

A STUDY OF THE LAND-USE CHANGES  
OF THE NORTH YORK MOORS

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## Abstract

The North York Moors form a distinct geographical region covering an area of over six hundred square miles. While the coastal fringe and interior dales have long been farmed there still remains a very large area of high moorland where broad expanses of heather form the most distinctive feature of the landscape.

The physical features and the vegetation of the remaining moorland have been described in order to make clear the problems of reclamation and changing land-use.

Changes in land-use during nearly nine hundred years have involved both moorland reclamation and changes in the use of existing improved land. The Domesday Survey provides the earliest evidence of land-use, and indeed some changes had already been detailed in the Survey itself. Throughout the medieval period pioneer farming by the monasteries led to very great changes, especially in the use of moorland. During this period too, the creation of the Forest of Pickering in the south-east of the region and the enforcement of Forest Law restricted the extension of farming and some forms of land-use.

By the time the monasteries were dissolved in 1536 many of their granges had been enclosed, with some conversion from arable to pasture. Changes of this nature continued slowly during the next two hundred years.

Parliamentary enclosure in the mid-eighteenth century led to the reclamation of much larger areas of moorland than ever before, until by 1828 the general distribution of moorland and improved farm land was much the same as it is today.

During the last century moorland reclamation for farming has proceeded more slowly, but afforestation has been systematically undertaken. On the improved land fluctuations in the proportions under arable and grass have resulted from depressions and wars. The long history of changing land-use shows the change from self-sufficiency to regional specialisation made possible by modern conditions.

Summary of Original Work

In this thesis primary sources have been used for the greater part of Chapters III, IV, V and VII and to a lesser extent in Chapter VI.

The following maps have been compiled from manuscript sources:-

Figures 11 to 17, 20 to 23, and 26.

Field work has been carried out for five successive summers. Figure 26 was constructed after the summer of 1955.

The lay-out of farms in part of Bilsdale (Fig. 16 and notes) was reconstructed by combining a detailed analysis of two seventeenth century surveys with field study and the study of large scale maps (1:2,500).

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## Chapter I

### Physical Character

The North York Moors form a compact upland region occupying the north-eastern part of the North Riding of Yorkshire. The North Sea coast is everywhere backed by cliffs, reaching the remarkable height of over 600 feet near Boulby. In the west the moors descend by a precipitous scarp to the lowlands of Cleveland and the Vale of Mowbray, and in the south dip gently down to the low-lying floor of the Vale of Pickering.

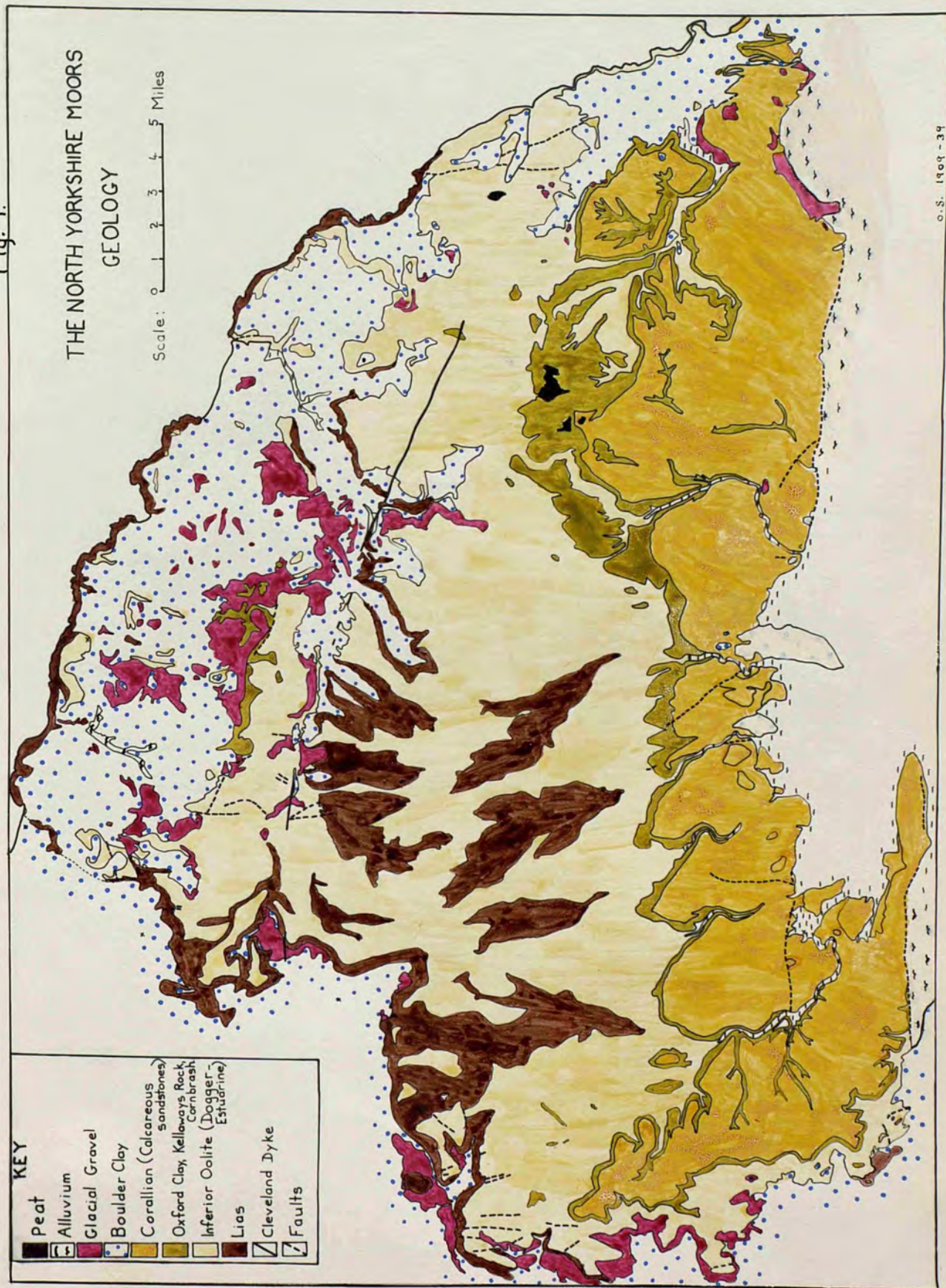
Geologically the moors comprise the northern extremity of the Jurassic outcrop, which here consists of a great variety of shale, sandstone and limestone strata, ranging in age from Lower Lias to Corallian. (Fig. 1)<sup>1</sup>

The Lower Lias, consisting of dark grey shales, appears only in the dales of the moorland area where streams have cut deeply through the overlying formations, and in the wave-cut platform along the coast. The sandstones, shales and iron-stone bands of the Middle and Upper Lias are the chief scarp-formers, and are capped by the Estuarine deposits of moor grit, shale and sand on which the moorland has mainly developed. The Kellaways Rock and Oxford Clay which overlies the

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<sup>1</sup> Compiled from Geological Survey one inch maps, sheets 34, 35, 42, 43, 44, 52, 53, 54. (New Series)

Fig. 1.



O.S. 1908-39

Upper Estuarine sands appear only in isolated outcrops north of the Esk and in a narrow belt extending from west to east across the southern part of the moorlands, where they form a damp, ill-drained vale. (Figs. 1 and 2).

South of this vale rises the steep, northward-facing Corallian scarp, stretching for more than thirty miles from the Hambleton Hills in the west to the Hackness Hills, overlooking Scarborough, in the east. The Corallian Series consists of alternating layers of grits and gritty limestones, dipping gently southwards to the Vale of Pickering, where the limestone disappears under the Kimmeridge Clay and the superficial lacustrine deposits of the Vale floor.<sup>2</sup>

Structurally the moorland region is formed on the Jurassic dip slope. Although the main dip is towards the south, a slight eastward tilt is discernible also, continuing the Pennine dip, and resulting in a general decrease of height from west to east. The dip slope is diversified by a series of anticlinal folds of Tertiary age. The largest of these is the Cleveland anticline which forms the crest of the region. (Fig. 2).

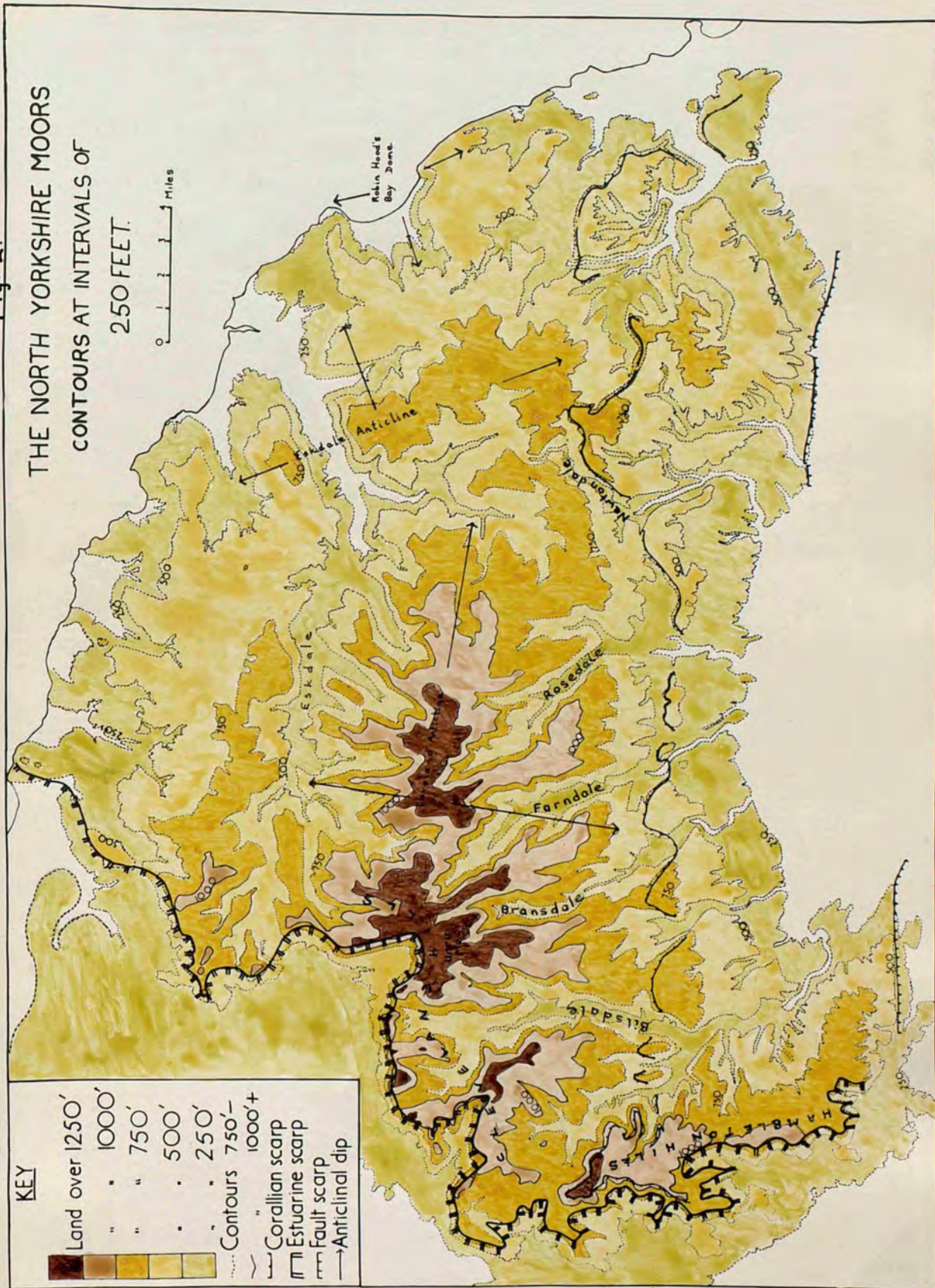
Faulting has also occurred, especially round the margins of the region.

The geological structure is most easily discernible in the field through its influence on the development of the drainage pattern.

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<sup>2</sup> For details of rock strata see Wilson V., *British Regional Geology, East Yorkshire and Lincolnshire*, 1948 pp.19-51.

Fig. 2.  
THE NORTH YORKSHIRE MOORS  
CONTOURS AT INTERVALS OF  
250 FEET.



The easterly dip mentioned above provided the slope on which the Leven-Esk drainage system was initiated but the anticlinal crests of the moorland form the main watersheds. (see Fig.3). From the most northerly of the folds small streams drain north and east towards the North Sea, while another group follows the slope of the opposite flank and drains southward into the Esk. From the Cleveland anticline (the main watershed), short streams drain northwards to join the Esk on its right bank, but a longer and more powerful series drains southward, cutting through the Corallian escarpment, and eventually joining the River Derwent in the Vale of Pickering.

Finally it is necessary to mention the effect of the Quaternary Ice Age. Glacial deposits are found only on the margins of the region where both boulder clay and sands and gravels are prominent. The most extensive glacial deposits lie in the north and east between Eskdale and the coast where the geological map (Fig.1) shows a belt of boulder clay five to seven miles in width. The southern margin corresponds very closely with the present moorland edge and extends to a height of over 800 feet above Stanghow. Glacial deposits are also found in Eskdale, and a terminal moraine lies a short distance to the west of Lealholm station where it crosses the valley in the form of a huge ridge. Professor Kendall<sup>3</sup> has shown that the ice edge in this position dammed up the Esk and its tributaries forming

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<sup>3</sup> Kendall P.F. and Wroot H.E. The Geology of Yorkshire, 1912 Vol.I. pp.493-495.

Fig 3.

THE NORTH YORKSHIRE MOORS.  
DRAINAGE

0 1 2 3 4 5 Miles

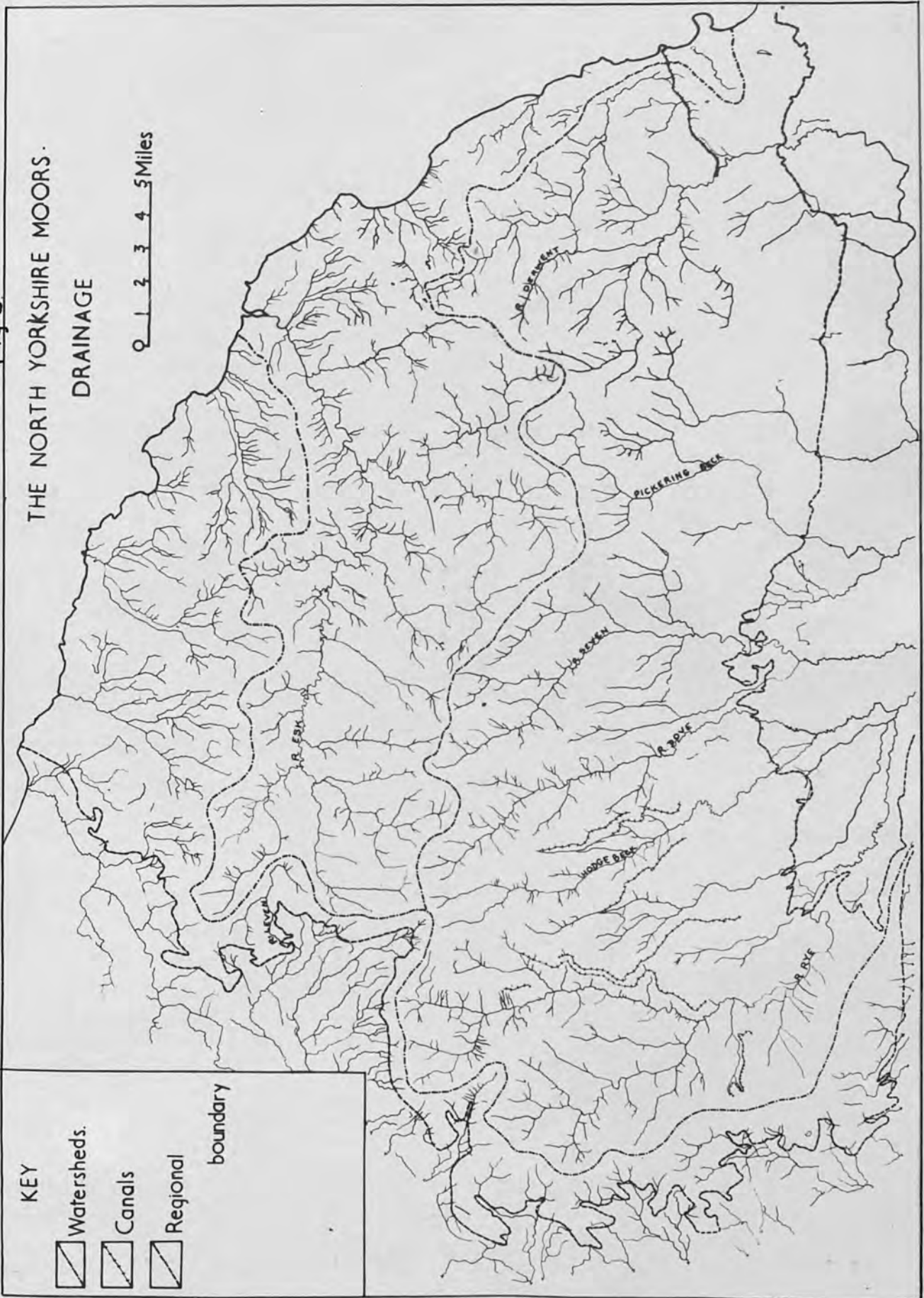
KEY

Watersheds.

Canals

Regional

boundary



an extensive temporary lake in which deposits of clay and gravel were laid down.

The tributary valleys below the Lealholm moraine, namely Iburndale and the Murk Esk valley, were occupied by tongues of ice, and they also contain glacial and lacustrine deposits. Boulder clay covers the southern coastal district from Scarborough to Harwood Dale and Staintondale.

To the west of the region drift reaches up the slope of the Hambleton escarpment to a general height of 450 to 600 feet. In the north-facing Ingleby Greenhow recess where the unusual height and steepness of the scarp presented a formidable barrier to the southward-moving ice, drift has been recorded at 1,050 feet.<sup>4</sup>

Glacial deposits are absent from all the summit areas of the central moorland and from all the large dales. It is the driftless upland that forms the main part of the moorlands.

The very varied physical character of the North York Moors allows three sub-regions to be distinguished (Fig. 4).

#### I - The Northern Boulder-clay Plateau.

This coastal plateau is an upland area lying mostly between 300 and 700 feet and terminating in cliffs along the coast. It is the only sub-region of the North York Moors endowed with an extensive

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<sup>4</sup> Ibid p.471. The one inch geological map does not show drift at such a high level.

covering of boulder-clay, within which, north of the Esk, are patches of glacial sands and gravels. The boulderclay reaches its maximum width of five to six miles in the neighbourhood of Liverton. Though the plateau rarely exceeds 700 feet in height it is exposed to the full force of north-easterly winds from the sea and is consequently bleak. The only sheltered places are the steep-sided ravines occupied by the small streams draining to the coast, and the larger more open valley of the Lower Esk. The soils developed on the boulder clay are heavy and relatively fertile, while those on the sand and gravel patches vary greatly both in texture and fertility. Driftless moorland reaches the coast near Ravenscar, south of Whitby, and this marks the south-eastern end of the boulder clay plateau.

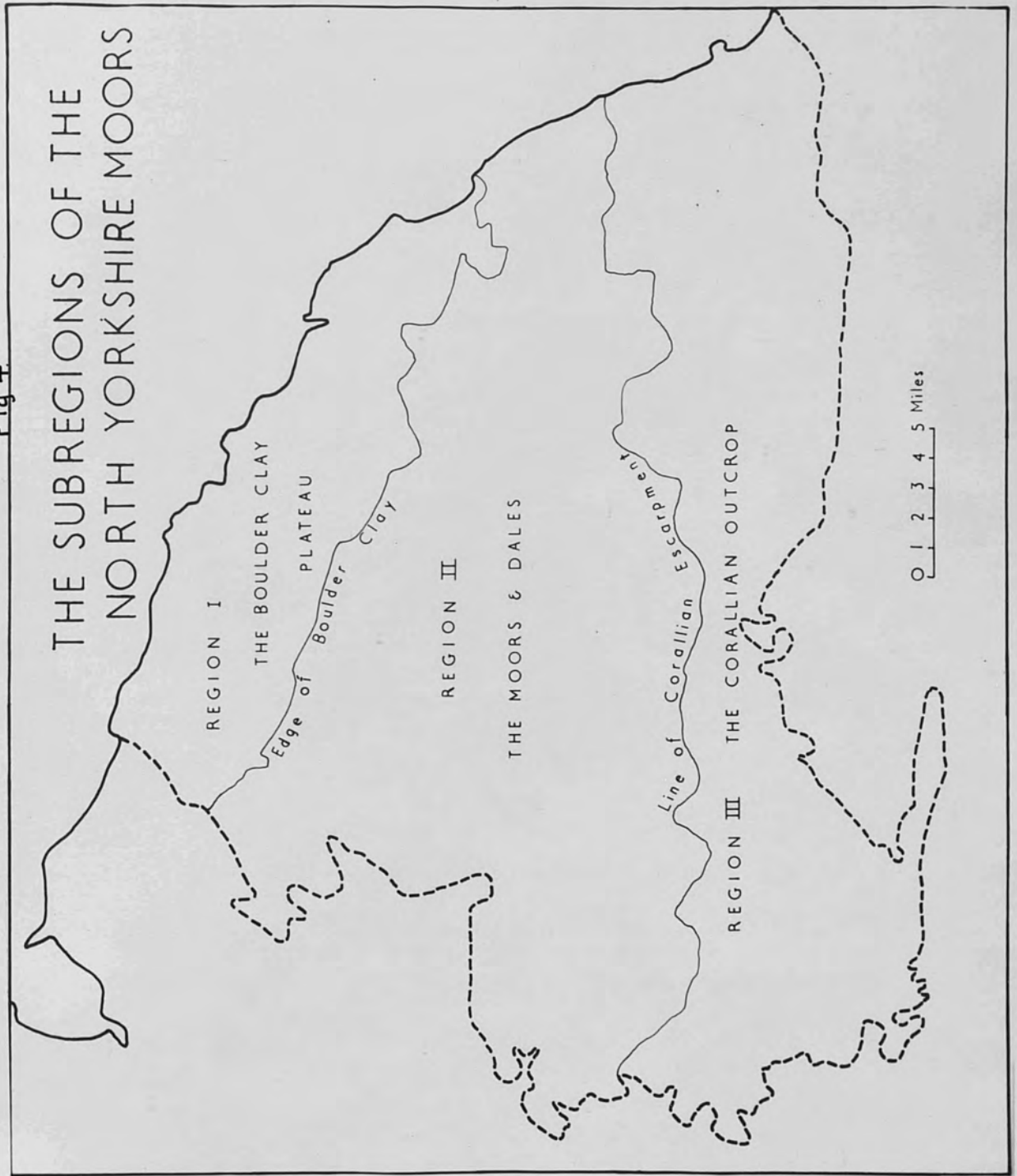
## II - The Moors and their Dales.

The central moorlands form a large sub-region bounded on the north and east by the boulder clay plateau, on the west by the Lower and Middle Jurassic scarp and on the south by the Corallian escarpment. Their plateau surface comprising broad, gently rolling interfluves, is composed of Estuarine Grit which weathers into an infertile, acid soil. The general slope is to the east and south, from a maximum height of 1,489 feet in Urra Moor, near the crest of the western boundary scarp.

Within the moorland the dales form two distinct groups, recognisable on account of their position and physical character.



Fig. 4.



The first group lies near the northern margin of the region and embraces the west-east valley of the Esk and its tributaries. The main Esk valley is broad and flat-floored and contains deposits of boulder clay and glacial sands and gravels which are found in the dale as far up as Danby. (see Fig.1). The north bank tributaries are small and their valleys inconspicuous. The south bank tributaries are longer, flowing from the main watershed of the central moorlands. Their dales are broad and deep, with Lias Shales exposed in their floors and sides. They are of more or less uniform width from their broad heads to their junctions with Eskdale. A resistant outcrop of massive sandstone near the base of the Estuarine Series makes the upper slopes of each one craggy and precipitous, while the lower slopes, cut through weaker rocks, are gentle and smooth. The characteristic form of the cross section thus produced is shown in the diagram(Fig. 5). Glacial deposits extend into all these dales except Baysdale and Westerdale, and in the tributary valleys downstream from Glaisdale they almost mask the underlying Lias Shales.

The second group of dales trending southward from the main watershed consists of the upper and middle parts of the Bilsdale, Bransdale, Farndale and Rosedale. The cross section changes southwards (see Fig. 6). In the upper part, where erosion has exposed the Lias Shales, the general weakness of the rocks has led to the

Fig. 5.

SECTION ACROSS GREAT FRYUPDALE  
SHOWING THE CHARACTERISTIC  
FORM OF THE NORTHERN DALES.

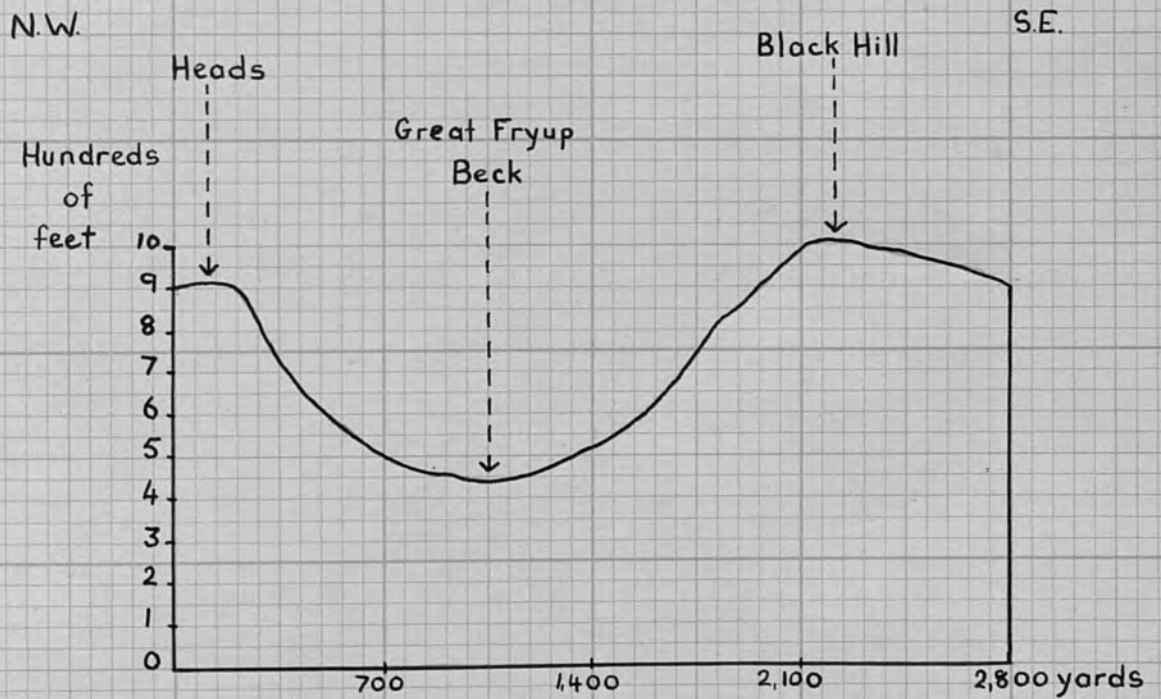
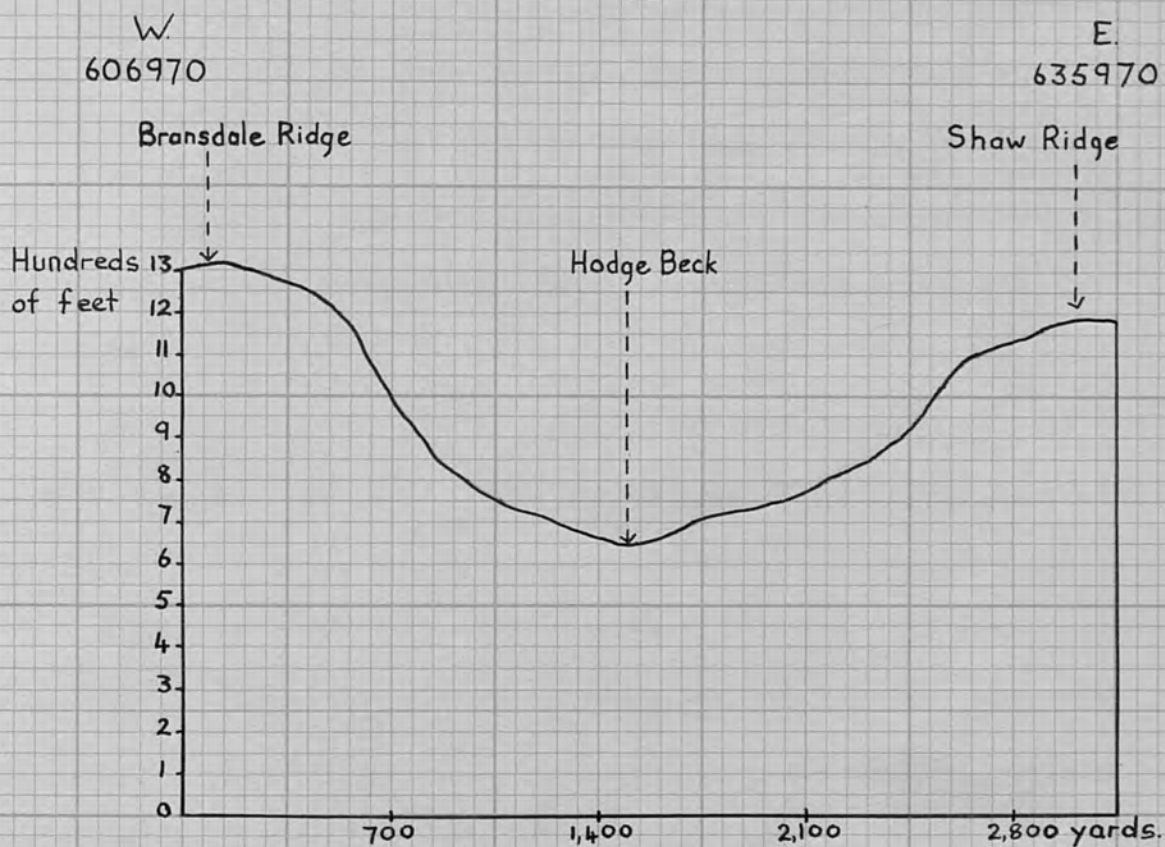
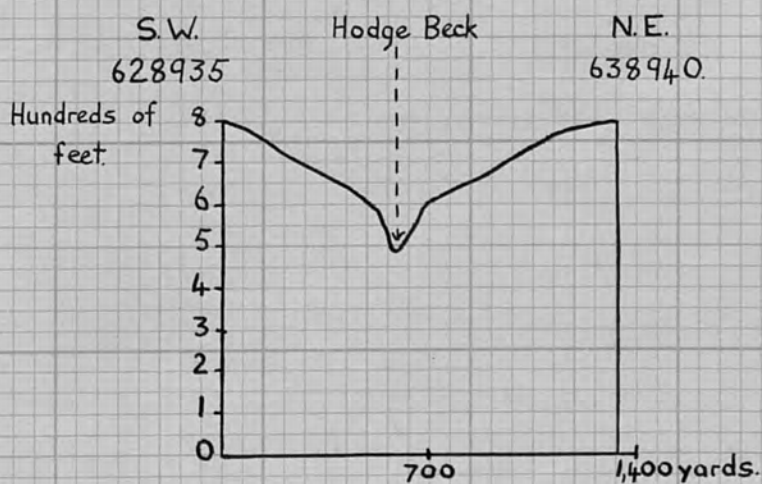


Fig. 6.

SECTIONS ACROSS BRANSDALEa) In the Lias Shales.b) In the Estuarines.

formation of broad, open dales with more resistant strata forming well marked benches and giving a characteristic steepness to the upper slopes. In the lower part the dales narrow as the Lias is not reached and Estuarine deposits form their floors. They widen almost imperceptibly as they cross the narrow vale of erosion in the Oxford Clay at the foot of the Corallian Limestone scarp and thus pass into Region III.

All these dales are confined to the high western part of the moorland region, where the summit levels lie mostly above 1,200 feet. Eastwards, the height decreases steadily until at the coast south of Robin Hood's Bay, the watershed lies at little over 500 feet. In this lower, eastern area, the river valleys are shorter, narrower and fewer in number than in the west, and are cut entirely within the Estuarine formation. In this eastern area the moorland remains almost unbroken.

### III - The Corallian Outcrop.

The outcrop of Corallian Limestone forms the southernmost part of the North York Moors (see Fig.1.). Its northern boundary is marked by a well-defined scarp overlooking the narrow Oxford Clay vale; southwards the limestone dips gently towards the Vale of Pickering.

The Hambleton Hills form the westernmost part of the Corallian outcrop and the highest part of the sub-region. From

Black Hambleton in the north, which exceeds 1,200 feet in height, the plateau slopes southwards for eleven miles. The southern half is considerably lower, though it does not fall below 700 feet. The plateau surface south of Black Hambleton is particularly level (see Fig.2), but is deeply trenched by a large number of valleys occupied by short streams flowing eastward into the Rye. The tributary streams rise as springs from the permeable Corallian Limestone at approximately 600 feet, the upper parts of the valleys being dry. The western boundary of the Hambletons is formed by the steep southern portion of the main Jurassic scarp, partly overlain by glacial deposits. The southern boundary is the Ampleforth fault scarp, running from east to west, and descending abruptly to the lowlands of the Coxwold-Gilling gap.

Between Ryedale and Newtondale the limestone upland is known as the Tabular Hills. It is the narrowest part of the Corallian outcrop, reaching a width of only three miles from north to south near Hutton-le-Hole, though it widens eastwards and westwards. (see Fig.1). It is breached by southward-flowing streams occupying Riccaldale, Kirkdale, Newtondale and the lower reaches of Farndale and Rosedale. All these streams drain from the dales of Region II and receive remarkably few tributaries once they enter the Corallian. Aligned parallel with the main dales are numerous shallow dry valleys which have been formed entirely on the permeable Corallian

Surface and whose floors do not reach the Oxford Clay beneath. The effect of these valleys has been to reduce the gently dipping surface of the Corallian Limestone to a series of flat-topped tablelands between 300 and 600 feet high, terminating on the south in a steep bluff overlooking the alluvial flats of the Vale of Pickering.

East of Newtondale the Corallian outcrop is distinguished as the Hackness Hills. The limestone here broadens out to a maximum width of seven and a half miles from north to south between Whinny Nab and Wilton, though it decreases to only two miles south of Scarborough. (see Fig.1) The height of the scarp crest continues to decrease eastwards to less than 500 feet. For most of its length the scarp faces north, but from Hackness Moor it swings sharply south-east and descends steeply to the narrow boulder-clay plain bordering the coast. The plateau surface is remarkably level, but is dissected in the west by numerous dry valleys, all rising within the Corallian Limestone at about 700 feet. In the east a complicated system of valleys drains into the Derwent. Most of them have cut down to the Oxford Clay and contain small streams, but a few are dry. (see Fig.1) All the valleys in the Hackness Hills are remarkable for their very steep sides and their depth. The large ones are also flat-floored. The degree of dissection is so great that in many places the plateau has been reduced to a series of flat-topped spurs.

The southern boundary of the Hackness Hills is marked by a fault which brings the Corallian up against the Kimmeridge Clay. It is recognisable on the ground by a well-marked change of slope, particularly noticeable between Wilton and Snainton, where the term "cliff" is applied to the feature on the large scale maps.<sup>5</sup>

Soils throughout the Corallian sub-region are derived directly from the Corallian strata, which in this area are composed mainly of grits, with only narrow bands of true limestone. The soils they produce are easily drained but vary greatly in their fertility, depending on the proportion of lime they contain. Glacial deposits are absent except in the east near the coast.

The physical variations found in the three sub-regions have greatly affected the type of land-use changes which have taken place during the last nine centuries. Changes in land-use will therefore be discussed in relation to the physical sub-regions.

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<sup>5</sup> O.S. 1:25,000 sheet SE88. Grid Ref: 864825.



## Chapter II

### Moorland Vegetation

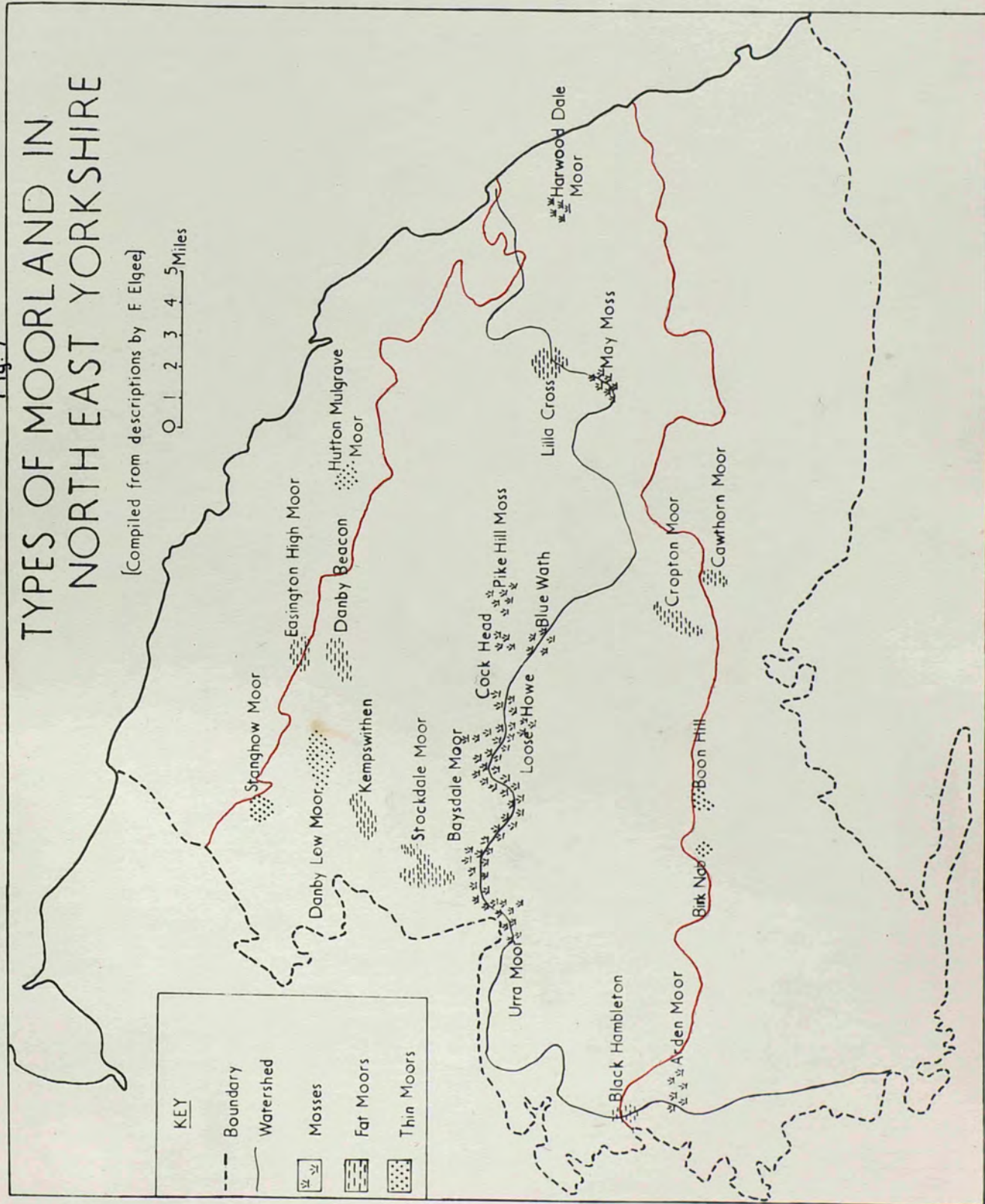
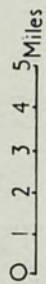
At first sight the vegetation of the North York Moors appears singularly uniform. Wide tracts of heather moor occupy the flat or gently rolling plateau surface, while deciduous woodland covers the steep slopes of the escarpments and valley sides, except where they have been cleared for cultivation. Within this apparently uniform plant cover there are many variations. F. Elgee who studied the area exhaustively for fifteen years in the early part of this century, recognised four different types of vegetation and classified them according to the relative abundance of the species making up their plant associations.<sup>1</sup> The following is a summary of the physical and botanical features of his four types of moorland. The type areas are shown on Fig.7.

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<sup>1</sup> Elgee F. The Moorlands of North-eastern Yorkshire, 1912, Chaps. I - VI; XVI.

# Fig. 7 TYPES OF MOORLAND IN NORTH EAST YORKSHIRE

[Compiled from descriptions by F. Elgee]



Type I - The Mosses.

The mosses, comprising the wettest land of the region, are found chiefly along the main watershed between the basins of the Esk and Derwent (Region II) where the heaviest rainfall of the district is experienced. From the climatic statistics available it seems likely that the yearly precipitation on the watershed is between thirty-five and forty inches.<sup>2</sup> The mosses have developed most fully either on flat ground or in shallow depressions where the natural drainage is poor. All the mosses are underlain by clayey shales of the Estuarine Series which prevent the downward percolation of surface water, and Elgee has suggested that they may occupy the sites of former lakes or large pools which have become filled with peat, in some cases to a depth of thirty feet. The combination of heavy rainfall and poor drainage causes the peat to remain saturated throughout the year to such an extent that in some bogs the centres are raised above the level of the edges. Eight plant species are found to make up the greater part of the vegetation and their relative abundance in eleven moss areas is shown in the following table which has been compiled by the writer from Elgee's descriptions.<sup>3</sup>

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<sup>2</sup> British Rainfall 1953, pp.165-166.

<sup>3</sup> Elgee, F. op.cit. pp.77-97.

Table 1 The Vegetation of the Mosses.

	Name of Moss	Depth of Peat	Dominant Species					
			1	2	3	4	5	6
1	Harwood Dale	30'	Calluna	Eriophorum	Sedge	Sphagnum	Molinia	E.Tetralix
2	May Moss	10'-30'	E.Tetralix	Calluna	Eriophorum	Sphagnum	Sundew	
3	Pike Hill	6'-7'	Calluna	Eriophorum	Erica	Sphagnum		
4	Yarlsey	?	Juncus	Sphagnum				
5	Cock Heads	6'	Calluna	Eriophorum	Sedge	Sphagnum	Juncus	Erica
6	Urra Moor	2'-3'	Eriophorum	Calluna	Sphagnum	Juncus	Erica	
7	South of Cock Heads	6'+	} No data					
8	Bluewath	20'						
9	Loose Howe	6'						
10	Baysdale	?	Calluna	Eriophorum				
11	Arden Moor	2'-6'	Calluna	Eriophorum				

It is clear from the table that heather and cotton grass are the dominant species, growing on peat of very varied depth. When for any reason the supply of water decreases the moss may slowly dry out. Different associations of plants then colonise the peat, which is thus converted into "Fat Moor".

Type II - The Fat Moors.<sup>4</sup>

The fat moors resemble the mosses in being developed on thick peat but different from them by virtue of their drier surface. The fat moors are generally found surrounding the watershed, at slightly lower altitudes than the mosses and on gently sloping ground. They are usually underlain by a layer of hard-pan developed in the sandy, gritty or clayey soils derived from the Estuarine Series. These soils are poor in plant food, partly because of the lack of soluble minerals in the Moor Grit, and partly owing to heavy leaching. Pan is important chiefly because it prevents the roots of plants from reaching beyond the peat layer to the sub-soil below. This does not have any noticeable effect on the heather, but it does produce stunted growth in any seedling trees which appear and may therefore be responsible for the absence of natural forest or scrub vegetation in positions where such growth would otherwise be possible. Consequently the vegetation consists of shallow-rooted, acid-loving

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<sup>4</sup> Elgee, F. op. cit. pp. 38-47.

plants, mostly Ericaceae. The following table shows the dominant plants in eight contrasted areas, of which seven are situated on the Moor Grit (Region II) and one on the summit of Black Hambleton on the Corallian. (Region III).

Table 2 The Vegetation of the Fat Moors.

(Compiled from descriptions by F. Elgee.)

	Position of sample area.	Dominant Species				
		1.	2.	3.	4.	5.
1	Kempswithen	Calluna	Erica	Vaccinium	E.Vaginatum	
2	Head of Stockdale	Calluna	Vaccinium	Eriophorum		
3	Danby Beacon	Calluna	Molinia	Eriophorum	Juncus	Sphagnum
4	Easington High Moor	Calluna	+ Eriophorum	<u>or</u> Carex	or Sphagnum	
5	Lilla Cross	Calluna				
6	Black Hambleton	Calluna	Vaccinium	Empetrum	Eriophorum	
7	Cropton Moor)	Calluna	Molinia	Erica	Myrica gale	
8	Cawthorn Moor)					

The Table shows that in every case Calluna is the dominant species, as in most of the mosses, and in the vicinity of Lilla Cross is sufficiently abundant to exclude everything else.

At some time most of the fat moors have been burnt either accidentally or by carefully regulated fires started by farmers or gamekeepers. A new growth of heather may take up to fourteen years to become established, during which time the swidden or burnt area may be colonised by a variety of plants. The species which appear are determined by the vegetation of the surrounding unburnt areas, and by the type of soil and degree of natural drainage. Liverworts, mosses and lichens often form the first plant cover, and are gradually replaced by flowering plants such as heather, bilberry and grasses which at first form a close, low-growing turf. Occasionally an association including purple bell heath (*Erica cinerea*), bilberry or bracken may appear, particularly in marginal areas. Associations containing a large proportion of bracken or grass are often indicative of changing physical conditions and are regarded as forming the third type of moorland.

#### Type III The Thin Moors.<sup>5</sup>

Thin moor is found towards the edges of the moorland area, mainly in regions I and III. Its surface is noticeably drier than that of the fat moors and mosses, and its peat cover is so thin that rock frequently protrudes through it. White or grey sand carried by

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<sup>5</sup> Op. cit. pp. 65-76.

water collects in patches on the surface. Hard pan is absent. The thin moor normally develops at lower altitudes than the fat moors and mosses. Of the five areas quoted in the following Table four lie between 750 and 850 feet, while only Birk Nab reaches 1,000 feet.

Table 3 The Vegetation of the Thin Moors.

Position of sample area	Dominant Species				
	1.	2.	3.	4.	5.
1 Danby Low Moor	Calluna	Nardus	Erica	J.Squarrosus	Lichens
2 Stanghow Moor	Seirpus	Erica	E.Vaginatum	Molinia	Rushes
3 Hutton Mulgrave Moor	Erica	Nardus	Seirpus	Eriophorum	
4 Birk Nab	Calluna				
5 Boonhill	Grassy commonland				

The Table shows several differences in the character of the vegetation of the thin moors compared with that of other types of moor. Calluna appears as the dominant plant in only two out of the five areas, first place being taken in one case by grasses, in another by Erica tetralix, and in the other by tufted club rush. The proportions in which each plant occurs vary greatly from one area to another. Heather is usually thin and stunted in its growth, and is dominant



only when the ground is fairly wet. Under these conditions it may be the only plant present. In other cases the thin moors consist only of coarse grasses interspersed with clumps of tufted club rush, Erica and occasionally Calluna. Where there is sufficient depth of soil trees may grow among the moorland plants. This has happened on Rievaulx and Helmsley Moors where plantations of pines have provided a ready source of seed which has been carried by the wind to hitherto unforested moorland nearby. Although the moorland provides conditions under which the seeds can germinate, growth is often stunted, probably as much by the wind as by the soil. Thus trees never form an important element in the vegetation of the thin moors.

#### Type IV - The Moorland Slopes.

It has been shown in the foregoing pages that true moorland with its characteristic peaty soil and dominant heather develops on the more-or-less level summits of the region. The steep slopes of the valley sides and of the escarpments of the Moor Grit and the Corallians support a somewhat different association of plants and are transitional between the moors and the surrounding regions. The varied rock outcrops and resultant soils are responsible for the great variety of plants compared with those of the moorland summits, a variety which embraces every gradation from heather to mixed woodland, though there is abundant evidence to suggest that the slopes

have in the past been almost entirely tree-clad. At the present day there is comparatively little natural woodland. The main species are oak, birch, rowan and Scot's pine. On the northern flank of Eskdale between Castleton and Commondale where the slope is sunny, the woodland has a luxuriant undergrowth of bracken, one of the most frequently-occurring plants of the moorland slopes. It appears again among the woodland in Newton Dale, as well as in a wide variety of similar situations on the margins of the moors. The inability of its roots to penetrate the hard-pan and its intolerance of strong winds render it unsuited to a moorland habitat, so that the presence of bracken on a slope can usually be taken to indicate the former existence of woodland. Where trees are absent it is often associated with grasses, but where growth is very vigorous, for example on the south side of Scugdale, few other plants appear. The occurrence of wood sorrel, primrose and dog violet among the heather, for example on the slopes below High Cliff overlooking Guisborough, is a further indication that woodland has existed there at some time in the past but has now been replaced by a predominantly moorland flora. In this particular case the First Edition of the Six Inch Ordnance Survey maps shows that woodland existed on the slopes in the middle of last century (1851), so that clearing and the subsequent spread of ericetal plants must have taken place in less than a hundred years. The suitability of the slopes for either agricultural improvement or afforestation, as well as the demand for timber in an

area where wood is scarce, has led to a great deal of interference with the natural flora so that it is difficult at the present day to make any reliable generalisations about the original plant cover. The enormous variety of plant associations found on the slopes probably represent stages in colonisation following human interference at different times in the past.

In the foregoing account of the types of moorland to be found in North-eastern Yorkshire it has been shown that their geographical distribution conforms in a general way with a relatively simple pattern. The mosses, characteristic of the highest parts of the region, are developed under conditions of extreme wetness, resulting from a combination of comparatively heavy rainfall and poor drainage. Because of their altitude they are exposed to the maximum effect of local temperature changes and strong winds. The fat moors commonly develop on the slightly drier ground surrounding the watersheds, at lower altitudes than the mosses where rainfall may be slightly less and an increased slope gives better drainage. Exposure to wind and sun however are unlikely to be very different. The thin moors on the whole occupy the margins of the region where still drier conditions have prevented the formation of very much peat, while the steep, well drained valley and escarpment slopes are transitional both botanically and geographically between the uplands and lowlands.

It is clear that the type of vegetation which develops in

any part of the moorland region appears to depend upon climate, altitude, the efficiency of the natural drainage and interference by man. Everywhere the soil is acid.

None of the vegetation types can be assigned exclusively to any of the three moorland regions. In Region I (The northern boulder clay plateau) most of the moorland remaining today is thin moor, developed on glacial sands and gravels and on the Moor Grit. There is some fat moor also, notably in Easington High Moor. Mosses are absent. In Region II (The moors and their dales) all types of moorland vegetation occur, though mosses and fat moors predominate. Woodland still exists in some of the dales. Region III (The Corallian outcrop) also includes all types of plant association. Mosses and fat moors are confined to the highest part, near the summit of Black Hambleton: thin moor predominates everywhere else and the steep valley sides are mostly wooded. In all three regions reclamation has made inroads into all types of vegetation except the mosses, with consequent changes in land-use from rough grazing to some form of cultivation.

