - and in line with the Freedom of Information Act, Data Protection Act etc are conscious that information should only be restricted on grounds of confidentiality, commercial sensitivity, and national security. Legal Services will advise on the extent to which information gathered through the implementation of the strategy and the regulatory regime can be released to the public.

1.6 Consultation and Involvement of Community Groups and Businesses

The Council in line with the core values outlined in the corporate plan:

- Being accountable to our community
- Working with our partners in the public, private and voluntary sectors

Aim to consult as widely as possible with the local community and business and are hoping to utilise the Viewfinder Panel and Focus Groups to facilitate this.

# 2 Regulatory Context

2.1 The primary legislation for contaminated land is Part II A of the Environmental Protection Act 1990 as inserted by Section 57 of the Environment Act 1995. The Act sets out the legislative framework and places a statutory duty on local authorities to inspect their areas to identify potentially contaminated land. There are three principle objectives under the act which are to:

- a) identify contaminated land; and
- b) enable the authority to decide whether any such land which is required to be designated as a special site
- c) secure remediation where significant harm or there is a significant possibility of significant harm is being caused; or where the pollution of controlled waters is being caused or where there is significant possibility of pollution of controlled waters

# 2.2 Legislation to Date – Other Regimes and Interaction

The Contaminated Land (Scotland) Regulations came into force on 14 July 2000. Until the commencement of these regulations, contaminated land was dealt with through other regimes being, statutory nuisance, control of pollution and the planning process, where land was being redeveloped.

The nature of land contamination due to the complexity of physical properties means that other regulatory controls interact with and can conversely affect the legal approach to dealing with the land contamination in question.

There are eleven other regulatory controls that interact with the contaminated land regime being:

- The Town and Country Planning (Scotland) Act
- Control of Pollution Act 1974 (pollution of controlled waters)
- Finance Act 1996 (landfill tax)
- Food and Environment Protection Act 1985 (food contaminated by land)
- Health and Safety at Work Act (protection of workers)
- Pollution Prevention and Control
- Integrated Pollution Control
- Part II of the Environmental Protection Act 1990 (waste licensing)
- The Control of Major Accidents and Hazards Regulations (major incidents at installations storing dangerous substances)
- The Environmental Information Regulations 1992
- The Groundwater Regulations 1998

Although the principal legislation is Part II A of the Environmental Protection Act 1990, the other regimes may play a role in the contaminated land regime.

Radioactively contaminated land is not covered under Part II A at the present time. Situations where contaminated land is found to be radioactive will be continued to be regulated by the Radioactive Substances Act 1993.

There is provision within the Act to allow for Scottish Ministers to make regulations applying the Part II A regime. A consultation process conducted in 1998 outlining a possible approach to radioactivity contaminated land has highlighted the need for more detailed proposals to be related to this particular problem and interaction with the Part II A regime.

2.3 Although the primary objectives fall to the local authority, the Scottish Environment Protection Agency is the enforcing agency in respect of the legislation in certain circumstances i.e. 'special sites'.

In the case of "special sites", SEPA are the enforcing authority and are responsible for ensuring remediation. Special sites once designated by the local authority will pass to SEPA for administration and securing remediation on a voluntary basis or through the use of enforcement action.

SEPA are a statutory consultee in terms of the strategy and its implementation. They are also charged with providing site-specific information in specific matters concerning the pollution of controlled waters.

SEPA also has the statutory function of preparing national reports on the state of contaminated land for the Scottish Executive when requested by Ministers. The local authorities will provide information for this report directly to SEPA from data collected during the inspection process.

Although SEPA is not a direct consultee within the planning process that involves contaminated land, there may be issues that require to be discussed at early stages when dealing with some redevelopment. The main issues for seeking appropriate consultation are:

- (i) The licensing of remediation processes
- (ii) Waste movements and disposal of waste of site
- (iii) Groundwater contamination
- (iv) Prevention of pollution during redevelopment
- 2.4 The Role of Local Authorities

Local authorities are the lead regulators for the implementation of Part II A of the Environmental Protection Act 1990. Under the statutory duty, Perth and Kinross Council are tasked with the following:

- (i) Have cause to inspect their areas
- (ii) Identify potentially contaminated land
- (iii) Identify appropriate persons
- (iv) Secure voluntary remediation
- (v) Enforce remediation through statutory duty
- (vi) Record details of remediation on public register

The local authorities have to prepare a strategy to deal with the inspection process in line with the statutory guidance as issued by the Scottish Executive.

2.5 Statutory Definition of Contamination

The historical use of terminology describing contaminated land took a wide encompassing approach which meant any land contaminated with substances above indicative historical trigger values could be indeed deemed to be contaminated. A strict legal definition now applies to land in order for it to be identified as contaminated. Land that is identified as contaminated must meet the statutory definition as detailed in section 78 A (2) of Part II A of the Environmental Protection Act 1990 as the following

"Contaminated land" is any land that 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 that land, that-

- a) Significant harm is being caused or there is a significant possibility of such harm being caused; or
- b) Pollution of controlled waters is being or is likely to be caused

"Significant Harm" means harm to a "receptor" as specified by the statutory guidance. A table of types of receptor is contained within Appendix A to this document.

The table also sets out a description of harm to a receptor, which is regarded to be significant harm.

2.6 Principles of Pollutant Linkages

In order that the Council identifies "Appropriate Persons" that are those responsible for the contamination, and determine whether a site is by definition, contaminated, it must identify a "significant pollutant linkage". This is where a contaminant (also known as the source), through a "pathway" impacts on a receptor as defined in table 1, to a degree where significant harm or the significant possibility of significant harm or the pollution of controlled waters is being or is likely to be caused.

In certain circumstances, there may exist, multiple pollutant linkages from a range of substances within the land that are impacting and meeting the definition. One or more persons may be responsible for each linkage and form part of a liability group.

#### 2.6.1 Liability for Contamination

As with other legislation concerning the protection of the environment, Part II A of the Environmental Protection Act 1990 is based on the, "polluter pays principle." That is, who has caused or knowingly permitted the contamination to be within the land or groundwater is liable for the costs of restoring that land to a condition where it will no longer pose an unacceptable risk or prevent the persistence of substances entering controlled waters.

In order to secure remediation, the Council must identify the appropriate person who is responsible for contamination or pollution.

Appropriate persons fall into two categories. Class A (the person who knowingly permitted the substances to be in or on the land) and class B (the current owner or occupier of the land) as specified in the statutory guidance

#### 2.7 Principles of Strategic Approach

Perth and Kinross covers an area of 5133 square kilometres. The rationale to determine the approach to identify potential contaminated sites will reflect the circumstances of the local area to be inspected.

#### **Development of the Strategy**

The lead Service for the implementation of Part II A is Environment Services. There are historical reasons for this Service taking the lead role and why it is best placed to conduct the inspection process.

It has been the role of Environment Services to conduct the planning consultations with regard to environmental impact and many experienced officers have the necessary backgrounds in pollution control and waste regulation that can be drawn upon in the future realisation of the objectives and targets of the strategy.

#### Overall Approach

Contaminated land impinges on many Council functions and the development of the strategy has been written to reflect the various interactions of Council Services. This holistic approach is designed to amalgamate those Services, cohesively adopting a joined up working approach sharing resources and information. In using the Part II A statutory duty as a catalyst in promoting cross platform information and data management, the Council can realise many added benefits and advantages in meeting "best value" and improving overall performance in the Services identified.

#### Internal Team Responsible

To meet the overall objectives of the strategy, an internal working group has been established. The group is made up of the Services identified who:

- (i) will have a direct involvement within the regime
- (ii) can provide information to assist in the identification process
- (iii) can assist in technical issues



The general group has been made up of 9 Services. This in turn has been broken down to form Functional groups of which there are 4. A selected representative chairs these functional groups.

#### Internal Liaison

Arrangements for internal liaison and communication are being addressed within the overall management system. A focus member for each Service has been selected to receive and disseminate information within their respective Service from the main working group. This has been supported through internal training of the Service focus reps.

#### Internal Training

Each Service that has been chosen to act and has an interrelationship with the regime in practice has undergone training that has been prepared internally. This training is on a rolling programme as the regime is rolled out throughout the Services. The dedicated Officers responsible for the regime are continually being trained within the CoSLA Contaminated land Working Group Seminar Programme – in conjunction with Land Quality Management, Nottingham University.

#### Consultation with Statutory Consultees

Early meetings have been held with all statutory consultees to establish lines of communication and identify information necessary for the strategy available by them to the Council. A list of statutory and non-statutory consultees can be found in Appendix B.

#### Consultation with Community Councils and Other Organisations

It is the intention to inform and target as wide an audience as possible indicating the Council strategy and this is being spearheaded through our communications strategy in conjunction with Performance & Management Planning.

Viewfinder is the Council outreach initiative and is a sample of 1,000 Perth and Kinross residents, which is broadly representative of the demographic characteristics of the population of Perth and Kinross. All panel members have agreed to participate in up to four postal surveys per annum.

It is the intention to make the strategy available on the Internet through the Council website.

Any comments received will be considered before publication of the final strategy document.

#### 4 Objectives of the Strategy Document

4.1 The Requirement to Produce a Strategy

The contaminated land regime came into force on the 14<sup>th</sup> of July 2000. Section 78B of the Environmental Protection Act 1990, placed a statutory duty on local authorities to produce a strategy to, "cause its area to be inspected from time to time" for the purposes of identifying potentially contaminated land; and where necessary, enforce remediation where there is imminent danger of harm being caused to the humans and the environment.

The Scottish Executive has published statutory Guidance on how the local authorities must approach the contaminated land regime and has prescribed the framework in which the inspection of its area is to be conducted.

4.2 Strategic Approach to Inspection

In line with the Scottish Executive Guidance, the Council must adopt a strategic approach to the inspection of its area in the process of identifying potentially contaminated land and this strategic approach should reflect:

- (a) Be rational, ordered and efficient
- (b) Be proportionate to the seriousness of any actual or potential risk
- (c) Seek to ensure that the most pressing and serious problems are dealt with first
- (d) Ensure that resources are prioritised on investigating areas where the authority is most likely to identify contaminated land; and
- (e) Ensure that the local authority identifies requirements for the detailed inspection of particular areas of land.

To reflect local circumstances given the geographical nature of Perth and Kinross, and meet the statutory guidance, the department has developed in house methodology for deriving an inspection strategy using demographic and geographic parameters in conjunction with historical land use data based on the most contaminating industries. Using these parameters, the Council has been able to prioritise the time-scale of the inspection of its area and to meet the statutory requirements. A detailed timetable has been prepared based on the information available at this time, which may be subject to change depending on resource allocation. The timetable for inspection can be found in Appendix D.

4.3 Communication to Stakeholders of the Authorities Intentions

Contaminated land is a highly contentious issue and the new regulatory regime surrounding it is one of the most complicated. It is hoped that the strategy conveys the complexity of the tasks involved and the desire of the Council to ensure openness and transparency in dealing with all stakeholders.

