Environmental Character Area Profile for the Minerals Local Plan: 22. Severn Meadows Corridor

1. Introduction

- 1.1. Minerals development usually takes place on previously undeveloped land and can therefore result in permanent change to the natural environment and green spaces in Worcestershire. The impacts of both the working and the restoration of mineral sites need to be considered in detail in the development of the Worcestershire Minerals Local Plan (the MLP).
- 1.2. The Council will take a 'green infrastructure' (GI) approach to considering these impacts. The GI approach is a different way of thinking about the green spaces in Worcestershire. It moves beyond solely considering the environmental benefits of green spaces and integrates the consideration of economic, health and social benefits in the planning and management of green spaces. Rather than considering each green space in isolation it looks at the ways in which individual sites and corridors of green space collectively form the distinctive character of Worcestershire that attracts both visitors and business to the County.
- 1.3. The components of GI include biodiversity, landscape, historic environment, access and recreation and water (also know as blue infrastructure). The GI approach requires thinking about the environment as an integrated system of stepping stones or nodes in a wider network¹.

Green infrastructure and mineral workings and restoration

- 1.4. There is significant potential for mineral workings to destroy existing networks of green infrastructure if the nature and character of these networks is not taken into account. However there is also significant potential to contribute positively to green infrastructure through the restoration of mineral workings.
- 1.5. The GI approach extends beyond thinking about designated sites of biodiversity or historic interest. This means that the impact of a mineral working on the wider environment and the integrated system of stepping stones or nodes in a wider network² will need to be considered.

Environmental Character Areas³ and the Minerals Local Plan

1.6. The Worcestershire Green Infrastructure Partnership has undertaken an analysis of the landscape character, biodiversity and the historic environment of Worcestershire to identify 30 distinct GI Environmental Character Areas (ECAs). Details about how these were developed is set out in *Planning for a Multifunctional Green Infrastructure Framework in*

¹ Green Infrastructure Guidance – Natural England.

² Green Infrastructure Guidance – Natural England.

³ Worcestershire County Council (July 2012) *Planning for a Multifunctional Green Infrastructure Framework in Worcestershire: Green Infrastructure Framework 2*

Worcestershire: Green Infrastructure Framework 2 (2012) available at www.worcestershire.gov.uk/GI

- 1.7. These underlie the distinctive character of Worcestershire and it is the Council's intention that the unique characteristics of each area will drive the restoration strategy for the Minerals Local Plan.
- 1.8. This is one of 30 profile documents which set out the characteristics and priorities for the each ECA. It sets out the mineral resources in the ECA and the GI priorities identified by the Worcestershire GI Partnership. These priorities are structured around biodiversity, historic environment, landscape character, water environment (also known as blue infrastructure) access and recreation and transport. The document is also supplemented by other locally relevant information as appropriate.
- 1.9. This information will be used to develop the spatial strategy and restoration priorities for each ECA.
- 1.10. Profiles for each of the following ECAs are available on our website www.worcestershire.gov.uk/mineralsbackground:
- 1.11. The Environmental Character Areas are:
 - 1. Teme Valley & Wyre Forest
 - 2. Severn Valley North
 - 3. North Worcestershire Hills
 - 4. Forest of Feckenham & Feckenham Wetlands
 - 5. Lenches Ridge
 - 6. Bredon
 - 7. Severn Valley South
 - 8. Bushley
 - 9. Malvern Chase and Commons
 - 10. Hagley Hinterland
 - 11. Hollywood & Wythall
 - 12. Bromsgrove Redditch Corridor
 - 13. Mid-Worcestershire Corridor
 - 14. East Wychavon

- 15. Bow Brook South
- 16. Evesham Valley
- 17. Broadway & Cotswold Corridor
- 18. Carrant Brook Corridor
- 19. Longdon Hinterland
- 20. Kempsey Plain
- 21. River Teme Corridor
- 22. Severn Meadows Corridor
- 23. Eardiston
- 24. Bewdley Fringe
- 25. Birchen Coppice
- 26. Birlingham
- 27. Crowle
- 28. Defford
- 29. Bickmarsh
- 30. Long Marston

These are illustrated on Figure 1. Environmental Character Areas.