### Chapter III

#### The Domesday Survey

An account of land-use changes in periods far distant from the present day must rely entirely on the scant written records of the time. For this purpose the Domesday Survey is unique. While it was not intended as a land-use survey in the modern sense it contains a remarkable body of information which either directly or indirectly makes possible a reconstruction in broad outline of eleventh century land-use.

The Survey for north-east Yorkshire records a large number of vills, the distribution of which is shown in Fig. 8 where the site of almost every vill mentioned in the survey has been plotted.<sup>1</sup> A few have left insufficient evidence for their sites to be determined with any degree of accuracy. Their absence can make little difference to the main features of the settlement pattern. Each vill contained one or more manors, and these were the basic units of farming organisation. Ploughland, meadow and woodland made up the manorial farm-land, the woodland being valued for the pasturage it provided. Moorland grazing was never mentioned.

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<sup>1</sup> For method of identifying vills see Maxwell I.S. The Geographical Identification of Domesday Vills. Transactions of the Institute of British Geographers 1950 pp.97-121.

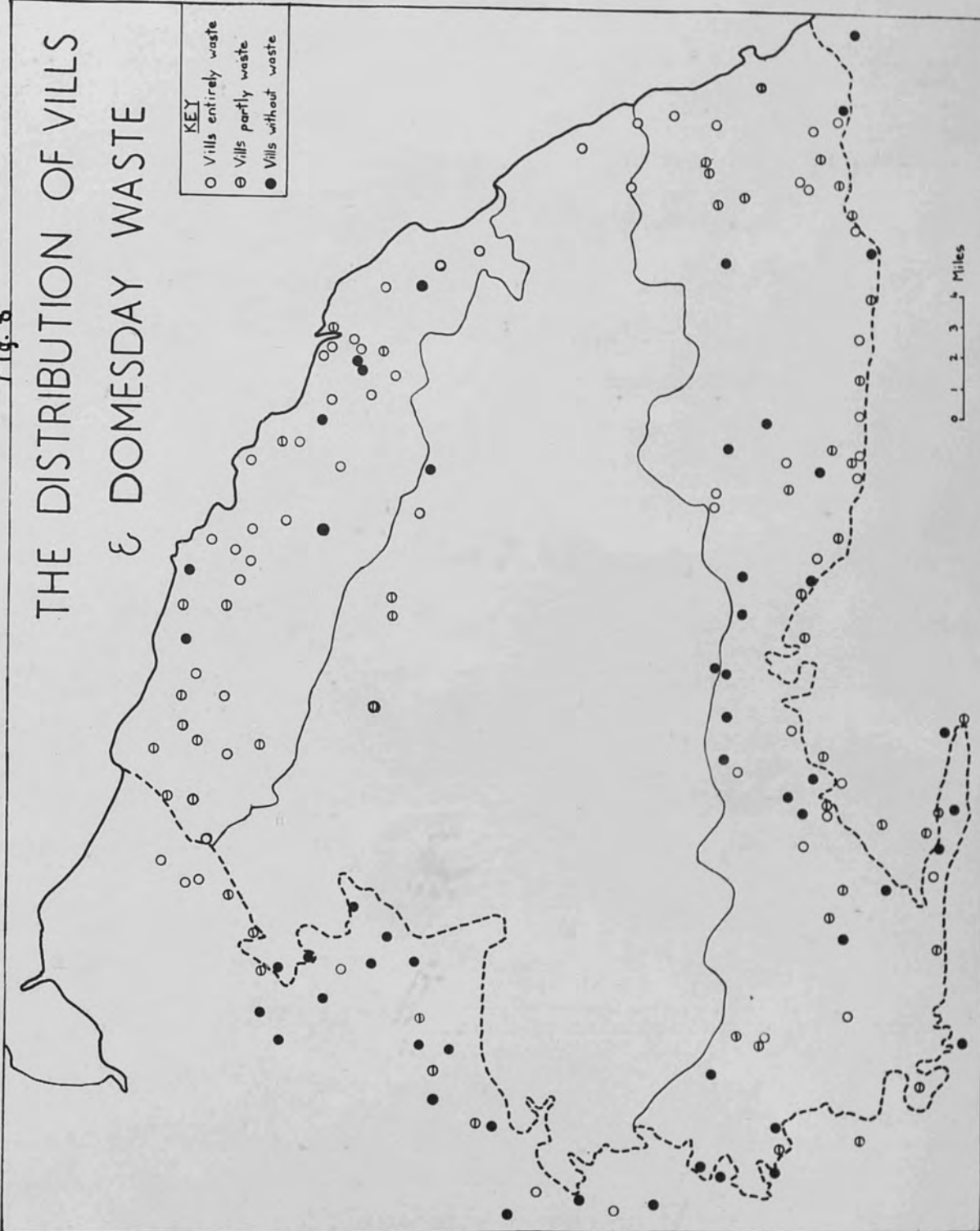
Ploughland entries often included the amount of ploughland (in carucates) and the number of ploughs in use, both at the time of King Edward's death in 1066, and at the time of the survey in 1086. This information makes it possible to compare the ploughland at the beginning and end of the twenty year period. At the beginning of the period, in 1066, ploughland formed an important part of each manor. In 1069 the Conqueror's armies marched northward to the Tees, destroying everything within reach. Fig. 8 shows only too clearly the effect of this devastation in north-east Yorkshire, still apparent at the time of the survey seventeen years later. Many of the vills recorded in 1086 were still uninhabited, and where there was no habitation it is unlikely that there would be much ploughland still in use. Thus in Fig. 8 the vills which were wholly or partly cultivated in 1086 are distinguished from those still entirely devastated, and the map indicates where the arable land had diminished since 1069.

Meadowland was recorded in less than a third of the manors in north-east Yorkshire. Except in Pickering and its soclands all entries of meadow are given in acres. The quantities of meadow varied considerably from place to place, though the acreages were usually fairly small (Fig.9). It is of course impossible to determine the exact site of meadowland within a vill, but the distribution of vills with meadow, shows a remarkable relationship

Fig. 8

# THE DISTRIBUTION OF VILLS & DOMESDAY WASTE

KEY	
○	Vills entirely waste
⊖	Vills partly waste
●	Vills without waste



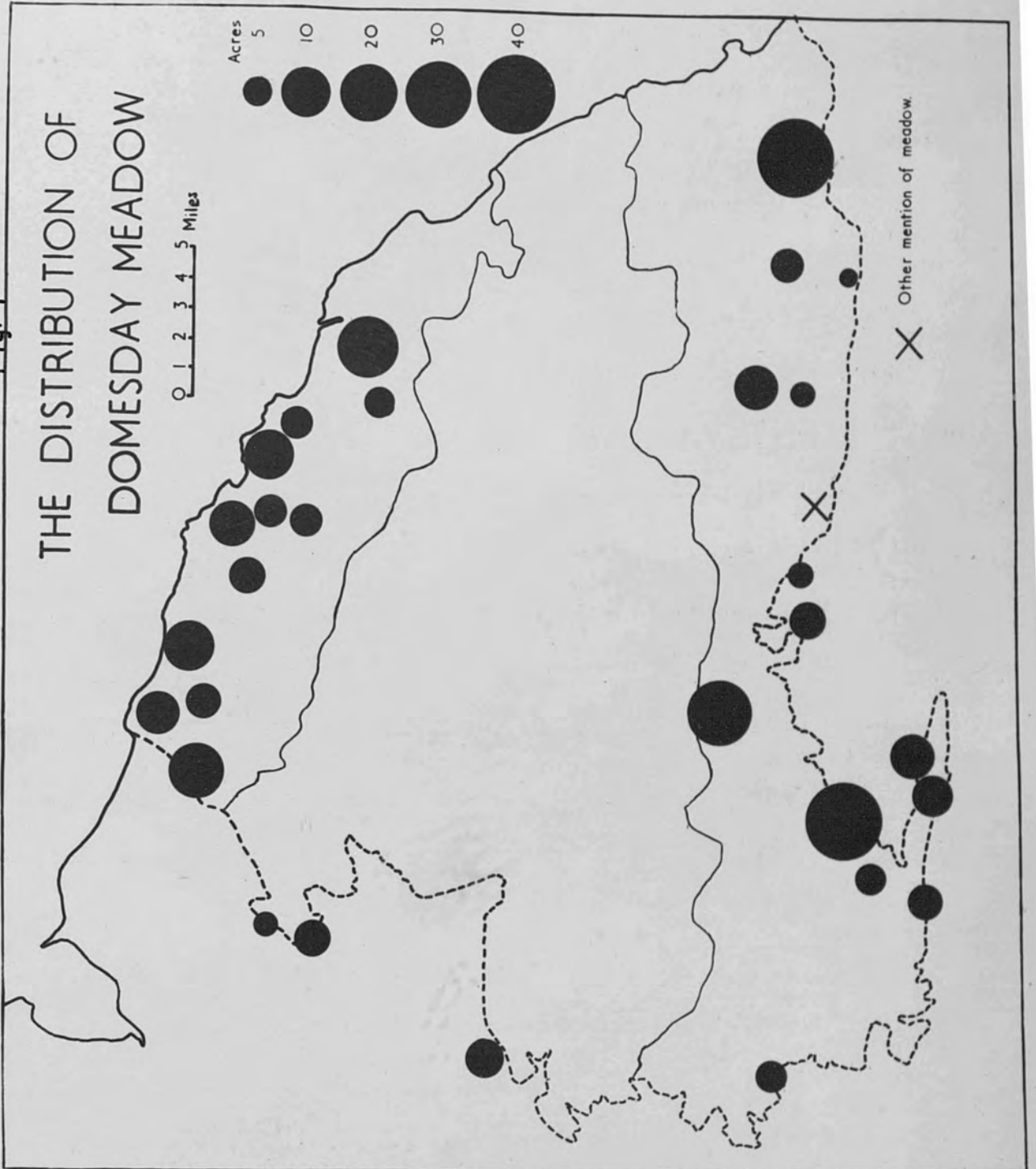
with physical conditions. This will be discussed in detail later, when the three physical sub-regions are considered separately.

The vills in which woodland was recorded represent only a very small proportion of the total number of vills in the area. Whenever actual amounts of woodland are stated, the measurements of length and breadth are given in leagues and furlongs. Underwood (*silva minuta*) is occasionally mentioned without any indication of its extent being given. In Fig. 10 the linear measurements of the woods have been drawn and the lines representing length and breadth have been placed within the boundaries of the modern parish bearing the name of the Domesday vill. The map shows the distribution of woodland in the three physical regions. By contrast, Fig. 11 attempts to show the relative proportion of certain vills occupied by woodland. In constructing the map the extreme measurements of the woodland have been compared with the extreme measurements of the whole manor and calculated as a fraction of it. Unfortunately the measurements of the manor are not always given, so that not all the manors containing woodland could be represented on the map.

The distribution of farm land shown in Figs. 8, 9 and 10 is closely related to the physical character of the three sub-regions of north-east Yorkshire, and these will now be described individually.



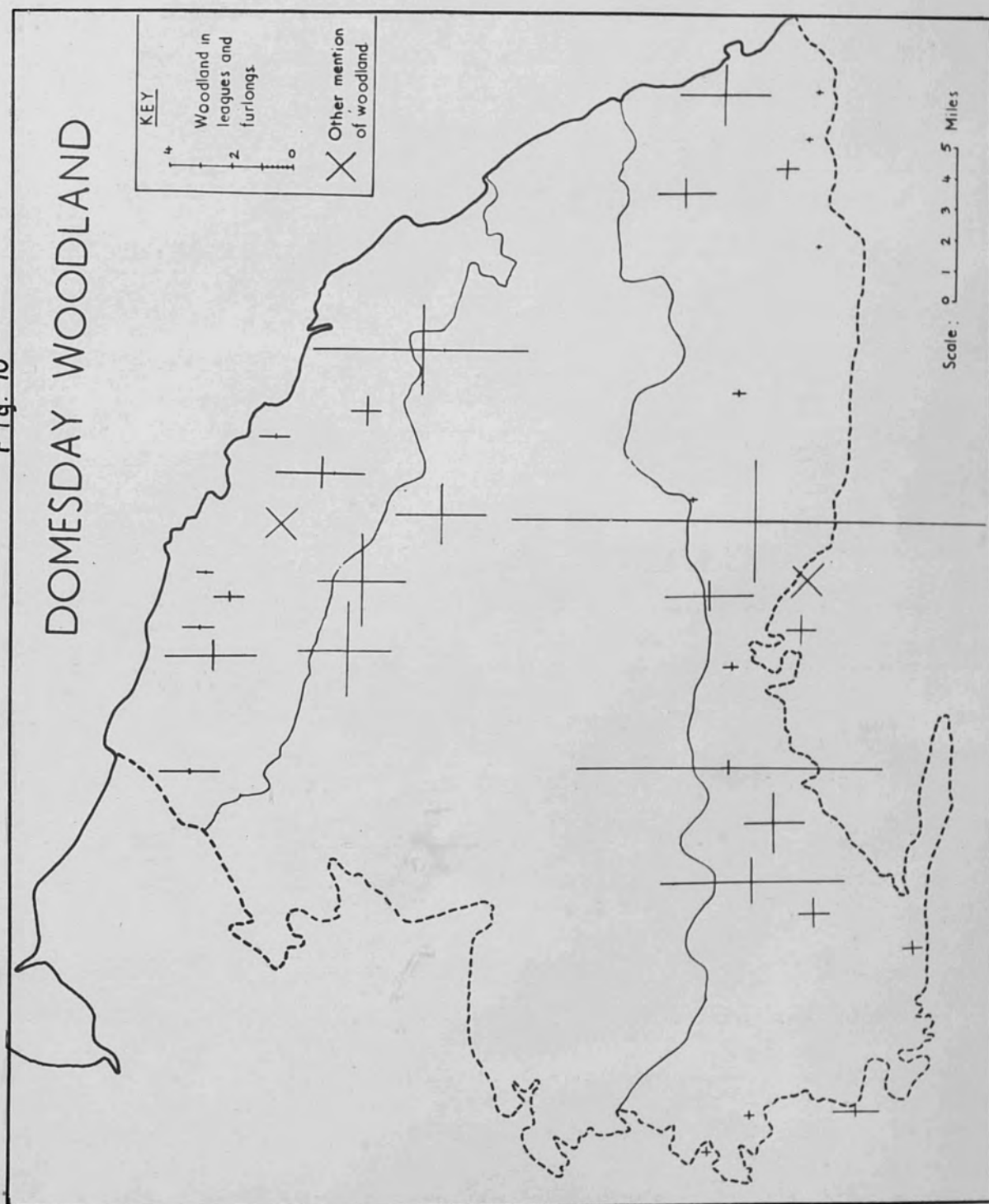
Fig. 9



Region I. The Northern Boulder-clay Plateau.

A comparison of the geological map (Fig. 1) with the map showing settlement in 1066 (Fig. 8) reveals a remarkably high concentration of settlement in this region of boulder clay. The closest settlement was in the lower Esk valley within three miles of the river mouth, where low-lying land was more extensive than in any other part of the boulder-clay region. There is a noticeable absence of settlement from areas where glacial sands and gravels are widespread. Fig. 8 also shows that the region suffered severely in the devastation of 1069, and even by 1086, out of forty-two villis in the region, only seven were as fully cultivated as they had been previously, the rest having remained either wholly or partly in a state of devastation. All the villis showed a decrease in value between 1066 and 1086. There is not a single instance of a manor which increased in value during those years, and only one where the value remained unchanged. In some cases the decrease was very large. One manor in Skelton vill had fallen in value from 40/- T.R.E. to 16/-, while Lythe had dropped from 20/- to 5/6d. Time after time the words "wasta est" follow the entries, thus indicating the entire loss of agricultural value. The loss of value is reflected again by changes in the area actually under the plough. The villis of the boulder clay plateau were taxed on a total of 172 carucates, while the survey recorded only 109 carucates actually in use in 1066. By 1086 only

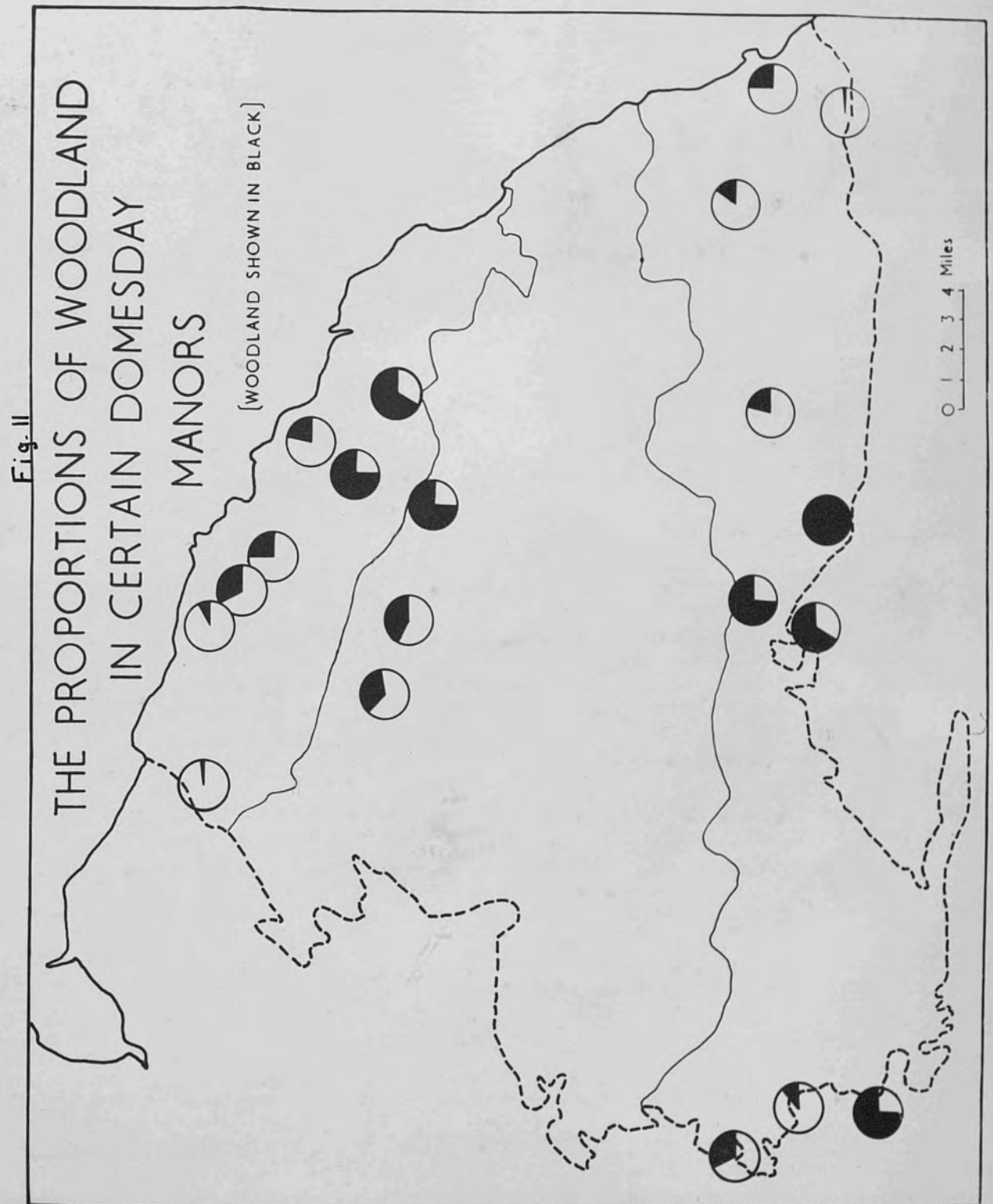
Fig. 10



twenty-four ploughs were working in the entire region, ten of these in the group of vills near the Esk mouth. Reckoning at the rate of one carucate to one working plough team, this means that at least eighty-five carucates had gone out of use since 1066, and one hundred and forty-eight since the assessment for Danegeld was made, leaving only one-seventh of the former arable land under cultivation. It is clear that in 1086 ploughland formed only a very small part of the boulder clay region.

Meadlowland in this region was recorded in only twelve of the forty-two vills, but as Fig. 9 shows, the vills possessing meadow were fairly evenly distributed, only a small area south-east of the Esk being entirely without meadow. The meadows were usually small, the meadowland totalling twelve acres or less in each of nine of the twelve vills.

Woodland was mentioned in only ten vills, all of them lying north-west of the Esk. It is possible that in 1086, as at the present day, much of the woodland lay along the steep sides of the many ravines which dissect the plateau, tree growth being encouraged by the sheltered nature of the valleys. It is difficult to estimate how much of the plateau itself was wooded in Domesday times, but Fig. 11, showing the proportions of woodland in several manors, reveals great variations, from three-quarters of the total in Hutton Mulgrave to one-thirtieth in Skelton. This suggests that woodland remained uncleared on the plateau surface in some places at least.



Where woodland formed only a small part of the manor it is likely that more clearing had taken place.

It is clear that in 1066 the boulder-clay plateau was a region of relative prosperity. By 1086 a decline in its prosperity was reflected in a decrease in the number of inhabited vills, in the decreased area of ploughland, and in a decrease of the overall value of the manors. This region, with its boulder-clay cover therefore offered wide scope for the revival of farming in succeeding years.

#### Region II. The Central Moors and Dales.

Fig. 8 reveals that settlement and cultivation were absent from a large area in the central moorlands. Comparison of Fig. 8 with Figs. 1 and 3 shows that this uninhabited area coincides precisely with the outcrop of Moor Grit, which forms the high, exposed summit of the region where the infertile, acid soils are still largely uncultivated even today. Perhaps more surprising is the absence of settlement from the broad, south-facing dales which are entrenched below the grits in the high western part of the moors. Only in three well-defined localities did settlements exist, and as Fig. 8 clearly shows, all were near the margins of the grit-stone outcrop. In the first, Staintondale, the most isolated of all the vills, was situated near the coastal margin of the region, on a small patch of glacial deposits overlying the Moor Grits. It had suffered devastation in 1069 and was still uninhabited in 1086, and it was unlikely to have played any

part in farming. Secondly beyond the western margin of the moors was a large number of vills clustered along the scarp foot. There can be little doubt however, that the plough-lands and meadows of these vills lay in the more fertile boulder-clay lowlands to the north and west of the scarp, and thus were outside the North York Moors. Thirdly near the northern edges of the moors, in Eskdale, lay the only important group of vills in the entire region. The vills were widely spaced and few in number, and some of their sites cannot be accurately located today. Of those whose sites are known however, all except Eskdaleside were situated on the north side of the main valley, with the advantage of a southerly aspect, and with shelter from cold north-east winds. It is significant also that they all lay in the middle section of the valley where glacial deposits give rise to easily-worked soils, and were absent from the upper reaches of the dale and the tributary dales, which were driftless. (Fig.1) Farming in Eskdale shows signs of having suffered from the devastation of 1069, as elsewhere in the North York Moors. In Danby, Lealholm, Broca (lost) and Camisedale (lost) the five ploughs which had been working in 1066 had all disappeared, and the value of this manor had fallen from 60/- to 3/-. Egton was entirely devastated and the single plough recorded at Crunkley was the only one remaining in the dale. No meadow was recorded at all.

Woodland is recorded in three places and in each case the dimensions of the woods are large. Danby, Lealholm, Broca, Camisedale

and Crunkley, for example, included one holding three leagues long by three broad; lower down the valley at Egton there was woodland three leagues long by two broad. Fig. 11 shows that in each case the woodland occupied a large part of the total area of the manor, amounting in Egton to as much as three-quarters.

Thus, at the time of the Domesday survey the central region of the moors and dales was sparsely peopled and almost uncultivated. There is no evidence to suggest that the moors were even used for grazing. This almost empty region therefore provided a unique opportunity for the extension of settlement and associated farming in the centuries to follow, an opportunity which was first used only a few years after the Domesday survey.

### III. The Corallian Outcrop.

The region of Corallian Limestone contained a large number of vills at the time of the Domesday survey, and Fig. 8 shows clearly that they occupied four well-defined localities. Most were in the Tabular Hills. The first locality was along the southern edge of the limestone, near its junction with the Vale of Pickering, and combined the advantages of a well-drained site with easy access to the meadowlands of the low-lying marshes.

The second lay in the northern part of the outcrop, near the summit of the south-facing dip-slope with its warm, easily cultivated soils and gentle gradient. There was one exception,



Lastingham, situated immediately at the foot of the scarp.

Most of these vills in the Tabular Hills possessed large numbers of carucates and ploughteams. In 1086 over two-thirds of them were still either wholly or partly under cultivation, though many had dropped in value. Pickering, for example, a large manor with thirty-seven carucates, was worth £88 T.R.E. but only 20/4 in 1086, while a neighbouring manor of twenty-seven and a half carucates was reduced in value from £12 to 100/-. On the other hand, Dalby and Spaunton had not altered in their value of 10/- each between 1066 and 1086, several other vills showed a slight increase, and a holding in Brompton had even doubled in value from 10/- in 1066 to 20/- in 1086.

More vills formed a third distinct group in the broad plateau of the Hambleton Hills in the west of the limestone outcrop. Most of them occupied the plateau surface, where the soils were light and limy. The narrow, clay-covered floors of the deep valleys remained devoid of settlement, and only where the valleys broadened out were they occupied by vills, as in the case of Hawaby, Dale Town and Arden, all of which were situated in the broadest part of Ryedale. A few vills also lay on the westward-facing Hambleton escarpment, a few in valleys which dissect the scarp, and some at the scarp foot. Values are given only for Boltby, which had not changed since 1066. Few details of land-use are recorded, but most of the vills seem to have been cultivated, at least in part. Both in Dale Town and Hawaby which each contained two

manors with different owners, one manor was devastated and the other was not.

In the Hackness Hills further east was the fourth group of vills situated on the floors of some of the numerous steep-sided valleys where the soil is derived from post-glacial lacustrine deposits, or on the boulder clay near the coast. Most of these vills were cultivated to some extent in 1086, though all their values had decreased. The greatest decrease was recorded among the coastal vills, notably at Falsgrave and Northfield, where the decrease was from £56 in 1066 to 30/- in 1086.

In the Corallian region as a whole, there was more devastation in the coastal vills than among those lying further inland. Loss of value is further reflected by changes in the area of plough-land. The Danegeld assessment of the limestone plateau was based on a total of 334 carucates, but by 1066 the number of carucates actually in use had fallen by more than half to 159. By 1086 only 77 ploughs were employed in the region, which, on the basis of one plough to one carucate, represents a further halving of the arable area. Although this was a very serious reduction in the area of arable land, it represents a much smaller degree of devastation than had taken place in the boulder clay plateau further north. (Region I).

Meadow-land is mentioned more frequently in the Corallian region than in any other part of north-east Yorkshire, but even here is concentrated in a few well-defined areas. (Fig.9). It is

recorded mainly in those vills which lie adjacent to deeply-cut river valleys of which the floors are natural meadows, and in those vills lying close to the marshland in the Vale of Pickering.

There is also more woodland in the Corallian region than in other parts of the North York Moors. (Fig.10). The amount of woodland in each manor varied from the maximum of sixteen leagues long by four broad in Pickering, to an almost insignificant amount in Brompton (two furlongs by two furlongs). This is illustrated for ten of the manors in Fig.11, which shows the proportion of each manor occupied by woodland. Of these ten manors, three contained woodland equivalent to almost three-quarters of their total extent, four were approximately one-quarter wooded and two had only a very small proportion of woodland. In the manor of Pickering, the dimensions of the woods (stated in one entry in the survey) were the same as the dimensions of the manor (given in another entry). As the manor also contained large quantities of ploughland and meadow the relationship between the woodland and the manor is difficult to determine. It can only be concluded that the manor was well wooded, and that the woodland was well distributed throughout the manor. It is interesting to note that the only woodland recorded in the Hambleton Hills was in the scarp foot vills, while the walls of the interior valleys, which today are densely wooded, appear to have been without a woodland cover.

It is clear from the foregoing that in 1086 the Corallian outcrop was a relatively thickly settled part of north-east Yorkshire,

and the siting of the vills was closely related to the physical character of the area. Some of the ploughland was still uncultivated as a result of the 1069 devastation, and several vills appear to have been still uninhabited, but the area as a whole showed fewer signs of having suffered lasting damage than the other regions of the North York Moors.

The Domesday farming pattern of the North York Moors shows that the central moorland itself was an uninhabited highland region bordered on the north by the more fertile boulder-clay plateau, and on the south by the Corallian Limestone, both of which were already farmed at the time of the Norman Conquest. Even these areas however, were sparsely peopled in 1086, as north-east Yorkshire had suffered more than most parts of England from the hostile attentions of William's armies, and as a result the population of pre-conquest days was greatly reduced, and much land had gone out of cultivation. Meadowland, an essential part of the farm economy wherever ploughing oxen were kept, amounted to only 440 acres in the entire region. Woodland was almost entirely confined to the Corallian dip slope and the coastal boulder clay plateau, where, except in a few manors it was not extensive. But amid the ruin and desolation which still prevailed in 1086, seventeen years after the destruction of the north, it is possible to detect the beginnings of an effort to bring the devastated areas back into productivity. The results of this effort are clearly seen in the records of the succeeding centuries.

## Chapter IV

### The Medieval Period

In contrast with the troubled years following the Norman Conquest, the twelfth century began peacefully in north-east Yorkshire. Many old vills were repopulated, some new settlements were established, and contemporary documents show that village communities in many widely separated localities were engaged in the cultivation of open-fields. Records<sup>1</sup> of medieval farming are piecemeal and provide no more than tantalising glimpses of manorial land utilisation. Frequent references are made to ploughlands, meadows, woods and commons, but only rarely is there any means of knowing either the geographical distribution of each type of farmland or what proportion of the manor each type represented.

The foundation of numerous monasteries and nunneries in the twelfth century, followed by their rapid growth and organised exploitation of farmland, marked the beginning of a new era in the agricultural development of the region. In the chartularies of the larger monasteries<sup>2</sup> are recorded many details of their farming up to the time of the Dissolution, and from these it is possible to assess the part played by the monasteries in the agricultural life of the region.

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<sup>1</sup> Most of the records used are those reprinted by Farrer W. - Early Yorkshire Charters 1915 Vols. I-III; Vol. IX. These include conveyances, wills and the settlement of disputes.

<sup>2</sup> Chartularies of Guisborough Priory, Whitby Abbey and Rievaulx Abbey are published by the Surtees Society.

In the following pages agricultural changes on both lay and monastic land will be discussed in detail in the sub-regions already described.

Region I. The Northern Boulder-Clay Plateau.

Medieval farming in this small, coastal region can best be illustrated from a few manors for which the most complete records have been examined. The first of these manors is Liverton, which is referred to in a series of charters of the mid-twelfth century onwards.<sup>3</sup> The land was cultivated in three open-fields - Holmesclive, Waytehil<sup>4</sup> and Hutcroft, but in addition there was a fourth, referred to simply as "the new inclosure". The arable holdings divided among these fields are best exemplified by one of eighteen acres, consisting of twelve acres in Holmesclive and two acres in each of the other fields, including the "new inclosure"<sup>5</sup>, which thus appears to have been regarded as a fourth field. Tofts, or small inclosures, "--- twelve perches in width and the same length as the tofts of other men"<sup>6</sup>, were held in addition to the open-field strips. The tenants also enjoyed grazing rights in "the common woods and pastures".<sup>7</sup> Waste land lay outside the open-fields between "the waters of Skinninggrove and Scalebeck".<sup>8</sup>

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<sup>3</sup> Farrer W. Early Yorkshire Charters, Vol. II pp.236 - 239.

<sup>4</sup> For position see 6" O.S. map.

<sup>5</sup> Farrer W. Op. cit. p.237 No.892.

<sup>6</sup> Ibid. p.236 No.891.

<sup>7</sup> See note 5 above.

<sup>8</sup> See note 3 above.

Dunsley is another manor in which similar arrangements can be discerned from the few records which exist. The ploughland lay in the open-fields, and tofts were associated with each holding.<sup>9</sup> There was pasture "in the fields of Dunsley and Grededale, and in the woods and moors," one tenant holding grazing rights there for 200 sheep.<sup>10</sup> A small acreage of meadow was allotted to the tenants along with their other holdings. Similar details are available for Hawsker, Brotton and Ugthorpe, and records of open-field cultivation are extant for Loftus and Hinderwell also. The precise method of using the land is summed up by William de Thweng in his description of yet another parish - Moorsholm - written about 1341: "Est apud Lyttel Moresom unium messuagium et una carucata terrae debilis et morosae, continens lx acras de quibus duae partes possunt quoet anno seminari cum utroque semine precium acre iid, et tertia pars inde jacet quolibret anno in warecto et pastura inde nichil valet quia jacet in communi."<sup>11</sup>

The importance of sheep is shown best by the Nonarum Inquisitiones of 1341.<sup>12</sup> In most of the parishes for which such records exist, the Ninth of wool and lambs formed a valuable part of the total contribution. Moreover, in the records for both Loftus and Easington it is stated that "... this church is situated in the moors where the inhabitants make the greater part of their living by keeping sheep". The Nonarum shows

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<sup>9</sup> Farrer W. op. cit. Vol. II p.230 No.884 and P.240 No.897.

<sup>10</sup> Ibid p.242 No.899.

<sup>11</sup> Quoted by l'Anson, W.M. - Kilton Castle, Yorkshire Archaeological Journal Vol. XXII 1913 p.59.

<sup>12</sup> Nonarum Inquisitiones 1341. Record Commission Reprint, 1807.

however the great reduction in the value of wool and lambs between 1292 and 1341, caused by the frequent Scottish raids along the coast.

Farming during the medieval period was greatly influenced by the monasteries, founded in the early years of the period. In 1078 Whitby Abbey was re-founded in the southern part of the boulder-clay plateau, and was the first of the great monasteries to be established in north-east Yorkshire. At first it played little part in the life of the area - indeed it is not mentioned in the Domesday survey - and quite fifty years passed before it became active in moorland farming. During the twelfth century it rapidly increased its territorial possessions, first by gifts from lay landowners and later by purchase, the earliest acquisitions being near the abbey itself. Indeed, in the late twelfth century the Abbot of Whitby demanded that land for sale in Whitby itself must be offered first to the monastery.<sup>13</sup> Most of Whitby Abbey's possessions lay to the south of the Esk mouth, a smaller number spread to the north-west of the Esk and some were further afield in other regions of north-east Yorkshire. Guisborough Priory, situated outside the region, also held land in the boulder-clay plateau north-west of the Esk (Fig. 12), and Handale Priory too held a small amount of land there. By the end of the twelfth century these monasteries owned land in almost every parish in the region. Many of their holdings were of arable land in the open-fields, which the monks worked under the same conditions as

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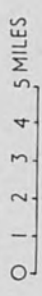
<sup>13</sup> Farrer W. op. cit. p.231 No.886.



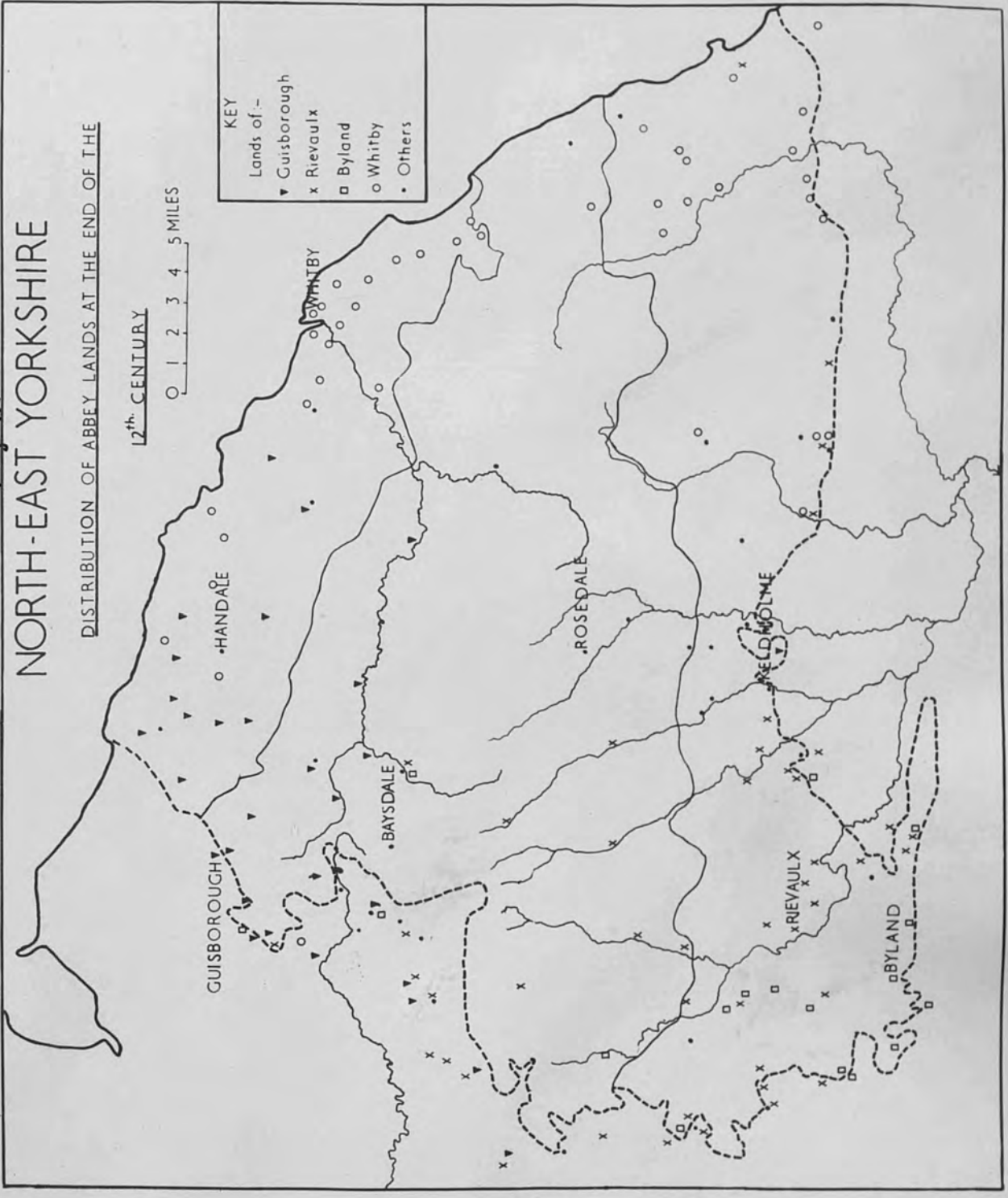
# Fig. 12 NORTH-EAST YORKSHIRE

DISTRIBUTION OF ABBEY LANDS AT THE END OF THE

12<sup>th</sup> CENTURY



KEY	
Lands of:-	
▼	Guisborough
x	Rievaulx
□	Byland
○	Whitby
•	Others



laymen. Such were the holdings of Whitby Abbey in Liverton, of Guisborough Priory in Brotton and Ugthorpe<sup>14</sup> and of Handale Priory in Dunsley. Grazing rights in the woods, moors and common fields were also subject to the same restrictions as those imposed upon laymen under the manorial system. Where the abbey holdings were particularly large, granges were established, most of those on the boulder-clay plateau belonging to Whitby Abbey and lying within four miles of the abbey itself. The earliest detailed records of farming on four out of five of these granges - Stakesby, Lathgarth, Whitby Lathes and Fyling - are found in an inventory of their products for the year 1394.<sup>15</sup> The inventory shows that both arable farming and animal-raising were carried on. The arable crops consisted mainly of wheat and oats, with much smaller quantities of barley and maslin. The total acreages of ploughland are not stated. Hay was grown on each of the granges. The animals kept there included sheep, cows, horses and goats. Besides the farmland on the granges, the monks also possessed extensive pasture rights from Whitby as far as Iburndale in the Esk valley. (Fig.12).

Reclamation of moorland and the clearing of woodland were carried out by the monks wherever they gained such land which was free from manorial restrictions. For instance, the waste land in Liverton was

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<sup>14</sup>. In Ugthorpe the prior gained rights "... in terra culta et inculta". Farrer W. Early Yorks. Charters Vol. II p.371 No.1062.

<sup>15</sup>. Whitby Chartulary, pp.318-320.

given to Whitby Abbey during the twelfth century and does not appear to have been used at all until the monks took over. In Fyling, where one of the granges was situated, a record of 1320 states that the Abbot "inclosed about eight or nine acres of moor on the southern part of Rethryg"<sup>16</sup>, a fairly large area to be inclosed at one time. Evidence of reclamation also comes from the sheltered valleys of Eskdale and Iburndale, where, in 1311 the monks were granted full pasture rights on any inclosures already made in either valley, "or in any other place whatever of the moors and waste"<sup>17</sup> which belonged to them. The implication is that the monks had made the inclosures, which appear to have been in the moorland, and the Lord of the Manor was now relinquishing his rights.

It is clear from the foregoing extracts, and in the absence of contradictory evidence, that the region was one of open-field farming in which manorial custom held sway. As the wealth of Whitby Abbey and other monasteries increased in the region, land was held in the manor under customary law and usage. Any deviation from this had to be sanctioned by the Lord of the Manor. It appears that farming was mixed, though with a certain emphasis on the keeping of sheep in some places. This emphasis seems to have been more pronounced among laymen

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<sup>16</sup> Charlton, L. A History of Whitby and Whitby Abbey, 1779, p.240.

<sup>17</sup> Ibid. p.236.

than on monastic holdings. It is also clear that the moorland and waste surrounding the open-fields was taken in and improved, chiefly by the monks. For this period no reference has been found as to the process of reclaiming moorland, except that the first step seems to have been inclosure, and the evidence points to reclamation on land below 600 feet.

### Region II. The Central Moors and Dales.

In the centuries following the Domesday Survey the dales in the western moorlands were settled and farmed almost entirely by the religious foundations, and during the period under discussion many abbeys, situated mostly in neighbouring regions, gained extensive tracts of land, both in the dales and in the adjacent moors. Famous abbeys to which these gifts were made included Guisborough, Rievaulx, Byland and Keldholme, all of which played an important part in moorland farming.

The extension of farming into the western moors and dales began soon after the founding of Guisborough Priory in 1119. A large tract of moorland in upper Eskdale was included in the founder's gift to the priory<sup>18</sup>, and this was followed in 1180 by another gift of moorland in the Cleveland Hills between Eskdale and the foot of the northern boundary scarp.<sup>19</sup> Gradually, with further gifts, the monks extended their estates down the Esk valley as far as Glaisdale, into the tributary dales to the south of the main valley and on to the high moorland summits between them.<sup>20</sup> This vast estate, embracing thousands of acres of unimproved

<sup>18</sup> Guisborough Chartulary, Vol.I, pp.190-201, No.86.

<sup>19</sup> Farrer W. op. cit. Vol.II, pp. 8-21, Nos. 659-662.

<sup>20</sup> Guisborough Chartulary, Vol.II, pp.190-201.

moor and woodland, lay almost entirely in the area which had been uninhabited at the time of the Domesday Survey. The monasteries were therefore responsible for the extension of settlement and farming to the remoter parts of the area. By the end of the thirteenth century the results of their enterprises were to be clearly seen. Six granges were established from which these lands were administered, and monastic records show that the area was developed primarily as grazing land for cattle and sheep.<sup>21</sup> Arable land remained insignificant, except for a small holding of eleven acres in the open-fields of Danby<sup>22</sup> (one of the few villis in the dale), which the monks were obliged to cultivate according to local law and custom.

At the same time the tributary valleys of Baysdale and Westerdale were being settled and improved. In Westerdale, Rievaulx, Byland and Baysdale Abbeys were all given substantial grants of land, which included a large proportion of pasture as well as smaller amounts of ploughland and meadow. By the end of the twelfth century, for example, Rievaulx alone possessed pasture in Westerdale for 500 sheep and six-score beasts<sup>23</sup>, and the nuns of Baysdale also had rights of pasture for 200 sheep and large numbers of cattle, pigs, horses and oxen. The combined arable land of the two houses made a total of only four bovates, which, as in the case of the Guisborough holding in Danby, formed part of the open-fields.

<sup>21</sup> For a full discussion of this see Waites B.F. The part played by the Monasteries in the mediaeval development of North-eastern Yorkshire. Ch.6, p.204.

<sup>22</sup> Guisborough Chartulary, Vol. II, p.188, No.924.

<sup>23</sup> Farrer W. op.cit., Vol.I, p.301, No.386, and Vol.II, p.109, No.774.

In the southern dales, where Rievaulx and Keldholme held most of the land, there was a similar development of large-scale pastoral farming. In Bransdale and Farndale, for example, both abbeys gained extensive pasture rights for sheep, beasts and pigs, but the monks appear to have cultivated only a small area, probably to provide food for the shepherds and herders.<sup>24</sup>

Bilsdale, the largest of the south-facing dales, was mainly in the hands of the monks of Rievaulx. By about 1148 the abbey had gained all the upper part of the dale, and the tributaries of Great and Little Raisdale (see Fig. 22), all of which was used as pasture.<sup>25</sup> The pastures also extended beyond the valleys on to the neighbouring moors. In "Kaldemor", for instance, between the heads of Bilsdale and Little Raisdale, the monks were allowed to graze all their animals from Little Raisdale except pigs and goats<sup>26</sup>, an arrangement which suggests a seasonal movement of sheep and cattle between the sheltered pastures of the dale and the high, exposed moorland, which here reaches 1,300 feet. The moors of Stainton further south were also used as pasture by the monks, at least as early as 1150.<sup>27</sup> These grazing lands, containing hundreds of acres all told, lay partly within the dales and partly in the moors to the west of the main valley, forming an estate comparable in all

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<sup>24</sup> Ibid. Vol.IX, p.92, No.12.

<sup>25</sup> Rievaulx Chartulary, p.226.

<sup>26</sup> Ibid.

<sup>27</sup> Farrer W. op.cit., Vol. III, pp.451-452, Nos. 1842-1845.

respects to the estates of Guisborough Priory in Eskdale. In Bilsdale, as in Eskdale, arable land was relatively insignificant and was confined to the open-fields belonging to the lay inhabitants.<sup>28</sup> There is no evidence to suggest that the monks ever attempted to develop arable farming in any part of the dale.

In the scarplands forming the western and northern moorland margins, both lay and monastic farmers were making extensive and varied use of the hitherto neglected moors, extending their activities upwards from the scarpfoot villis. Snilesworth and Whorlton Moors, which extend south-east from the scarp as far as the west side of Bilsdale, were grazed by the flocks of Byland Abbey by the early thirteenth century,<sup>29</sup> and were described as pastures in contemporary documents. All this moorland exceeds 900 feet in height and in places reaches 1,200 feet. Elsewhere in the scarplands reclamation of moorland was beginning to take place during the latter part of the twelfth century. In Ingleby Greenhow, for example, grants to the nuns of Keldholme included both 28 acres of the intakes which had already been made<sup>30</sup> and "the right to break up the moor as far as their land and pasture extend ...." The total extent of the intakes is not recorded; nor is there any record of the use the nuns made of this generous gift. Nevertheless, three significant facts emerge: first, that moorland reclamation was feasible, even with the limited means at the disposal of a medieval community;

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<sup>28</sup> As there is no mention of ploughland in Bilsdale in Domesday Book it can be assumed that clearing had taken place since 1086.

<sup>29</sup> Farrer W. op. cit., p.143, No.798.

<sup>30</sup> Ibid. Vol. I, p.450.

secondly, that encroachment on the moorland pastures was not only tolerated but actually encouraged; and thirdly, that people were feeling the need to extend the cultivated area beyond the old limits of the open-fields and were prosperous enough to undertake the reclamation of new land. In Great Ayton a parallel case of moorland reclamation is recorded, twenty-four acres of the newly-made intakes being granted to Whitby Abbey.<sup>31</sup> In neither case is there any information about the position of the intakes or the method by which they were reclaimed, but it seems certain that both resulted in the raising of the level of cultivation to higher altitudes than ever before.

Thus throughout the high, western moors and the broad dales which dissect them the monks were the pioneers who, in the twelfth century, extended farming into remote areas where previously it had never been practised.

Further east, where the moors are lower and unbroken by large dales, the monks gained very little land. This area lay almost entirely within the Royal Forest of Pickering, where the extension of farming was controlled, and in some ways impeded, by the enforcement of Forest Law. Grazing, though it was allowed in the Forest at certain times of the year, was strictly limited in order to preserve enough food for the wild animals, while sheep, goats, geese and swine, which were considered "uncommonable beasts", were banned altogether. Assarting and

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<sup>31</sup> Ibid. Vol. II, p.357, No.1044.



enclosure of parts of the Forest were generally regarded with disfavour. Nevertheless, Duchy of Lancaster records show that inroads into both moor and woodland were made almost every year from the early thirteenth century onwards. Most of this clearing was confined to the two large dales which cut into the easternmoors - Rosedale, with its tributary occupied by Hartoft Beck, and the Murk Esk and Wheeldale Beck, tributaries of the middle Esk. In Hartoft, for instance, between 1217 and 1338, forty-three assarts were made, with a total area of 112 acres.<sup>32</sup> Most of these assarts were very small, containing only two or three acres, and the largest single assart was only nine acres, but in spite of their small size the assarts made a noteworthy addition to the cultivated land of Hartoft.<sup>33</sup> The assarts were used mainly for arable and meadow. A record of the land-use has been preserved in a Forest survey of 1334-37, in which are recorded all the assarts made since 1217. During the 120 years covered by the survey spring corn and oats were the only crops grown, often with long periods of fallow between the sowings. At some time during the period, forty-seven acres of the assarts were used for these crops, though not necessarily all in the same season. Hay figures frequently in the records, being mown on forty-two acres. The remaining assarts were still unimproved at the time of the survey and do not appear to have been used for arable crops

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<sup>32</sup> Turton R.B. Honor and Forest of Pickering, Vol.II, pp.148-169. Coucher Book - Regard of the Forest of Pickering.

<sup>33</sup> Fig. 13.