#### 4.4 Provision to SEPA of Information for its Report on Contaminated Land

Each local authority is required to provide information to SEPA for its report on the state of contaminated land to the Scottish Ministers. There is no confirmed date when information for the first report will be required by SEPA but this is thought to be around April 2002. We will participate fully to provide all the information required which we hold at that time.

#### 5 Characteristics of the Local Area

This section gives the background to the geographical area of Perth and Kinross Council and an explanation of how this influences the Council's approach to the identification and inspection of contaminated land. It will also enable fair comparison with other authorities.

The area covered by Perth and Kinross Council lies in the heart of Scotland. It comprises the bulk of the old counties of Perthshire and Kinross and is virtually landlocked. It has one outlet to the sea by way of the River Tay estuary. It is bounded by 8 of Scotland's 29 mainland Councils and shares more boundaries with other Councils than any other Council in Scotland. The Council area covers some 5,311 square kilometres (2051 square miles) or about 7% of the land area of Scotland. It is the fifth largest Scottish Council by area.

Perth, the former county town of Perthshire lies on the River Tay at the point, which historically, represented the lowest practical location for bridging the river. It is a route centre and the junction of the railway lines from Edinburgh and Glasgow to Inverness and Aberdeen. In addition, seven trunk and principal roads radiate from the city. Perth remains the administrative centre of the area.

As of 1999, the population of the Council area was estimated at 134,000. Around 55% of the population reside in the 7 largest settlements.

Town	Population
Perth	41,490
Blairgowrie	7,861
Crieff	5,996
Scone	4,502
Kinross	4,479
Auchterarder	3,213
Pitlochry	2,572
	70,113

# At the 1991 Census these were:-

The area of Perth and Kinross is largely rural in character with a number of settlements where the majority of the populace reside. The Northwest comprises mountain and moorland divided by glaciated valleys. The lowland areas to the south and east are mostly good quality farmland.

The area has been inhabited for several thousand years. The early Pictish inhabitants were subdued by the Romans who built many forts, camps and signal stations. There is evidence of a Roman camp and settlement at Perth, but the name is probably of Celtic origin [from Abertha (Abertay) meaning "At the Mouth of the Tay"].

After the Roman withdrawal, the Pictish capital was established at Abernethy, then Forteviot and Scone before moving to Perth in the 12<sup>th</sup> century. Perth was made a royal burgh in 1210. Scotland's capital finally moved to Edinburgh in 1452.

In the Middle Ages, Perth was a significant river port but it gradually declined in importance over the centuries. The port's fortunes have improved in recent years and it can accommodate shipping from Europe and the Baltic.

The area features prominently in Scottish history although little architectural evidence remains of its eventful past.

5.1 Industrial and Agricultural Heritage

The study of the development of Perth from early medieval times has revealed a wide range of industrial activities conducted throughout the area including;

- Tanneries
- Electronic manufacturing
- Scrap metal
- Glass manufacture
- Metal foundries
- Explosives manufacturing
- Jute, rope, linen and tartan manufacture
- Dye and bleach works

Farming remains vital to the economy of Perth and Kinross with arable and cattle and sheep farming. Diversification within the livestock industry has seen perhaps more exotic breeds being reared including Ostrich for their rich non-fatty meats and Cashmere Goats for their fleeces.

Fish farming also contributes to the rural economy of Perth and Kinross of which there are a number of hatcheries situated on the main Tay tributaries.

5.2 Regional Archaeology and Ancient Monuments

Perth and Kinross contains a rich and diverse archaeological and heritage resource. These remains range in size and date from scatters of flint artefacts of the neolithic period (c.a. 4,000-1,800 BC), to the 20 ha Roman Legionary Fortress at Inchtuthil and the airfields of the Second World War. The low-lying countryside is littered with the remains of burial mounds and settlements of prehistoric and medieval periods, and extensive medieval and later rural settlement can be found well into the highland zone. The buried deposits of medieval and post-medieval Perth represent one of the most important urban archaeological sites in Scotland. In addition, many of the more rural, smaller settlements, such as Abernethy, Dunkeld and Forteviot are rich in upstanding and buried archaeological remains and are particularly important for our understanding of the development of Scotland as a nation state.

The Perth and Kinross Sites and Monuments Record (SMR) currently holds details of over 12,000 sites of archaeological importance in the area. It is widely recognised, however, that the total number of sites is much higher, with a significant number awaiting discovery. Of the total, just over 650 are deemed of national importance and warrant Scheduled Ancient Monument (SAM) status. Historic Scotland protects Scheduled Ancient Monuments under the 1979 Ancient Monuments and Archaeological Areas Act, and any work or action affecting the monument requires their consent. The remaining sites, of regional importance and local importance, are considered as a material concern within the planning framework, as outlined in the National Planning Policy Guideline 5 (NPPG5) and Planning Advice Note 42 (PAN42).



Figure 5.1 Old gas manufacturing plant and gas holder landscaped and incorporated as part of the landscaping design at Stanley Mills.

While the vast majority of archaeological sites will be classed as "receptors", the diverse nature of archaeological remains means that a small percentage, notably post-medieval industrial sites, may well meet the definition of "contaminated land". The primary issue with respect to re-mediation work on both classes of site, however, is that appropriate mitigation strategy, involving either preservation *in situ* or preservation by record, should be employed whenever possible.

#### 5.3 Geology and Hydrogeology

One of Scotland's main geological faults, the Highland boundary fault bisects the area from Crieff in the southwest to Alyth in the northeast, forming a rough boundary between lowland Perth in the southeast and the Grampian highlands in the northwest. The fault is still active and produces minor tremors, particularly in the Comrie area to the west of Crieff.

Highland Perth, a plateau about 1000 metres high rising to Ben Lawers (1214m) and Schiehallion (1083m), covers about 70% of the Council area. It is much dissected by intensely glaciated valleys often occupied by glacial ribbon lakes (e.g. lochs Rannoch, Tummel, Tay and Earn) and was the centre of ice dispersion during the last ice-age about 10,000 years ago.

Much of lowland Perth and Kinross lies within the central rift valley of Scotland; it includes the Ochil and Sidlaw hills (400-700metres), the valleys of Strathmore and Strathallan, forming a complex, drift covered lowland corridor running southwest-northeast. The plain around Kinross lies to the south-east of the Ochil hills.

The valleys include the light, fertile fluvioglacial soils of the fruit growing areas of Strathmore and the Carse of Gowrie.

The underlying bedrock is predominantly softer sedimentary rock in the lowland area and harder igneous / metamorphic rock in the highland area.

#### 5.4 Mineral Extraction

The diverse geology of the area has led to exploitation of mineral resources from the glaciofluvial deposits providing the sand and gravel extractions throughout the area to the limestone coal measures to the south bordering Clachmannan, Stirling and Fife.

Extensive but thin deposits of brick clay were deposited throughout the coastal areas of the Tay and Earn which have been and are continuing to be exploited and there are Brickwork's still manufacturing in Errol.

Barytes is mined in the Aberfeldy area and is transported to Aberdeen for the manufacture of drilling fluid for the oil industry.

Coal mining is mainly opencast although there were deep deposits mined in Blairingone.

Lead and copper have been mined in the northern areas and unique methods of processing iron have been recorded.

#### 5.5 Specific Local Features

Perth and Kinross by way of its rich diversity and geology has many unique features. The soils of the area show a high natural occurrence of Arsenic, Lead and Iron the latter of which was processed in ways that have interested archaeologists.

#### 5.6 Protected Locations

Perth and Kinross has a rich, natural biodiversity and this is reflected in the status placed on specific areas by Scottish Natural Heritage. There are several types of designation for specific habitats and the table below shows the number and type as well as proposed designations.

Designation and Number	Location
Areas of Great Landscape Value	1
Gardens and Designed Landscapes	34
Local Nature Reserves	0
National Nature Reserves	5 covering 7,253 Hectares
National Scenic Areas	5 covering 69,400 Hectares
Natural Heritage Zones	2
Ramsar	4
Scottish Wildlife Trust Reserve	1
Sites of Specific Scientific Interest	There are a total of 176 covering an
	approximate area of 50,055 Hectares
Special Areas of Conservation	16 with 2 proposed
Special Protection Areas	5 with

As part of Environmental Policy, the Council will seek where appropriate to, enhance and protect natural ecosystems and promote biodiversity in the interests of sustainable urban and rural development through the Concordat with Scottish Natural Heritage and in partnership with the Tayside Biodiversity Partnership whose aim is to protect the areas wildlife and landscape.

The Council also actively participates in The Tay Estuary Forum. Founded as a voluntary partnership in 1997, the forum consists of 300 members. The Forums primary objective is the promotion of the "wise and sustainable use of the Tay Estuary and adjacent coastline."

As ecological receptors are to be protected from the effects of contaminated land, Perth and Kinross Council will adopt procedures and protocols to deal with any land significantly impacting on such designated areas in conjunction with Scottish Natural Heritage.

5.7 Water Resource Protection Issues

The water resources of Perth and Kinross have a natural softness due to the rivers' origins being in the mountain areas where the geology is largely composed of 'acidic' type rocks.

The quality of the waters is of great importance from a number of perspectives.

Various rivers, including the Tay are used for drinking water abstraction and the Tay and its tributaries remain an important salmon and trout fishing area.

There are whisky distilleries operating in several locations in both highland and lowland Perthshire and spring water is bottled in Blackford to the north of the Ochil Hills.

Flows in the Rivers Tummel and Garry systems are regulated by the Hydro-Electric Scheme which was constructed in the years following the Second World War. It is the largest such scheme in Scotland.

Throughout Perth and Kinross, many households and business rely on private water supplies. Water is abstracted from Boreholes, Natural Springs and Wells. Surface Waters such as Burns, Rivers and Lochs also make up types of private water supplies. Public water supplies are abstracted from the Rivers Tay and Earn. The provision of public water supply is the responsibility of the North and East of Scotland Water Authorities both of which serve the Perth and Kinross area the western area of Perthshire is served by the West of Scotland Water Authority. The three water authorities will conglomerate into one body in 2002 which will be titled, Scottish Water under the proposed Water Services Bill.

There are a total of 1078 private water abstractions within Perth and Kinross (896 domestic and 182 commercial) which are required under the new legislation to be protected where there is the possibility of these resources becoming contaminated. All surface waters and

groundwater is classed as a "statutory receptor" under the new legislation whether or not these are abstracted from for domestic or commercial uses.

#### 5.8 Land Owned by Perth and Kinross Council

Perth and Kinross Council have a substantial property portfolio and are in the continual process of acquisition and disposal of property. The types of property owned by the Council include:

- schools
- housing;
- shops;
- industrial units;
- parks, recreational and areas of public amenity;
- waste disposal and recycling facilities

Housing and Property Management are the appropriate department responsible for Council owned and leased land. Further acquisition of property is now audited and Environment Services consults and advises Housing and Property Management ensuring that the Council does not inherit any environmental liability in the form of contaminated land.

