



2019



**Economy, Planning &
Employability Services**



Contaminated Land Inspection Strategy

Part IIA of the Environmental Protection Act 1990 was inserted by Section 57 of the Environment Act 1995, and it is enforced in Scotland by the Contaminated Land (Scotland) Regulations of 2005

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Introduction

- The Land & Air Quality Team is working on its eighteenth voluntary remedial project in eighteen years, each securing the future of land damaged by historical contamination; each bringing land back into beneficial use. Our achievement is believed to be unique in the UK.
- Working in partnership neighbouring local authorities, we are doing intrusive investigations using our own equipment and expertise. Our award-winning shared-services agreement has saved tens of thousands of pounds of public money and won prestige for Fife Council.
- In fulfilling our duty under Part IIA of the Environmental Protection Act 1990 (as amended), we have now inspected eighty percent of sites considered to be at high- or medium-risk of containing contaminants harmful to human health and/or the water environment.
- The team is supporting brownfield regeneration with timely and comprehensive responses to planning and building control. Raising awareness of contamination issues has resulted in a ten-fold increase in consultations from colleagues across the Council in recent years.
- Fife Council's Land & Air Quality Team is working closely with Development Management, Building Standards, Local Plan, Economic Development and Vacant & Derelict Land teams to promote best practice and to ensure that best value is achieved on large Council projects.

Our Inspection Strategy not only fulfils the statutory duty on the Council to inspect our area for historical contamination: it also seeks to complement and enhance Fife Council's wider policies aimed at regeneration and sustainability for people who live in, work in, or choose to visit, Fife.

When reading this document, it is important to differentiate between formally determined Contaminated Land (as defined in the statutory guidance) and land that has the potential to be affected by contamination. Only where a 'significant possibility of significant harm' exists — and then only where there is no prospect of a remedy — should a site be determined as statutorily Contaminated Land. The Land & Air Quality team has worked hard to avoid any recourse to formal determination...

...we have instead succeeded in finding voluntary solutions for problem sites.

This Inspection Strategy document is presented in four sections as described in Box A1.3 of the Government's guidance on strategies^a. They are:

1. a description of the characteristics of Fife and how they influence our approach,
2. an outline of the Land & Air Quality Team's main goals, objectives and priorities,
3. appropriate timescales for the inspection of potentially contaminated land, and
4. arrangements and procedures for managing the risk from land contamination.

This document has been completely rewritten from its predecessors to reflect significant progress with the team's objectives, both strategic (periodic inspection) and reactive (timely consultation)^b.

1. About Fife

Fife has existed as an historical entity since at least the twelfth century. Occupying 1357 km², it is Scotland's third-largest local authority by area. Having 370,500 inhabitants, it is also ranked third by population. Land boundaries are shared with Clackmannanshire and Perth & Kinross-shire whilst the coastal path extends to approximately 188 km connecting the Forth and Tay estuaries.

– Geology and hydrology

The boundary between Devonian sandstones to the north and Carboniferous coal measures to the south cuts across the centre of Fife. This distinction had a profound effect on former industrial land uses. In the northern parts of Fife, the predominant land use is agriculture whilst to the south of this divide Fife is characterised by former coal mining and the derivative industries it supported.

Fife's largest river is the Leven, which flows from Loch Leven in the west down to the sea at Leven in the east. This river provided power to countless textile and paper mills for centuries as it flowed through the heartland of Fife's industrial southern half. Fife's second river is the Eden: this river traverses the agricultural heartland of Fife through the Howe of Fife and Cupar to the North Sea.

– Population and land use

About 3,000 years ago, Celtic-speaking tribes had become sufficiently organised to construct hill forts for defensive purposes. The Romans managed a few incursions into Fife, and they may have helped weld the various native factions into the Pictish nation. Scotland's early capital was at Dunfermline, and Robert the Bruce became the last of seven Scottish Kings to be buried here in 1329.

Agriculture, fishing and maritime trading expanded, and Fife became a major coal-mining area supporting other industries such as linen, floor covering, distilling, papermaking and heavy engineering as well as the First World War naval dockyard and base at Rosyth. Since the Second World War, skilled jobs, many in electronics, and a rise in tourism have served to boost Fife's economy.

– Protected areas

Fife includes places that, because of their natural habitat, enjoy protected status including Sites of Special Scientific Interest, Special Areas of Conservation, Special Protection Areas for birds and Ramsar Convention designations for coastal and inland wetlands. There are also several Sites of Importance to Nature Conservation and Regionally Important Geological Sites within Fife. Fife has a rich and distinctive built heritage including 46 Conservation Areas, of which 24 are designated outstanding, and 24 Archaeological Areas of Regional Importance within the kingdom.