Fig. 13

# NORTH-EAST YORKSHIRE

ASSARTS AND INTAKES 1100-1334

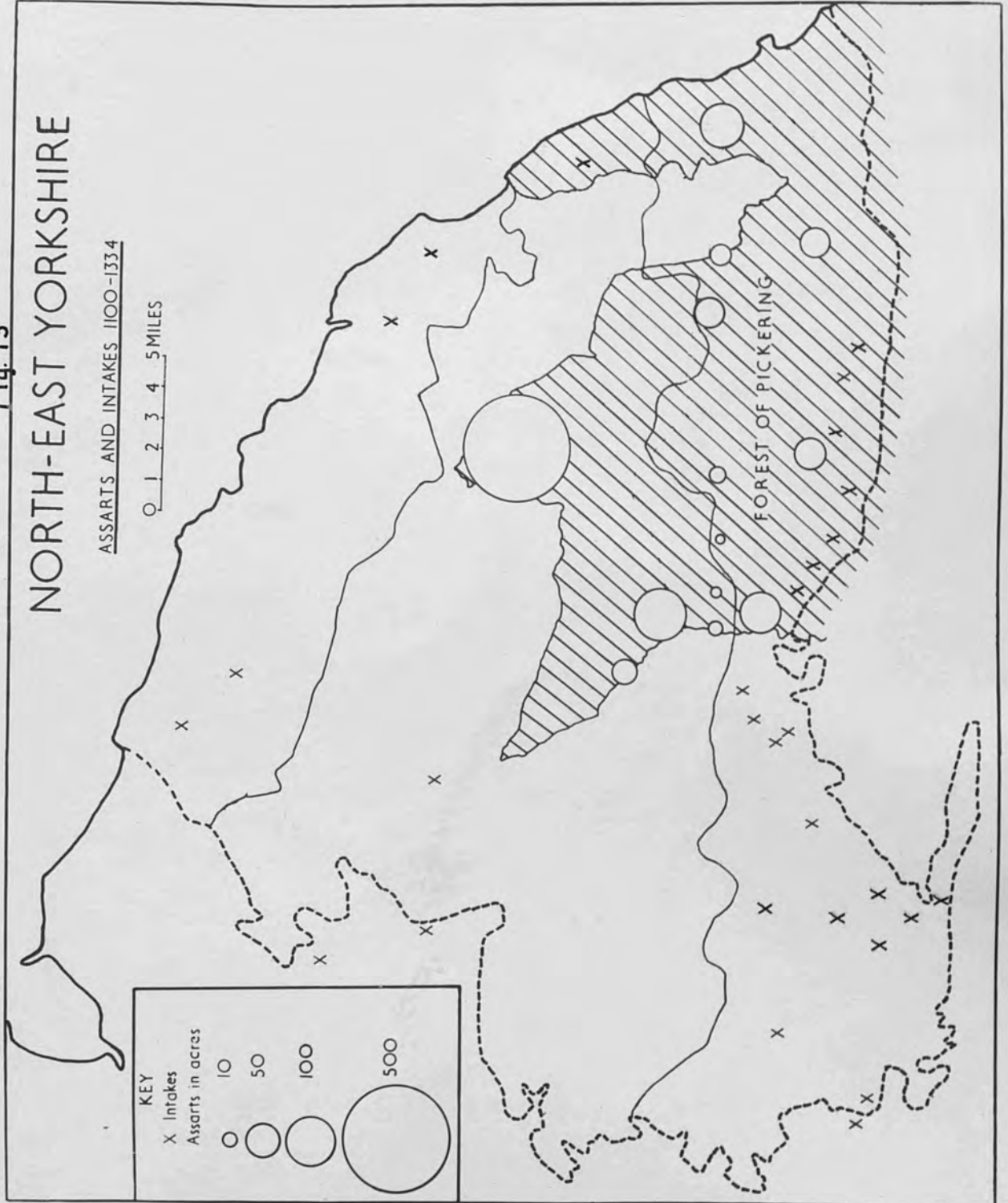
0 1 2 3 4 5 MILES

**KEY**

X Intakes

Assarts in acres

- 10
- 50
- 100
- 500



or hay at any time. None of the cleared land was used specifically for pasture.

In Rosedale, where land was being cleared both by the nuns of Rosedale Abbey and by the lay tenants, the assarts were fewer in number than they were in Hartoft, but considerably larger in size. Indeed, two assarts made by the nuns were of eighteen acres and twenty acres respectively and with the other smaller assarts made a total of forty-seven acres. At Trammire in Cropton Moor, assarts totalling nine and a half acres were brought into cultivation by the beginning of the fourteenth century (Fig. 13). All these assarts, both in Rosedale and in Trammire, were made "contrary to the Assize of the Forest", and the survey of 1337 resulted in the removal of several of the enclosing fences, particularly those round large assarts in Rosedale. Most of the enclosed assarts were left undisturbed, however, and were thus among the first to be tolerated in Pickering Forest. This marked the beginning of the slow change-over from hunting to cultivation as the chief feature of land utilisation in the area.

Further north-east the valleys of Wheeldale Beck and the Murk Esk combine to form a broad area of comparatively low land, which, until the fourteenth century was mostly covered with woodland. In the part of the Murk Esk valley known as Allantofts (Fig. 13) many assarts were made during the late thirteenth and early fourteenth

centuries. These are recorded in great detail in Duchy of Lancaster documents,<sup>34</sup> thus making it possible to trace the progress of land improvement with greater precision than is possible elsewhere. The first encroachment was made in 1273, when enclosure of land and the building of a house created a new farm where previously there had only been woodland.<sup>35</sup> Clearing continued, and some years later a total of 160 acres had been reclaimed, enclosed and tilled.<sup>36</sup> In 1317 a list of the offences of vert in the Forest included the cutting down of over 200 oaks and a whole alder plantation in Allantofts. The felling of this timber had been carried out over a long period, but it all added to the amount of cleared land available for cultivation. Other large inroads into the Forest were those made by Robert Coniscliffen, who "... of old, caused an assart and encroachment to be made of 190 acres 1 rood within the demesnes of Goathland and Allantofts", and his successors also cleared another 308 acres "in the same place."<sup>37</sup> These two assarts amounting to almost 500 acres made a very considerable inroad into the royal hunting ground, and Allantofts figures to only a small extent in later surveys of Forest trees. Indeed, the improved farm land in Allantofts today still amounts to less than 700 acres, and it is clear that most of the cultivable land up to a height of about 600 feet had been cleared by

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<sup>34</sup> Turton R.B. op. cit. Vol. II, p.215.

<sup>35</sup> Ibid., p.37. This farm was rented at ten shillings per year.

<sup>36</sup> Ibid., p.43-44.

<sup>37</sup> Ibid., p.175.

the middle of the fourteenth century.

Unfortunately the Forest surveys include no record of land utilisation in Allantofts, and the use which was made of the newly cleared ground can only be surmised by comparison with other areas near at hand. In an account of the farming enterprises of the Abbot of Whitby in Goathland at about the same time the main item was a herd of cows for which the Abbot claimed common pasture in the Forest.<sup>38</sup> Sheep and "such like animals" were pastured on the common, and the Abbot held in addition "... land tilled and sown, and meadow that may be mown every year ...". Very great variations in farming practice are unlikely to have occurred within one parish, and it seems most likely that the rearing of cattle and sheep, the growing of hay for winter fodder, and grain crops in the more favourable situations, was characteristic of most of the settled part of the dale, including Allantofts.

The moors to the east of Rosedale and the Murk Esk contained remarkably little cultivated land, and it was only on the boulder clay in the valley of Hayburn Beck that reclamation was proceeding in medieval times. This small, fertile oasis, lying below 600 feet, with the high grit moorland surrounding it, belonged to Whitby Abbey and was farmed by the Abbey until 1230, when it was leased to Bridlington Priory. The charter confirming the lease describes in unusual detail the variety of purposes for which the land was used.

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<sup>38</sup> Ibid., Vol. IV, pp.12 and 21. Presentments of Pickering Eyre to Articles relating to the Abbot of Whitby and his men.

The main part was to provide "common-pasture for 50 cows and their offspring to the age of 3 years, so that they may feed over all that pasture without watch or ward ...." The Abbot of Whitby, however, reserved for his own use "... the newly broken up closes, intakes and meadows which he had there before this agreement", and also "... 500 acres within the aforesaid bounders<sup>39</sup> which he might take in, cultivate and purvey at his pleasure." The actual amount of land which the Abbot reclaimed is not recorded, but "500 acres within the aforesaid bounders" suggests a fairly ambitious programme of land improvement.

The evidence of clearing and cultivation which has been quoted covers a number of widely scattered localities. It is clear that in medieval times improved farm land was confined within the dales, where, as far as can be ascertained, all the land reclaimed for cultivation lay below 600 feet. The moors themselves remained heather-covered, used in places for pasturing animals, especially sheep and cattle. The emphasis on pastoral farming shown by the monasteries on their improved land contrasts sharply with the predominantly arable farming of the lay farmers, some of whose improved land was added to the open-fields while some was enclosed and cultivated outside them.

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<sup>39</sup> The area lay between Hayburn, Keysbeck and Hellwath.

Region III. The Corallian Outcrop.

Medieval farming in this broad limestone upland was mainly centred on the numerous vills which had been established before the Norman Conquest. After the depopulation of 1069, farming was quickly re-established in the region as a whole, but recovery did not take place in some manors until the coming of the monasteries. Monastic farming began soon after 1131, when Rievaulx Abbey was founded in the south-west of the region. At its foundation the abbey was endowed with nine carucates of land at Griff and Stiltons<sup>40</sup> close by, and this was soon followed by other acquisitions of farmland, many of them within a few miles of the abbey but some extending eastwards almost to the coast. Byland Abbey, Keldholme Priory and Arden Priory were also established in the region - Byland and Keldholme on the southern margin and Arden in a secluded part of upper Ryedale. All of them gained farmland, most of which lay within a few miles of each abbey in the western part of the region (Fig.12). St. Mary's Abbey, York, Yedingham Priory and several smaller monasteries situated outside north-east Yorkshire also held land in the Corallian Hills, mostly in the parishes to the west of Rosedale. Thus, it was in the western half of the Corallian Hills that monastic influence was greatest, and indeed by the end of the thirteenth century the five chief monastic landholders had acquired land in thirty-one of the

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<sup>40</sup> Rievaulx Chartulary, p.22.

thirty-six parishes to the west of Rosedale.

Arable land gained by the monks usually lay in the open-fields, where it was worked under the same conditions as those observed by laymen. One such holding was that of Rievaulx Abbey in Nawton, where 96 acres held by the abbey were scattered through the fields in numerous small parcels.<sup>41</sup> Similar holdings were worked by Rievaulx in Welburn and Wombledon,<sup>42</sup> by Byland in Oldstead, Wass and Cold Kirby,<sup>43</sup> by Keldholme in Kirbymoorside<sup>44</sup> and by St. Mary's in Appleton-le-Moors, Hutton-le-Hole and Spaunton,<sup>45</sup> where the holding amounted to twenty-three carucates.

Many additional gifts were of grazing rights, particularly for sheep. The grazing rights held by Rievaulx Abbey lay mostly to the west of Kirkdale and extended into practically every parish. Their grange of Skiplam seems to have been one of the main sheep-raising centres and one of the few places in the Tabular Hills where moorland was used for sheep pasture, the monks being granted common pasture for 300 sheep "... in quandam mora quae continet circiter trecentes acras..."<sup>46</sup> In the neighbouring parish of Nawton, on the other hand, the grazing rights lay entirely in the arable fields, the monks being allowed to turn 300 sheep on to three carucates in the fields.<sup>47</sup>

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<sup>41</sup> Ibid., pp.21-11.

<sup>42</sup> Farrer W. op cit. Vol. IX, pp.228-232, Nos. 145, 150, 151.

<sup>43</sup> Ibid., Vol. IX, p.148, No.76.

<sup>44</sup> Ibid., p. 92, No. 12.

<sup>45</sup> Ibid., Vol.I, pp.263-270.

<sup>46</sup> Rievaulx Chartulary, p.401.

<sup>47</sup> Ibid., pp.210-11.



In Beadlam also the monks had rights in the common pastures for an unspecified number of ewes and lambs. The provisions made for the free passage of sheep between Beadlam and Nawton, and the grange at Skiplam suggests that seasonal movements of sheep might have taken place in order to make the best use of fallow land and stubble in the arable fields, and open moorland on the hills. Near Rievaulx Abbey itself, in Griff, Stiltons, Pockley and Helmsley, the monks of both Rievaulx and the subsidiary abbey of Kirkham held grazing rights, including pannage for pigs, which they shared with the villagers.<sup>48</sup> West of the abbey, in the Hambleton Hills, the monks of Rievaulx also had extensive grazing lands. In Sproxton alone there was grazing for at least 1,000 sheep,<sup>49</sup> and in Boltby, Ravensthorpe and Thirlby for another 400.<sup>50</sup> Other animals were included too: "Idem monachi habebunt in eadem pastura quatuor carrucas boum, unamquamque de viii bobus, et vaccas, cum secta et exitu sarum, et duos tauros et vi equos, et sues cum exitibus earum ...." At Sproxton also provision was made for thirty-five cows, two bulls and forty-eight oxen.<sup>51</sup> Some of the grazing land lay in the open-fields, but some was also in the moors and woods.<sup>52</sup> All was administered from the grange at Sproxton Cote. Other large areas of woodland and moorland grazing were administered

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<sup>48</sup> Ibid., pp. 22, 160.

<sup>49</sup> Ibid., pp. 79, 125, 291, 292.

<sup>50</sup> Ibid., p. 65.

<sup>51</sup> Ibid., p. 293.

<sup>52</sup> Ibid., p. 79.

<sup>53</sup> Ibid., pp. 45-46.

from Hesketh Grange, most of this land being in the high, northern part of the Hambleton Hills, at heights exceeding 1,000 feet. One such area consisted of part of the waste below Hesketh ("... unam partem deserti subtus Hestechait adjacentis Boltebia").<sup>53</sup> The bounds were described carefully but are difficult to follow on a modern map. The area seems to have been a large one, however, lying roughly between Hesketh Grange, Lunshaw Beck and Murton. Another large area consisted entirely of "... communem pasturam morae suae et bosci sui quam ipse Petrus habet inter villam suam Hardeniae (Arden) et grangiam monachorum de Hesteskeid."<sup>54</sup> This is the only reference that has been found where the moors are specifically described as communal pastures. Also administered from Hesketh Grange was the highest part of the entire region, comprising Arden Moor and Black Hambleton. The woods and moors were leased to Rievaulx Abbey as grazing lands by the prioress of Arden,<sup>55</sup> but there is no record of the animals they kept there.

Byland Abbey also held grazing lands in the Hambleton Hills, but they were much less extensive than those owned by Rievaulx, and sheep were grazed at Kepwick and Ampleforth, the monks having pasture rights for 200 animals in each place. On the granges at Murton and Old Byland, where the abbey held all the grazing rights, cattle were more important.<sup>56</sup> While there is no means of knowing how many

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<sup>54</sup> Ibid., p.33.

<sup>55</sup> Ibid., p.90.

<sup>56</sup> A special grant gave the monks of Byland free access to a spring in Dale for their cattle at Murton Grange. Burton. Ecclesiastical History of Yorkshire, 1753. pp. 329-332.

animals were owned by the monasteries, it is clear that grazing rights were distributed over most of the area and must have supported flocks and herds of considerable size.

Side by side with monastic farming went the clearing of woodland and reclamation of moorland, which was taking place in many parishes. Documents of the early thirteenth century record the existence of assarts, most of which were made by lay landowners, on the lower, southern part of the lime-stone plateau. In Hutton-le-Hole, for example, two assarts near Rumesdale were made by William de Stuteville early in the thirteenth century,<sup>57</sup> and another was given to St. Mary's Abbey. This was an area called "Hogthuet", which was cleared (sartatum) "the day this charter was made",<sup>58</sup> but the owner stipulated that no more assarting was to be done by the monks without his consent.

In Helmsley a very large area seems to have been improved during the twelfth century, before the land was given to Rievaulx Abbey. The grant to the abbey included all the improved land and woods ("... totum sartum meum et boscum...") belonging to Everard de Ros,<sup>59</sup> an area which, from the description of its bounds, seems to have occupied the same position as Duncombe Park at the present day (see map at end). In Sproxton also there were two assarts large and important enough to be distinguished by individual names - Batingge Riding and Siwenes Riding.<sup>60</sup> There is little to indicate the size of

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<sup>57</sup> Farrer W. op.cit., Vol. IX, p.105, No.27.

<sup>58</sup> Ibid., p.87, No.6.

<sup>59</sup> Rievaulx Chartulary, p.23.

<sup>60</sup> Ibid., p.292.

these assarts, but it is clear from the record that an area of at least twelve acres was involved. This clearing resulted in a change in land-use from rough grazing to arable farming.

For monastic clearing there is little evidence, but the monks of Rievaulx were responsible for a considerable amount of improvement in Hoveton, the whole of which manor was given to the abbey during the twelfth century.<sup>61</sup> From the description of the manor given in the original charter it seems probable that most of the land was uncultivated. Twenty years after the gift was made a mandate of Pope Alexander III ordered the restoration to Rievaulx Abbey of "all wood and newly cultivated land in Hoveton" unjustly seized by the donor, Robert de Stuteville.<sup>62</sup> At least three more assarts were made in Hoveton by the monks before 1180,<sup>63</sup> thus adding to their holding of improved land.

At Skiplam near the edge of the Corallian scarp, where Rievaulx Abbey established one of its granges, the monks were given freedom to improve the land if they wished. One of the early grants, for example, was of land "... ad calendum et sartendum et utendum in omnibus sicut suis propriis."<sup>64</sup> It is difficult to ascertain exactly how much use the monks made of this provision, but Skiplam certainly became an important farming centre. As it was not a vill at the time of the Domesday Survey, all the land in Skiplam which was cultivated in the twelfth century was likely to have been reclaimed some time after 1086

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<sup>61</sup> Farrer W. op. cit. Vol.I, p.211.

<sup>62</sup> Ibid., Vol.IX, p.218, No.132.

<sup>63</sup> Ibid., pp.90 and 217.

<sup>64</sup> Rievaulx Chartulary, p.30.

This was true also of Newlathes, in a similar physical situation, which became a grange of Rievaulx Abbey during the twelfth century, though here again there is no direct reference to reclamation in any monastic charter. Freedom to enclose and improve was often granted to the monks when gifts of unimproved moorland and woodland were made, but there is usually no record to show whether the privilege was used or not. This is the case at Oswaldkirk and at Antofts, where the monks of Rievaulx received land.<sup>65</sup> It is clear, however, that the landowners who donated land to the monasteries were well aware of the monks' desire to extend their improved land. The only area for which there is no record of permission to reclaim is the large area of moorland and woodland belonging to Arden Priory, where the high altitude of the land (over 1,100 feet) rendered it unsuitable.

Thus, from the deep trench of the River Seven westward to the high, exposed plateau of the Hambleton Hills slow but significant changes appeared in the land utilisation of medieval times. Manors, such as Hoveton and Griff, which had been neglected since 1069 were converted into useful crop and pasture land; sheep rearing was extended and became the main activity on some monastic granges; some new settlements were established, notably the granges at Hesketh and Skiplam, which became the administrative centres of large monastic holdings. In many places, assarting and moorland reclamation resulted

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<sup>65</sup> Ibid. pp.235 and 214.

in a slow, piece-meal extension of the improved land. In all these changes the monasteries played an important part. Eastward from the valley of the Seven almost the whole of the Corallian region lay in the Forest of Pickering. The only part of the eastern Corallian Hills not included in the Forest was a small area to the north-east of the Derwent and the present Sea Cut (Fig. 13), and it was in this area alone that a monastery - Whitby Abbey - gained complete control of the farmland.<sup>66</sup> Here arable farming was centred on the grange at Hackness,<sup>67</sup> where wheat, barley, oats and hay were grown, though there were arable holdings in the other parishes also. Pasturage for animals included both the improved land and the moors and woods. This is illustrated particularly clearly by a charter relating to land in Hackness and elsewhere, by which Whitby Abbey received right of common pasture in the arable fields and "... com. pasturae in moris et vastis quae sunt extra Acregarth<sup>68</sup> in praedictis villis."<sup>69</sup> Pannage for pigs in the woods at Broxa<sup>70</sup> was also included, but there is no record of other animals being kept in the area. Other uses of the moors and woods are not recorded, and it seems likely that apart from establishing the grange the monks made few changes in the farming of the area.

Elsewhere in the eastern Corallian Hills within the Forest of Pickering acquisition of land by the monasteries was curtailed to some extent, as noted already in Region II, and although the abbeys

<sup>66</sup> Whitby Chartulary, p.3.

<sup>67</sup> Ibid., pp.318-320.

<sup>68</sup> Acregarth = open-field.

<sup>69</sup> Whitby Chartulary, p.429.

<sup>70</sup> Ibid., pp.221, 271.

did gain property within the Forest from the early twelfth century onwards the amounts were generally smaller and the holdings more scattered than in other parts of the Corallian outcrop.

In the West Ward of the Forest, between the Seven and Thornton Dale, the abbeys gained land in only seven of the fourteen townships. The arable holdings were all small, consisting of no more than a few bovates in the open-fields of five of the townships.<sup>71</sup> Grazing rights were more extensive. In Lockton, for instance, where Rosedale Abbey held only one bovate of arable land with a toft and a croft, the grazing rights included 200 sheep, a team of oxen, two horses, ten cows and a bull, which between them must have required fairly extensive pastures.<sup>72</sup> In Pickering, both the monks of Rievaulx and the hermits of Goathland held grazing rights, the monks using the waste land in the Vale of Pickering<sup>73</sup> and the hermits having rights "for all their flocks"<sup>74</sup> in the open-fields. Grazing rights in the other townships were confined similarly to either the open-fields, as in Thornton,<sup>75</sup> or the woods and moors, as in Middleton<sup>76</sup>, while the animals allowed to graze there were usually sheep. In every case the monks shared the grazing with the lay tenants and were therefore not free to use the land for any other purpose.

<sup>71</sup> Farrer W. op. cit., Vol.I, p.156; Vol.IX, p.127, No.56. The townships were all in the parishes of Pickering, Ellerburn and Middleton.

<sup>72</sup> Ibid, Vol. I, p.307

<sup>73</sup> Rievaulx Chartulary, p.110.

<sup>74</sup> Farrer W. op.cit., Vol.I, p.310.

<sup>75</sup> Rievaulx Chartulary, p.280.

<sup>76</sup> Tithe Cause Papers quoted by Purvis J.S. Yorks. Archaeological Journal, 1944-47, p.441.

Changes in land-use in the Forest of Pickering were entirely the concern of the lay tenants, whose efforts to reclaim parts of the Forest were severely impeded by Forest Law. From the thirteenth century onwards, however, the felling of timber proceeded rapidly, usually without permission.

Assarts in the western part of the Forest were located in Levisham, Cropton and Kingthorpe<sup>77</sup> (Fig. 13). In Levisham, four assarts had been made by 1300, mostly in a now unidentifiable area called Stainthwaite. The largest contained nine acres and was used for hay. Two of the others were of two acres each, and one was sown with spring corn. For the remaining assart there is no record of either the size or the use to which it was put, but the statement that the Steward "inclosed it and took rent for it" suggests that the land was improved.

Many assarts were made in Cropton, which lies near the western edge of the Forest. In the early fourteenth century, for example, an assart of eight acres and another of sixteen acres were made in a part of Cropton known as Bartondale. Elsewhere in Cropton five assarts, comprising a total of thirty-two acres, were made during the late thirteenth and early fourteenth centuries.

The assarts in Kingthorpe were made during the fourteenth century and were remarkable for their large size. One of them consisted of nine acres in Kingthorpe Wood and had been sown once with

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<sup>77</sup> Turton R.B., op.cit., Vol.II, pp.37, 148, 174.



spring corn at the time of the survey in 1337. Most of the assarting in Kingthorpe was carried out by one tenant - Roger Mansergh. By 1323 he possessed an inclosed assart of twelve acres and another of four acres,<sup>78</sup> and in 1334 he and his wife were given permission to "... assart and break up twenty acres of waste on their own land."<sup>79</sup> The use which Roger Mansergh made of his assarts is interesting. The sixteen acres in use in 1323 appear to have been cultivated in some years, but with long periods of fallow in between, a practice which prevailed in other places also. The twenty acres which were to be reclaimed after 1334 were to be used partly for tillage and partly for pasture and meadow, thus representing each type of farm land. By the time Roger Mansergh's twenty acres were reclaimed the area of improved land west of Thorntondale would amount to approximately sixty acres.

No assarts are mentioned in other parishes in this part of Pickering Forest between Newtondale and Rosedale, but there is evidence to suggest that a number of encroachments had been made from time to time for which a special rent was charged, as shown in the

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<sup>78</sup> Ibid., Vol. II, p.242.

<sup>79</sup> Ibid., Vol. IV, p.126.

following table:

Table 4. ENCROACHMENTS in the Western Part of Pickering Forest.<sup>80</sup>  
(late 13th - early 14th century)

Position of Encroachment	Size (acres)	Rent	Crop
1. Cropton	2	6d.	Wheat
2. Cropton	10	5/-	Oats
3. Wrelton	8	4/-	Oats
4. Middleton	20	10/-	Oats
5. Middleton	.1/2	3d.	Oats
6. Pickering	10 )	10/-	Oats
7. Pickering	10 }		Oats
8. Kingthorpe	3	3/-	Wheat
9. Kingthorpe	2	2/-	Wheat
10. Ellerburn	3	1/6	Oats
11. Wilton	40	20/-	Oats
12. Cropton	10	5/-	Oats
13. Aislaby	9	4/6	Oats
14. Pickering	9	4/6	Oats
15. Pickering	10	5/-	Oats
16. Stainton	3 )	5/6	Wheat
	5 }		Oats
Total Acreage	118.1/2		

<sup>80</sup> Compiled in order given from Turton R.B. op. cit., Vol.II, pp.215 et seq. It will be noted that with one exception, oat land paid 6d. per acre and wheat land 1/-.

It is clear from the examples shown in this table and from the assarts which were made in Cropton that all the cleared land was used for arable crops.

In the East Ward of the Forest, from Thornton Dale eastward to the scarp overlooking the coastal plain, abbey property was confined to seven parishes bordering the Vale of Pickering. Here, as in the west ward, the monastic holdings were generally small, consisting of a few bovates of arable land, small amounts of meadow, and grazing rights for sheep, all of which was controlled by manorial custom. In the numerous dales which reach the Derwent on the west, and on the plateau surrounding them, there was no abbey property whatever. There is abundant evidence to suggest that this area was very well wooded, especially in the dales. The extent of woodland beyond the dales is difficult to estimate, but it seems likely that in some places at least, woodland extended on to the plateau surface. In Troutdale, for example, the boundary of a wood held by Gilbert de Ayton is described in detail, and there is no doubt that it covered parts of both the dale and the neighbouring plateau.<sup>81</sup>

From the twelfth century onwards intakes and assarts were made by the lay tenants in many places, though reclamation seems to have proceeded slowly at first. Intakes in Givendale (in Allerston) made by laymen and given to Rievaulx Abbey in 1160 represent some of the earliest improvements.<sup>82</sup> Givendale is a deep, narrow valley which

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<sup>81</sup> Turton R.B. op. cit., Vol. III, p.98.

<sup>82</sup> Farrer W. op. cit., Vol. I, p.301, No.386.

has been cut in the plateau immediately north of Allerston (see map at end), and it is one of the few such valleys in which reclamation is recorded. It is of particular interest as the intakes do not appear to have been added to the open-fields. During the fourteenth century reclamation became more widespread. In Wykeham and Ruston two assarts of twenty acres each were made in 1337,<sup>83</sup> and it is an interesting reflection of the changing attitude on the part of the Forest Stewards that such large encroachments were tolerated. In the dales west of the Derwent assarts were also being made on a fairly large scale. In Langdale, fourteenth century Forest Surveys record an assart of twenty acres made in 1337,<sup>84</sup> and the felling of sixty-two trees in the dale, of which fifty-five of the stumps were "... from trees sold to fermors at the grubbing up of their closes."<sup>85</sup> At about the same time, an area of forty acres of Forest land at Bickley was enclosed and sown with oats<sup>86</sup> (see map at end). The tenant also built a house there. Bickley lay in a part of the Forest which was uninhabited at the time of the Domesday Survey and it seems, therefore, that this new farm and the forty acres surrounding it represented the beginning of a new type of settlement - the isolated farm. Even today there is no village settlement in the dales lying west of the Derwent, but the land is worked from a number of farms in widely scattered situations.

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83 Turton R.B. op. cit., Vol. II, p.171.

84 Ibid. Vol. II. p.171.

85 Ibid., p.188.

86 Ibid., p.174.

On the boulder-clay lowlands near the coast woodland was particularly extensive, and of the larger monasteries only Whitby Abbey and Bridlington Priory gained small areas of arable land, two carucates in Burniston belonging to Whitby,<sup>87</sup> and two ploughlands of ten acres in Cloughton belonging to Bridlington.<sup>88</sup> These holdings were worked in the open-fields and the monks had little opportunity to add to the acreage by reclamation. Indeed, encroachments into the Forest were resisted in this area until the mid-thirteenth century. In 1256 the Manor of Falsgrave was disafforested and granted to the Burgesses of Scarborough so that they could "... build, inclose and approve on that land and have free warren."<sup>89</sup> Thus, reclamation of former Forest land was given official sanction. In 1337, a survey of the Offences of Vert committed in the Forest revealed that the felling of timber had been going on at an alarmingly rapid rate. In Scalby Hay alone 2,141 tree stumps were reported in the demesne woods,<sup>90</sup> in addition to 650 oaks which had been felled elsewhere. In Fullwood, which was appurtenant to Burniston, Cloughton, Scalby and Newby, the woods were found to have been "... wasted of old, and have recently been wasted again ..."<sup>91</sup>, thus indicating that the felling of timber was proceeding more or less continuously. Whether the felling was carried out with a view to

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87 Whitby Chartulary, p. xlvihi.

88 Farrer W. op. cit., Vol. I, p.283. A note quoted from the Chartulary of Bridlington Priory.

89 Turton R.B. op. cit., Vol. II, p.222.

90 Ibid., Vol. II, p.188.

91 Ibid., Vol. II, p.176.

clearing the land for cultivation or merely for the profit which could be gained from the timber, is not always certain. There is no record of cultivation in Scalby Hay, and the fact that over 2,000 stumps were left in the ground without being grubbed up indicates that the land was not intended for immediate reclamation. In Fullwood, however, it was noted in 1337 that eighty acres had been enclosed with a ditch<sup>92</sup> - evidently the first stage in improvement.

By the end of the fifteenth century the long-continued process of assarting, along with the felling of timber for other purposes, was beginning to make its mark, and was still continuing. For example, in 1489 Ellis Close, two miles north-west of Cloughton, contributed 300 oak trees for the repair of "... the Getye and Key of our Towne of Scarborough"<sup>93</sup>, a loss of growing timber which must have resulted in the clearing of a considerable area of land. Ten years later Ellis Close was being described not as woodland but as pasture.<sup>94</sup> The same description was applied also to Scalby Hay, where the clearing of woodland had been proceeding for over a century. From this it may be deduced that domesticated animals were grazing in both places instead of the deer and wild boar of former years.

Thus, by the beginning of the sixteenth century the process of reclamation was well under way. Complaints about "divers assartes" made within the Forest without permission or right continued to appear

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92 Ibid. p.170.

93 Ibid., Vol.I, p.122.

94 Ibid., Vol. I. p.131.

from time to time in the Duchy of Lancaster records, showing that the Forest was gradually being reduced in size by the encroachment of cultivated land and improved pasture.

This eastern part of the Corallian Hills was one of the few areas in the North York Moors where the abbeys played little part in the land-use changes. While abbey possessions in the region were fairly numerous, the individual holdings were unsuitable for the development of the large-scale farming practised elsewhere by the monasteries. Moreover, with the exception of Yedingham Priory, all the monasteries were situated at great distances from their holdings in this area, and it is probably for this reason that many of the holdings were soon leased to lay tenants for the payment of a yearly rent,<sup>95</sup> thus diminishing still further monastic influence in this district.

Throughout the Corallian region the general distribution of the different types of farmland bore a similar, well-defined relationship to the physical conditions of soil, altitude and drainage. This relationship emerges clearly in some parishes for which particularly comprehensive records have been found. In Kirbymoorside, for instance, meadowland "... near the boundary of Edstone",<sup>96</sup> and "... common pasture in the moor near Bowforth",<sup>97</sup> given to Keldholme

<sup>95</sup> Whitby Chartulary, p.139. Five bovates in Irton were let for a rent of half a mark. p.218 - pasture rights in Suffield, Everley and Hackness were let to the Prior of Bridlington.

<sup>96</sup> Farrer W. op. cit., Vol. IX, p.92, No.12.

<sup>97</sup> Ibid., p.90, No.10. "Moor" was used here to denote rough grazing land at a low altitude, and not in the sense generally employed in this thesis.

Prior during the twelfth century were all on the low-lying, marshy floor of the Vale of Pickering. The arable fields adjoined Kirkdale, a plateau settlement. The wood of Ravenswyke, which belonged to Kirbymoorside, occupied the steep sides of the Dove valley where it cuts through the Corallian limestone.<sup>98</sup> In Pickering a similar arrangement is apparent. Here, waste land lay "below the town"<sup>99</sup>, i.e., in the Vale of Pickering. During the twelfth century a large area of this land was given to Rievaulx Abbey, extending southwards from Pickering to the Derwent and eastward from Pickering Beck to Allerston Beck, thus including a substantial part of the ill-drained lowlands of the Vale. This became meadow and pasture.<sup>100</sup> Arable land in Pickering parish lay in open-fields,<sup>101</sup> and it seems likely that as the land to the south of the town was uncultivated the arable must have lain to the north, on the better-drained, lower slopes of the Corallian limestone plateau. Woods in Pickering were widespread, as shown by Fig. 14, which has been compiled from names mentioned in Duchy of Lancaster records.<sup>102</sup> It shows clearly that woodland

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<sup>98</sup> Ibid., p.92, No.12.

<sup>99</sup> Rievaulx Chartulary, p.110.

<sup>100</sup> Ibid., p.128.

<sup>101</sup> One carucate of arable land in Pickering was given to the hermitage of Goathland early in the twelfth century "... to be cultivated among the carucates of the demesne." Farrer W. op.cit., Vol.I, p.310.

<sup>102</sup> Turton R.B. op.cit., Vol.II, pp.130-139; 176-188.



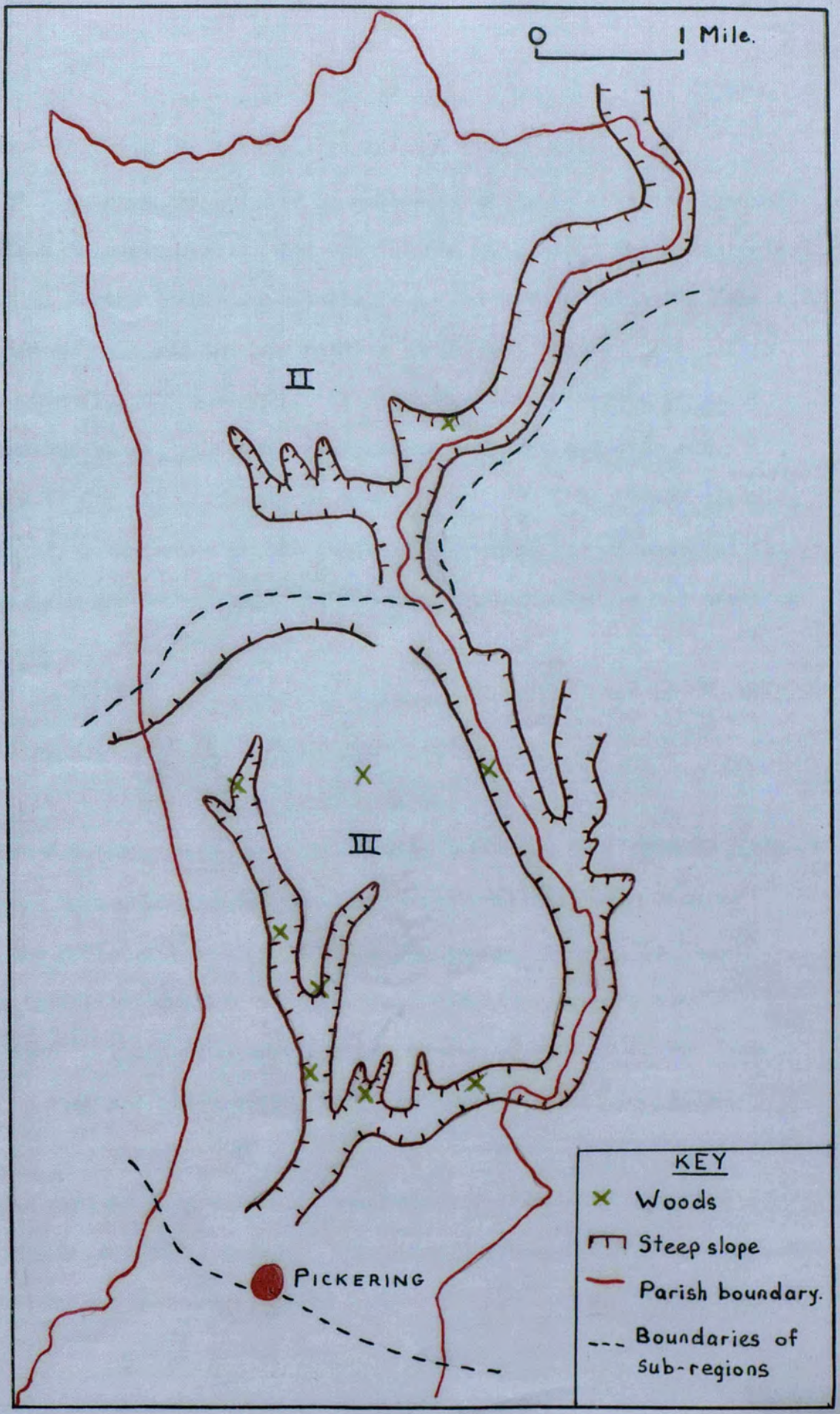
extended along the sides of the valleys and on to the flat-topped spurs separating them. In places as far apart as Scawton in the west and Wykeham in the east, the same general arrangement of the farmland is discernible - the arable land occupying the Corallian limestone plateau itself at altitudes of from 350 to 600 feet,<sup>103</sup> the meadow in the Vale of Pickering and on the narrow floors of the dales which dissect the plateau, and the woodland on the steep valley sides, extending in places outwards from the valleys on to the plateau surface.

Between the Domesday Survey and the Dissolution of the Monasteries, land-use in the Corallian limestone hills underwent many small changes even though the overall distribution of the types of farmland remained the same. The open-fields, which continued to be the mainstay of agriculture throughout the period, were enlarged in many places by the addition of woodland clearings and moorland intakes. Some intakes were enclosed and were cultivated apart from the fields. From the evidence available it seems likely that most of these were at comparatively low altitudes, below 600 or 700 feet, though the long periods of fallow to which they were subject suggests that they lay in areas of inferior soil. There is no evidence of

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<sup>103</sup> The precise position of the arable fields is shown on eighteenth century enclosure maps. See *infra*. Ch. VI.

Fig. 14 THE LOCATION OF WOODS IN PICKERING IN THE 14<sup>th</sup> CENTURY. 96.



the method by which the land was reclaimed, though both in the Forest of Pickering and outside its enclosure seems to have accompanied reclamation in most cases. The acquisition of land by the monasteries resulted in further changes, especially in the area outside the Forest of Pickering. It was the monasteries which were chiefly responsible for the extension of grazing in the highest and most remote parts of the limestone hills, where the altitude of 800 feet and over was unfavourable for the extension of arable farming. Thus, by the clearing of woodland, reclamation of moorland and increased use of moorland for grazing, both arable and pastoral farming were extended in all parts of the region.

The foregoing pages have dealt with the three sub-regions of the North York Moors, and it now remains to summarise the main changes during the medieval period. The region emerges as an area where farming increased steadily in extent and prosperity during the Middle Ages. This often involved the re-use of land which had been wasted in 1069 and the reclamation of moor and woodland for both arable and pasture.

The pace of progress was quickened by monastic farming from the early twelfth century onwards. Moreover, a certain degree of specialisation was discernible by the thirteenth century - the

monasteries specialised in large-scale animal-raising, particularly sheep, in marked contrast with the mixed farming of the lay farmers. In the moors and dales (Region II) the extension of farming into the dales was largely the work of the monks, who established granges wherever their holdings were large enough to work as farm units. In the few places where farming was in the hands of laymen, mixed farming was characteristic. This specialisation and the increase in the area of improved land by reclamation continued throughout the medieval period.

## Chapter V

### Two Centuries of changing Land-Use 1539-1750

The dissolution of the Monasteries marks the beginning of a new phase in the agricultural development of the North York Moors. The continuity of tenure enjoyed by the monks for four hundred years came to an end, and with it the uniformity of agricultural practice and farm management which the monks had imposed upon the large areas of farm-land they controlled. The extensive estates of the four large abbeys, and the smaller holdings of other houses, were split up into units of varying sizes, and all were occupied by lay tenants. The details of land-use, and the size of the holdings, are revealed in the Ministers' Accounts<sup>1</sup> of Abbey property made after the Dissolution, between 1539 and 1547. The amount of information supplied varies greatly. At their briefest the accounts simply state the number of laymen who became tenants on former abbey lands, and the yearly value of their holdings; the fullest accounts list every bovate in the open fields, every acre of meadowland, all the rights of pasturage and every close in the manors and granges which had passed from monastic hands. In many manors also, intakes are described. An analysis of the accounts can thus provide a very accurate picture of land utilisation, enclosure and reclamation prior to 1539.

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<sup>1</sup> Extracts from these are included in the Chartularies of Whitby, Guisborough and Rievaulx Abbeys, published by the Surtees Society.

Manorial surveys can also be used to trace changes in land-use and the progress of improvement. These surveys were made at infrequent intervals, and most of them belong to the seventeenth century.<sup>2</sup>

Parliamentary surveys made about 1650 of crown lands confiscated during the Commonwealth, also exist for some parts of the moorland region, notably the manors of Pickering, Rosedale and Northstead<sup>3</sup>. Like the Ministers' Accounts, both types of survey vary greatly in the amount of information they give, from a bare statement of the acreages of individual farms and the names of the tenants, to a detailed account of land-use, intakes and closes.

Further information is supplied by parish maps. These are rare, and range in date from 1598 to the early eighteenth century, but where they exist, they show clearly and precisely the positions of the different types of farm land. By comparing these old maps with modern Ordnance Survey maps it is possible to relate the land-use pattern to physical and geological conditions.

Duchy of Lancaster Records for the Forest of Pickering describe the conditions in the south-eastern part of the moorland region in considerable detail, and cover the period from 1577 to 1665. They

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<sup>2</sup> Several of these surveys were consulted at the North Riding Records Office.

<sup>3</sup> Public Records Office. Yorkshire Parliamentary Surveys. A full account of these is given by Willan T.S. In *Yorks. Archaeological Journal*, Vol. XXXI 1934 pp.224-289.

are chiefly concerned with the woodlands, and provide a large amount of information about the extent of woods and the attempts made to clear them.

In the following pages the five classes of document which have been described are used to trace the slow progress of reclamation and improvement through the two centuries between the Dissolution of the Monasteries in 1539 and the beginning of Parliamentary enclosure round about 1750, and to illustrate the resulting changes in land utilisation.

Region I. The Northern Boulder-clay Plateau.

The period opens with little change from the preceding centuries, and farming was still largely medieval in character. Open-fields are recorded in the accounts of Guisborough Priory, for example in Ugthorpe,<sup>4</sup> and again in a survey of Liverton made in 1577, which showed that most of the arable holdings still lay in the open-fields.<sup>5</sup>

A similar arrangement is apparent in Hawsker, Stainsacre, Newholm and Dunsley where the open-fields still contained most of the arable land at the time of the Dissolution. The accounts for Uglebarnby also mention "lands" or strips in the open-fields, Land House Field and Hall Field. The same was true on the Whitby Abbey estates, which included most of the land near the Esk mouth. On

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<sup>4</sup> Guisborough Chartulary. Abstract from Ministers' Accounts, 31-32 Henry VIII, p. xxxi-xxxiv.

<sup>5</sup> Rental of John Dawnay's property, 1577. North Riding Records Office.

the grange of Whitby Lathes for example, the Ministers' Accounts<sup>6</sup> refer to "---1 parcelle terre voc. Pickburne Felde et iiii selionum t'rae (groups of strips) jacent. juxta eundem campum ---." Meadow land lay in the ings or watermeadows where the grange possessed "---1 parcelle prati voc. Monke ynge". The monks also held grazing rights on the common pastures. In the case of the grange at Fyling the monks possessed "--- pastura communi super moram sive communiam ibid. voc. Blakamoore ---," and it is probable that in other places also, the moors were used as communal pastures.

By 1539 however, closes were appearing in the open-fields of many manors. Although all the manors mentioned in the Ministers' Accounts include some enclosed land, the extent to which the process of enclosure had proceeded varied enormously. On some manors very few closes had been made. In Stainsacre, for example, there were only three closes, in Newholm three and in Ugthorpe and Dunsley six. The sizes of the closes are not given, but it seems probable that they represented only a small part of the total improved area. In Robin Hood's Bay there were eight closes, most of them called Langthwaite, which suggests that all the enclosure had taken place in one part of the parish.

In contrast, the Manor of Whitby, which also had belonged to Whitby Abbey, had no open-fields remaining in 1539. Not only is there evidence of complete enclosure, but the land-use is also given,

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<sup>6</sup> Whitby Chartulary. Vol. II. pp.719-765. Ministers' Accounts 31-38. Henry VIII (1539-47).



as shown in Table 5 - a record which can rarely be obtained for such an early period. The outstanding feature of the land-use is the large total of pasture and meadow, which together form over three-quarters

Table 5. Enclosed Land in the Manor of Whitby. 1539-47.

No. of closes	Arable Acres	Meadow Acres	Pasture Acres	Unspecified Acres
1	20			
1	30			
1	15			
1		30		
4		80		
1			5	
1			24	
1			30	
1			20	
1			200	
1				5
1				11
1				?
1				?
Totals 17	65	110	279	16 +
	470 + Acres			

of the acreage. This can only mean that the main activity was stock-raising, and the quantity of meadow suggests that there was wintering. This is one of the earliest records found for any part

of North-east Yorkshire, where the arable land forms such a small part of the farm. It will be noted that all but five of the closes are over fifteen acres in size. These details, which refer to the Whitby Abbey estates at the time of the Dissolution, show a remarkable departure from the norm of the preceding centuries.

The same trend is probably apparent at Fyling, where out of a total of fourteen closes, all but three were recorded as pasture. No acreages are given. It is not possible to say whether the same was true of Stakesby. There were twenty-nine closes, but details of land-use are only given for eight of them. Of these, as many as six were in pasture, one (of sixteen acres) was in meadow and one was arable. The land use of the remaining twenty-one closes is unknown, but it should be remarked that the proportions of the three types of farm land in the eight closes, are similar to the proportions in the Manor of Whitby, with a very marked emphasis on pasture.

Enclosure of moorland had also proceeded in many places. Evidence of this comes mainly from the Whitby Dissolution Accounts, which frequently mention "le More Close (as in Ugthorpe) or "le intak lately taken from the waste," a description used of the intakes in many manors. It should be noted however, that few manors had more than one intake, and few of the intakes exceeded one or two acres in size. There is only one exception. In Liverton, John Dawnay's "newe Intack" reached the unusual size of 120 acres, let at a nominal rent of  $1\frac{1}{2}d.$  The enormous size of the intake, coupled with

the low value placed upon it, suggests strongly that little improvement had been carried out, and it seems probable that the area was moorland which had been enclosed for grazing rather than for cultivation. Elsewhere there is no evidence of the use which was made of the reclaimed land, and the method of reclaiming moorland is also obscure. All the intakes were enclosed however, and this seems to have been the first step towards reclamation, just as it was in the medieval period. Whether the newly reclaimed land lay on the edge of the moors, adjacent to the open-fields, or whether it lay in more distant situation is not generally known, except in the case of two farms. At Foul Sike, one of the four closes which existed was "the Intak upon the moor which was enclosed from the waste----." Foul Sike lies on the side of a small slack where a spring emerges, at a height of 625 feet, and even today the farm there is remote and surrounded by unenclosed moorland. Saint Iles (or Ives) was a "cottagium" - super moram," and possessed "una claus. voc. Moore. (close)." A dwelling house called St. Ives still exists, in an isolated position at a height of 550 feet, and separated from the open moorland by only one field. Today, both Foul Sike and St. Ives are but two of a number of isolated farms in an area of dispersed settlement, but there is no doubt that at the time of the dissolution they were pioneers, two of the more remote outposts of farming in the Fylingdale Moors, and some of the first representatives of what was then a new phenomenon - the isolated dwelling. It is noteworthy

that the spread of farming to new areas was not accompanied by any increase in the altitude of the upper level of cultivation.

The enclosed land at Foul Sike and St. Ives lay entirely below 650 feet, a height which was very similar to that reached by medieval farmers in many places.

The evidence which has been quoted is sufficient to show that rapid changes in the agricultural scene began to take place during the sixteenth century. The most important change resulted from enclosure, which in some places marked the beginning of the break-up of the open-fields, and in others the piece-meal reclamation of waste land. Enclosure was accompanied by a marked specialisation in animal-raising, especially on the abbey granges. Although the Ministers' Accounts provide the earliest evidence of this, the process was apparently well under way by the time they were made, and there is no means of knowing how long either enclosure or an increase in stock-raising had been going on. It is possible however, that as both processes were more advanced in some places than in others, the changes were of comparatively recent origin. These changes set the pattern for the succeeding centuries.

## II. The Moors and Dales.

In the sixteenth and seventeenth centuries the dales still contained most of the improved land in the region, as they had

done in medieval times, and there is little evidence to suggest that encroachments into the moor had extended beyond the upper slopes of the main valleys.

At the beginning of this period, when the monasteries were dissolved, their ranches in the western moors were split up, and were subsequently farmed in small units by laymen.

Agricultural progress shows considerable variation from one dale to another, particularly between those leading to the Esk and Leven in the north and those to the Derwent in the south. In the upper Esk-Leven valley and its tributary dales, where the medieval grazing lands of Guisborough Priory were situated, comparatively few changes in land-use took place following the Dissolution. In 1539 rough grazing land still occupied the area, extending northwards as far as the foot of the moorland boundary scarp, and "Lounsdale", "Whaywathe", "Northynge" and "Moresome" were all named as pastures in the Dissolution Accounts.<sup>7</sup> At the present day all these are names of stretches of moorland lying north of the main valley, and the first three are also the names of farms situated in or near the main valley (see map at end). It is clear that they were stock-raising centres in the sixteenth century.

Enclosures were made in only two places. Sleddale Close and Rounde Close both occupied small moorland valleys for which there

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<sup>7</sup> Guisborough Chartulary pp. XXXI to XXXIV.

is no record of either settlement or cultivation at any earlier date, though the valleys have been occupied continuously ever since. Sleddale drains south to the Esk and most of the improved land lies between 700 and 800 feet. Rounde Close lies on the upper slopes of a small, north-facing valley cutting back through the scarp near Guisborough. Most of the improved land is below 700 feet. The Ministers' Accounts give no details of land-use in either close. Such isolated instances of enclosure of moorland affected only a small part of the total acreage of moorland owned by Guisborough Priory, but they are sufficient to indicate that changes in the use of moorland were taking place.

