

CONTAMINATED LAND
INSPECTION STRATEGY

ENVIRONMENTAL PROTECTION ACT 1990, PART II A

MAY 2001

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CHAPTER 2

CHARACTERISTICS OF MALVERN HILLS DISTRICT

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2.0 This chapter provides the background to MHDC's area and an explanation of how this influences the Council's approach to inspection for contaminated land. As this strategy has been written in close association and liaison with neighbouring authorities in Herefordshire & Worcestershire who are using the same format, a fair comparison with other authorities will be possible.

2.1 **GEOGRAPHICAL LOCATION**

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The Malvern Hills District is surrounded by Herefordshire, Gloucestershire and Shropshire and covers most of the west of the County of Worcestershire. Formerly divided between Worcestershire and Herefordshire, the new Malvern Hills District includes Malvern, on the slopes of the famous hills and the towns of Upton-upon-Severn and Tenbury Wells. It came into being on 1 April 1998 in the process of local government re-organisation.

The nine mile stretch of the hills extends from Bromsberrow to Malvern and is surrounded by the green swathes of the extensive commons where sheep have roamed since the middle ages.

The boundary of the district passes along the western fringe of the City of Worcester and also close to the towns of Tewkesbury to the south and Stourport-on-Severn to the north.

The River Severn cuts through the east of the district and the market town of Upton-upon-Severn which is a popular holiday and boating resort. The River Teme passes along the northern boundary of the district and through the town of Tenbury Wells, an old spa town. The stone bridge in Tenbury not only spans the River Teme but also acts as a link between the counties of Worcestershire and Shropshire.

About Malvern Hills

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Malvern Hills District is in the west of the County of Worcestershire. It has a population of 74,000 and an area of 57,710 hectares. The main towns are Malvern, Tenbury Wells and Upton Upon Severn which have populations of around 29, 600, 3,000 and 2,850, respectively.

The economy has diversified from a traditional association with agriculture and is now shifting focus to research and electronics, as well as tourism.

Attractions include the Malvern Hills themselves: an Area of Outstanding Natural Beauty (AONB) that attracts 1.5 million visitors a year, the Malvern Theatres and a variety of major shows and events.

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2.2 **BRIEF DESCRIPTION AND HISTORY**

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The Malvern Hills District is a predominantly rural area with three main towns. The urban area of Malvern has developed from a number of individual settlements located to the north, east and west of the Malvern Hills. There was little development in the area until the mid-nineteenth century when the first water-cure establishment was opened and the arrival of the railway in 1859 / 1860. These two events gave rise to rapid expansion based on the environmental attractions of living and visiting a spa town. Today Malvern is still dominated by the backcloth of the Malvern Hills and retains much of its Victorian character. Malvern is the largest town in the District, and is the administrative and employment centre of the area. Almost 7% of the total area of Malvern Hills District Council is designated as an Area of Outstanding Natural Beauty (AONB).

Within Malvern there have been a number of constraints which have a direct bearing on the future development potential of the land. These include overloaded drainage systems, inadequate water supply in some areas, the effects of development on the highway network and the high environmental quality of the area.

Upton-upon-Severn is a town of early foundation developing around an early crossing point on the River Severn. During medieval times it became the market centre servicing the needs of the surrounding rural area. Its location on the navigable section of the River Severn also made it an important inland port. Constraints imposed by the floodplain has resulted in Upton developing into a compact town of a unique character.

Tenbury Wells lies on the south bank of the River Teme and is connected to Burford on the opposite bank by the old stone bridge. Tenbury town centre lies in the valley floor with its hospital and fire station across the river in Burford. Tenbury's future is inextricably linked to Burford. Tenbury contains the main part of the joint community's residential area, and Burford is important for it's industrial area.

2.3 **SIZE OF THE DISTRICT**

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The District Council's boundaries encompass a total area of 222 square miles or 57,710 hectares.

2.4 **POPULATION DISTRIBUTION**

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As of 1998 the total population of the District was estimated at 75,000 with fractionally under 50% of the inhabitants living in the three major towns:

TOWN	POPULATION
Malvern	31,647
Upton-upon-Severn	2,561
Tenbury Wells	Est. <u>3,000</u>
	Total 37,208

2.5 **LAND OWNED BY THE DISTRICT COUNCIL**

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The Council sold all of its housing stock and associated land in March 1995 to the Elgar Housing Association. In addition, various areas of public park and open space land transferred to the recently created Malvern Town Council in 1999 and 2000.

In specific instances the Council may actively pursue the purchase of derelict land, or the compulsory purchase of buildings and land, for redevelopment in connection with the provision of Council services or so as to improve the overall quality of an area.