– Industrial heritage

Forty coal gas manufacturing plants operated in Fife, some serving large towns and some just for a single country house. Two thousand known or suspected mineshafts provided coal for gasworks and many other industries and for export to the rest of the world. Our database contains over four thousand sites (Figure 1) where industries have come and gone in the last century and a half.

Airfields, Breweries, Chemical works, Docks, Engineering works, Food processing, Gasworks, Hospitals, Iron foundries, Jute works, Laundries, Military land, Oil storage, Paper mills, Quarries, Railway land, Sewage works, Timber treatment, Unknown filled ground and Waste facilities: these have all been investigated by the Land & Air Quality team during the last eighteen years.



Figure 1: Fife's industrial legacy in 2000 (left) ... and its first reclamation project in 1976 (right).

2. Aims and priorities

Fife Council's Land & Air Quality Team has a statutory duty to inspect the area of Fife, developed or undeveloped, in public or private ownership, for evidence of contamination. The team also has an important role as a specialist consultee in planning permission and building warrant processes.

– Corporate goals

For the first time in Fife, there is one plan^c for the future of public services – one plan that the Council and its partners have signed up to and provides a vision for Fife for the next ten years. It puts fairness at the heart of everything we do; bringing together communities and services in a way that means everyone can get involved in improving neighbourhoods and creating a fairer Fife.

– Team objectives

The Land & Air Quality Team undertakes its own intrusive investigative work in-house. Doing this saves up to 75% of costs. It also gives us more confidence in the outcome of our work because we sampled the soil and completed the risk assessment (in the form of a conceptual site model) ourselves. This in turn gives us more credibility as regulators when reviewing consultant's reports submitted in support of planning applications^d. On the reactive side, we provided our planning and building control departments with a GIS 'constraint layer' to help screen proposed developments. This reduces the risk of inadvertently creating future problems with contaminated land.

– Inspection priorities

To ensure fairness and objectivity, the team uses a proprietary algorithm in our site management software to sort sites in order of priority for inspection^e. Once preliminary inspection is complete, one of four categories broadly compatible with recognised definitions is applied, where a '1' is taken to represent a high priority, '2' is medium and '3' is low with '4' equating to near-zero risk^f.

Where there is considered to be significant risk to public health, the Council acts to secure funding for voluntary remedial action to ensure risks are mitigated in a timely fashion without causing undue hardship. (Experience and case law suggest that attempting to pursue the original polluter or knowing permitter has always either failed or resulted in costs coming back to the local authority.)

3. Timescales

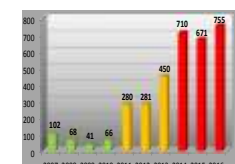
Although not enshrined in the statutory guidance, there was an expectation that local authorities should have inspected all high- and medium-priority sites within 25 years of the act coming into force in 2000. Fife Council is in a strong position to achieve this and—if it does not—it would be because we have chosen to divert our resources to dealing with “the most pressing and serious problems first” in accordance with the statutory guidance⁸ Paragraph 3.3.

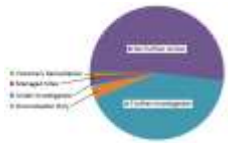


**REGISTER OF
UNDERGROUND
DERELICT TANKS**



- 2000 → Entry into force of the new statutory regime for the identification and remediation of contaminated land
- ← 2001 Publication of Fife’s first contaminated land Inspection Strategy and purchase of the historical land-use database
- 2002 → Successful bid for government funding facilitates the team’s first major project: removing 10,000 dumped tyres
- ← 2003 Commencement of intrusive investigation work based on the outcome of the first 150 desk-based studies
- 2004 → Decision taken to bring the preparation of preliminary risk-assessment reports in-house instead of using consultants
- ← 2005 A fourth full-time member of the team employed to support Fife’s ambitious programme of site inspections
- 2006 → Three major remedial action projects completed with government funding at two landfill sites and a chemical works
- ← 2007 The team now employs a fifth full-time officer, with our time equally divided between inspection and consultation
- 2008 → Awareness-raising presentations on brownfield development for planners, consultants and house-builders
- ← 2009 Trading Standards’ derelict tank records digitised ensuring faster, more accurate geo-location of historical records
- 2010 → Purchase of proprietary site management and prioritisation software (Geo-Environ) and report writer (MapEagle)
- ← 2011 Inception of the award-winning officer-led ‘Resource Sharing Group’ bringing intrusive investigation in-house
- 2012 → Acceptance of our GIS constraints layer by the planning department leading to increased numbers of consultations





- ← 2013 Publication of the first of two ‘Summary Updates’ emphasising only additions and improvements to the team’s work
- 2014 → The team re-brands itself ‘Land & Air Quality’, thus emphasising the positive contribution of our work in both arenas
- ← 2015 Seventy-five percent of high or medium priority sites were investigated during the first fourteen years of this strategy
- 2016 → Another four large voluntary remedial projects completed by the team during financial year 2016-2017, costing £1.4m
- ← 2017 Started recording ‘Requests for Service’ as a separate performance indicator because of the increasing workload
- 2018 → Completion of our fifteenth voluntary remedial project, securing the future of yet another residential development
- ← 2019 Celebrating eighteen years of proactive inspection, Fife issues this completely rewritten concise inspection strategy

Land & Air Quality



The team is working on three remedial projects: one in partnership with the Ranger Service, one working with Economic Development and Parks & Open Spaces, and one in a private housing area.

Gasworks waste has been uncovered in an area of grazing land and it was reported to the Land & Air Quality team by Coast & Countryside Rangers. It required urgent action to protect the livestock. The council acted → within months to secure remedial action and it is planning to remove the contaminating material and arranging to have the ground safely reinstated.



A persistent gap site in a busy high street has been the subject of attention by a multi-agency group including the Land & Air Quality Team. Phase one of this ambitious project is complete, resulting in a ← vastly improved environment on the front part of the site. Action to deal with the remaining area is ongoing with buy-in from Communities & Open Spaces as well as Economic Development teams.



Finally, the site of a former linen & bobbin works has been the subject → of ongoing intrusive investigation with a view to providing remedial action.

We are pleased to be able to provide environmental improvements and to protect public health by implementing this Contaminated Land Inspection Strategy in accordance with statutory guidance.

4. Arrangements and Procedures

The Land & Air Quality Team must work with internal and external partners to ensure it can deliver on its responsibilities to inspect land, and as a consultee in the planning process. Protection of the public health and the wider environment from the legacy of historical industrial contamination is the overriding priority of this Strategy, as outlined in the sections below.

i. Council owned land

We do not actively prioritise Council-owned land over private land; however, where a problem is encountered, there is a strong case for spending public money on public ground, remedial work can proceed without negotiation with private land owners and the Council will be seen to be keeping its own affairs in order before expecting others to do the same. It is important to uphold this principle. Where appropriate, Elected Members will be advised of any intentions to determine land owned by the Council as Contaminated Land under Part IIA EPA 1990 or of any plans to deal with it voluntarily.

ii. Water environment

We do not actively prioritise human health risks over the water environment; however, as a team working in Environmental Health, it is important for us to be seen to be protecting public health, and the budget required to evaluate one groundwater problem could fund the investigation of several human health linkages. If SEPA identifies a particular risk to the water environment from potentially contaminated land, the Council will be informed. Fife Council will consider any comments made by SEPA in relation to remedial action for the water environment, taking account of the provisions of the relevant groundwater assessment guidance^h.

iii. Statutory receptors

All of the tasks that were prioritised in earlier versions of this Strategy Document either have been completed or are now incorporated into the day-to-day activities of the Land & Air Quality Team. The prioritisation of sites on the basis of risk to human health and/or the wider environment relies on evaluation of pollutant linkages between known or suspected sources of contamination and any statutory receptors. Receptors include residents, site users, surface- and groundwater (collectively known as the Water Environment in Scotland), ecological receptors (considered to be statutorily protected areas on-site) and property.

iv. Existing contaminants

Researching the potential for contamination to exist relies on the assimilation of historical maps, Council records and anecdotal evidence. Sources of information include scanned maps from Landmark Information Group (Ordnance Survey) and town plans from National Library of Scotland (John Wood and Bartholomew) as well as records held by the former District Councils (waste management licenses) and Trading Standards (register of derelict underground storage tanks). Typical former land uses in Fife are listed at Section 1 (above) and lists of chemical contaminants commonly associated with these uses are widely published.

v. External consultation

Our key external consultees include Scottish Environment Protection Agency for any concerns that relate to the water environment and radioactive contamination, and Scottish Natural Heritage for any concerns in relation to Fife's natural heritage sites.

The Council routinely consults other external organisations and agencies including British Geological Survey for borehole information, the Coal Authority in relation to mining, Health & Safety Executive for asbestos guidance, Historic Environment Scotland in relation to the historic built environment and the National Library of Scotland for historical maps and other archives.

vi. Private landowners

In the event that the team identifies, through ground investigation, that a risk to human health on private land cannot be ruled out, officers will approach the land or property owner with information and advice about the nature of the problem. As stated above, the team has worked very hard to avoid formal determination because entry on a Contaminated Land Register is unlikely to benefit either party. Instead, a voluntary solution is always sought and, where possible, funded by the Council. Should any entries be made on the Council's Contaminated Land Register we will publish them online (see subsection xi).

vii. Managing requests

Three types of request are routinely dealt with by the Land & Air Quality Team.

- Consultations are received from the planning department and from building control. These are dealt with on a weekly rota basis with the time for response being 10 working days.
- Enquiries are received from individuals, companies or agents acting on their behalf. For a fee, we collate information held by the team relating to historical maps and Council records.
- Requests that do not relate to potential historical contaminated land or any particular site are now recorded separately as they are beginning to take up a significant amount of time.

viii. Inspection planning

Having now inspected four-fifths of all sites considered to be high or medium priority, our emphasis continues to move towards intrusive site investigations and subsequent remedial projects. Both are potentially very costly, rapidly consuming our limited budgets and potentially restricting the scope and speed with which sites can be dealt with. Annual targets include a dozen new desk studies and four new intrusive investigations completed in-house. However, it is important that the team should be ready to react to any unanticipated events that might take precedence to ensure continued good public health provision in Fife.

ix. Detailed inspections

The risk assessment process normally follows a phased approach where the first stage is always a desk study supplemented by information and observations from a site walkover. Every stage of risk assessment should include a conceptual site model as a diagram, table or prose.

The desk study might rule out any need for further consideration of potential contamination. If it does not, the next stage is exploratory intrusive investigation to provide an indication of likely ground conditions. This may be followed by main and supplementary investigations as required.

If contamination is encountered, and the risks are considered significant, then remedial action will be required to make the site safe for its current (or future proposed) land use. A verification report will be required on completion to demonstrate that no complete pollutant linkage remains.

x. Review procedures

From time to time, the team must respond to unforeseen eventualities and modify its inspection programme accordingly. Examples of such circumstances include proposed changes in the use of land surrounding an investigated site, or unplanned changes in the use of the land (for example, persistent unauthorised use). There may be circumstances where new information becomes available, either through a complaint received by the Council or through documentary research by the team. This strategy will itself be updated or reviewed if significant changes are deemed necessary.

xi. Information management

In order to discharge its duties, the Land & Air Quality Team holds significant volumes of spatial data in different formats. Three categories of data can be defined, including:

- information that is freely available in the public domain such as historical maps and vertical aerial photography,
- data that are held or stored by the Council under licence for an annual maintenance fee like geology, the water environment and former land uses, and
- records digitised from former District Council archives including waste management licences and the register of derelict underground storage tanks.

A proprietary site management database is used to ensure the Council is dealing with potentially contaminated land in a “rational, ordered and efficient manner” as required by statutory guidance. Fife Council’s Public Contaminated Land Register is available online at www.fife.gov.uk (search for ‘Contaminated Land’) and on the Improvement Services’ Spatial Hub website www.spatialhub.scot.

Further Information

The Council’s Contaminated Land website is at www.fife.gov.uk (search for ‘Contaminated Land’). As well as contact details, you will find:

- More about our **contaminated land inspection work** with a link to our Register of any formally determined sites
- Advice on **redeveloping land affected by contamination** including a link to our online guidance advice document
- Payment details for use when **requesting environmental information** and notes on what to expect in return

^a Scottish Executive Env Grp “Contaminated Land Inspection Strategies Advice for Scottish Local Authorities” July 2001

^b Fife Council “Contaminated Land Inspection Strategy” Sep 2001, Feb 2003, Jul 2006, Jun 2010, Mar 2013, May 2016

^c Fife Council “Plan for Fife 2017-2027 Local Outcome Improvement Plan” June 2019

^d The Scottish Office “Planning Advice Note 33 Development of Contaminated Land PAN 33” October 2000

^e Environment Agency “Model Procedures for the Management of Land Contamination CLR 11” September 2004

^f Department of the Environment “Prioritisation Procedure for Sites which may be Contaminated CLR6” January 1995

^g Scottish Executive “EPA 1990 Part IIA Contaminated Land Statutory Guidance Edition 2 Paper SE/2006/44” May 2006

^h Scottish Environment Protection Agency “Assigning Groundwater Assessment Criteria WAT-PS-10-01” August 2014