In the middle Esk, at Danby, where the land had never been entirely under monastic control, conditions were somewhat different. Some details of farming are revealed by a manorial survey of 1577,<sup>8</sup> in which three farms are described in detail. These contained five and a quarter acres, seven acres and twelve acres respectively. The two smaller ones consisted mainly of "lands" lying in the open-fields, and small parcels of meadow in the ings. Each farm also had one close; one of these contained one-and-a-half acres of meadow; but the second was called the "New Close" and contained two "lands" of half an acre. This co-existence of "lands" and "closes" is of particular interest for two reasons: first, it shows without

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<sup>8</sup> Danby Field Book, 1577. North Riding Record Office.

doubt that enclosure of open-fields had begun even as early as the sixteenth century, and secondly that enclosure was of very recent date. In contrast, the largest farm consisted of "1 Messuage called the Bramblecarr" and four closes adjoining it, containing a total of twelve acres. A farm of the same name still exists at the present day, in an isolated position about one mile outside Danby village, at a height of about 600 feet. It is the earliest example in the middle Esk valley, of a farm which was entirely enclosed, but owing to its isolated position, it is not possible to decide with certainty whether enclosure was from the open-fields or whether it was of new land reclaimed from the moors. During the sixteenth and seventeenth centuries enclosure proceeded fairly rapidly, and it will be shown in the next chapter that the changes illustrated above were completed in all the dales embraced by Danby parish by 1754.

Further west, in Kildale, enclosure was also well advanced by the early eighteenth century, though it was by no means complete. The glebe for instance, included ten closes in addition to "lands" in the common fields and meadows.<sup>9</sup> The taking in of moorland was also proceeding. Three intakes were included among the closes, at least two of which abutted on the moors from which they were undoubtedly reclaimed.<sup>10</sup>

In the northern scarplands, in the parishes which lie partly in the moors and partly on the neighbouring plains, enclosure and

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<sup>9</sup> Kildale Glebe Terrier undated but pre-1716.

<sup>10</sup> A similar Terrier dated 1727.

improvement were confined to the open-fields in the lowlands. This is apparent from estate maps of Great Broughton and Busby, drawn in the early eighteenth century, which show the closes ending abruptly at the scarp foot,<sup>11</sup> leaving the moors as unenclosed, communal grazing land.<sup>12</sup>

The southern moors and dales, like the northern ones, had been developed during medieval times as monastic grazing lands, but by 1539 several important changes were apparently. In Bilsdale, sixty-two small farms replaced the single large ranch which had been owned and worked by the monks of Rievaulx,<sup>13</sup> each farm being worked as a single unit by a lay tenant. Woodland was still extensive in the dale, and the Ministers' Accounts list several large areas of woodland, amounting to 118 acres. Most of the woods occupied small tributary valleys such as "Laddelle" and "Todd Daile", or the steep valley sides as at "Baneskewe". The woods were however, widely separately, and probably represented only the remnants of the more continuous woodland cover of medieval times, much of the remainder having been cleared to make way for improved farmland.

By the seventeenth century many more changes had taken place. Two detailed surveys of Bilsdale, made in 1637 and 1642<sup>14</sup> provide

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<sup>11</sup> These maps are kept in the North Riding Record Office.

<sup>12</sup> Rievaulx Chartulary p.334 mentions "common of moore" in Great Broughton.

<sup>13</sup> Rievaulx Chartulary pp.314 et seq.

<sup>14</sup> Rental and Survey of the Manor of Helmsley, 1637; and Survey of Bilsdale, 1642. North Riding Record Office.



evidence of these changes, and serve to illustrate the progress which had been made. The surveys give the names of all the farms in Bilsdale, and list for each one the acreages of arable, meadow and pasture land lying in named closes and in the open-fields. Most of the farm houses still exist today and can be identified with reasonable certainty from the 1:2,500 plans, supplemented by observation in the field.

Fig. 15 shows the position and distribution of farms in 1637 and it is significant to note that the number had increased from sixty-two to over one hundred since 1539. The farms were well distributed throughout the dale, and even extended into the heads of the small, remote tributary dales. The map shows many of the farm houses on or near the moorland edge, about 600 feet above sea level. All the farm houses were surrounded by closes of varying number and size, though it is rare to find a close of more than ten acres and most were less than five. Some of the closes were intakes, thus providing unchallengeable proof that reclamation had taken place. The absence of intakes however, cannot necessarily be taken to indicate lack of reclamation, for a comparison of the field names in the two surveys shows that even five years was long enough for the name to be dropped from use on many of the farms.

The size of the farms in Bilsdale varied greatly. Table 6 shows that, while the majority of the farms were small (under 30 acres),

Fig. 15  
 DISTRIBUTION OF FARMHOUSES  
 IN BILSDALE IN 1637 AND 1642

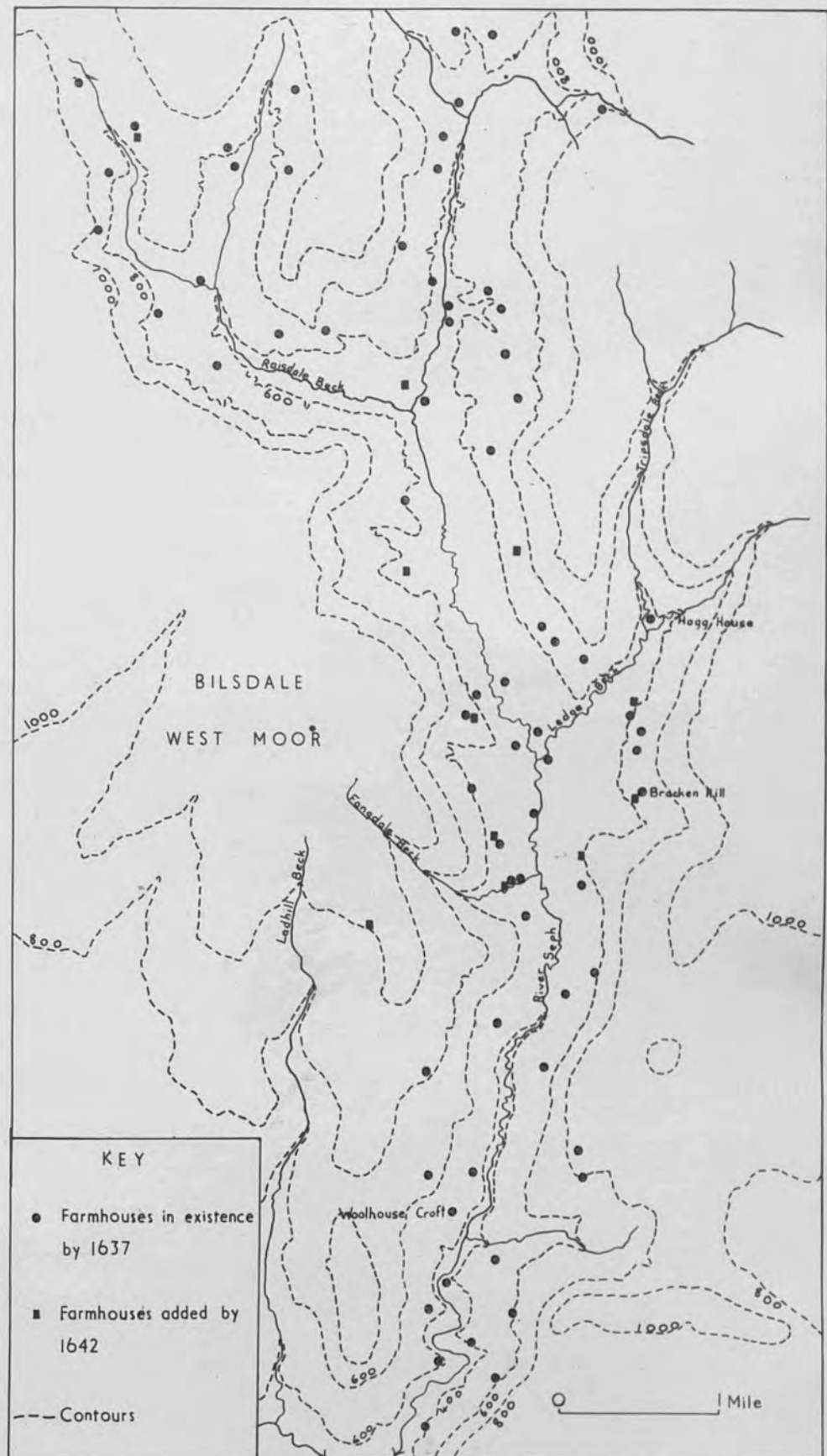


Table 6. The size of Farms in Bilsdale. 1637.

Size of farm	No. of farms.	Total Acreage.	%
Under 10 acres	12	82½	2.5
10-19	25	380½	12.5
20-29	19	442½	14.5
30-39	20	692½	23
40-49	12	514	17
Over 50 acres	14	914½	30.5
Total	102	3031½	100.0

almost 50% of the improved land was occupied by a few larger farms.

The distribution of the intakes among the farms is worth noting. While the majority possessed at least one intake of half an acre or more, there were several farms, especially among those with under 30 acres of land, without any. The actual size of the intakes varied, but on the average the larger intakes were to be found on the larger farms. Among the largest farms (over 50 acres) the average intake per farm was more than 10 acres, on the medium-sized farms (30-49 acres) the average was 7 acres and on the smallest ones (under 30 acres) the average intake was only 3 acres. Thus there appears to be a direct connection between the size of the farm and the amount of reclamation which could be undertaken, in general the smaller farms adding proportionately less to their total than the

larger ones. Attention must be drawn however, to the farms having under 20 acres. Six consisted entirely of intakes, and on several others 30% to 50% of their total area was in intakes. If this observation is correlated with the increase in the number of farms previously noted (sixty-two in 1539 and 102 in 1637), it may be pertinent to suggest that some of the smaller farms were of more recent origin than the larger ones. If this suggestion is accepted, their distribution (Fig. 15) can provide a fairly accurate measure of the reclamation which had been carried out since 1539. In 1637 the dale contained nearly 580 acres of land still labelled "intack" - almost a fifth of the total acreage of improved land. This large acreage of reclaimed land, along with the wide distribution of intakes among the farms, points to one incontrovertible conclusion - that reclamation was proceeding rapidly through the whole length of Bilsdale. Moreover, at no earlier time in the history of the dale had such activity been recorded.

But for what purpose were the intakes used? An analysis of the land-use of the intakes shows without doubt that the main purpose of reclamation was to increase the area of improved pasture, with 60% of the intakes being used for this purpose compared with only 27% of the older farm land. The proportions of arable and meadow among the intakes were very much less than on the older improved land, probably because of the situation of the intakes near the upper limit of cultivation. On the farm lands

excluding the intakes however, meadow and pasture made up 70% of the total acreage, which indicates clearly that animal-raising was the chief means of livelihood. It seems therefore, that the concentration on animal raising which first developed when Bilsdale was owned and worked by Rievaulx Abbey, still existed, despite the great changes in land ownership and farm organisation which had taken place.

Table 7. Land-use in Bilsdale. 1637.

Intakes			Other Improved land	
Land-use	Acres	%	Acres	%
Arable	85½	14.8	731½	29.8
Meadow	55½	9.6	1,050	42.8
Pasture	349½	60.5	672	27.4
Unspecified	87½	15.1	-	-
Total	578	100.0	2,453½	100.0

The second survey of 1642 follows the same lines, but there are some noteworthy differences in the information supplied by the two surveys. Several new farms had appeared in the five-year interval, but the most remarkable feature is the enormous increase in the acreage of improved land. The 1637 total of 3,031½ acres had leapt to 7,729 acres in 1642 (an increase of 155%) and moreover, every farm had increased in size. Woolhouse Croft for example, a farm lying near the southern end of the dale, had increased from twenty-one acres in 1637 to 125 acres in 1642, and its intakes had increased from four to sixty-seven acres. Other farms show the same phenomenon, though the increases in size are by no means uniform from farm to farm. An increase of this magnitude poses a number of problems:-

(1) The gap between the total acreages of 1637 and 1642 is not covered by the intakes.

(2) The intakes appear to be too large to have been made within five years.

(3) A few farms are missing in the second survey, but their acreage is not sufficient to account for the increase in size of neighbouring farms by amalgamation.

(4) Where did the additional improved land come from? As open-field holdings were included in the 1637 survey, the increase in area cannot be attributed to enclosure.

In order to try and solve these problems, part of Bilsdale in the short left bank tributary valley of Ledge Beck was selected for further study. This area was chosen because all the farms listed in 1637 reappeared in 1642, and they have also been identified in the field today. The accompanying map (Fig. 16) and notes illustrate the detailed examination, and it will be seen in answer to the four problems posed above, that:-

(1) The original farms (1637) consisted of land lying near the farm house, usually below it. Unfarmed land lay between the farms, Hagg House was more isolated, nearer the head of the valley. The farms which were new in 1642 occupied areas which had previously separated existing farms (High Cow Helm and Low Bracken Hill). These two new farms, comprising 153 acres, are unlikely to have been reclaimed within five years. Both are low in altitude, and lie adjacent to older farms, and it is possible that the land was used in some way before 1642 by the neighbouring farmers, perhaps for additional grazing, thus improving it sufficiently for it to be let as new farms.

Surveys of farm land in Bilsdale in 1637, 1642 and 1947.

The two surveys have been studied carefully in conjunction with the 25 inches to 1 mile map. Particular attention was paid to the sites of farm buildings, field acreages and the disposition of rough grazing. The paths and tracks linking the farm houses with each other and with the reclaimed land were also investigated. This has enabled the writer to claim a high degree of accuracy for the accompanying map which represents:-

- (a) the land of the original five farms of the 1637 survey
- (b) the extended lands of these five farms in 1642

(representing reclaimed land) and the reclaimed land of two new farms, i.e. Low Bracken Hill and High Cow Helm. All these farms were still in existence in 1947 when the estate was sold and it has been assumed that the farm houses and most of the fields still occupy the same positions as they did 300 years earlier.

TABLE 8. Farm Acreages recorded in the three surveys.

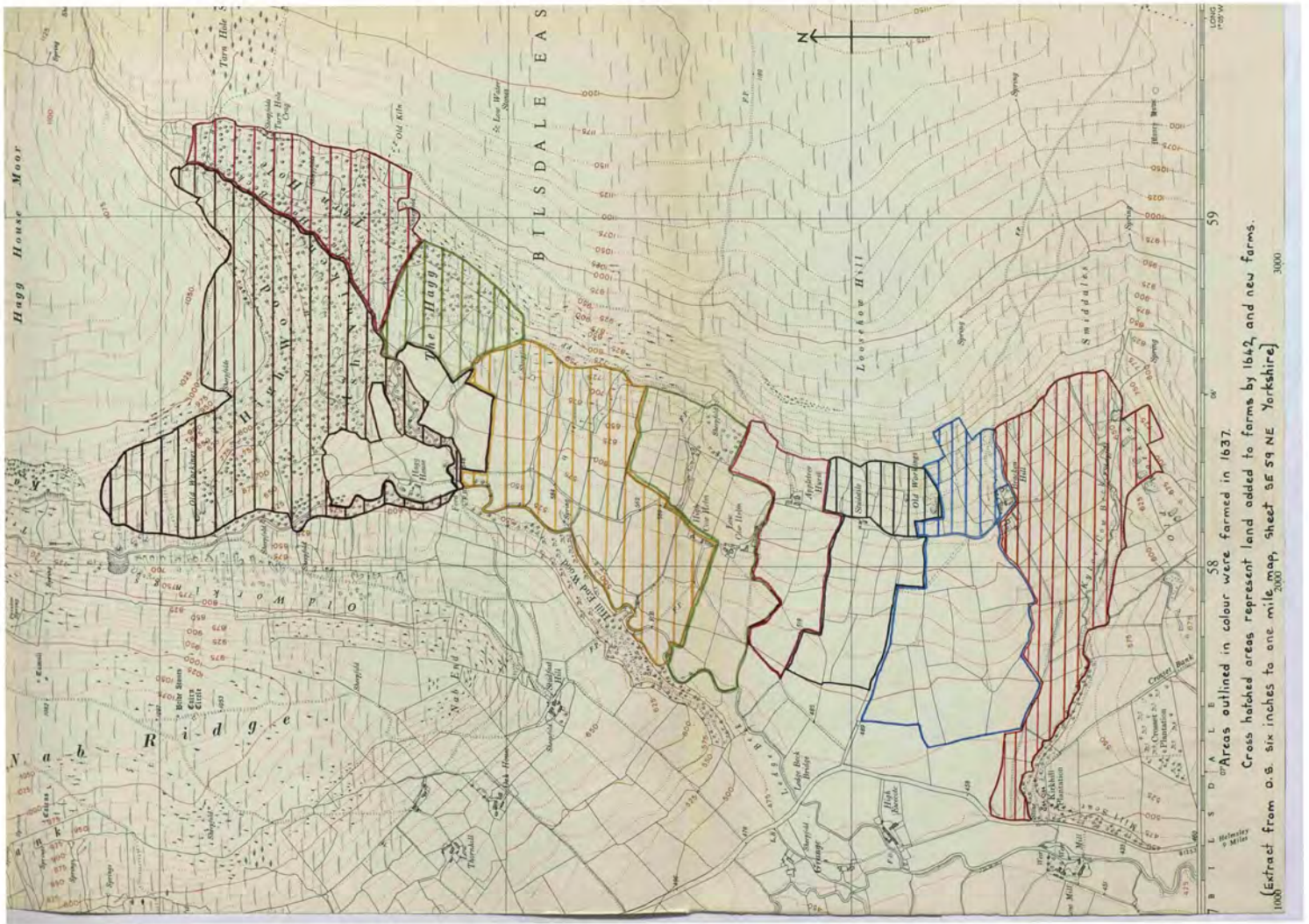
Farm	Acreage in 1637	Acreage in 1642	Acreage in 1947
Bracken Hill	} 55	67½	52
Low Bracken Hill		76	70
Studstile	} 24	38	11
Appletree Hurst		71½	55
Low Cow Helm		70½	125
High Cow Helm		77	77
Hagg House	28	151	152
Total	172	551½	542

It will be noticed from the table that the increase in land farmed by 1642 is 221% and that the decrease between 1642 and 1947 is 2%. The size of the acre is assumed to have remained the same.

Fig. 16

RECONSTRUCTION OF SEVEN  
FARMS IN BILSDALE IN  
1637 AND 1642.





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Areas outlined in colour were farmed in 1637.  
 Cross hatched areas represent land added to farms by 1642, and new farms.  
 (Extract from O.S. six inches to one mile map, sheet SE 59 NE Yorkshire) 3000

(2) The land described as "intack" was above the older farms (Bracken Hill and Studstile), or distant from them (Appletree Hurst and Low Cow Helm), and extended into the valley head, up to a height of 1,025 feet. It is unlikely that all of this was reclaimed in the short space of five years. The probability is that piecemeal reclamation had been going on surreptitiously for a long time, but not until 1642 was the land officially incorporated in the farms and rent charged for it.

(3) The creation of new farms on reclaimed land in the spaces between the old ones, and the reclamation of land at a higher level than any previously cultivated, accounts for the increase in the area of improved land IN THIS PARTICULAR PART OF BILSDALE. By 1642 all the upper part of this small valley was reclaimed and there have been few changes since.

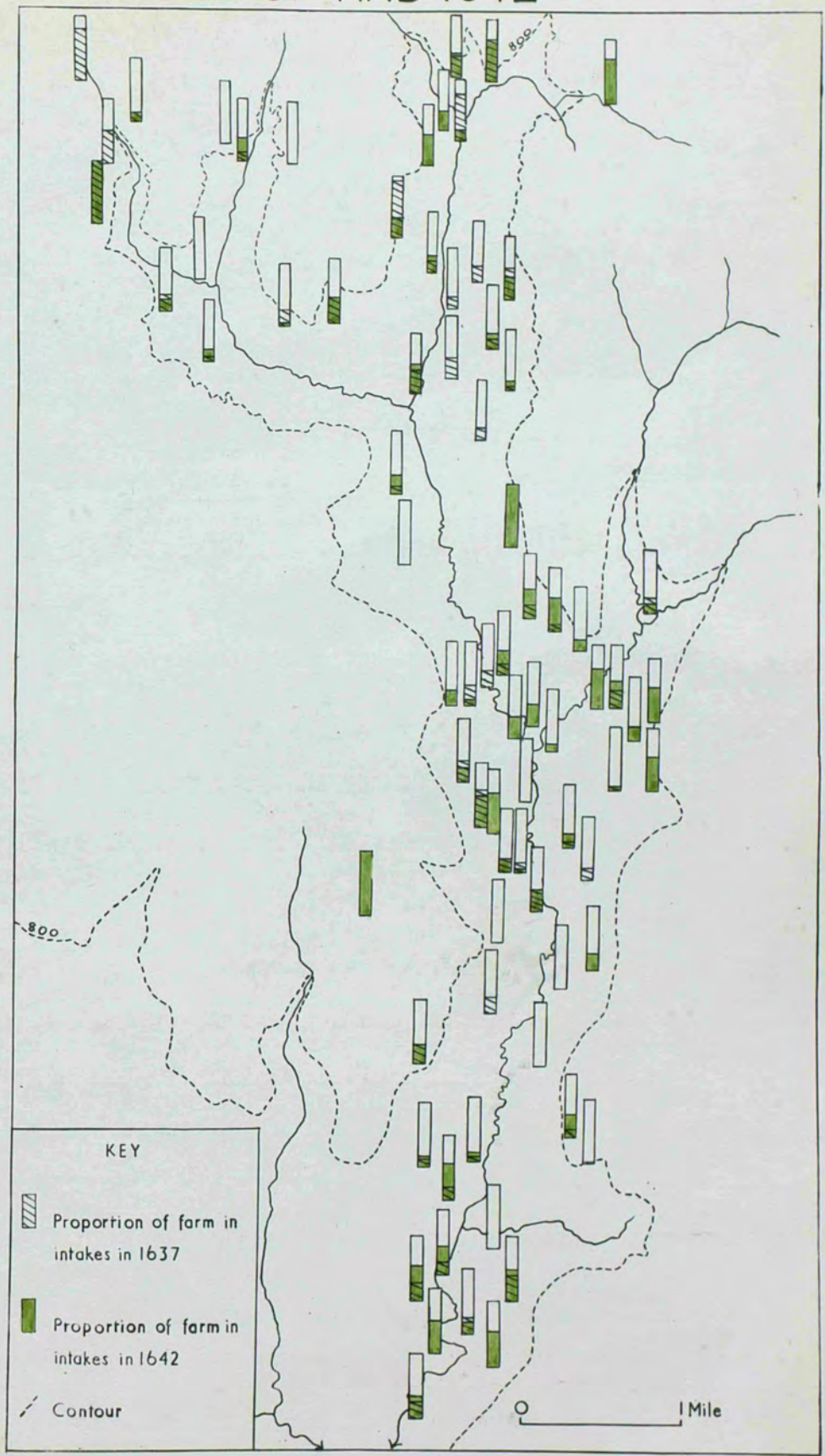
If the results of this study can be applied to the whole of Bilsdale, where the same anomalies are apparent, only one conclusion can be reached - that in the early seventeenth century reclamation for new farms and additions to then-existing farms was on a very large scale, more than doubling the area of improved land.

For the other farms in the dale the progress of reclamation has been assessed by expressing the intakes as a fraction of the total improved land in 1637 and 1642. It is then possible to assess the increase in the area under cultivation as a proportion of the whole. Fig. 17 shows the proportion of land in intakes.<sup>15</sup> Where the proportion in intakes to improved land has increased from 1637 to 1642 it is likely that the increase represents land reclaimed during those five years; a decrease in the proportion of intakes probably means that the name has been dropped from some fields during the five years,

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<sup>15</sup> Not all the farms mentioned in the 1637 survey reappeared in 1642. In some cases the names may have been changed; others may have been combined to make a larger farm.

Fig. 17  
INTAKES IN BILSDDALE IN  
1637 AND 1642



while any new reclamation was carried out on too small a scale to make up the difference. The map shows therefore, in which part of the dale reclamation was most active.

In other parts of the Manor of Helmsley a similar upward encroachment upon the moorland can be detected. To the west of Bilsdale, at Snilesworth, where Byland Abbey had had a grange, fifteen farms contained between them 1,013 acres of improved land, of which 680 acres (67%) were permanent pasture, 268 acres (27%) were meadow and only 15 acres (1%) were arable. The remaining 50 acres were described as meadow and pasture. There were 37 acres called "intake", all permanent pasture, and 4,277 acres of moorland remained unreclaimed, but were used as grazing land by the fifteen farms. Thus, here as in Bilsdale, was a small, stock-raising community, engaged in reclaiming additional pasture from the open moors.

East of Bilsdale Cowhouse Intake, near the entrance to Riccalldale, was also mainly grassland, with meadow and pasture amounting to at least 120 acres, worked by six farmers. The chief purpose for which the intake was made is clear from its name, and the description "meadow and pasture" which is applied to almost the entire area suggests that it was used in summer as meadowland, and in winter as pasture for animals brought down from the adjacent moors. Only one farmer had any arable land and its acreage is not given.

In Bransdale, where Rievaulx Abbey held a large area of land before the Dissolution, nine houses were in existence by 1539, and

all had farm land attached,<sup>16</sup> though no details are recorded about the way in which it was used. By 1637 all the land was enclosed, though tenants often shared certain large closes as well as possessing whole closes. The following table shows details of one holding which was similar in most respects to most of the others in the dale, and illustrates the facts mentioned above.

Table 9. Peter Swale's holding in Bransdale, 1637.<sup>17</sup>

Name of Parcel	Farmland in acres			
	Pasture and Arable	Meadow	Pasture	Other
House, barn etc.				$\frac{1}{2}$
Lowe Garth				$\frac{1}{2}$
a third-part of Lundfeild	14			
" " " " Lowfeild	14			
" " " " Bottomefeild	15			
" fourth parte of one close			15	
" " " " " "			14	
Lingthwaite close			15	
Oxe close			3	
Abbot Hagg close			7	
Little feild			5	
a third parte of the flatt		3		
Beane Park		1		
Holmes		4		
Ings		2		
Ings		$5\frac{1}{2}$		
Totals:	43 (36.2%)	$15\frac{1}{2}$ (13%)	59 (49.9%)	1 (0.9%)
Total acreage of farm 118 $\frac{1}{2}$ acres, with common of pasture for 20 beasts and 200 sheep.				

By modern standards this could be classed as a mixed farm, but the table shows clearly the overwhelming importance of animals in the farm

<sup>16</sup> Rievaulx Chartulary pp.314 et.seq.

<sup>17</sup> Compiled from the Helmsley Manorial Survey, 1637.

economy. Many farms in Bransdale had closes described as intakes, and practically all of them were pastures, showing yet again the importance of animals in the farming of the dale.

In Rosedale, the most easterly of the dales, conditions were similar in many ways to those prevailing in Bilsdale and Bransdale. At the time of the Parliamentary Survey in 1649 it was stated, "The Manor<sup>18</sup> is wholly inclosed (save only the Common or waste ground) with smale and verry bad ground."<sup>19</sup> Up to 1649 no evidence of open-fields has been found; yet in this survey the names "Northfield", "Southfield," "Eastfield" and "Middlefield" occur frequently among the names of closes, and are therefore thought to be the old names of the open-fields. The enclosures, which were small, were generally grouped round the farmsteads. For example, one tenant held a farm of 66 enclosed acres, "All of which saide closes ly one adjoyninge to another and encompassinge the aforesaide messuage."

A statistical analysis of land-use is impossible in Rosedale for, out of about 1,716 acres of improved land precise details are supplied for only 800 acres, as the following table shows.

Table 10. Land-use in Rosedale, 1649.

Land-use	Acreage	% for which details exist	% of total
Arable, meadow and pasture	105	13	6
Arable	56	7	4
Meadow	104	13	6
Pasture	535	67	31
Total	800	100	47

<sup>18</sup> The Manor of Rosedale is now the parish of Rosedale East.

<sup>19</sup> Rosedale Parliamentary Survey. Willan T.S. Yorks. Archaeological Journal 1934 Vol. XXXI pp.242-289.

The remaining 916 acres of improved land is described vaguely as "land", "ground" or "close", without any details of land-use being given.

Intake of the common<sup>20</sup> was proceeding in Rosedale, as in the other dales, and the survey records no less than twelve enclosed intakes and three "New Closes." Few details are given about the intakes, but it appears that one intake, presumably a large one, had been reclaimed communally, as it was used as common pasture.

Thus in all the southern dales the evidence suggests that enclosure of the open-fields was well advanced, if not complete, by the mid-seventeenth century. Reclamation also had proceeded steadily before 1650, being particularly rapid in Bilsdale and Bransdale where little had been carried out in the medieval period, but more slowly in Rosedale where assarting and the taking-in of moorland had been conspicuous in the thirteenth and fourteenth centuries.

North-east of Rosedale, in the valleys of Wheeldale Beck and the Murk Esk a considerable amount of enclosure and reclamation was carried out in Eskdaleside parish on the former lands of Whitby Abbey. By 1539 enclosure of the open-fields of Eskdaleside had begun, and on the Abbey lands alone there were more than twenty-six closes.<sup>21</sup> Details of size are given for only fifteen of them.

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<sup>20</sup> Rosedale Parliamentary Survey refers to these intakes.

<sup>21</sup> Whitby Chartulary pp.743-5. The exact number of closes is uncertain because there are several entries like the following:- "1 mes. voc. Newe Cote et certis parvis clausis---," giving no precise information.



These comprised an area of  $26\frac{1}{2}$  acres, and the largest single close was no more than three acres. It seems likely therefore, that only a small proportion of the cultivated land of Eskdaleside was enclosed in the sixteenth century. The term "intake" was applied to eight of the closes; two of them were divided into several smaller closes and may have covered quite a large area, but the rest were small, consisting of only one or two acres. Of the eight intakes, no less than five were "nuper de novo incluso," which shows clearly that they were of recent origin in 1539. Their position cannot always be identified, but two of them called respectively "Half the Fayre Hede" and "Little Bek" can be located within fairly narrow limits from place names which are still in use. (see map at end.)

Higher up the Murk Esk valley, within the Forest of Pickering, little of the land was owned by monasteries, and the area is therefore not mentioned in any of the Dissolution Accounts. In Goathland and Allantofts, where much reclamation was carried out in the thirteenth century, there is no further evidence until the seventeenth, when once again Forest surveys reveal further unauthorised encroachments. The largest encroachment comprised "--- certaine lands lying in Goathland ... sometime incroached, known by the name of Intakes," leased to James Elliot and William Loving in 1627.<sup>22</sup> There were twenty-nine of these intakes, with a total area of over 157 acres,

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<sup>22</sup> Parliamentary Survey, Yorks. Pickering No. 42 folio 28.  
(Public Records Office.)

ranging in size from a quarter of an acre to 22 acres. These intakes seem to have been scattered over a fairly wide area, but between them they represent a substantial increase in the area of improved land in the parish.

At Allantofts, 329 acres of intake were recorded at about the same time, but it is not clear from the survey whether these were new intakes, made in the sixteenth or seventeenth centuries, or whether they are the much older ones mentioned in Chapter IV. However, the statistics and descriptions relating to the assarts are so similar in the seventeenth century and fourteenth century surveys, that it is likely that they both refer to the same land. Nevertheless there is no doubt that with the exception of Bilsdale, the intake in Allantofts is the largest area of reclaimed land to be encountered so far, but in the absence of conclusive evidence it must be regarded as the result of three centuries' work.

In the moors to the east of Rosedale and the Murk Esk, the only dale of any size is the upper part of Newton Dale, a narrow, steep-sided valley which cuts across the moors from north to south. Its narrow floor is marshy, and can be reached only with difficulty, and little attempt was made at cultivation before the seventeenth century. Much of the dale was wooded. From the early years of the century onwards, several attempts were made to clear land in the dale, with varying degrees of success. The main clearing followed

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23 Turton R.B. op.cit. Vol.I. pp.10,31.

soon after a survey of the woods, made in 1608, when it was reported that "the woode there groweth upon steepe bancke sides, and will yeelde but little monye".<sup>23</sup> By 1621 an enclosure of nine acres had been made in the dale,"-but by what right or warrant --- they know not,"<sup>24</sup> At about the same time, 60 acres of land in the dale was let on lease for the purpose of improvement, but "The tenants of Newton, their wives and children, riotuously pulde dowme the inclosure"<sup>25</sup> ... "and thus prevented any improvement from being carried out.

The moors adjacent to Newton Dale remained in an unimproved state. In the seventeenth century, Wheeldale Moor, to the north-west of Newton Dale, was"--- a spacious moorish wolde pasture grounde ---, a verie colde and barreyne place cont. about MDC acres,"<sup>26</sup> but it was held by a single tenant who used it for pasturing sheep. Another part of Wheeldale Moor included in the Forest of Pickering, was described by John Norden, the surveyor of Crown Lands, as "meane heathie and boggye grounde,"<sup>27</sup> and it does not appear to have been farmed at all.

Further east, where the moorland reached the coast, settlement and cultivation were mostly confined to three localities - the northern and southern margins of the moors, and the interior valleys of Helwath Beck and Thorny Beck. All except the valley of Helwath Beck have soils derived from boulder clay, and all except the valley of Thorny

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<sup>24</sup> Ibid. p.31.

<sup>25</sup> Ibid. p.48.

<sup>26</sup> Turton R.B. op.cit. Vol.I. p.49.

<sup>27</sup> Ibid. p.22.

Beck were comparatively new areas of cultivation in the sixteenth century and included a large proportion of reclaimed land.

Along the northern edge of the driftless moorland, land at Stoupe Brow and Thorny Brow had been leased for settlement by Whitby Abbey some time before the Dissolution.<sup>28</sup> Both settlements were small, with only six houses in Stoupe and five in Thorny. Each house had its "appurtenances", consisting of a small area of land, partly enclosed. No acreages are stated in the abbey accounts, but from the low money values of the houses and land combined, it seems unlikely that the closes were of any great size. These settlements are interesting in that they represent new hamlets built within the parish of Fyling, but at a distance of a mile or more from the nearest village. There is no doubt that the improved land surrounding them had been reclaimed from the moor, and that the moorland nearby was being grazed by their animals.

In the valley of Helwath Beck was another isolated dwelling, called Helwayth. It is first mentioned in the Dissolution Accounts, and this is the earliest record which has been found, of any settlement in the valley. The house was undoubtedly established to facilitate the use of the surrounding moorland, either for grazing or for cultivation, and its appearance in the mid-sixteenth century therefore marks yet another stage in the progressive utilisation of remote moorland. In the valley of Thorny Beck, where land had been

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<sup>28</sup> Whitby Chartulary. p.737.

cultivated since pre-Domesday times, there is no record of any change during the sixteenth or seventeenth centuries.

North. Away to the south, on the southern margins of the eastern moors was Harwood Dale, where much reclamation was carried out during the sixteenth century. Part of the parish belonged to Whitby Abbey, but by 1539 all this land was leased to lay tenants, most of whose holdings included some enclosed land. There were also six intakes; all were described as small, and each belonged to a different tenant. In the part of Harwood Dale not owned by the abbey, reclamation was proceeding on a larger scale. In the mid-fifteenth century there were less than 1,000 acres of improved land, but by the mid-sixteenth century over 300 acres had been added in nine intakes, which varied in size from 3 acres to 148 acres. The evidence comes from a survey made in the sixteenth century at about the time of the Dissolution, which describes the farm land in detail,<sup>29</sup> and which leaves no doubt that Harwood Dale was the scene of very great improvement in agriculture in the sixteenth century. No further changes are recorded however, until 1858 when the parish was finally enclosed.

Thus, in the period 1539 to 1750 the medieval pattern of agriculture based on open-fields largely disappeared from the moorland dales. In the southern dales enclosure was complete by the mid-seventeenth century, and the small, hedged fields which made up the

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<sup>29</sup> North Riding Record Office. A sixteenth century rental of the Lordship of Hackness, made at about the time of the Dissolution. (Undated).

farm holdings, were worked from isolated farmsteads spread through the entire length of each dale. In the Esk-Leven valley further north, enclosure proceeded more slowly during the seventeenth century, but nevertheless, was well advanced only a century later. In all the dales, the evidence which is available points to the predominance of pastoral farming on the enclosed land, thus continuing the trend which began in monastic times. Reclamation of moorland, which had also started in the medieval period, continued at a rapid pace in the sixteenth and seventeenth centuries. It was still confined to the dales, especially Bilsdale, and the valley of the Murk Esk, and to the northern and southern moorland margins. In none of the dales was there a complete lack of reclamation, but there was noticeably less in the Esk-Leven valley than in the southern dales.

The method of reclaiming moorland remains obscure. Enclosure, usually of small areas, was undoubtedly one of the first processes to be carried out, and is the only process mentioned in any of the documents which have been examined. Ploughing, burning and draining are never mentioned in connection with reclamation. There is no doubt however, that in many places reclamation resulted in the upward extension of cultivation to a higher altitude than ever before, which, in the southern dales especially, was probably not far short of that reached at the present day.

Region III. The Corallian Outcrop.

The Corallian region, like the other regions of the North York Moors, was the scene of far-reaching changes in land-use during the sixteenth and seventeenth centuries. Early in this period began the systematic enclosure of open fields, a process which continued without interruption for the next two centuries and which was responsible in turn for other fundamental changes in agricultural policy. In the western part of the region, west of Rosedale, the earliest enclosures are recorded on abbey property, notably on some of the larger granges, where early consolidation of the holding under monastic control gave special opportunities for enclosure. On some of the Rievaulx Abbey holdings enclosure was complete by 1539. On the grange at Griff for example, the entire 490 acres was divided into twenty-three closes.<sup>30</sup> At Skiplam, though precise details are not given, it seems probable that most, if not all of the land belonging to the grange, was enclosed by 1539. Enclosure was also complete on two other farms belonging to Rievaulx Abbey - the home farm at Rievaulx and the grange at Newlathes. In both these cases there is no evidence that open-fields had ever existed, and enclosure was probably a direct result of reclamation.

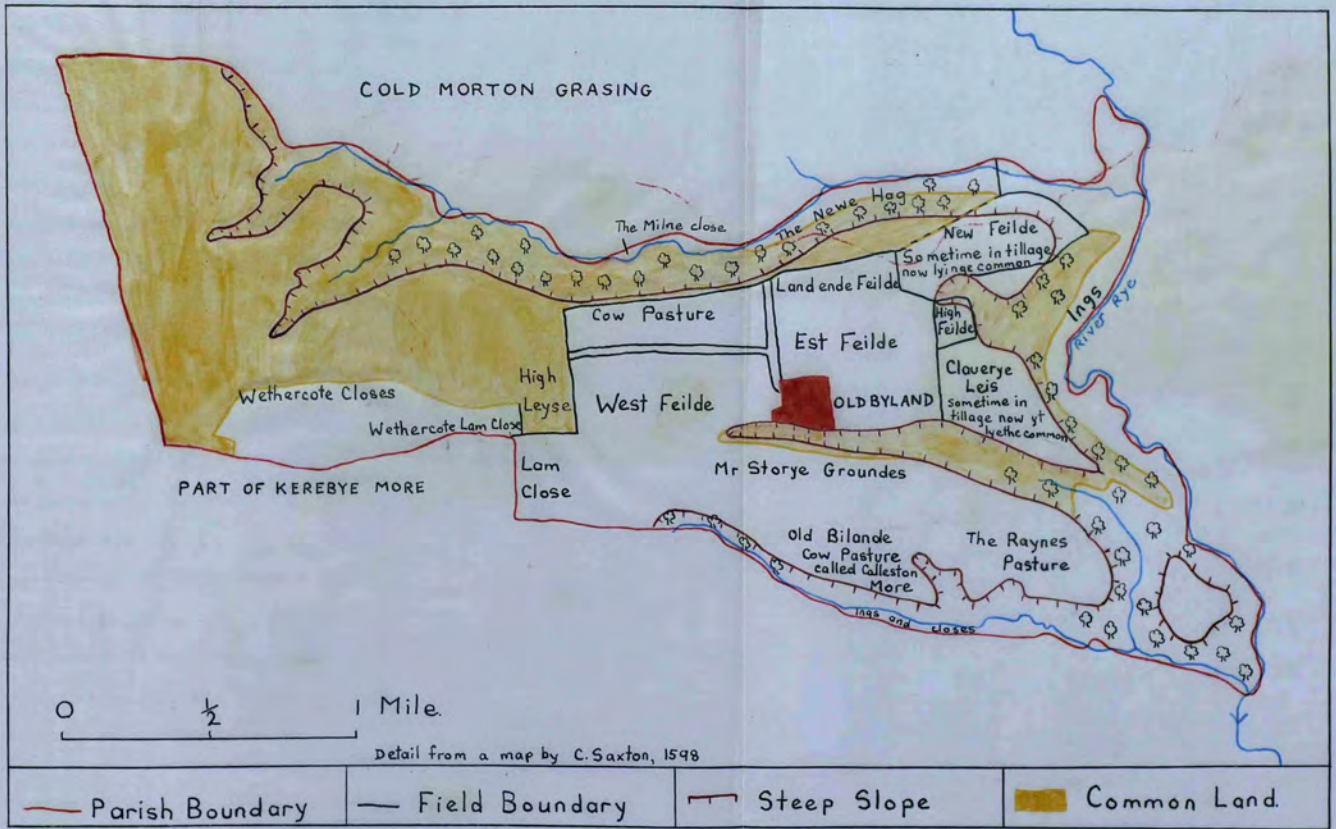
In contrast with the early enclosure of these granges was the apparent backwardness of some other places. At West Newton Grange,<sup>31</sup>

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<sup>30</sup> Rievaulx Chartulary p. 314 et.seq.

<sup>31</sup> Ibid.

Fig. 18  
 LAND - USE IN OLD BYLAND - 1598





which also belonged to Rievaulx Abbey before the Dissolution, meadows, pastures and arable lands are referred to in rather vague terms in the Ministers' Accounts, which suggests that they were as yet unenclosed. Meadowland in the neighbouring parishes of Oswaldkirk and Stonegrave also belonged to the grange, and this too was unenclosed. From the evidence which has come to light it seems that complete enclosure, such as existed on the few large granges, was still rare in 1539, and in most places the time-honoured method of cultivation in the open-fields still held sway. There is no doubt however, that the mid-sixteenth century was a turning point in the history of farming in the district. The Dissolution of the monasteries placed in the hands of individuals the large areas of land which had been farmed for centuries by the collective efforts of the monks, and some of this land was already enclosed. During the next half century more enclosure took place, and it is perhaps significant that most of this appears to have been in parishes where the monasteries had been important landowners. This was clearly what happened in Welburn, where Rievaulx Abbey had held arable land and grazing rights. Before the Dissolution "---ther was no demeanes in Welburn nor feeldes enclosed,"<sup>32</sup> but within the next sixty years, enclosure began; by 1597 at least seven closes had appeared on the Fairfax property alone.<sup>33</sup> Three years later more

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32. Tithe Cause Paper, 1606-7. Evidence given by an elderly witness who remembered the parish before the Dissolution.

33. Conveyance of land between C. Savill and N. Fairfax, 1597. York Minster Library, Box 3. Bundle 1.

closes were named, and a field called Great Harforth was described as being "divided by hedges."<sup>34</sup> By 1598 much land was enclosed at old Byland also, as is shown by Fig. 18. This is a simplified extract from Saxton's map<sup>35</sup> which was made by transferring the outlines of the original to a two-and-a-half inch Ordnance Survey map. The physical features have been added. The map shows clearly that the main features of agriculture in Old Byland were still medieval in character, based on the communal use of the open arable fields and common pastures and meadows. A gradual change towards more modern conditions is shown by the large areas of enclosed land which lay beyond the open-fields and extended towards the parish boundaries. (Wethercote Closes, Wethercote Lamclose and Lam Close). The fact that the closes lay outside the fields is important as it seems likely that some of the close were made from reclaimed common-land and not from former arable land. Before the Dissolution, Old Byland was a grange of Byland Abbey, but there is no evidence to show whether enclosure had been started by the monks, or whether it was the work of laymen during the sixty years which had elapsed since the monastery was dissolved.

A century after the Dissolution, the same slow change from open-fields to closes was still continuing and the agricultural scene of 1637 differed from that of 1539 only in detail. At the time of the Helmsley Manorial Survey of 1637, open-field land still formed

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<sup>34</sup> Another Conveyance in the same bundle.

<sup>35</sup> Saxton's map of Old Byland, P.R.O. E.178/2779; MPB.32.

the major part of every holding in Helmsley itself and in most of the neighbouring parishes, though most landholders possessed one or two closes in addition.<sup>36</sup> In Sproxton the existence side by side of enclosed farms and open-field holdings, was particularly marked. Most of the holdings were small and unenclosed, consisting of a few acres of ploughland and "pasture gates" for a few animals. There was one large farm however, attached to Sproxton Hall, containing 223 acres of improved land, all enclosed. It may be worth noting that in Sproxton, Rievaulx Abbey had once possessed an important grange. Further westward, where the Corallian scarp descends to the Vale of Mowbray, the manors of Hesketh and Ravensthorpe were also mostly enclosed by 1637, though the moorland pastures and some large closes were still used communally. Both manors belonged to Rievaulx Abbey before the Dissolution when each was worked as a single farm unit. The passage of a century had seen not only their enclosure, but also their division into several smaller farms. Further evidence of enclosure in the western Corallian hills does not appear until late in the seventeenth century. In 1685 the Nunnington Glebe Terrier<sup>37</sup> recorded several closes, most of them containing meadow. Indeed, a note appended to the Terrier states that "--- enclosure of the carrs (took place) 10 years since," i.e. in 1675, and it seems likely that all the meadow in the

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<sup>36</sup> For example, Beadlam, Pockley, Carlton and Sproxton were all still in open-field.

<sup>37</sup> Glebe Terriers of Nunnington and Stonegrave, 1685 and 1716.

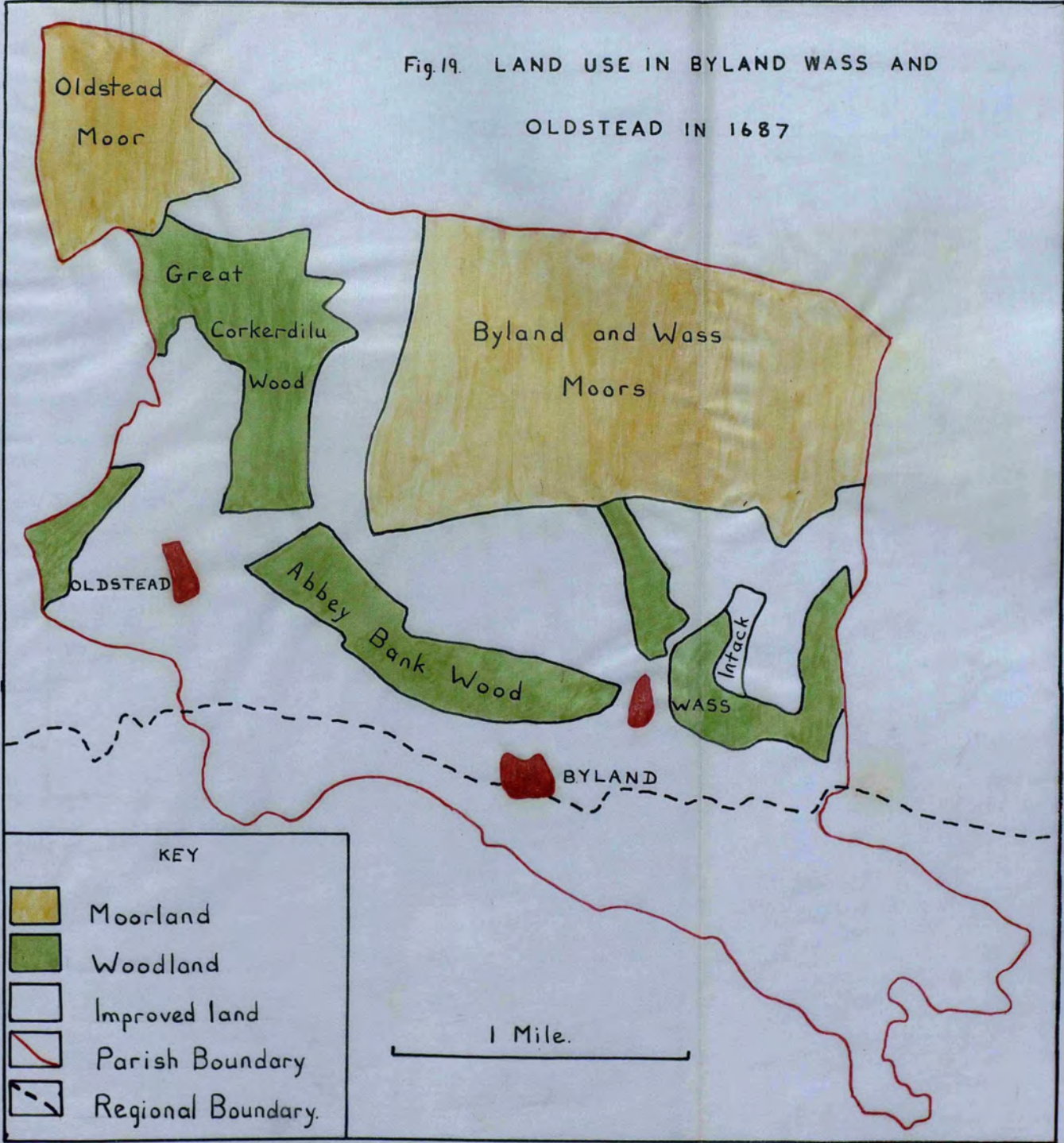
parish was enclosed at the same time. Arable and pastureland were still in open-fields and Nunnington can consequently be classed as an open-field parish. Only a few miles to the west however, in Byland, Wass and Oldstead, conditions were very different. The state of the land in these parishes is shown clearly by two maps, the earlier one drawn in 1687 and the second during the early eighteenth century.<sup>38</sup> These three parishes lie together near the southern margin of the Hambleton Hills, and formed part of the possessions of Byland Abbey before the Dissolution. It is remarkable that even as late as the eighteenth century they were described as "Lands of Byland Abbey." Fig. 19 shows the farm land in 1687. The improved land lay mostly in the south near the abbey and the villages of Oldstead and Wass. The map shows this land divided into numerous parcels, each labelled with the tenant's name. Some tenants had large consolidated holdings, but some had small parcels of land scattered through one or more parishes.

Where a farm consisted of a single unit only the ring fence is shown, and it is therefore difficult to decide whether all the land was enclosed or not. Consolidation suggests enclosure, and the parcels of land look like closes rather than strips. The second map drawn early in the eighteenth century confirms that enclosure was complete. All

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<sup>38</sup> North Riding Record Office: Maps of the Lands of Byland Abbey. The eighteenth century map is undated, but has been dated approximately by the county Archivist. Byland in this case is the settlement which grew up round the Abbey, and should not be confused with Old Byland.

Fig.19. LAND USE IN BYLAND WASS AND OLDSTEAD IN 1687



the improved land was occupied by small closes, separated by hedges and distinguished by individual names.