2. Characteristics and priorities of the Severn meadows corridor ECA 22

Figure 2. Environmental Character Area 22. Severn Meadows Corridor: Mineral Resources



Mineral Resources

Aggregates

2.1. Details about the aggregate resources in this ECA are given in the background report "Analysis of Mineral Resources in Worcestershire" available on <u>www.worcestershire.gov.uk/mineralsbackground</u>. The following is therefore only a simple summary.

Sand and gravel

2.2. ECA 22 contains 1,st, 2nd, 3rd, 4th and 6th river terrace deposits along the river Severn corridor for much of this ECA. The resource has been worked more or less continuously somewhere within it for at least the last 60 years, notably between Holt and Grimley.

Hard rock

2.3. There is no evidence that strata suitable for aggregate production from crushed rock exists in this ECA. There are however exposures in

Shrawley wood and Areley wood which suggest that some kind of stone resource exists.

Industrial minerals

Clay

2.4. There is no evidence that significant clay resources exist in this ECA.

Silica sand

2.5. There is no evidence that strata suitable for silica sand production exists in this ECA.

Brine

2.6. There is no evidence of brine working in this area or that Halite deposits might exist at depth.

Future Growth

- 2.7. The key driver for mineral extraction is to provide the raw materials required for the economy to function properly and for homes and infrastructure to be built. Minerals are unevenly distributed. Some of the minerals that we need are not found in Worcestershire and will need to be imported from outside the County. Many minerals are expensive to transport, particularly aggregates as they are a relatively low value and bulky material, and they are likely to be used close to their source, meaning that some local mineral extraction will be needed to support local growth in housing and the associated infrastructure that is required, or to provide raw materials for local industry. On average, about 80 per cent of mineral products are used within 30 miles of the quarry.
- 2.8. This ECA is a largely rural area primarily within Malvern Hills District but crosses into Wychavon and Wyre Forest Districts as well as clipping the edge of Worcester City. Malvern Hills District anticipates the development of 2,592 homes and 29.76 ha of employment land, whilst Wychavon anticipates 5,807 homes, 18.5 ha of employment land and a new neighbourhood centre, Wyre Forest anticipates 2,946 homes, 35.17 ha of employment land and 17,000 sq m of retail space and Worcester City anticipates the development of 6,525 homes, 74 ha of employment land and 10,000 sq m of retail space in the next 14-18 years⁴.
- 2.9. The ECA does not incorporate any settlements proposed for development in the South Worcestershire Development Plan proposed submission document⁵ or Wyre Forest Site Allocations and Policies Local Plan

⁴ Information gathered by Worcestershire County Council in early 2013. This gives a good indication of the likely levels of development which can be expected, but for the latest figures please refer to the relevant City, District or Borough Council.

⁵ Category 1, 2 and 3 villages are fourth in the five tier settlement hierarchy set out in the South Worcestershire Development Plan proposed submission document. Their role is predominately aimed at meeting locally identified housing and employment needs. They are therefore suited to accommodate market and affordable housing needs alongside limited employment for local needs. The scale of allocated development is significantly less than that

submission document. However, the ECA does incorporate the Worcester urban expansion areas of Temple Laughern and Grove Farm.

2.10. These and other areas beyond the boundary of the ECA could create demand for minerals in this Environmental Character Area. Particularly the market town of Stourport on Severn at the northern end of the ECA and Worcester City at the southern end, which is anticipated to experience significant development over the life of the Minerals Local Plan.

Green Infrastructure priorities⁶

- 2.11. All Environmental Character Areas (ECA's) have been placed into one of three categories based on their overall score for Green Infrastructure. These are:
 - 1. Protect and enhance
 - 2. Protect and restore
 - 3. Restore and create
- 2.12. The category is based an assessment of the ECAs landscape character, biodiversity and the historic environment characteristics. These characteristics were each attributed a score, with biodiversity being given a greater weighting than landscape and the historic environment, each of which were given equal but lower weightings.
- 2.13. The strategic GI approach for the Severn meadows corridor ECA is to protect and restore. The overarching principle identified by the GI partnership is to protect and enhance multi-functional Severn river corridor.

Landscape and biodiversity

- 2.14. This area is defined by the River Severn and its late glacial outwash which has created a series of river terrace deposits. These support areas of botanical interest which have been fragmented by arable land variously classified as Principle Settled Farmlands and Settled Farmland on River Terraces within the Worcestershire Landscape Character Assessment but are, in essence, associated with the rolling topography and fine sandy and fertile soils which have supported medium scale, open, sparsely treed landscapes of dispersed settlement.
- 2.15. North of Holt Heath, the land has been classified as Riverside Meadows, an unsettled Landscape Type where the land use is inherently pastoral with networks of unimproved meadows. These flat, riverine landscapes are divided into medium-to-large, regularly shaped fields divided by hedges and drainage ditches. Woodland is not typical but lines of trees, often pollarded willows, are very prominent along the banks of the river and ditches.

for the urban areas and is aimed at helping to address housing needs and support local services.