There may be found in certain cases where liability for contamination on sites presently or historically have been in Council ownership or occupation, where the Council are the appropriate party responsible for the remediation. In these circumstances, the arrangements for the remediation will be handled through the Contaminated Land Working Group.

#### 5.9 Contamination known to the Local Authority

Contamination of many sites is either known or suspected by the Council. Whether or not these sites meet the statutory definition or require further investigation will be based on the site prioritisation methodology selected for the specific site in question.

5.10 Redevelopment History and Controls

As with all cities and towns socio economic factors change and the requirement for redevelopment to meet the changing needs ultimately brings about changes in land use.

The Council has remained pro active in the formulation of policy regarding the redevelopment of brownfield sites applying the 'suitable for use' approach and subsequent guidance from the Department of the Environment, Interdepartmental Committee on the Reclamation of Contaminated Land.

Sites that have required remediation prior to the commencement of the contaminated land regime have detailed records of actions taken. These records are held within Environment Services although can be accessed through Planning and Development Services

#### 5.11 Action Already Taken to Deal with Contamination

As yet, there has been no direct action taken to deal with contamination other than through the planning regimes where planning conditions are imposed to allow redevelopment and remediation process.

#### 6 Perth and Kinross Overall Aims and Objectives

The objectives of the strategy are laid down in section 3. This section illustrates how the Council intends to meet the objectives and identifies some priorities.

The Councils overall aims in dealing with contaminated land are listed in the box below, of primary importance is the protection of human health. The remainder of the aims are not listed in order of importance.

- To protect human health
- To adopt a system of prioritisation based on risk
- To protect controlled waters
- The protection of designated eco-systems
- To prevent damage to property
- To promote voluntary remediation
- To identify urgent sites
- To provide information and advice
- To identify and deal with urgent sites
- To encourage the use of brownfield sites
- To assess the Councils potential liability and put our own house in order.

6.1 Authority Priorities to Deal with the Problem

The regime has identified a range of priorities relating to dealing with contaminated land. These are detailed in Section 7.1 other priorities identified are:

- Develop Code of Practice for agents redeveloping contaminated land
- Deliver internal training for those with involvement of contaminated land
- Design of GIS for Council wide use of environmental data

Other objectives may be identified throughout the implementation of the regime as it develops.

6.1.1 Completion of Assessment where the Authority may be the Appropriate Person

The inspection process is designed to seek out the most pressing sites with the highest risk to receptors and to deal with those sites urgently. These may or may not be sites that the Council is the appropriate person.

The Council will be in a position where they are regulators and regulated under the Part II A regime. This may lead to owners, occupiers and appropriate persons identified feel that they are being unfairly treated. The core of Council policy is transparency and openness and this is reflected throughout the contaminated land regime.

The Council will therefore seek to identify those sites for which it is the appropriate person and take what action is necessary as a priority and take what action is required to remediate the site in question.

Communication and liaison has been established with Housing and Property Management to establish the Council's current and historic liability under the regime.

6.1.2 Evidence of Actual Harm or Water Pollution Collated and Reviewed

The responsibilities for the prevention of water pollution will remain with the Scottish Environment Protection Agency but there is considerable overlap between the designation of contaminated land, where there are controlled water issues.

It will be the role of the Council to determine if land is contaminated by virtue of substances entering controlled waters.

Data has been collected for the quality of groundwater for the centre of Perth and review of the data has confirmed that the groundwater has been considerably impacted through industrial activity from a number of sources.

Groundwater quality data for private water supply within Environment Services will be put on the database and GIS where these will also be identified as receptors.

More groundwater data will be gathered as part of the implementation of the Water Framework Directive most probably by British Geological Survey under contract from SEPA.

Considerable data is available on the quality of surface waters and we have received from SEPA, a summary of surface water quality data for the Tay, Earn, Upper Devon and Loch Leven Catchments.

Evaluation of this data has revealed that under the current classification scheme used by SEPA, that the majority of surface water is generally excellent to good (river classification A1 or A2) with some locally downgraded surface waters.

During the course of the strategy implementation, the CP team will be able to conduct specific risk assessments where it is thought that a site is impacting and downgrading the surface or groundwater.

Major consideration has been given to controlled waters and the interaction of the Water Framework Directive on the contaminated land regime and sites under remediation schemes through the planning process have been approved on meeting strict criteria where surface waters and ground water will ultimately be required to be improved on biological and chemical parameters e.g. downgraded surface waters.

#### 6.1.3 Possible Receptors Identified

During the course of the inspection process, all receptors will require to be identified. This will be achieved by recording all statutory receptors on the GIS as individual data sets.

6.1.4 Possible Risk to Those Receptors Assessed

Much of this data will be transferred to the corporate GIS system so spatial interpretation of the receptor can be analysed for the potential of significant harm or pollution of controlled waters through site specific risk assessment.

6.1.5 Information on Possible Presence of Contamination Evaluated

Information collected on the possible presence of contamination will be interrogated and where it is thought that it may cause significant harm or pollute controlled waters through significant linkage, specifications of the level of risk assessment required will be specified.

6.1.6 Efficient Liaison and Information Exchange Established Internally and Externally.

Each Service that has been selected to form the internal working group is updated with information as and when it is available.

Lines of communication between the statutory consultees were established at a very early stage. All the consultees can be viewed in Appendix B.

The CoSLA Contaminated Land Working Group of which Perth and Kinross are participants, allows the dissemination and exchange of information and meets on a regular basis.

6.1.7 Justification for Inspection of Particular Areas are Established.

We have during the preparation of the Perth and Kinross strategy considered the most effective approach to undertake the implementation based on the information available to the Council at this time.

It has been designed to reflect the principles as laid down by the statutory guidance and tackle the sites that pose the worst threat to receptors. However, it is anticipated that as more information is obtained, inspection schedules and areas for priority will be subject to change.

6.1.8 Assumptions and Inspection Priorities Checked at Appropriate Intervals

The priorities for inspection will be checked every year to make sure they are proportionate to the seriousness of the scale of the number of sites identified.

6.1.9 Effective Output of Information

Data, once collected will be used in a variety of situations to deliver the objectives for inspection.

6.2 Authority Priorities Relating to Work Already Done

To date, the Council has established three priorities resulting from the work conducted in the preparation of the strategy. These are:

- Collection of historical land use data where none exists
- The requirement for the purchases of external data sets
- Development of effective communication
- 6.3 Authority Targets

The main targets for the strategy implementation are to meet the inspection schedule as defined in **Appendix D**. Other than the preliminary actions and targets for the initial project plan. This will be subject to change but are as follows:

Identified Objective	Objective Start Date	Objective Completion
High Risk Sites Prioritisation and Inspection	December 2001	March 2002
Historical Land Use Interpretation of Wards	December 2001	December 2002
Phase 1 Ten Electoral Wards Inspection	January 2002	December 2002
Second High Risk Phase Inspection	Ongoing	Ongoing
Phase 2 Ten Electoral Wards Inspection	January 2003	December 2003
Phase 2 Ten Electoral Wards Inspection	January 2004	December 2004
Phase 3 Final 11 Electoral Wards	January 2006	December 2006

# 7 **Priorities Actions and Timescales**

# 7.1 Priorities

# Phase 1 - Purchase of Landmark Database (March 2001)

 The inspection process is highly dependent on the use of Geographical Information Systems and is therefore closely linked with the development of the Corporate GIS System, which is in its very early stages. To start off the inspection process Environment Services has purchased a set of digitised historical Ordinance Survey (OS) maps covering the whole of the Perth & Kinross Council area from Landmark Information Group Ltd, along with a database of historical land use.

The digitised maps cover four separate epochs from 1855-1943. It is hoped the postwar data will be resourced centrally through the inclusion of this information within the Service Level Agreement (SLA) between the OS and the Council.

• The historic land use database identifies and classifies areas of potentially contaminated land from analysis of historic mapping, in accordance with government guidance.

It is important to note that the land use database only covers a small proportion of the Council area (see Section 8.5.7). Analysis of the remainder of the area will need to be carried out manually. Advice and training on data capture tools will be required and is expected to be provided by Forth Valley GIS as part of the Corporate GIS Strategy. In addition resources will need to be identified for data entry and management, either externally or internally.

#### Purchase of Arcview Licences and Training

Environment Services have purchased 3 Arcview Licences in line with decision to run Arcview as the Corporate GIS - and have upgraded some computers to allow them to run the system. It is not anticipated that this Service will be able to utilise the data purchased until sometime after October 2001, in line with the Corporate GIS Strategy. In the meantime it is hoped that key personnel will be involved in GIS training over the summer months.

Identification of a realistic budget for data capture and purchase of additional information in year 2001/2002 and beyond. To include training, personnel, acquisition of prioritisation tools, risk assessment models, various digital and paper based information sources and database design or modification to ensure all the information required by SEPA can be easily accessed and reproduced.

<u>Representation on the GIS/OS Working Group</u> (ongoing) to ensure data required from other Services for Contaminated land investigation is prioritised for inclusion in the GIS Strategy.

# Phase 2 Consultation

The information sources mentioned in Phase 1 will not necessarily identify all potentially contaminative uses even in the areas already analysed. It is entirely possible that land may have housed a contaminative activity without it ever appearing on any map. It is considered vitally important that local consultation take place with Community Councils, Local History Societies etc to help identify potential gaps.

# It should be noted that only a small number of sites with potentially contaminative uses will meet the strict legal definition of contaminated land.

The legislation grants only limited powers to deal with materials present in, on or under the ground. Many people believe that any materials which are not normally present in the

ground should be removed. It is important to understand that this can only be required if there is a proven risk of significant harm. It is probable that the expectations of some members of the public will not be met by the powers available to the Council.

It is considered a priority that an effective risk communication strategy be developed to help deal with these instances.

• Statutory Consultees have been asked to comment on the draft strategy and there comments have been considered before publication of the final version of their strategy and will be sought during any review process.

#### Phase 3 Dealing with Urgent Cases (ongoing)

It is possible that sites causing significant harm or pollution of controlled waters may come to light during the consultation and inspection exercises, and investigative work may have to commence prior to publication of the final inspection strategy. <u>This necessitates the development of procedures for dealing with these cases</u>.

**<u>Phase 4 - Development of Planning Procedures</u>** (ongoing) to ensure Responsible Redevelopment of Contaminated Land in line with Part IIA and Planning Advice Note (PAN) 33.

#### Phase 5 - Production of a Register of Council Owned Sites (ongoing)

The Council's Property Management Service have had their own GIS system (BADGER) for some time and are currently preparing a list of landholdings for which the Council may be the appropriate person.