Changes in land-use accompanying enclosure are also apparent in many parishes, and once again a few examples suffice to show the general trend. For the enclosed granges of Rievaulx Abbey some important details are recorded in the Ministers' Accounts. The following table of Land utilisation on the three granges for which details exist, shows that the agricultural economy of the granges was far removed from that associated with the medieval period.

Table 11. Land use on three farms belonging to Rievaulx Abbey, 1539.<sup>39</sup>

Granges	Arable		Meadow		Pasture		Wood	Unspecified		Total
	Acres	Closes	Acres	Closes	Acres	Closes	Acres	Acres	Closes	Acres
Griff	96 (19.6%)	3	10 (2%)	1	262 (53.5%)	14	-	122	5	490
Rievaulx	1	(Garden)	24½ (6.1%)	4	-	-	341 (85.9%)	31½	11	397
Newlathes	-		38 (10.7%)	3	288 (81.3%)	9	8 (2.2%)	20	5	354

Arable land represents only a small part of the total acreage. The very large number of closes devoted to pasture, and the large area involved, show the greatest deviation from medieval conditions, and suggest strongly that on the abbey granges, enclosure, whether of open-

<sup>39</sup> Compiled from Rievaulx Chartulary. p.314 et.seq.

field land or of waste, had been accompanied by a marked concentration on stock-raising. It is significant also that at both Griff and Newlathes where the area devoted to pasture was greatest, a "shepecote" was included in the holding. At Skiplam, for which very little detailed information exists, no analysis of land utilisation is possible. From the names of two closes however, Lamb Close and Wethercote Close<sup>40</sup>, it seems likely that the land there was also devoted to sheep pasture.

In 1637, a century after the Dissolution further changes were apparent. The Manor of Rievaulx then included the original manor and Griff, Stiltons and Newlathes in addition, giving an area of 1,452 acres. While the greatest area was still devoted to pasture (541 acres), much larger areas were also occupied by meadow (346 acres) and arable (146 acres). The remainder consisted of garths and closes for which precise details of land-use were not stated, though many of them included some arable land. This is interesting because it reveals a notable change of emphasis during the century, from extensive grazing to a more intensive mixed farming. On some other enclosed farms in the immediate neighbourhood of Helmsley, there was a similar tendency towards mixed farming during the seventeenth century, though in no other case is it possible to compare seventeenth century land-use with that of an earlier period. In Sproxton however, the mixed farming on the only enclosed farm seems to have differed little from the mixed farming of the open-fields - it had only one pasture close

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<sup>40</sup> Ibid. p.347.

of 48 acres, and most of the remaining land (75% of the total) was arable.

Further west, on the old granges of Hesketh and Ravensthorpe, the land-use on the enclosed farms in 1637 showed the same specialisation in stock as existed at Griff and Stiltons a century earlier. The Manorial Survey of 1637 shows that Hesketh and Ravensthorpe were divided into several holdings. At Hesketh there were four holdings, ranging from a minimum of under thirty acres to a maximum of 136 acres. The land-use on these holdings is shown in the following table:

Table 12 - Land-Use on enclosures in Hesketh in 1637.<sup>41</sup>

Size of Holding (Acres)	Arable		Meadow		Pasture		Moor Acres
	Acres	%	Acres	%	Acres	%	
1. 136	0	0	43	31.6	93	68.4	
2. 52	3	5.8	31	59.6	18	34.6	In the
3. 42.5	0	0	14.5	34.0	28	66.0	Little
4. 27.5	0	0	13	47.2	14.5	52.8	Moor 45 Acres
Total 258	3	1.2	101.5	39.3	153.5	59.5	45

Total area of manor = 407 acres 12 perches.

The most noteworthy feature revealed by the Table is the small proportion of arable land enclosed - one small close on only one of the

<sup>41</sup> From the Survey of Helmsley. See Note (14) supra.



four farms. Any other arable land was probably included in the 104 acres of unenclosed land for which precise details are lacking.

The preponderance of pasture and meadow suggests strongly that enclosure had been accompanied by an increase in grazing.

In Ravensthorpe the enclosed land was used in much the same way, as the following Table shows:

Table 13. Land-Use on Enclosures in Ravensthorpe, 1637.

Size of Farm	Arable		Meadow		Pasture	
	Acres	%	Acres	%	Acres	%
1. 247.5	22.5	9	90	36.4	135	54.6
2. 72 .5	16	22.1	7.5	10.3	49	67.6
3. 197.5	13	6.5	65	32.5	119.5	61
4. 169.5	22	13	47	27.7	100.5	59.3
5 322.5	0	0	111	34.4	211.5	65.6
1009.5	73.5	7.3	320.5	31.7	615.5	61.0

Once again, the large proportion of pasture and meadow compared with the arable land points to only one possible conclusion - that the purpose of enclosure was to facilitate specialisation in animal-rearing.

The clearing of woods and reclamation of moorland represented additional changes in the land-use of several parishes. Evidence of

such changes during the sixteenth century is rare, and is usually derived from inferences in records of farming rather than from direct statements; such inferences have been mentioned already on the former granges of Rievaulx, Newlathes and Old Byland. Direct reference to improvement does not appear until 1637, when, in the manor of Helmsley alone large areas of moorland were reclaimed and enclosed in a wide variety of situations. In Pockley, which lies on the limestone plateau entirely above 250 feet, and mostly above 500 feet, reclamation and enclosure of moorland was well under way. Intakes amounting to 61 acres were recorded in 1637; all were enclosed, and were used for "arable and pasture". At Ravensthorpe, on the western scarp, where the land rises quickly to over 900 feet, there were more intakes, all enclosed and with a marked preponderance of pasture. The importance of the pastures is further emphasised by a note appended to the survey of Ravensthorpe - "Boltby Intack to be taken in for pasture" thus showing clearly that more improved pasture was needed. In addition "The mayne Common besides this Intack Conteyninge 1851 acres 10 perches" was apparently used for pasture.

In the neighbouring township of Boltby, also occupying the scarp face and the adjacent moorland summit, intakes were particularly extensive. By 1637 nine intakes had been made, amounting altogether to 508 acres. Arable land occupied two of the intakes, which between them contained only 10 acres. The remainder was used for pasture. Practically the whole of this enclosed pasture was described as "moorish",

a term which suggests that insufficient improvement had been carried out to make it readily distinguishable from the open moorlands from which it had been taken. Indeed, of one large intake of  $108\frac{1}{2}$  acres it is said "---- they stint themselves to 26 gates." A "gate" in local speech means the area required to feed one animal during the summer months. An allowance of over four acres per animal was generous, and bears unmistakable witness to the poor quality of the "Moorish Pastures". Similar records of reclamation continue to appear until the end of the century. In 1696 more intakes were in existence in Kirby Knowle<sup>42</sup>, which adjoins Ravensthorpe and Boltby on the western scarp. No land-use is recorded. In Nunnington, on the lower, southern slopes of the Corallian Limestone, reclamation of moorland was probably complete at least as early as 1685. The High Moor is referred to several times in the Glebe terrier, but each time as either arable or pasture. It was divided into the "Corn High Moor" and "Pasture High Moor" the former being worked in "lands" or strips, and the latter let off in "beast gates". It seems therefore, that the land, which was originally moorland, had been incorporated in the open-field system and had come to be treated as an extra field. The "High Moor" in Nunnington lay on the tongue of oolitic rock which projects eastward into the Vale of Pickering south of the village (Fig. 1). Geologically therefore, it is similar to the main mass of the Hambleton Hills. The chief distinguishing feature is its height,

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<sup>42</sup> Glebe Terrier, 1696.

which nowhere exceeds 320 feet, and it is this low altitude which was probably responsible for the early disappearance of moorland. The reclaimed land in Nunnington differs from that in all the other parishes in two important respects - it was not enclosed and it was not devoted primarily to pasturage.

Reclamation in Byland, Oldstead and Wass was confined to the remotest parts of their high moorland. The map of 1687 (Fig.19) shows a small group of closes which were unmistakably made from reclaimed moorland, occupying a small area in the northern part of Oldstead parish, near a hamlet known at the present day as Cold Cam. These intakes were far from any of the villages and were surrounded on all sides by open moorland. The eighteenth century map shows only one additional group of intakes, also in Oldstead Moor where a large, isolated area called Shaws had been divided into closes. This lay entirely above 900 feet and was therefore more likely to have been enclosed for pasture than for conversion into arable. Woodland clearings of which the largest was in Abbey Bank Wood, represent the only other change, and this is the only place where woodland clearing is recorded. It is interesting to note that the positions and extent of improved farmland, woods and moors are very much the same today as they were at the beginning of the eighteenth century.

These examples of enclosure and reclamation, drawn from different parishes at long intervals of time, illustrate clearly the type of change which was taking place in the western part of the

Corallian hills. Generalisation is dangerous, particularly when it applies to a period of transition in agriculture such as the 200 years which are under consideration, but the three maps which have been described help to build up a picture of the state of some of the land in the region at successive stages in its history. Enclosure of the open-fields was not completed in the remaining parishes as early as in Oldstead, Byland and Wass, though in many places land was enclosed by Act of Parliament little more than fifty years later, towards the end of the eighteenth century. That the influence of the monasteries, both direct and indirect, played a great part in determining the progress and site of most of the improvements, is fully apparent from the evidence which has been quoted.

Further eastward, in the area east of Rosedale, different influences were at work. It was in this area, out of the whole of the North York Moors that monastic influence was weakest; indeed, many of the monastic holdings were leased to laymen long before the Dissolution and any influence the monks had once had therefore disappeared very early. After the Dissolution the monastic holdings in Pickering Forest became Crown property. Several of these parcels of land, in Wykeham, Ruston, Hutton Buscel, Lockton and Kingthorpe were still described as open-field lands in 1577,<sup>43</sup> and had thus remained unchanged since medieval times. At Burniston, on the boulder-clay lowlands near the coast, and at Suffield and Everley in

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<sup>43</sup> Turton - R.B. Op.cit. Vol.1, p.8.

the small area outside the Forest, owned by Whitby Abbey, the same absence of change is apparent.

This stability is reflected also in the land in Pickering Forest which had remained in the hands of laymen. References to open-fields occur frequently in documents of the seventeenth century. The open-fields of Pickering and Brompton, for example, are described in the Parliamentary Survey of 1650<sup>44</sup> and those of Ellerburn, Thornton Dale, Ebberston and Hutton Buscel in the glebe terriers of the late seventeenth and early eighteenth centuries.<sup>45</sup> But although the open-field landscape remained very largely unbroken until well into the seventeenth century, isolated instances of enclosure can be traced as early as 1539, especially on land confiscated from the dissolved monasteries. By 1539 some of the land held by Whitby Abbey in the open-fields of Hackness and High and Low Dales had already been enclosed,<sup>46</sup> though the description of some of this land as "lately inclosed" shows that the change from open-field farming was of comparatively recent origin. Even in Suffield and Everley, a few closes had been made, two in Suffield and four in Everley, though these could make little difference to the open-field economy. More rapid progress had taken place in Silpho. By the mid-sixteenth century 273 acres out of a total of 362 acres of improved land had been enclosed

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<sup>44</sup> Yorkshire Parliamentary Survey, 1650.

<sup>45</sup> Glebe Terriers: Hutton Buscel 1685, Ebberston 1698, Ellerburn 1716, Thornton Dale 1685.

<sup>46</sup> Whitby Chertulary p.747 et.seq.

in nineteen closes,<sup>47</sup> all worked by laymen though the land itself, like all the other land in the district enclosed in the sixteenth century, was held by Whitby Abbey.

While these scattered enclosures were in existence in the sixteenth century, no record has been found which suggests that enclosure of any parish was completed during the century. There were no large granges in the Forest of Pickering comparable with those farther west on which the earliest enclosure had taken place, and not until more than a century after the Dissolution, in 1650, is there any evidence of enclosure on a larger scale. Even in 1650 there was only one manor - Northstead - where enclosure was complete. The exact date of this enclosure is not known, but remnants of the former common fields can be detected as some of the closes were still shared between "divers of the inhabitants of Scarborough and Scawby." In Pickering, some enclosure had taken place on a fairly large scale, though it involved only a part of the parish. The main area affected was Blansby Park, which was originally a hunting enclosure, and was divided into five lots sometime between 1608 and 1650. All the land was enclosed, though some pasture closes contained over 100 acres and were thus very large. Elsewhere in Pickering parish there were only two farms which were completely enclosed, and while many of the other farms in the parish included one or two closes,

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<sup>47</sup> From "A Cobby of an Auntient Rentall or Survey of the Mann<sup>r</sup> and Lordship of Hackness found amongst the old writings of Sir Thomas Posthumus Hoby and Transcribed in the year 1709 ---." The rental is undated but was made in "the last Abbat's time".

they still depended primarily on open-field cultivation.<sup>48</sup> Similarly, in Allerston and Hutton Buscel, enclosure had begun by 1650, but all the closes were made by the same man and were thus presumably all on one farm.<sup>49</sup>

Changes in land-use resulting from enclosure were rare in the eastern Corallian hills. No changes can be detected following the sixteenth century enclosures. In the seventeenth century it was only in Hackness, Pickering and Northstead that enclosure was sufficiently extensive to allow any major changes in farming to take place. At Hackness, outside Pickering Forest, where over 750 acres had been enclosed by 1608, changes from an open-field economy were only apparent on three of the fourteen farms affected by enclosure. Two of these farms belonged to the demesne, and contained between them 76 per cent of the enclosed land. The land-use on all the fourteen farms is shown in the following table:

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<sup>48</sup> Parliamentary Survey, Pickering 1651, pp.38-40.

<sup>49</sup> Turton R.B. *op. cit.* pp. 102-3. The acreage of these closes is not stated; they were of a yearly value of 36 shillings.



Table 14. Survey of the Enclosures of Hackness. 1608.<sup>50</sup>

Holdings	Arable				Meadow				Pasture			
	A	R	P	%	A	R	P	%	A	R	P	%
Demesne	0	2	0	0.1	89	2	26	23.1	293	2	17	76.8
"	8	0	7	4.3	91	3	17	49.7	85	1	12	46.0
3	9	3	27	13.7	23	3	4	32.2	39	2	11	54.1
4	-	-	-	-	1	3	24	100	-	-	-	-
5	-	-	-	-	3	0	1	100	-	-	-	-
6	-	-	-	-	1	3	26	100	-	-	-	-
7	-	-	-	-	11	0	30	100	-	-	-	-
8	-	-	-	-	4	2	33	100	-	-	-	-
9	0	3	37	18.2	4	2	5	81.8	-	-	-	-
10	0	0	29	8.4	4	1	2	66.6	1	2	0	25.0
11	-	-	-	-	11	3	13	100	-	-	-	-
12	-	-	-	-	15	0	6	66.6	7	1	31	33.4
13	-	-	-	-	26	0	20	100	-	-	-	-
14	-	-	-	-	15	0	4	100	-	-	-	-
Total	19	2	20	2.6	304	3	11		427	1	31	56.8

The small acreage of arable land among the enclosures is particularly noteworthy, and the survey leaves no doubt that on the majority of farms the arable was still in open-field, and the enclosure of meadow was of primary importance. Enclosure of pasture was significant only on one of the demesne farms, where about 77 per cent of the enclosed

<sup>50</sup> Compiled from a Survey kept in the North Riding Records Office.

land was in permanent pasture, suggesting that specialisation in stock-raising had taken place.

In Pickering, where the enclosed farms were few in number but very large in size there are signs that specialisation followed enclosure. The following table shows the land-use on the enclosed farms in Pickering, five of them in Blansby Park and the others elsewhere

Table. 15. Land-use on large holdings in Pickering, 1651.<sup>51</sup>

Size of Holding Acres	Arable		Meadow		Pasture		Wood		Moor		Unspecified	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
935	22	2.3	39	4.2	573	61.3	40	4.3	255	27.2	6	0.7
967	0	-	71	7.3	833	86.1	62	6.4	0	-	1	0.2
73	0	-	8	10.9	0	-	15	20.5	0	-	50	68.6
86.5	0	-	41.5	4.8	45	5.2	0	-	0	-	0	-
* 282.5	0	-	0	-	0	-	282.5	100	0	-	0	-
197	1	0.5	53.5	27.1	142.5	72.4	0	-	0	-	0	-
782.5	0	0	0	-	676	86.4	0	-	106.5	13.6	0	-

\* Farms in Blansby Park.

in the parish. The table shows that, of the seven farms, five were completely without arable, while on the remaining two it formed only a very small proportion of the total area. One holding consisted entirely of

<sup>51</sup> Parliamentary Survey, Pickering 1651. ff.38-40.

woodland. The main part of each other farm was made up of meadow, pasture and moor. The importance of animals on these farms is clear, and in each case the animals kept were sheep.<sup>52</sup>

In Northstead, where enclosure was complete by 1650 a similar type of specialisation appears to have resulted:

Table 16. Land-use in Northstead. 1651.

Acreages	Land-use
40	Unclassified.
31	Arable and Pasture
5	Pasture and Meadow
424:1 rood	Pasture.
Total 500:1 rood	

With only 6 percent of the total known to be used for arable at any time, the importance of animals is unmistakable. Another change accompanied enclosure in Northstead, which also suggests that former arable land had been converted to pasture. In describing the closes, the survey mentions "all that close or Inclosed peice of pasture ground --- wherein a House heretofore stood," and further, of the manor as a whole, "There is not any house upon the premises (manor) ---."

<sup>52</sup> Several of the large pasture closes are called sheep walks in the Parliamentary survey. On each farm, land was set aside for use as a fold.

This is the only definite record of depopulation in the district, and, as in other parts of Britain at the same period, was clearly the result of land-use changes.

During the next hundred years, between the confiscation of Crown property during the Commonwealth period and the beginning of Parliamentary enclosure round about 1750, there seems to have been little change. In Burniston for instance, in 1724, one holding of over 266 acres<sup>53</sup> contained closes amounting to only twenty-one acres, or eight per cent of the total improved land. If this was characteristic of the parish as a whole, it seems that the farming organisation had undergone little change since medieval times. Only in Silpho is there evidence of a marked increase in the area enclosed. Here in 1724, there were 871 acres of improved land, an increase of 509 acres since the mid-sixteenth century, all of which was enclosed. The closes were distributed among twelve farms. On each individual farm, arable land occupied about twenty per cent, meadow twenty-six per cent and pasture fifty-four per cent of the total area. Thus, all these farms can be described as mixed; enclosure was not followed by specialisation. The large increase in the area enclosed is remarkable as the 509 acres enclosed since the sixteenth century formed as much as fifty-eight per cent of the enclosed land in 1724. It will be noted however, that this is little more than the percentage

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<sup>53</sup> North Riding Record Office, Survey of John Bempde's property, Hackness estate, 1724.

of permanent pasture, and it seems likely that much of the increase resulted from the enclosure of the common pastures.

Clearing in the woods and wastes which surrounded the improved land was resulting in further changes. In the woods the assarting of small areas continued as it had done in medieval times. Some of these small assarts had been made in Levisham sometime before 1619 and in Langwathdale by the mid-seventeenth century.<sup>54</sup>

In "the heart of the Forest" at Blackhow, and in the secluded dales of Dalby and Bickley, more closes were recorded during the same century, and as these were all places where open-fields had never existed, these closes clearly resulted from the clearing of woodland or waste.

A suggestion that improvement on a larger scale might be desirable was made as early as the reign of Elizabeth, when 220 acres of woodland on the west side of Pickering Beck was granted to Francis Dickinson "--- for and dureing the Term of sixty yeares if three lives should so long live---",<sup>55</sup> and he was given full authority "--- to inclose the Hags and woodlands aforesaid --- and to erect or build 1 messuage or barne or other edifices upon any of them."

Surveys of the woods made between 1600 and 1665 revealed that much of the timber was in a very poor state, and confined mainly to the steep valley sides,<sup>56</sup> In 1627 another large wood was leased

<sup>54</sup> Turton R.B. op. cit. pp.102-3.

<sup>55</sup> Ibid. Vol.I. p.87.

<sup>56</sup> Ibid. p.10.

for improvement. This was King's Hagg, situated between Scallamoor and Howldale to the east of Pickering. It included 79 acres and was estimated to be worth £46.9.6. upon improvement.<sup>57</sup> A note added to the Survey to the effect that the bushes growing on the land would pay for the clearing, indicates that the improvement envisaged by the surveyors involved a change-over from hags to pasture or tillage. By 1651 the whole of Scallamoor was described as "pasture ground,"<sup>58</sup> and it is likely that this included the former hags. The granting of long leases, often for "three lives," became increasingly common as the seventeenth century advanced, and gave further encouragement to the improvement of Forest land. In Scalby, leases of as much as ninety-nine years were granted to thirteen tenants, "--- at the determination of which said Lease of 99 yeares they are to double the said Rent of £21-10-6 as an Increase of Rent or Improvement---"<sup>59</sup> Intakes and encroachments, made with the approval of the Forest administrators were also being let on lease to tenant farmers,<sup>60</sup> and by 1627 these amounted to at least ninety-eight acres.<sup>61</sup>

The largest systematic enclosure of waste and wood took place in the Upper Derwent valley, in the part known as Langdale. In 1603 the valley contained waste and woodland which was used for grazing.<sup>62</sup> In 1614 the lessee was granted "full liberty and power to

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57 Ibid p.86.

58 Ibid p.97

59 Ibid p.88

60 Ibid p.91

61 Willan T.S. op. cit. p.237.

62 Turton R.B. op.cit. Vol.I. p.80.

inclose all that parcell of ground called Langdale --- and to convert the same to Tillage or other uses, also to erect howses to dwell in and other howses on the premises, so as ther weere ten acres of ground laidd to every howse." The Parliamentary survey of 1650 records that this enclosure had actually taken place, 240 acres on the east side of the river being divided into nine holdings ranging from 15 to 60 acres. On the west side 448 acres could not be enclosed because of rights claimed by one of the tenants "which his predecessors purchased from King Henry VIII."

But although improvement was encouraged by the Forest authorities, it was not always tolerated by the local inhabitants. Haugh Rigg, a wooded area in Pickering parish, was let on "an improving lease" during the early seventeenth century, but the Duchy of Lancaster records say, "the tenants of Pickeringe barr the tenants from making anie use of this lease ---."<sup>63</sup> Nevertheless, the low economic value of the timber coupled with a decline in hunting, eventually resulted in a steady increase in the importance of agriculture within the Forest, and the granting of long leases went a long way towards encouraging farm tenants to improve their holdings.

Reclamation of moors and wastes was mainly represented by small intakes made in widely scattered situations. During the sixteenth century part of the common in Middleton was enclosed and brought into

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<sup>63</sup> Ibid. p.48.

cultivation<sup>64</sup> for the first time in living memory, the land having formerly been sheep pasture belonging to Rosedale Abbey. In January 1580 it was recorded that Sir Richard Cholmeley "--- hath enclosed two Intacks in a place called Stangate Banck and Crossdaile Sicke conteyning by estimacion tenn acres ----." <sup>65</sup> The same survey revealed that Thomas Brockett also "---hathe inclosed four intackes in a place called Dawbye (Dalby) conteyning by estimacion four acres being of the Quenes Ma<sup>ties</sup> demeynes ----." Similar entries refer to "--- Three intackes in a place called Trottesdaile conteyning ---8 acres," 10 acres at "Haddowke", 10 acres between Cockerway Cross and Stowgripp, 4 acres in Newtondale, 30 acres in Cropton and 1 intack in Cowme Hills." It is not possible to locate all these places accurately, but the main purpose in quoting them is to show on what scale most of the moorland reclamation was proceeding. Some land owners, however, were able and willing to carry out improvement on a much larger scale, and it is from the records of their enterprises that some knowledge is gained of the use to which the reclaimed land was put. One such intake was the work of William Metham who "Hathe enclosed three intackes in a place called Stayndale and Haulesicke End, conteyning by estimacion three score six acres being within his Lordship of Lockton, and hathe sett two haystackes in the said place ----." <sup>66</sup> Not far away a much larger encroachment had been made over a long period of time. On 15th June

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<sup>64</sup> Tithe Cause Paper, 1547, No.G.367.

<sup>65</sup> Turton, R.B. op.cit. Vol.1, p.221.

<sup>66</sup> Ibid. p.221.



1573 it was alleged that Sir Richard Cholmeley of Roxby, near Thornton Dale, had "wrongfully entered and entruded into and upon diverse and sondrye parcelles of the soyle and wast groundes of hir Ma<sup>tie</sup> lyeinge within the precinct of the said Forrest (of Pickering) --- being very great and large groundes and conteyning by estymacion threë hundreth acres or thereabouts, part wherof he --- hath enclosed, and some partes therof hath bene enclosed, by some of thauncestors of the said Sir Richard, or of some others whose estate he --- hath.--- and the same groundes so enclosed he the said Sir Richard both still kepe enclosed, and the same hath converted and doth convert partly into arable groundes and partly into meadows and pasture, clayminge the same as his awne enheritaunce ---"<sup>67</sup> This was disapproved of by the Forest administrators more in principle than in practice, for there is no record that any action was taken to prevent such work in the future, either on Sir Richard Cholmeley's property or elsewhere.

Active opposition by the local inhabitants to the enclosure of wastes is apparent in the many references to the pulling down or burning of new hedges. In Horcum for example on 4th February 1584 the same Sir Richard Cholmeley was given a copyhold grant of 100 acres of "moore ground"---- parcell of the wastes in Pickering Lieth".<sup>68</sup> These 100 acres were hedged and ditched, but his hedges were burnt down at night. A lease of 120 acres on Little Dale Rigg was also made

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<sup>67</sup> Ibid. p.217.

<sup>68</sup> Turton R.B. op.cit. Vol.I. p.235.

useless through active interference by the inhabitants of Pickering, with any improvement the leaseholder attempted<sup>69</sup>. In both cases the improvements threatened to suppress old-established pasture rights. Resistance of this kind continued in the seventeenth century. In 1626, fifteen persons were presented at Thirsk Quarter Sessions "for entering and throwing down the fences of a certain enclosure made by the inhabitants of Burniston on the great common there, parcel of the Honor of the Manor of Pickering, to the extent of 200 acres, and which they had and held in sepralty for the space of 2 years."<sup>70</sup>

At about the same time, another tenant in Burniston was prevented from enclosing forty acres of waste heath, even though it was surrounded on all sides by intakes.<sup>71</sup>

In the small area outside the Forest of Pickering in the eastern part of the Corallian region, moorland reclamation was hampered by fewer restrictions. Moorland in the Hackness Lordship was extensive: "there is belonging to the Lordship a huge wayste, moor or comon very (?) in some parts except it be for peat or Turf, but in other parts good pasture for sheep and cattle, w<sup>ch</sup> contayneth by Estimation 8,000 acres rated at a penny per acre----"<sup>72</sup>. Intakes from the moor were made in several places. At Bradee (Breaday Gill) 86 acres had been taken in as

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69 Ibid. p.48.

70 Willan T.S. op.cit. p.254. Quoted from North Riding Quarter Sessions Records, iii p.269.

71 See note 63 above. Part of a Survey of Pickering Forest made by John Norden, 1619-21.

72 See note 67 above.

early as the mid-sixteenth century, and in Hackness another intake of 11 acres was used as arable and pasture land. In Suffield it is recorded that "the Tennants there hath in Intackes Maddocke Moore," a statement which suggests that the entire moor had been enclosed.

It is clear from the examples which have been quoted that in the eastern Corallian hills, both in the Forest of Pickering and outside it, agricultural changes were following much the same pattern as in other parts of the Corallian outcrop. Enclosure of open-fields was well under way in some parishes, notably those included in the Hackness Lordship, by the beginning of the eighteenth century, and was already complete in Northstead. Large consolidated holdings of enclosed land were still rare however, even in the eighteenth century, though the fact that they existed at all shows that the open-field system was gradually being broken up. On the few such holdings in Pickering and Northstead the type of farming is remarkably similar to that practised on the former monastic granges further west, thus suggesting a general tendency to enclose for pasture at the expense of arable.

Reclamation of woods and moors, though patchy and sporadic, was also proceeding in most parts of the region, and was only opposed when it caused a serious threat to old-established grazing rights.

Throughout the North York Moors there was an unmistakable trend towards the improvement of agriculture by both enclosure of common fields and the taking in of waste and woodland. This new attitude towards the land, exemplified by the desire to gain higher rents by improvement, was perfectly in keeping with the spirit of the time. The treatises on husbandry which began to appear during the sixteenth century show unmistakable signs of a newly awakened interest in the improvement of the land, partly through the desire to consolidate and enclose arable holdings in the open-fields, and partly through suggestions of methods by which "--- to render the Barren Earth fruitful, and provide for the Profit as well as Pleasure of those whose lot is fallen into a Heathy Ground."<sup>73</sup>

Though the main wave of enclosure did not start in north-east Yorkshire until the mid-eighteenth century, the process was well under way in many parts of the area by the mid-sixteenth. Reclamation was even more widespread, and it may well be that some of the methods suggested in general terms by agricultural writers of the seventeenth century were put to good use in the district. Certainly Markham's description of "--- the Barren and unwholesome grounds"<sup>74</sup> can be applied to the North York Moors. He lists several ways by which such lands could be recognised: "--- first by the clyme and continent wherein they lie; next by their constitution and condition; and lastly by outward faces and characters. --- When you see the ground covered with

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<sup>73</sup> Gabriel Reeve: Directions left by a Gentleman to his Sonns for the Improvement of Barren and Heathy Land in England and Wales. 1670. epistle Dedicatory.

<sup>74</sup> Markham's Farewell to Husbandry 1638. p.2.

Heath, Lyng, Broom, Bracken, Gorse or such like, they be most apparent signes of infinite great barrennesse, as may be seene in many Mores, Forrests, and other wilde and woody places." He regarded moors as the worst type of land: "--- this earth of which I am now to intreate, bearing no Grasse at all, but only a wilde, filthy, blacke, browne weede which we call Ling or Heath, the tender tops whereof cattel and wile Deere will sometimes crop, yet it is to them but little reliefe and onely maintaineth life and no more."<sup>75</sup> To destroy the heath and improve the land he gives very detailed instructions, which include among other things paring and burning, liming and deep ploughing, all of which must of necessity have been done on the moorland intakes, thus enabling farmers to improve land which had previously been "Barren and unwholesome."

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75 Ibid. p.32.

## Chapter VI

### Enclosure and the Expanding Acreage (1750 - 1850)

The process of enclosure which had continued slowly for at least two centuries, reached its climax after 1750. During the following hundred years most of the land which had hitherto remained in open-fields was enclosed by Act of Parliament; common grazing land was enclosed too, wherever such enclosure could be of benefit to "the parties interested therein."

Enclosure could hardly take place without causing, directly or indirectly, some changes in land-use. At the same time, new farming methods were being made known and new crops, improved strains of the traditional grain crops, and improved breeds of cattle and sheep were being introduced. It was during this period too, that Britain quickened her development as an industrial nation, and the rapid growth of large urban populations, especially in the West Riding, Tees-side and South Durham, created fresh markets for food and stimulated food production in all the agricultural parts of the county, including the North York Moors. Home production of food was stimulated further by the Napoleonic Wars, and the twenty years of agricultural depression which followed the end of the war also made its mark on farming in the region.

The effect of all these events on land-use is reflected in a wide variety of documents. Parliamentary Enclosure Acts and Awards throw some light on the state of farming before enclosure actually took place, and convey something of the thoughts and ambitions of the most influential farmers. The maps which sometimes accompany them are often the earliest maps in existence showing land-use.

In the late eighteenth century the North York Moors were described by three well-known agricultural writers - Arthur Young (1771), William Marshall (1788), and John Tuke (1800), all of whom provide valuable information on many aspects of farming.

For the nineteenth century the Crop Returns of 1801 throw some light on arable farming. More valuable, however, is the Tithe Survey of 1838-50, which is the closest approach to a modern land-use survey that exists for the nineteenth century. None of these documents covers the whole of the North York Moors, but by using them all in conjunction with one another and with other minor sources, it has been possible to build up a picture of land-use changes in each of the three moorland regions.

#### Region I The Northern Boulder-clay Plateau.

"In the best parts of this Riding, few open or common-fields now remain, nearly the whole having long been inclosed."<sup>1</sup>

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<sup>1</sup> Tuke J. Agriculture of the North Riding of Yorkshire, 1800, p.90.

So wrote John Tuke in 1800 of the North Riding as a whole, and the fertile belt of boulder clay bordering the north coast of the Riding was no exception. During the main period of Parliamentary enclosure, from 1750 to 1830, Acts of Parliament for the enclosure of open-fields were sought by only seven of the twenty-four parishes in the region. In most of the other parishes enclosure had been a gradual process which started in the sixteenth century, and by the time Acts of Parliament became obligatory, the agricultural landscape of much of the boulder-clay plateau must have been very much the same as it is today. The chief evidence of piecemeal enclosure is in the shape of the fields. In Fylingdales, where most land was enclosed before 1750, the fields are small and irregular. In Newton Mulgrave and Loftus these small irregular fields are confined to specific areas, thus locating fairly accurately the position of the oldest enclosures.

Among the last parishes to be enclosed was a small group between Hinderwell on the west and Lythe on the east. Fig. 20 compiled from L. R. R. O. maps shows the land-use in these open-field parishes in the late eighteenth century.<sup>2</sup> The pattern is a familiar one: long narrow garths, usually in pasture, extended from the backs of the houses as far as a "back lane"

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<sup>2</sup> P.R.O. M/R 337, 340, 341. M P E 391 - 393.

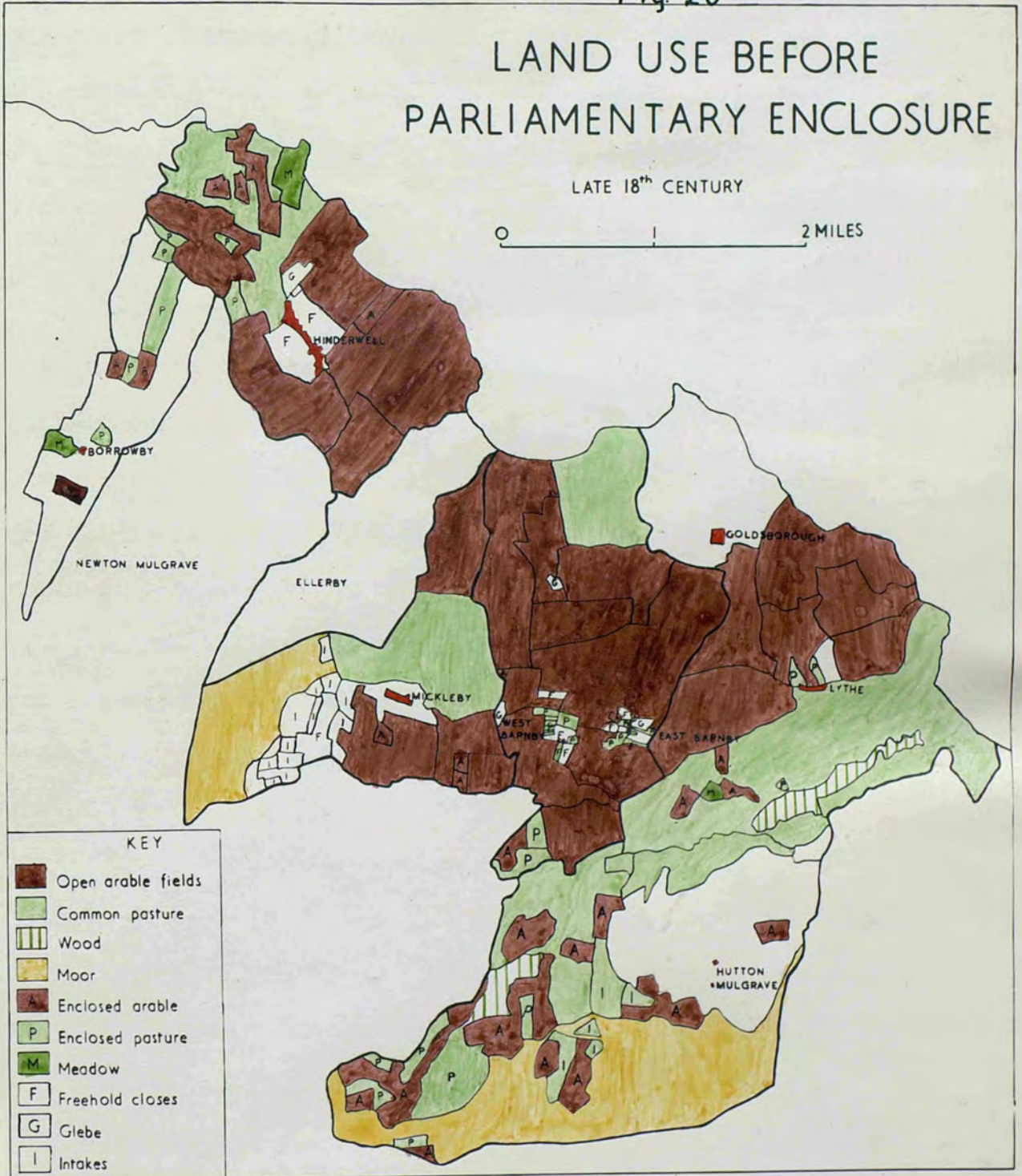


Fig. 20

# LAND USE BEFORE PARLIAMENTARY ENCLOSURE

LATE 18<sup>th</sup> CENTURY

0 1 2 MILES



which ran between the garths and the open-fields. The fields themselves, four or six in number, surrounded the village and formed unbroken expanses of arable land, only rarely interrupted by small closes. These were consolidated holdings of a few acres, still used as arable land, and indistinguishable from the common-fields except by their enclosing fences. Pastures were extensive, especially in Lythe and Hutton Mulgrave where they occupied all the steepest valley slopes and the valley floors. Enclosure of the common pastures was much more advanced than enclosure of the arable fields. Most of the enclosures were still used as pasture, but in both Hinderwell and Hutton Mulgrave fairly large areas were converted to meadow or tillage. With the passing of Enclosure Acts from 1771 onwards, both the arable fields and the common pastures gradually disappeared. By 1814 only one parish - Hinderwell - was still unenclosed, and this remained unchanged until 1853.

The final break-up of the open-fields left the way clear for agricultural experiments. The more progressive farmers, no longer held back by conservative neighbours, were now free to adopt new methods and to try out new crops. John Tuke, in his Report to the Board of Agriculture, provides the first written account of farming in the region. "The soils," he says, " - - - are a brownish clay, a clayey loam, a loam upon a strong clay, a lightish soil upon an alum shale, a loam

upon a freestone - - - and in some vallies west of Whitby, a deep rich loam."<sup>3</sup> On this remarkable variety of loams and clay a fairly rigid pattern of farming was established. The rotation of crops still commonly used in Tuke's day, was a three-fold one consisting of fallow, wheat and oats, and was clearly a continuation of the pre-enclosure system. Oats were sometimes replaced by beans or blendings (a mixture of peas and beans). "Turnips," says Tuke, "are there but little cultivated, even upon lands suitable for them."<sup>4</sup> Clover also, was "in disrepute there," even though it was rapidly gaining favour in other parts of the country. The over-whelming importance of wheat and oats compared with the other crops is shown by the Crop Returns for 1801 (Table 17) which give the acreages devoted to each crop parish by parish.<sup>5</sup> In each of the eight

<sup>3</sup> Tuke J. op.cit., pp.7 - 8.

<sup>4</sup> Ibid, p.109.

<sup>5</sup> The reliability of these figures is open to question. Inquiries by the clergy about farm crops had often been the prelude to increased taxation. Some farmers are therefore likely to have understated their acreages.

See Henderson H.C.K. Agriculture in England and Wales in 1801. G.J. 1952, p.340.

Table 17. Acreages under arable crops, 1801. (Region I).

Parish	Wheat	Barley	Oats	Potatoes	Legumes	Rape or Turnips	Rye or Maslin	Total	Acreage of Parish
Easington	200	20	200	16	40	40	0	516	3,372
Fylingdales	$344\frac{3}{4}$	$62\frac{3}{4}$	535	$145\frac{3}{4}$	$39\frac{3}{4}$	$121\frac{3}{4}$	0	$1,249\frac{3}{4}$	17,937
Liverton	100	10	150	10	26	20	0	316	2,400
Loftus	150	45	202	13	44	35	0	489	3,775
Lythe	920	198	1,156	121	190	188	0	2,773	3,620
Skelton	262	62	176	$2\frac{1}{2}$	180	56	0	$738\frac{1}{2}$	6,431
Sneaton	176	$23\frac{1}{2}$	$247\frac{1}{2}$	$31\frac{1}{2}$	$17\frac{1}{2}$	49	0	545	4,040
Whitby	160	50	260	60	25	60	0	615	1,718
TOTALS	$2,312\frac{3}{4}$	$471\frac{1}{4}$	$2,926\frac{1}{2}$	$399\frac{3}{4}$	$562\frac{1}{4}$	$569\frac{3}{4}$	0	$7,242\frac{1}{4}$	

parishes for which such figures exist these two grain crops occupied almost two-thirds of the crop land, the remainder being divided in varying proportions between the other crops. A large part of the wheat crop from the coastal plateau and the adjoining Cleveland Plain, was "sent (by sea) to every part of the

western coast of Great Britain."<sup>6</sup> Considerable quantities also went to the markets at Thirsk and Leyburn "which are bought up for the manufacturing parts of the country." There is no doubt that the steady demands of these old-established markets were largely responsible for the remarkable lack of change in the farming of the district, and little advantage was taken of the opportunities which enclosure provided.

Despite the great importance of grain crops, arable land was estimated to occupy only about one-third of the available farm land,<sup>7</sup> the remainder being devoted to meadow and pasture for large numbers of cattle. These were reared for both beef and dairy purposes. The animals were of good quality, similar to the famous Teeswaters of the Cleveland Plain. "Great numbers of oxen," says Tuke, "are worked until six or seven years old, and then are sold chiefly to the graziers of the south of Yorkshire, and of Lincolnshire, by whom they are preferred to every other breed."<sup>8</sup> Advances in the methods of cattle-rearing appear to have been as slow in reaching north-east Yorkshire as new crops, and in Tuke's view, "the good qualities of the cattle-stock of this district, seem to be more owing to the soil, climate or accident, or all of them united,

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<sup>6</sup> Tuke, J. Op.cit.,p.116. It seems unlikely that grain would be sent by sea to the western shores of this island. At Whitby the coast trends east-west, therefore cargoes sent westward would reach Durham and Northumberland.

<sup>7</sup> Tuke, J. op.cit. p.101.

<sup>8</sup> Ibid.p.250. The fattened cattle finally went to Smithfield.

than to the care and attention of the breeders, whose spirit for improvement is very feeble indeed."<sup>9</sup> Dairying also was carried on according to traditional methods. Turnips were rarely used as winter fodder and stall-feeding was almost unknown. The farmers were therefore dependent upon their hay crop for winter food as their ancestors had been for centuries before, thus continuing the practice which had prevailed under the open-field system.

The forty years following Tuke's survey saw several important changes. The Tithe surveys of 1838-45 reveal that arable land then occupied well over half the acreage of improved land in all but five of the parishes for which there are records, an overall increase of about seventeen per cent since Tuke's day.

An increase of this magnitude in the arable acreage is remarkable, and suggests at one and the same time both a growth of local population and an expanding market for grain elsewhere. The Census Returns for 1801 and 1841 show that the increase in the local population in the forty-year period was only 696, of which 547 was in the single parish of Hinderwell. In almost half the parishes in the region, the population had actually decreased, and in several more had increased by only a very few.

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<sup>9</sup> Ibid. p.250.

F<sub>19</sub> 21  
THE NORTH YORKSHIRE MOORS  
LAND UTILISATION

1838 ~ 1850

[COMPILED FROM TITHE SURVEYS]



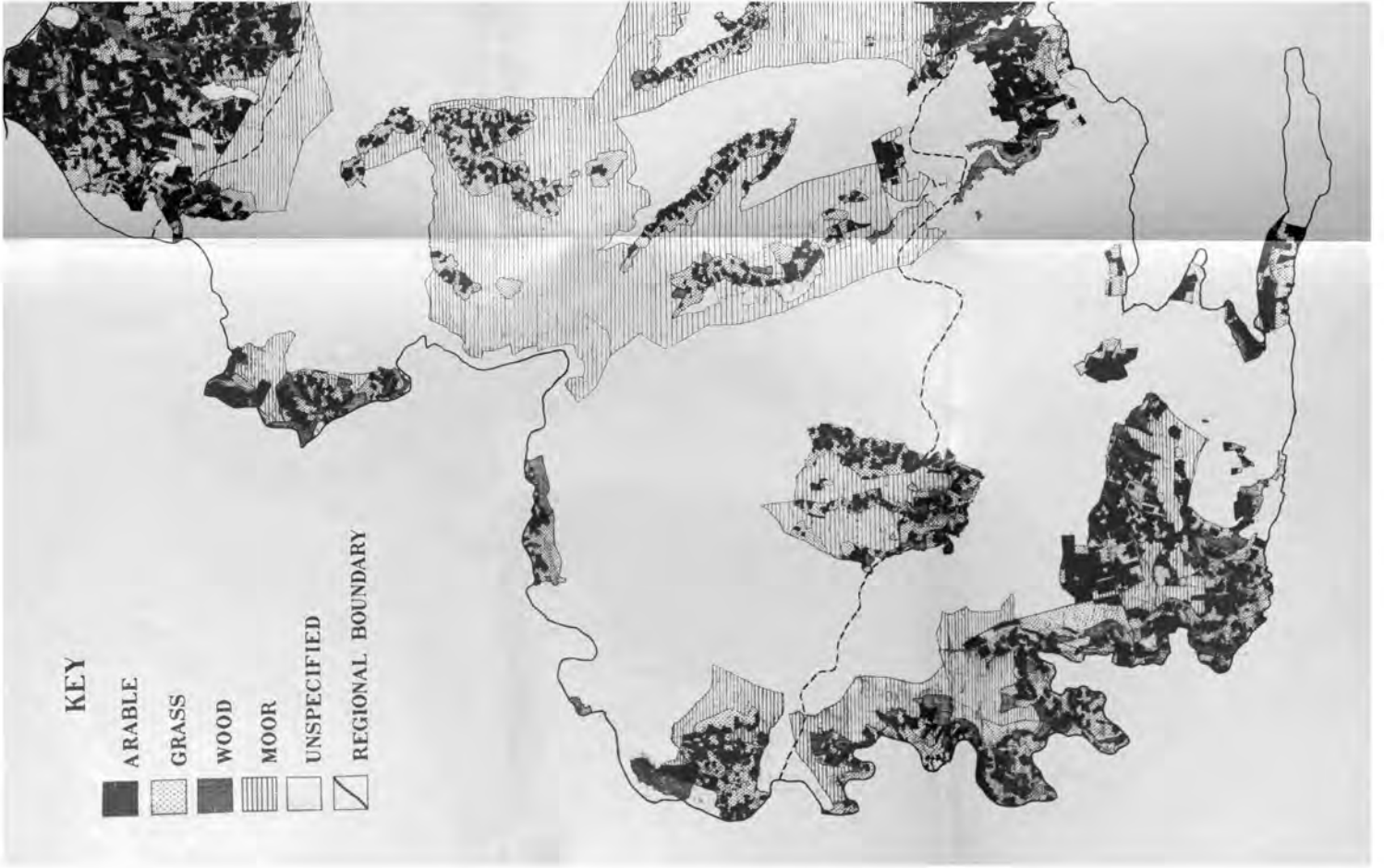




Table 18. - Land-use from the Tithe schedules 1838-45. (Region I).

Parish	Arable	%	Grass	%	Wood	Moor	Total Acreage
Aislaby	238	32.6	491	67.4	72	-	801
Borrowby	172	46.4	199	53.6	-	160	710
Brotton	1,131	64.9	611	35.1	80	-	1,934
Easington	1,594	65.1	854	34.9	361	450	3,372
Ellerby	309	56.7	236	43.3	-	51	596
Fylingdales	1,511	30.1	3,502	69.9	286	12,602	17,937
Hawsker with Stainsacre	1,793	55.5	1,437	44.5	64	123	3,417
Hinderwell	834	58.1	600	41.9	34	-	1,486
Hutton Mulgrave	← 1,205 →				-	130	1,335
Kilton	825	58.4	587	41.6	160	40	1,643
Liverton	1,036	57.9	753	42.1	176	393	2,400
Loftus	1,759	58.6	1,241	41.4	305	380	3,775
Moorsholm	639	60.6	416	39.4	150	1,900	3,844
Newholm-cum- Dunsley	692	41.4	978	58.6	166	113	1,949
Newton Mulgrave	546	54.2	461	45.8	← 508 →		1,515
Skelton	1,829	57.1	1,373	42.9	270	2,900	6,431
Stanghow	752	52.8	761	47.2	189	547	2,250
Whitby (including Ruswarp)	467	32.9	1,021	67.1	17	-	1,718
Total	16,127+	51.0	15,515+	49.0	2,330+	19,789+	57,113

For a complete explanation of the increase of arable land it is necessary to look beyond the region itself to the areas which, by long-established tradition, formed the main markets for grain. It has been mentioned already that in the latter part of the eighteenth century produce from Cleveland and the coast found its way to the growing industrial region of West Yorkshire and along the coast, west and north of Whitby, to Durham. In both these areas the population increased rapidly during the first forty years of the nineteenth century. Middlesbrough also had grown from a hamlet of 25 people in 1801 to a town of over 5,000 by 1841, and while growth of population elsewhere was less spectacular, it was sufficient to provide a great stimulus to food production in the neighbouring rural areas.

The expansion in the food market undoubtedly led to the great wave of moorland reclamation which characterised the period. When Parliamentary enclosure began, the boulder-clay plateau still included several large areas of moorland. These are shown clearly on Fig. 22 for the fourteen parishes for which enclosure maps exist. It will be seen that in several places moorland stretched northward almost to the coast, especially in Newholm-cum-Dunsley where the moor ended less than a quarter of a mile from the cliff top. Some of the moors were surrounded by improved land. In all cases, moorland vegetation grew upon glacial soils which were very little different from those of the

neighbouring areas which had already been improved for cultivation. The main reason for the continued existence of moorland in these areas was to provide the common grazing land which was an essential part of the open-field economy. Frequently the commons were of little value. The evils of intercommoning, in promoting the spread of animal diseases and preventing the improvement of strains by careful breeding were well known. Enclosure of moorland therefore followed quickly after the enclosure of open-fields, "moor allotments" being awarded to the former owners of grazing rights in proportion to their holdings. The results of enclosure varied considerably. In Sneaton, where "An Act for Inclosing and Dividing the Commons and Waste Lands" was obtained in 1802, the moors were divided into eleven allotments of various sizes, some consisting of no more than seven or eight acres and others containing several hundred acres. The entire moor comprised 1,800 acres which, in the words of the preamble to the Act, "in their present State and Condition, yield but very little Profit to the several Persons interested therein." Clearly, the chief object in seeking an Enclosure Act was to make improvement possible. There is little evidence that much improvement followed. On maps made in 1815-17<sup>10</sup> (i.e. before the implementation of the Act in 1824) and in 1828<sup>11</sup>, four years

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<sup>10</sup> Greenwood's map of Yorkshire, 1817.

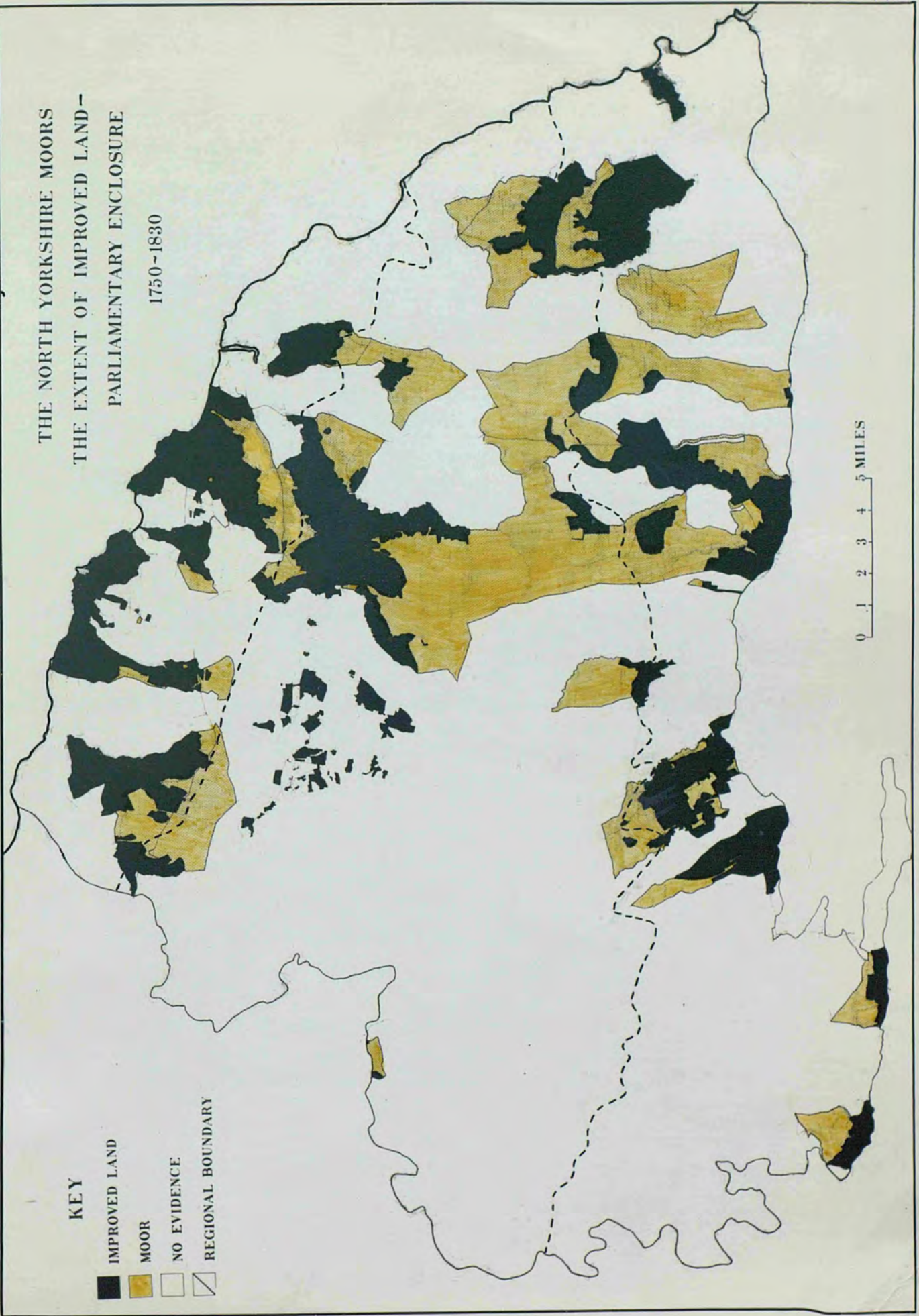
<sup>11</sup> Teesdale's map of Yorkshire, 1828.

Fig. 22

THE NORTH YORKSHIRE MOORS  
THE EXTENT OF IMPROVED LAND -  
PARLIAMENTARY ENCLOSURE  
1750-1830

KEY

- IMPROVED LAND
- MOOR
- NO EVIDENCE
- ▨ REGIONAL BOUNDARY



0 1 2 3 4 5 MILES

afterwards, the moorland edge in Sneaton differed in only one place. Only seven of the eleven allotments appear to have been improved in any way. It seems therefore that the improvement envisaged by the land-holders in 1802 resulted in nothing more than enclosure, enabling them to graze their animals in severalty instead of in common. There was no change in land-use.

In most parishes enclosure of the moorlands resulted in the pushing back of the moorland edge to an extent which was quite unprecedented. In Newholm~~g~~-cum-Dunsley, where moorland was particularly extensive, 760 acres were reclaimed between the passing of the Enclosure Act in 1793 and the making of the Tithe survey fifty years later. Only 113 acres of moorland remained, occupying the remotest corner of the parish at a height of over 800 feet. In Easington, the progress of reclamation was no less remarkable. In 1808 an Act was passed for enclosing 178 acres in the Low Moor and a further 570 acres in the High Moor. The enclosure map of 1817 shows the Low Moor as a rectangular area in the centre of the parish surrounded by improved land, and clearly a remnant of a much larger moor. The High Moor occupied all the southern part of the parish, with an irregular boundary at 600 to 650 feet where it joined the enclosed land. By 1838 the Low Moor had disappeared and was remembered only in the "moor" names of its rectangular arable fields. The High Moor had seen less change, with 510 of the 570 acres still in their

original state. The 60 acres which had been reclaimed all lay along the northern moorland margin where they adjoined the old enclosures. In Ellerby, a small parish of 630 acres, no less than 112 acres was reclaimed from the moor between Parliamentary enclosure in 1771 and the Tithe survey in 1841, all of it lying between 650 and 700 feet, while in Mickleby, another small parish adjoining Ellerby more than 223 acres of former moorland, at 500 to 600 feet, had been reclaimed before the end of the eighteenth century.

Skelton, which shared an enclosure act with Stanghow and Kilton, was also the scene of much reclamation during the early nineteenth century. An Act for enclosing the moors was passed in 1814, and the map that accompanied it shows the great extent of moorland at that time, descending as low as 500 feet at its northern edge. On the western side of Stanghow parish however, old enclosed land reached up to 850 feet in places. By 1845 fresh intakes had been made along much of the moorland edge, amounting to 125 acres. Of this, over 100 acres was in the lowest, northern area, where the rectangular fields, all of similar size, are unmistakably a product of Parliamentary enclosure. In Stanghow, over 40 acres had been reclaimed in a completely new situation - in the middle of the moor at some distance from any other improved land.

In other parishes for which there are no enclosure maps, some measure of the reclamation can be gained from the field names given in the Tithe and other surveys. Many of these names include "intake" or "moor", both of which refer to enclosed areas of former moorland. All these parishes which possessed moorland also possessed intakes, sometimes covering large areas - 388 acres in Fylingdales, 100 acres in Hawsker with Stainsacre, 480 acres in Moorholm and a further 428 acres in Liverton, to quote only a few. The total area of reclaimed land shown as intakes is given in Table 19, and the distribution of "intake" and "moor" names is shown on Fig.23.<sup>12</sup> In some parishes, such as Fylingdales, the intakes were spread round the existing moorland edge in a series of small, enclosed fields, clearly representing piecemeal reclamation by individual farmers. In others the intakes occupied large, compact areas, suggesting that a systematic enclosure of the waste had been carried out. In Liverton for instance, "intacks" occupied almost all of the parish south of the village, from the moorland edge down to about 500 feet. These intakes were continuous with a similar belt of intakes in Loftus, and these in turn were adjacent to Easington Low Moor. It appears therefore, that these were all once part of a large moor, which, by the mid-nineteenth century had entirely disappeared. In its place were the neat,

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<sup>12</sup> Compiled from Tithe surveys and estate maps.

Table 19 Reclamation shown by Field names recorded in the Tithe Survey (Region I)<sup>13</sup>

Parish	Acreage Reclaimed	Acreage of Parish
Aislaby	38	1,080
Barnby	-	1,400
Borrowby	0	650
Brotton and Skinningrove	0	2,050
Easington	238	3,850
Ellerby	112	630
Fylingdales	388	13,010
Hawsker with Stainsacre	100	3,330
Hinderwell	25	1,550
Hutton Mulgrave	-	1,480
Kilton	173	1,510
Liverton	420	2,360
Loftus	386	3,700
Lythe	0	3,620
Mickleby	223	1,340
Moorsholm	280	4,260
Newholm cum Dunsley	759	2,250
Newton Mulgrave	201	1,950
Roxby	-	2,410
Skelton	125	3,830
Sneaton	-	4,040
Stanghow	150	2,350
Ugthorpe	-	2,180
Whitby	0	50
TOTAL	3,618	64,880

<sup>13</sup> A dash indicates no evidence; 0 indicates no reclamation.



rectangular fields of a planned enclosure. Fig. 23 shows the wide distribution of "intake" and "moor" names throughout the boulder-clay plateau, from the cliff top to the present moorland edge. The reclaimed areas are numerous and their aggregate area large. The amount of reclaimed land was probably still larger since many reclaimed areas did not retain intake or moor names,<sup>14</sup> and for several parishes no information about intakes exists. Fig. 23 thus shows the minimum extent of land whose reclamation from moorland was still recognised at the time of the Tithe survey.

Land-use on the intakes varied greatly from parish to parish. Arable land figured prominently in Moorsholm and Easington where almost the entire area of reclaimed land was used for this purpose. The newest intakes in Skelton were also entirely arable. Grassland predominated on the older intakes in Stanghow and Fylingdales, and also in Ellerby, where almost the whole reclaimed area was in grass. Elsewhere the intakes included arable and grassland in more or less equal proportions. Plantations were made on reclaimed land in only three places. In Easington about 52 acres of the Low Moor was planted with trees, and in Stanghow a small wood of 25 acres was planted in an isolated position in the middle of the moor.

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<sup>14</sup> This is shown clearly when enclosure maps and Tithe maps are compared. In most parishes there is land which was reclaimed between the two surveys but which is not labelled with "intake" or "moor" names.

Fig. 23

THE NORTH YORKSHIRE MOORS  
FIELD NAMES IN INTAKE AND MOOR



KEY

- INTAKE
- MOOR
- OTHERS
- REGIONAL BOUNDARY

0 1 2 3 4 5 MILES

The largest plantation was in Newholm-cum-Dunsley, where more than 100 acres of new woodland occupied the high southern part of the parish, adjoining the last remnant of moorland.

The method of reclaiming moorland adopted by farmers in the Boulder Clay Plateau remains obscure. Whatever methods of reclaiming were favoured, it is clear that the location of the land to be reclaimed was determined to a great extent by the combined effects of altitude and soil. It has been shown already that there was a fairly close correlation between reclamation and altitude during the eighteenth and nineteenth centuries. No reclamation has been recorded at heights of less than 500 feet, most of the lower land having been brought into cultivation at an earlier date. The highest altitude at which reclamation is known to have taken place was 850 feet (in Skelton), a height which, even today is above the general level of cultivation. Most reclamation took place somewhere between these two extremes, and by the time the period closes in 1850, little moorland remained below 650-700 feet.

The extent of reclamation was also controlled by the geological character of this sub-region. Most of the reclamation carried out up to the mid-nineteenth century concerned moorland developed on the glacial soils, especially on the boulder clay up to a height of 850 feet, and to a lesser extent on the large areas of glacial sand and gravel. Very

little reclamation was accomplished on the acid soils of the Moor Grit, (even when lower in altitude) which forms the High Moors of such parishes as Sneaton and Fylingdales, and which, even to the present day, supports moorland vegetation.

During the period under discussion there were two important changes in the land-use of the Coastal Plateau:- an increase in the arable acreage to just over half the improved land and the reclamation of most moorland below 700 feet. These changes accompanied the final enclosure of the open fields and established a land-use pattern that remained almost unchanged for nearly half a century.

#### Region II The Moors and Dales

In the vast expanse of moorland to the south of the boulder clay plateau the late eighteenth century saw few significant changes. The heather-covered moorland itself, traditionally used as sheepwalk, was grazed in common by the flocks from numerous farms situated in the dales and the neighbouring lowlands. Sheep were grazed at the rate of one animal to ten acres. They spent their entire lives on the moors, only being brought down to the enclosed dales pastures during the breeding season.<sup>15</sup> Wool was an important product,

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<sup>15</sup> Marshall W. Rural Economy of Yorkshire, 1788 Vol.II, p.281.

and, despite its coarseness, found a market in the West Riding. Mutton was also valued, the sheep being sold off in the autumn at the age of four to five years to be fattened on the lowland pastures of the Vale of Pickering. The market for meat was a local one, chiefly confined to the market towns of the Vale, and it seems probable that, when Marshall and Tuke visited and described the area they saw a system of both rearing and marketing which had not changed for centuries. The sheep themselves were hardy animals, small and black-faced, with long, coarse wool, a breed which, according to Marshall " - - - is peculiarly adapted to the extreme bleakness of the climature, and the extreme coarseness of the herbage."<sup>16</sup> The breed had not changed for centuries, and indeed, in some views was " - - - nearly as good as the soil and climate will admit."<sup>17</sup> The small fleeces produced by these sheep, the low price fetched by both the wool and the carcasses,<sup>18</sup> and the heavy losses caused by disease and bad weather<sup>19</sup> left the farmers with very little profit from their moorland grazing.

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<sup>16</sup> Ibid, p.221.

<sup>17</sup> Tuke J. op.cit., p.263.

<sup>18</sup> Marshall W. op.cit., pp.230-231.

<sup>19</sup> Ibid. Note on p.282.

In the dales which dissect the moors, conditions were less rigorous. Much of the land was in arable or improved pasture and had already long been under cultivation. Enclosure had been completed in most parishes without resort to Acts of Parliament, and the Esk-Leven valley in the north was the only dale where open-fields were retained after 1750. These soon disappeared. By 1754 Danby parish had only one small open-field called Carlwate, and plans were already made for its enclosure.<sup>20</sup> Acts of Parliament passed for Kildale in 1775, Egton in 1776 and Westerdale in 1811, marked the end of open-field cultivation in the dale, and indeed in the whole of the moorland region. Thus, by the time the region was visited and described by William Marshall and John Tuke towards the end of the eighteenth century, the dales already had a system of farming based on the use of small enclosed fields. Cultivation was widespread in all the major dales, and the small fields, surrounded by hedges

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<sup>20</sup> Note in the field book of the Danby Estate Agent, 1754:-

"The above Carlwate is an Open field, lays farr of the Occupyers makes the land suffer and does the Tenants little good. I purpose to inclose it into 4 or 5 Closes; the fence Ditches will Drain the land which is wanted, and lay it to one or two of the nearest Tenants to it that is good ones."

A later note in the same volume (1787) begins,

"As Carlwate is now Inclos'd - - -."

North Riding Record Office, Danby Estate records.

or walls, reached as high up the valley sides as soil, slope and economic conditions would permit.<sup>21</sup>

The type of farming which could be attempted in the dales was strictly limited by the rigorous climate. "The great altitude," says Tuke, "renders the climate extremely cold and bleak, - - - and it frequently happens that the crops are cut long before they are ripe, and are still in the field when the ground is covered with snow."<sup>22</sup> The soils he described as "a black moory earth upon a clay, a sandy soil, in some places intermixed with large grit-stones, upon a shale, and a light loam upon a grit rock."<sup>23</sup> In this unpromising environment rye and maslin persisted as the chief grain crops much later than in the more favoured lowlands surrounding the moors. In 1788 when William Marshall described the region, maslin was still widely grown in the dales, though already it had largely disappeared from the surrounding lowlands. Rye was also fairly common, but "- - - even there, the alteration of soils by lime has been such, that wheat is become the more prevalent crop."<sup>24</sup> Oats and

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<sup>21</sup> (i) From the Danby Estate records and the seventeenth century survey of Bilsdale quoted above, it seems that few fields were of more than five acres.

(ii) Tuke op.cit., p.16. "--- The level land at the bottoms of the vales is seldom more than 200 or 300 yards in breadth, but the land is generally cultivated from half a mile to a mile and a half up the hills, though the surface is in many places very irregular."

<sup>22</sup> Tuke, op.cit., p.3.

<sup>23</sup> Ibid., p.16.

<sup>24</sup> Marshall W. op.cit. Vol.II, p.15.

potatoes were the only other arable crops of any importance, and both were well-suited to the late harvesting season which the climate imposed upon the region. The production of oats was stimulated by the demands of the "manufacturing parts of West Yorkshire," where oaten bread was generally eaten. "This," says Marshall, "accounts for their high price at harvest here, compared with that which they bear in other places."<sup>25</sup> Potatoes were much favoured, as those grown in the moorlands were free from the "curled top disease" which affected all the lowland areas. Even at this early date, the moorland dales were therefore enjoying some advantage as suppliers of seed potatoes.

Small changes in the arable farming of the dales were apparent even in the twelve years which separated the surveys of Marshall and Tuke. The decrease in the acreage devoted to maslin and rye, noted by Marshall had continued, and it is clear from both Tuke's survey and the Crop Returns of 1801 that both crops had become insignificant, having disappeared altogether from almost half the parishes. Wheat and oats now occupied most of the arable land, though wheat could rarely be ripened above 600 feet or other grains above 800 feet, except where aspect and soil were favourable. Turnips and potatoes were grown in rotation with the grain crops.

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<sup>25</sup> Ibid., p.22.



Table 20. Acreages under arable crops, 1801. (Region II).

Parish	Wheat	Barley	Oats	Rye or Maslin	Potatoes	Legumes	Rape or Turnips	Total	Parish Acreage
(Danby	250	68	500	8	78	18	72	994	13,860
(Kildale	120	14	200	0	25	3	30	392	5,730
(Egton	409 $\frac{1}{2}$	128 $\frac{1}{2}$	439	8 $\frac{1}{2}$	170	5 $\frac{1}{2}$	68	1,229	13,570
Eskdale (Eskdaleside	85	20	110	0	25	8	50	298	3,776
(Glaisdale	220	60	300	0	50	20	30	680	8,370
(Goathland	115	20	160	6	50	15	12	378	11,030
(Ugglebarnby	134	30	168	0	34	15	36	417	2,210
(Bilsdale	165	1	132	0	0	37	1	336	14,470
(Hawby	98 $\frac{1}{2}$	28	451 $\frac{3}{4}$	32 $\frac{1}{2}$	60 $\frac{3}{4}$	3	94	768 $\frac{1}{2}$	7,070 <sup>26</sup>
(Lastingham	406	115	894 $\frac{1}{4}$	21 $\frac{3}{4}$	90 $\frac{1}{4}$	12 $\frac{1}{2}$	345 $\frac{3}{4}$	1,886	
(Rosedale	114 $\frac{3}{4}$	35 $\frac{3}{4}$	317 $\frac{1}{2}$	24	47 $\frac{1}{4}$	6	52 $\frac{1}{2}$	897 $\frac{3}{4}$	7,812
Cloughton + Staintondale	232 $\frac{1}{2}$	54	333 $\frac{1}{2}$	4	123 $\frac{1}{4}$	8	121 $\frac{1}{2}$	876 $\frac{3}{4}$	2,780
Harwood Dale	166	12	278	0	52	3	77	588	5,557
Totals	2,516 $\frac{1}{4}$	586 $\frac{1}{4}$	4,264	104 $\frac{5}{4}$	806	154	989 $\frac{3}{4}$		

<sup>26</sup> The total average of Lastingham parish is now much less than the acreage of arable land given here. The returns must have included some of the neighbouring parishes, but it is not possible to discover which ones.

But although grains occupied more of the arable land than any other crop (Table 20) corn was not an important product of the dales. In Tuke's estimation, not more than one-fifth of the land was arable, and the farmers' chief source of income was from the cattle and numerous sheep which grazed on the improved pastures of the dales and on the open moorland. The cattle were Teeswaters, similar to those kept on the Boulder Clay Plateau. They were of good quality and were intended mainly for beef. They were kept for most of the year on the improved dales pastures, but in summer were sent up to the higher pastures near the moorland margins.<sup>27</sup> Oxen and young bulls were still widely used on the farms as draught animals, and these too, were sold to lowland graziers to be fattened for beef after working for six or seven years.<sup>28</sup>

The conservatism in farming noted in the Boulder Clay Plateau, was also apparent throughout the moorland dales. New crops were accepted only slowly; horses had yet to replace oxen for farm work, and the breeds of both cattle and sheep had undergone little change. Hay remained the traditional winter fodder and was grown, according to custom, on the low-lying watermeadows bordering the rivers. As these meadows were not often ploughed out, new and improved grasses were rarely introduced.

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<sup>27</sup> Tuke, op.cit., p.179, and Marshall, op.cit., p.281.

<sup>28</sup> Tuke, ibid, p.253.

Thus, in the dales, farming appears to have made even less progress during the late eighteenth century than in the Boulder Clay Plateau to the north, despite the early disappearance of open-fields from the region.

During the first forty years of the nineteenth century grassland continued to form the major part of the improved land. Table 21 shows however, that the proportion of arable increased from Tuke's estimate of Table 21. Land-use from the Tithe schedules 1838-1850. Region II).

Parish	Arable	%	Grass	%	Wood	Moor	Total	
Eskdale	(Comondale	516	66.4	260.5	33.6	12	336.5	1,131
	(Egton	1,965	25.8	5,646	74.2	440	7,094	15,146
	(Eskdaleside	493	37.4	825	62.6	265	2,193	3,776
	(Goathland	450	42.8	600	57.2	260	8,353	9,886
	(Ugglebarnby	701	43.1	924	56.9	-	277	1,902
	(Westerdale	411	21.9	1,470	78.1	28	14,020	15,930
South-west dales	(Bilsdale							
	(Midcable	1,400	21.2	5,183	78.8	388	12,000	18,971
	(Bilsdale West	620	38.1	1,008	61.9	227	2,145	4,014
	(Bransdale "	320	33.2	645	66.8	-	4,000	4,965
	(Bransdale							
	(East and	652	26.1	1,850	73.9	72	2,403	4,977
	(Farndale High							
	(Quarter							
	(Farndale Low							
	(Quarter	286	31.6	575	68.4	29	1,500	2,390
	(Farndale East	900	34.1	1,740	65.9	117	6,341	9,103
	(Hawnby	190	28.0	489	72.0	-	1,147	1,826
	(Laskill							
(Pasture	274	33.6	540	66.4	187	2,000	3,080	
(Lastingham	227	73.5	82	26.5	4	-	406	
(Rosedale East	722	31.7	1,554	68.3	81	2,754	5,112	
(Rosedale West	300	37.5	500	62.5	100	1,800	2,700	
Eastern Moors	Harwood Dale	1,181	66.1	605	33.9	190	3,580	5,557
Total		11,608	32.1	24,496	67.9	2,500	71,943.5	110,872

The discrepancy of 325 acres is accounted for by roads, quarries, etc.

one fifth in the late eighteenth century, to about one third when the Tithe survey was taken. Only in Westerdale, the last parish to enclose its open-fields, and in Upper Bilsdale, did

the proportion remain unaltered. This increase in the arable land, even in the remote dales, is comparable with the increase noted during the same period in the Boulder Clay Plateau, and here, as in the Boulder Clay Plateau, was accompanied by an

increase in population. The increase was a larger one, reaching over 1,500 between 1801 and 1841, despite a small decline in many places in the twenties and thirties. This decline in population came during the period of agricultural recession following the end of the Napoleonic Wars and the passing of the Corn laws in 1815. This depression in farming caused the

emigration of farming families from the dales, notably to America. Corn prices in the district were low, agricultural wages were low, less labour was employed by tenant farmers and

margin of the older improved land as it had been during the preceding centuries. Table 22 shows the average of intakes recorded in the Tithe survey.

<sup>29</sup> Minutes of evidence taken before a Select Committee on Agriculture, 1835. The area described was a square between Whitley, Sanby, Harrogate, Malton and Scarborough.  
<sup>30</sup> Marshall, *op. cit.*, p. 295.

by 1833 rents of farms in rural areas were estimated to have dropped by as much as forty per cent. Many small land-owners were forced to sell, and it was they, on the whole who became the emigrants.<sup>29</sup> To add to the troubles of the farmers, the price of lime was at this time very high, and lime was consequently less widely used on dales farms than formerly. In such a district as this, where the success of arable farming depended upon the liberal use of lime this was disastrous, and on the heavy clay land found in patches in all the dales, yields in 1833 had decreased by more than one-third from their earlier levels. Little land is reputed to have gone out of cultivation but the increase in the arable acreage which was apparent by the middle of the century must have been confined to the period before 1812, when the enclosure of the commons and wastes, "gave freedom to the spirit of improvement,"<sup>30</sup> and high wartime prices and the demand for corn made such an extension of ploughland worth-while.

Reclamation of moorland gave rise to further changes in land-use during the period 1750-1850. In the dales and along the scarp foot reclaimed land spread upwards from the upper margin of the older improved land as it had done during the preceding centuries. Table 22 shows the acreage of intakes recorded in the Tithe survey.

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<sup>29</sup> Minutes of evidence taken before a Select Committee on Agriculture, 1833. The area described was a square between Whitby, Danby, Kirbymoorside, Malton and Scarborough.

<sup>30</sup> Marshall W. op.cit., p.285.

In the dales, by far the greatest proportion of the intakes lay in Eskdale and its tributary dales. Fig. 23 shows that most of the intakes were small and scattered, and formed a new upper limit of cultivation. In Westerdale for instance, the intakes lay generally between 600 and 700 feet on the steep upper slopes of the valley sides. Occasionally they reached 1,000 feet, but always they were some distance below the moorland summit and well within the confines of the dale. As Fig. 23 shows, they were strung out along the moorland edge in a discontinuous belt not more than a few hundred yards wide, but extending the full length of the dale from its broad head to its junction with the main Esk-Leven valley.

Traces of the same pattern are discernible in all the dales, but with slight variations in the altitude of the intakes from one dale to another. In general however, the intakes were above 700 feet - the old limit of cultivation, but did not exceed 1,000 feet except at the valley heads and in isolated places along the valley sides. The effect of reclamation was to iron out numerous irregularities in the height of the moorland edge, bringing it to an average of between 800 feet and 950 feet in each of the dales. Only in the main Esk-Leven valley and in the Murk Esk valley near Goathland did the moorland edge remain at a lower altitude, and in these places rarely rose above 600 feet. These intakes, small though they were individually, amounted to remarkably large areas all told, as

Table 22. Reclamation recorded in the Tithe and other Surveys.

1750-1850. (Region II).

	Parish or dale	Acreage reclaimed	Notes
Esk-Leven Valley	( Commondale	78	Manorial Survey, 1754. Only a small part of parish tithed.
	( Denby	482+	
	( Egton	300	
	( Eskdaleside cum	741	
	( Ugglebarnby	233	
	( Goathland	93	
South-west dales	( Kildale	1,000	Tuke's estimate of Sir C. Turner's intakes.
	( Westerdale	544	
	( Bilsdale	380	
	( Bransdale	250	
	( Farndale	290	
Scarp *	( Hawnby	231	Estate survey of 1829 records 445 acres in intakes.
	( Lavingham	4	
	( Rosedale	172	
	( Busby	15	
	( Easby	32	
Summits *	( Great Ayton	46	* Only parts of these parishes lie within Region II. The intakes included here are all within the Region. Others lying outside the moorlands or in Region III have been excluded.
	( Great Broughton	246	
	( Hutton Lowcross	21	
	( Pinchinthorpe	79	
	( Ingleby Arncliffe )	336	
	( Nether Silton )		
	( Over Silton )		
( Osmotherley			
( Thimbleby			
Summits *	( Fadmoor	279	Marshall's estimate.
	( Hutton-le-Hole	31	
	( Pickering	1,180	
	( Blakey House	2	
	Total	7,065 +	

Table 22 clearly shows, and represented the piecemeal efforts of practically every farmer.

A glowing account of the achievements of some of the small-scale improvers in Bilsdale is given in the comments appended by the incumbent to the 1801 Crop Returns: "There are 94 Farmers who are a laborous set of People, indefatigable in the improvement of their little Farms. Bilsdale is more improved within the last 20 years, than perhaps any one Parish in the whole Nation." The improvement may not have been confined to reclamation and the last claim was undoubtedly rather sweeping. Nevertheless it does show that the smallness of a farm was no bar to improvement.

In addition to these small-scale enterprises there is evidence that in some of the dales reclamation was deliberately planned on a more ambitious scale. In Eskdaleside, Parliamentary Enclosure of the moors in 1760 resulted in the reclamation of 741 acres on the gently-sloping south side of the Esk valley, mostly between 650 and 800 feet. All this land, lying adjacent to the upper limit of the older enclosed land, was shown on the enclosure map as moorland. By the time of the Tithe survey in 1844 it was divided into neat rectangular fields, all of which were improved. Elsewhere in the Esk-Leven valley, systematic enclosure of relatively large areas took place without the assistance of an Act of Parliament. In Danby there were two such



areas, one near Danby Castle where large intakes totalling 85 acres covered the spur between the main valley and Little Fryupdale, and another in the small tributary valley of Clitherbeck to the north of the village where 72 acres were enclosed and reclaimed between 1754 and 1820.<sup>31</sup> At Esklets, a high, remote area near the source of the Esk, intakes of over 184 acres were recorded in the Tithe survey, all lying above 800 feet and forming a compact area round the farmsteads. This is one of the few places where reclamation appears to have been associated with the making of new farms.

By far the most spectacular reclamation scheme was at Kildale, where Sir Charles Turner, in the late 1770's, started to improve about 1,000 acres, situated partly in the Leven valley and partly on the neighbouring moorland. The valley land had formerly been enclosed and cultivated, though when Turner began his improvements it had been neglected for a long time. By 1783, when William Marshall visited Kildale, the improvements were well under way, with 150 acres already let off in a single farm at £150 per year, and with " - - - three or four more substantial farm houses" under construction.

In the scarplands bordering the moors, a further extension of improved land took place as the limit of cultivation was

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<sup>31</sup> Danby Estate Records, eighteenth and nineteenth centuries. North Riding Record Office.

pushed upwards from the lowlands. Cultivation on the scarp itself was limited by the steepness of the gradient, and the intakes were generally confined either to the scarp foot, as in Over Silton, Easby and Great Broughton, or to the floors and lower slopes of re-entrant valleys such as the valley of Sorrow Beck in Nether Silton, and a smaller valley in Hutton Lowcross. Reclamation on the scarp itself was usually in the form of plantations, the largest of which were in Great Broughton and Nether Silton. Only where the gradient of the scarp decreased to an average of less than one in six was there any attempt at cultivation, notably in Great Ayton, where intakes reached upwards to the scarp crest. In the scarplands as in the dales, the largest reclaimed areas appear to have been made following Parliamentary Enclosure and resulted from careful planning. In Great Broughton this was certainly the case. In Osmotherly and Nether Silton the geometrical layout of the reclaimed land suggests such a planned enclosure, though no maps have come to light to confirm this. In both parishes the rectangular intakes are reached from the village by straight lanes, called in each case "Moor Lane;" the lanes end abruptly where the upper edge of the intakes adjoins the moor. In shape and general alignment neither the lanes nor the field boundaries bear any relation to the contour of the land, and clearly originated as lines drawn

with ruler and pencil on a surveyor's plan.

It was during the last half of the eighteenth century that reclamation of the moorland beyond the dales was first attempted on a large scale. Sir Charles Turner's scheme on the moors of Kempswithen, between Kildale and Baysdale, was one of the first, and was particularly remarkable as it resulted from the enterprise of a single landowner.<sup>32</sup> Other early attempts at reclamation in such a situation usually resulted directly from Parliamentary enclosure of the moorlands. At Middleton near Pickering, enclosure about 1760 was followed by the ploughing up of some of the moorland. The experiment was described by Marshall as follows: "The site which was principally chosen for the essays which have been made, are the lower skirts of the Moorland hills, under the northern steep of the limestone heights. This situation was in a degree of shelter, was near the cultivated country, and the soil in that valley is better than it is higher up the sides of the hills."<sup>33</sup> The actual position cannot be found now as, owing to boundary changes Middleton parish no longer extends into the moors, but it was undoubtedly on the outcrop of Kellaways Rock, on the lower, southern slopes of the moors, where the height rarely exceeds

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<sup>32</sup> The foundations of the enclosing walls can still (1955) be found among the heather.

<sup>33</sup> Marshall W. op.cit., Vol.II, pp.285-287.

700 feet. The enclosure of Pickering moors in 1785 and of Fadmoor in 1793 also resulted in the reclamation of very large areas - 1,180 acres in Pickering High Moor and a further 279 acres in Fadmoor, all on the southern slopes in the lee of the limestone scarp, but extending in Pickering as high as 900 feet. The exact amount of reclamation which followed enclosure can be discovered by comparing the Enclosure maps with the Tithe maps, made almost half a century later. Not all the enclosed moorland was reclaimed in either parish, especially in the highest parts, though it was all divided into allotments with neat geometrical outlines. In both places, reclamation was accompanied by the building of new farm houses, isolated from one another and from the existing villages. In most other parishes, enclosure of moorland outside the dales was limited to very small areas - 20 acres surrounding Wether House on the moorland summit above Bilsdale, 31 acres at Hutton-le-Hole along the outer margins of the older improved land, and as little as two acres at Blakey House, on the ridge between Farndale and Rosedale, where an altitude of almost 1,300 feet made improvement on any scale a remarkable achievement.

It is clear from the examples which have been quoted that throughout the moorland region, reclaimed land extended up to unprecedented heights. The usual height of the intakes was between 800 and 950 feet, with some reaching as high as 1,300

feet, especially near the heads of the large dales. There are few instances of reclamation below 600 feet, most of this lower land having been brought under cultivation much earlier. There seems to be little or no connection between the height of the intakes and their aspect. In Eskdale for instance, the highest intakes (over 1,000 feet), are on the north-westward facing slopes of both the main valley and the south bank tributary dales such as Westerdale and Glaisdale, while the lowest intakes, at 500 to 600 feet are on the southward-facing slopes of the main valley. In Goathland, where all the intakes are below 700 feet, they nearly all occupy the south-facing slopes; at Esklets, with intakes entirely above 800 feet, the aspect is northerly. There is a very close connection however, between the upper limit of the intakes and the outcrop of Upper Lias Shales. In the dales and on the scarp face these shales form the upper parts of the slopes. A comparison of large-scale geological maps with the maps showing intakes reveals that in most places the intakes cease at or below the junction between the Upper Lias and the overlying grits of the Estuarine Series. In the few places where the intakes extend on to the Grits, the area involved is not great, and indeed is frequently no more than the upper parts of long fields, the lower ends of which are on the Lias. In Eskdale and Goathland, where the intakes are at unusually low levels, Lias shales are absent, and the intakes lie either on the Moor Grit, or on the layer of glacial

material which overlies the lower part of the grit outcrop. Lias Shales are also absent from all the summit areas, and here the intakes lie entirely on the Grits, or, at Fadmoor and Pickering, on the varied sandy and clayey surface of the Kellaways Rock. The existence of intakes on the Moor Grit in some places shows quite clearly that the soils derived from the Grits were not entirely unsuitable for cultivation, though the soils developed on the Upper Lias may have been preferred where a choice existed. It is quite possible, however, that the wetness of the ground produced by springs emerging at the upper surface of the Lias, or the precipitous crags formed by outcrops of massive sandstone near the base of the Estuarine Series, formed an effective barrier to reclamation.

That much could be done to overcome the disadvantages of poor soil is shown clearly in the accounts of reclamation given by William Marshall and John Tuke. These first-hand descriptions are of particular interest as they provide the earliest known evidence of the methods employed in reclaiming moorland. At Middleton, according to Marshall, the principle of improvement "was to extend the cultivated country into the heart of the Morelands," and the chief aim was to grow corn.<sup>34</sup> With this

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<sup>34</sup> Marshall W. op.cit., p.285.

end in view, the enclosed land was first broken up either by paring and burning or by fallowing, "- - - which latter was performed in a singular manner. The heath being previously singed off, the land was plowed, and suffered to lie unstirred in a rough furrow for two years, in order to give the roots time to rot. The third year it was stirred as fallow; and the fourth year cropped." In addition, lime was added at the rate of "three to six or seven chaldrons an acre."<sup>35</sup> The first crops to be sown on the newly prepared land were wheat, rye, oats, potatoes and turnips, all of which are exhaustive crops. A similar method was used on newly enclosed moorland "on the east side of Rosedale and Hartoft,"<sup>36</sup> except that the initial ploughing was followed by only one year of fallow, after which the land was limed, ploughed again and sown with rye or wheat.

Further north, at Kempswithen, ploughing and liming were again the first stages in improvement. By 1783 most of this land had been enclosed with stone walls and part of it ploughed up and limed ready to be sown with corn. This proved to be a mistake, as the position of Kempswithen on the summit of the ridge between Kildale and Baysdale, at a height of 950 feet, rendered it too exposed to allow the crop much chance of

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<sup>35</sup> Normal liming: 2-4 chaldrons per acre. 1 chaldron = 32 bushels  
= 1 cwt.

<sup>36</sup> Tuke J. op.cit., p.215.

reaching maturity. In addition, the moorland soil compared unfavourably with that of the neighbouring valley floor, and was better suited to the grass which was subsequently grown upon it, the hay from which was reputed to have been equal in value to that from much richer land. All the same, Marshall gave scant praise to the experiment, though in fairness to the landowner perhaps it should be said that the five years which had elapsed between the beginning of the scheme and the publication of Marshall's book did not give much time for the results to be assessed. By the time Tuke saw Kempswithen Sir Charles Turner had died and the pastures were suffering from neglect, rushes and ling having been allowed to grow among the grass. But even so the improvements which had been achieved were sufficiently obvious to earn his praise,<sup>37</sup> and there was still a marked difference between the grassy sward inside the inclosures and the heather moor beyond, showing that improved pastures could be created out of the moorland with considerable success. Indeed, reclamation for pasture met with much greater success than the attempts to convert moorland into tillage, and Marshall quotes as an example what was perhaps the highest, and smallest reclamation scheme known to him. This was about two

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<sup>37</sup> Tuke J. op.cit., p.203.



acres, "situated near the highest swell of these mountains," near Blakey House. It was very carefully manured with lime, ashes and cow-dung, a small patch being worked over every year. Corn crops and potatoes had all failed, but in 1783 when Marshall saw it, "very productive grassland" occupied most of the area.<sup>38</sup>

Though the success of these four experiments in reclamation varied considerably the methods by which they were carried out had a good deal in common. Both Sir Charles Turner at Kempswithen and the un-named improver at Hartoft began by ploughing up the ground and adding large quantities of lime to prevent the heather re-establishing itself. Hartoft lies near enough to the Corallian outcrop for supplies of lime to be obtained easily and at no great cost, but at Kempswithen the cost of transporting it added considerably to the price. The first crop to be sown was corn which varied at Hartoft from rye on gravelly soils to wheat on heavy clay. No record exists of the grains sown at Kempswithen. The growing of corn at such an early stage was probably the greatest mistake that could have been made as, in Tuke's view, "this impoverished the land, and the expense of lime and carriage was too great for the quantity of corn which could be produced there to repay it. Economy as

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<sup>38</sup> Marshall W. op.cit., p.294 note.

well as skill, is necessary in the improvement of such barren land, which can never repay great expenses; and this must be incurred when corn is attempted to be grown. If green crops and grass, for the support of small cattle and sheep, had been the object, the land would have been much more improved, at an expense of perhaps not more than one-sixth part of what was laid out."<sup>39</sup> This view had already been expressed by Marshall when he said "It appears to my mind that a man who attempts at present to crop these heaths with corn, must either be in natural abilities extremely deficient, totally uninformed in rural affairs, or unfortunately gifted with more genius than judgement. To begin with carrying off the means of productiveness in the shape of grain (which the cultivation of corn implies) from a soil which it is to be feared naturally contains them in very inconsiderable quantity, is irreconcilable with common sense."<sup>40</sup>

But while intelligent and well-informed men such as Marshall and Tuke realised the improvidence of converting moorland into tillage, the majority of farmers still considered the growing of corn to be the main object of any improvement. This is reflected in the reasons usually given in support of applications for Enclosure Acts. In the Eskdaleside Enclosure Act for instance, it is stated: "The moors and commons at

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<sup>39</sup> Tuke J. op.cit., p.203.

<sup>40</sup> Marshall W. op.cit., p.288.

present afford little or no profit or advantage, but are capable of great improvement, and the same would (if divided and inclosed so that they may be converted into tillage) be of great advantage to the --- persons interested therein."<sup>41</sup>

Everywhere where enclosure was on a large scale and of fairly recent origin, arable land predominated, even though much of the land concerned was above 800 feet which Tuke regarded as the upper limit for the growth of any kind of grain. On the smaller intakes, particularly those surrounding the dales, pasture usually occupied a greater acreage than arable by the time of the Tithe survey. It is important to remember however, that the Tithe survey gives land-use information for only one year, that it was made after a long period of agricultural decline when there was little incentive to keep marginal land under the plough, and that at least forty years had elapsed since Tuke expressed his views on the best methods of using reclaimed land.

Plantations were prominent in some reclaimed areas, but their aggregate acreage formed only a small part of the total reclaimed land. The plantations on the scarp face in Great Broughton and Nether Silton have been mentioned already, and there were similar, though smaller areas in Little Ayton and

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<sup>41</sup> Act for the Inclosure of Commons and Waste Lands in Eskdaleside-cum-Ugglebarnby 1760, p.2.

Busby. In Eskdaleside, three small plantations were made on the enclosed moorland; in Bransdale several large areas were planted near the moorland summit. In Hawnby, woods were planted in long, narrow strips near the moorland edge, where they would act as wind-breaks for the cultivated land. These are the only instances of the planting of woodland as a means of reclaiming moorland, recorded in the Tithe survey.

More than half a century earlier however, William Marshall strongly recommended the planting of trees as a suitable means of starting to reclaim, for, he claimed, when the woods became established, they would provide shelter for stock and "would in all human probability change the climature of these bleak swells so far as to give due encouragement to the herbage which might be cultivated upon them."<sup>42</sup> The trees he suggested for the purpose included Scotch Fir, Birch, Norway Spruce, larch and oak, all useful for their timber, and all species which incidentally, were used by the Forestry Commission a century and a half later. Charlton writing in 1779, also expressed his views on possible methods of reclaiming some of the moorland, stressing particularly the need for adequate drainage of the wetter parts. In his opinion "they must first be inclosed, and after that thoroughly drained of the water that

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<sup>42</sup> Marshall W. op.cit., p.289.

now almost everywhere stands upon them: then afterwards they ought to be well fenced, and planted here and there with trees, so as to defend them from the cold and bleak winds that now hinder them from producing anything but ling. When this is done they should be plowed in such manner that there may be always an easy descent by which the water may be carried off; for it is beyond all doubt that moor is originally produced by cold, and by a stagnation of water upon it."<sup>43</sup> These principles, sound though they proved to be, were far beyond the means of small farmers. Both draining and planting required considerable reserves of labour and capital, and new plantations could not be expected to produce any return for at least twenty years. It was probably these considerations which in part at least, prevented the more widespread use of plantations on the intakes.

The instances of reclamation which have been quoted show clearly that there were great changes in the extent of the improved land in the moors and dales between 1750 and 1850. Very few of these changes can be accurately dated within the period, and the Tithe survey, which furnishes the most detailed and precise information about the location of improved land, does not cover the entire region. The only maps giving a complete coverage during the period are those published by Greenwood in

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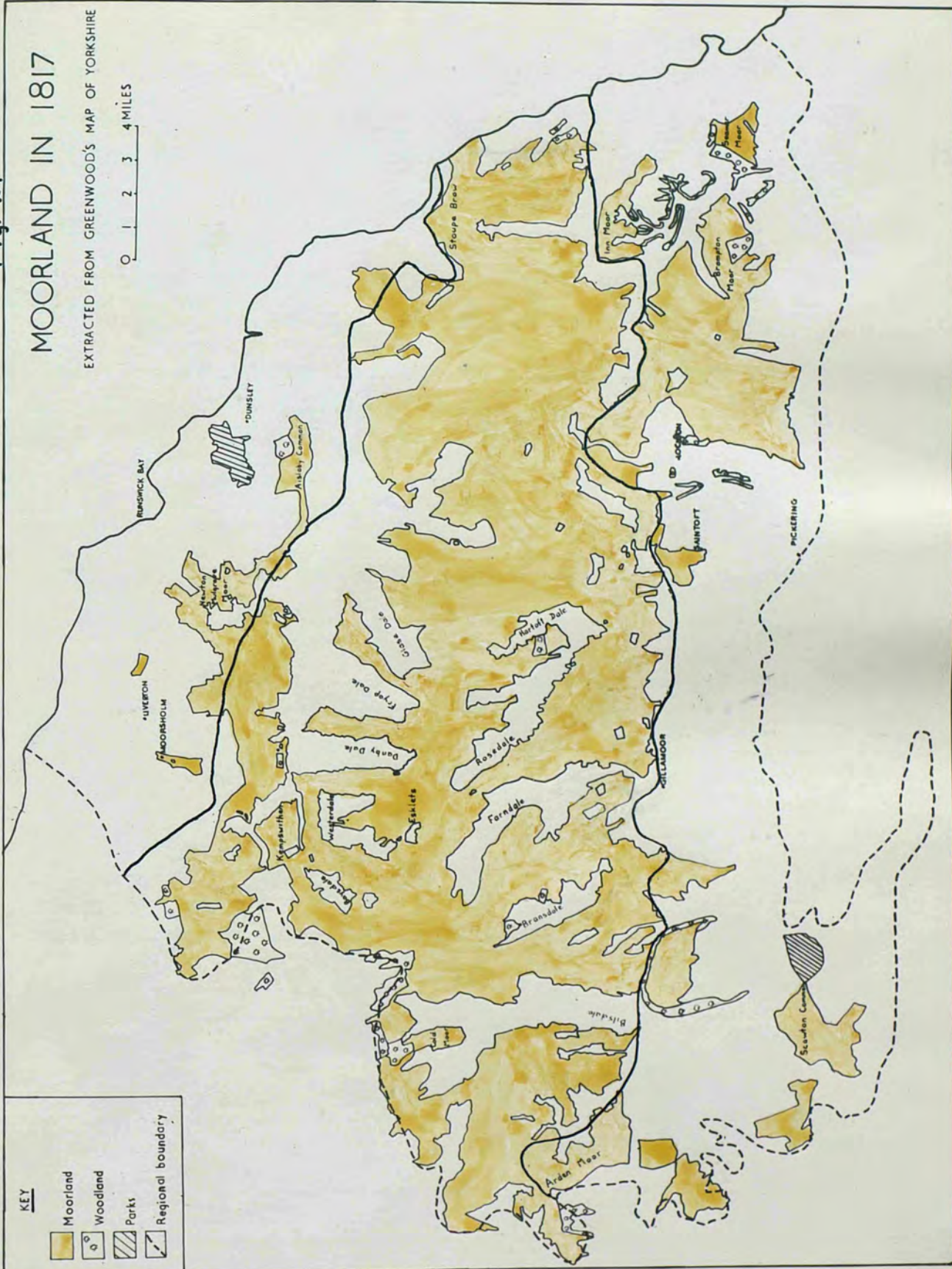
<sup>43</sup> Charlton L. History of Whitby, 1779, p.352.

Fig. 24

# MOORLAND IN 1817

EXTRACTED FROM GREENWOOD'S MAP OF YORKSHIRE

0 1 2 3 4 MILES



1817 and Teesdale in 1828. A comparison of these maps with one another (Figs. 24 and 25) and with the Tithe map (Fig. 21), reveals some of the changes which occurred in the periods which separated their publication. Between 1817 and 1828 there were few changes. Indeed, only at the head of Bilsdale did they amount to any more than the addition of one or two small fields to the cultivated area, and in Kildale and Bransdale some land had gone out of cultivation during the eleven year period. From 1828 until the Tithe survey there were also few changes, at least in the areas for which the Tithe survey is complete, though an accurate comparison of the maps is difficult to make because of the great difference in their scales. The main changes seem to have been in the High Moors of Pickering and at Esklets, where more land was reclaimed by the later date. In general however, the outlines of the moorland edge in the dales, along the scarp and in the summit areas were very much the same at all three dates. Most of the reclamation, like the conversion of pasture into tillage, must have taken place therefore, before 1817 when economic incentives were greater.

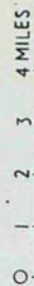
### Region III The Corallian Limestone Hills.

By 1750 enclosure of the open-fields, reclamation of moorland and the clearing of woods had been going on for a long time. Woodland was by this time confined mainly to the steep slopes of the valley sides and scarp, but unreclaimed moorland



Fig 25

MOORLAND IN 1828

EXTRACTED FROM TEESDALE'S MAP OF YORKSHIRE



KEY

-  Moorland
-  Regional boundary



still occupied a large proportion of many parishes, and open-field cultivation here remained the rule rather than the exception. After 1750, Parliamentary enclosure of the open-fields was accomplished rapidly. Between 1751 and the end of the century at least twenty-one Acts of Parliament were passed authorising enclosure, and affecting twenty-seven parishes. Enclosure of the open-fields of the whole sub-region was completed in the first ten years of the nineteenth century with the passing of three more Acts - for Kirkdale and Helmsley in 1806, Allerston in 1809 and Irton and Seamer in 1810.

The position and extent of the improved land is shown clearly on the enclosure maps, and it is unfortunate that so few are extant for this region. Fig. 22, compiled from these maps shows that before enclosure the improved farm land generally extended up from the neighbouring lowlands on to the lower southern slopes of the limestone hills. The junction of the improved land with the moorland was irregular both in height and outline, but, with rare exceptions, was well below the summit of the dip slope and only occasionally reached 700 feet.

When Arthur Young passed over the Hambleton Hills in 1771, Parliamentary enclosure had barely begun. Arable land was cultivated on the time-honoured rotation of fallow, wheat and oats. Turnips were just beginning to appear on some farms but were still regarded as an innovation.<sup>44</sup> The main source of

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<sup>44</sup> Young A. Northern Tour, 1771. Vol II, p.90.

income was derived from the flocks of sheep which, as in the neighbouring regions, were kept on the open moors. It is unfortunate that Young did not visit other parts of the region. He saw only the western extremity of the limestone heights, and his route over the Hambletons lay almost entirely above 800 feet. This height is rarely attained elsewhere, and his impressions of the backward state of farming were not necessarily true of the region as a whole.

By the time William Marshall made his observations, twelve to fourteen years after Young's visit, many of the open-fields had disappeared or were in the process of doing so, and "the spirit of improvement" was in the air. Enclosure of the parishes bordering the Vale of Pickering was accompanied by the draining of the "carrs" or water-meadows, which from time immemorial had been in permanent grass. Draining led to the ploughing out of the old grassland and the conversion of the rich alluvial land into tillage. At the same time, the old arable fields on the limestone slopes were frequently sown with grasses, and became the new, improved pastures and meadows. The common grazing lands disappeared. These were far-reaching changes in land-use and according to Marshall, " - - - wrought a considerable change in what may be called the **ECONOMY OF LIVESTOCK** - - -. Dairies have increased, Grazing has been

introduced and rearing has declined."<sup>45</sup> The limestone margins of the Vale of Pickering were inseparable in their economy from the Vale itself, and the whole area became, in Marshall's day, an important producer of butter, cheese and beef for both local and distant markets.<sup>46</sup> The change from arable to grass on newly-enclosed land continued the trend which began as far back as the mid-sixteenth century.

At the end of the eighteenth century when John Tuke wrote his report, enclosure of the open fields was almost complete. The old rotation of fallow, oats and wheat was still widely used; in some places because of the conservatism of the farmers and landowners; elsewhere because it proved to be well suited to particular types of soil. On the light soils, a four, five or six year rotation had been introduced, which included barley, clover, turnips and grass seeds in addition.<sup>47</sup> The prevalence of these crops in particular parishes is shown in the Crop Returns of 1801.

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<sup>45</sup> Marshall W. op.cit., p.180.

<sup>46</sup> Ibid., pp.194-196. Butter was sent to York, cheese to London and beef cattle to Malton.

<sup>47</sup> Tuke J. op.cit., pp.60-66. On the Hackness estate both systems were in use according to the soil types. There were also some modifications of the new rotation on land which proved unsuitable for clover, leaving half the farm in permanent grass while the remainder was tilled on a 6-fold rotation with sown grasses occupying three parts of the rotation.

Table 23. Crop Returns, 1801. Region III.

Parish	CROPS IN ACRES							Total	
	Wheat	Barley	Oats	Rye or Maslin	Potatoes	Legumes	Rape or Turnips		
The Hambleton Hills	(Ampleford)	40	0	200	0	5	20	15	280
	(Boltby & Felixkirk)	283	60	409	2	18	55	147	974
	(Kilburn)	127	22½	261	14	9	26½	98	558
	(Kirkby Knowle)	87	9	126	2	9	11	40	284
	(Oswaldkirk)	96	28	190	33	15	29	187	578
	(Scawton)	44	5	132	9	10	2	19	221
	(Cawthorne Cropton)	560	61	228	0	4	111½	79	1,043½
The Tabular Hills	(Helmsley)	310	44	125	0	4	60	23	566
	(Kirbymoorside)	536½	174	1,414	167	128	70	742½	3,232
	(Middleton)	478	201	986	28	74	27½	371½	2,166
	(Newton)	387	114	633	17	66	42	239	1,498
The Hackness Hills	(Ayton East)	239	145	533	24	94	0	64	1,099
	(Brompton)	141	158	162	0	16	33	130	640
	(Hackness)	201½	200	571	3½	64½	32	362½	1,435
	(Hutton Buscel)	180	44	546	0	34	2	80	886
	(Levisham)	254	182½	366	3	73½	17	240	1,136
	(Lockton)	29	39	116½	2	28	8	51	273½
	(Scarborough)	388	171½	192	0	10	200	50	1,011½
	(Scalby, Burniston, Newby, Throxenby)	34	0	40	0	2	4	15	95
	(Seamer & Irton)	274	52	478	2	159	12	95	1,072
	(Snainton)	325	309	375	43	48	32	268	1,400
	(Wykeham)	224	75	406	0	43	14	194	956
	(Totals)	75	67	105	0	42	7	132	428
	<b>Totals</b>	<b>5,313</b>	<b>2,161½</b>	<b>8594½</b>	<b>349½</b>	<b>956</b>	<b>815½</b>	<b>3,642½</b>	<b>21,832½</b>

Clover and rotation grasses were not included in the returns.

Unfortunately, arable land sown with grasses and clover is not included in the returns. This turnip and clover husbandry produced fodder crops on up to half of the arable land in some years and, to a great extent, replaced the rough grazing of the rapidly disappearing commons. The acreage of the permanent meadows and pastures at this time is not given. Tuke estimated however, that only one third of the improved land was in tillage, thus leaving a very high proportion in permanent grass. Combined with the large quantity of arable land devoted to fodder crops this suggests a mixed farming economy with an emphasis on animals.

In the first forty years of the nineteenth century, this region was subject to the same fluctuations in fortune as the other two moorland regions, though the agricultural depression which followed the end of the Napoleonic Wars was less marked here than in the dales. Yields were maintained at their former level by the use of bone manure.<sup>48</sup> Little land was left unoccupied. The value of land fell alarmingly, and there were many changes in ownership accompanied by a reduction in the amount of labour employed and the emigration of some farm workers. Parliamentary enclosure was by this time complete, and it seems likely, in view of the uncertain state of the markets,

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<sup>48</sup> Minutes of Evidence, 1833.

that there were few changes in land-use for at least twenty years up to 1833.<sup>49</sup>

Between 1838 and 1850 when the Tithe survey was completed conditions had become more stable. The slight fluctuations in population which had characterised the two preceding decades were replaced in 1841 by a general increase, which in almost every parish brought the total population well above the 1801 level. Indeed, the total increase in population between 1801 and 1841 was over 5,000, much of it in the parishes where farming was the main occupation. The effect of this increase on the land-use is shown quite clearly by the statistics contained in the Tithe surveys. The proportion of arable land had increased from Tuke's estimate of a third of the improved land in 1800 to just over a half (52%) in 1838-50 in the parishes which were tithed. In the parishes where there had been a big population increase, the proportion of arable was often much higher than this, though there were a few important exceptions, notably Sproxton and Cropton. The dates at which this change took place are not known, but it seems most likely that the increase in the arable acreage occurred either before 1815 to meet the wartime demand for corn, or after 1833 in response to the rise in the local population and the increasing demands of the industrial areas.

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<sup>49</sup> Minutes of Evidence, 1833. The witness thought there had been no reduction in the acreage of corn in the last twenty years.

Table 24. Land-use from the Tithe schedules, 1838-50. (Acres).  
Region III.

Parish	Arable	%	Grass	%	Wood	Moor	Total
Boltby	1,000	33.4	1,992	66.6	232	1,450	4,696
Byland with Wass	186	38.5	298	61.5	0	250	734
Cold Kirby	781	68.0	367	32.0	69	383	1,620
Gowesby	420	54.5	350	45.5	30	331	1,150
Dale Town	181	20.3	710	79.7	478	396	1,765
East Newton	335	72.0	130	28.0	16	0	591
Hood Grange	230	83.6	45	16.4	36	0	311
Kepwick	500	37.5	835	62.5	-	1,400	2,935
Kilburn	984	36.8	1,687	63.2	145	52	2,868
Kirby Knowle	576	51.7	539	48.3	159	227	1,556
Laysthorpe	70	22.6	240	77.4	0	0	310
Old Byland	2,296	91.0	228	9.0	204	0	2,733
Oldstead	460	65.7	240	34.3	377	274	1,361
Oswaldkirk	521	29.0	1,276	71.0	368	8	3,573
Scawton	682	48.5	725	51.5	312	985	2,768
Sproxton	624	33.4	1,248	66.6	776	163	2,813
Sutton-under-Whitestone Cliffe	956	54.4	800	45.6	7	-	1,763
Appleton-le-Moors	916	83.7	179	16.3	147	24	1,300
Beadlam	280	37.4	470	62.6	5	3	1,405
Cropton	1,000	26.2	2,818	73.8	-	-	3,818
Fadmoor	681	48.7	717	51.3	49	1,048	2,495
Gillamoore	692	48.8	725	51.2	70	1,053	2,540
Helmsley	872	33.3	1,744	66.7	365	488	3,469
Hutton-le-Hole	610	65.0	329	35.0	121	1,800	2,860
Kirbymoorside	1,600	54.3	1,347	45.7	-	531	3,478
Newton	921	62.8	546	37.2	252	586	2,401
Pickering	5,100	71.8	2,000	28.2	497	4,500	12,986
Pockley	961	50.0	961	50.0	270	200	2,392
Rievaulx	618	33.3	1,236	66.7	858	1,344	5,290
Skiplam	600	45.5	718	54.5	324	1,098	7,260
Spaunton	839	80.7	200	19.3	188	8,000	9,227
Allerston	1,830	60.1	1,217	39.9	275	6,677	10,000
Ebberston	283	42.5	382	57.5	2	8,000	8,627
Levisham	563	59.7	380	40.3	299	1,709	2,962
Wykeham	1,895	65.7	990	34.3	420	4,230	7,535
Total	31,063	52.0	28,669	48.0	7,341	47,210	123,592

N.B. Some land included in the parish totals was not tithed.

Reclamation of moorland accounted for further changes in land-use. When Parliamentary enclosure began, moorland still occupied the highest slopes of the limestone hills. Arthur Young, in his journey across the Hambletons, found an extensive tract of moorland either side of the road, " - - - a continued ridge of black moors; eleven or twelve miles long and from four to eight broad."<sup>50</sup> Further eastward, though the elevation was generally lower, moorland was no less extensive, and in Pickering and Allerston especially, occupied almost the full width of the limestone outcrop from the margins of the Vale of Pickering northward to the scarp. Elsewhere, moorland generally lay in smaller, discontinuous areas, confined to the higher parts of each parish, and with only isolated patches remaining on the lower slopes. These moors are shown on Fig.20. for the few parishes for which enclosure maps exist. In the most easterly part of the region there was still much moorland. Enclosure Acts relating to fourteen of the twenty-one parishes east of Thornton Dale, provided for the enclosure of more than 20,000 acres of moorland, mostly in Allerston and Eberston, but some even in the low-lying coastal parishes of Falsgrave, Cloughton and Scalby. All these moors, large and small, were the common grazing lands which had formed an integral part of the open-field system.

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<sup>50</sup> Young A. Northern Tour, 1771. Vol.II. Letter VII, p.88.



Enclosure of the open-fields was accompanied by the enclosure of the moors, always with a view to their improvement. That improvement was both possible and desirable was recognised by many enlightened farmers. Arthur Young wrote of the "black moors" of the Hambletons, " - - - It is melancholy to travel through such desolate land when it is so palpably capable of improvement. Much of it is greensward, and wants nothing but inclosing and ploughing to be converted at once into good farms. Even the blackest parts are evidently deep enough to afford, if drained where wet, a good depth of soil undoubtedly profitable for many articles of culture."<sup>51</sup> The same opinion was echoed time and time again by Marshall and Tuke, and in the preambles to many Enclosure Acts. Enclosure was the key to improvement, and in most places had to be carried out within one or two years of the passing of the Act.<sup>52</sup>

The effect of enclosure in promoting the disappearance of moorland is apparent at least as early as 1817. Greenwood's map shows the moorland confined to a few compact areas, several miles apart (Fig. 24). The largest of these were in the high region of the Hambleton Hills in the west and in the Hackness Hills in the extreme east - the two areas which had contained the largest expanses of moorland in the eighteenth century.

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<sup>51</sup> Young A. op.cit., p.88.

<sup>52</sup> e.g. East Ayton - enclosure to be completed in one year (1768).

The coastal parishes were by this time entirely without moorland. In the central part of the Corallian region most of the moorland had disappeared, and the small areas remaining were confined to the summit of the dip slope.

By 1828 when Teesdale's map was published, more moorland had disappeared - from the Hambleton Hills near Cowesby and Kilburn, from the central region in Pickering and Newton, and from the Hackness Hills in Thorntondale and Brompton. Two areas appear to have reverted to moorland between 1817 and 1828, one small one on the eastern slopes of Black Hambleton, and a very large one in Appleton-le-Moors.

These and other changes are shown in greater detail for some parishes by the Tithe surveys, made from ten to twenty years after Teesdale's map and more than half a century after most of the enclosure maps. The acreage reclaimed between the two dates was in several parishes remarkable. In Allerston, more than 2,000 acres were improved, mostly in a compact block extending up the limestone dip slope from the edge of the old enclosed land in the Vale of Pickering to a height of about 750 feet. The only moorland remaining near the village was a small area, reserved at the time of enclosure, where the landholders could obtain lime and marl for the improvement of their land. Even in the unreclaimed moorland on the highest slopes of the limestone, there were several small intakes, all

associated with isolated farms and amounting to 118 acres all told. In Pickering a further 1,500 acres was reclaimed in a similar situation, and the Tithe map shows a rectangular pattern of fields occupying the former moorland. Other fields were still unreclaimed even though they were enclosed, and it is clear that in Pickering reclamation of the enclosed land was still proceeding, even though fifty-three years had elapsed between Parliamentary enclosure in 1785 and the Tithe survey in 1838. Very little moorland remained however, and this was nearly all on the summit of the dip slope, above 650 feet. In the neighbouring parish of Newton also, moorland was reduced to a small area in the highest part of the parish.

Further west, in Kirbymoorside, Fadmoor and Gillamoore, the numerous small commons which, in 1788 had occupied parts of the dip slope, had all been reclaimed, thus adding a further 990 acres to the improved land. In Kilburn, on the southwestern edge of the Hambletons, reclaimed land spread up the steep slope of the south-facing fault scarp to a height of over 950 feet on the flat limestone summit. Enclosure of the moors did not take place until 1829, and as much as 731 acres was reclaimed by 1840.

Field names in the Tithe schedules indicating former moorland also give evidence of reclamation in about one-third of the parishes (Fig. 23). Often the areas thus shown were large.

In the Hambleton Hills alone there were 428 acres in Cowesby and Kirby Knowle, 224 acres in Boltby and 127 acres in the small parish of Murton. Acreages for other parishes are shown in Table 25. In some of these, especially in the Hambleton Hills, the reclaimed land was situated on the scarp face and the steep valley sides. Only a few reclaimed fields occupied the flat summits. East of the Hambletons, almost all the reclamation was on the summits, and occupied positions very similar to those already described in Pickering and Allerston.

Everywhere however, as in the other regions, the effect of reclamation was similar; moorland disappeared from the lower slopes, and the limit of cultivation was pushed upwards to heights generally exceeding 600-700 feet. Indeed, moorland disappeared altogether from most of the low central part of the region, and it was only in the Hambleton Hills and the Hackness Hills, where the altitude is greatest, and the sandy beds of the Corallian most extensive that large areas of moorland remained after 1850.

Methods of reclaiming were modified to suit differing types of soil, though all reclamation in the region was greatly helped by the ease with which lime could be obtained. John Tuke describes two reclamation schemes, both near the centre of the region, both undertaken as a result of Parliamentary Enclosure, and both relying to a great extent on copious liming.

Table 25. Region III - Acreage of land reclaimed, 1750-1850.

Parish	Acreage reclaimed	Source of information
Ampleforth	407	Reclaimed 1806-50 (enclosure)
Boltby	224	Field names
Cold Kirby	70	Field names.
Cowesby and Kirby Knowle	428	Field names
Kilburn	731	Reclaimed 1829-40 (enclosure)
Kepwick	31	Field names
Murton	118	" "
Oldstead	127	" "
Oswaldkirk	87	" "
Scawton	9	" "
Sutton	84	" "
Beadlam	653	Reclaimed after 1819 (enclosure)
Fadmoor	992	Reclaimed after 1788 (enclosure)
Gillamoore		
Kirbymoorside		
Newton	476	Reclaimed after 1785 (enclosure)
Pickering	1,503	Reclaimed after 1785 (enclosure)
Skiplam	82	Field names
Spaunton	76	" "
Allerston	2,099	Reclaimed after 1810 (enclosure)
Ayton East	11	Field names
Ayton West	91	" "
Brompton	23	" "
Broxa	19	Reclaimed after 1819 (enclosure)
Ebberston	15	Field names
Hackness	31	Reclaimed after 1819 (enclosure)
Hutton Buscel	59	Field names
Levisham	51	" "
Lockton	70	Turke's estimate
Scalby	24	Field names
Seamer	408	Reclaimed after 1809 (enclosure)
Silpho	38	" " 1819 "
Thornton dale	717	" " 1780 "
Wykeham	178	Field names. <u>TOTAL 9,932</u>

One of these was begun round about 1790, on a part of Lockton Moor which had been enclosed by Act of Parliament in 1784.<sup>53</sup> The holding consisted of about 70 acres of rough moorland "which would not lett for more than 1/- per acre before it was inclosed." The owner began cautiously by reclaiming only 48 acres. "The soil consisted - - - of benty peat upon red gritstone, with a mixture of clay upon limestone." On this type of land the vegetation usually consists of heather and coarse grasses, sometimes with bracken in more sheltered positions. After paring and burning, ploughing and liming, (two and a half chaldrons of lime per acre), 47 acres were sown with rape and the other one acre with rye. The second year the same land was sown with oats and grass seeds (including white clover), followed by turnips and potatoes. Good crops of rye, hay and potatoes were obtained, though the yields of rape, oats and turnips were poorer than had been expected. Nevertheless, the improvement in the land after only a very few years was sufficient to warrant the building of a farm house on it.

On a somewhat larger scale was the reclamation carried out by Mr. Richard Simpson<sup>54</sup> at Saintoft Grange, a farm of 315

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<sup>53</sup> Tuke J. op.cit., pp.203-204.

<sup>54</sup> Op.cit., pp.204-214.

acres which had been allotted to him in 1785 when the commons of Pickering and Newton were enclosed. When Simpson took over the farm in 1787 the entire area consisted of rough moorland which had never been cultivated before. Its value was estimated at under six-pence per acre. The vegetation was mainly heather, with varying quantities of bracken and coarse grass intermixed. But though the surface vegetation was more or less uniform the owner was able to identify, before he started his improvements, three different types of soil all requiring different treatment. He classified them as follows:-

"Class I - 100 acres pretty strong loam, of a moderate depth, upon limestone.

Class II - 70 acres of a deep sandy soil, with more or less of a red-stone earth intermixed.

Class III - 145 acres of a black moory soil."

Class III was further subdivided on a basis of the subsoil which varied from "a light sandy loam intermixed with a free-stone gravel" to "a hard cemented grey sand of a most unpromising appearance, as impenetrable to water as the closest grained stone, and almost as hard."<sup>55</sup>

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<sup>55</sup> These soil types have been described in detail because they all occur repeatedly in the region and the methods used in reclaiming them are therefore of particular interest. The hard-pan in Class III is especially widespread.

By careful cultivation the entire farm was brought under the plough by the end of four years, and even the poorest soil of Class III was producing reasonably good crops of grass and clover, though turnips and grain had not been very successful. On the better land grain and root crops had succeeded, but in spite of this Simpson's chief aim was to improve his sheep pasture rather than to convert moorland immediately into grain land. This policy may well be the reason for his success. He readily admitted that he would not have attempted to cultivate the poorest land "had it not unavoidably fallen within the ring fence of the farm, and being already inclosed, there was a greater probability of its paying for the improvement."

As at Lockton, the land was first pared and burnt, and after being ploughed once was limed ready for the sowing of the first crop. The amount of lime varied, but was as much as four chaldrons per acre on the poorest land. There was a good deal of variation in the crop selected for the first sowing on the newly ploughed land. On the better land Simpson tried oats, rape and turnips, of which the latter were highly successful, and as they were eaten on the land by sheep, could be followed by oats the next year. On the poorer land turnips did not prove to be a good choice as "the bottoms (were) in general not larger than the common hedge-crab."



The rotation of crops with which Simpson was successful spread over a period of six to eight years, consisting of oats and turnips grown for a year each, followed by either rye and grass seeds or oats and grass seeds sown together. After the corn had been harvested the grass was left for from three to five years, during which time it was used as pasture for sheep. The turnips were also fed to sheep on the land, so that during at least five years out of an eight year rotation the fields were stocked with animals. Exhaustive crops such as grains or potatoes were never grown two years in succession. Each time the pasture was ploughed out more lime was added; thus the soil was continually being improved by both animal manure and lime.

It was found by Simpson and others that the ploughing up of moorland without burning did not produce satisfactory results, even if the same quantities of lime and manure were added to the unburnt as to the burnt land. In describing the effects of this treatment on 10 acres of his own land Simpson remarks, " - - - I had sufficient cause to repent it, for I have not even had one middling crop from it since; and though laid down with seeds, they have by no means so good an appearance as those sown the same year on similar soils ....."

If lime were omitted from land which had been pared and burnt the results were similar, as Simpson proved by experimenting with one acre of his good Class III land. The absence of lime

made little difference to the first crop - turnips, but was very noticeable in the case of the oats and grasses which followed. In the limed part of the field white clover flourished, while in the unlimed acre there was hardly any to be seen. Even more important, "although the other parts of the field is a tolerably good herbage, with a few thinly-scattered small branches of ling coming amongst it (owing, I suppose, to its not having been long enough in tillage to destroy all the roots of this hardy plant), yet that part of the field unlimed is nearly destitute of herbage and covered with heath."

The results of these experiments show that paring and burning followed by copious liming was the better method of reclaiming moorland, while the growing of fodder crops for sheep was more likely to be successful than the growing of grain crops. At both Lockton and Saintoft only one ploughing was done before the sowing of the first crop, but both Simpson and Tuke agreed that better crops were obtained when the land had been ploughed a second time. There is no evidence available to show to what extent these methods and crops were used on reclaimed land in other parts of Region III. In the Tithe survey, with the exception of intakes in Boltby, Oswaldkirk and Allerston, most of the reclaimed land was recorded as arable, but details of cropping are not known. In

Boltby and Allerston, grassland was more or less continuous on large areas of former moorland. In Pickering arable and grassland each occupied similar proportions of the reclaimed land, except at Saintoft where there was a marked preponderance of grass. In general, the proportion of arable to pasture on the intakes was similar to the proportion for the parish as a whole.

Plantations were more numerous here than in other parts of the moorlands. They occupied most of the reclaimed moorland along the westward-facing scarp in Cowesby, as well as large areas in Kilburn, Oldstead and Boltby. There were smaller plantations in Pickering, Allerston and Appleton-le-Moors to mention only a few. All the wooded areas are shown on Fig. 21.

In the century from 1750 to 1850, several distinct changes can be traced in the land-use of the Corallian region. Although the farming remained mixed there was after enclosure, an increase in the acreage of permanent grass at the expense of arable crops. There was also a marked degree of specialisation in cattle-raising. With the gradual acceptance of turnips and clover, some of the permanent grass was ploughed out and put under a six to eight year rotation which included a long ley. Thus between 1800 and 1850 the arable acreage increased. These changes were accompanied by the vigorous reclamation of moorland up to a height of about 700 feet, with a consequent increase in the area of improved land.

The upper limit of cultivation achieved in the south-facing Corallian region was very similar to that in the coastal plateau (Region I) where the effects of a northerly aspect were accentuated by exposure to the sea, and generally lower than in the high central moors (Region II). In all three regions it appears that aspect was of little significance in determining the upper level of cultivation. Soil type was the limiting factor in the improvement of moorland.

The development of these regions as major producers of wheat and wool. - First iron mines with low freight rates between these countries and Great Britain brought their abundant produce to bear on the British market, and farmers in this country were thus faced with competition of a kind hitherto unknown. At the same time the population in Britain was growing rapidly, especially in the industrial districts of the Midlands and North. Communications by road and railway were also improving, and which meant for farm produce a market of new breadth, nearer to the home of the consumer. In the North West the effect of these developments can be seen in the landscape changes which took place during the latter part of the nineteenth century.

In the twentieth century both external and internal influences caused further modifications in landscape. The First World War stimulated home production of food while the general depression of the

CHAPTER VIIFarming and Forestry, 1851 to 1955.

During the last century from 1850 to 1955 English farming was subjected, for the first time in its long history, to the influence of economic changes on a world-wide scale. Before the end of the nineteenth century the building of railways in Canada, the United States and Australia coupled with technological advances made possible the development of these remote areas as major producers of wheat and meat. Fast iron ships with low freight rates between these countries and Great Britain brought their abundant produce in bulk on to the British market, and farmers in this country were thus faced with competition of a kind hitherto unknown. At the same time the population in Britain was growing rapidly, especially in the industrial districts of the Midlands and North. Communications by road and railway were also improving, and quick transit for farm produce between the rural areas and the towns allowed farmers even in remote districts to cater for the expanding urban market. In the North York Moors the effect of these developments can be seen in the land-use changes which took place during the latter part of the nineteenth century.

In the twentieth century both external and internal influences caused further modifications in land-use. The First World War stimulated home production of food while the general depression of the

early 1930's caused a recession of farming. The Second World War provided an even greater stimulus, and the introduction of farm subsidies on most of the basic foodstuffs went a long way towards encouraging arable farming even on marginal land. The effects of these events in the North York Moors are clearly reflected in the parish agricultural returns collected annually by the Ministry of Agriculture. The returns for six years have been used:- 1867, the first year for which statistics are available and one of the later years of the "Golden Age" of English farming; 1890 which comes towards the end of the Great Depression when farming in Britain as a whole had reached its lowest ebb; 1918, the final year of the First World War when wartime agriculture was at its peak; 1931, representative of the post-war depression; 1945 illustrating the full effects of the Second World War; and 1955 representing the post-war years and the end of this thesis.

The extent of moorland reclamation during the century, both for farming and for forestry has been assessed by comparing the first edition of the six inch map (1851) with a survey of moorland made in 1955 on foot, and recorded on the six inch map. (1951 Revision).

#### Region I. The Northern Boulder-clay Plateau.

The land-use pattern established in the boulder-clay plateau during the first half of the nineteenth century persisted into the latter part of the century with few changes at first. In 1851 the

moorland occupied much the same areas as it had done more than thirty years before<sup>1</sup> and the greater part of the Northern Boulder-clay plateau remained under cultivation.

The first agricultural returns collected in 1867 provide the first detailed record of land-use since the beginning of the century and the earliest comprehensive and statistically reliable record for all time. Arable land at this time occupied well over half the improved acreage in all but two of the parishes. In the sub-region as a whole arable comprised as much as 57 per cent of the improved land. Comparison with the parishes included in the Tithe survey shows that there had been a general increase in arable over the intervening period of twenty to thirty years.

The agricultural returns reveal some changes in arable farming since the early part of the century. Oats and wheat remained the chief grain crops as they had been in 1801, but a very large proportion of the arable land was now devoted to fodder crops, particularly rotation grasses. While there are no earlier records with which to compare it seems probable from Tuke's comments on the lack of winter feed in 1800, that these crops were much more widely grown in 1867 than they had been in Tuke's day.

Permanent grassland which in Tuke's estimation had occupied about two-thirds of the farm land at the beginning of the century, had

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<sup>1</sup> Compare Teesdale's map (fig.25) with fig.26.

Fig. 26  
THE NORTH YORKSHIRE MOORS  
CHANGES IN LAND USE

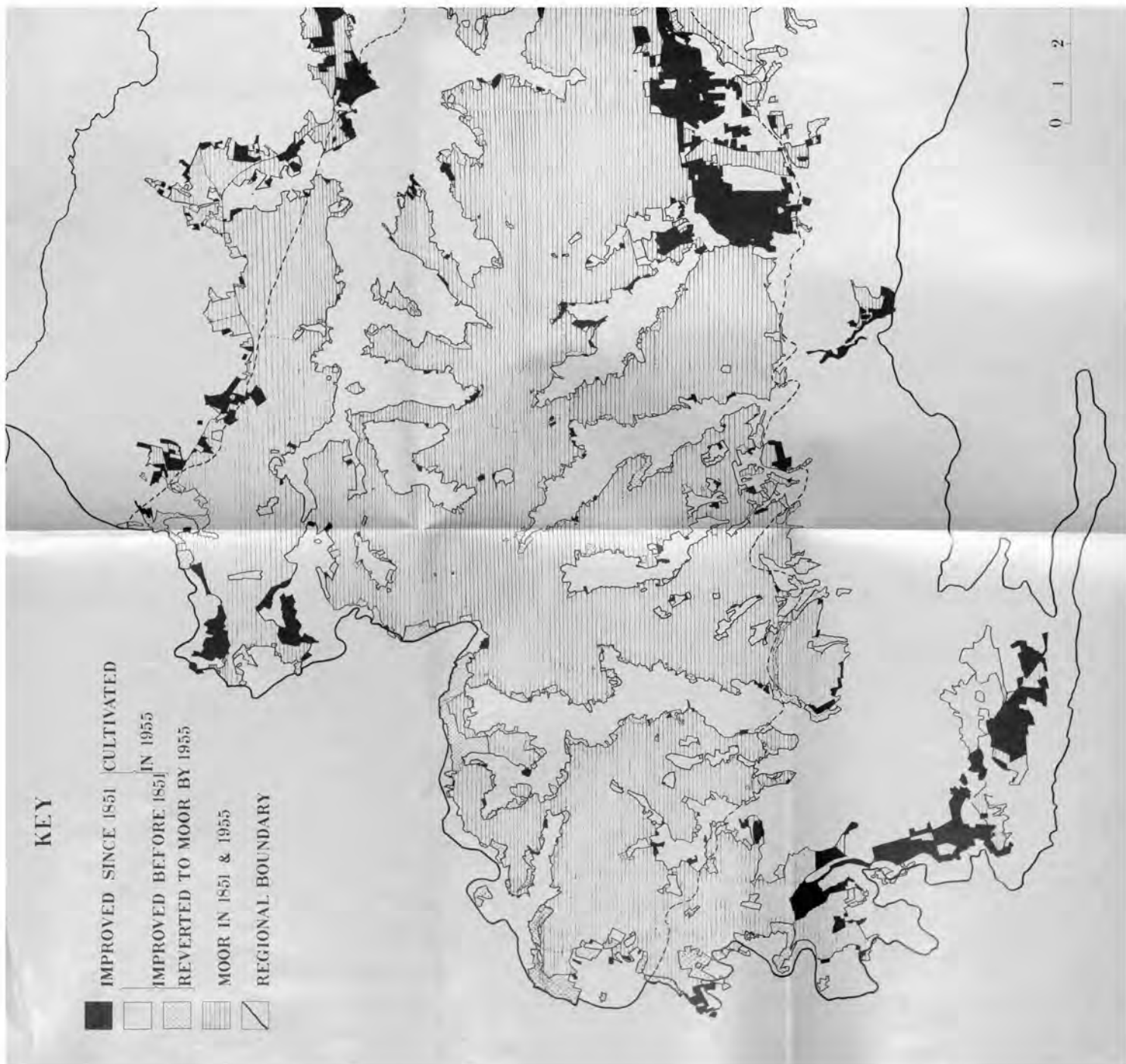
1851-1955





KEY

- IMPROVED SINCE 1851 | CULTIVATED
- IMPROVED BEFORE 1851 | IN 1955
- REVERTED TO MOOR BY 1955
- MOOR IN 1851 & 1955
- REGIONAL BOUNDARY



0 1 2

decreased to 50 per cent at the time of the Tithe survey in the parishes which were tithed, and to no more than 39 per cent of the same parishes in 1867. In the sub-region as a whole the permanent grass occupied 43 per cent. In some parishes the proportion of land under permanent grass was even lower and in two of them, Ellerby and Kilton, was under 30 per cent. The increase in arable land and the corresponding decrease in grass suggest at first sight a change from pastoral to arable farming, but if the permanent grass and rotation grass are taken together they comprise as much as 54 per cent of the improved land. The region can therefore be classed as one of mixed farming in which animal-raising continued to play a prominent part. The change in the proportions of arable and permanent grass were nothing more than a continuation of the trend which began as far back as the late eighteenth century.

This type of farming came to an end during the 1870's when a series of bad summers, coupled with a rapid increase in supplies of foreign corn caused a serious fall in the price of home-produced grain, especially wheat.<sup>2</sup> The effect in this coastal region was marked. By 1890 arable land occupied only 40 per cent of the improved land, and, if temporary leys are excluded the proportion under grain and root crops was no more than 30 per cent. In every

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<sup>2</sup> Royal Commission on Agriculture, 1894-95. Report by R.H.Fringle on South Durham and selected districts of the North and East Ridings of Yorkshire, pp.8-10.

parish in the region the arable acreage had decreased. The area under grass, both permanent and temporary ley, had increased until it included as much as 70 per cent of the improved land in the region. (1967 - 54%) (fig.27). In some parishes the change to grass was even more complete. In Stanghow as much as 82 per cent was grassland; in Kilton the proportion of grass had doubled since 1867, and in thirteen of the twenty-three parishes for which there are records grassland exceeded 70 per cent of the area under crops and grass. This was a complete reversal of the earlier long-established trend, and was a direct response to changing economic conditions.

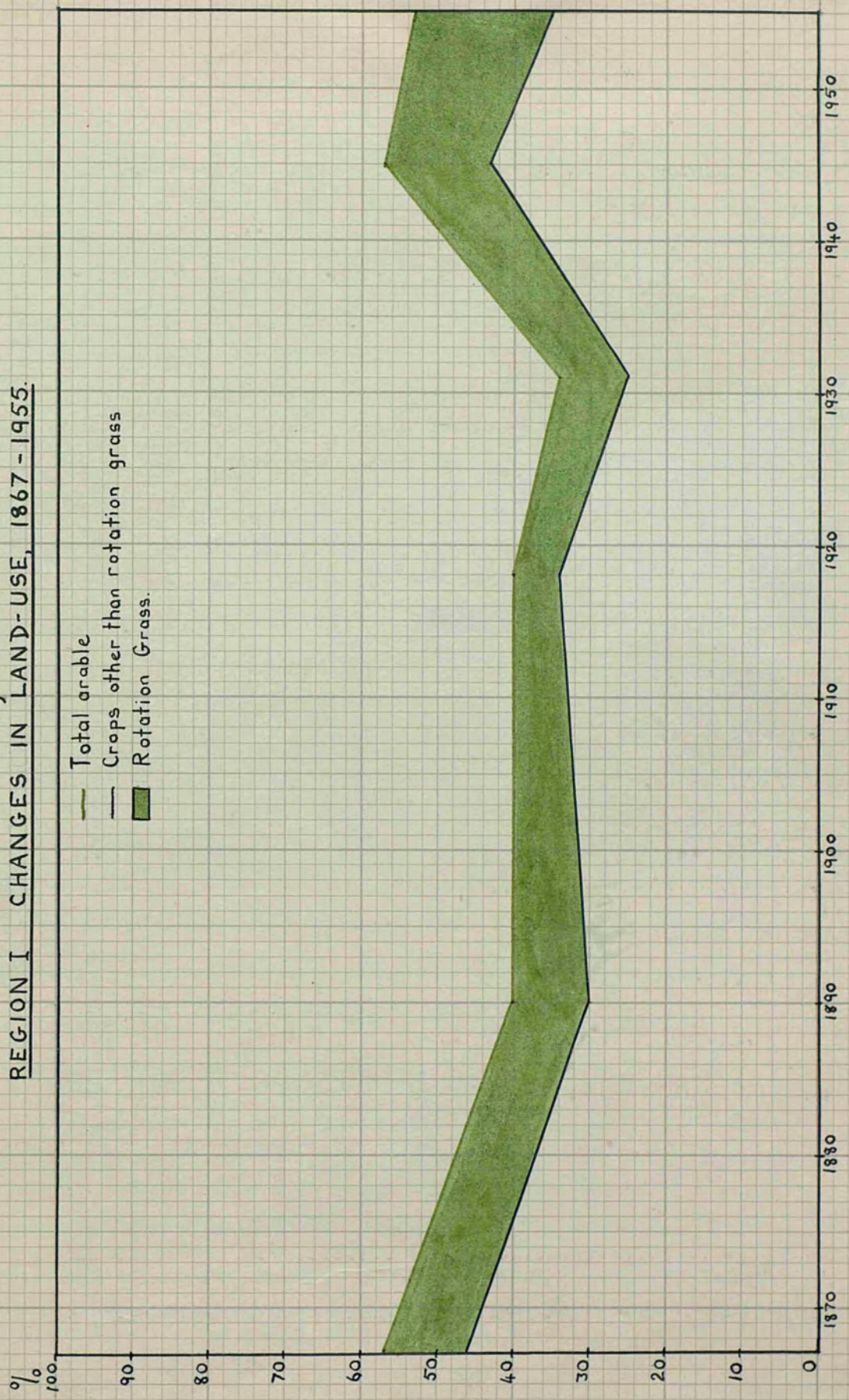
Further changes in land-use took place during the First World War when home production of food was a matter of national policy. In this sub-region however, the changes were slight. Arable land still made up only 40 per cent of the total, but when the land under short ley is excluded the cropped land shows a small increase (3.5%) which resulted from a reduction of short leys in the arable rotation.

The post-war period saw an even greater acreage laid down to grass than in the depression of the late nineteenth century. By 1931 the arable land had fallen to 34 per cent of the improved acreage,<sup>3</sup> and of this about a quarter was under short leys. In every parish without exception the percentage of rotation grass had risen from

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<sup>3</sup> Compare with the land utilisation survey, 1931-36 - 33% arable.

Fig. 2.7  
REGION I CHANGES IN LAND-USE, 1867 - 1955.



the 1918 level, often by as much as eleven or twelve per cent. Except in two parishes where there was a small decrease, the proportion of permanent grass showed a similar though generally smaller rise. As many as three parishes had over 80 per cent of their farm land under grass, and in only one parish (Hinderwell) did the proportion of grassland fall below 70 per cent.

Thus, 1931 represents a period when stock raising was the mainstay of farming in the region, when importation of grain from abroad discouraged its production in this generally unfavourable region. With the outbreak of the Second World War home production of wheat, potatoes, sugar beet and other food crops was once again encouraged by the government. The provision of subsidies made the cultivation of all these crops worth-while even on marginal land, and in most parts of Britain the arable acreage was extended to its limit. In this boulder-clay region wartime farm policy resulted in the ploughing out of old grassland, and the arable acreage rose to 57 per cent of the improved land. (rotation grasses 14 per cent). Thus in 1945, when wartime farming reached its peak, the proportion of land in arable returned for the first time to its 1867 level.

The post-war years witnessed another slight fall in the arable acreage (53 per cent of the improved land), and at the same time the proportion of sown grasses increased. In other respects the arable land was still used in much the same way as it had been in 1867. Oats remained the chief grain crop, while rotation grasses, wheat, potatoes

and turnips continued to make up the major part of the remaining arable acreage.

The changes in the main land-use categories are summarised in Fig. 27.

Moorland reclamation caused further land-use changes in the sub-region. Fig. 26 shows that the small area of moorland remaining after 1851 had been considerably reduced by 1955. Much of the reclamation consisted only of single fields along the moorland edge and these were often very small. In some places, especially in Moorsholm and Hutton Mulgrave Moors reclamation was on a much larger scale. The distribution of the intakes is shown on Fig. 26 and Table 26 shows the acreage reclaimed in each parish. Most of the intakes lay near the upper edge of the boulder-clay where altitude rather than soil makes cultivation unprofitable except under conditions of extreme economic pressure. In Newton Mulgrave Moor, one of the few large moors remaining on the boulder-clay, reclamation occurred round the lower edge of the moor, mostly below 700 feet. In Hutton Mulgrave Moor where moorland vegetation grows on glacial sand and a narrow outcrop of the Estuarines, the very large intakes are confined to the glacial deposits and avoid the intractable soils of the Estuarine outcrop. Fig. 26 also shows that several small scattered fields reclaimed sometime before 1850 were allowed to revert to moorland during the following century. Most of these were in Fylingdales to the south of Robin

Table 26. Changes in the Moorland in Region I. 1851-1955.

Parish	Acreage Reclaimed	Acreage Reverted
Aislaby	16	5
Borrowby	27	0
Easington	16	7
Ellerby	28	0
Fylingdales	392	114
Hutton Mulgrave	435	9
Liverton	15	5
Loftus	0	32
Mickleby	122	8
Moorsholm	406	80
Newton Mulgrave	71	46
Roxby	63	159
Skelton and Stanghow	348	156
Sneaton	139	432
Ugthorpe	167	0
Total	2,245	1,053

All acreages in this and other similar tables have been obtained by measuring from the maps with squared paper.

Hood's Bay on the steep, northward-facing slope of the Estuarines, slightly above the upper margin of the boulder clay. These fields were formerly worked by cottagers engaged in the alum quarries, but the quarries are now closed and the cottages and fields deserted.

Elsewhere the neglected fields are on the boulder clay, near the moorland edge and often very close to the new intakes.

Comparison of Fig. 26 with the Land Utilisation Survey (1931-35)<sup>4</sup> shows that few of the intakes had been made before 1931. Indeed, the largest areas were not reclaimed until the second World War under the direction of the War Agricultural Committee. At this time the ploughland was extended where possible regardless of profit and with government aid. A few examples will serve to illustrate how the improvement was achieved and how the intakes were used.

In Stanghow and Skelton, moorland in Busky Dale and Skelton Warren was taken over in 1940 and 68 acres gradually reclaimed by deep ploughing followed by copious liming and the addition of basic slag. Cultivation on a five-fold rotation (two years arable followed by three years ley), and the introduction of seed potatoes as a main crop, resulted in a considerable improvement in the quality of the land. Another reclamation scheme was carried out on part of Moorsholm Moor where 80 acres has been reclaimed since 1942 and used as improved pasture for cattle.<sup>5</sup> These reclamation schemes involved the extension of cultivation on two existing farms. Reclamation of a different order was carried out on the southern part of Moorsholm

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<sup>4</sup> Sheet 16.

<sup>5</sup> Information obtained through investigation in the field.



Moor at Dimmingdale Farm<sup>6</sup> which had remained untenanted and the land neglected since the end of the nineteenth century. Ploughing was renewed during the war with government assistance, and in the post-war period the farm was retenanted and 147 acres brought into cultivation, with oats and grasses as the main crops. The method of reclaiming was remarkably similar to that used in the eighteenth century, but with different implements. The heather was burnt off and the land ploughed. A prairie buster was used to break the underlying hard-pan which in most places is only five inches below the surface. Lime was then added at the rate of four tons per acre, and the land sown down to grass. Regular applications of fertiliser and lime are essential to prevent the regrowth of heather and to maintain the high quality of the pasture. The main object of the scheme is to stock the improved land with cattle. The 2,000 acres of rough moorland belonging to the farm are stocked with black-face ewes.

In other parts of the boulder clay plateau reclamation has been achieved by similar methods and with similar results. Only in one place has moorland been reclaimed by afforestation - on Hutton Mulgrave Moor where, in 1955 planting mainly with conifers was still going on.

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<sup>6</sup> Yorkshire Illustrated, May 1952, p.7. This was followed up in the field.

The main result of reclamation has been an increase in the acreage of improved pasture, much of which has subsequently been stocked with cattle. Cultivation is marginal. Regular treatment with lime and phosphates is necessary to prevent the regrowth of heather and other moorland plants because of the rapid rate at which soluble minerals are leached from the upper layers of soil. Even one season's neglect is often enough for heather to reappear. The cost of keeping marginal land in its improved state is so high that it is frequently only possible with the help of subsidies.

Use of the unimproved moorland remains unchanged. It is still grazed by black faced sheep throughout the year, and the normal allowance of one sheep to ten acres is the same as that recorded by William Marshall in 1788. In 1955 the boulder clay plateau still included 8,600 acres of moorland used as common grazing land, 7,300 acres of which was stinted grazing and carefully controlled.<sup>7</sup> Far-reaching changes in the use of this moorland are unlikely to take place in the immediate future owing to the bleak climate, high altitude and infertile soils.

#### Region II. The Moors and Dales.

In the period from about 1850 to 1867 arable farming in the remote moorland dales reached its greatest extent. In the sub-region as a whole as much as 52 per cent of the improved land was

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<sup>7</sup> Report of the Royal Commission on Common Land, 1955-58, pp.247-249.

devoted to arable crops in 1867, compared with about 20 per cent in Tuke's day and only 32 per cent in the Tithe survey. Only parishes appearing in the Tithe survey and the returns for 1867 have been compared. This increase in arable farming was comparable with that already described in Region I although the increase in the dales was much greater. (Figs. 27 and 28). This change from permanent grassland to arable is particularly remarkable as the region was traditionally one where stock-raising predominated. There were small variations in land-use from one dale to another. In the Esk-Leven system of dales in the north there was more grassland than the average for the region, especially on the glacial soils of the lower and middle Esk. It was a mixed farming district, with easy access to the industrial area of Tees-side which provided an ever-increasing market, particularly for milk and meat.<sup>8</sup>

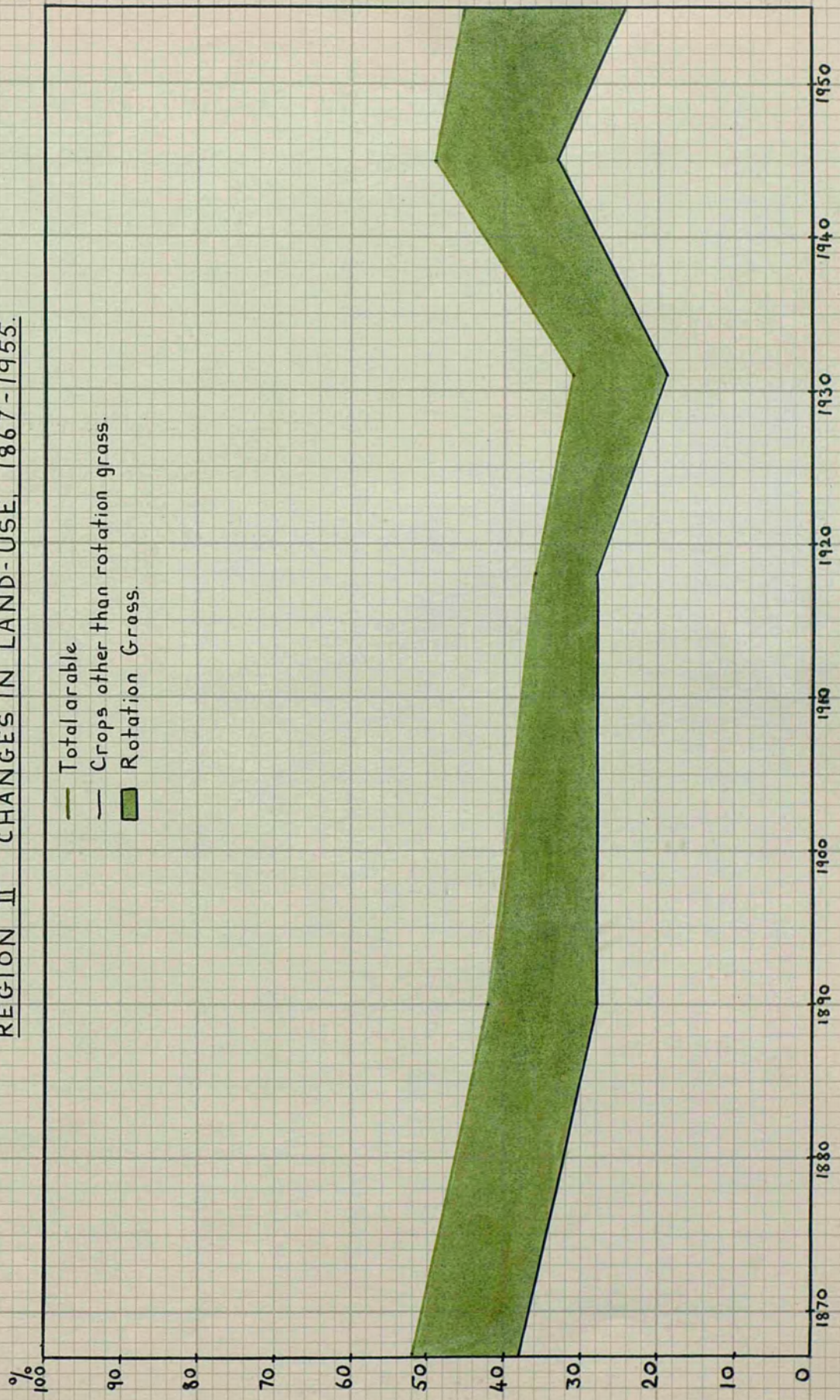
In the southern dales arable farming predominated. Indeed in Farndale as much as 71 per cent of the improved land was arable, and while the proportion in all the other dales was smaller, arable still made up the major part of the farm land. The soils derived from the Lias were neither very fertile nor easily worked, especially on the steep valley sides. It seems therefore that remoteness from industrial centres, and poor communications<sup>9</sup> exercised more control

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<sup>8</sup> The railway through Eskdale from Whitby to Middlesbrough was opened in 1854.

<sup>9</sup> Royal Commission on Agriculture, op.cit. p.7.

Fig. 28  
REGION II CHANGES IN LAND-USE, 1867-1955.



over the type of farming than the unfavourable physical conditions.

In the eastern moors in the drift-filled valleys of Harwood Dale and Staintondale concentration on arable cultivation was more pronounced than anywhere else in the moorland region, and here as in the southern dales, remoteness was probably the main controlling factor rather than the physical conditions of soil and climate.

The agricultural returns for 1867 shows that in the Moors and Dales region oats remained the chief crop, while rotation grasses and turnips were the only other crops grown in large quantities. The introduction of rotation grasses represents the greatest change in arable farming since the beginning of the century and with 14 per cent of the arable land devoted to this use, also accounts for most of the increase in the arable acreage. Cultivation in the dales was on a five year rotation: turnips were followed by oats, after which a temporary ley was left for two years before being ploughed up again for oats.<sup>10</sup> Thus, three of the five parts of the rotation provided food specifically for stock, especially sheep, and the increased arable acreage resulted from improvements in stock-feeding rather than a change from the traditional stock-raising economy of the dales. A large proportion of the land remained in permanent grass (48 per cent of the improved land) and open moorland grazing was also very extensive. (Fig.26).

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<sup>10</sup> Milburn M.M. Farming in the North Riding of Yorkshire 1848, p.517.

By 1890 the effects of the agricultural depression were being felt acutely. In Bilsdale, where rents had been increased during the prosperous years of the 1860's the Royal Commission of 1894-95 reported numerous neglected fields and several failures among the farmers. These were attributed mainly to the fall in price of grain, wool and meat over the preceding decade, which affected not only Bilsdale but all the other remote dales as well. Signs of extreme poverty were to be found everywhere, and while in the majority of parishes the acreage of improved land had increased since 1867 the proportion of arable had fallen by 10 per cent. The reduction was chiefly in the grain crops, and the proportion devoted to rotation grasses remained unchanged. At this time the permanent and rotation grasses together occupied nearly 72 per cent of the improved land. The differences between the dales noted in 1867 still existed though the proportion of land under grass had everywhere increased and only in Harwood Dale and Staintondale did arable farming still predominate.

The First World War made little difference to dales' farming. Rotation grasses fell by about 6 per cent from the 1890 level and there was a corresponding increase in permanent grass. The proportion under grain and root crops remained almost unchanged and indeed, in spite of the pressure of wartime economic conditions the proportion of land used in this way actually decreased by 0.5 per cent.

The reversion to peace-time conditions saw an even greater reduction in arable farming, until by 1931 grain and root crops occupied only 19 per cent of the improved land, while as much as 69 per cent was laid down to permanent grass. In some of the dales the change was particularly pronounced. In the Murk Esk valley at Goathland over 86 per cent of the farm land was laid down to permanent grass and in Eskdale generally the proportion of grassland exceeded 70 per cent.<sup>11</sup> In Rosedale, Bilsdale and Bransdale there was a similarly large increase in grassland, and in Rosedale over 80 per cent of the improved land was in permanent grass alone. Harwood Dale and Staintondale, while retaining a larger proportion of arable land than any of the other dales, had become areas of mixed farming.

The trend towards a grassland economy was checked once again by the Second World War. Between 1931 and 1945 the proportion of permanent grass decreased throughout the region to only 51 per cent of the improved land. At the same time the area under grain and root crops almost doubled, from 19 per cent in 1931 to 34 per cent in 1945. This was a higher proportion than at any other time in the twentieth century though it still fell short of the 1867 maximum despite the encouragement provided by government subsidies on all the basic crops. With an average of 66 per cent of the improved land under temporary and permanent ley the area could still be regarded as one where grazing was the mainstay of farming. There was at this time little difference between the land-use in Eskdale

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<sup>11</sup> Compare with Land Utilisation survey, 1931-32. Eskdale below Lealholm 32 per cent arable, i.e., 67 per cent permanent grass.

and in the southern dales, good roads and the development of motor transport having eliminated the major difficulty caused by isolation. Harwood Dale and Staintondale once again reverted to arable.

The wartime extension of arable farming was short lived. The returns for 1955 show that arable land under grains and roots had fallen again to only 24 per cent of the improved acreage, while permanent and temporary grassland had increased to over 75 per cent. No less than 21 per cent of the improved acreage was devoted to rotation grasses and these occupied a greater acreage than any other single arable crop. Oats and turnips made up the greater part of the remaining acreage as they had done in 1867, while other crops such as wheat, barley and potatoes remained almost insignificant.

From the evidence accumulated over more than a century it appears that the proportion of farm land that can be kept in arable in the Moors and Dales can only exceed 30 per cent at particularly favourable periods when a heavy demand for home-produced grains and roots can offset the disadvantages of soil, climate and remoteness from the main markets. Even government grants and price supports have failed to encourage the continuation of arable farming in peacetime, and the region maintains today its old-established stock-raising tradition.

Reclamation of moorland between 1850 and 1955 was for two main purposes - farming and forestry. Additions to the farmland



were generally small. In the Esk-Leven valley only a few small intakes were added along the moorland edge, mostly in the tributary dales. The distribution of these intakes is shown on fig. 26. With the exception of the intakes at the head of Danby Dale at a height of over 900 feet most of these newly reclaimed fields were on the lower slopes. In the main Esk valley the only large area of reclamation was on the south-facing slope of Egton Low Moor on one of the few patches of glacial sand and gravel hitherto left uncultivated. Table 27 shows the acreages reclaimed in these northern dales. Comparison of fig. 26 with the Land Utilisation maps<sup>12</sup> shows that very little of the reclamation had taken place by 1931. Here, as in Region I, reclamation was encouraged during the Second World War when up to 85 per cent of the cost could be claimed by farmers under the marginal production scheme.<sup>13</sup>

In the moors surrounding Eskdale very little new land has been brought into cultivation by farmers and the main change in land-use results from afforestation. The first plantation was made on the slopes above Kildale early this century. In 1951 planting was begun by the Forestry Commission. The five areas which had been planted by 1955 are shown on Fig. 30, and these, along with a much larger area scheduled for future planting make up Cleveland Forest. Most of the planting has taken place on the steep scarp slope, this being the

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<sup>12</sup> Sheets 15, 16, 22, 23.

<sup>13</sup> This ended in 1957.

Table 27. Changes in the Moorland in Region II. 1851-1955.

Parish	Acreage Reclaimed	Acreage Reverted	
Commondale	19	104	} Esk-Leven system of dales
Danby	67	106	
Eskdaleside cum Ugglebarnby	116	69	
Egton	737	250	
Glaisdale	105	46	
Goathland	35	30	
Kildale	532	231	
Westerdale	55	71	
Total	1,666	907	
Bilsdale (Midcable, West, Laskill)	119	1,178	} Southern Dales
Bransdale	89	184	
Farndale (East and West)	113	450	
Hartoft	364	126	
Lastingham	4	0	
Rosedale (East and West)	187	207	
Snilesworth.	53	96	
Total	929	2,241	
Harwood Dale and Staintondale	2,535	64	} Eastern Moors
Ayton (Great and Little)	3	147	} Parishes mostly outside the region but with some moorland within it.
Broughton and Busby	0	254	
Cropton	2,225	16	
Easby	20	0	
Fadmoor and Gillamoore	-	166	
Guisborough	97	365	
Helmsley	27	122	
Hutton Lowcross	410	0	
Ingleby Greenhow	42	657	
Osmotherley	47	168	
Pickering	2,371	82	
Pinchinthorpe	37	10	
Thimbleby	0	129	
Whorlton	42	922	
Total	5,313	3,038	

only land the Forestry Commission can buy. It is not valued for any form of agriculture as most of it is covered with bracken and scrub and is unfit for sheep pasture. The slopes are too steep to plough except with the large machines used by the foresters. The soils are fairly thick and fertile, being derived from boulder clay on the lower slopes and Lias shales above. Hard-pan is a problem only on the summit areas but it can be broken by deep ploughing. The trees planted include Douglas fir, larch and beech on the lower slopes and larch and red oak higher up. All these are valuable timber trees, and in twenty or thirty years time will yield a much greater profit than has ever been gained before.

During the same period a number of fields in the tributary dales reverted to moorland, especially those in high situations near the heads of Fryupdale and Glaisdale and on the upper slopes of the small, drift-filled valley of Egton Grange.

In the moors surrounding Eskdale many of the isolated groups of intakes at high altitudes have been allowed to revert to moorland. Among these are the fields on Kempswithen reclaimed by Sir Charles Turner at the end of the eighteenth century, and only the lower courses of the enclosing stone walls remain to show where they have been. There was also a great spread of moorland vegetation along the moorland scarp where woodland cleared during the 1930's did not regenerate.

In the southern dales as in Eskdale there has been very little change. In Bilsdale, Bransdale and Farndale more land has reverted to moorland since 1851 than has been reclaimed. (Table 27). Indeed, in Bilsdale especially, the moorland edge has descended on the average 150 feet below the 1851 level. Fig. 26 shows that more land has reverted in the higher, northern part of the dale than in the south, but throughout the whole length of the dale it is possible to see the remains of old stone walls surrounding fields that once were cultivated but which lie now above the moorland edge.<sup>14</sup>

In Bransdale and Farndale there has been less change and the moorland edge in 1955 was at much the same level as in 1851. The largest areas which have reverted to moorland are former woods which have been cleared and not replanted. In Rosedale the moorland edge has spread downwards on the north-eastward facing slope, while on the opposite side of the valley many new intakes have been made. This general recession of the level of cultivation can be attributed to four main causes. In all the dales there has been a decrease of population since the end of the nineteenth century. Farms have been left untenanted and have either been incorporated in neighbouring farms or allowed to go derelict.<sup>15</sup> Even when such land remained in use the fields furthest from the farmhouse were frequently too poor in quality to justify the trouble and expense involved in

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<sup>14</sup> Most of these were still classed as improved land in the Land Utilisation survey, but independent evidence shows that they have been neglected for a long time.

<sup>15</sup> In Bilsdale alone one elderly farmer can think of at least sixty such cases in his lifetime.

maintaining them. This was particularly true in the years between the two world wars. The coming of tractors has also had its effect as they cannot be used on very steep slopes where ploughing with horses was possible. But perhaps the most important factor is the general tendency now among dales farmers to regard dairy herds and poultry as the chief sources of income. All the animals are therefore kept as near the house as possible and on the land with the greatest stock-carrying capacity. The high fields, distant from the house and near the upper limit of cultivation are no longer of value to the majority of farmers. But despite this change in farm management improvements including reclamation have been carried out in all the southern dales, always on a very small scale. In Bilsdale many of the old enclosed fields which for years had been under permanent grass of poor quality, were reploughed during the war under the marginal production scheme. The main aim was to increase the stock-carrying capacity. The same policy has been continued since the war on a few farms, involving the improvement of land already reclaimed rather than the reclamation of fresh moorland. This has been done in Bilsdale at Clough House, one of the farms which had long been derelict, and at Cock Flatt, where improvement of the neglected land began in 1950. The improvements at Cock Flatt included the ploughing out of old grassland and bracken-covered slopes, ditching and underdraining where necessary, and the addition

of large quantities of lime and fertilisers.<sup>16</sup> The improvements were made gradually, not more than twelve acres being tackled in either of the first two years. As a result of these improvements the carrying capacity of the reseeded areas was increased, so that they could support the entire stock of young store cattle. Thus all the better quality land near the farmstead was available for the dairy herd. The stores can now be fattened for the market off the grass, Swaledale lambs can also be taken to greater weights than formerly and more hay is produced as a safeguard against a late spring. Similar improvements are being made on some farms in both Bransdale and Farndale.<sup>17</sup>

In the moorlands surrounding the dales a recession of the improved land has been general. Fig. 26 shows clearly the areas where moorland vegetation has spread down the scarp to the west and north, and the small isolated intakes in the minor dales where most or even all of the fields have gone out of cultivation. High altitude and poor soil have made these areas difficult to cultivate profitably, and extreme isolation from all the comforts of the twentieth century discourages any farmer from living there. In these moors, especially along the scarp, afforestation is planned but had not been started by 1955.

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<sup>16</sup> For details see Ewing, J.M. *Spotlight*, August 1955, pp.3-4.

<sup>17</sup> Information gained in the field.

Eastward from Rosedale there has been very little reclamation for farming except on the boulder clay fringes of Fylingdales Moor and in Staintondale. Also, only a very few fields have gone out of cultivation. (Fig.26) It is in this area that afforestation has been most extensive, nearly all of it on the moorland slopes where the soil is too infertile and difficult to plough to allow the extension of profitable agriculture. There are three main areas where planting has been started which together make up the Allerston Forest District.<sup>18</sup> Rosedale Forest,<sup>19</sup> the most westerly of the three, was begun in 1927 when only a small area of heather moor was planted. It was greatly extended in 1949 and will eventually cover 7,000 acres, two-thirds of it on moorland.<sup>20</sup> The main species planted are Corsican Pine, Scots Pine and Sitka Spruce, with Japanese Larch on slopes which were formerly bracken-covered. The extent of the forest in 1955 is shown on fig. 30.

Crosscliff Forest<sup>21</sup> lying east of Newton Dale was started in 1937 and by 1955 covered an area of over 2,800 acres, nearly all of which was originally moorland.<sup>22</sup> Most of it lies on south facing slopes below 750 feet on heavy soils derived from the Oxford Clay and

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<sup>18</sup> Information supplied by the Forestry Commission.

<sup>19</sup> Now sub-divided into Cropton and Pickering areas.

<sup>20</sup> Zehetmayr, J.W.L. - Afforestation of Upland Heaths, Forestry Commission Bulletin No.32, 1960, p.25.

<sup>21</sup> Ibid. pp.14-18. This area was originally called Langdale Forest.

<sup>22</sup> Unpublished material from the Forestry Commission.

the Estuarines. Harwood Dale Forest is the most easterly and extends to within two miles of the coast. The soil here is also heavy clay which is believed to be fairly fertile, but the numerous large boulders it contains made ploughing impossible until machinery of a suitable type was developed a few years ago. Planting was started in 1927 and was still continuing in 1955, by which time the planted area was about 1,600 acres. There are other older plantations nearer to the coast on what was originally Cloughton Moor. The main species planted in both Langdale and Harwood Dale forests are Scots Pine, Japanese Larch, Norway Spruce and Sitka Spruce, which when fully grown will be a valuable source of home-produced timber.

It is clear that at the present day the reclamation of moorland for farming is unlikely to proceed much further, despite the financial assistance which can often be obtained for reclamation. Within recent years many farmers have reclaimed small areas of not more than two or three acres at a time, usually to justify the purchase of machinery. While most of these small efforts have yielded a profit eventually the farmers could probably have gained more in the long run by improving the quality of existing enclosed land. There is no doubt that most of the moorland will always be used as sheep pasture. In 1955 the Royal Commission on Common Land recorded no less than 78,800 acres of moorland in the region, in most of which grazing was stinted and the rights carefully



preserved.<sup>23</sup> The North Riding as a whole the commissioners stated, "--- could claim to be the county of England where common land retains its greatest hold on the life of the community." This is particularly true of the Moors and Dales region.

### Region III. The Corallian Outcrop.

In this southernmost sub-region changes in land-use were spectacular during the mid-nineteenth century. The increase in the proportion of arable land noted during the first half of the century continued, and when the first agricultural returns were collected in 1867, no less than 64 per cent of the improved land was devoted to this use. There were some variations in the proportion of arable within the sub-region. In the Hambleton Hills in the west, where the general elevation is higher than elsewhere there was less arable (57 per cent) than in the lower eastern areas. The only exceptions were on the low-lying land in the south between Sproxton and Nunnington, and a small area in the central part of the Hambletons where the surface is particularly flat and the soil easy to plough. Along the steep western scarp and in the high northern part of the plateau the proportion of arable land was generally under 40 per cent.

From Helmsley eastwards the proportion of arable was greater, exceeding 67 per cent almost everywhere. Exceptions were the high plateau north-east of the Derwent and the boulder-clay lowland

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<sup>23</sup> Royal Commission op. cit. pp.247-49.

nearest to Scarborough where the close proximity of the town created a local need for horse pasture and a market for hay.

The type of arable farming was remarkably uniform throughout the region. A four-fold rotation was generally followed, consisting of oats, turnips, rotation grasses and either wheat or barley. Sheep were fed on the turnips in winter. In the region as a whole only about twelve per cent of the improved land was under a temporary ley, while a far larger proportion was devoted to grain crops, especially oats. In a few places the old rotation of grain crops and fallow was still followed, though it was always modified by the introduction of a small acreage of rotation grass.

Permanent grassland, which earlier in the century had occupied almost half the improved land had decreased to barely 36 per cent by 1867. Only in the Hambleton Hills did the proportion remain higher. Thus, in 1867 the Corallian Limestone hills could be regarded for the first time as a predominantly arable region.<sup>24</sup>

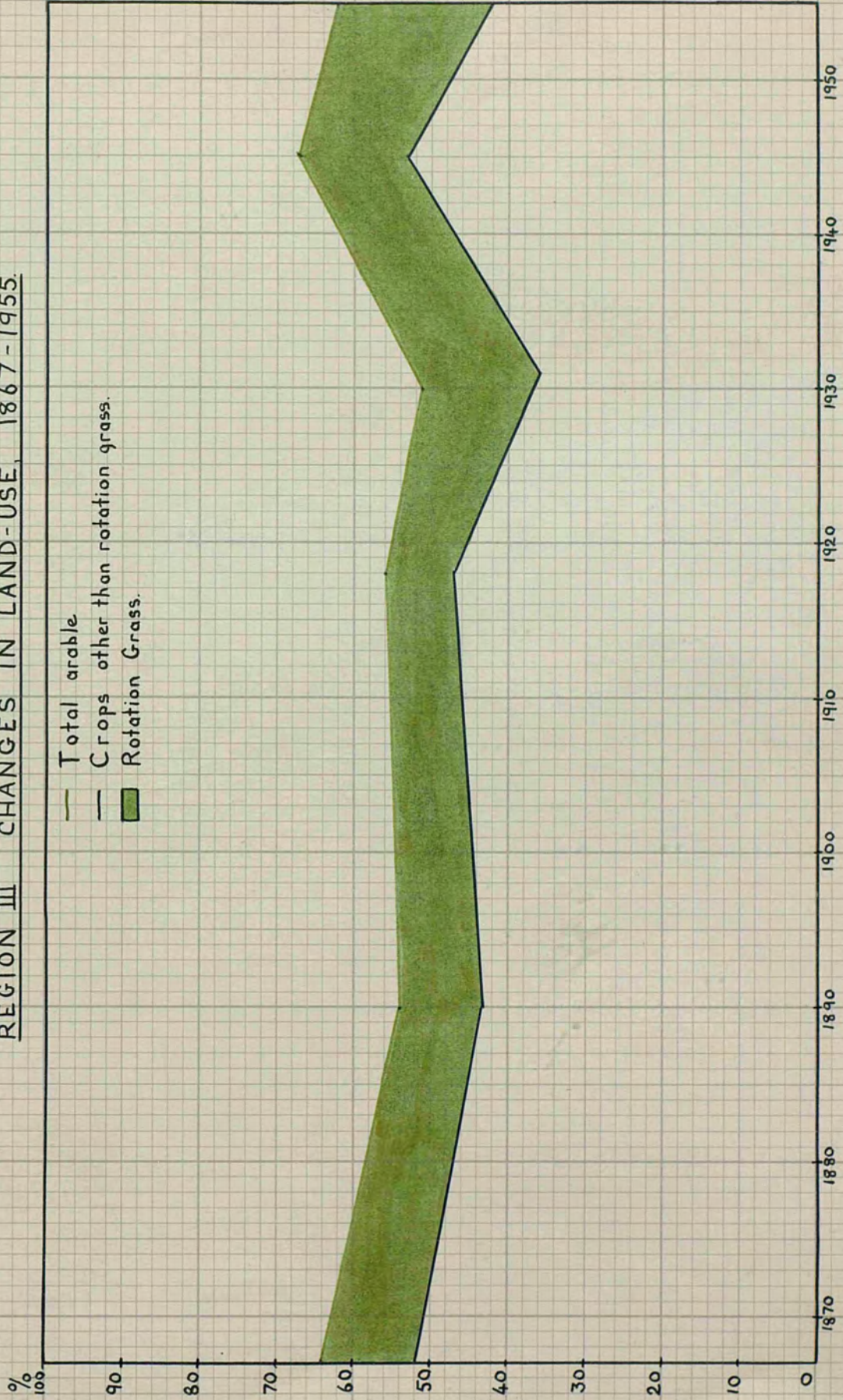
Land-use changes during the later part of the century followed much the same pattern as in the other two sub-regions (figs. 27, 28, 29). The period of "high farming", exemplified by the conditions in 1867, was followed by a general decline in the arable acreage during the great depression. This change was more pronounced in some parishes than in others. While in a third of

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<sup>24</sup> Details of cropping at Lund cote in 1882-83 show that there at least this remained true. Royal Agricultural Society, ix, p.496. 1883. Yorkshire farm prize competition.

REGION III CHANGES IN LAND-USE, 1867-1955.

Fig. 29.



the parishes over 60 per cent of the improved land was kept in arable, in the sub-region as a whole the proportion had fallen by 1890 to only 54 per cent, a decrease of ten per cent since 1867. Everywhere some of the land which had formerly been arable was laid down to permanent grass. In the Hambleton Hills this resulted in a preponderance of grassland though in other parts of the Corallian Limestone Hills arable land still occupied more than half the improved acreage.

The period up to 1918 saw little further change. The arable acreage increased only slightly to meet wartime conditions, but there was a general increase in the acreage under grains and roots at the expense of the rotation grasses. The War was no more than a halting time in the general trend away from arable farming, and in the post-war years more land continued to be laid down to permanent grass. By 1931 the proportion under arable had fallen even lower than in 1890, and occupied only 51 per cent of the improved acreage. At the same time there was a great increase in the proportion of temporary ley, which throughout the Hambleton and Tabular Hills to the west of Newton Dale, had almost doubled since 1918. In this western area only 34 per cent of the improved land was used for grain and root crops, compared with 45 per cent in 1918. The decrease was greatest in the Tabular Hills where as much as 18 per cent was under a temporary ley. Indeed in this western area grassland predominated almost everywhere, and the farming, though mixed, depended very largely

on animals. Further east, in the Hackness Hills the proportion under grains and roots was generally higher (41 per cent) though in other respects the farming differed very little.

The Second World War heralded a complete reversal of the earlier trend. Grassland was ploughed up; throughout the sub-region the proportion of the improved land under arable crops exceeded 60 per cent, and in the Hackness Hills it reached almost 71 per cent by 1945. The proportion of rotation grass changed very little, and the greater part of the increased acreage of ploughland was used for grains and roots. Except in the Hambleton Hills where the proportion of crop land had always been low, these crops occupied more than half the improved acreage for the first time since 1867.

The end of the Second war was followed by a slow return towards the former type of farming and land-use. The proportion of arable land decreased, though by 1955 this change amounted to only five per cent of the improved acreage and arable land still occupied well over half the improved land. The proportion of rotation grass increased more rapidly, and this was accompanied by a decrease in the acreage of grains and roots. (fig.29). In parts of the Hambleton Hills reversion to grassland was almost complete by 1955, and in Oldstead over 93 per cent of the improved land was under temporary and permanent grass. Elsewhere the change was less spectacular and the proportion of grassland remained below 60 per cent.

Cropping had undergone few changes since 1867, and sown grasses, barley, oats and turnips still occupied most of the arable land. By 1955 some local differences were apparent. In the area west of Pickering sown grasses were the main crop; further east barley occupied the greater acreage and wheat was of more significance than elsewhere. As in 1867, sheep fed on roots during the winter formed an important feature of the farming of the Corallian region.

Since 1867 the region has emerged as one of mixed farming with an emphasis on arable. The relative amounts of arable land and permanent grassland have varied according to the prevailing economic conditions. The greatest variations have always occurred in the central part of the region (the Tabular Hills) where the light loamy soils are equally well suited to either grain crops or grass. Much smaller variations in land-use have characterised the Hambleton Hills, where the high altitude especially of the northern part of the plateau, and the steep gradients of the scarp and valley sides favour permanent grassland and fodder crops rather than cereals. In the east the Hackness Hills have remained predominantly arable at all times.

Moorland, which occupied only a relatively small area in the Corallian region even in 1851, has been very largely reclaimed since.

In the Hambleton Hills where moorland was fairly extensive very large areas have been reclaimed. Most of the reclaimed land lies on the flat plateau surface. The intakes are generally above 900 feet, rising to over 1,000 feet along the western edge of the plateau and are therefore above the general level of cultivation. Smaller scattered intakes also occur round the moorland edge (fig.26). All of them are high, the lower land having been brought into cultivation much earlier.

Reclamation has been undertaken for both farming and forestry. Reclamation for farming has been on a relatively large scale in the Hambletons, mainly as a result of compulsory ploughing during the Second World War. The reclaimed land suffers from the combined disadvantages of height and a lack of surface water. Its height of over 900 feet makes it unsuitable for growing grain crops except when weather and prices are particularly favourable; the absence of surface water is a handicap for any kind of stock except sheep.

Reclamation for forestry has been carried out in two large areas in the Hambleton Hills. These form part of the Ampleforth Forest District. Byland Forest, the more southerly of the two areas, occupies a large area on the plateau surface near the southern margin of the Hambletons (fig. 26). Planting was started in 1928 when 135 acres on Byland Moor were planted with conifers. By 1953 planting on Byland, Wass and Ampleforth Moors was complete, and the total area had reached 867 acres. Reafforestation had also been

started on Sproxton Moor and on steep southward-facing slopes in Byland and Oldstead where woodland had been cleared at some time in the past.

Boltby Forest further north is the second area and occupies the steeply sloping sides of the valley of Lunshaw Beck, and extends on to the plateau surface only in the north. Planting mainly with conifers has been continuous since 1929, and by 1953 the forest covered 487 acres, all of it on former moorland. Only a small area remained to be planted.

The spread of moorland vegetation beyond its former limits has also taken place in some parts of the Hambleton Hills. Fig. 26 shows several small intakes which have reverted to moorland, most of them in isolated positions on the northern part of the plateau and along the western scarp. There are also three large areas where woodland has been cleared and the land overrun by heather and bracken. Table 28 shows clearly that in the Hambleton Hills more land has been reclaimed during the last century than has been allowed to revert to moorland. Only the highest and least fertile areas now remain as unimproved sheep runs.

In the Tabular Hills between the River Rye and Newton Dale, very little moorland remained by 1851 and there have been few changes since. Reclamation has been entirely for farming, and most of it has been carried out since the beginning of the Second World War. The largest reclaimed area is in Appleton-le-Moors where part of the



common was enclosed and ploughed during the war. Less extensive reclamation has been attempted since the war on Boonhill Common where about 80 acres of heather and gorse have been cleared and the land ploughed. In Blansby Park and at Saintoft Grange near Pickering, scrub has been cleared since the war from old intakes which had been allowed to degenerate. Elsewhere in the Tabular Hills the intakes are small and are scattered round the lower edge of the remaining moorland.

The extension of moorland below its former level has also been confined to a few areas, as fig. 26 shows. In practically every case, heather and bracken have colonised steep slopes where woodland has been cleared and which are of no particular value for either ploughing or grazing. In this area there has been no general lowering of the level of cultivation.

In the Hackness Hills east of Newton Dale there has been very little reclamation for farming, lack of surface water being the chief handicap. Also, only very few fields have gone out of cultivation (fig.26). Most of the moorland in existence in 1851 has since been bought by the Forestry Commission, and it is in this area that some of the earliest and largest plantations are situated. The plantations form the remainder of Allerston Forest, some parts of which have been described already in Region II. Most of the area originally consisted of heathland on the flat plateau

Table 28. Changes in the Moorland in Region III. 1851-1955.

Parish	Acreage Reclaimed	Acreage Reverted	
Ampleforth	270	0	Hambleton Hills
Arden and Hawnby	143	285	
Boltby	1,137	149	
Byland with Wass	717	0	
Cold Kirby	382	0	
Dale Town with Murton	195	0	
Kepwick and Cowesby	10	274	
Kilburn	240	9	
Kirby Knowle	40	42	
Oldstead	26	32	
Scawton	346	0	
Sproxton	278	250	
Sutton-under-Whitestone	115	0	
Silton (Over and Nether)	168	305	
Total	4,067	1,346	
Appleton-le-Moors	219	0	Tabular Hills
Cawthorn and Cropton	36	23	
Fadmoor and Gillamoor	169	0	
Helmsley	16	267	
Hutton-le-Hole	146	0	
Newton	0	161	
Pickering	71	99	
Pockley	20	75	
Rievaulx	123	387	
Skiplam	16	60	
Spaunton	14	0	
Total	830	1,072	

Continued...

Table 28. Continued.

Parish	Acreage Reclaimed	Acreage Reverted
Allerston	1,926	196
Ayton, East and West	216	0
Brompton	898	69
Cloughton	785	89
Ebberston	921	37
Hackness and Broxa	690	44
Hutton Buscel	786	0
Irton and Seamer	61	17
Levisham	0	177
Lockton	225	220
Silpho	256	0
Snainton	381	22
Suffield	286	0
Thornton Dale	3,316	0
Troutsdale	83	57
Wykeham	710	0
Total	11,540	928

Hackness  
Hills

surface at heights of between 500 and 700 feet. The forest also extends into some of the smaller dales, but most of the larger ones were already farmed before the Forestry Commission took over, and only the steep sides were available for planting. The soils on the plateau are derived from the Calcareous Grits. They are heavily leached and are underlain by a continuous hard-pan. The surface in many places is covered with several inches of peat, and the whole area is unsuitable for cultivation.<sup>25</sup>

<sup>25</sup> Zehetmayr J.W.L. op.cit. pp.14-18.

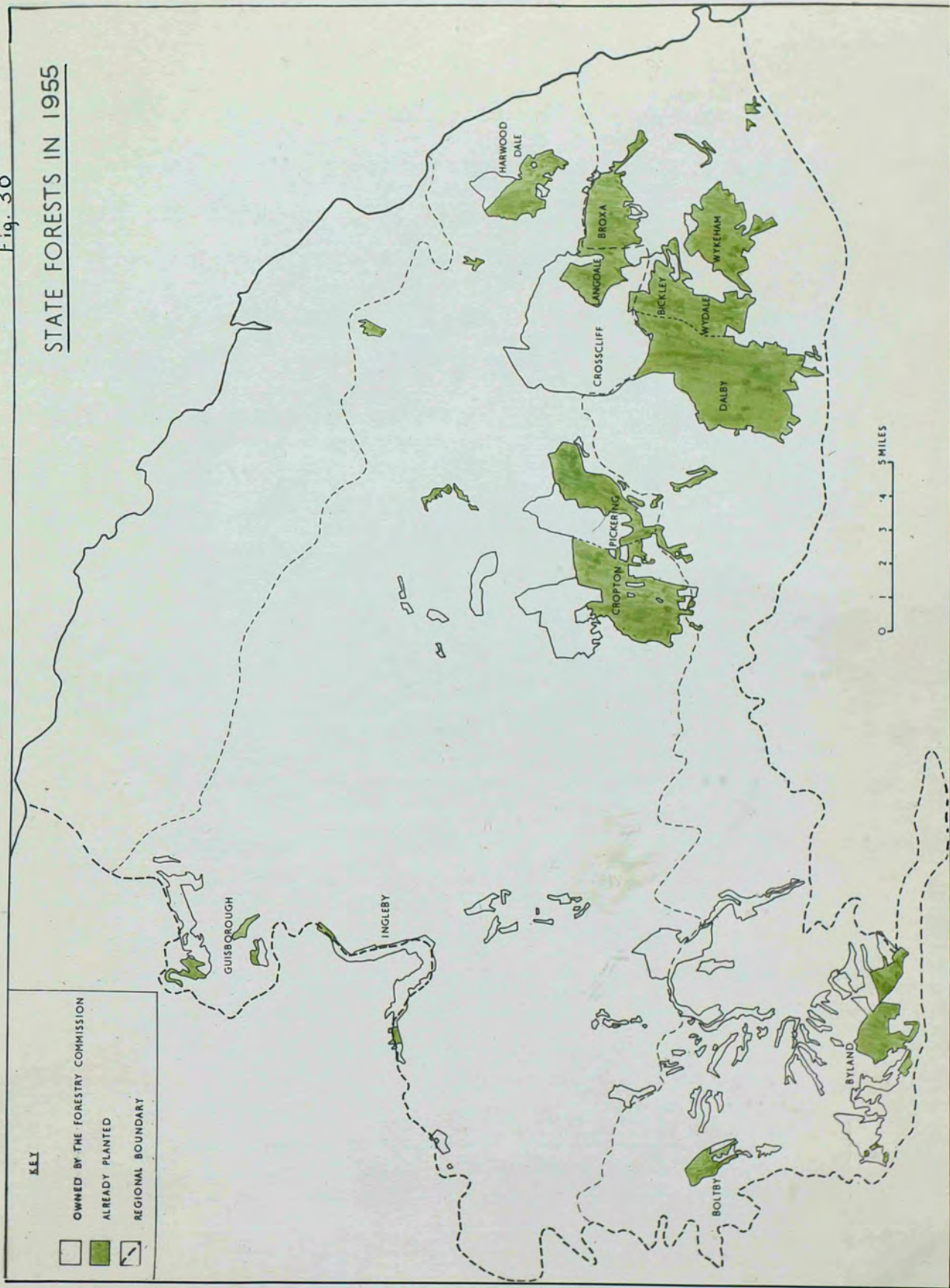
Planting began in 1921 in Staindale and Dalby Warren, partly in the numerous dry valleys and partly on the plateau surface. By 1955 the plantations covered the whole of Allerston Moor and extended eastward into the Bickley, Wykeham Wydale and Broxa Moors. The position of the Forest is shown on fig. 30 and the areas reclaimed in Table 18. The species used have varied considerably. Some of the early plantations of Spruce, Scots Pine and Japanese larch failed to mature and have since been replaced by other species such as Contorta Pine, which research has shown are better suited to the conditions. Most are conifers, with only small quantities of beech intermixed.

Within the Forest, both in the dales and on patches of more fertile soil on the plateau, farms have been established to the mutual benefit of both farming and forestry. The forests provide shelter for the farms, while the farms form firebreaks for the forest. This is particularly valuable where surface water is absent.

As a result of afforestation very little moorland remains today in the Hackness Hills as fig. 26 clearly shows. Thousands of acres which until 1921 were grouse moors, sheep pastures and rabbit warrens of inferior quality are now producing crops of timber of considerable value. This is the greatest change in land-use that has taken place in the Hackness Hills during the last hundred years, and the area is now notable for its forestry rather than for its farming.

Fig. 30

STATE FORESTS IN 1955



In the Corallian Region as a whole the period from 1851 to 1955 has witnessed three important changes in land-use. The first is the fluctuation in proportions of arable land and grassland with the changing economic conditions. Despite this fluctuation the region has remained one of mixed farming, with the emphasis on grassland in the west and on arable in the east. The second is the great reduction in the acreage of moorland. Indeed, the Royal Commission of 1955 reported under 14,000 acres of moorland still used as commons in the parishes of the region.<sup>26</sup> The commons play comparatively little part in the life of the region. The third and most important change is the large-scale afforestation which now characterises both the Hambleton and Hackness Hills and which has changed not only the land-use but the appearance and economic worth of the region.

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<sup>26</sup> Some of the parishes extend into Region II, and the amount of moorland remaining in Region III is actually much less.

### Conclusion

It is clear that within the last century numerous changes have taken place in the land-use of the North York Moors. On the improved farm land emphasis has swung between an arable and a grassland economy according to the prevailing economic conditions. At most times the three physical sub-regions have also been distinct land-use regions, with arable predominating on the Boulder-clay Plateau, grazing land in the Moors and Dales and arable on the Corallian. In times of economic decline grassland has predominated everywhere, while periods of high prices and expanding markets are marked by a general increase of arable. Under either circumstance the regional distinctions are to some extent masked.

Despite the great extent of reclamation the life of the region is still dominated by its moorland. Within the last ten years the North York Moors have been set aside as a National Park. In the future attention is likely to be paid to the preservation of the moors as an open space for recreation rather than to their conversion to other uses.

APPENDIX INational Grid References for small places  
mentioned in the textRegion I. The Northern Boulder-clay Plateau.

Aislaby	858087	Goldsborough	836147	Normanby	927059
Barnby	827125	Handale	726157	Roxby	761165
Borrowby	770156	Hawsker with	914083	Ruswarp	890092
Boulby	755192	Stainsacre		Sneaton	895079
Busky Dale	665156	Hutton Mulgrave	836100	Stakesby	886108
Dimmingdale Ho.	689119	Iburndale	873070	Stanghow	678158
Dunsley	857112	Kilton	700184	Stoupe Brow	953025
Easington	745180	Liverton	712159	St. Ives	924027
Ellerby	800147	Mickleby	802130	Swindale	679145
Foulsyke	914024	Moorsholm	690145	Thorney Brow	947017
Fylingdales	9303	Newton Mulgrave	789156	Ugthorpe	800111
Fyling Raw	936056	Newholm	868105	Whitby Lathes	920096

Region II. The Moors and Dales.

Allantofts	830030	Glaisdale	775055	Little Ayton	570103
Banniscue Wood	550905	Goathland	837013	Little Beck	880050
Baysdale	621068	Hartoft	750930	Lounsdale	605109
Blakey House	680998	Harwood Dale	962956	North Ings	649111
Bramble Carr	704074	Hawmby	543898	Nether Silton	455924
Broughton Moor	555037	Hayburn	008970	Over Silton	451933
Busby Moor	530035	Helwath	955996	Osmotherley	455972
Cock Flatt	551001	Hutton le Hole	705900	Round Close	640146
Clough Ho.	529011	Hutton Lowcross	603139	Sleddale	620120
Commondale	663107	Ingleby		Snilesworth	510956
Cowhouse	608898	Greenhow	580065	Staintondale	990985
Crunkley Gill	755070	Kempswithen	655085	Thimbleby	450954
Danby	707085	Keysbeck	966960	Ugglebarnby	880072
Easby	578088	Kildale	607096	Wayworth	646097
Egton	810060	Laskill	563907	Westerdale	665060
Esklets	656017	Lastingham	730905	Wether Ho.	555943
Fair Head	835047	Lealholm	763078	Whorlton Moor	5099
		Lilla Howe	890987		



Region III. The Corallian Outcrop.

Aislaby	775857	Kingthorpe	840866
Ampleforth	583785	Kirby Knowle	468873
Antofts	580829	Langdale	940910
Appleton-le-Moors	735880	Lund Court	670857
Arden	520906	Middleton	780850
Beadlam	651846	Murton	535880
Bickley	915919	Nawton	660846
Birk Nab	626910	Newton	812906
Blansby Park	824867	Newlass	581865
Boltby	492866	Northstead	030900
Boonhill	663910	Nunnington	665790
Breaday Gill	965927	Old Byland	550860
Broxa	945915	Oldstead	530800
Byland Abbey	548790	Oswaldkirk	625790
Cawthorn	774891	Pockley	637860
Cold Cam	542815	Ravensthorpe	480867
Cold Kirby	534845	Rievaulx Abbey	577850
Cropton	757890	Ruston	960830
Dalby	853887	Saintoft Grange	791894
Dale Town	535886	Scalla Moor	818850
Ellerburn	842842	Scawton	550835
Ellis Close	985950	Silpho	965920
Everley	971890	Skiplam	656874
Fadmoor	675894	Spaunton	725900
Falsgrave	025877	Sproxton	615815
Gillamoor	683900	Staindale	870903
Givendale	880850	Stiltons	599845
Griff	588838	Stonegrave	655778
Hackness	965900	Suffield	985906
Hesketh Grange	502869	Troutsdale	931900
Hood Grange	504823	Wass	555793
Horcum	844932	Welburn	680845
Hutton Buscel	970840	West Newton Grange	630800
Keldholme	709863	Wilton	860830
Kepwick	470910	Wombledon	670840
Kilburn	514795	Wrelton	767860

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Appendix II (Contd.)

Appendix II. The Central Moors and Dales APPENDIX IIIntakes and Assarts during medieval timesRegion I. The Northern Boulder-Clay Plateau

<u>Parish</u>	<u>No. of intakes</u>	<u>Acreage</u>	<u>Century</u>
Liverton	New enclosure	-	12th
Fyling		9	14th
Iburndale	-	-	14th
Brotton	-	-	12th
		<hr/>	
	<u>Total</u>	<u>?</u>	

Region II. The Central Moors and Dales

Ingleby Greenhow	-	28	12th
Great Ayton	-	24	12th
Rosedale	4	47	12th
Hartoft	43	112	13th-14th
Cropton		9 $\frac{1}{2}$	14th
Allantofts	-	160	13th-14th
Allantofts	1	190	14th
Allantofts	1	308	14th
Staintondale		500	13th
		<hr/>	
	<u>Total</u>	<u>49+</u>	<u>1,378<math>\frac{1}{2}</math></u>

## Appendix II (Contd.)

## Region III. The Corallian Outcrop

<u>Parish</u>	<u>No. of Intakes</u>	<u>Acreage</u>	<u>Century</u>
Hutton le Hole	3	-	13th
Helmsley	1	-	12th
Sproxton	2	12+	12th
Hoveton	3+	-	12th
Skiplam	-	-	12th
Newlathes	-	-	12th
Oswaldkirk	-	-	12th
Antofts	-	-	12th
Levisham	4	13	14th
Cropton	7	56	14th
Kingthorpe	2	5	late 13th to early 14th
"	3	25	14th
"	1	20	14th
Cropton	3	22	13th-14th
Wrelton	1	8	"
Middleton	2	20 $\frac{1}{2}$	"
Pickering	4	39	"
Ellerburn	1	3	13th-14th
Wilton	1	40	"
Aislaby	1	9	"
Stainton	2	8	"
Allerston	-	-	12th
Wykeham and Ruston	2	40	14th
Langdale	1	20	14th
Bickley	1	40	14th
Burniston	1	80	14th
<u>Total</u>	<u>46+</u>	<u>460<math>\frac{1}{2}</math>+</u>	

## APPENDIX III

Land owned by the monasteries in medieval timesRegion I. The Northern Boulder-clay plateau.

<u>Parish</u>	<u>Monastery</u>	<u>Land-use</u>
Liverton	Whitby Abbey	Arable and pasture
Whitby	" "	Arable, pasture, meadow
Fyling	" "	Arable
Stakesby	" "	Arable
Iburndale	" "	Pasture
Hawsker	" "	Arable
Loftus	" "	Arable
Dunsley	Handale Priory	Arable and pasture
Brotton	Guisborough Priory	Arable
Ugthorpe	" "	Arable
Hinderwell	Whitby Abbey	Arable

Region II. The Moors and Dales.

Guisborough	Guisborough Priory	Moorland
Glaisdale	" "	Pasture
Danby	" "	Arable
Baysdale	Baysdale Abbey	Arable, meadow, pasture
Westerdale	" "	Arable, meadow
Bilsdale	Rievaulx and Byland	Pasture
Bransdale	Rievaulx Abbey	Pasture and arable
Farndale	Rievaulx and Keldholme	Pasture
Rosedale	" " "	Pasture
Snilesworth	Rosedale Abbey	Arable, meadow, pasture
Whorlton	Byland Abbey	Pasture
Ingleby Greenhow	" "	Moorland
Great Ayton	Keldholme Priory	Pasture and arable
Goathland	Whitby Abbey	Arable
Staintondale	" "	Arable, meadow, pasture
	Bridlington Priory	Pasture

## Appendix III (Contd)

## Region III. The Corallian Outcrop.

<u>Parish</u>	<u>Monastery</u>	<u>Land-use</u>	
Helmsley	(Griff	Rievaulx Abbey	Arable
	(Stiltons	" "	"
	(Helmsley	" "	Pasture
	(Newlathes	" "	Arable and pasture
	Nawton	" "	Arable
	Welburn	" "	"
	Wombleton	" "	"
	Skiplam	" "	Pasture
	Beadlam	" "	"
	Pockley	" "	"
	Sproxton	" "	"
	Boltby	" "	"
	Ravensthorpe	" "	"
	Thirlby	" "	"
	Hesketh	" "	Moorland
	Hoveton	" "	Arable and pasture
Oswaldkirk	" "	Arable	
Scawton (Antofts)	" "	"	
Pickering	" "	Arable, meadow, pasture	
Ellerburn	" "	Arable	
Thornton Dale	" "	Pasture	
Allerston	" "	Arable	
Oldstead	Byland Abbey	Arable	
Wass	" "	Arable	
Cold Kirby	" "	Arable	
Kepwick	" "	Pasture	
Ampleforth	" "	Pasture	
Murton	" "	Pasture	
Old Byland	" "	Arable and pasture	
Kirby-Moorside	Keldholme Priory	Arable	
Appleton-le-Moors	St. Mary's, York	Arable	
Hutton-le-Hole	" " "	Arable	
Spaunton	" " "	Arable	
Arden	Arden Priory	Pasture	
Hackness	Whitby Abbey	Arable, meadow, pasture	
Broxa	" "	Pasture	
Burniston	" "	Arable	
Middleton	Rosedale Abbey	Pasture	
Lockton	" "	Arable and pasture	
Pickering	Goathland Hermitage	Pasture	
Cloughton	Bridlington Priory	Arable	

## APPENDIX IV

## Reclamation of Moorland - 1539 - 1750.

Region I. The Northern Boulder-clay plateau.

<u>Parish</u>	<u>No. of Intakes</u>	<u>Acreage</u>	<u>Century</u>
Dunsley	2	?	16th
Fyling	2	?	16th
Fyling Thorpe	1	?	16th
Liverton	1	120	16th
Ugthorpe	2	?	16th
<u>Totals</u>		8	120+

Region II. The Moors and Dales.

Bilsdale	219	2,843 $\frac{1}{2}$	17th
Bransdale	?	?	17th
Kildale	3	?	18th
Snilesworth	6	37	17th
Helmsley (Cowhouse)	6	120	17th
Rosedale	12	?	17th
Pickering (Newton Dale)	3	29	16th-17th
Eskdaleside	8	4+	16th
Goathland and Allantofts	33 15	486 308+	17th 16th
Harwood Dale			
<u>Totals</u>		305+	3,827 $\frac{1}{2}$ +

Continued...

Appendix IV (Contd.)Region III. The Corallian Outcrop.

<u>Parish</u>	<u>No. of Intakes</u>	<u>Acreage</u>	<u>Century</u>
Pockley	14	61	17th
Boltby	9	508	17th
" (Ravensthorpe)	2	356	17th
Kirby Knowle	?	?	17th
Nunnington	?	All moorland enclosed	17th
Byland, Wass, Oldstead	1	?	17th
Levisham	?	?	17th
Pickering	?	299	16th-17th
Middleton	?	?	16th
Troutsdale	34	8	16th
Lockton -Staindale	3	66	16th
" -Horcum	1	100	16th
Thornton Dale	3	300	16th
Cropton	4	30	16th
Hackness	2	13	16th
" (Breaday Gill)	1	86	16th
Scalby	?	98	17th
Burniston	1+	200	17th
Suffield	?	entire moor	16th
Sproxton	9	50	17th
Beadlam	2	?	17th
Helmsley (Rievaulx)	3	15	17th
<u>Other places</u>			
Langwathdale	?	?	17th
Blackhow	?	?	17th
Bickley	?	?	17th
Dalby	4+	4+	16th-17th
Langdale	15	240	17th
Stangate Bank	2	10	16th
Haddowke	1	10	16th
Cockerway Cross	1	10	16th
Cowme Hills	1	?	16th
Little Dale Rigg	1	120	16th
<u>Totals</u>		114+	2,584+

APPENDIX VEnclosure, 1539 - 1750.Region I. The Northern Boulder-clay plateau.

<u>Parish</u>	<u>No. of Closes</u>	<u>Acreage</u>	<u>Century</u>
Dunsley	6	?	16th
Fyling	14	?	16th
Fyling Raw	4	?	16th
Fyling Thorpe	4	?	16th
Hawsker	6	?	16th
Newholm	3	?	16th
Normanby	1	?	16th
Robin Hood's Bay	8	?	16th
Ruswarp	4+	?	16th
Stainsacre	3	?	16th
Stakesby	29	?	16th
Ugthorpe	6	?	16th
Whitby	17	470+	16th
<hr/>			
<u>Totals</u>	105	470+	

Region II. The Moors and Dales.

Bilsdale	844+	7,729	17th
Bransdale	?	?	17th
Danby	6	14	16th
Eskdaleside	26	26 $\frac{1}{2}$ +	16th
Guisborough	?	?	16th
Kildale	10	?	18th
Rosedale	all enclosed	1,716	17th
Snilesworth	109	1,013	17th
<u>Other places</u>			
Stoupe Brow	?	?	16th
Thorny Brow	3+	?	16th
Helwath	?	?	16th
<hr/>			
<u>Totals</u>	998+	10,498 $\frac{1}{2}$ +	

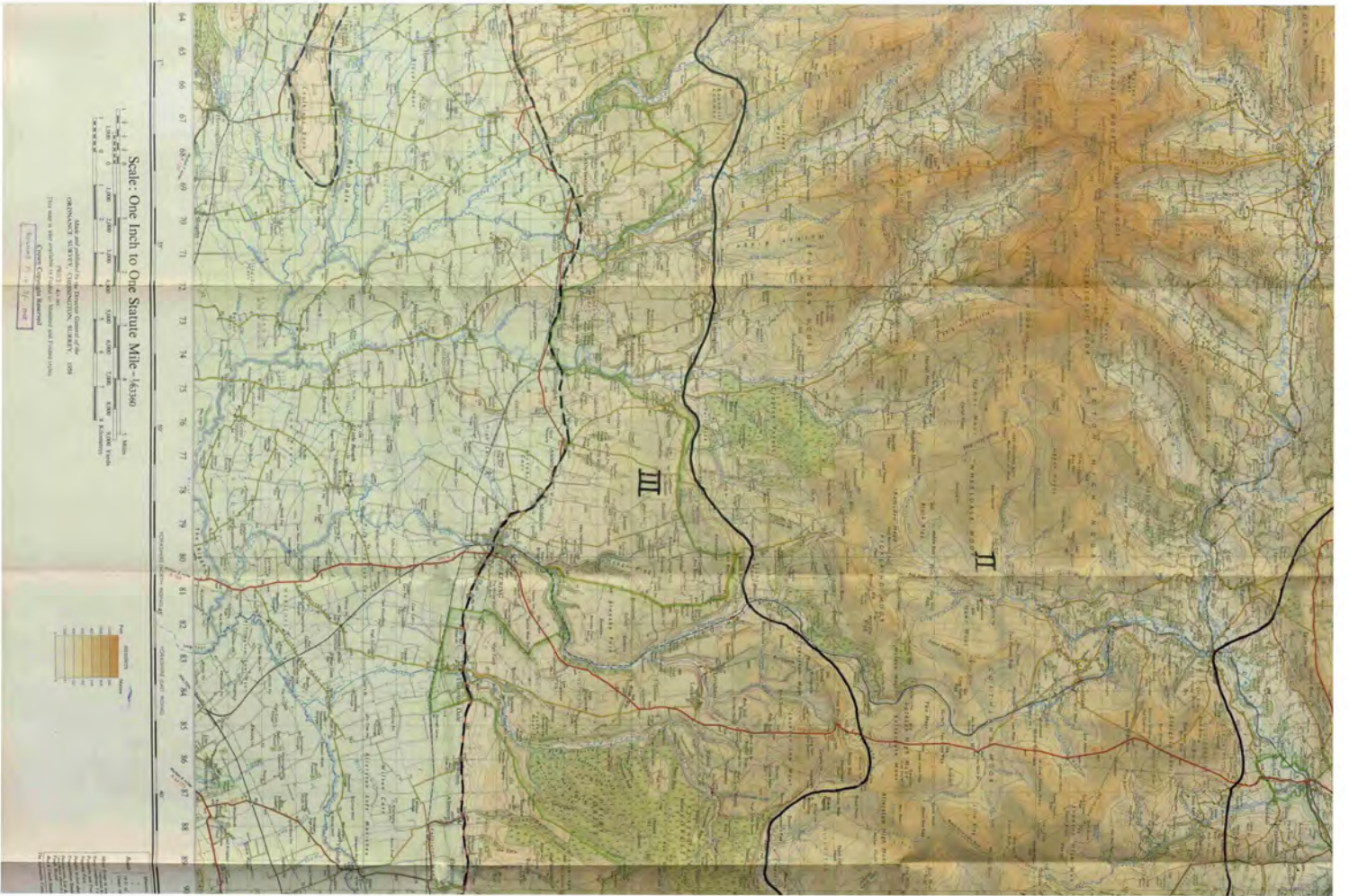


Appendix V. (Contd.)Region III. The Corallian Outcrop.

<u>Parish</u>	<u>No. of Closes</u>	<u>Acreage</u>	<u>Century</u>
Allerston	?	?	17th
Boltby	4	8	17th
" (Hesketh)	30	258	17th
" (Ravensthorpe)	84	1,009 $\frac{1}{2}$	17th
Burniston	9	21+	16th & 18th
Byland, Wass, Oldstead	? (all enclosed)	3,558	17th
Everley	4	?	16th
Hackness	24	750	17th
Helmsley (Rievaulx)	16 (all enclosed)	397	16th
" (Griff)	23	490	16th
" (Newlathes)	17	354	16th
Hutton Buscel	?	?	17th
Northstead	?	500	17th
Nunnington	?	?	17th
Old Byland	?	?	16th
Pickering	?	?	17th
" (Blansby Park)	16	1,421	17th
Silpho	55	1,144	16th & 18th
Skiplam	?	(all enclosed)	16th
Sproxton	70	223	17th
Suffield	2	?	16th
Welburn	7	?	16th
Wykeham (Langdale)	?	?	16th
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<u>Totals</u>	361+	10,133 $\frac{1}{2}$ +	
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NORTH YORK MOORS (with boundaries of regions added)