⁶ Worcestershire County Council (July 2012) *Planning for a Multifunctional Green Infrastructure Framework in Worcestershire: Green Infrastructure Framework 2*

- 2.16. The boundary of the ECA skirts the edge of several discrete blocks of ancient woodland such as Shrawley Wood SSSI and above the river there is a good network of BAP habitats on the river scarps which are often associated with the fluvial deposits. These include examples such as Grimley Brick Pits SSSI, and the Boreley Bank and Winnal Coppice, Bournes Dingle and Thorngrove Lake Local Wildlife Sites. These are examples of the BAP habitats prioritised within the Severn and Avon Vales Biodiversity Delivery Area which both epitomises and compliments this Environmental Character Area.
- 2.17. Extensive river terrace deposits make this ECA an area of productive farmland with arable cropping and orchards comprising the majority of the land use. However, considerable botanical interest still remains within unimproved or semi-improved grassland. Biodiversity Opportunities and priority habitats within this ECA are detailed in the Severn and Avon Vales Biodiversity Delivery Area statement published by the Worcestershire Biodiversity Partnership (available at www.worcestershire.gov.uk/biodiversity). Key priority habitats are lowland meadow and lowland wet grassland and the restoration of these habitats from former arable land should be encouraged in the river floodplain. Opportunities should also be taken where possible to enhance or restore areas of fen, marsh, wet woodland and reedbed.

GI Priorities:

- 2.18. The landscape and biodiversity priorities identified for the Severn Meadows Corridor ECA are⁷:
 - The northern part is composed entirely of the unsettled Riverside Meadows Landscape Type where opportunities should be sought to retain pastoral land use and management regimens that support natural river and flood plain function.
 - Protect and enhance the hedgerow field boundaries in a planned enclosure pattern of medium-to-large fields. Seek opportunities to address density and age structure in linear tree belts along hedgerows, ditches and watercourses.
 - Priority to protect and enhance existing site and biodiversity interest. Implementation and delivery to be directed to existing site management and buffering as a first principle. Linking of networks to be applied where practicable. Restore functional stream corridors, and re-link flood plain corridors in particular wet and floodplain grassland, reedbed and wet woodland.

Geodiversity

2.19. There are no geological SSSIs or local geological sites in this ECA.

Historic Environment

2.20. This character area is dominated by sand and gravel deposits, many of which have been exploited heavily during the twentieth century. These terraces have revealed a diverse and extensive settled landscape from the

⁷ Worcestershire County Council (July 2012) *Planning for a Multifunctional Green Infrastructure Framework in Worcestershire: Green Infrastructure Framework 2*

Neolithic through to the post medieval period, with notable large prehistoric and Romano British farmsteads and field systems, as well as prehistoric funerary complexes. The meanders of the river are likely to have left a series of palaeochannel's sealed beneath later alluvial deposits.

2.21. The strategic importance of the river crossing at Holt is highlighted by the remnants of the medieval castle and the WW2 defensive monuments.

GI Priorities:

- 2.22. The historic environment priorities identified for the Severn Meadow corridor ECA are⁸:
 - Explore opportunities to protect below ground archaeology associated with extensive prehistoric, Romano-British and medieval settlement adjacent to and east of the A443.
 - Protect and restore historic hedgerows.
 - Enhance and create linkages with wider historic environment green networks (hedgerows, woodland, parkland and river meadows) and protect the setting of the Hallow parkland landscape.
 - Protect historic water features and buffer key sites, such as moats and fishponds.
 - Protect features and watercourses associated with the extensive historic water meadows east and south-east of Grimley.

