Contaminated

Land Inspection Strategy

SOUTH LANARKSHIRE COUNCIL

Community Resources
Environmental Services

Message from

Councillor Gerry Convery,

Chair of Community Resources Committee

"Much of the contamination within the ground in South Lanarkshire is the legacy left to us by the industrial revolution when our forefathers unwittingly disposed of materials in ignorance of the problems they were leaving behind.

South Lanarkshire Council has always taken a proactive approach to this issue and the implementation of this Strategy represents a more systematic approach which will build on action already taken."

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Note to readers

The technical terms and legal references used in this strategy are explained in the glossary at the back of the document.

Executive summary

On the 14th July 2000, a new statutory regime came into force. The Environment Act 1995, modified the Environmental Protection Act 1990 with regard to the regulatory powers available to Local Authorities for dealing with contaminated land, by inserting a new part (Part IIA) to deal specifically with this problem. In addition to this, the Scottish Executive also brought in the Contaminated Land (Scotland) Regulations 2000.

The new duties which were imposed on councils by this legislation can be summarised as follows:

- To inspect their areas from time to time to identify any contaminated land
- To determine whether a particular site meets the statutory definition of contaminated land
- To establish responsibilities for remediation of the land
- To ensure that appropriate remediation takes place through agreement with those responsible, or if not possible by serving a remediation notice, or in certain cases, carrying out the work themselves, or in certain cases, through other powers
- To keep a public register detailing the regulatory action which they have taken under the new regime

It is South Lanarkshire Council's intention that this document, The Inspection Strategy for the Identification of Contaminated Land will form the basis for the implementation of the Part IIA legislation. It provides not only the procedures for the inspection of land within the South Lanarkshire Council area, but also a justification for, and a transparency in, the decisions as to how this work and how any subsequent actions will be undertaken . South Lanarkshire Council intends to inspect its area following a strategic approach, which will:

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 located first;
d) ensure that resources are concentrated on investigating areas where the authority is most likely to identify contaminated land; and
e) ensure that the authority efficiently identifies requirements for the detailed inspection of particular areas of land.

In carrying out the assessment of this area, South Lanarkshire Council will not be placing greater or lesser emphasis on any particular aspect of the environment. It is envisaged that this will be achieved by:

a) Establishing a methodology, which identifies potentially contaminated sites in a strategic manner employing risk assessment, as required by the legislation. To this end, South Lanarkshire Council has adopted an independent semi-automated GIS (Geographical Information System) based model designed specifically for this purpose.
A key aim of South Lanarkshire Council has been to adopt a methodology which will assess significant harm where it is causing the Human Health Effect, the Ecological System Effect, the Animal or Crop Effect, the Building Effect and also where controlled waters may be affected. The latter will be brought to the attention of the Scottish Environment Protection Agency.

b) Prioritising and categorising the inspection of such sites in an impartial manner, based on (so far as reasonably practicable), robust, publicly available data sources. This is in accordance with South Lanarkshire's policy on disclosure of information, based on the Local Government (Access to Information) Act 1985, which details the rights of members of the public to attend Council meetings and to inspect documents and papers, and on the EU Directive on Public Access to Environmental Information (90/313/EEC), under which the public are entitled to have access to all information about the environment held by government and public authorities, (unless exempt on the grounds of commercial confidentiality or national security).

c) Providing an auditable path to prioritisation by incorporating a Metadatabase within the Model, which provides a permanent record of the information sources and how they have been used.

d) Inspecting sites in a cost effective manner, identifying all available previous work prior to undertaking any further investigations where required. This will be achieved by adopting a Land Quality Management Database designed to record all previously available information which also permits the addition of new information as it becomes available. It is intended that this will ensure that data on contaminated land is recorded in an ordered and structured manner, reducing error and preventing duplication of effort.

e) Establishing a database of all relevant information pertaining to potentially contaminated sub areas and data collected during the inspection stage. The outcome of a) to d) will be retained in digital format and reviewed and added to as further information becomes available.

The main objective is to prioritise which sub-areas within South Lanarkshire Council have the highest potential to be contaminated as defined under Part IIA, that is where a pollutant linkage exists or is likely to exist.

The first major output milestone of this project will be the production of a prioritised list of sub-areas. It is anticipated that this will be achieved by December 2001. Following production of this prioritised list of sub-areas the Council will then begin further detailed researches into the pollutant linkages involved and will create a definitive list of prioritised sub-areas, which will be taken forward for site inspection, desk study and potentially intrusive investigation.

Concurrent with the determination of contaminated land, the Council will have to establish who:

- is the landowner;
- is in the occupation of all or part of the land; and
- appears to be an appropriate person to bear responsibility for any remediation action that might be necessary.

Once a particular sub-area of land has been determined as statutorily contaminated land, the Council will notify SEPA and those persons outlined above of this decision and the capacity (such as landowner) in which they have been informed. The Council will also inform each appropriate person about the tests for exclusion from and apportionment of liabilities as per the statutory guidance.

The Environmental Services Manager will be responsible for issuing all enforcement notices and will do so after consultation with the Council's legal department.

1.0 Introduction

Under the new contaminated land legislation introduced under Part IIA1 of the Environmental Protection Act 1990 on the 14th July 2000, each Local Authority has the responsibility to

"cause its areas to be inspected from time to time for the purpose of identifying contaminated land"

The legislation states that when contaminated land is identified the Local Authority must ensure that land is managed in an appropriate manner. The Scottish Executive has issued Statutory Guidance on the implementation of Part IIA in Scotland to Local Authorities.

1.1 General policy of South Lanarkshire Council

South Lanarkshire Council has produced a number of documents which set out its approach to a range of issues. Action plans are developed at partnership level and Council level to monitor activity and Service Plans also have detailed action plans which link to these, ensuring actions relate to strategic aims.

This strategy reflects the themes and priorities in these documents. In particular these are:

Our aims
Sets out the broad aims and commitment of the Council

Access and opportunity
The Council's social and economic strategy

Action for the environment
The Council's contribution to Local Agenda 21, this is both a strategy and an action plan

Stronger together
The Council's Community Plan for South Lanarkshire

Local plans
Set out planning policies and proposals for land use and development

South Lanarkshire Council has developed a Community Planning Partnership vision for the area involving Greater Glasgow Health Board, Lanarkshire Health Board, Scottish Enterprise Lanarkshire, Scottish Homes, Strathclyde Police and the Council

The Community Plan commits all of the partners to a shared agenda to develop:

- Successful and Inclusive Communities
- Safe and Healthy Communities
- Working and Learning Communities.

Results will be achieved through a number of theme based partnerships, which are:

Local Agenda 21 Partnership
Health Alliance
South Lanarkshire Rural Partnership
Social Inclusion Forum
Community Safety Partnership
Children and Young People's Partnership
Lanarkshire Economic Forum

Partnerships are being established in each of these areas to co-ordinate policy development and ensure that plans are effectively being adopted as an overarching Council strategy.

The Environmental Services Section of Community Resources in carrying out the lead role on behalf of the Council will ensure that all its actions reflect our internal Enforcement Policy. This Policy provides a framework to ensure statutory duties are executed in an equitable, transparent and consistent manner without compromising the protection offered by the legislation.

It is South Lanarkshire Council's intention that this document, 'The Inspection Strategy for the Identification of Contaminated Land', will form the basis for implementation of the Part IIA legislation. This Strategy will not only provide the arrangements and procedures for inspection of land within the South Lanarkshire Council area but also a justification for, and a transparency in, the decisions on how the land will be inspected and subsequent actions undertaken.

1.2 Regulatory context

The contaminated land provisions of Part IIA of the Environmental Protection Act 1990 came into force in Scotland on 14th July 2000. The Scottish Ministers made the Environment Act 1995 (Commencement No.17 and Saving Provision)(Scotland) Order 2000 (S.I.2000/180) bringing into force Part IIA of the Environmental Protection Act 1990. Part IIA was inserted into the 1990 Act by Section 57 of the Environment Act 1995. The Scottish Ministers, in exercise of the powers conferred upon them by sections 78C(8) to (10), 78E(6),78G(5) and (6),74L(4) and (5) and 78R(1),(2) and (8) of the Environmental Protection Act 1990 and of all other powers enabling them, made the Contaminated Land (Scotland) Regulations 2000 (S.I.2000/178). Guidance is provided in the Scottish Executive Circular 1/2000.