#### Phase 6 - General Inspection Process (January 2002-2005 approx.)

The Council's main priority in dealing with contaminated land is the protection of human health (see Section 6.1). Land within the Council will be inspected in order of population density. The largest towns will be given the highest priority as these have the greatest likelihood of having all 3 elements of a pollutant linkage present (source, pathways, receptors)

7.2 Timescales

As already mentioned the Council's obligations under the Contaminated Land Regime have been a key driving force in pushing forward the Corporate GIS Strategy. Given the vast amount of information which requires to be manually inputted reformatted or digitised onto the GIS system and then specially related such as Planning records, Local Plan information, the Petroleum Register, Private Water Supply Records, to name but a few - it is difficult to assign a preliminary timescale to this task, as it is highly dependent on the staff time, resources and quality of training provided for each Service, to ensure this information is integrated as soon as possible.

#### 8 Procedures

Procedures to be adopted in the management of and identification of contaminated land will be formalised into a management system to provide an audit trail of actions performed by the authority. This will allow a "quality control approach" and performance to be effectively measured against statutory indicators.

The Environment and Consumer Services Committee on 20 October 1999, delegated the carrying out of all functions and necessary actions relating to contaminated land to the Director of Environment Services. These include:-

• The inspection of the District

- The identification of contaminated land
- Urgent remediation action
- Identifying and notifying those who may need to take action (in conjunction with Legal Services)
- Determining Liability (in conjunction with Legal Services)
- Identifying appropriate remediation measures
- The Service of Remediation Notices (in conjunction with Legal Services)
- Recovering the cost of remediation and dealing with orphan sites (in conjunction with Finance and Legal Services)
- The designation of 'Special Sites' (in conjunction with SEPA)
- Producing and maintaining a Public Register (in conjunction with Legal Services)

The Director of Environment Services shall inform elected members at the earliest opportunity of any proposals to designate as contaminated any Council land, land where the Council is the 'appropriate person' or may have liability for remediation costs (e.g. orphan sites).

8.1 Information and Data Collection

It is envisaged that a wide range of data that will be required to be collected both internally and externally from a range of sources. Data collection will be integral to the delivery of the strategy.

Resource	Location	Use
Historic Maps	Digital Maps purchased from OS (through landmark)	To identify sources
Historic Land Use Database	Digitised Polygons, etc of potentially contaminative land uses	To identify sources
Geological Maps	1:50,000 solid and drift geology maps from BGS (digital/paper based?)	To characterise potential pathways
Hydrogeological Maps	To identify ground water vulnerability, where from?	To identify receptors
Soil Maps	To investigate if soil maps can be obtained from MLURI	To characterise potential pathways
Environment Health Records	Records of complaints & investigation from Environment Services	To identify known information on contaminated land
Private Water Supplies	Register kept within Environment Services not geo referenced	To identify receptors
Planning Records	Records of development in the area, including information on ground condition in survey reports - from Planning and Development Services (PDS)	To identify known information on contamination and remediation
Local Plan	Details of current and proposed land use from PDS	To identify potential receptors (e.g. proposed housing)
Building Control Records	Detailed records of development including ground condition surveys	To identify existing knowledge on contaminated sites
Trading Standards Records	Register of current and abandoned petrol tanks	To identify information on known sites of potential contamination
Integrated Pollution Control Register	Register of authorised industrial processes (from 1990) from SEPA	Identify records indicating potential historical contamination
Waste Management Licences	Register of sites licensed by SEPA	Identify records indicating potential historical contamination
Closed Landfills	Info from SEPA, Environment Services, Property Management	To identify potential sources of contamination
SVDLS Register	Register of Vacant & Derelict Land prepared annually by PDS	To identify potential sources of contamination

Maps of SSSI and otherTo be obtained from PDS, orTo identify receptorsconservation sites, protectedSNH preferably in digital format		Location	Use
conservation sites, protected SNH preferably in digital format	Maps of SSSI and other	To be obtained from PDS, or	To identify receptors
	conservation sites, protected	SNH preferably in digital format	
habitats	habitats		
Water Quality Data, Fresh Water - limited data from SEPA on To identify receptors	Water Quality Data, Fresh Water	- limited data from SEPA on	To identify receptors
Fisheries Information classification of controlled	Fisheries Information	classification of controlled	
waters		waters	
Maps showing Scheduled - already on Arcview in PDS To identify receptors	Maps showing Scheduled	- already on Arcview in PDS	To identify receptors
Ancient Monuments from Regional Archaeologist	Ancient Monuments	from Regional Archaeologist	
Records of Farm Chemical Use SERAD To identify sources of rural	Records of Farm Chemical Use	SERAD	To identify sources of rural
contamination			contamination
Records and Locations of Sheep SEPA/Police To identify sources of rural	Records and Locations of Sheep	SEPA/Police	To identify sources of rural
Dipping Areas contamination	Dipping Areas		contamination
Records and locations of NOSWA To identify sources of potential	Records and locations of	NOSWA	To identify sources of potential
Sewage Sludge Disposal contamination	Sewage Sludge Disposal		contamination

Additional Sources of Information will be researched when considered appropriate.

8.1.1 Information on Actual Harm or Pollution of Controlled Waters

At present there is little or no information with regard to the actual harm or pollution of controlled waters. It is hoped that with the implementation of the forthcoming Water Framework Directive 2000/60/EC, that further information will be made available to the authority when collated by SEPA.

8.1.2 Information on Receptors

Information on receptors will be collected from a number of external and internal sources and recorded within the GIS system.

8.1.3 Information on the Possible Presence of Contaminants

To identify if a site contains substances in or on the land, the authority will conduct desktop studies to determine the previous uses of that land. It will also seek to identify any work by way of intrusive investigation conducted by third parties.

8.1.4 Other Information

More information on receptors, sources, pathways will be identified throughout the inspection process.

8.2 Internal Management Arrangements for Inspection and Identification

The role for inspection falls to Environment Services who have dedicated Officers for the implementation of the Part II A regime

8.3 Inspecting and Assessing Local Authority Owned/Leased Land

The Council has substantial land holdings throughout the Council area, and in addition there are other areas of land which the Council (or its predecessors) may have owned or occupied at some stage, where potentially contaminative uses may have taken place (eg waste disposal sites).

The Council may also have acquired or leased derelict or 'brownfield' land in order to develop or improve the overall quality of an area. Within the general population - based approach to investigation of the area, it is considered a priority that these sites are investigated and remediated where necessary in order that the Council can be seen to be providing a lead role to the private sector in this regard.

8.4 Identifying, inspecting and assessing former local authority landholdings and other areas where the authority may be the appropriate person

As already stated in 7.1, the Council's Property Management Service is preparing a list of potential sites, in which the Council may be liable for remediation costs. Property Management will continue to have a lead role in identifying and handling these sites, with input and advice from Environment Services on actual site investigations, risk assessments, remediation and employment of external consultants

#### 8.5 Information Evaluation

The basis of determining potentially contaminated land will be based on qualitative perception of risks to any receptor identified. The evaluation of information will be used in terms of further risk assessments on site specific risk assessment.

#### 8.5.1 Evaluating Information on Actual Harm or Pollution

Where it is found that a significant pollutant linkage exists after initial screening, the Council will conduct specific risk assessments to ascertain the level of perceived harm to the receptor identified. If the level of risk is unacceptable, then action will be taken to secure remediation.

#### 8.5.2 Contaminant Sources vs. Receptors

Although contamination may very well be present on site and a pollutant linkage identified, the type of contaminant may not pose significant risk to human health or the wider environment. In these circumstances, the site would not be identified as contaminated land unless site specific circumstances were to change. The previous data collected on the site would then be reviewed to reflect the change in circumstances and re-evaluated to determine significance any pollutant linkage identified.

#### 8.5.3 Effectiveness of Other Actions or Other Regimes in Dealing with Contamination

Policy development on a European and National level has placed the emphasis on environmental protection and sustainable development both of which are reflected in the development of this strategy.

The legacy of contamination, which has been inherited from our industrial past, will be dealt with directly through the contaminated land regime where the land meets the definition within the statutory guidance.

The main other mechanism for dealing with both contaminated land and brownfield redevelopment will be through the planning regime. Developers will be required to undertake site specific risk assessment and intrusive investigation to develop remediation plans and these developments will be required to be signed off as "suitable for the proposed use" by the applicant or their agents. All documentation for the implementation of reclamation schemes will be available through Planning and Development Services.

#### 8.5.4 Identify any Key Geographical Areas

Key geographical areas will be identified through the use of historical land use data and priority actions for inspection of that area will be based on population density and immediate harm to any receptors from potential sites within the specific area.

It may be necessary to identify where in rural areas; potable waters are supplied by private supply are at risk from contaminated sites and provide source protection zones.

Areas where there is highly permeable drift geology will be prioritised for historical land use and where it is found that a source is present, it will be investigated to identify the potential risk involved. 8.5.5 Identify any Specific Pollutant Linkages

Specific pollutant linkages will be identified through site specific risk assessment using specified methodology particular to those circumstances in which there is the potential for significant harm.

8.5.6 Identify any Particular Individual Sites

The Department of the Environment published specific reports on contaminated land and issued specific guidance on polluting industries. These Industry Profiles will be used to identify sites where historically, these industries operated and when quantitative risk assessment dictates, further investigation will be undertaken.

8.5.7 Identify Gaps in Information and how these are to be Remedied

Considerable information is held within various Council departments that will assist in the identification of sites that will be screened for the requirement of further investigation.

The Council has purchased the Historical Land Use Data supplied by Landmark Information Systems Ltd. One of the complexities of the implementation of the strategy for the Council is the fact that the vast majority of the area has remained rural. For this reason, the historical data has been collated based on past industrial activity within the largest settlements throughout the Perth and Kinross area.

This has influenced our approach in the inspection strategy design and although accepting there will be anomalies in this preferred approach, we believe it to be rational, ordered and efficient and will where information is available, identify those sites that pose the greatest risk of significant harm, and pollution of controlled waters and in line with the Scottish Executive Guidance.



Fig. 8.1 available historic land use data

#### 8.6 Information and Complaints

It is anticipated that a number of complaints regarding potentially contaminated sites will come from the public, business or community groups which may alter the inspection programme.

8.6.1 Determining the Appropriate Level/Type of Further Investigation

Each site will be investigated to provide enough information to allow the characterisation of the site in the context of source, pathway, receptor linkages and the likelihood of significant pollutant linkage and causing harm or the pollution of controlled waters. This information will allow qualitative risk assessment. In the initial stages of preliminary investigation and Desktop Study, there will have been enough information gathered to determine the level of intrusive investigation.

8.6.2 Maintaining Appropriate Confidentiality

The majority of the information collected during the inspection process will be subject to the Environmental Information Regulations 1992 (as amended).

In certain circumstances it may be inappropriate to release information held by the Council. Advice will be given on confidentiality in specific cases by Legal Services.