The Council currently retains ownership of a number of properties throughout the District; these include office premises, car parks, industrial units and public parks. The details are held within the Estates and Valuation Section. The area of the land and buildings owned by the Council is approximately 80 hectares and therefore represents a very small percentage (0.13%) of the overall area of the District.

2.6 **CURRENT LAND USE CHARACTERISTICS**

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The main use of land in the District other than for residential use, is for agriculture with large areas of open common land. Although some of the Malvern Hills and Commons are under private ownership for example by Severn Trent Water PLC the majority is maintained and administered by the Malvern Hills Conservators, an independent Board set up under a Private Act of Parliament.

Current industrial activity is generally restricted to the towns of Malvern and Upton-upon-Severn (the industrial centre at Tenbury Wells is in Burford which is outside the District), and a number of small to medium sized industrial estates. Malvern itself has in many ways a separate identity from the remainder of the District in employment terms. Its economy tends to be over-reliant on the service sector and its largest employer, the Defence Evaluation Research Agency. This specialist high technology employer has attracted other similar employers to the area. Other large employers in the area are MHDC, the Morgan Motor Works, English Braids and specialist UPVC manufacturers in Upton-upon-Severn.

Some quarrying and extraction of gravel takes place in the corridor of the main A38 Tewkesbury to Worcester road at Ripple and Severn Stoke, and in the Grimley / Holt area adjoining the A443.

2.7 **PROTECTED LOCATIONS**

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Large areas of the District are specially designated areas highlighting the strategic importance of the Malvern Hills District in terms of its natural assets. The Malvern Hills themselves, stretching for nine miles, are designated as an Area of Outstanding Natural Beauty (A.O.N.B). A large area to the east of Tenbury Wells is designated as an Area of Great Landscape Value. In addition the District also has:

- Forty nine sites of Special Scientific Interest (SSSI's)
- Twenty one conservation areas
- Two hundred and one key wildlife sites
- 3,000 acres (1,200 hectares) of common land; Malvern Hills Conservators being responsible for the largest proportion of this.

2.8 **KEY PROPERTY TYPES**

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Malvern Hills District also has a rich heritage within its built environment retaining much of its Victorian architecture and townscape. There are 1,835 listed buildings, 27 ancient monuments and many parks and formal gardens.

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2.9 **KEY WATER RESOURCE / PROTECTION ISSUES**

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Severn Trent Water supplies the majority of the Districts drinking water and is the mains sewerage undertaker.

The District Council regularly inspects the quality of around 350 private drinking water supplies in the area. Most of the private supplies are of well or spring water although some are borehole abstractions from the underlying aquifer. Malvern and Tenbury Wells are historic spa towns and this continues to be an important aspect in the attraction of visitors to the area. There are several spring water collection points around the Malvern area which are periodically tested for their suitability for drinking water. One spring water feature in Great Malvern is provided with a small treatment system (sand filtration and UV tube) to provide greater confidence in its reliability for drinking purposes. The Spa Water Association is actively seeking to re-open spring water features in the Malvern area in the promotion of the area for tourism.

2.10 **KNOWN INFORMATION ON CONTAMINATION**

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The Council already has some information on land contamination in the District this is divided into two main categories;

- i) Information on closed landfill sites. This is restricted to that part of the District remaining from the old Malvern Hills District area pre-April 1998. No information was provided by the old Leominster D.C. on the Tenbury Wells area.
- ii) Information gathered on brownfield sites and from closed industrial sites as a study on potential sites for re-development for housing or employment use. Again there is a marked shortage of information on land administered by the former Leominster D.C.

Where planning applications are considered involving an area of land where the past use may have resulted in contamination the Council will request that a site investigation is undertaken by the attachment of a condition. Planning records will form a continuing valuable complementary database during the investigation and assessment process.

2.11 **CURRENT AND PAST INDUSTRIAL HISTORY**

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The Malvern Hills District does not have a long and varied industrial history. Malvern and Tenbury Wells developed from Victorian times as spa towns and visitor centres with the arrival of the railway. Upton's history derives from its establishment as a severnside port.

Traditional industries in the District include:-

- Quarrying for sand, gravel, stone and marl
- Brick manufacture
- Tannery and animal by-products and abattoir processes
- Ministry of Defence land use including land used by visiting forces and military hospitals
- Electric light manufacture

- Aircraft manufacture
- Motor car manufacture
- Timber processing and treatment
- Gas production
- Defence Research specialist electrical and small component development

Many of the previous industrial uses have now ceased including a waste incineration plant and small factory businesses. Large areas of land in the Malvern area are either still owned or were previously owned by the Ministry of Defence. It is likely that any M.O.D. land designated as contaminated will be dealt with by the Environment Agency as a 'special site'.

