

SECTION 1 DESCRIPTION OF CURRENT SITUATION IN THE YORKSHIRE AND THE HUMBER REGION

1.1 GEOGRAPHIC AREA AND PHYSICAL CONTENT

1.1.1 Topography, Geology and Relief

1. The Yorkshire and Humber Region is one of considerable variation, ranging from the peaks of the Pennine Hills in the west, down to the North Sea to the east.

2. West of the A1 corridor, the land is characterised by the carboniferous limestone and millstone grit of the Pennines chain, and rises to over 700m above sea level. In the north of the region are the Pennine Dales, with a series of river valleys flowing eastwards dissecting the broad plateau; to the south this upland continues, merging into the hills of the Peak District.

3. To the north east, the land rises to form the upland landscape of the North York Moors, including sandstone, mudstone and limestone deposits, over 400m at their highest point. To the south east the extensive chalk deposits of the Yorkshire Wolds, a prominent plateau almost 300m above sea level, with steep sided dry valleys, extend eastwards with spectacular cliffs where the outcrop meets the coast at Flamborough Head. South of the Humber, the northern tip of the extensive chalk deposits of Lincolnshire Wolds enters the region.

4. In the south of the region, immediately east of the Pennine Hills, lie the shallow coal measure deposits of the Yorkshire coalfield, the eastern boundary of which is marked by the Magnesian Limestone ridge which bisects the region from north to south along the A1 corridor.

5. The large central low lying area of the Vale of York constitutes the floodplain of many of the region's major rivers and is underlain by glacial deposits of sandstone and mudstone.

1.1.2 Climate

6. The Pennine uplands and foothills in the west of the region and the North York Moors in the north east are characterised by severe conditions, especially in winter. The high rainfall in the Pennines decreases rapidly eastwards and the North York Moors are generally drier. The growing season is approximately 190-200 days (Figure 1.1), which limits agricultural production to extensive livestock systems.