8.6.3 Dealing with Anonymously Provided Information

All information provided would be recorded. Depending on the quality of information received will determine if the authority would take further action.

8.6.4 Complaints

A complaint regarding contaminated land will be handled in the same way as other complaints dealt with by Environment Services. Complainants will have their complaint logged; be contacted by an officer within 3 working days; and be kept informed of progress. Although every effort will be made to secure an efficient resolution to the problems, the legislation contains a number of obstacles:

- 1) Proof of a viable pollutant linkage before any formal designation of contaminated land is possible, this may require a detailed ground investigation (if not carried out voluntarily by appropriate person, the Council has only limited resources to fund these and will consider each case on its merits and these will be ranked along with other priorities).
- 2) The requirement for the enforcing authority to identify and attempt to track down the original polluter (Class A person).
- 3) Prior consultation with interested parties before designation of contaminated land.
- 4) A minimum 3 months consultation period between designation and serving a remediation notice.

The legislation allows (3) and (4) to be waived when dealing with urgent cases but not (1) and (2). If a member of the public or organisation provides information relating to contaminated land, that is not directly affecting their own health or their property this will not be treated as a complaint, although the information will be recorded and necessary action assessed.

The Council does not normally investigate anonymous complaints, and this approach will be taken in dealing with contaminated land issues. Anonymously supplied information and anecdotal evidence will be noted, but no designation will take place without sufficient evidence being available.

#### 8.6.5 Confidentiality

The principle of confidentiality of complainants is long established within the Council. The only situation where complainant details will be made public, is in the event of court action, where the identity of the complaint is a material concern.

#### 8.7 Assessment Methods and Prioritisation

As previously stated to allow the prioritisation of inspection, we are interrogating the historical land use data we have at the present time purchased from Landmark Information Systems Limited. This will evolve into the first tranch of scheduled work to allow the site specific risk assessments and desktop studies to be undertaken.

In parallel to this first tranch of site inspections, interpretation of the areas of land of which we have no or little data will be conducted to identify further sites for further assessment.

#### 8.7.1 Areas of Land

In order that we identify particular areas of land, we proposed to look at spatial information based on the proximity of receptors and vulnerability of groundwater's using the GIS.

We will conduct the strategy based on inspection of the 41 electoral wards of the Council area based on demographic information and the historical land use available to give an overall indication of potential problem within the area being surveyed.

We do however recognise that there will be anomalies in this preferred method of survey for the area but these can only be addressed when more information becomes available to the authority through the strategy implementation and data acquisition. These anticipated problems will be addressed at the review of the strategy in October 2002.

#### 8.7.2 Individual Sites

Where it is believed that a site may indeed meet the statutory definition of being contaminated and further work is required by way of characterising the site, the following procedure will be undertaken;

- 1. The owner or occupier will be contacted
- 2. If information is available confirming the condition of the site this will be requested
- 3. That information will be evaluated using specific risk assessments applicable to the source-pathway receptor linkage using specific software for contaminant fate modelling.
- 4. Where no information exists, the owner-occupier will be asked to provide that information unless that person is a class B person and it is a controlled water issue. In this case, the Authority will specify what works are required to investigate suspected pollutant linkages and undertake those works if no class A person can be found.
- 5. If the site is a controlled waters issue, SEPA will be consulted at this stage and site specific guidance will be sought to determine if the site is a special site and

the significant pollutant linkage is entry into controlled waters of a substance as listed in SCHEDULE 1 of the regulations.

6. Where there is a significant pollutant linkage identified that land will be designated as contaminated land.

All site investigations will be conducted to BS 10175:2000, Investigation of Potentially Contaminated Sites-Code of Practice when conducted by the Council. Any contractors appointed to conduct intrusive investigation will be required to be accredited to Ground Investigation Drillers, Accreditation Scheme and conform with applicable standards i.e. Specification for Ground Investigation, Site Investigation Steering Group or equivalent.

The Public Analyst of Dundee City Council will conduct laboratory analysis on samples collected during any site investigation by the Council. Analytical protocol will be agreed dependent on the analysis required.

Site specific risk assessment will be undertaken using a variety of different software tools, which will include;

- British Geological Survey Site Prioritisation Software
- RBCA Toolkit for Chemical Releases Groundwater and Human Health
- R&D Publication 20 Groundwater
- SNIFFER Framework Human Health
- BGS Reporting System Site Specific Reports
- CLEA Guideline Values (when and if available) Human Health

As yet, software to predict or measure the impact from contaminated land on designated Eco Systems is unavailable so any protocol required for measuring the impact on such systems will be agreed with Scottish Natural Heritage.

#### 8.8 Trans-boundary Migration Impacting on Neighbouring Authorities

The trans-boundary migration of pollutants from one neighbouring authority to the next is a highly complex issue. This is especially true where changes in political boundaries of adjacent authorities have taken place in times of industrialisation throughout the later 17<sup>th</sup> and earlier 18<sup>th</sup> centuries.

Liability for contamination will be extremely difficult to trace.

As already mentioned, Perth and Kinross neighbours with more local authorities than any other, namely;

- 1. Clackmannanshire
- 2. Stirlingshire
- 3. Angus Council
- 4. Dundee City Council
- 5. Argyll and Bute
- 6. Highland
- 7. Fife Council
- 8. Aberdeenshire

It may be discovered during the inspection process that a site identified as requiring further investigation through suspected release of substances creating an S-P-R linkage.

This could potentially be from a source from the enforcing authority's land or the adjacent bordering Local Authorities land, either resulting in an impact on a statutory designated receptor.

Section 78 x (2) gives powers to the Council where pollutants are migrating from the neighbouring authority and impacting on a receptor within the Council area.

If such circumstances are discovered, then where the source or receptor is identified in any of the neighbouring authorities they will be informed by letter, a liaison team will meet with the authority to determine a course of action. In the case of controlled waters, SEPA will be consulted at an early stage.

# 9 Liaison and Communications Strategy

The work required to implement the strategy - is vast and complex, and necessitates a collaborative approach making effective liaison and communication vital, both inside and outwith the Council.

#### 9.1 Owners, Occupiers and Other Interested Parties

The complex nature of contaminated land issues cannot be explained easily or quickly. To aid this task CoSLA and SEPA have produced a useful booklet giving an overview of the likely impact of the legislation on people who own, occupy or may be liable for contaminated land. (i.e. appropriate persons). This booklet can be obtained by calling the Environment Services' Helpline (01738 476 476) and covers issues such as:-

- What is contaminated land?
- What happens once land has been identified as contaminated?
- What is remediation and what is likely to be required?
- Who is responsible for the cost of remediation?
- What appears on the public register?

SNH have an extensive database of major landowners within the district, which we hope to be able to utilise.

9.2 Other Statutory Bodies

Contact has been made with each of the statutory consultees listed below:-

- Scottish Environment Protection Agency
- (SEPA)
- Scottish National Heritage (SNH)
- Historic Scotland
- Food Standards Agency
- Scottish Executive
- Scottish Enterprise Tayside

Close links have been formed with SEPA and SNH. Given the major aquifer underlying much of the Council's area, the relationship with SEPA is considered vital to effective implementation of the strategy and the regulatory regime. Perth and Kinross Council's area is divided among 3 different SEPA area teams, Perth, Stirling and Dundee, each with an 'Area Contact' for contaminated land. Liaison with SEPA will follow the 'Liaison Framework' agreed nationally by SEPA and several Scottish Local Authorities.

9.3 The Wider Community

It is appreciated that communicating with members of the public and certain sections of the commercial sector will be essential to the success of strategy. This issue will be the subject of a future contaminated land working group meeting that will address the issues of general

communication, and in particular risk communication. The Council's website is seen as a useful tool to aid this task.

# 10 **Programme for Inspection**

#### 10.1 Local Issues

The strategy has been produced to reflect local issues in identifying potentially contaminated land. The diversity of the area and the spatial geographical circumstances in historical land use has led to the development of in-house methods to identify where land poses unacceptable risk to receptors as identified in line with statutory guidance.

# 10.2 Criteria for Selecting Individual Areas and Sites

As previously stated, the criteria for selecting areas for inspection has been based on the development of in-house methodology based on population density and historical land use data. It is expected that the methods are robust, however there may be certain anomalies in specific circumstances when a site is identified by other information made available to Council Officers.

Our approach is influenced by several factors and in order that we meet the requirements of the strategy, these factors have been used to develop our inspection strategy in line with statutory guidance. The main contributing factors are:

- a) Land use data readily available
- b) Historical mapping available
- c) Geographical characteristics of the area
- d) Population distribution
- e) Historical industrial activity

There are 41 Electoral Wards within the Perth and Kinross Boundary, all with varying characteristics and population densities. Each electoral ward will be inspected over the time scale in an order of priority based on the population density of the ward.

Ward Number	Population	Area Size/	Population	Previous Land
		Hectares	Density by	Use Risk
			Hectare	Ranking
1-Rannoch & Atholl	1861	144100	0.012914643	
2-Pitlochry	2870	7380	0.388888889	
3-Rattray & Glenshee	3418	47770	0.071551183	
4-Alyth & Old Rattray	3419	9770	0.349948823	
5-Coupar Angus & Meigle	3637	5120	0.710351563	
6-Rosemount	2821	2573	1.096385542	
7-Blairgowrie	2789	1589	1.755191945	
8-Kinclaven & Clunie	2967	10750	0.276	
9-Strathtay & Dunkeld	3109	53280	0.058352102	
10-Breadalbane	2982	68840	0.043317838	
11-Comrie	2452	41570	0.058984845	
12-Crieff North	3097	386	8.023316062	
13-Crieff South	3282	1936	1.695247934	
14-Strathord & Logiealmond	3319	19670	0.168734113	
15-Strathalmond	3052	4230	0.721513002	
16-Scone	3290	148	22.22972973	
17-Dunsinnan	2987	12900	0.231550388	
18-East Carse	2927	6090	0.480623974	
19-Central Carse	3160	9130	0.34611172	
20-Barnhill & West Carse	3311	2747	1.205314889	
21-Pictstonhill	3074	776	3.961340206	

Ward Number	Population	Area Size/	Population	<b>Previous Land</b>
		Hectares	Density by	Use Risk
			Hectare	Ranking
22-North Inch	2584	95	27.2	
23-Muirton	3645	106	34.38679245	
24-North Muirton	3865	159	24.3081761	
25-Hillyland	3037	279	10.88530466	
26-Ruthven Park	1319	94	14.03191489	
27-North Letham	3388	75	45.17333333	
28-South Letham	4333	63	68.77777778	
29-Wellshill	2973	150	19.82	
30-Oakbank	3075	165	18.63636364	
31-Craigie	3272	89	36.76404494	
32-South Inch	2779	254	10.94094488	
33-Moncreiffe & Friarton	3515	286	12.29020979	
34-Earn	3326	6710	0.495678092	
35-Auchterarder & Mid Earn	2675	13250	0.201886792	
36-Strathallan & Glendevon	3311	24410	0.135641131	
37-Auchterarder Craigrossie	3161	8930	0.353975364	
38-Abernethy & Glenfarg	2832	14450	0.195986159	
39-Milnathort & North Kinross	2981	3527	0.845194216	
40-Kinross Town	3329	1053	3.161443495	
41-Kinross-shire	3017	15960	0.189035088	

#### The provisional time scale for inspection is within Appendix D.

Individual sites that are suspected of being contaminated land would be selected for further investigation if it appears to the Council that there is a source, a pathway and a receptor present and that a significant pollutant linkage is suspected.

