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ABSTRACT

The lower Hull valley is an extensive tract of estuarine alluvium between Kingston upon Hull and Beverley, North Humberside. The thesis examines the evidence for later Iron Age and Romano-British settlement in a landscape block of c. 330 km², incorporating the valley proper and the higher glacial deposits at its margins. The discussion utilises a comprehensive and critical gazetteer of some two hundred and twenty sites and findspots, and seven detailed site-studies present the results of the author's fieldwork or analysis of previously unpublished material assemblages. The sites are located on both alluvial and glacial deposits, and are presented in the context of their environmental settings.

Activity on the valley margins before the end of the Arras burial tradition is evidenced by aerial photography, and by the beginning of the first millennium A.D. there were settlements on the clay/alluvium interface at sites such as Salhouse High School, Hull, and Chapel Farm, Weel. Acculturation from south of the Humber is suggested by the use of wheelthrown cordoned pottery at Risby, a site which may have developed into a villa and which remained in occupation until the late fourth century.

Settlement on the alluvium deposit itself, hitherto held to have been a tidal inlet of the Humber until the early Middle Ages, can now be demonstrated at riparian sites such as Greylees Avenue, Hull, throughout the Roman period. A substantial body of Roman finds from the alluvium has been revealed by recent fieldwork and database research, and is analysed in the light of the valley's geomorphology and the lower Mean Sea Level which then obtained and for which a value is postulated.

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ASPECTS OF LATE IRON AGE AND ROMANO-BRITISH
SETTLEMENT IN THE LOWER HULL VALLEY

by

MICHAEL PETER TOWNLEY DIDSBURY

In two volumes:

VOLUME ONE

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CONTENTS

VOLUME ONE

	Page
Contents	1
List of tables	5
List of illustrations	8
Declaration	14
Statement of copyright	14
Acknowledgements	15
CHAPTER 1	INTRODUCTION AND BACKGROUND
1.1	Introduction 16
1.2	The physical background to settlement 21
1.3	The study area: description, delineation, and the geography of settlement 23
1.4	Previous archaeological work in the study area 28
1.4.1	Surface fieldwork 29
1.4.2	Excavations 30

		Page
1.4.3	Aerial photography	34
1.4.4	Data management	37
CHAPTER 2	ASPECTS OF LATE IRON AGE SETTLEMENT IN THE STUDY AREA	
2.1	Introduction	39
2.2	East Yorkshire: the Iron Age background	40
2.2.1	The nature of the evidence	40
2.2.2	Climate	43
2.2.3	Food producing economy	46
2.2.4	Settlement and society	52
2.3	Evidence for Iron Age settlement in the study area	69
2.3.1	Aerial photographic evidence	69
2.3.2	Archaeologically investigated Iron Age sites	86
2.3.2.1	Salthouse High School, Hull (G.97)	88
2.3.2.2	Chapel Farm, Weel (G.159)	95

		Page
2.3.2.2	The late Iron Age settlement at Redcliff, North Ferriby (G. 187)	114
2.3.3	Iron Age material finds from the study area	160
CHAPTER 3	ASPECTS OF ROMANO-BRITISH SETTLEMENT IN THE STUDY AREA	
3.1	Introduction	166
3.2	Settlement in the study area in the light of recent research	167
3.2.1	Introduction	167
3.2.2	Settlement west of the River Hull	169
3.2.2.1	The IA and RB settlement site at Fishpond Wood, Risby (G.139)	205
3.2.2.2	The IA and RB settlement site at Burn Park Farm, Skidby (G.145)	238
3.2.3	Settlement east of the River Hull	280
3.2.3.1	General survey	280
3.2.3.2	A fourth-century occupation site at High Eske Farm (G.161)	283

	Page	
3.3	Settlement in the alluvial areas of the lower Hull valley in the Roman period	291
3.3.1	Introduction	291
3.3.2	Excavations at Greylees Avenue, Hull (G.69)	292
3.3.3	Romano-British finds from the alluvium deposit: their significance and interpretation	307
CHAPTER 4	SUMMARY AND CONCLUSIONS	341
<u>VOLUME TWO</u>		
	Contents	1
	List of illustrations	2
	List of civil parishes	8
APPENDIX 1.	THE GAZETTEER.	
	Introduction	9
	The Gazetteer.	14
	Illustrations	82
	Bibliography	168

LIST OF TABLES

[All page references are to Volume 1]

	Page
3.1	Bishop Burton. Recovery rate of pottery by chronological period and field-walked area. 178
3.2	RB coins from clay and gravel areas west of the River Hull. 199
3.3	Burn Park Farm. Flint types recovered. 249
3.4	Burn Park Farm. Flints per hectare, by area. 250
3.5	Burn Park Farm. Mediaeval and post-mediaeval pottery in each area as percentages of the total pottery from each line-walked area. 266
3.6	Burn Park Farm. Mediaeval and post-mediaeval pottery in each area as percentages of the total mediaeval and post-mediaeval pottery from the farm. 266
3.7	Burn Park Farm. Average sherd weights of mediaeval and post-mediaeval pottery. 267

		Page
3.8	Burn Park Farm. Sherds per hectare of mediaeval and post-mediaeval pottery.	267
3.9	Burn Park Farm. Prehistoric, RB and unclassified sherds. Number and weight per area.	267
3.10	Burn Park Farm. Chronological distribution of pre-mediaeval pottery per line-walked area.	268-9
3.11	Burn Park Farm. Pottery totals by period for each line-walked area.	270
3.12	Burn Park Farm. Sherds per hectare of main IA and RB fabric types in each field-walked area.	270
3.13	Burn Park Farm. Average sherd weights of selected IA and RB fabric categories per line-walked area.	271
3.14-18	Burn Park Farm. Basic ceramic data Fields 1-6. All pre-mediaeval and unclassified fabric categories.	272-6
3.19	Burn Park Farm. Basic ceramic data Field 1 (1987).	277
3.20	Burn Park Farm. Basic ceramic data Field 3 "Gridded Scatter".	278

	Page
3.21	Burn Park Farm. Field 1. Analysis of pottery collected by "general survey" in 1984. 279
3.22	Burn Park Farm. Overall densities of IA and RB sherds per 0.25 hectare in each field-walked area. 279
3.23	High Eske Farm. Spatial distribution of material of periods I, VI, and VIII compared. 287
3.24	Alluvium deposit. "Zones" 1-5 as percentage of alluviated area. 323
3.25	Alluvium deposit. Distribution of sites and finds per "zone". 325
3.26	Alluvium deposit. Percentage of finds having any contour as nearest. 326
3.27	Alluvium deposit. Distance of "Zone 1" finds from -3.8m OD contour. 326
3.28	Alluvium deposit. Distance from -3.8m contour of all Zone 1 and 2 finds having it as "nearest contour". 327