1.3 Role of the Local Authority

Under the new provisions, duties have been assigned to both Local Authorities and the Scottish Environment Protection Agency (SEPA). The primary regulatory role for the new Contaminated Land Regime rests with the Local Authorities. The role is designed to reflect their existing functions under the statutory nuisance regime, and also complement their responsibility as planning authorities. The main role of the Local Authority under this new regime is to:

- Complete a “Contaminated Land Inspection Strategy”
- To cause their areas to be inspected from time to time to identify any contaminated land
- To determine whether a particular site meets the statutory definition of contaminated land
- Establish responsibilities for remediation of the land
- Ensure that appropriate remediation takes place:

    i. through agreement with those responsible, or if not possible
    ii. by serving a remediation notice, or
    iii. in certain cases, carrying out the work themselves, or
    iv. in certain cases, through other powers

- Keep a public register detailing the regulatory action which they have taken under the new regime

1.4 Role of the Scottish Environment Protection Agency

The principal roles held by SEPA with respect to contaminated land as defined in Part IIA are:

- To assist Local Authorities in identifying contaminated land, particularly in cases where pollution of controlled waters is involved
- Provide site-specific guidance to Local Authorities on contaminated land
- Act as the enforcing authority for any land designated as a "special site"
- Publish periodic reports on contaminated land

1.5 Definition of contaminated land under Part IIA

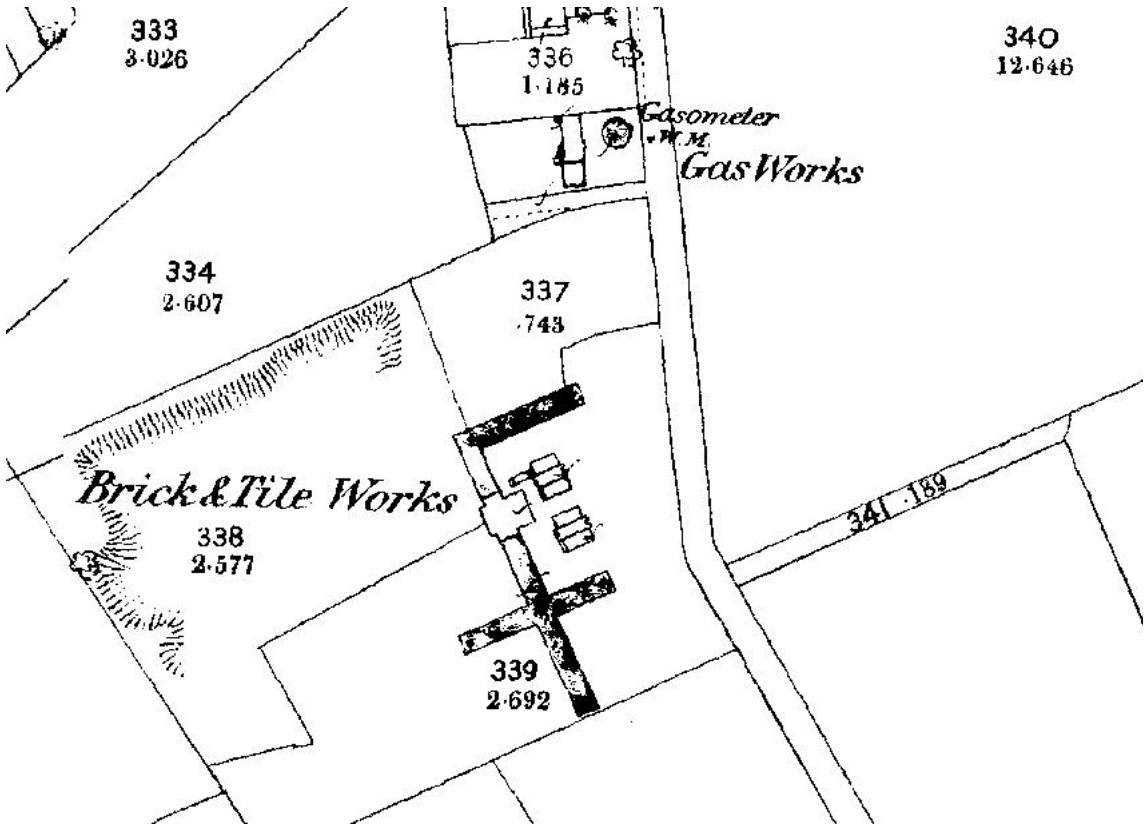
Section 78 A(2) of the Environmental Protection Act 1990 gives the statutory definition of contaminated land for the purposes of Part IIA as:

"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."

The definition is intended to reflect the anticipated role of Part IIA thus enabling the identification and remediation of land on which contamination is causing unacceptable risk to human health or the wider environment. The definition does not necessarily include all land where contamination is present, even though the contamination may be relevant in the context of other legislation.

Section 78A(5) requires the regulatory authority to act in accordance with guidance issued by the Scottish Executive (Circular 1/2000) in determining significance and likelihood.



1.6 Principle of pollutant linkage

Before the Local Authority can make a judgement that any land appears to be contaminated land on the basis that significant harm is being caused, or that there is a significant possibility of such harm being caused, the authority must identify a significant pollution linkage (see Section 1.2). This means that each of the following has to be identified:

- A contaminant
- A pathway
- A relevant receptor

A contaminant is defined as:

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

A receptor is defined as:

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 (or B) , in Chapter A of the Scottish Executive, Rural Affairs Department Circular (01/2000) as a type of receptor, and
   ii. is being, or could be, harmed by a contaminant, or

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

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

a) "is being exposed to, or affected by, a contaminant, or
b) could be so exposed or affected."

The same would apply when making a judgement that land appears to be contaminated on the basis that pollution of controlled waters is being caused, the Authority must here identify a significant pollution linkage where a body of controlled water forms the receptor.

The statutory guidance uses the concept of a “pollutant linkage”. Within the context of the Scottish Executive guidance a pollution linkage means the relationship between a contaminant (source), a pathway and a receptor, and in this context a pollutant means the contaminant in a pollutant linkage. For a pollution linkage to exist a contaminant (or source), a receptor and a pathway must all be present. This recognises that harm to health and the environment arises not from the mere presence of contaminating substances in land, but from their movement along a pathway to where they can cause damage to a receptor.

Unless all three elements of a pollutant linkage are identified in respect of any piece of land that land should not be identified as contaminated land. It is also possible that there may be more than one pollution linkage on any given piece of land.
In order to define an area of land as being contaminated under the legislation the Local Authority must satisfy itself that:

a) such a pollutant linkage exists in respect of the piece of land; and
b) that pollutant linkage:

   i. is resulting in significant harm being caused to the receptor in the pollution linkage,
   ii. presents a significant possibility of significant harm being caused to that receptor,
   iii. is resulting in the pollution of the controlled waters which constitute the receptor,
   iv. is likely to result in such pollution.

Descriptions of significant harm and conditions for there being a significant possibility of significant harm are listed in Table A (Chapter A) of the Scottish Office Rural Affairs Department Circular (01/2000).

Consideration must also be given to the time-scale within which the harm might occur (e.g. if the current use of the land is due to change) and the vulnerability of the receptors. The regulations are aimed at identification and dealing with significant contamination in the UK, and only specify a 'suitable for current use' approach.

The suitable for use approach recognises that the risks presented by contamination will vary dependent upon the use of the land and other wider natural and built factors. The suitable for use approach consists of three elements:

1. Ensuring land is suitable for its current use
2. Ensuring land is made suitable for any new use, as planning permission is given for that new use, and;
3. Limiting requirements for remediation to the work necessary to prevent unacceptable risks to human health and/or the environment in relation to the current use or future use of the land for which planning permission is being sought

1.7 Risk assessment

Fundamental to assessing the suitable for use approach is risk assessment, which is a technique used to rationalise the likelihood and severity of the contaminant-pathway-receptor pollutant linkage being realised and the significance of the impact upon the receptor. Many factors require to be assessed and this is broadly approached at two levels, qualitative assessment and quantitative assessment. The level of risk assessment will depend upon the quality and availability of relevant data upon which to form the assessment.

Section 5.0 of this Strategy, details the risk assessment process adopted by South Lanarkshire Council. In broad terms it involves an automated regional screening and prioritisation risk assessment based on public domain information, followed by a more detailed manual site-specific risk assessment.

1.8 Requirements for a strategic approach

A strategic approach to the inspection and identification of contaminated land is necessary to meet both the national and local objectives.