This will be achieved by conducting "site specific risk assessment" using specialised computer modelling software. As yet we have not selected any of the packages available but there are several under evaluation at this time.

#### 10.3 Activities

It is anticipated that the inspection process could take up to 5 years and there after a rolling programme of inspection. The main activities identified within the main inspection process will be as a priority, the identification of those sites that pose significant risk to human health and the wider environment.

Within the initial inspection period the information management system and geographical information management system will be implemented. In line with the corporate GIS strategy, information source and management that will include the identification of sources, pathways and receptors.

#### 10.4 Timetable

It is difficult at this time to prepare a detailed timetable of activities until we ascertain the extent of the problem within the Perth and Kinross area. The final timetable for activities will be resource dependent. A provisional timetable has been prepared and is subject to change as the inspection process is conducted. The provisional timetable is contained in Appendix C.

#### 11 Arrangements for Carrying out Detailed Inspection

Where it is found that a particular site requires more detailed inspection, Environment Services will start to collate the necessary information required to assist in making any determination that the land is Contaminated Land.

11.1 Site Specific Liaison and Communication

Where it is thought by conducting sufficient Phase One Desktop Survey work that a significant pollutant linkage exists, the Authority will seek to establish communication with the owner or occupier of the site in question if it has not already done so. This will initiate the process of designing what will be required by way of intrusive investigation design and remediation. It will also assist in the process of determining liability for the contamination.

Where it is found that a site is causing imminent risk to human health, those likely to be at high risk will be contacted and will be explained the factors relating to what is being done to remediate the site.

11.2 Methods for Assessment and Inspection

All site assessments and inspections will be based on a quality control approach and where appropriate, specific standards will be applied in the management of information and design of intrusive investigations.

11.3 Health and Safety Procedures

All Health and Safety procedures will be drawn on site specific risk assessment and control measures adopted where required. Protocol will be achieved through the guidance prepared by the Health and Safety Executive and the Construction Industry Research and Information Association. All health and safety plans will be prepared in collaboration with the internal health and safety Officer.

11.4 Appointment of External Specialist Advice

Where appropriate, the Authority will appoint specialist consultants when the specific expertise is out with the authority capability. This may include circumstances where a specific discipline such as hydrogeology, geochemistry or other such expertise is required.

Specialist consultants will also be engaged where EXPERT WITNESS is called for during any litigation procedure.

Consultants will be required to submit a statement their professional capabilities and experience to allow them to be placed on an approved list.

Where the requirement for specialist consultants or contractors is found, tender and contract procedures will be followed as per the Scheme of Administration.

11.5 The Use of Statutory Powers

Where it is known to the authority that unacceptable risk to human health or a receptor as defined by the statutory guidance, the authority will exercise its statutory duty to remediate that land unless:

- (i) The authority has received detailed information on the condition of the land either from SEPA or other persons such as the owner/occupier as to allow the authority to determine whether the land is contaminated land: or
- (ii) A person offers to provide such Information within a reasonable and specified time, and then provides such information within that time
- 11.6 Risk Communication Strategy

The general public in the UK is generally unaware of the regulation now in force to deal with contaminated land. Unlike the problems encountered in the USA such as the Love Canal

incident where evacuation of properties was required to the imminent risk to human health and have highlighted the potential when risk is required to be communicated.

In the course of communicating any perceived risk based on sound scientific advice the Council will seek to;

- Identify all necessary stakeholders
- Decide when to communicate
- What actions are being taken

The risk communication procedures are at the time of writing being formalised as a corporate communications strategy.

#### 11.7 Frequency of Inspection

Frequency of detailed inspection will be largely dependent on resources available to this Service. As previously stated, until the extent of the problem is identified, a detailed inspection programme cannot be identified at this time.

11.8 Format of Information Resulting from Inspection

Information collected during the process of inspection will be used for three specific purposes, which are:

- (i) Allowing the determination of land that is contaminated land
- (ii) The provision of information to SEPA on the state of contaminated land report, and:
- (iii) Providing internal information to services that require detailed environmental information for the use of strategy production, planning and other purposes

If land is found to be contaminated land, there are structured procedures that have been agreed between Scottish Local Authorities, SEPA and CoSLA. These are to provide the information on the reasons justifying the grounds on which the land was determined to be contaminated land.

#### 12 Review Mechanisms

Until such times as we have had opportunity to evaluate how the inspection strategy is working in practice it is difficult to determine what mechanisms or circumstances would justify a review. Throughout the inspection process, there will be highlighted areas that warrant review and we will undertake appropriate corrective action to allow the statutory duty to continue in line with the legislation and the guidance. The following subsections are indicative of what would trigger such a review.

#### 12.1 Reviewing Inspection Decisions

There may be specific circumstances where an inspection of land that previously had been subjected to a detailed inspection requires re-evaluation to determine if there have been any changes that would cause the land to be contaminated land. These circumstances would include:

- Proposed changes in the surrounding use of land
- Unplanned changes in the use of land
- Unplanned events
- Reports of localised pollution which appear to relate to a particular area of land
- Verifiable reports of unusual or abnormal site conditions received from business, members of the public or voluntary organisations
- Responding to members of the public

- Responding to owners or occupiers of land and other relevant interested parties
- Monitoring of other information becoming available
- Case law and changes in legislation

# 12.2 Review of the Strategy Document

As the implementation of the strategy progresses, the authority will be in a position to evaluate the effectiveness of the procedures adopted to identify contaminated land. The review process will be undertaken on a yearly basis unless major deficiencies are identified and require to be addressed immediately. This will be achieved through systematic auditing of procedures using a quality control approach.

#### 12.3 Review of the Frequency of Inspection

The inspection strategy has been designed to reflect local circumstances. The frequency of inspection largely depends on the initial work conducted within the first year of implementing the strategy and the extent of the problem quantified. This involves the collection of data previously mentioned in this strategy, to be evaluated so as to provide the basis on which a realistic timescale can be provided and re-inspection frequencies timetabled.

#### 13 Information Management

#### 13.1 General Principles

In the course of preparing the strategy and the subsequent inspection programme, the Council will obtain a vast amount of information in the form of bound documents, reports, letters, maps and electronic records. As already mentioned GIS will be used – extensively – although paper records will also be kept.

The Council has produced a Corporate Information Strategy to ensure that statutory requirements and best practice regarding storage, maintenance, security and dissemination of information are met. The information management sub-group of the Contaminated Land Working Group will continually discuss these issues and any additional requirements for information management systems will be incorporated as required.

# 13.2 Public Register and Contents

Under the legislation, the Council is required to set up and maintain a public register of contaminated land. The register will be kept by Environment Services, Pullar House, 35 Kinnoull Street, Perth. It will be paper-based initially, although this may alter in time and it may also be available electronically. At the time of writing no sites have been identified, designated and placed on the register. The contents of the register are prescribed in The Contaminated Land (Scotland) Regulations 2000. (SI 178) and includes:

- Identification notices
- Remediation notices (including details of site reports)
- Appeals against remediation notices and outcome
- Remediation declarations, statements and notifications of claimed remediation
- Designations of 'special sites'
- Convictions under Part IIA

It is not envisioned that the historical land use data and other records used to research potentially contaminated sites, will be made available to the public. An opinion from Legal Services will be sought to clarify this issue.

#### 13.3 Storage Systems

The nature of information collected during the inspection process and in particular, sitespecific investigation results in hard and electronic media. It is the intention to store as much data collected in electronic format although in most circumstances where remediation plans are submitted which can run to large volumes, this will be kept manually.

In line with the corporate GIS project the contaminated land regime is the key driver within Environment Services to rationalise the data management requirements throughout the Service.

#### 13.4 Administration

The administration of the strategy will be the responsibility of Environment Services, Pollution Control Section. At the time of writing, the administration and management systems are being devised for the data management and storage of electronic and hard media.

#### 13.5 Use by Other Services

The information that is required to be collected under the new regime is diverse and complex and highly beneficial in many Council applications. As a resource, this information will serve the Council in providing detailed information when considering Local and Strategic Plans, Planning Applications.

The contaminated land regime places an obligation on local authorities to designate sites as contaminated where pollution of controlled waters is occurring from land contamination. Controlled waters are surface waters (lochs, ponds, streams, rivers, canals, stanks) and groundwater (water beneath the unsaturated zone in the ground held between pores and rock strata). Under the Water Framework Directive, all waters are to be considered on an integrated approach to the protection of all waters. This involves collecting data on surface water quality is impacted, restoration of the water body must be reached by the year 2010 where it must reach "good status". These impacts can occur from land contamination and it is strategic policy to record all surface water and groundwater data. It is hoped that this will be undertaken with a collaborative approach with the Scottish Environment Protection Agency using a network for data exchange.

#### 13.6 Confidentiality of Information

In some cases, the information collected may be confidential and be restricted from being entered on to the register. This may be on the grounds that either the information is prejudicial to national security or, where the information is commercially confidential.

Where a third party provides information, justification will be required if they require any of that information to be withheld from inclusion within the register and public access. The authority will consider the reasons for the exclusion of such information.

If the local authority considers that inclusion in the register of information supplied may be commercially confidential, the authority will notify that person in writing. Reasonable opportunity will be given to that person to allow them to reasonably justify why the information should be excluded from the register contents.

On the grounds of national security, the authority will not place any information on its register that may prejudice or compromise national security. Where any information held on the register is challenged on the grounds of national security, the authority will seek the advice of the Scottish Ministers. If the Scottish Ministers notify the authority that the inclusion of such information is determined to be prejudicial to national security, the information will be removed from the register.

13.7 Arrangements for Giving Access to Information

Under the Environmental Information Regulations 1992, Local Authorities have an obligation to make available information held by them pertaining to the environment. The definition of "environmental information" includes information on "state of any natural site or land". Although the access to the public registers by an individual will be free, any requests

for information on land contamination over and above register contents will be chargeable retrospectively for Officers time in collating the information.

Requests for information should be made in writing to the authority detailing the information required. Environment Services will do all in its power to deal with the request for the information requested as quickly as possible and will collate information held on record.

13.8 Dealing with Requests for Information

Requests for environmental information should be made in writing to Environment Services. Any request made should be specific as to the nature of the information required.