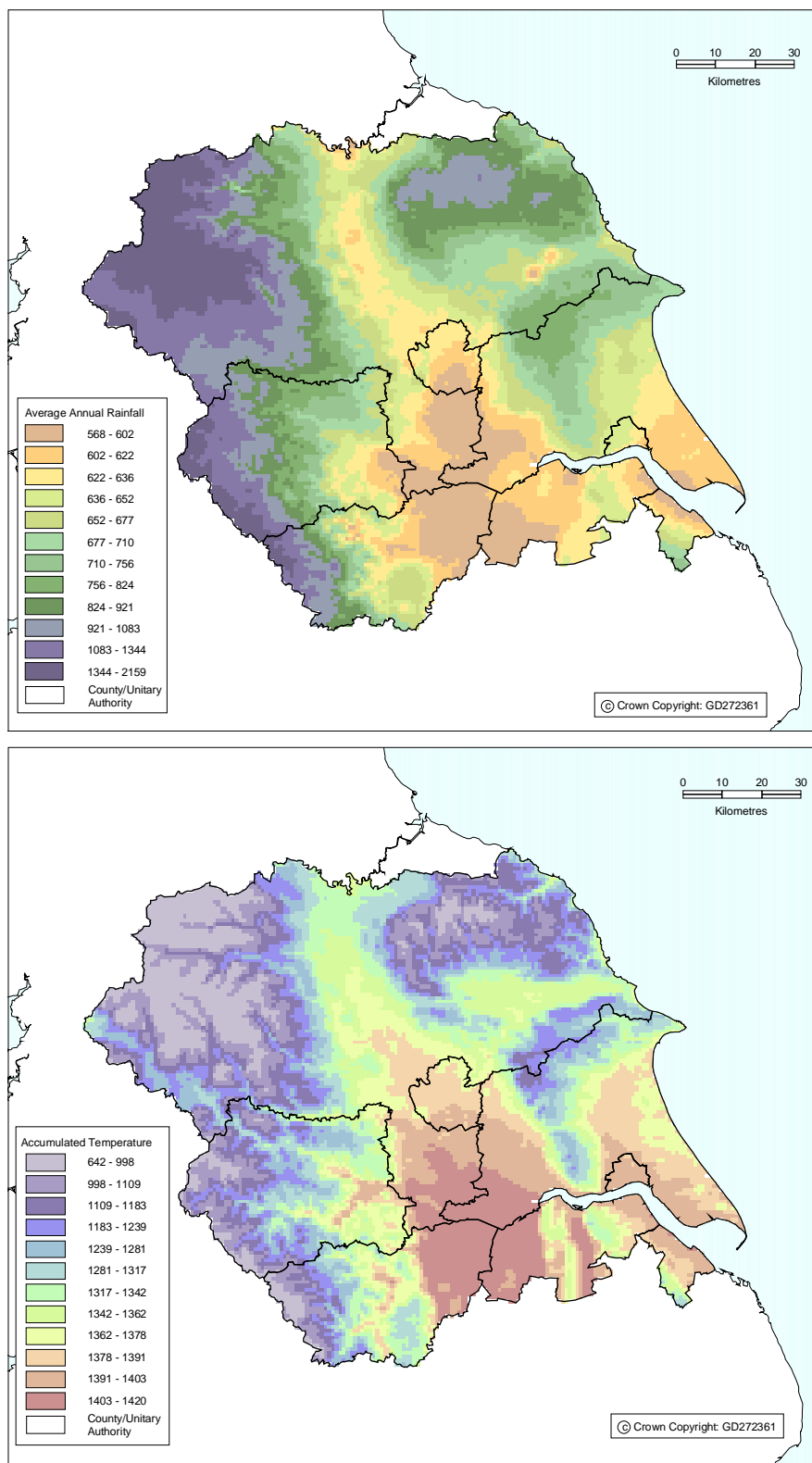


Figure 1.1: Accumulated Temperature above 0 degrees C (January to June) 1941-1970. Average Annual Rainfall (mm) 1941-1970 (Source: The Meteorological Office)

7. The lowlands including the Vale of York, Vale of Pickering and the area around the Humber estuary, are relatively dry, but inclined to be exposed to cold winds in spring and early summer, increasing erosion risk on light soils. Drainage of cold air from surrounding uplands gives rise to prolonged and severe frosts and fog in the Vale of York. The growing season inland is generally between 250 and 260 days, while around the Humber estuary it is about 275 days. These conditions create few limitations for most agricultural crops.

8. The Yorkshire Wolds are exposed to easterly winds giving rise to higher rainfall than in the lowlands to the west. The growing season tends to be shorter than surrounding lowlands, being around 230 days in the high Wolds. This provides few limitations to most arable crops.

1.1.3. Land Quality and Use

9. Agricultural land represents 76% (1,095,544 ha) of the total regional area (1,542,951 ha). MAFF has an agricultural land classification system with 5 separate grades depending on physical limitations. Grade 1 is the best quality and Grade 5 the worst (See Annex IV of the National Plan for a detailed definition of ALC grading system).

10. Excellent quality agricultural land (Grade 1) accounts for 1.2% of the agricultural land in the region (Figure 1.2). It is most extensive on the lighter warp soils found alongside the lower reaches of the Rivers Ouse and Trent but also occurs south east of Barton-on-Humber and on some deep sandy loam soils around Ripon. This land has few, if any limitations and is capable of growing high yields of a wide range of arable and horticultural crops.