Malvern's largest current employer is the Defence Evaluation Research Agency.

As most of the Districts industrial land use is restricted to relatively small and easily identified areas and was relatively small scale it is not anticipated that there will be many designated contaminated sites.

It is recognised that the designation of buildings or sites as having an industrial heritage does not automatically indicate an actual or potential designation as being contaminated or polluted.

2.12 **BROAD GEOLOGICAL CHARACTERISTICS**

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Much of the area to the North of the District consists of the Old Red Sandstones of the Downton and Ludlow series of the Silurian period. These strata include Red Marks and Sandstones, Lower Ludlow strata and Temeside Bed's

Coal bearing strata of the Upper Carboniferous period are found around the Mamble area. These consist of Highley Beds of grey clays, shales, sandstones, coals and spirorbis limestone together with Wenlock Limestone.

Moving further south deposits to the east of the hills are of the Triassic and Jurassic period in the area referred to as the Worcester Basin. These strata consist of; Limestone, Siltstone, Lower lies clay formations with Limestone and river terrace drift deposits.

The hills themselves are described as Pre-Cambrian "Malvern Complex." With solid igneous microdiorite. To the eastern slopes are sandstone deposits and on the westerly slopes fractured by the Colwall fault are deposits of the Palaeozoic period including Raglam mudstone, Upper Ludlow strata and Malvern quartzite.

The valleys of the rivers Teme and Severn are marked by a wide band of Quaternary Alluvium drift.

The southern area of the Malvern Hills District beyond Upton and bordering Tewkesbury and the Forest of Dean District is characterised largely by strata of the Mercia Mudstone and Sherwood Sandstone groups.

Outcrops of Arden sandstone occur in the Eldersfield and Pendock parishes.

Copyright permission will be sought from British Geological Survey to use their maps as the basis for producing a simplified plan outlining the broad geological characteristics of the District. Subject to this permission being granted this plan will be reproduced in the finalised version of this strategy.

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2.13 **BROAD HYDROGEOLOGICAL CHARACTERISTICS**

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The Northern boundary of the Malvern Hills District is defined in part by the River Teme, which then passes through the parishes around Tenbury Wells and then the south through Knightwick and Rushwick. The Rivers Teme and Severn meet at the southern edge of Worcester where the Severn continues through the Malvern Hills District, through the town of Upton-Upon-Severn passing across the southern boundary and into Tewkesbury.

The two major rivers are fed by the Kyre Brook, River Reg, Dick Brook, Laughern Brook, Grimley Brook, Sapey Brook and Leigh Brook in the north of the District. To the south, the main feeder water-courses are the Longdon Brook, Kempsey Brook, Madresfield Brook and Whiteacres Brook.

Sampling information provided by the Environment Agency of river water quality indicates that both the Teme and Severn are predominately categorised as "Very Good" or "Good." The protection of these water courses and associated and tributaries from pollution is therefore a high priority and major objective of this strategy.

Further information is required concerning groundwater vulnerability and aquifer status. It is anticipated that this will be acquired from British geological Survey data sets which will be provided in digital format to be overlaid on the digital mapping system. The aim is to provide this detail in the finalised version of the strategy, which will be sent to DETR.

2.14 **AREAS OF NATURALLY METAL ENRICHED SOILS**

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A national soil survey has been undertaken by The Soil Survey and Land Research Centre at Cranfield University. The Herefordshire and Worcestershire Contaminated Land Study Group are to approach the University with a view to purchasing database relating to the two counties. It is hoped that by approaching the research centre in this way, data will be available in a more cost effective package. Information concerning any areas of naturally mineral enriched soils will be included in the finalised strategy to be released to the DETR in June 2001.

2.15 **ACTION ALREADY TAKEN TO DEAL WITH LAND CONTAMINATION**

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There are no sites within the District which are currently undergoing remediation work following designation as contaminated land sites.

2.15.1 **CLOSED LANDFILL SITES**

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There are currently 23 known former landfill sites. (List of sites shown at Appendix II).

The largest sites are monitored for gas migration, and include:-

- i) Belmont Quarry, Cowleigh Bank, Malvern
- ii) Dukes Meadow, Pound Bank, Malvern
- iii) Byrons Wood, Powick

Sites i) & ii) are monitored by MHDC staff in association with a specialist contractor. Site iii) is monitored by Lazer Civil Engineering who have offices close to the site.

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2.15.2 **SITES RE-DEVELOPED UNDER PLANNING PERMISSIONS**

A small number of sites with a known history of previous contaminative uses have been remediated by the use of conditions attached at the stage of consideration of the planning application.