Inspection of registers will be allowed during normal working hours. Persons wishing to inspect the registers would be best advised to make an appointment with Environment Services where they can meet with one of the dedicated officers who can assist them.

An interview room will be made available so the persons may inspect the register contents in the presence of the officer.

Copies of register entries can be made but this will be chargeable.

13.9 Provision of Information to SEPA

As already mentioned SEPA are required to produce an annual report on the State of Contaminated Land in Scotland. This will include:

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

A detailed list of the information required by SEPA is shown in Appendix C. It is likely that some database design or modification work will be required to ensure this information is easily retrievable from the GIS System.

The Council must also provide details to SEPA when a site is designated as contaminated and whenever a remediation notice, statement or declaration is issued. SEPA and CoSLA have agreed standard forms for information exchange and the Council will adopt these to fulfil the reporting requirements of the legislation.

#### 14 Other Supporting Information

14.1 Points of Contact

The principle contact for implementation of the Contaminated Land Inspection Strategy is Roy Stewart, Environmental Health Manager. He can be contacted at Environment Services, Pullar House, Perth.

The lead officers for the preparation and implementation of the strategy are Robin Mackenzie, Technical Officer Contaminated Land and Jacqueline Baird, Environmental Health Officer who can be contacted at Pullar House, Perth. A list of relevant contact names and departments are tabled below.

Name	Title	Department	Telephone Number
Roy Stewart	Environmental Health	Environment Services	Tel: 01738 476461
	Manager	Pollution Control	Fax: 01738 476410
Robin Mackenzie	Technical Officer	Environment Services	Tel: 01738 476443
	Contaminated Land	Pollution Control	Fax: 01738 476410
Name	Title	Department	Telephone Number
Jacqueline Baird	Environmental Health	Environment Services	Tel: 01738 476452
	Officer	Pollution Control	Fax: 01738 476410
Colin Davidson	Planning Officer	Planning &	Tel: 01738 475381
		Development Services	Fax: 01738 475310
Geoff Fogg	Solicitor	Legal Services	Tel: 01738 475130
		-	Fax: 01738 475710
Jim Low	Principal Estates	Housing & Property	Tel: 01738 475951
	Surveyor	Services	Fax: 01738 475949

General enquiries regarding the strategy should be made in the first instance to Roy Stewart. Written requests for information should be made to:

The Director Environment Services Perth & Kinross Council Pullar House 35 Kinnoull Street Perth PH1 5GD

Tel: 01738 475000 Fax: 01738 476410

# TABLE A - CATEGORIES OF SIGNIFICANT HARM

	Type of Receptor	Description of harm to that type of receptor that is to be regarded as significant harm
1	Human beings	Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions.
		For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned. In this Chapter, this description of significant harm is referred to as a "human health effect".
2	<ul> <li>Any ecological system, or living organism forming part of such a system, within a location which is:</li> <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 (i.e. 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;</li> <li>Any habitat or site afforded policy protection (i.e. candidate Special Areas of Conservation, potential Special Areas of Conservation, potential Special Protection Areas given equivalent protection;</li> </ul>	<ul> <li>For any protected location:</li> <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> <li>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.</li> <li>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.</li> <li>In this Chapter, this description of significant harm is referred to as an "ecological system effect".</li> </ul>
	• Any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949; or	
	<ul> <li>Any candidate National Park to be designated under the proposed National Parks Act</li> </ul>	

	Type of Receptor	Description of harm to that type of receptor that is to be regarded as significant harm
3	<ul> <li>Property in the form of:</li> <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>	For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage. The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or loss in value is caused by a pollutant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss. In this Chapter, this description of significant harm is referred to as an "animal or crop effect"
4	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".	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. 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. In this Chapter, this description of significant harm is referred to as a "building effect".

**Statutory Consultees and External Contacts** 

SEPA Regional Office Edinburgh SEPA RegionKim Bradley Contaminated Land Specialist East RegionSEPA Clearwater House Herriot Watt Research Park Riccarton Edinburgh EH14 4AP Td: 0131 449 2381 Td: 0131 449 7314 Clearwater House Herriot Watt Research Park Riccarton Edinburgh EH14 4AP Td: 0131 449 7314 Clearwater House Herriot Watt Research Park Riccarton Edinburgh EH14 4AP Td: 0131 449 7314 Clearwater House Herriot 1284 457700 Fax: 01738 627989 Fax: 01738 627989 Fax: 01738 620997 Fax: 0131 668 8765 DL Fd: 0131 668 7765British Geological Enquiries North Geological Enquiries North Trust LtdDerek Ball (hydrogeoligist) Peter HalpinMurchison House West Mains Road Edinburgh EH9 31A Td: 0131 668 7785 Edins 0131 668 7785 Edin	Body	Contact Details	Address
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# Annex 1: THE STATE OF CONTAMINATED LAND REPORT

The report will focus on the three key stages of Part IIA: inspection strategies; the identification of contaminated land; and the remediation of contaminated land. The emphasis on each stage will obviously vary for each report issued. Information will be presented as highlighted below for the individual stages.

# Local Authority Inspection Strategies

In formation obtained from published inspection strategies, subject to finalisation of the inspection strategy guidance, reported for each local authority;

- 1. date of publication of the strategy
- 2. date of proposed review of strategy
- 3. brief description of local authority area
- 4. information to be collected and organisations to be contacted
- 5. management of information
- 6. basis of prioritising sites for detailed assessment
- 7. timescales for inspection of sites

#### Land Identified as Contaminated

Information obtained from written records of determination, report as total numbers and broken down per local authority:

- 1. date of notice
- 2. potential appropriate persons (causer, knowing permitter, current owner, previous owner, current occupier, previous occupier, trustee, other, none)
- 3. area of contaminated land
- 4. basis on which identified as contaminated (harm/pollution of controlled waters)
- 5. source of contamination (activity)
- 6. form of contamination (dissipated in soil, NAPL, discrete phase, present in tank etc)
- 7. the contaminants present (chemical name)
- 8. pathway/s (soil, air, groundwater, surface water, foodchain)
- 9. receptor/s (humans, ecosystem, property, controlled waters)
- 10. number of pollutant linkages identified
- 11. current site use (residential, residential with gardens, commercial/industrial, parks/playing fields/open spaces and allotment gardens)
- 12. previous site use (residential, residential with gardens, commercial/industrial, parks/playing fields/open spaces and allotment gardens).

In addition, sites designated as special sites will be highlighted, with reference to the regulation which resulted in them being a special site.

#### Site Remediation

Information obtained from remediation notices, statements and declarations, reported as total numbers and broken down by enforcing authority:

- 1. date identified as contaminated
- 2. whether remediation notice, declaration or statement
- 3. whether replaces another remediation notice, declaration or statement
- 4. reason for issue (agreed remediation, EF uses powers, no remediation possible, remediation required)
- 5. date issued
- 6. whether urgent action taken (Y/N)
- 7. whether the notice/statement/declaration relates to an orphan site (Y/N)

- 8. whether assessment action taken (Y/N)
- 9. remediation objective (reduce concentration, break pathway, remove receptor)
- 10. remedial treatment actions: brief details
- 11. whether monitoring action taken (Y/N)
- 12. class of appropriate person (A/B/none)
- 13. nature of appropriate person (causer, knowing permitter, current owner, previous owner, current occupier, previous occupier, trustee, other, none)
- 14. time period for remediation (0-1 year, 1-5 years, 5-10 years, >10 years)
- 15. time after notice served/statement issued, remediation commencing
- 16. receptor/s addressed by remediation notice/statement
- 17. receptor/s excluded (human health, ecosystems, property, controlled waters)
- 18. basis on which remediation excluded (no liability, excessive cost, hardship, not serious)
- 19. number of pollutant linkages to be addressed
- 20. number of pollutant linkages to be excluded Additional information is desirable in relation to remediation notices and statements to gain information on actual remediation undertaken:
- 21. whether work was undertaken by enforcing authority and the reasons why it was undertaken (imminent danger, written agreement, notice not complied with, precluded remediation, cost not recoverable, no appropriate person, authority is appropriate person)
- 22. whether costs were recovered for work undertaken by an enforcing authority
- 23. whether appeals were made against remediation notices served and the outcome
- 24. whether notifications of claimed remediation were received
- 25. whether remedial activity was completed or the requirements were met

# Additional Information Supplied on a Voluntary Basis

Where available, the following information will be broken down by local authority to provide an indication of the effort involved in identifying land as contaminated under Part IIA and the percentage of sites considered which were found to be statutorily contaminated.

- 1. Number of sites considered which were found not to be statutorily contaminated i.e. no pollutant linkage
- 2. Number of sites considered which required a desk study to be conducted for the purposes of Part IIA
- 3. Number of sites considered which required a site visit to be carried out for the purposes of Part IIA
- 4. Number of sites considered which required an intrusive site investigation to be carried out for the purposes of Part IIA

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Technical Standards for Compliance with the Building Standards (Scotland) Regulations 1990, as amended.

Animal or crop effect: significant harm of a type in box 3 of Table A of Appendix A.

**Apportionment:** any determination by the enforcing authority under section 78F(7)(that is, a division of the costs of carrying out any remediation action between two or more appropriate persons).

#### Appropriate person::

"any person who is an appropriate person, determined in accordance with section 78F...., to bear responsibility for any thing which is to be done by way of remediation in any particular case."

**Assessment action:** a remediation action falling within the definition of remediation in section 78A(7)(a), that is the doing of anything for the purpose of assessing the condition of the contaminated land in question, or any controlled waters affected by that land or any land adjoining or adjacent to that land.

Attribution: the process of apportionment between liability groups.

**Building:** any structure or erection, and any part of a building including any part below ground, but not including plant or machinery comprised in a building *Table A*, Appendix A.

**Building effect:** significant harm of a type listed in box 4 of Table A of Chapter A.

**Caused or knowingly permitted:** test for establishing responsibility for remediation, under section 78(2) of Part IIA of the Environmental Protection Act 1990.

**Changes to Substances:** an exclusion test for Class A persons set out in Part 5 of Chapter D. *Paragraphs D.62 to D.64 of the Statutory Guidance.* 

**Class A liability group**: a liability group consisting of one or more Class A persons.

**Class A person:** a person who is an appropriate person by virtue of section 78F(2)(that is, because he has caused or knowingly permitted a pollutant to be in, on or under the land).

Class B liability group: a liability group consisting of one or more Class B persons.

**Class B person:** a person who is an appropriate person by virtue of section 78F(4) or (5)(that is, because he is the owner or occupier of the land in circumstances where no Class A person can be found with respect to a particular remediation action).

**Collection action:** a remediation action which addresses together all of the significant pollution linkages to which it is referable, but which would not have been part of the remediation package for every one of those linkages if each of them had been addressed separately.

**Common action:** a remediation action which addresses together all of the significant pollution linkages to which it is referable, and which would have been part of the remediation package for each of those linkages if each of them had been addressed separately.