National objectives

The Government's primary objectives for introducing the new contaminated land regime were to:

- Improve the focus and transparency of the framework for management of contaminated land, ensuring Authorities take a strategic approach
- Provide greater consistency of approach taken by different authorities
- Provide a more tailored regulatory mechanism, including apportionment of liability, better able to reflect the complexity and range of circumstances found on individual sites.

An important secondary objective for the implementation of Part IIA is voluntary remediation. The Government considers that the improved clarity and consistency of the new regime is likely to encourage this.

Local objectives

The legislation states that the local authority needs to take a strategic approach to the inspection of its area and it must set out this approach in the written strategy. Taking a strategic approach enables the local authority to identify, in a rational, ordered and efficient manner, the land which merits detailed individual inspection, identifying the most pressing and serious problems first and concentrating resources on the area where contaminated land is most likely found.

South Lanarkshire Council has followed these criteria in forming a strategic approach to the implementation of the new Contaminated Land Regime.

1.9 Development of the strategy

South Lanarkshire Council has employed the Babtie Group, Technical & Management Consultants to assist in the preparation of this Strategy. Furthermore, South Lanarkshire Council has purchased the Babtie Section 57 Model, (the Model), which is a software package utilising the established technology of Geographical Information Systems (GIS) coupled with a robust risk based approach to pollutant linkage identification, to assist the Council in identifying and prioritising contaminated land. The Model will provide the Council with an auditable data management tool to prioritise those areas identified as potentially statutorily contaminated land and will allow planning of more detailed inspection.

1.10 Overall approach

The aim of this strategy is to ensure that all those affected by, and involved in, contaminated land inspection have a clear understanding of the rationale for inspection, how this will be carried out and over what timescale. It is South Lanarkshire Council's aim that this document will set out a strategic approach to the inspection of their area.

Due to the complex nature of the contaminated land regime, it will be necessary to enlist the specialist services of a number of Council departments. The Environmental Services Manager will be responsible for liaison between these departments.

1.11 Statutory consultation

South Lanarkshire Council recognises the requirement for consultation with a number of statutory bodies including SEPA and Scottish Natural Heritage (SNH) (see Section 6.0).

1.12 Consultation with other stakeholders

Consultation with neighbouring local authorities will be carried out as standard practice, as will consultation with other consultees. See Section 6.0.

1.13 Objectives of the strategy document

South Lanarkshire's objectives in compiling this strategy document are many; to meet the requirements of the new legislation; to provide a clear, justifiable, public strategy document; to demonstrate how we intend to meet these requirements; to inform neighbouring authorities and other statutory and non-statutory stakeholders of our intentions and to provide Scottish Environment Protection Agency with information for it's responsibilities under the legislation and to enable them to prepare their report on contaminated land.

2.0 Characteristics of the South Lanarkshire Council area

2.1 Geographical location

South Lanarkshire is located in the central belt of Scotland and straddles the upper reaches of the River Clyde extending into the Southern Uplands. The area encompasses the former districts of Clydesdale, East Kilbride and Hamilton as well as the Rutherglen and Cambuslang areas of the former Glasgow District. The major towns in South Lanarkshire include the county town of Hamilton, East Kilbride New Town and country market towns such as Lanark and Strathaven.

Situated in the heartland of Central Scotland, major transport routes play a critical role in South Lanarkshire's economy. Radiating from Glasgow the M74 and main rail passenger and freight routes transect the area and are Scotland's principle links to the south and England.

2.2 History and size

It is the area's unique mineral wealth deposits and the industries that grew rich out of exploiting them that has led to many of the contaminated land issues in South Lanarkshire today. In particular the steel and chrome manufacturing industries along the upper reaches of the Clyde and mining throughout the area have contributed to recurring environmental and health and safety implications. The southern regions of the council however have remained predominantly rural relying on farming activities and latterly tourism to support a sparse population.
South Lanarkshire Council covers an area of 177,116 Hectares (ha).

2.3 Population distribution

Estimates from the General Register Office Scotland show the population of South Lanarkshire to be 301,067 in 1999. The average population density of the area is 1.7 persons per hectare, however this figure does not reflect the distribution of the population across South Lanarkshire. Approximately 60% of South Lanarkshire's residents are located within the towns of East Kilbride, Hamilton, Rutherglen and Cambuslang whilst the central and southern portions of the area are only sparsely populated. In terms of population South Lanarkshire is the fifth largest Local Authority in Scotland but only the eleventh largest in terms of area.

Since 1993 the population of South Lanarkshire has experienced a minor decrease in numbers. This may be attributable to out migration rather than a natural decline in numbers.

The demographic profile of South Lanarkshire indicates a relatively young population with 48.6% of men and women aged between 25 and 60. There are slightly greater numbers of women (52.7%) than men (47.6%) in the 1999 figures.

2.4 Details of ownership of land

Historically, South Lanarkshire Council and its predecessor Authorities have been major land holders for a variety of reasons and for a variety of land uses. Since the 1970's there has been a major shedding of Council owned land via Council house sales to individuals, housing associations and private developers and industrial estates sold to private developers among others.

2.5 Current land use characteristics

In terms of land use characteristics South Lanarkshire can be divided into three distinct land use areas:

- The urban north west
- The rural south
- The fertile central regions

The north west

Developed land occupies 10,760 ha, that is 6%, of the total area of South Lanarkshire with the majority of this land concentrated in the towns of East Kilbride, Hamilton, Rutherglen, Cambuslang and Blantyre. These conurbations retain strong links with the city of Glasgow and its economy.

The south

The Council area is predominantly rural with around 133,033 ha in agricultural use, 74.55% of the total land area. In addition over half of South Lanarkshire's area (56%) is accounted for by grassland, with 8% being heather and 6% peatland. The majority of South Lanarkshire's grassland landscape and hill farming regions are located in the southern portion of the area as part of the Southern Uplands. Within this hilly area the sparse population is scattered between a number of small villages and isolated farms.

The central region

The central region of South Lanarkshire is occupied by much of the area's horticultural and agricultural land. The focal point of this region is the market town of Lanark which would traditionally have been the market centre for local produce. The fertile Clyde Valley, a traditional fruit and vegetable growing area stretches from Lanark to the outskirts of Hamilton and Motherwell to the north west, whilst the agricultural flood plains of the Clyde and its tributaries span east towards Carnwath and Biggar.

2.6 Protected locations

Due to the size and location of South Lanarkshire the area contains a diverse range of natural, semi-natural and manmade environments. All these environments are subject to external pressures and therefore liable to change. In order to protect features considered to be sensitive to adverse change a number of national and local designations have been assigned.

In terms of conservation South Lanarkshire has forty six Sites of Special Scientific Interest. These sites range from internationally significant raised peat bogs to semi-natural ancient woodlands in the Clyde Valley. In addition features such as Braehead Moss and Jock's Gill are designated National Nature Reserves. The Council also contains 29 Conservation Areas of which 7 are designated as Outstanding Conservation Areas.

2.7 Key property types

The built heritage of South Lanarkshire has a rich and varied character ranging from the grand country houses in rural Clydesdale to the Georgian and Victorian villas in Hamilton and Cambuslang. In order to safeguard South Lanarkshire's built heritage 29 Conservation Areas have been established. South Lanarkshire contains some 1000 listed buildings, designated for their special architectural or historic interest. The area also contains around 166 Scheduled Ancient Monuments, which are of national archaeological significance and numerous locally important archaeological sites. The registers of listed buildings and SAMs are continually monitored and updated.

2.8 Key water resources/protection issues

The Scottish Environment Protection Agency (SEPA) River Classification Scheme has been developed to assess the chemical, biological, aesthetic and nutrient content of rivers. From the West Region Water Quality Review 2000 South Lanarkshire has 72km of river in A1 condition (excellent) and 222km classified as A2 (good). 154km of river fall into category B (fair) while 42km are considered to be in a poor condition (category C). 6km are thought to be seriously polluted. This data is, however, dynamic and current data will be obtained on a site by site basis during implementation of the strategy.

2.9 Known information on contamination

The Scottish Executive Development Department requires local authorities to undertake an annual survey of vacant and derelict land as part of the Scottish Vacant and Derelict Survey (SVLS). This survey is a useful indication of land which may be contaminated. It should be stressed that not all land, which has had a former use, will be contaminated as defined in Part IIA. The Council is required to monitor a range of issues in terms of vacant and derelict land, including site size; previous use; preferred use; take-up of land; fall-out to a vacant or derelict state etc. The survey is a 'snap shot' in time at 31st March each year.

The authoritative guidance on the interpretation of which sites should be classified as vacant or derelict is provided in the 'Scottish Vacant and Derelict Land Survey 1999 Guidance Notes' (Scottish Executive). In South Lanarkshire approximately 700 Ha of land has been identified as vacant or derelict, with the majority of this total located in Rutherglen and Cambuslang districts. The following table provides details of these sites within each area.

Vacant and derelict land 2000

	Area (Ha)	% of South Lanarkshire Lanarkshire total	No. of sites	Average site size (ha)
Clydesdale	208	29.6	87	2.4
East Kilbride	39	5.6	21	1.9
Hamilton	197	28	110	1.8
Rutherglen/Cambuslang	258	36.8	74	3.5
South Lanarkshire total	702	100	292	2.4

Investigations of vacant and derelict land carried out to date through planning and other processes have already highlighted a number of potentially contaminated sites principally relating to chromium waste, colliery spoil and former land filling activities.

2.10 Past and current industrial activity

The area of South Lanarkshire Council in common with many others within the central belt of Scotland has witnessed a diverse range of industries over many years. These have ranged from heavy industries such as steel manufacturing and ancillary industries, heavy engineering works, chemical manufacturing and deep coal mining in the urban areas to the north and north west of the area. In the more rural southern areas, there has been a wide range of agricultural activities, deep coal mining and mineral and ore extraction such as lead mining. The legacy of this industrial past is that there are many locations within the area which have the potential to fall within the scope of the new contaminated land regime with the consequence of possibly possessing the requisite elements i.e. source, pathway and receptor.

The most recent employment figures from 1999 indicate that manufacturing activities remain the primary employer within the region with approximately 21% of the workforce employed in this sector. Retail and trade also provides large scale employment with 18% of the workforce, followed by health and social work which commands approximately 11% of the workforce.

2.11 Broad geological/hydrogeological characteristics

Just as South Lanarkshire encompasses a diverse range of landscapes, the contributing geological attributes are also varied and diverse.

In terms of solid geology the Council can be divided into 5 broad regions; the southern tip, the central region, the northwest, the northeast and the northern boundary area. The very southern area of the council around the Lowther Hills is indicated to be underlain by Silurian Llandoverty strata principally comprising greywacke sandstone and shales with basalt, dolerite and camptonite sills crossing the region and localised intrusions of Permian basal breccias comprising sandstones and mudstones. Further north into the lower central region the underlying strata is indicated to belong to the Ordovician Ashgill and Caradoc group again with basalt and dolerite sills and localised Permian basal breccias.

The central region of South Lanarkshire is indicated to be predominantly underlain by the Carboniferous Lower Red Sandstone group which comprises siltstones, mudstones, conglomerates and interbedded lavas. In addition Andestic and Basaltic lavas and tuffs with Rhyolite, trachyte, felsite and elvans are found in localised areas. The western portion of the central region is shown to be underlain by the Carboniferous Westphalian Coal Measures and partly by the Namurian Millstone Grit Series. The route of the River Clyde and its tributaries is defined by deposits of Quaternary alluvium and sands and gravels.

The northeastern region of the council is principally underlain by the Carboniferous Upper Old Red sandstone, whilst further west the Westphalian Coal Measures which comprise cyclincal deposits of mudstones, siltstones, fine-grained sandstones, seatclays and coals dominate the bedrock geology. The coal seams in the Hamilton area have been extensively worked by both open cast and deep mining methods in the past.

In terms of hydrogeology the coal measures of Westphalian Age are categorised as locally important aquifers where flow is dominantly in fissures and other discontinuities. Mine workings have been heavily pumped in the past, however yields are typically low and water quality is poor. The Old Red Sandstones Measures are also considered to be locally important aquifers, however borehole yields can vary significantly within the region.

The Silurian and Ordovician strata in the southern portion of South Lanarkshire is considered to have aquifers of limited potential with no significant groundwater.

2.12 Specific local features

National Designations - There are 38 Sites of Special Scientific Interest (SSSI) located wholly within South Lanarkshire, covering 4738 hectares. In addition, a further 8 SSSIs fall partly within the boundary of South Lanarkshire. SSSIs are sites of national importance for nature conservation protected by legislation. Most are privately managed although a few are in the ownership of South Lanarkshire Council. Scottish Natural Heritage is the body responsible for identifying SSSIs and ensuring their protection.

Local Sites - In addition to nationally designated sites there are over 200 sites within South Lanarkshire considered to be of local importance for nature conservation. Some of these are identified in Local Plans, others have emerged from local habitat surveys and the preparation of the Local Biodiversity Action Plan. The list is continually being updated as survey work progresses.

International Designations - A number of sites in South Lanarkshire are potentially of international significance. Special Protection Areas (SPA) protect the habitats of rare breeding bird species. There are two candidate SPA sites in South Lanarkshire. Special Areas of Conservation (SAC) protect vulnerable habitats. There are 12 candidate SACs in South Lanarkshire.

Protection of the built environment is also considered important within South Lanarkshire. The unique settlement of New Lanark is recognised as a World Heritage Centre reflecting its international importance. Other major heritage sites include Chatelherault, Bothwell Castle, Strathaven Castle, Craignethan Castle and the David Livingstone Memorial area. South Lanarkshire has 163 Scheduled Ancient Monuments mainly concentrated in the former Clydesdale area. There are 13 settlements of particular archaeological interest and 10 areas with significant industrial archaeology.

2.13 Redevelopment history and controls

Planning policies in South Lanarkshire generally encourage the redevelopment of brownfield land in preference to greenfield sites, where a choice exists. This is in accordance with national planning guidance.

Analysis of take-up of vacant and derelict land gives an indication of the scale and nature of brownfield development in South Lanarkshire. (It should be noted that this does not include all brown field developments, due to definitional differences). Over the past five years 1996-2000, 282 hectares of urban and rural vacant and derelict land was redeveloped or reclaimed within South Lanarkshire. Residential development accounted for 50% of this figure,

with environmental improvement (27%), industry and business (8%) and other uses, eg retail, recreation etc (15%) accounting for the remainder.

Looking at industrial and business development throughout South Lanarkshire, on all categories of land, 60% of new development has been on greenfield sites with only 40% on brownfield. This is partly due to the constrained nature of much of the land zoned for industrial/business use. However figures for the take up of industrial land show that the total amount of brownfield land taken up for industrial purposes between 1996 and 2001 has doubled, whilst the take up of greenfield land has fluctuated, decreasing slightly between 1999 and 2001.

The figures for industrial land supply in 2001 indicate that there are 182.6 hectares of marketable land within South Lanarkshire, the majority of which 39.5% is located in the Rutherglen and Cambuslang areas, whilst 35% is located around East Kilbride.

Local authorities have been empowered, under The Town and Country Planning (Scotland) Act 1972 to control most forms of development including the development of land which may be contaminated. Section 63 of the 1972 Act gave powers for planning authorities to require the proper maintenance of privately owned land where the amenity of an area was adversely affected by the condition of the land in question.

A significant proportion of the problems associated with the re-use of contaminated land has historically fallen within the scope of planning legislation. In April 1988, the Scottish Development Department issued Planning Advice Note 33, “Development of Contaminated Land” (revised October 2000) which said that although it was subject to regulation under pollution control legislation, contamination, or the potential for contamination, can be a “material planning consideration” and should be taken into account at various stages in the planning process, including the preparation of developments plans and the determination of planning applications.

In carrying out these duties, planning authorities have had to consider whether or not there was a hazard, what further information was required with applications, whether the proposed use could give rise to a health hazard to future occupiers, and what steps should be taken to reduce these risks. Responsibility for providing the information on contamination has always rested with the developer of the land, although the planning authorities will take advice from other Services within the council and in certain specialist areas take advice from external sources.

- The end result of this has been land which was perceived to be contaminated was brought to a standard suitable for its intended or actual use using the best technical advice available at that time. Once an application had been through the planning process, and it was intended to start building on the site, attention was given to the provisions of the Building Standards (Scotland) Regulations concerning site preparation and construction standards. Any materials, which might have had harmful affects on the health of the users or occupants of the building were removed from the site of the building and from the ground in its vicinity. Various services involved in assessing applications would pay heed to some of the following guidance although the list is not exhaustive:

- Guidance produced by the Interdepartmental Committee on the Redevelopment of Contaminated Land (various).

- The Department of Environment 'Waste Management Paper No. 27 Landfill Gas': HMSO 1989
- Building Research Establishment 'Report 121 - The Construction of Buildings on Gas Contaminated Land' 1991
- The DETR, 'Industry Profiles'
- The DETR, ' Passive Venting of Soil Gases beneath Buildings: Volumes 1 and 2'
- Health and Safety Executive Publication - 'Protection of Workers and the General Public during the Redevelopment of Contaminated Land'.

2.14 Action already taken to deal with contamination

Action has already been taken to deal with a number of contaminated sites in South Lanarkshire. This has been achieved through a mixture of Planning controls on redevelopment of brownfield sites, and voluntary remediation.

During this process, advice has been sought by Planning Services from a variety of sources, i.e. Environmental Services, South Lanarkshire Council Technical Services, Roads, SEPA and external consultants regarding the suitability of the sites for their intended purposes.

Every effort was made to ensure that all site assessments and remediation works were carried out in accordance with the current technical guidelines.

Commercial development of reclaimed land.

Typical brownfield development.

3.0 South Lanarkshire Council Strategy - overall aims

South Lanarkshire Council intend to inspect its area in accordance with the Statutory Guidance following a strategic approach which will:

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 located first;
d) ensure that resources are concentrated on investigating areas where the authority is most likely to identify contaminated land; and
e) ensure that the authority efficiently identifies requirements for the detailed inspection of particular areas of land.

A key aim of South Lanarkshire Council has been to adopt a methodology, which will assess significant harm where it is causing a Human Health Effect, an Ecological System Effect, an Animal or Crop Effect, a Building Effect and where controlled waters may be affected. The latter will be brought to the attention of SEPA.

3.1 Aims of the strategy

South Lanarkshire Council aims to comply with the requirements of the Legislation in a rational, ordered and efficient approach as described in the guidance. This strategy sets out how this is to be achieved by:

a) Establishing a methodology which identifies potentially contaminated sites in a strategic manner as required by the legislation. This has been achieved by adopting an independent semi-automated GIS based model.

b) Prioritising the inspection of such sites in an impartial manner and based on (so far as reasonably practicable), robust, publicly available data sources. This is in accordance with South Lanarkshire's policy on disclosure of information.

c) Providing an auditable path to prioritisation. This has been achieved by incorporating a Metadatabase within the Model, providing a permanent record of the information sources, used and how they have been used.

d) Inspecting sites in a cost effective manner, identifying all available previous work prior to undertaking any further investigation where required. This has been achieved by adopting a Land Quality Management Database, which will record all available previous information, permit the addition of new information as it becomes available ensuring that data on contaminated land is recorded in an ordered and structured way, reducing error and preventing duplication of effort.

e) Establishing a database of all relevant data pertaining to potentially contaminated sub areas and data collected during the inspection stage. The outcome of a) to d) will be retained in digital format and reviewed and added to as further information becomes available.

In summary, the methodology will provide an impartial, robust and transparent approach to identification of potentially contaminated land and will provide an audit trail of all procedures employed and datasets used.

3.2 Objectives and milestones

The main objective is to prioritise those sub-areas within South Lanarkshire Council which have the highest potential to be contaminated as defined under Part IIA, that is where a pollutant linkage exists or is likely to exist.

The first major output milestone of this project will be the production of a prioritised list of sub-areas. Following production of this prioritised list of sub-areas the Council will then begin further detailed researches into the pollutant linkages involved and will create a definitive list of prioritised sub-areas, which will be taken forward for site inspection, desk study and potentially intrusive investigation.

4.0 South Lanarkshire Council priority actions and timescales

4.1 Priorities

The Council's priorities when dealing with contaminated land are:

- to protect human health
- to protect controlled waters
- to protect designated ecosystems
- to prevent damage to property
- to prevent further contamination of land
- to encourage voluntary remediation
- to encourage re-use of brownfield land

The Council will create a flexible database of information on which to assess pollutant linkages by geospatial analyses. In order to permit prioritisation of sub-areas, a preliminary risk ranking system (PRRS) is included within the Model.

In general, risk ranking systems should take account of the following factors:

- Any scoring system should be simple to use by many different users disregarding professional qualifications and experience
- The system should be sufficiently clear and rational to be understood by a range of end users
- The queries performed to reach the final score should be based upon reliable and easily acquired data
- Each part of the source pathway receptor linkage should have equal significance
- The numerical scores applied to each of the evaluation factors in the source pathway receptor linkage should be designed to weight the factors according to their potential or actual relevance in contributing to the hazard or risk presented by contamination and,
- The combination of scores should reflect their individual interactions (i.e. in the case of the migration of pollutants, if the rock underlying a sub-area is highly permeable but is overlain by impermeable clay, the combined scores should reflect the true efficiency of the pathway taking account of both considerations.

The PRRS is based upon the application of a normalised scoring system, applied to each potentially contaminated sub-area, to characterise the relative risk of the identified source-pathway-receptor, pollutant linkage. It provides a scored hierarchy of sub-areas, which takes into account the potential seriousness of the contamination (i.e. source severity), the ability of the migration pathway to transport contaminants (i.e. pathway efficiency) and the sensitivity of the receiving environment (i.e. receptor sensitivity).

The risk ranking system places all potentially contaminated sub-areas in order of their relative potential risk (based on source-pathway-receptor data) and therefore provides a system which enables the authority to address sub-areas of potential contamination in a logical and ordered manner.

Department of the Environment Report CLR6 Part II provides a methodology for refining the prioritisation by placing sub-areas within specific categories "using more detailed information about each site". It relies on the collation and the review of additional desk study information and a walkover visit to assess the risks to development, surface water and groundwater.

It is not possible to determine an absolute correlation with the CLR 6 Part II Priority Categories (PC), as these do not have absolutely defined numerical boundaries. However, it is recognised that the inspection procedure and assessment process will be enhanced if a comparison could be made between the risk ranked scores and Priority Categories. This would enable an assessment of the relative risk severity of identified sub-areas and their distribution within the Priority Categories, for example, by identifying the number of sub-areas requiring urgent action (i.e. PC1).

Categories assigned on the basis of the risk ranking score have been called Preliminary Priority Categories (PPC). To identify the risk ranking score thresholds, which define the boundaries between Preliminary Priority Categories, requires a subjective assessment of the definitions of the risk categorisation methodology given in CLR 6 Part II.

5.0 Procedures

5.1 Internal management arrangements for inspection and identification

The Environmental Services Section of Community Resources is the lead department in the Council for the implementation of the contaminated land regime and the Executive Director of Community Resources has delegated powers to deal with Part IIA of the Environmental Protection Act. The principal responsibility lies with the Environmental Services Manager (Environmental Protection) who has the role of Project Manager.

The Contaminated Land Project Team will oversee the implementation of the strategy and ensure South Lanarkshire Council meets all of its responsibilities in terms of Part IIA as both regulator and land owner.

Objectives and Milestones

Task	Activities Information	Timeframe
1.	Information based on previous land-use will be evaluated to determine the possible presence of contaminants.	Dec 2001
2.	Obtain and review information currently held by the Council in the form of development and other reports. Incorporate further information as it is produced.	May 2003 and Ongoing
3.a.	Identify potential receptors from information evaluated in task 1 above and assess the possibility of them being subjected to harm or significant harm by contaminants.	Dec 2001
3.b.	Identify potential receptors from information evaluated in task 2 above and assess the possibility of them being subjected to harm or significant harm by contaminants.	May 2003
4.	During our investigations we will liase with other statutory organisations, owners or occupiers of land and any other relevant interested parties.	Ongoing
5.	Obtain and evaluate information in relation to contamination of controlled waters.	Dec 2001
6.	Devise a programme for the tier 2 inspections of specific areas of land and review this programme as required.	Dec 2004
7.	As necessary we will carry out the detailed inspection of specific areas of land.	May 2008
8.	Respond to information or complaints/enquiries from members of the public, business community or other interested parties. All responses will be in accordance with the department QA system and South Lanarkshire's Corporate Standards	Ongoing
9.	Manage information obtained in the course of this process and will review and update information to enable compliance with the programme of inspection.	Ongoing
10.	The Council will consider land for which it has responsibility as a current or former owner or occupier.	May 2008

5.2 Considering Local Authority interests in land

The methodology adopted in the Model & Core Tools permits the prioritisation of inspection across the whole of South Lanarkshire Council. Therefore, the Council's land will be inspected along with all other land. This approach is entirely impartial, based on publicly available data and is in line with the approach advocated in the statutory guidance.

Following identification onto the prioritised list of sub-areas, details of land ownership and occupiers is sought and entered into the Land Quality Management Database (LQMD). At that point in the process sub-areas, which fall within land owned by South Lanarkshire Council, will be subject, along with all other land, to further assessment of archive material, site walkover and desk study and site investigation, if appropriate.

Thereafter, should the sub-area identified within South Lanarkshire Councils land be considered as statutorily contaminated, South Lanarkshire Council will attempt to lead by example, and ensure that prompt and effective remedial action is undertaken, where required, on land for which the council has been identified as an appropriate person.

5.3 Information collection

It is South Lanarkshire Council's view that the inspection strategy should be based, where possible, on publicly available data for the initial prioritisation. The audit trail and the Metadatabase will record details of the information used, its source, date and copyright etc. Following production of the prioritised list information possibly not in the public domain due to reasons of confidentiality may be used to consider the sub-area further.

In this way, anonymously provided information will not be used in initial risk ranking but may be recorded within the Land Quality Management Database (LQMD). The LQMD is a Core Tool, which links the information collated to the GIS database. The LQMD is the appropriate place to store such information so that it can be viewed alongside recorded information and a full and proper assessment made.

5.4 Information evaluation

The following is a summary to outline the general principals of the datasets used. The basis for evaluating information is that it is publicly available, South Lanarkshire Council may have incurred a cost in procuring it, but third parties who are responsible for its accuracy and content have published it.

Most information has been acquired in digital format and is hereafter termed a dataset.

The information sources can be divided into three distinct datasets based on the source-pathway-receptor theory;

1. Source Datasets; Landmark historical Land-use, SEPA data & local authority supplied data.

2. Pathway Datasets; British Geological Survey drift, solid and manmade geological data, Mine Entry data supplied by the Coal Authority.

3. Receptor Datasets; Human receptors, Groundwater Vulnerability, Surface Waters, Agricultural, Ecological Receptors & Heritage receptors.

5.5 Source datasets

Source datasets represent the potentially contaminated sub-areas determined from the examination of past and present industrial uses. These are derived from the Landmark Information Group (Landmark), Council records and SEPA.

Successive changes in contaminative land use history were primarily characterised using the historical land use datasets produced by Landmark. These datasets were derived by Landmark through systematic analysis of historical paper maps representing up to six time periods (epochs) from circa 1850 to the present day. The Land Use Classification scheme used by Landmark is derived from the schedule of potentially contaminative uses contained in Annex C of the former Department of the Environment (DoE) consultation paper “Public Registers of Land which may be contaminated” (May 1991).

The final product is a digital dataset showing potentially contaminative former land uses for the available editions of the Ordnance survey. In addition, the Landmark dataset known as Unknown Filled Ground, arising from the disappearance of water features between map editions is included.

The Statutory Guidance directs Local Authorities towards making specific arrangements for the procurement of relevant information from other regulatory bodies, particularly the Scottish Environment Protection Agency for potentially contaminative source and sensitive receptor datasets.

Typical information received included current and former discharge consents, Integrated Pollution Control Authorisations, Waste Management Licences and a list of active Landfill Sites.

South Lanarkshire Council datasets and records such as amenity recreation areas, former landfills, schools and nurseries and listed buildings which are not necessarily in the public domain have been added to the datasets and a record of their use is included in the audit trail/Metadatabase.

5.6 Pathway datasets

The characterisation of the potential pollutant pathways is undertaken by examining the British Geological Survey (BGS) drift, solid and man-made mapping information and the mine entry datasets.

5.7 Receptor datasets

The creation of human receptor built-environment datasets relies on the extraction and creation of a general buildings outline within the GIS from the current Ordnance Survey Landline contextual data. The use of the various buildings is extracted from the Council's own address point database and the properties assigned to one of the following categories:

- Residential
- Industrial/commercial
- Amenity/Recreation
- Schools
- Farms

The groundwater vulnerability dataset is generated via the interpretation of the hydrogeological map of Scotland, BGS 1:625000 drift, solid and man-made geology mapping. Aquifers are geological strata, which contain groundwater in exploitable quantities. All groundwaters are controlled waters but it is convenient to subdivide permeable strata into two types; highly permeable (major aquifers) and variably permeable (minor aquifers), the former having the greater capacity to transmit contaminated recharge entering at their surface than the later.

Surface waters are extracted from the OS Landline data. These include all inland water features such as rivers, streams, tributaries, drainage ditches, lochs and ponds. The water quality is obtained from SEPA's records and assigned to mapped watercourses as available. This is then applied to assigned receptor sensitivities to the watercourses. Where necessary watercourses which fall outwith this will be assessed individually.

Local authority and BGS records are used to establish the presence of water abstraction points within the area.

Certain ecological systems are statutorily designated receptors as defined under Part IIA of the Act. SNH's full dataset was obtained and datasets held by the local authority are added to the system to generate this receptor dataset.

The heritage dataset comprises Historic Scotland's Scheduled Ancient Monuments and the listed buildings dataset held by South Lanarkshire Council.

Once the prioritised list of sub-areas is produced, archive information will be used to augment the pollutant linkage information from the Model. The archive information may comprise information about past land use e.g colliery records, ground investigation information, chemical testing, pollution monitoring, revoked permits and licences, pollution records and anecdotal information.

This information may provide details of land where remediation has already been undertaken under a previous regime. In this instance where the system has identified that a pollutant linkage may exist, the archive material will be assessed to consider whether the remediation undertaken has been adequate to break the pollutant linkage. This information will be recorded within the LQMD.

Where insufficient reliable documentary information is available for South Lanarkshire Council to progress the determination, it will be necessary to undertake site reconnaissance and possible investigation.

6.0 General liaison and communication strategies

Sub-areas will be identified during the inspection process, which are causing or have the potential to cause significant harm or pollution of controlled waters. As these are identified, a report will be produced from the LQMD by the Environmental Services Manager and issued along with the rationale for assessment of the sub-area. Within South Lanarkshire Council the Contaminated Land Project Team will ensure that the Council will effectively communicate with all internal and external interested parties.

6.1 Liaison with statutory consultees

South Lanarkshire Council recognise that effective interaction with SEPA is essential in ensuring the successful implementation of Part IIA. Communication will occur in the following general areas:

- Consultation with SEPA in relation to pollution of controlled waters issues
- Obtaining relevant datasets from SEPA (or Landmark Information Group as their VAR)
- Seeking advice from SEPA in relation to the designation of Special Sites
- SEPA's powers to initiate designation of contaminated land if they consider it to be a Special Site
- Supplying SEPA with the necessary information for inclusion in the state of contaminated land report.

Liaison with SEPA on Special Sites will be essential to ensure the referrals to Scottish Ministers are kept to a minimum. If the Council identifies a potential Special Site, a written request will be made to SEPA for any supporting information. Thereafter the information will be reviewed, collated in the LQMD and the site taken forward as before, through site walkover and further intrusive investigation, if required. Liaison with SEPA will continue throughout this process and appropriate interaction will take place on a site-by-site basis. SEPA will be consulted immediately prior to the Local Authority making the designation of Special Sites. All notifications will be sent to SEPA, in writing, by the Environmental Services Manager.

Other consultees for the Inspection Strategy for the Identification of Potentially Contaminated Land are:

- Scottish Executive
- Scottish Natural Heritage
- Scottish Enterprise Lanarkshire
- Historic Scotland
- Food Standards Agency

- North Lanarkshire Council
- Dumfries and Galloway Council
- East Ayrshire Council
- Scottish Borders Council
- City of Glasgow Council
- West Lothian Council
- East Renfrewshire Council

6.2 Liaison with non-statutory consultees

Non-statutory consultees include, the Coal Authority, Community Councils and the Health and Safety Executive. The Council will consult with these bodies on the finalisation of the strategy.

6.3 Communication with owners, occupiers and other interested parties

Concurrent with the determination of contaminated land, the Council will have to establish who:

- is the landowner;
- is in the occupation of all or part of the land; and
- appears to be an appropriate person to bear responsibility for any remediation action that might be necessary.

Once a particular sub-area of land has been determined as statutorily contaminated land, the Council will notify SEPA and those persons outlined in the sub-paragraphs above of this decision and the capacity (such as landowner) in which they have been informed. The Council will append the following information, where appropriate and available, to facilitate the initiation of consultation on the remediation to be adopted:

1. A copy of the written record (LQMD) of the determination made by South Lanarkshire Council that the land appears to be contaminated
2. Information on the availability of site investigation reports
3. An indication of why particular persons may appear to the authority to be appropriate persons
4. The details of other persons that have been notified, including the capacity of their involvement.

The Council will also inform each appropriate person about the tests for exclusion from and apportionment of liabilities as per the statutory guidance.

6.4 Enforcement action

The Environmental Services Manager will be responsible for issuing all enforcement notices and will do so after consultation with the Council's Legal Services Section.

As previously described, the system used to generate the prioritised list of sub-areas for inspection, is entirely transparent and auditable and is (where possible) based on publicly available datasets. When an enforcement notice is issued, in writing, to the appropriate person, the details of the reasons for identification of the site can be provided in the from of a report generated from the Land Quality Management Database.

6.5 Risk communication

South Lanarkshire Council recognise the need for two-way communication, trust in the regulatory role and openness, to enhance the legitimacy of the overall process to the stakeholder.

The requirement to communicate with identified stakeholders during the risk assessment and management of contaminated land is foremost and requires regular review and critical assessment to ensure an effective approach. At an early stage, the stakeholder group will be identified from within the local community, and will constitute, landowners, industry, regulatory bodies, Local Community Councillors and members of the public.

The method of communication with interested parties will have regard to the guidance contained within "Communicating Understanding of Contaminated land Risks" published by Scottish and Northern Ireland Forum for Environmental research (SNIFFER).

7.0 Programme for carrying out detailed inspection

Stage	Milestone	Timeframe for completion
1.	Production of prioritised list of sub-areas for inspection from S57 Model	January 2002
2.	Populate Land Quality Management Database (LQMD) with archive information for prioritised sub-areas	September 2001 to September 2003
3.	Desk studies of prioritised sub-areas where information is not available.	April 2002 to September 2002
4.	Sub-area walkover visits, data collection and addition to LQMD	September 2002 to September 2003
5.	Determination of requirements for additional intrusive investigation	September 2002 to April 2003
6.	Identification of Special Sites and notification to SEPA	Ongoing
7.	Commence process of dialogue on Notification of Contaminated Sites with Appropriate Person	September 2002 onwards

7.1 Local issues

Sites will be selected on a priority risk basis, i.e. sites which are potentially contaminated in terms of the legislation (Source-Pathway-Receptor) will be ranked according to potential risk and will be dealt with in that order.
However, sites with a history of contaminative uses and believed to possess the potential to cause harm or pollution of controlled waters and are known to the Council will be dealt with as early as possible in the process.

A wide variety of tasks will be carried out in order to comply with the inspection strategy. These tasks will be carried out in the most efficient and effective manner possible.

Where South Lanarkshire Council believe that there is a possibility of land being contaminated by reason of a former activity, a detailed inspection to establish the nature and extent of contaminants will be carried out.
This will be carried out in accordance with The Departmental Quality Procedures for Enquiries and Information Supplied by Third Parties.

Anecdotal evidence and information held by members of the public will be sought.

The precise nature of the required site investigation will vary from site to site. An intrusive investigation may be carried out when the preliminary investigation suggests a possible pollutant linkage which requires more refined analysis and clarification with respect to the associated risks to human health and the environment.

All work will be carried out in accordance with the Health & Safety at Work etc Act 1974, the Construction (Design & Management) Regulations 1994, the Management of Health & Safety at Work Regulations 1992 and the Guidance Note issued by the Health and Safety Executive “Protection of Workers and the General Public during the Development of Contaminated Land”
Prior to carrying out any physical site works, potential risks to the health and safety of all persons who may be affected by the investigation and the possible impacts of the investigation on the surrounding environment will be considered using the above Guidance.
This covers the following potential receptors:

- Site staff
- Any other persons working on site
- Site neighbours
- The surrounding environment (air, ground and water).

Where risks are identified, appropriate precautions will be taken to minimise the risks.

8.0 Review mechanisms

From time to time both this strategy and the prioritised list of sub-areas will be reviewed. The strategy is a statement of intent of how South Lanarkshire Council intends to undertake its responsibility under the new contaminated land regime. A major driver in altering the strategy would be a change to the legislation dealing with contaminated land. The strategy may also require to be reviewed and updated should there be a change in Council area, structure or internal organisation.

There are fundamental external triggers, which may require the inspection to be repeated. The system provides the flexibility to add data and augment data sets as they change or become superseded. South Lanarkshire Council intend to re-run the system at least annually dependent upon resources being made available to purchase revised data sets etc. This is a necessary aspect of the system to permit South Lanarkshire Council to inspect its area "from time to time" as given in Part IIA of the EPA 1990.

The system will be re-run to take account of the changing image of South Lanarkshire in that development is ongoing, more amenity sites are being created and environmental enhancement is paramount to the future of the area. In this way, the following triggers will be used to consider undertaking a review of the prioritised list:

1. Changes in land use - through the planning process the Council is notified of changes in land use as it affects surrounding land e.g. if housing is developed or a site has been nationally designated for ecological or historical reasons,

2. Changes in legislation - licensing of groundwater abstraction is expected in Scotland within the time frame of this inspection process and may alter the vulnerability ranking of the groundwater receptor.

3. Unplanned events - the impact of a major pollution spill or breach of discharge consent may change the status quo at a suspected pollutant linkage.

4. Information from the public - consideration must be given to notified health effects which relate to particular areas.

5. Information from external bodies - such as SEPA who may alter the designation of surface watercourse thereby altering the vulnerability ranking of the surface water receptor.

6. Following receipt of information from remediation schemes in South Lanarkshire. The information and data sets used in the model may not represent these changes to the environment. As information becomes available it will be recorded within the system ready to be incorporated in the next system run.

The Metadatabase permits the inclusion of new and revised data sets and provides a permanent audit trail for each re-run of the system. In this way South Lanarkshire Council can demonstrate the data used each year and for every determination.

9.0 Information management

9.1 Introduction

Information collected during the desktop studies and site works will be stored in the Land Quality Management Database (LQMD) and updated as new information becomes available. Both the LQMD and the data collected and generated by the Model will be stored on a computer, securely held within the Environmental Services Department of South Lanarkshire Council. The computer will be designated for restricted access due to the confidential nature of the information contained on it.

The Land Quality Management Database (LQMD) is a bespoke database, which forms an integral part of the Model. This application has been developed to store information that cannot be readily held in Arcview, for example archived report information, sub-area walkover records, communications and links to photographs. The LQMD is the repository for any textural or photographic information relating to the potentially contaminated sub-areas and is the primary reporting tool for this information.

9.2 Storage systems

All data will be held on a single computer, backed up regularly, with backups stored on tapes in a fire safe.

9.3 The Public Register

Under the legislation the Council is required to maintain a Public Register. The legislation also specifies the information to be included. The Register will contain such information as is required.
The categories of information to be included are: Identification Notices; Remediation Notices; Remediation Declarations; Remediation Statements; Designations of Special Sites; Appeals; and other matters contained in Schedule 4 of the Contaminated Land (Scotland) Regulations.
The Register will be available for inspection by the public during office hours.

9.4 Confidentiality of information, arrangements for access to information and dealing with requests for information

South Lanarkshire's policy on disclosure of information, is based on the Local Government (Access to Information) Act 1985, which details the rights of members of the public to attend Council meetings and to inspect documents and papers, and by the EU Directive on Public Access to Environmental Information (90/313/EEC), under which the public are entitled to have access to all information about the environment, held by government and public authorities (unless exempt on the grounds of commercial confidentiality or national security).

10.0 Contact information

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Even our beautiful historic buildings have been affected by past industrial activities.

Glossary

This strategy uses a number of terms, which are defined in Part IIA of the Environmental Protection Act 1990 and in the Statutory Guidance itself. The meanings of the most important of these terms are set out below, along with a reference to the section in the Act or the paragraph in which the relevant term is defined. Those terms, which are defined in statutes (mostly in Section 78A of the 1990 Act), are shown in italic. Other terms used in the context of Geographical Information Systems (GIS) are also defined.

Animal or crop effect:
significant harm of a type listed in box 3 of Table A of Chapter A. of the Statutory Guidance

Appropriate person:
defined in Section 78A(9) as; "any person who is an appropriate person, determined in accordance with Section 78F… to bear responsibility for ant thing which is to be done by way of remediation in any particular case."

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 of the Statutory Guidance.

Building effect:
Significant harm of a type listed in box 4 of Table A of Chapter A of the Statutory Guidance.

Categorisation:
The assessment process under Part II of DoE CLR No.6, which allows a refinement of initial Priority Groupings using more detailed information in respect of potential pollutant linkages. Categorisation relies on the collation of additional desk study data and a walkover visit to support the assignment of a Priority Category (PC) to potentially contaminative sub-areas based upon the likely impact on development, groundwater and surface water targets and the urgency of any action required.

CLR No. 2:
Guidance on Preliminary Site Inspection of Contaminated Land, Vols. 1and 2, DoE 1994.

CLR No. 3:
Documentary Research on Industrial Sites, DoE 1994.

CLR No. 6:
Guidance on Prioritisation and Categorisation Procedure For Sites, Which May Be Contaminated, DoE 1995.

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. Paragraph A.13 of the guidance.

Contaminated land:
defined in section 78A(2) of the Act 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."

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

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. Paragraph A.26 of the guidance.

Database:
A database is a logical collection of interrelated information, managed and stored as a unit. A GIS database includes spatial and attribute information about the spatial features held in the GIS, such as the name of a river.

Datasets:
Information contained in digital format prepared for input to GIS software.

Desk study:
Interpretation of historical, archival and current information to establish where previous activities of the land were located and where areas or zones containing distinct and different types of soil contamination can be expected to occur. Also undertaken to understand the environmental setting of the site in terms of pathway and receptors using standard checklist given in appendix 8.

Ecological system effect:
significant harm of a type listed in box 2 of the Table A of Chapter A of the Statutory Guidance

Epoch:
Time period during which historical potentially contaminative uses were mapped/recorded by Ordnance Survey or any other collecting agency.

Flora and fauna:
Plants and animals including livestock (agricultural and games species), crops and plants used for landscape and amenity purposes.

Geographic data:
The locations and descriptions of geographic features. The composite of spatial data and descriptive data.

GIS:
a Geographical Information System (GIS) is a software package capable of showing both graphical information (digital maps) and associated attribute information (from a database). Typical GIS functionality includes, data entry, spatial and textual querying, data analysis, data management and the production of hardcopy maps.

Harm:
defined in section 78A(4) of the Act as:
"harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property."

Hazard:
A property (of a substance) or situation with the potential to cause harm.

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."

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

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. Paragraph B.20(c) of the guidance.

IPC/IPPC:
Integrated Pollution Control/Integrated Pollution Prevention and Control.

Landmark:
Land-use Database: A database of historic contaminative land-use, derived by the Landmark Information Group, through the systematic analysis of historical paper maps representing specified time periods and based on DoE classifications.

LQMD:
a Core Tool called the Land Quality Management Database, which is an Access database allowing detailed contamination data to be held and accurately recorded for each identified feature, from which accurate sub-area maps and reports can be generated.

Local Authority:
defined in Section 78A(9) as meaning Scottish local authority.

Made Ground:
Material artificially in place comprising of a wide range of materials such as, concrete, tarmacadam, brick or waste materials.

Metadata:
Metadata is a textual description of a dataset. It highlights all the information a user of the dataset should be aware of, to use it correctly e.g. date produced, scale, projection, error information, etc. This describes the entire geo-dataset while attributes describe individual features within the geo-dataset.

Model and core tools:
Arcview extensions created by the Babtie Group Ltd.

Other stakeholders:
Interested parties who may have an interest in the aspects being raised in a consultation document.

PAN 33:
Planning Advice Note No 33.

Part 11A:
Part IIA of 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. Paragraph A.14.

Pathway efficiency:
The ability of a pathway to transport and distribute contaminants from source to receptor.

PC:
Priority Category (PC1 to PC4) assigned under DoE CLR NO. 6 Part II based upon the potentially contaminative sub-area's suitability for current use and environmental setting, the likely impact on key development, groundwater and surface water targets and the urgency with which action might be necessary.

Pollutant:
A contaminant, which forms part of a pollutant linkage. See paragraph A.18 of the statutory guidance.

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

Pollution of controlled waters:
defined in Section 78A(9)) of the Act as: "the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter."

Polygon:
Polygons are used in GIS to represent areas. A polygon is defined by the arcs that make up its boundary and associated attribute that describe the geographic feature it represents.

Potentially contaminative source:
A sub-area of land, which is potentially contaminative due to its historical use(s).

PPC:
Preliminary Priority Category (ranging from PPC1 to PPC4), derived from the application of the Preliminary Risk Ranking System and assigned to each potentially contaminative source on the basis of its normalised risk ranked score.

PRRS:
The Preliminary Risk Ranking System, which is applied to all potentially contaminative sub-areas following assessment under CLR No. 6 Part I procedures. PRRS provides an intermediate step before undertaking full categorisation under CLR No. 6 Part II, allowing sub-areas to be rank ordered numerically according to eleven factors representing the source-pathway-receptor linkage.

Prioritisation:
Classification of potentially contaminative sources (sub-areas) under Part 1 assessment procedures of DoE CLR No. 6, resulting in the assignment of a Priority Grouping (A, B or C).

Priority grouping:
A priority group (A, B or C) assigned to each potentially contaminative source (sub-area) based upon the spatial coincidence or relative proximity of each to designated development, surface water and groundwater receptors and buffer zones, according to CLR No. 6 Part I.

Ramsar site:
A 'Ramsar site' is the land listed as a Wetland of International Importance under the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (the Ramsar Convention) 1973.

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. Paragraph A.14 of the guidance.

Receptor sensitivity:
A score assigned to each potentially contaminative sub-area based upon an assessment of its spatial coincidence with recognised sensitive receptor groups i.e. current land-uses.

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 risks 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. Paragraph A.31.

Remediation:
defined in Section 78A(7) of the Act as:

(a) "the doing of anything for the purposes 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 purposes of keeping under review the condition of the land or the waters."

Risk:
the combination of:

(a) the probability, or frequency, of occurrence of a defined hazard (for example, exposure to a property of a substance with the potential to cause harm); and
(b) the magnitude (including the seriousness) of the consequences paragraph A.9.

Risk assessment:
The process of the study of risk as defined above.

Risk ranking:
Performed by the application of the PRRS to assign a normalised rank ordered score to each potentially contamination source, derived from the numerical assessment of source sensitivity, pathway efficiency and receptor sensitivity factors.

SAC:
A Special Area of Conservation (SAC) is the land designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

Score:
An arbitrary number assigned to source, a pathway or receptor based on an assessment of the relative severity, efficiency and sensitivity (respectively) of each.

SEPA:
the Scottish Environment Protection Agency.

Significant harm:
defined in section 78A(5) of the Act. 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 that Chapter).

SNH:
Scottish Natural Heritage.

Source severity:
A measure of the contaminative potential of a sub-area based on its former DoE land-use classification.

Special site:
defined by section 78A(3) of the Act as:

"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)…"

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.

SSSI:
A Site of Special Scientific Interest (SSSI) is the land notified as a SSSI under the Wildlife and Countryside Act (1981), as amended.

Statutory consultees:
nationally designated bodies to be consulted officially on matters, which may affect their areas.

Statutory guidance:
Scottish Executive Circular 1/2000- 'Environmental Protection Act 1990: Part IIA Contaminated Land'.

Statutory guidance:
'Inspection Strategies Advice Note, Final Draft, August 2000, The Scottish Executive.

Sub-area:
A geographical feature (polygon, line or point) representative of a potentially contaminated area of land.

Sub-area reconnaissance:
A walkover survey carried out on a particular sub-area of land, undertaken in accordance with the broad principles of CLR No.2.

Substances:
defined in Section 78A(9)) of the Act as:
“any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour”.

The Inspection Strategy:
document prepared by a Scottish local authority to fulfil their statutory obligations and to comply with the underlying principles of the Part IIA regime.

Walkover visit:
A survey performed to assess and record the visual evidence of land contamination and factors affecting the distribution and impact of contamination.

Weighting:
Refers to the relative score allocated to the various factors within each element of the pollutant linkage, proportionate to their relative importance.

For more information or if you want this information in a different format or language, please phone 0845 740 6080 or email slcenvironmentalservices@southlanarkshire.gov.uk

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