LIST OF ILLUSTRATIONS

[All page references are to Volume 2]

	Page
1.1 National and regional location of the study area.	83
1.2 East Riding relief.	84
1.3 The Wolds and Holderness: drift geology.	85
1.4 The Wolds and Holderness: diagrammatic cross-section.	86
1.5 The study area, with sites mentioned in section 1.4.	87
2.1 IA square barrows in relation to drift geology.	91
2.2 IA square barrows north of Scarborough.	92
2.3 Swine barrow group in relation to drift geology.	93
2.4 IA sites and finds on the till and chalk west of the Hull.	94
2.5 Late IA sites and findspots. Southern alluvia.	95

	Page	
2.6	Plan of settlement at Salthouse High School, Hull.	96
2.7a)	Salthouse High School and the	
2.7b)	topography of the Sutton Clays.	97-98
2.8	Chapel Farm, Weel. Location and geology.	99
2.9a	Beehive quern, Chapel Farm, Weel.	100
2.9b	Location of material, Chapel Farm, Weel.	101
2.10	Chapel Farm, Weel. Chronological distribution of sherds by number.	102
2.11	Chapel Farm, Weel. Histogram 1.	103
2.12	Chapel Farm, Weel. Histogram 2.	104
2.13	Pottery from Chapel Farm, Weel.	105-108
2.14	Redcliff. Geological section.	109
2.15	Redcliff. Eastern end of cliff section.	110
2.16	Redcliff. Pre-excavation fieldwork.	111
2.17	Settlement and communications in Late Iron Age Lincolnshire.	112
3.1	The study area. IA/RB AP sites, with RB sites and material finds.	114

	Page
3.2 AP settlement features SW of Bishop Burton (after Waugh 1984).	115
3.3 Soilmarks at Bishop Burton, Area 1.	116
3.4 Soilmarks at Bishop Burton, Area 2.	117
3.5 Soilmarks at Bishop Burton, Area 3.	118
3.6 The Cottingham/Woodmansey gravels. Pre-Iron Age sites and finds.	119
3.7 English and Scandinavian woodland names west of Hull.	120
3.8 RB sites and finds from the vicinity of the Leconfield gravels.	121
3.9 Location of Rowley parish and its townships.	122
3.10 Glacial spillways at Risby.	123
3.11 Park Farm, Risby. Field numeration of area walked.	124
3.12 Archaeology of Risby township.	125
3.13 Field 2, Risby. Extent of IA/RB scatter, with principal findspots.	126
3.14 Cordoned LPRIA vessel from Fishpond Wood, Risby.	127

	Page
3.15 Fishpond Wood, Risby. Resistivity survey.	128
3.16 Cordoned LPRIA pottery in East Yorkshire.	129
3.17 Lezoux "Rhenish Ware" from Risby.	130
3.18 Pottery and metalwork from Risby.	131
3.19 Fields with Roman pottery near possible line of Margary 813.	132
3.20 Distribution of RB material. Risby Fields 1-5.	133
3.21 Burn Park Farm. Field 1 AP features.	134
3.22 Cottingham <u>c.</u> 1600.	135
3.23 Burn Park Farm. Areas field-walked.	136
3.24 Burn Park Farm. Distribution of post-mediaeval pottery south of farm complex.	137
3.25 Burn Park Farm. Field 1, initial survey.	138
3.26 Burn Park Farm. Field 3. Distribution of IA/RB pottery.	139
3.27 Burn Park Farm. Field 1. Distribution of line-walked RB pottery.	140
3.28 Burn Park Farm. Field 1. Pottery distribution, Lines 1-3.	141

	Page
3.29 Burn Park Farm. IA/RB pottery distribution. Field 3 gridded scatter.	142-145
3.30a Burn Park Farm. Distribution of Fabric B pottery.	146
3.30b Burn Park Farm. Fabric B sherds within gridded scatter.	146
3.31 Burn Park Farm. Pottery distribution, all IA/RB fabrics.	147
3.32 Burn Park Farm. IA/early RB pottery.	148
3.33 Coin-hoard container from Swine.	149
3.34 Location of High Eske Farm.	150
3.35 High Eske Farm. Area field-walked.	151
3.36 High Eske Farm. Field 3.	152
3.37 High Eske Farm. Pottery histogram 1.	153
3.38 High Eske Farm. Pottery histogram 2.	154
3.39 Greylees Avenue (1984) in relation to Late IA and RB sites and findspots within Hull city boundary, as published by Loughlin and Miller 1979.	155
3.40 Greylees Avenue 1984. Diagrammatic representation of excavator's phasing.	156

	Page
3.41 Greylees Avenue 1984. Feature 1, section 2.	157
3.42 Greylees Avenue 1984. Feature 1, section 2. Emended stratigraphic relationships.	158
3.43 Greylees Avenue in relation to late IA and RB sites and findspots from Hull, as recorded before 1984.	159
3.44 The Hull valley. Main elements of natural drainage system.	160
3.45 Holderness in A.D. 400, after J. Sheppard.	161
3.46 Greyware jar from National Avenue, Hull, G.61.	162
3.47 West bank RB settlement focus.	163
3.48 Hull alluvium deposit. IA and RB finds in relation to the height of the buried till surface.	164
3.49 Postulated tidal levels in the Humber in the Roman period.	165
3.50 Early mediaeval hamlets on alluvium east of the Hull; with RB finds from Marfleet.	166
3.51 The lower Hull valley. Location of civil parishes.	167

DECLARATION

No material contained in this thesis has been previously submitted for a degree in Durham or any other university, nor is any of it based on joint research with any other person.

STATEMENT OF COPYRIGHT

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CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Introduction

The aim of this study is to present, and examine, the evidence for late Iron Age and Romano-British settlement in the lower Hull valley. The "central importance of the regional study in understanding ancient cultures" has recently been re-emphasised by Salway (1981, 761), and it is as a contribution to that "greater coverage of ancient Britain region by region and period by period" to which he looks forward that this research has been conceived. The location and description of the study area are dealt with in detail below (sections 1.2, 1.3), but before proceeding further, and at the risk of anticipating some of what follows, it will be convenient to examine some of the factors which have governed the research and helped to determine the form of the present work.

Topographically, the Hull valley forms a distinctive constituent part of the former East Riding of Yorkshire. The Riding can justly be regarded as a geographical entity in its own right (Eagles 1979, 11), a fact which is amply reflected in the archaeological and historical record; the home of the Arras culture from the mid-fifth century B.C., and later largely synonymous, first with the tribal territory of the Parisi, and then with the Anglian kingdom of Deira, it has manifest claims on our interest. Sadly, not all parts of the region have received an equal amount of

attention from researchers. Perhaps inevitably, given the expectations of early workers in regard to settlement, efforts tended to concentrate almost exclusively on the upland chalk Wolds, with their light dry soils, the clays and alluvia of Holderness and the Hull valley receiving scant consideration. The views of a generation ago with regard to the late settlement of the forested boulder clays of eastern England are well exemplified by June Sheppard, who envisaged no large-scale clearance in Holderness until the Anglo-Saxon period (J. Sheppard 1956, 53); and Allison, writing as late as 1976, could conclude his discussion of the revised attitudes to lowland settlement which the "data explosion" of the 1960s and 1970s had necessitated with the cautionary enjoinder that, "it would be unwise...in the East Riding to suggest that prehistoric and Romano-British peoples were attracted to the marshy carr-lands of the Hull valley..." (Allison 1976, 30-31). This research bias has, then, continued into the modern period, its momentum reinforced by the amenability of the Wolds to aerial photographic survey. In the eastern lowlands, conversely, and with the major exception of sites revealed by aerial photography on glacio-fluvial gravels in the valley, our knowledge of settlement in the Romano-British period has depended largely upon chance finds and fortuitous excavation.

The impetus to collate the scattered notices of such finds was given the author by two circumstances. In November 1982, he discovered, with colleagues, an extensive Iron Age and Romano-British occupation site at Fishpond Wood, Risby (G.139 - all sites referred to in the main body of the text are followed by their unique Gazetteer reference number in this fashion), where the clay-covered dip-slope of the Wolds overlooks

the lower Hull valley (Frere 1984, 283; Didsbury 1986a, 28-29); the site appeared on no aerial photographs, and its discovery served to indicate what remained to be achieved by surface fieldwork in the area. Secondly, in February 1984, while employed in the Archaeology Department of Hull Museums and Art Galleries, he was involved in the excavation of Romano-British ditches revealed during housing development on the west bank of the river at Greylees Avenue, Hull (G.69; Crowther and Didsbury 1985); this, the first riparian site in the area to receive the benefit of controlled excavation, produced the largest body of stratified pottery east of Brough on Humber/Petuarria (SE 9427), and rapidly assumed the status of a key-site for the re-interpretation of known settlement along the lower reaches of the river.

It is, in fact, from work on the above-mentioned sites that the present study grew. Both seemed to suggest that a survey of settlement in the eastern hinterland of Petuarria, never before attempted, could profitably be undertaken, not only for what it might intrinsically reveal, but also for the hypotheses it might generate and the firm foundation it would provide for future research in the area. It quickly became apparent that the gazetteer element in such a study would be of the greatest initial importance, for there was no comprehensive guide to findspots of Iron Age or Romano-British material in the area. The most up-to-date general survey of archaeological sites in Humberside (Loughlin and Miller 1979) had restricted itself, for reasons of time and economy, almost exclusively to the compilation of aerial photographic evidence when considering the northern half of the county, and most of the material evidence was either obscurely published or lingered in un-published form, sometimes completely

forgotten, within Hull Museums. At this point, one further personal observation may be allowed, since it has a direct bearing on the above: the author had a close connection with Hull Museums from 1983 to 1986, having been employed in the Archaeology Department there for two of those years. This allowed him a knowledge of, and access to, archives and material collections alike which would have been impossible for any visiting researcher. That this needs saying in 1986 is unfortunate, though blame attaches rather to the ways in which our museums are funded (and to the often low priority of archaeology within them) than to those individuals who have had the collections in their care; that it is an all too familiar situation is amply evinced in other studies (e.g. Challis and Harding 1975, 5). The author hopes, at any rate, that what he has uncovered will now remain available for future researchers. To borrow a sentiment from Urn Burial, "we were very unwilling they should die again and be buried twice among us" (Brown 1658).

A full critical gazetteer of sites and findspots within the study area appears after Chapter 3, below. Its nature is further discussed in the introduction to that section, to which the reader is referred. It must be stressed from the outset, though, that the Gazetteer is regarded as an essential and integral part of the study, without the prior compilation of which the research could not have taken place. The available data-base relating to the study area when the present writer began his research was severely inadequate, being both incomplete and marred by inaccuracy (see further section 3.3.3). The present Gazetteer is now the most extensive compilation of material from the area in existence, and as such will allow the author's conclusions to be assessed, as well as serving as a

firm platform from which further work may be launched. In order to facilitate cross-reference between various parts of the study, and as already noted, all sites or findspots mentioned in the main body of the text are followed by their unique Gazetteer reference number in brackets. Critical evaluation of material, which would interrupt the flow of the main text, will also generally be found under the relevant Gazetteer entry.

The organisation of the main text may now briefly be described: the remainder of Chapter 1 concerns itself with the physical background to settlement (1.2); a description of the study area and the geography of settlement within it (1.3); and previous archaeological work in the study area (1.4). Chapter 2 deals with aspects of Iron Age settlement in the study area, and consists of an Introduction (2.1); a summary of the Iron Age background in East Yorkshire as a whole (2.2); and a discussion of the various classes of evidence for Iron Age settlement in the study area (2.3). Chapter 2 also includes case-studies of three specific sites within the study area (sections 2.3.2.1 - 2.3.2.3). Chapter 3 deals with aspects of Romano-British settlement in the study area in the light of the most recent research and fieldwork. It includes three site-specific studies (3.2), and pays particular attention to new evidence for the utilisation in the Romano-British period of alluvial lands hitherto held to have been unavailable for settlement until mediaeval times (3.3). Chapter Four offers a brief synthesis of the preceding chapters, with suggestions for further research. An Introduction to the gazetteer already referred to, and the Gazetteer itself, conclude the study (Appendix 1).

1.2 The physical background to settlement

The "principal topographic feature" of the East Riding is the Yorkshire Wolds (Neale 1974, 225), a crescent-shaped band of Upper Cretaceous chalk hills which arcs northwards and eastwards from the Humber at Melton (SE 970265) to meet the North Sea at Flamborough Head (TA 2571; figs 1.2, 1.3). The hills can be up to twelve miles wide in their central section and attain their maximum elevation of some 220m on the western and northern scarp. In the south and east the chalk dips beneath the newer glacial drift deposits of Holderness and underlies much of the North Sea immediately off the South Yorkshire coast (fig. 1.4).

The ice of the last, Late Devensian, glaciation entered Yorkshire from the north and north-east, and spread south-westwards into Holderness, eventually depositing the Drab (Skipsea) and Purple (Withernsea) Tills of the Newer Drift. (The so-called "Hessle Till" has recently been shown to be only the post-glacial weathering profile of whichever of these tills happens to be exposed at the surface, v. Madgett and Catt 1978). The present shape of the Wold tops is scarcely affected by this glaciation, though boulder clays and glacial sands and gravels blanket much of the easterly dip slope. In addition, glacial channels floored with gravel by the retreating ice bite deeply into the chalk along its entire length. The onset of the glaciation is fixed by radio-carbon dating of moss-bearing silts in the hollows at the interface between the Drab Till and the underlying (pre-Devensian) Basement Till as having occurred around 18,000 B.P. (Penny 1974, 254.) Holderness was ice-free by 13,000 B.P., some 3,000 years before the glaciation had finally run its course (Kent 1980).

Subsequently, physical processes during the early Flandrian period in Holderness established a landscape and ecological system many aspects of which only began to be seriously modified by human activity in the early Middle Ages. The undulating till-sheet left behind by the ice (generally in the height-range 10m - 17m O.D.) was poorly drained and dissected by countless small streams, many draining westward into the River Hull, which may have originated as a pro-glacial stream running south along the western margin of the retreating Dimlington Stadial ice-sheet (J. Sheppard 1956, 29; Catt 1990). Other channels and hollows, blocked by glacial gravels, gave rise to pools and meres, and with the establishment of temperate woodland extensive deposits of peat began to form locally, whether in original depressions in the till-surface, in kettle-holes, or in solutional hollows in the chalk-enriched clay (Gilbertson 1984, 9). Reedswamp and alder- and oak-carr fringed the marshes and lakes, and drier woodland occupied the better-drained eminences. It is generally held that some parts of Holderness remained un-improved by drainage until the post-mediaeval period (J. Sheppard 1966); it was known to Chaucer's Summoner as "a mersshy contree" (Robinson 1957, 94) and an abundance of wetland place-name elements remains as eloquent testimony to its former condition (J. Sheppard 1957).

A further important consequence of physical processes operating during the early Flandrian was the establishment of the River Hull, in very much its present position, as the main agency of drainage in Holderness. Before the world-wide re-establishment of higher sea-levels after the glaciation, drainage channels in the Humber estuary appear to have undergone a phase of pronounced fluvial incision,

cutting through great depths of glacial deposits in response to a sea-level in the Humber estuary which could have been as low as -16m to -18m O.D. (Gaunt and Tooley 1974). In parts of the lower Hull valley, as a consequence, the boulder clays have been completely eroded, so that post-glacial deposits (peats caused by rising groundwater, and marine alluvia) rest directly on the chalk (De Boer et al. 1958, 203). The subsequent eustatic rise in sea-levels, as glacial melt-waters were released into the oceans, caused widespread alluviation of such deeply-incised channels, and this is a process which has continued intermittently to the present day. If "large areas of Humberside exist only because of the events of the Quaternary" (Penny 1974), then the lower Hull Valley is, even more specifically, a gift of the Flandrian.

1.3 The study area: description, delineation, and the geography of settlement

The probable origins of the River Hull as a late glacial drainage channel have already been alluded to. From its sources near Driffield (TA 0258), it flows south for some twenty miles to its confluence with the Humber, winding through a broad valley, the edges of which can be taken as the 10m contour lines to the east and west of it. The valley separates the claylands of the historical wapentake of Holderness on the east from the clay-mantled dip slope of the Wolds on the west. The two areas are very similar in terms of land-use and agricultural potential (Eagles 1979, 14), and the geographical entity of Holderness is probably best considered as stretching from the Wolds to the North Sea, with the Hull valley as one of its most distinctive elements. (It is thus regarded in J.

Sheppard 1957). Receiving considerable volumes of water from both areas, and enjoying only a slight gradient, it contained until relatively recent times some of the most extensive tracts of marshland in England outside the Fens (J. Sheppard 1958, 1). The river is also tidal for most of its course, though the tidal range decreases from some 5.8m (19') at the confluence with the Humber to only c. 0.1m (4") at Hempholme (TA 0850) (J. Sheppard 1956, 422-423, fig. 86). Much of the lowland of Holderness is, today, below the level of high water in the Humber at spring tides, and inundation has thus been a major factor in determining the valley's constituent soils. The soil map of the area (Soil Survey of England and Wales 1983) shows ground-water gleys of the Wallasea 1 association developed in alluvium and extending approximately as far north as Beverley (TA 0440), where they begin to give way to more organic-rich ground-water gleys on the mixed alluvium and fen peat of Downholland 3, which dominates most of the rest of the valley. South of Beverley, the valley has naturally been subject to tidal flooding and marine transgression, and saltmarsh vegetation must once have predominated. North of this, tidal influence is less marked and freshwater flooding, especially when water has "ponded back" at times of higher sea-level, gave rise to extensive swamps and peat marshland known locally as "carrs". The change from original salt- to peat-marshland, reflected in the increase of "carr" placenames as one travels north (O.S. 1:50000 Sheet) permits a convenient division of the valley into Upper and Lower parts.

The lower valley is itself divided into western and eastern parts by "islands" of glacial drift, which rise as much as 10m above the alluvia at Sutton, Tickton and Wawne (fig. 3.44). The wider, western, division is

drained by the Hull itself, while the narrower eastern part was originally drained by a separate stream of which the present-day Old Fleet is probably a remnant (J. Sheppard 1958, 1). The alluvium is also interrupted by a spread of glacio-fluvial gravels around Woodmansey (TA 0537; fig. 1.3, and see above, section 1.1). The greater part of the alluvium deposit in the lower valley is today covered by the modern city of Hull and its dormitory suburbs. In the south the urban area occupies nearly all the land between the eastern and western clay flanks, while in a northerly direction it extends for some four miles, or about half the distance between the River Humber and Beverley.

From the brief descriptions given above, it will be seen that the region is of marked physical contrasts within a relatively small area. Travelling in a straight line eastwards (from SE 9730, let us say) one can leave the chalk of the Wolds, descend their drift-covered dip slope, cross the alluvia of the valley floor, and regain the clays to the east of the River Hull, all in the space of 10 kms. The economic interdependence and interaction between such closely contiguous geographical zones, each with its specialised potential for exploitation and settlement, is likely to be of the greatest interest, and for this reason alone it would be inadvisable to attempt to study the alluvial lands in isolation. In defining a study area, therefore, a rectangular landscape block has been chosen which allows these interactions to be examined (fig. 1.5). It is delimited on the north by northing SE/TA 43 of the National Grid, which marks the approximate limit of the marine alluvia within the valley, and on the south by northing SE/TA 25 or the Humber shore itself. Its western and eastern sides have been drawn at eastings SE 97 and TA 17

respectively, to allow some consideration of settlement on both the chalk and the drift. The area of some 180 sq. kms thus enclosed also represents, in effect, the eastern hinterland of the civitas capital of Brough/Petuaria, and its study may therefore be regarded as a necessary contribution to the fuller understanding of that town in its economic setting.

The study area thus comprises portions of four topographically differentiated zones: the chalk itself in the north and west of the block, the dip slope clays and gravels generally below the 200' (60m) contour, the valley silts with "islands" of gravel and clay, and the undulating drift of Holderness proper. Each of these zones has its own distinct potential for land use, but it is the interfaces between them which have been most important for the siting of settlements, as the distribution of present-day villages reveals (De Boer 1965, 202, fig. 2). This is, of course, an essentially early-mediaeval pattern, but since its underlying causes may be expected to have been operating in the Roman period also, it is worth considering briefly here. The Wold tops were largely eschewed by mediaeval settlement. Their thin, dry soils and deep water table pose a perennial problem (Ramm 1978, 3), and present villages tend to be sited in the many gravel-floored dry valleys which bite into the chalk, and where the water-table is more easily penetrable by wells. Romano-British settlement also, though known from every part of the Wolds, probably conformed to a similar distribution, as Eagles has pointed out (Eagles 1979, i, 209). Such tongues of gravel, aligned on an east-west axis, also provide a physical and socio-economic link between the chalk and the clay, where they often terminate in spreads of gravel affording better-drained soils more hospitable

to agriculture. One of the largest of these spreads, the "Cottingham gravels" of Eagles (1979, i, 219-220), occurs within the study area in the parishes of Haltemprice and Woodmansey, extending north and south for some 6 kms between the margin of the clay and the alluvia of the river valley itself. Romano-British settlement on these gravels is discussed in section 3.2.2.

Present-day villages on the dip slope of the Wolds make a double row, one at the interface between the chalk and the drift, and the other at the junction of the drift with the valley alluvia (De Boer 1965, 207, and 202, fig. 2). The primary reason for this is the availability of water. Since surface drainage on the High Wolds is virtually non-existent, the recharge of rainfall to the chalk aquifer is maximised, and one of the major seepage zones from this aquifer occurs along the boundary between the chalk and the clay (higher village line); again, the high permeability of the glacial deposits banked against the Pleistocene buried cliff where the clay meets the alluvia (lower village line) ensures that water is easily obtainable from wells, boreholes and springs (Gray 1974, 380). To the attractions of water for these villages must also be added that of the chance to exploit a variety of soils. Settlements in the higher, western, row, while actually sited on the drift, could exploit the pastoral/arable resources available at the chalk/clay interface (section 2.3.1); those in the lower, eastern, row would be in a position to exploit the rich pasturage of the seasonally flooded carrlands in the valley, as well as the mixed arable, pastoral and woodland of the clays. Nor should the rich and varied ecological resources of the valley be overlooked. The wetter parts of the valley continued to be an important source of reeds,

peat, fish and wildfowl well into the eighteenth century (Harris 1959, 12-13; and see discussion of mediaeval use of such resources in section 3.2.2.2) and would have been exploited by communities on both sides of the valley. On the clays of Holderness east of the river, lack of water was never a problem, indeed the reverse, and villages are much more uniformly distributed. The main determinants of settlement here are likely to have been relative eminence and the presence of better-drained areas of gravel, though the boundary between the clay and the alluvia (both of the valley and the Humber shore east of the present study area) is again studded with a line of strategically placed settlements. There is documentary evidence that mediaeval village settlement also occurred on the Humber alluvial flats themselves during a time of lower Mean Sea Level prior to the marine transgressions of the mid-thirteenth century, which destroyed them (De Boer 1965, 208; De Boer 1970, 19), but although their lands were reclaimed for agriculture from the seventeenth century onwards no new settlements arose and the village sites lie buried under alluvia. The questions of alluviation and relative sea-level as they relate to the valley itself are of central concern to this study, and are discussed in a subsequent section (3.3).

1.4 Previous archaeological work in the study area

Previous work on late Iron Age and Romano-British settlement in the study area is summarised below under headings representing the main sources of evidence, viz:

- i) surface fieldwork
- ii) excavation

- iii) aerial photography (hereafter AP)
- iv) data management

All sites mentioned in this section are shown on fig. 1.5

1.4.1 Surface fieldwork

Despite the fact that the area has been served by Hull-based antiquarian/archaeological societies for almost a century (the East Riding Antiquarian Society and its successor the East Riding Archaeological Society) there has been little surface fieldwork in the lower Hull valley and its margins. The two great nineteenth-century antiquaries of the region, J.R. Mortimer and Canon Greenwell, worked mostly to the west and north of the study area, though Greenwell did excavate on Beverley Westwood in 1875 (G.2). The area lacked the profusion of upstanding earthworks that characterised the Yorkshire Wolds in Mortimer's day (Manby 1980), and there was no locally based antiquary who could encourage the habits of artefact collection which Mortimer inculcated among the agricultural labourers of his own neighbourhood. The generally prevalent belief of a century ago, that the heavy claylands of lowland Britain were not deforested until after the Roman period, was reinforced locally by the assumption that most of the lower Hull valley had been continuously under water from the Bronze Age until early mediaeval times, a view that Thomas Sheppard was fond of iterating (e.g. T. Sheppard 1907, 60; T. Sheppard 1931) and which was generally held until comparatively recently (J.A. Sheppard 1958, 1). It now seems more likely that the exploitation of the valley alluvia in the mediaeval period had been preceded by earlier and parallel usage at times of similar Mean Sea Level.

Evidence for this is presented in 3.3.3, below; for the moment it is sufficient to note that negative expectation has done much to restrict fieldwork in the area. The East Riding Archaeological Society has carried out much valuable work on Roman sites in the study area, but this has all been excavation (v. 1.4.2 below); the kind of fieldwalking that the Society has undertaken in recent years in relation to the Roman pottery industry of Holme on Spalding Moor (Halkon 1983; Millett and Halkon 1988) is urgently required for the elucidation of sites discovered by aerial photography in the valley, and it is the intention to organise much more such work in coming seasons. As far as the author is aware, organised archaeological fieldwalking had only taken place at two IA/RB sites in the study area before the present work began (G.159, and G.19-22 complex; see sections 2.3.2.2 and 3.2.2 respectively). The present author's large-scale fieldwork projects at Risby (G.139), Burn Park Farm (G.145), and High Eske Farm (G.161) thus represent a considerable expansion of this kind of research in the study area. For other surface indications of settlement of this period we are generally indebted to the many individuals who have reported chance finds to Hull Museums and to a few whose serious interest has valuably enhanced the Sites and Monuments Record. (The contribution of Mr A.H. Place through discoveries in Tickton, Leconfield and Walkington parishes - G.159, 114, 168 - exemplifies this).

1.4.2 Excavations

Iron Age and Romano-British sites excavated in the study area are listed and briefly categorised below. For fuller details refer to the Gazetteer, and to the specific sections listed below:

Iron Age barrows:

Beverley Westwood (G.2). Two barrows, one containing a cart burial. Opened by Greenwell, 1875. [Section 2.3.1].

Native Settlement:

Salthouse High School, Hull (G.97). Huts and enclosures, possibly of the first century A.D. By East Riding Archaeological Society (hereafter ERAS), 1962. [Section 2.3.2.1].

Redcliff/North Ferriby (G.187). Mid-first century A.D. native settlement characterised by reception of imported Roman fine wares. North bank of the Humber. By P. Corder et al., 1938 and Hull Museums, 1986-1989. [Section 2.3.2.3].

Agricultural complex:

Welton Wold (G.184). Late Iron Age and Romano-British complex, with buildings including a corridor villa. By R. Mackey, for ERAS and D.O.E., 1971-1976. [Section 3.2.2].

Romano-British ditch fragments:

Bransholme North, Hull (G.86). On boulder-clay island in valley alluvia east of R. Hull. Pottery probably third century. Hull Museums, 1975. [Section 3.2.3.1].

Greylees Avenue, Hull (G.69). Two ditches with large amounts of second- to fourth-century pottery and other

material. Alluvia on west bank of river. Hull Museums, 1984. [Section 3.3.2].

Haworth Hall, Hull (G.76). Large amounts of second- to fourth-century pottery from (?) ditches, recovered during building operations. West bank of river, south of Greylees Avenue. Hull Museums, 1966. [Section 3.3 passim].

Wylies Rd, Beverley (G.5). Ditch with second - to fourth-century pottery, found during excavation of mediaeval town-ditch. Humberside County Council Archaeology Unit, 1985. [Section 3.2.2].

Kilns:

Woodhouse Farm/Belagh (G.115). Pottery kiln dated c. A.D.150-200. On boulder clay west of river in Lockington Parish, slightly north of study area. By the Lockington Research Team, 1968. [Section 3.2.2].

Etton (G.36). Chance excavation of a "corn-drier" on boulder clay west of river, slightly north of study area. [Section 3.2.2].

Other:

Walkington Wold, (G.162). Fourth-century "occupation" on Bronze Age round barrow. Dip-slope of chalk. Suggestions as to site function have included "inland signal-station", and temple. ERAS, 1967-1969. [Section 3.2.2].

N.B. Etton and Haworth Hall, although chance excavations, are included here because each received a

degree of archaeological attention and recording, though in the case of Haworth Hall the site records now appear to be lost.

At first sight, the eight to eleven sites recorded here seem to represent a respectable amount of excavation for a relatively small area. Unfortunately, assessment reveals that the value of this work is limited in various ways. Only three settlements, as such, have been excavated and none of these has yet been published in detail. A plan of Salthouse High School is available in Challis and Harding (1975, ii, fig.68), where the pottery is also described and assigned a date, but the large amounts of animal bone from the site still await analysis and publication. Welton Wold is of major importance for a variety of reasons (v. the discussion in 3.2.2), in particular for the understanding of changing agricultural organisation and objectives on a site occupied from the late Iron Age and through the Roman period (Branigan 1980), but it remains unpublished a decade and a half after the close of excavations and the only detail available is from interim reports in the relevant volumes of Britannia and in information supplied by the excavator to other researchers (e.g. Morris 1979, passim.). Lastly, there are no extant records of the pre-war excavations at Redcliff, and the 1986-1988 excavations have as yet received only interim publication (Crowther and Didsbury 1988). For the rest, the excavated sites represent either isolated features (whether funerary or agricultural/industrial), sites of questionable function (Walkington Wold, Redcliff), or ditch fragments, the latter all either excavated under rescue conditions or otherwise limited in scope. In the absence of other evidence, however, the ditches in particular assume an importance which they would not

possess in many other areas, not only on chronological grounds, but, for example, in elucidating or confirming the value of other local finds. Thus, Wylies Rd serves to put into a settlement context the several finds of Roman material from the town of Beverley (v. section 3.2.2), while the sites at Haworth Hall and Greylees Avenue demonstrate at least riparian settlement on the valley alluvium deposit.

1.4.3 Aerial photography

Aerial photography is the greatest single source of evidence for Iron Age and Romano-British (IA/RB) settlement in the study area, albeit one that is sadly under-utilised, as witness the lack of surface fieldwork on sites so discovered. The western part of the study area has benefited from intensive aerial survey of the chalklands undertaken in the past two decades by the National Monuments Record and Dr St Joseph in particular, coverage which descends from the Wolds themselves onto the drift and gravels west of the River Hull; the alluvia of the lower valley and the Holderness clays, on the other hand, have proved neither so amenable to this kind of survey nor so attractive to its practitioners, and Loughlin points out that only 3.5% of the c.7000 prints from North Humberside consulted by him derived from these two areas, compared with 93% originating from the Wolds and their eastern flank (Loughlin and Miller 1979, 65-66). The extent to which aerial survey reflects an original distribution of settlements in the area needs careful assessment. The great majority of AP-derived sites lies to the west of the River Hull, where both the chalk-clay interface and the presence of gravel-spreads and -tongues appear to exert a determining influence upon settlement (section 3.2.2). However, both the

freer-draining gravels and the shallower drift deposits at the interface are precisely those areas where one would expect AP evidence to be more easily obtainable, and the apparent elegant association between drift geology and settlement sites needs investigating by properly considered sampling strategies. In the remainder of the study area it is easily demonstrable that the paucity of AP evidence is indicative more of locally operative constraints upon this kind of survey than of a genuine former absence of settlement, since material remains of the period are recorded for both the lower Hull valley and Holderness east of the river. In the lower Hull valley there has been considerable alluvial deposition since Roman times (v. 3.3.3) and much of the area is, in addition, covered by the urban district of Hull. Little arable land survives in Hull district, and areas of recreational grassland and pasture in and around the city would be unlikely to exhibit crop-marks except during extreme drought conditions (Wilson 1982, 60). This is especially true of sites near the river itself, where the ground-water table is consistently high and the soil-moisture deficit would normally be insignificant (Crowther and Didsbury 1985, 11). (It should be noted here that housing development is spreading northwards apace along both banks of the Hull and that the next drought year will probably represent the last opportunity to try to obtain AP evidence of settlement). The constraints in Holderness are similar to those operating in other boulder-clay areas of England (e.g. parts of the Tyne-Tees lowlands, v. Haselgrove 1982, 58). Pasture is less prevalent than formerly but the difficulty of obtaining clear soil- or crop-marks off boulder-clay has undoubtedly rendered the area less attractive to flyers. Crop-marks in particular can be slow to develop on clay (Wilson 1982, 55) and the rewards are

probably felt to be disproportionate to the amount of flying-time needed to obtain good results. Loughlin contrasts the number of remarkable small-finds of all periods from Holderness with the meagre evidence of APs for pre-mediaeval occupation; he lists only eight IA/RB sites in Holderness which he considers of primary significance for the study of the period, and these are mostly in south-western Holderness, five of them lying within or just east of the study area (Loughlin and Miller 1979, 47). The discrepancy between aerial-photographic and material sources of evidence is best observed in the eleven coastal parishes of Holderness (from Atwick, TA 1953, south to Easington, TA 4015), where coastal erosion has regularly exposed features unrecorded from the air: Loughlin records in excess of seventeen features or findspots of IA/RB material from these parishes, compared with only six AP sites, most of them fragmentary, which are even possibly of this date (Loughlin and Miller 1979, 47-61). The discovery in the early 1980s of IA/RB enclosures under late-to post-Roman alluvia at Welwick in south-eastern Holderness (TA 3420) further emphasises the fact (rescue excavation by J. Moynahan in advance of gas pipeline construction; material and archive in Hull Museum).

N.B. A search by the author in December 1984 of materials held at the National Monuments Record revealed that almost no prints of sites in the study area had been deposited there since Loughlin's compilation. It is probably unrealistic to expect much concerted aerial survey to take place in the foreseeable future, and therefore especially important that large-scale agricultural or industrial penetration of surface deposits in the study area should not go unobserved.

1.4.4 Data Management

The main archaeological data resources relating to the study area are the Sites and Monuments Records (SMRs) maintained by the County Council Archaeology Unit, based in Beverley, and by Hull Museums. The former has as its core Loughlin and Miller's 1979 "Survey" which, as already indicated (1.1), concerned itself mainly with AP data as far as the northern part of the county was concerned (and v.1.4.3); the Museum SMR exists as a loosely constituted series of filing systems and bodies of data rather than as a single consultable resource. Although many of the archaeological collections escaped the wartime bombing of Hull Museums almost unscathed, much of the relevant documentation was destroyed and it is therefore fortunate that the Museums's first curator, Thomas Sheppard, had instituted that series of Hull Museums Publications (hereafter HMP) which ran to 213 issues between 1901 and 1941. The papers are largely the work of Sheppard himself and remain "a valuable mine of information" (Bartlett 1963, 3), especially since they include quarterly records of additions to the museum collections for the whole period and enable at least a portion of the lost data to be reconstituted, as do also the pages of Transactions of the East Riding Antiquarian Society, to which Sheppard was also a regular contributor. The wartime disruption of Hull Museums unfortunately continued to affect data management until comparatively recently. It was only in 1975 that the museum began automatically to record details of all finds brought in for identification; previously this had been done only if the object were to be donated to the museum. Happily, the recording procedures now in use ensure that the museum's SMR is continuously enhanced by its identification services; the value of this approach, in

a decade which has seen both metal-detector usage and development threats on the increase, is amply evidenced in the present study, particularly in relation to RB utilisation of the alluvium deposit upon which Hull now stands (3.3.3) and to the dating and interpretation of the site at Redcliff (G.187 and section 2.3.2.3).

CHAPTER 2

ASPECTS OF LATE IRON AGE SETTLEMENT IN THE STUDY AREA

2.1 Introduction

The chapter discusses the various classes of evidence for late Iron Age settlement in the study area (section 2.3), paying particular attention to evidence for activity in its low-lying, mixed clay and fenland landscapes. Aerial photographic evidence is considered in section 2.3.1, while sections 2.3.2 and 2.3.3 deal with archaeologically investigated sites, and evidence of material culture, respectively. Section 2.3.2 (q.v.) includes detailed case studies of three sites in the study area, one of them (Chapel Farm, Weel, G.159) having an important pottery assemblage which is here published for the first time.

The investigations above are prefaced (section 2.2) by a general discussion of the social, economic, and environmental Iron Age background in the East Riding as a whole. The section attempts a synthesis of some of the most relevant published material, and illustrates the extent to which research into this period in the region has been biased towards upland areas such as the chalk Wolds.

(It is convenient at this point to note that the term "Later Pre-Roman Iron Age", hereafter LPRIA, has been adopted throughout this thesis to refer to the period of cultural and material development which took place

in various parts of Britain from the late second century B.C. to the Roman conquest, and which formerly would have been associated with historically attested immigration of Belgae from continental Europe. The use of this convention follows Millett (1990, 9-10), who summarises the difficulties of explaining these developments in terms of migrations, and characterises the LPRIA period as that "spanning the introduction of coinage, wheelmade pottery and lowland nucleated settlements").

2.2 East Yorkshire : the Iron Age Background

The purpose of this section is not to present a detailed exposition of the Iron Age in East Yorkshire but rather to indicate some of the environmental and other factors operating in the first millennium B.C. which helped to determine the type of society existing in East Yorkshire on the eve of the Roman invasion. The section draws heavily on the relevant chapters of Challis and Harding (1975), studies by Dent (1982, 1983 a-c), and the discussion of these themes in Haselgrove (1984).

2.2.1 The nature of the evidence

Before proceeding further it will be helpful briefly to consider the nature and limitations of the archaeological evidence for Iron Age settlement in East Yorkshire and the difficulties of interpretation it poses. The most basic problem concerns the extent to which the distribution of Iron Age sites known to us in the region is representative of an original density of settlement. The aerial photography "explosion" of the last twenty-five years has revealed a large number of potential Iron Age sites in the region, but the sample

excavation and morphological analysis which would be needed to interpret the pattern spatially and chronologically has not been undertaken. The common "trackway with flanking enclosures" type of settlement, when revealed by aerial photography, can generally only be assigned to the "Iron Age and/or Romano-British" period (Loughlin and Miller 1979, passim) unless it includes distinctive Iron Age components such as square-ditched barrows in observable relation to other features. Since cropmarks are only generated under crops there are important gaps in the evidence caused by areas of woodland, modern towns and differential agricultural practice; these questions, together with the influence of surface geology upon aerial photography, have been considered in section 1.4.3 (above) and their importance in relation to the study area will be especially apparent. They may be regarded as generally operative constraints affecting the AP survey of the remains of all periods, but are especially limiting in relation to the Iron Age. A lack of the durable ceramics and wide range of artefacts which characterise the succeeding period means that fieldwalking is generally of limited use in interpreting, chronologically, sites seen from the air, and of even less in discovering sites from ground survey alone. It required two seasons' fieldwork at Fishpond Wood, Risby, a site which has not appeared on aerial photographs, to discover among the easily discernible Romano-British settlement debris ceramic evidence distinctive enough to indicate with certainty that the site had been occupied in the LPRIA (G.139; for further discussion see section 3.2.2.1). There is also a bias in the AP evidence towards those classes of site which generate cropmarks most easily, and these are almost certainly not fully representative of the range of landscape exploitation and settlement types