Blue Infrastructure

- 2.23. This ECA covers parts of the Wyre Forest District Core Strategy and the SWLP; it follows the flood plain of the Severn from Stourport to Worcester. Important tributaries, the Dick Brook, Grimley brook and river Salwarpe and a small number of un-named watercourses join the Severn within this area. The Laughern Brook joins the Severn south of this ECA but is important in this ECA north-west of Worcester.
- 2.24. Flood risk is a significant risk in Kidderminster, Stourport and Bewdley. Historically, the key source of flooding within Kidderminster was from the Stour, particularly where it combines with flooding from the canal and in Stourport and Bewdley from the Severn. All of these towns are north of ECA 22 but might be adversely affected by developments within it. However, within the Wyre Forest part of this ECA, the flooding that occurred as a result of the June and July 2007 events was attributable to drainage problems and flash flooding from the smaller tributaries. In the Dick Brook this was exacerbated by the risk of blockages due to the highly vegetated valley. The storms of 2007 resulted in the formation of a series of "dams" caused by channel blockage, which caused water surges and subsequent flooding. Very heavy rainfall within the District has the potential to result in large numbers of individual local floods. Surface water run-off management in the whole of Wyre Forest District therefore remains an important issue for all developments.

⁸ Worcestershire County Council (July 2012) *Planning for a Multifunctional Green Infrastructure Framework in Worcestershire: Green Infrastructure Framework 2*

- 2.25. In the SWLP part of the ECA the principal flood risks are to Droitwich are from the River Salwarpe, the Droitwich canals, small watercourses in the rural areas and surface water in many locations. A broad scale surface water sewerage model was developed as part of the original Level 2 SFRA for Droitwich. This model confirmed that surface water discharge in some of the areas of the town will exacerbate flooding from the River Salwarpe. The Droitwich Canal interacts with the River Salwarpe in several places and also needs to be considered as part of the flooding system in ECA 22.
- 2.26. In the Malvern Hills part of this ECA the main cause of flooding is from local watercourses and surface water sewers. Rapid response catchments are of particular concern, and as many of the watercourses at risk are less than 3km2 in area there are no flood risk maps covering them. Malvern Hills council has specifically stated that it considers that the area west of Worcester is not defended against flooding to a satisfactory standard.
- 2.27. For the city of Worcester the main causes of flooding in this ECA are from the River Severn, Laughern Brook and localised surface water flooding from a possible combination of fluvial and surface and sewer floods. Flash flooding from rainstorms at other locations is also a matter of concern within the district. In the North West Worcester the primary risk is from the Laughern Brook and through Hallow from overtopping of the watercourse channel. There are several ponds north west of Worcester that could pose another source of flooding. New development within this area will need to ensure that ponds and their overflow systems are adequately maintained.
- 2.28. Groundwater flooding: The SFRA for Wyre Forest reports that the Environment Agency have confirmed that they are not aware of any specific incidences of groundwater flooding within Wyre Forest District. Groundwater flooding is not considered to be a major issue in the South Local Plan area.
- 2.29. The River Severn Catchment Flood Management Plan makes this a Policy 4 area, where it will "Take further action to sustain the current level of flood risk into the future (responding to the potential increases in risk from urban development, land use change and climate change.

Water supply

2.30. Most supplies in Wyre Forest District are from the Trimpley reservoir and River Severn. The Sherwood Sandstone aquifer beneath the central part of the district provides an additional source of supply though it only serves a few areas in the district itself, notably Chaddesly Corbett, Deansford Lane in Blakedown and Green Street in Kidderminster. Both the river and the aquifer are susceptible to over abstraction and pollution.

Water supply

2.31. Groundwater status is good throughout the area.

Water Quality

2.32. In the Wyre Forest part of the ECA the river Stour and Blakedown Brook are most at risk of failing WFD quality standards. The Stour is already

identified as eutropic. No water dependent SSSIs are located along the River Severn Corridor in WFD.

The River Salwarpe, Hadley Brook and Elmbridge Brook all have a moderate ecological quality status as they flow through or near to Droitwich Spa. The River Salwarpe, Elmbridge Brook and Hadley Brook do not achieve the good status required under the WFD due to unacceptable levels of phosphorus. Phosphorus levels are particularly bad in the River Salwarpe which is why it is now a designated sensitive area to eutrophication. The Rivers Severn and Salwarpe have passed the chemical quality assessment.

- 2.33. The Grimley Brick Pits SSSI and Northwick Marsh are thought to be in hydraulic continuity with the River Severn during elevated flows and must therefore be considered at risk from developments that could adversely affect the Severn.
- 2.34. The current ecological quality for the majority of rivers within Worcester is moderate, indicating that they have been moderately disturbed by anthropological activity and are at present below the recommended "good" status or "good potential" under the WFD. The River Severn has poor quality due to unacceptable levels of phosphorus.
- 2.35. The whole of this ECA is categorised as a water body with agricultural/rural diffuse pollution pressure and with water company point source pollution pressure.

GI Priorities:

- 2.36. The blue infrastructure priorities identified for the Severn Meadows corridor ECA are⁹:
 - Manage areas of low, moderate or high flood risk and take action where necessary to keep pace with climate change.
 - Explore opportunities to restore sustainable natural storage of floodwater on undeveloped floodplains. Make more space for rivers through urban areas via 'blue corridors' (i.e. Restoring access for floodwater onto key strips of floodplain by limiting redevelopment to flood-compatible land-uses e.g. parkland). Seek ecological improvements.

Access, informal recreation and tourism

2.37. This ECA is predominantly in the Malvern Hills District, which has 4,212ha of accessible natural greenspace. This is 7.3% of the total area of the District. There is a good spread of different sizes of accessible natural greenspace assets across the District and the presence of the Malvern Hills AONB along the western edge of the District means that access to larger assets is good with 84% of households in the Malvern Hills being within 10km of 500ha+ sites and 66% of households being within 5km of 100ha+ sites.

⁹ Worcestershire County Council (July 2012) *Planning for a Multifunctional Green Infrastructure Framework in Worcestershire: Green Infrastructure Framework 2*

- 2.38. The District has three sub-regional GI assets:
 - The Malvern Hills
 - Shrawley Wood
 - Kempsey Common

Malvern Hills district also enjoys a dense rights of way network, linking a network of small sites and commons which fall outside of the regional assets but combined together offer significant recreational opportunity.

- 2.39. There are no sub-regional recreation assets in the Severn Meadows corridor ECA, however the River Severn itself forms a significant GI asset. Shrawley Wood also runs adjacent to this ECA. Shrawley Wood has been identified as a site that is at or near capacity.
- 2.40. Tourist attractions in this ECA include Top Barn Activity Centre at a former mineral working near Grimley.

GI Priorities:

- 2.41. The access and recreation priorities identified for the Severn meadows corridor ECA are¹⁰:
 - Consider the proximity to and ability to integrate with the rights of way network, recreational way-marked routes and the cycle network;
 - Accommodate associated facilities necessary for the use and enjoyment of the site in a manner that is appropriate and able to integrate with the landscape character, wildlife and cultural interests.
 - Act as a greenway from town into the countryside and utilise existing canal, former railway lines, river corridors and wherever possible link with public transport routes.
 - Adopt minimum quality standards, (commensurate with its location and scale) that sites and routes should be expected to achieve will be those from the Green Flag Award Programme, and the Country Parks Accreditation Scheme, as appropriate.

Transport

Road

- 2.42. The A443 runs through much of the southern half of the ECA connecting Worcester to Holt Fleet where the road meets the A4133 from Droitwich Spa in the east to Tenbury Wells in the west. The A44 crosses the southern tip of the ECA to the west of Worcester. Other roads in this Environmental Character Area are more minor.
- 2.43. The Worcestershire Advisory Lorry Route Map does not show any low bridges which would restrict the movement of vehicles over 16'3" (4.95m) on the lorry route network. Local roads may have further restrictions and will need further assessment if they are to be used for accessing mineral resources.

¹⁰ Worcestershire County Council (July 2012) *Planning for a Multifunctional Green Infrastructure Framework in Worcestershire: Green Infrastructure Framework 2*

Rail

2.44. There are no network railways in this Environmental Character Area.

Water

2.45. The River Severn runs through or close to the eastern boundary of the entire length of the Environmental Character Area and is navigable up to Stourport on Severn.

GI Priorities:

- 2.46. The GI transport priorities identified for the Severn meadows corridor ECA are¹¹:
 - Opportunities should be sought to protect, enhance and create green infrastructure that promotes sustainable movement by walking and cycling, reducing the need to travel by car by providing pleasant environments that promote sustainable transport as a means to minimise the impact of transport on the natural environment and mitigate the impacts of climate change.

LTP Priorities:

- 2.47. The LTP 3 transport priorities identified for the Severn Meadows Corridor ECA are:
 - A443/A4133 Tenbury Wells-Worcester (M5) interurban corridor maintenance and improvement scheme - a programme of improvements to transport infrastructure on this route, which is likely to be progressed in the medium term and will include junction enhancements, street furniture decluttering, replacement and enhancement.
 - Worcester Crown East (West of Worcester) Park and Ride site - development of a Park and Ride site at Crown East to the west of Worcester City, likely to be progressed in the short term, to provide alternative access to Worcester for residents of the rural areas to the west of Worcester City, as well as to ensure that Bromyard Road does not become congested as a result of increased local development. Crown East is beyond the boundary of the ECA but depending on the precise location chosen could impact on the ECA.
 - Worcester north west link road scheme this scheme would involve the development of a new link road to connect the A4440 (Southern Link Road)/A44 at Crown East with the A449 at Claines, thereby completing the ring road around Worcester. However, significant costs and risks mean this is only likely to progressed in the long term.

Agriculture/Forestry

2.48. The agricultural land use in this ECA is dominated by mixed farming and cash crops. Agricultural land quality varies across the area, with a very small amount of the highest grade 1 land, the majority of the ECA classified as grade 2 or 3 land, with some lower quality grade 4 land and

¹¹ Worcestershire County Council (July 2012) *Planning for a Multifunctional Green Infrastructure Framework in Worcestershire: Green Infrastructure Framework 2*

some urban land where the ECA meets Worcester and Stourport, as shown in Figure 3.



Figure 3. Agricultural land quality

2.49. The forestry commission's woodland opportunity maps show that some areas along the western boundary and in the southern tip of this ECA are listed as priority 1 for woodland creation which could benefit landscape character, biodiversity, cultural heritage and/or public access (Figure 4). They also show that small areas in the west and south of the ECA are part of an ancient woodland landscape extending to the west of the ECA but are not prioritised for woodland restoration (Figure 5).

Figure 4. Woodland creation for landscape, biodiversity, heritage and public access



Figure 5. Ancient woodland landscape and restoration



Climate Change

- 2.50. Some effects of climate change will be similar across the whole county and many of the issues which can be addressed are likely to be common to all ECAs, such as:
 - Improving air quality
 - Providing flood risk management solutions
 - Preventing water and soils pollution as a result of climate change related extreme weather conditions
 - Promoting energy efficient and low carbon solutions
 - Contributing to renewable energy production

Opportunities and issues

- 2.51. Green Infrastructure features such as buffering of watercourses provide a way of minimising fluvial flooding. Planned landscaping incorporating flood defences could provide both and short term benefits and sustainable drainage schemes (SUDS) are a mechanism for managing both fluvial and pluvial flood risk.
- 2.52. Agricultural and horticultural businesses could face damaging water shortages in the coming decades as a result of climate change. In many parts of Worcestershire, water resources are under severe pressure. The majority of catchments in which horticultural production is concentrated have been defined by the Environment Agency as being either overlicensed and/or over-abstracted. Well executed water storage facilities could not only provide water supply for the business in the dry periods but a wide range of green infrastructure benefits such as biodiversity or landscape and opportunities for increased physical activity and exposure to nature.

Socio-economic considerations

- 2.53. The analysis of the socio-economic situation in Worcestershire in this strategy considers the economy and health & well-being at a high level. It is not intended to draw a full picture of the economy or health and well-being in the county, instead it focuses only on the indicators which are of most relevance to green infrastructure:
 - **Economy**: unemployment, household income and deprivation levels.
 - **Health and well-being**: health deprivation, heart diseases, obesity, mental health problems and respiratory conditions.
 - Access to sites for informal recreation: considers links between informal recreation opportunities and mental and physical wellbeing.
- 2.54. There is thought to be a link between green infrastructure and some aspects of health. The issues of obesity, respiratory conditions, mental health, heart disease and health deprivation have been considered in this context.

- 2.55. 26% (120,000) of the Worcestershire's adult population is obese and another 40% is overweight. The adult obesity levels in Worcestershire are higher than the national average. The level of childhood obesity is around the national average, at 10% of five year olds and 18% of eleven year olds. In terms of land cover, most of the Worcestershire area has some problems with obesity.
- 2.56. Obesity and respiratory problems in this county generally follow the same geographical pattern. Mental health problems, by contrast, tend to be found in the and around major settlements. Although mortality rates from cardiovascular diseases are significantly lower than the national rate, patterns of heart diseases are more dispersed than the other health indicators assessed and poor performance is found across the county. Contrary to other health indicators, heart diseases are least prevalent in some of the urban areas.