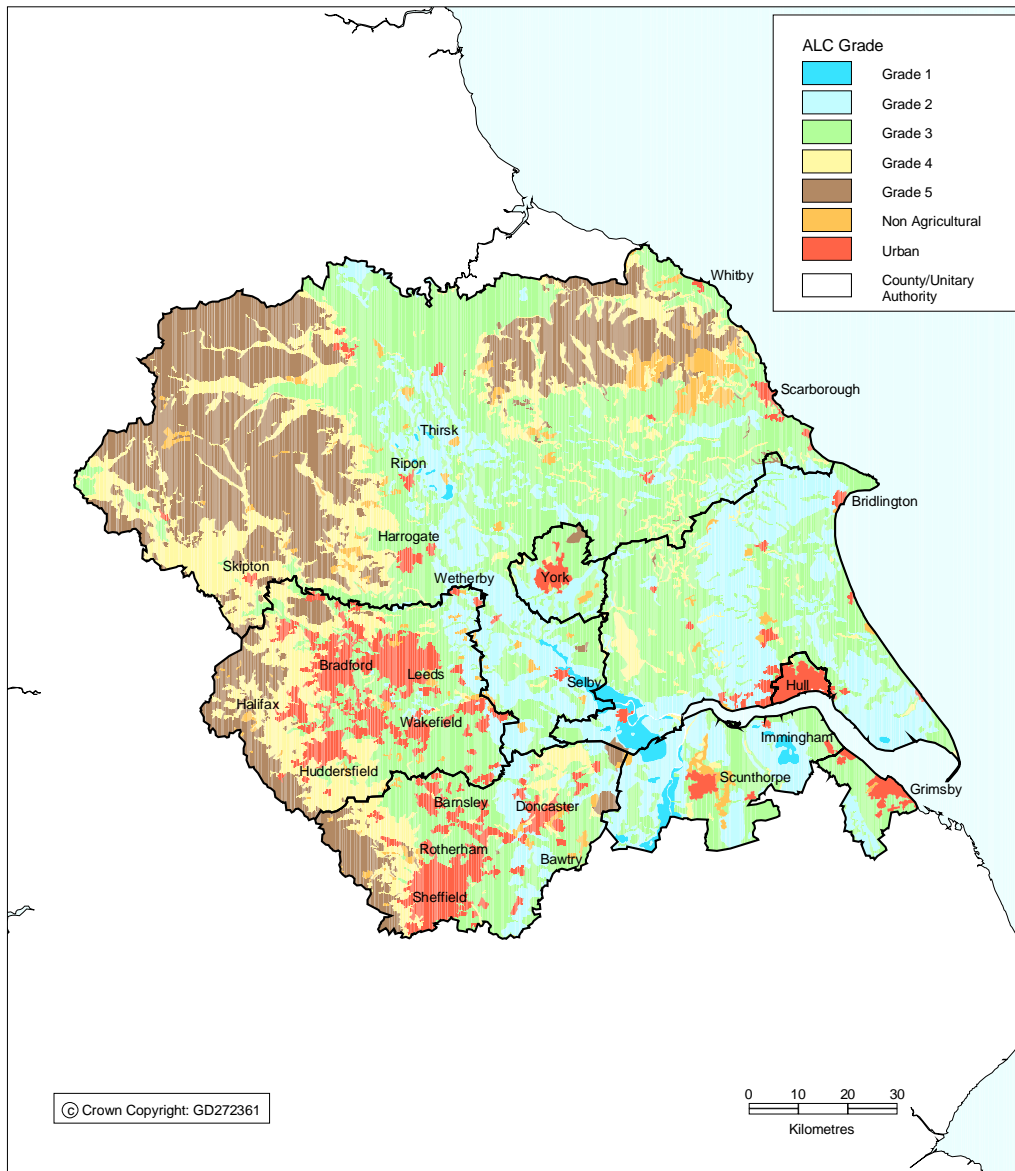


Figure 1.2. Agricultural Land Classification (Source: MAFF)

11. Very good quality agricultural land (Grade 2) accounts for 19% of the land in the region. It is extensive in the Vale of York, on the Yorkshire and Lincolnshire Wolds, on the heavier textured warp soils alongside the lower reaches of the Rivers Ouse and Trent, and in Holderness. This land has only slight limitations, principally slight soil droughtiness but also soil wetness/topsoil workability restrictions on the warp soils and in Holderness. This land is capable of growing a wide range of arable and horticultural crops.

12. Good to moderate quality agricultural land (Grade 3) accounts for 37.7% of the land in the region. Grade 3 land occurs extensively in the lowlands of Yorkshire and Humberside, often on soils derived from boulder clay, lacustrine clay or aeolian sand. The main limitations on Grade 3 land are soil wetness, but erosion and drought risk are also limiting

factors on some lighter soils. Grade 3 land is capable of growing a restricted range of arable and some root crops, as well as producing good yields of grass. Land at the lower end of the grade is likely to produce only moderate yields of a narrow range of crops, principally cereals and grass.

13. Poor quality agricultural land, classed as Grade 4, accounts for 14.9% of the land in the region. It is located principally in the foothills of the Pennines and the valleys of the North Yorkshire Moors, but also some very poorly drained and clayey soils in the Vale of York. Poor soil conditions due to high rainfall and poor drainage in the uplands are the main limitations on soil of this grade. Severe soil wetness and topsoil workability are limitations in the lowlands. Grade 4 land has severe limitations which generally restrict it to grass production with occasional forage crops.

14. Grade 5 land is classed as very poor agricultural land and accounts for 17.5% of the land in the region. It is mainly located on the tops of the Pennine Hills and North Yorkshire Moors and the undrained peat soils at Thorne Waste and Hatfield Moors between Doncaster and Goole. The principal limitations are the combination of climate and soil wetness. Grade 5 land is normally limited to rough grazing.

15. Urban and Non-Agricultural Land accounts for 9.7% of the land in the region and includes housing, industrial land, mineral workings, commercial forestry, amenity land, golf courses, public open spaces and allotments. The National Land Use Database (DETR 1999) highlights 2,970 hectares of previously developed vacant land in the region and a further 3,510 hectares of derelict land and buildings.

16. There are significant intra-regional variations in the distribution of land use (Figure 1.3). The most distinct is the marked divide between grassland fringes and moorland in the west of the region and arable cropping in the east of the region. The notable exception to this pattern being the upland area of the North York Moors in the north east, which also includes quite large tracts of forestry.