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

**Contaminated Land**: defined in section 78A(2) as

"any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that – "(a) significant harm is being caused or there is a significant possibility of such harm being caused, or;

"(b) pollution of controlled waters is being, or is likely to be, caused."

**Contaminated Land (Scotland) Regulations 2000:** regulations (SI 2000/178) made under Part IIA of the Environmental Protection Act 1990.

**Controlled waters:** defined in section 78A(9) by reference to section 30A of the Control of Pollution Act 1974; this embraces territorial and coastal waters, inland fresh waters and ground waters.

**Cost recovery decision:** any decision by the enforcing authority whether;

- a) To recover from the appropriate person all the reasonable costs incurred by the authority in carrying out remediation, or
- b) Not to recover those costs or to recover only part of those costs.

**Current use:** any use which is currently being made, or is likely to be made, of the land and which is consistent with any existing planning permission (or is otherwise lawful under town and country planning legislation). This definition is subject to the following qualifications:

- (a) The current use should be taken to include any temporary use, permitted under town and country planning legislation, to which the land is, or is likely to be, put from time to time;
- (b) The current use includes future uses or developments which do not require a new, or amended, grant of planning permission;
- (c) The current use should, nevertheless, be taken to include any likely informal recreational use of the land, whether authorised by the owners or occupiers or not, (for example, children playing on the land); however, in assessing the likelihood of any such informal use, the local authority should give due attention to measures taken to prevent or restrict access to the land; and
- (d) In the case of agricultural land, however, the current agricultural use should not be taken to extend beyond the growing or rearing of the crops or animals which are habitually grown or reared on the land.

Ecological system effect: significant harm of a type listed in box 2 of Table A of Appendix A.

Enforcing authority: defined in section 78A(9) as:

- (a) In relation to a special site, SEPA;
- (b) In relation to contaminated land other than a special site, the local authority in whose area the land is situated.

**Escaped Substances:** an exclusion test for Class A persons set out in Part 5 of Chapter D. *Paragraphs D.65 to D.67* of the Statutory Guidance Scottish Executive Rural Affairs Department Circular 1/2000.

**Excluded Activities:** an exclusion test for Class A person set out in Part 5 of Chapter D. *Paragraphs D.47 to D.50 of the Statutory Guidance Scottish Executive Rural Affairs Department Circular 1/2000.* 

**Exclusion:** any determination by the enforcing authority under section 78F(6) (that is, that a person is to be treated as not being an appropriate person).

**Favourable conservation status:** defined in Article 1 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

**Hardship:** a factor underlying any cost recovery decision made by an enforcing authority under section 78P(2).

Harm: defined in section 78A(4) of Part IIA of the Environmental Protection Act 1990.

"harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property."

**Human health effect:** significant harm of a type listed in box 1 of Table A of Chapter A.

**Industrial, trade or business premises:** defined in section 78M(6), for the purpose of determining the penalty for failure to comply with a remediation notice, as:

"premises used for any industrial, trade or business purposes or premises not so used on which matter is burnt in connection with any industrial, trade or business process, and premises are used for industrial purposes where they are used for the purposes of any treatment or process as well as where they are used for the purpose of manufacturing."

**Inspection using statutory powers of entry:** any detailed inspection of land carried out through use of powers of entry given to an enforcing authority by section 108 of the Environment Act 1995.

**Introduction of Pathways or Receptors:** an exclusion test for Class A persons set out Part 5 of Chapter D. of the Statutory Guidance Scottish Executive Rural Affairs Department Circular 1/2000.

**Intrusive investigation:** an investigation of land (for example by exploratory excavations) which involves actions going beyond simple visual inspection of the land, limited sampling or assessment of documentary information.

**Liability group:** the persons who are appropriate persons with respect to a particular significant pollutant.

Local authority: defined in section 78A(9) as meaning any Scottish local authority.

**Monitoring action:** a remediation action falling within the definition in section 78A(7)(c), that is "making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters".

**Orphan linkage:** a significant pollutant linkage for which no appropriate person can be found, or where those who would otherwise be liable are exempted by one of the relevant statutory provisions.

# Owner:

"a person (other than a creditor in a heritable security not in possession of the security subjects) for the time being entitled to receive or who would, if the land were let, be entitled to receive, the rents of the land in connection with which the word is used and includes a trustee, factor, guardian or curator and in the case of public or municipal land includes the persons to whom the management of the land is entrusted."

**Part IIA:** Part IIA of the Environmental Protection Act 1990.

**Pathway:** one or more routes or means by, or through, which a receptor:

(a) is being exposed to, or affected by, a contaminant, or

(b) could be so exposed or affected.

**Payments Made for Remediation:** an exclusion test for Class A persons set out in Part 5 of Chapter D. 67 of the Statutory Guidance Scottish Executive Rural Affairs Department Circular 1/2000.

**Person acting in a relevant capacity:** defined in section 78X(4), Part IIA of the Environmental Protection Act 1990 for the purposes of limiting personal liability, as any of the following:

"(a) a person action as an insolvency practitioner, within the meaning of section 388 of the Insolvency Act 1986 (including that section as it applies in relation to an insolvent partnership by virtue of any order made under section 421 of that Act);

"(b) the official receiver acting in a capacity in which he would be regarded as acting as an insolvency practitioner within the meaning of section 388 of the Insolvency Act 1986 if subsection (5) of that section were disregarded;

"(c) the official receiver acting as a receiver or manager;

"(d) a person acting as a special manager under section 177 or 370 of the Insolvency Act 1986;...

"(f) a person acting as a receiver or receiver and manager under or by virtue of any enactment, or by virtue of his appointment as such by an order of a court or by any other instrument."

**Pollutant:** a contaminant which forms part of a pollutant linkage.

**Pollutant linkage:** the relationship between a contaminant, a pathway and a receptor.

**Pollution of controlled waters:** defined in section 78A(9) Part IIA of the Environmental Protection Act 1990.

"the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter."

**Possibility of significant harm**: a measure of the probability, or frequency, of the occurrence of circumstances which would lead to significant harm being caused.

Receptor: either:

- (a) a living organism, a group of living organisms, an ecological system or a piece of property which:
  - (i) is in a category listed in Table A in Chapter A as a type of receptor, and
  - (ii) is being, or could be, harmed, by a contaminant; or

(b) controlled waters which are being, or could be, polluted by a contaminant.

**Register:** the public register maintained by the enforcing authority under section 78R of particulars relating to contaminated land.

**Related companies:** those which are members of a group of companies consisting of a "holding company" and its "subsidiaries", where these terms have the same meaning as in section 736 of the Companies Act 1985.

**Relevant date:** the date on which the enforcing authority first served on anyone a notice under section 78B(3) identifying the land as contaminated land (used in assessing whether appropriate persons are "related companies").

**Relevant information:** information relating to the assessment of whether there is a significant possibility of significant harm being caused, which is:

- (a) scientifically-based;
- (b) authoritative;
- (c) relevant to the assessment of risk arising from the presence of contaminants in soil; and
- (d) appropriate to the determination of whether any land is contaminated land for the purposes of Part IIA, in that the use of the information is consistent with providing a level of protection of risk in line with the qualitative criteria set out in Tables A and B of Chapter A, Appendix A.

**Relevant land or waters:** the contaminated land in question, any controlled waters affected by that land and any land adjoining or adjacent to the contaminated land on which remediation might be required as a consequence of the contaminated land being such land.

**Remedial treatment action:** a remediation action falling within the definition in section 78A(7)(b), that is the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose:

- (a) of preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land, or
- (b) of restoring the land or waters to their former state.

**Remediation:** defined in section 78A(7) of Part IIA of the Environmental Protection Act 1990.

- "(a) the doing of anything for the purpose of assessing the condition of
  - "(I) the contaminated land in question;
  - "(ii) any controlled waters affected by that land; or
  - "(iii) any land adjoining or adjacent to that land;
- "(b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose
  - "(I) of preventing or minimising, or remedying or mitigating the effects of, any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land; or
  - "(ii) of restoring the land or waters to their former state; or
- "(c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters."

**Remediation action:** any individual thing which is being, or is to be, done by way of remediation.

**Remediation declaration:** defined in section 78H(6). It is a document prepared and published by the enforcing authority recording remediation actions which it would have specified in a remediation notice, but which it is precluded from specifying by virtue of sections 78E(4) or (5), the reason why it would have specified those actions and the grounds on which it is satisfied that it is precluded from specifying them in a notice.

**Remediation notice:** defined in section 78E(1) as a notice specifying what an appropriate person is to do by way of remediation and the periods within which he is required to do each of the things so specified.

**Remediation package:** the full sent or sequence of remediation actions, within a remediation scheme, which are referable to a particular significant pollutant linkage.

**Remediation scheme:** the complete set or sequence of remediation actions (referable to one or more significant pollutant linkages) to be carried out with respect to the relevant land or waters.

**Remediation statement:** defined in section 78H(7). It is a statement prepared and published by the responsible person detailing the remediation actions which are being, have been, or are expected to be, done as well as the periods within which these things are being done.

Risk: the combinations of:

- (a) the probability, or frequency, of occurrence of a defined hazard (for example, exposure to a property of a substance with the potential to cause harm); and
- (b) the magnitude (including the seriousness) of the consequences.
- **SEPA**: the Scottish Environment Protection Agency

**Shared action**: a remediation action which is referable to the significant pollutant in more than one significant pollutant linkage.

**Single-linkage action:** a remediation action which is referable solely to the significant pollutant in a single significant pollutant linkage.

**Significant harm:** defined in section 78A(5). It means any harm which is determined to be significant in accordance with the statutory guidance in Chapter A (that is, it meets one of the descriptions of types of harm in the second column of Table A of Appendix A.

**Significant pollutant**: a pollutant which forms part of a significant pollutant linkage.

**Significant pollutant linkage:** a pollutant linkage which forms the basis for a determination that a piece of land is contaminated land.

**Significant possibility of significant harm:** a possibility of significant harm being caused which, by virtue of section 78A(5), is determined to be significant in accordance with the statutory guidance in Chapter A of Part IIA of the Environmental Protection Act 1990.

**Sold with Information**: an exclusion test for Class A persons set out in Part 5 of Chapter D. *Paragraph D.57 to D.61 of the Statutory Guidance Scottish Executive Rural Affairs Department Circular 1/2000.* 

**Special site:** defined by section 78A(3) of Part IIA of the Environmental Protection Act 1990.

- " any contaminated land
- "(a) which has been designated as such a site by virtue of section 78C(7) or 78D(6)...;and
- "(b) whose designation as such has not been terminated by the appropriate Agency under section 78Q(4)..." of Part IIA of the Environmental Protection Act 1990.

The effect of the designation of any contaminated land as a special site is that SEPA, rather than the local authority, becomes the enforcing authority for the land.

**Substance:** defined in section 78A(9) of Part IIA of the Environmental Protection Act 1990.

"any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour."