Contaminated Land Inspection Strategy 2012

Coventry City Council

Introduction

The UK has a significant industrial past; unfortunately many of these historic industrial and waste disposal processes have inadvertently caused contamination of the land. It is now widely accepted that land within the UK is a finite resource which should be managed with care. At the same time the pressure on land for development has significantly increased. The recycling of brownfield sites is now seen as a crucial method of reducing the pressure on the Green Belt and responding to the demand for social and affordable housing.

Potential contamination caused by the past land use may be detrimental to humans, water resources and the environment. Under Part 2A of the Environmental Protection Act 1990[1] local authorities must adopt and publish a strategy for the inspection of contaminated land within their area. The strategy should identify sites which have the potential to be contaminated and provide a framework to ensure these sites are responsibly assessed and managed. This is the third version of Coventry City Council's contaminated land strategy, the first being produced in 2001 and updated in 2004.

This strategy outlines how Coventry City Council will continue to carry out its duties in line with the revised Part 2A guidance released in April 2012. Since the first strategy, a substantial amount of work has been carried out to identify potentially contaminated land within Coventry. A large number of these sites have been dealt with through the planning process. The Council will proactively investigate areas of land which are unlikely to be dealt with via the planning process, by first risk assessing them and then taking appropriate measures to remediate land that poses a significant risk to humans, water resources or the environment.

[1] Environmental Protection Act 1990: Part 2A (EPA Part 2A)

CHAPTER 1

Contaminated Land and the Council's Role

1.1 What is Contaminated Land?

On some land there is greater potential for contamination to be present, usually associated with industrial use or waste disposal. Appendix 1 outlines the history of Coventry and the historical use that has resulted in the legacy of contamination in the city.

Occasionally levels of contamination can be at levels that are detrimental to human health and/or the environment. The legal definition of "contaminated land" is based upon Part 2A of the Environmental Protection Act 1990 (Box 1.0).

If proven that contamination exists at a level detrimental to humans, the environment, or water resources it is legally classed or "determined" as contaminated. However, to prove contamination is present at a level which is detrimental requires significant investigation.

Box 1.0 Definition of Contaminated Land

'Contaminated land' – 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 significant possibility of such harm being caused; OR

(B) Pollution of controlled waters is being, or is likely to be caused.

Pollution of controlled waters is defined as 'the entry into controlled waters of any poisonous noxious or polluting matter or any solid waste matter'.

EPA 1990: Part 2A – Section 78A(2) & 78A(9)

1.2 How is Contaminated Land Assessed?

To prove a site meets the definition of contaminated land (*Box 1.0*) a series of investigations are required. For a site to be potentially contaminated three elements need to be present (Table 1.0).

CONTAMINANT	PATHWAY	RECEPTOR
A source of contamination	Method contamination comes into contact with a receptor	The end user who will come into contact with the contamination
e.g. heating oil spill	*e.g. eating contaminated soils either directly or on vegetables grown in the soil*	*e.g. humans, the environment, property*

Table 1.0 Contaminant Linkage

A contaminant, pathway and receptor together form a *contaminant linkage*. All three have to be present for a site to be considered as potentially contaminated.

Even if a contaminant linkage has been proven the quantity of the contamination needs to be assessed to determine if it is detrimental to a receptor.

Not all substances in the soil or water can affect health or the environment. Some substances occur naturally and may be characteristic of soils in a geographical region.

1.3 Controlled Water Contamination

All water bodies including rivers, coasts, estuaries, lakes, man-made structures and groundwater come under the term controlled waters. The Environment Agency has powers to take action to remedy or prevent pollution of controlled waters under the Water Resources Act 1991, the Water Framework Directive and the Groundwater Regulations.

Where pollution of controlled waters arises from substances in, on, or under the land there is an overlap between these powers and Part 2A. In cases where contaminated land is affecting controlled waters, the council will work closely with the Environment Agency for technical advice and support.

1.4 Regulatory Context & Roles

Part 2A of the Environmental Protection Act 1990 places the main responsibility for contaminated land on the Council (Box 1.1), although the Environment Agency (EA) (Box 1.2) also has a considerable advisory role. In addition, where the contamination is having a significant effect on controlled waters, it can be classed as a "special site" and the Environment Agency becomes the lead regulator.

Box 1.1 Local Authority Duties:

- Identify contaminated land (as defined in box 1.1).
- Decide if any such land is required to be designated as a 'special site' (as defined in box 1.3).
- Regulate developments on potentially contaminated land through the planning process.
- Act as the enforcing authority for all contaminated land sites other than those that meet the statutory definition of a 'special site' (box 1.3).
- Keep a register of known/potential contaminated land and prioritise the worst sites first.

EPA Part 2A: Contaminated Land Statutorv Guidance

Box 1.2 Environment Agency Duties:

- Act as the enforcing authority for any land designated as a 'special site'.
- Provide technical guidance for Local Authorities especially in cases where water pollution is involved.
- Periodically publish reports on the state of contaminated land in England and Wales.

Definition of a 'Special Site'

Any site previously occupied by the Environmental Permitting Regulations 2010 (Formally Integrated Pollution Control (IPC) / Pollution Prevention and Control (PPC)) processes, certain industrial activities such as oil refining, Ministry of Defence lands or contamination which affects or is likely to seriously affect drinking water, surface water or some ground waters.

EPA 1990: Part 2A – Section 78A & Contaminated Land Statutory Guidance

1.5 The "Polluter Pays" principle

Part 2A sets out who can be held liable for the clean-up (remediation) of the contamination. The first principle is that the person who caused or allowed the contamination to happen is responsible as the "polluter".

If the Council is unable to find the "polluter", the responsibility falls back to the landowner. This may be an individual home owner, landlord, company or other legal entity. As the costs of remediation required may be significant, Part 2A contains some guidance on financial hardship which the Council must take into account when making a decision.

1.6 Development of the Strategy

Part 2A requires all local authorities to produce a formal contaminated land strategy and the approach should:

- Take a strategic approach to inspecting its land.
- Be rational, ordered and efficient.

- Be proportionate to the seriousness of any actual or potential risk.
- Seek to ensure that the most pressing and serious problems are dealt with first.
- Ensure that resources are concentrated on investigating areas where the Local Authority is most likely to find contamination.
- Ensure that the Local Authority efficiently identifies requirements for the detailed inspection of particular areas of land.

In order to satisfy this requirement a contaminated land strategy was produced in 2001 and updated in 2004. This new strategy is designed as a full review of the council's contaminated land aims, objectives and progress so far.

1.7 Local Aims and Other Strategies

The strategy aims to identify land that may be contaminated and takes steps to ensure the contamination does not have a significant effect on people or the environment. As such, it links with other Council and external strategies that deal with land development and public health. Parts of the public heath work currently carried out by Primary Healthcare Trusts (PCTs) will be transferred to local authorities from 1st April 2013 which will help forge stronger links between the work areas. In addition, the Council will continue to work with the national Health Protection Agency that will become Public Health England from this date.

CHAPTER 2

Aims and Objectives

2.0 The strategy has been designed to guide current and future contaminated land work in line with current Part 2A guidance (as outlined in section 1.5) and has the following aims and objectives.

2.1 Aims

- Provide a framework for the identification and investigation of contaminated land in line with Part 2A.
- Where contamination is found to exist as defined under Part 2A take appropriate steps to prevent significant impact on people and/or the environment.
- Support developers to bring damaged land back into beneficial use in the interests of the economy of the city and the local community.
- Ensure compliance with and enforce Part 2A of the Environmental Protection Act 1990

2.2 Objectives

1. Maintain and update the current register and information management system of known and potential contaminated land sites within Coventry.
2. Ensure that resources are concentrated on sites where contamination is most likely to exist and cause harm to humans and/or the environment.
3. Focus resources on areas of land that have the potential to be contaminated but are unlikely to be redeveloped through the planning process and therefore not be subject to any scrutiny.
4. Ensure the planning control process is effective in dealing with contaminated land to ensure the land is safe and suitable for its intended use.
5. Advise the council's property department on potential liability issues associated with contaminated land. Provide advice and raise awareness of contaminated land issues, both internally and to the general public.

CHAPTER 3

Implementation and Investigation

3.0 Since the initial contaminated land strategy (2001) a significant amount of work has been carried out to identify and investigate a number of potentially contaminated land sites within Coventry.

To investigate potentially contaminated sites within Coventry, 5 steps are undertaken. These are explained below.

3.1 Step 1

To identify sites where potential contamination may have occurred, an assessment of historical maps and information has been undertaken. Through this process a total of 2685 sites have been identified.

3.2 Step 2

The sites indentified in step 1 have been individually assessed based on current land use. Sites that are unlikely to be dealt with through the planning process and pose a potential risk to humans (for example residential properties built on previously industrial land) have continued to step 3.

These sites will be categorised according to their potential risk (High, Medium, Low) so that priority is given to higher risk sites first.

3.3 Step 3

Sites identified as having a potential risk will undergo further assessment. This will include collecting all relevant historic information about the site and talking to the land owner.

If the information collected either confirms the potential risk or the information is incomplete, only at this stage will chemical sampling of soils will be carried out to measure the exact level of contamination. If the contamination on site is proven by chemical sampling to be a risk to humans it will progress to step 4.

3.4 Step 4

Once contamination has been measured and there is potential risk to human health, an assessment of the cost benefit of clean up (remediation) will be undertaken. A net benefit has to be proven for a site to be remediated. Consultation with the land owner and voluntary

remediation will be discussed. Only when a proven significant risk to human health exists, a proven net benefit of remediation can be shown and a voluntary remediation proposal has not been agreed will the site be declared as 'contaminated' under Part 2A of the Act.

3.5 Step 5

Declaring a site as 'contaminated' triggers the remediation process. The original polluters or land owners are responsible for clearing the contamination and Officers can use powers under Part 2A. Remediation Notices can be served on polluters or land owners to require clean-up, and if this is not carried out, or within the timescale given, the Council can carry out the clean-up and seek to recover its costs.

CHAPTER 4

Risk Management

4.1 The risk to human health from contaminated land within Coventry is comparable to other cities in the West Midlands. Of the 2685 sites identified, approximately 75% are considered low risk and highly unlikely to be classed as Part 2A. A further 20% are likely to be dealt with through the planning development control process whereby clean-up is a requirement of the planning consent. Of the remaining 5% potentially contaminated sites (just under 150), approximately half have been investigated and not considered to meet the criteria of a Part 2A site.

4.2 Of the 75 (approx) sites that remain, the Council is continuing to gather all the relevant information necessary to determine if a site investigation is warranted. The information gathering is expected to be completed by the end of 2013. If further investigation is required based on this information, the date for completion will be extended.

4.3 If contamination is encountered that is proven to be damaging to human health there are a number of established approaches to remediate the site to remove the risk. Depending on the contamination the most common and simplest approach is to dig the contamination out and remove it from site ("dig and dump"). The excavated hole is then in filled with 'Clean' cover (topsoil). Any remediation will need to be targeted to the situation, and will need to include the likely impact on the local community. For example, the dig and dump approach will involve many frequent traffic movements that may generate noise and traffic control issues, as well as access considerations.

4.4 Remediation is an expensive and time consuming process. Part 2A provides a framework in determining financial hardship. Government grants are available for the clean-up of land that meets the funding criteria. This might be an appropriate source of funding where for example a group of private residential houses were found to have contaminated soils in their back gardens, to protect the householders from significant financial liability.

4.5 Declaring a site as 'contaminated' under Part 2A is considered to be the very last resort and the decision is not taken lightly. Only when the information gathered and the risk assessment proves there is significant harm being caused or likely to be caused will the council take action. Even before a site is determined, a net benefit has to be proven which includes any financial implications and property blight that may be caused.

CHAPTER 5

Advice and Information

Providing accurate advice is an important part of ensuring potentially contaminated land is managed correctly.

5.1 Advice & Information

Advice and support on contaminated land issues is freely available to the general public and internal council departments. The Council will continue to raise public awareness of contaminated land at the same time ensuring that distress to local residents or property blight is minimised.

5.2 Information Obtained During Investigation

The information collected and produced during the Council's investigation of contaminated land is not directly available to the public. This is due to copyright of the electronic mapping information used and to ensure that the information is not misinterpreted and possible property 'blight' is caused.

5.3 Environmental Information Requests

Environmental Information for specific sites is available from the Council through the Environmental Information Regulations[2] (EIRs). This is a chargeable service. Such information is useful in property/land sales and purchases to establish any future liability for contamination that may be transferred during a sale.

For further information on this service please contact:

env.protection@coventry.gov.uk

All documents associated with planning applications have to be kept indefinitely. Many contaminated land site investigations carried out to satisfy planning conditions are available on line through the publically accessible planning portal located at:

http://planning.coventry.gov.uk/portal/index.html

[2] Environmental Information Regulations 2004

Appendix 1

Characteristics of Coventry

To understand what potential contamination there is within the city it is important to understand the industrial and environmental character. This chapter describes the geographical, environmental and historical elements which contribute to the character of Coventry.

Geographical Setting

Coventry is the 9th largest city in England comprising of a metropolitan borough situated within the West Midlands. The population of Coventry is 316,900 (2011 census). Coventry covers 98.34 square kilometres and shares boundaries with Nuneaton and Bedworth Borough Council, Rugby Borough Council, Solihull Metropolitan Borough Council, Warwick District Council and North Warwickshire District Council (Figure 1). (2011 Census)

Geology, Hydrology & Hydrogeology

It is important to understand the geology and water sources because certain types of contaminants have the potential to migrate. The different types of rock (solid geology) and loose (drift geology) can facilitate or hinder the migration of the contamination.

The solid geology which underlies Coventry comprise of mudstones, sandstones and a handful of coal seams which form part of the Warwickshire Coalfield. The drift deposits across Coventry comprise mainly of glacial drift deposits, with some areas of river terrace deposits and alluvium (Figure 1).

The water within the underlying rock (called an aquifer) is an important resource. There are three types of aquifer which have been designed by the Environment Agency depending on how much readily available water can be extracted. There are three categories Principal Aquifers, Secondary Aquifers and Unproductive Strata. There are two Principal Aquifers located within Coventry.

There are two rivers that flow across the Coventry area. These are the River Sowe and the River Sherbourne. The Sowe flows from the north east southwards. The Sherbourne flows from the east through the city centre (mostly culverted) and then flows southwards. The Sherbourne and the Sowe converge just south of the A45.

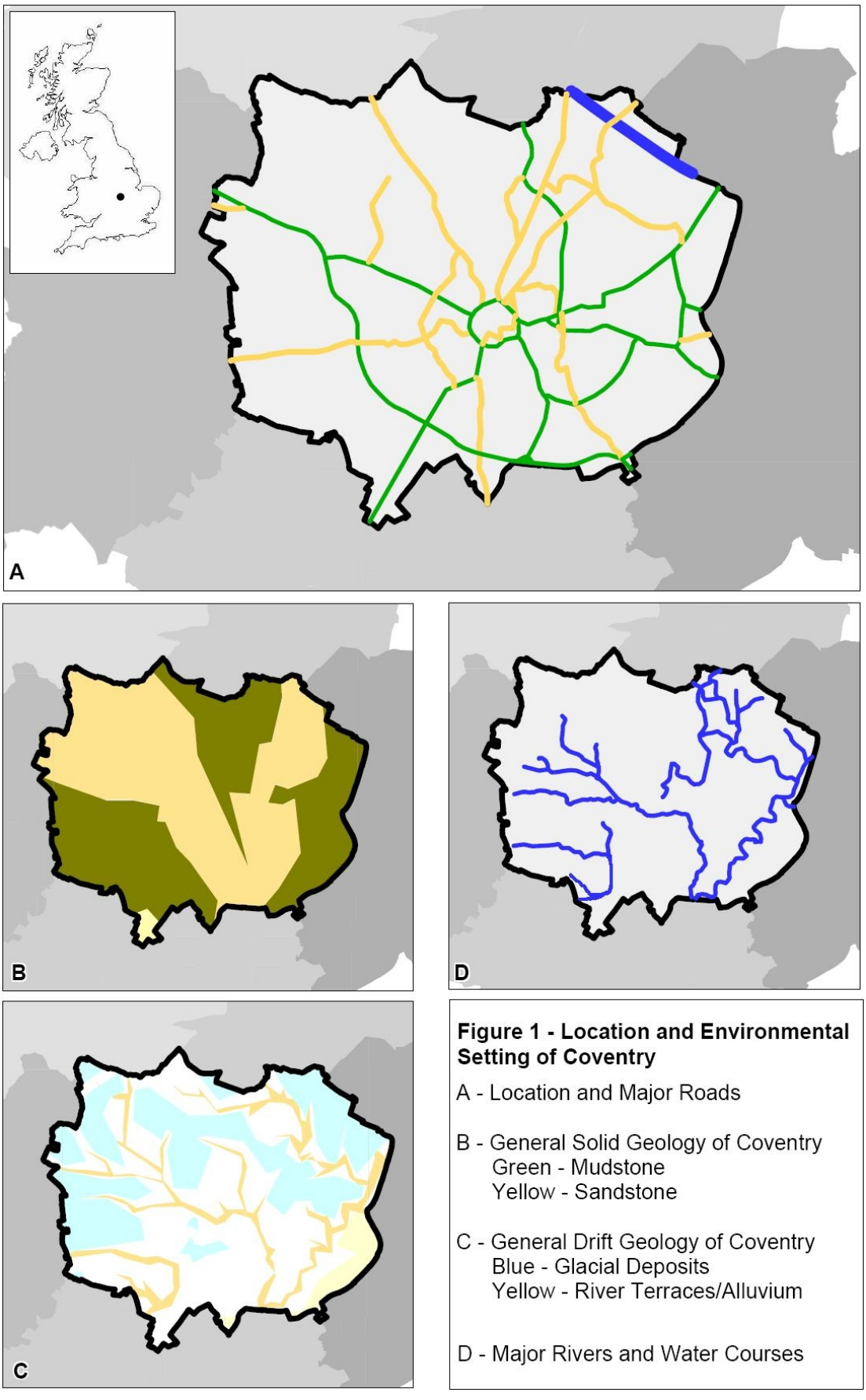

Figure 1 - Location and Environmental Setting of Coventry

A - Location and Major Roads

B - General Solid Geology of Coventry
Green - Mudstone
Yellow - Sandstone

C - General Drift Geology of Coventry
Blue - Glacial Deposits
Yellow - River Terraces/Alluvium

D - Major Rivers and Water Courses

Coventry's History

In order to assess the extent of potential contaminated land it is important to understand the previous history and development of the city. As can be seen from the descriptions below the city has a varied industrial heritage.

Early History

It is almost certain that Coventry came into existence as a late Saxon settlement. Later, during the medieval period, Coventry began to flourish into a prosperous city based on dying, fulling, skinning, tanning, slaughtering, shoemaking and born/horn working.

19th Century

Growth of the city was restricted due to land ownership. In 1845 an Act was passed allowing the city to expand out from its medieval centre. This allowed rapid industrial expansion in the north-east.

Early 20th Century

By the 20th Century the watch making industries had developed in to bicycle manufacturing and subsequently to car manufacturing. In the north of the city in Radford and Foleshill synthetic fabric and car manufacturing became dominant.

Most of these industries were connected with the motor trade and included the Humber Works at Pinley, the Standard Works at Whoberley, the Armstrong Siddeley Aircraft Works and the Dunlop Works at Whitmore Park. During this period the city boundary was expanded twice during 1928 and 1932 incorporating large areas of farmland into Coventry's control.

Mid 20th Century

The rapid industrial growth surrounding the ancient medieval centre during this period gave rise to a comprehensive plan for slum clearance and street improvement. However, many of these plans were interrupted due to the outbreak of World War II.

Coventry's industrial development in motor and aircraft production during the 19th and early 20th century made Coventry an ideal target for bombing raids. These raids resulted in much of the city centre and many important factories being damaged.

Late 20th Century

A Statutory Development Plan to rebuild Coventry's City Centre was approved in 1957, zoning the inner ring road for light industry. Many of the larger factories continued to increase in size and by 1969 several

new industrial estates across the city were created. However, over the last 30 years much of Coventry's industrial legacy has disappeared, with many of the large factories being demolished or redeveloped.

Coal Mining

Historically coal mining has been a dominant industry in Coventry, with several working collieries located in the north east of the city. By 1941, Coventry Colliery was the largest colliery in the region producing an excess of 850,000 tonnes/year. Production ceased in 1991, after 74 years of operation. Hawkesbury Colliery ceased production in 1946 and Exhall ceased production in 1948. There are now no active working collieries within the Coventry area.