originally in use. Thus, "trackway" settlements, ditched enclosures and square-ditched barrows are very apparent in the AP record, but there is little evidence for unenclosed settlement, "activity areas" and isolated features of types which have begun to be discovered in, for example, landscape excavations in the Vale of Pickering (Haselgrove 1984, 10; Powlesland 1986; Powlesland 1988)). Again, the fact that the most distinctive Iron Age cropmark feature in East Yorkshire is the square-ditched barrow poses important problems of interpretation. The square barrow distribution can not be taken as a direct equivalent of the extent of Iron Age settlement in the Riding since there is no way of knowing what alternative burial rites which have left no archaeological trace may have been in operation in the "blank areas", for example south-eastern Holderness (Ramm 1978, 15). The exact siting of cemeteries and barrow groups may have been influenced by religious considerations in addition to geographical-economic ones, and it is rarely possible to assess the relationship between funerary areas and undated IA/RB cropmark sites in the vicinity (e.g. in the case of G.152). In the case of isolated single barrows (e.g. G.17) it must always be questioned whether the apparent isolation is "real" or a function of the barrow having originally been sited in relation to a settlement area not now observable from the air.

Finally, excavation has done little to answer many of the questions posed by aerial photography. There has been large-scale excavation in the area, notably at Garton and Wetwang Slacks (usefully summarised in Dent 1983c), but publication is not yet complete and Garton Slack itself has served to emphasise the deficiencies of AP evidence rather than to resolve them (Haselgrove 1984, 10). The Slacks, as their name indicates, are

valley sites, on the eastern Wolds' periphery, and there is no way as yet of knowing how far, especially in their economies and development, they may compare with sites observed on the boulder clays of Holderness. Much research in the region has been oriented towards questions of chronological ascription and structural development rather than those of diet and economy. In addition, much of the excavated material from East Yorkshire is mortuary; few of the items used as grave-goods also appear in domestic assemblages, making precise dating almost impossible. The excavated sites also tend to be those of the earlier and middle Iron Age rather than those of the later period, and even here information can be woefully inadequate: the large amounts of animal bone from Staple Howe have apparently been disposed of after only rudimentary analysis (Challis and Harding 1975, i, 159-160). The question of the food-producing economy is dealt with more fully in section 2.2.3 (below). Like other aspects of the Iron Age in East Yorkshire it generates many interesting questions for future research, a priority of which must be the excavation of a sample of lowland sites, away from the foot of the Wolds, before the plough does further damage.

2.2.2 Climate

An assessment of the likely climatic conditions prevailing in East Yorkshire at the end of the first millennium B.C. is of some importance, since climate is one of a group of inter-related factors which can be expected to have a determining effect upon, inter alia, the extent of settlement, agricultural strategies and population levels.

That much of the first millennium B.C. was a time of climatic deterioration in north-west Europe is generally accepted, recent developments in the calibration of radio-carbon dates suggesting that the decline may have started as early as 1400 B.C. (Challis and Harding 1975, 10). A return to drier, milder and less stormy conditions appears to have begun in the later Iron Age (Haselgrove 1984, 9, after Lamb 1981), and it is likely that the climate was similar to that of today by the beginning of the Roman period. The implications for the distribution of settlement within north-east England are considerable, for it suggests that there would be no areas unsuited for settlement on grounds of climate alone, except in so far as growing seasons might have been affected by altitude or aspect, leaving factors such as soil-exhaustion due to previous agricultural practice to play a more important determining role. The distribution of higher land, with its higher annual precipitation and drop of 1°F in the mean July temperature for every 300' of altitude above O.D., suggests that any differentiation in population density due to climate would be an east-west one, the lowland areas of north-east England enjoying a more favourable climate than the Pennines and land to the west. Haselgrove, indeed, points out that the conventional division of Britain into Highland and Lowland zones has obscured the affinities of the north-eastern lowlands with bio-climatically and geologically similar areas of midland England, a fact which has tended to confuse our expectations of the kind of agricultural economy practised on them; he goes on to suggest that population densities as high as those being reported from Northamptonshire, for example, might prove to characterise these north-eastern lowlands when fieldwork of a similar intensity is carried out (Haselgrove 1984, 1).

Maps of important present-day climatic indicators in eastern England (Philip 1981) shew that particularly favourable conditions distinguish the erstwhile "tribal" territory of the Parisi, and especially the claylands east of the Yorkshire Wolds. For example, the Mean Daily Average of bright sunshine in July in the East Riding is 5.5-6.0 hours, compared to 5.0-5.5 hours in Yorkshire west of the Wolds and only 4.5-5.0 hours in the upland areas of North Yorkshire and much of the Pennines; the Hull valley and much of the clayland of Holderness enjoys a Mean Daily Average of 1.5-2.0 hours of bright sunshine in January, compared with 1.0-1.5 hours in much of the rest of Yorkshire. The Hull valley and Holderness are also noticeably drier than areas to the west, with a low annual precipitation of 500-625 mm. Lamb (1981) has suggested that Holderness and East Yorkshire were also much drier than areas to the west in the period c.750 B.C. to c.400 B.C., and Haselgrove (1984, 19) has advanced the possibility that resulting greater productivity than neighbouring groups in a competitive environment may have helped to foster material culture differentiation and the adoption of a distinctive burial-rite as an assertion of group-identity.

Palaeo-climatic evidence needs to be used with care (Evans 1975, 174-176; Greene 1986, 81-85) and there is as yet an inadequate body of archaeological data to test against it; its potential importance as one of the factors underlying changes in agricultural strategy during the period must not be ignored, however. Curtailed growing seasons, for example, may certainly have contributed to the dynamics behind the colonisation of lower-lying claylands by Iron Age peoples.

Note: the fluctuations in Mean Sea Level during the period might properly have been considered in this section; they are, however, discussed elsewhere (3.3.3, below), and it is sufficient here to note that a widespread marine regression phase in the later Iron Age, which made large tracts of coastal and estuarine land available for exploitation, is generally accepted (Challis and Harding 1975, 8-9; Haselgrove 1984, 19; Ramm 1978, 24). This regression is represented by the regressive contact of the "Lytham VIII" oscillation in north-west England (Tooley 1980, 82, fig. 35). There is evidence to suggest that the pattern of fluctuation in Mean Sea Level in the Humber estuary was chronologically closely similar to that in the North-West (Gaunt and Tooley 1974; see section 3.3.3) and, indeed, the transgressive contact of Lytham VIII is matched in the Humber by the transgressive conditions occurring between 800-540 B.C. at the site of the Hasholme log-boat (Millett and McGrail 1987, 99). The evidence from Hasholme also suggests, however, that estuarine conditions continued to prevail throughout the rest of the Iron Age and into the first century A.D., though with increasingly shallow depths of water (Millett and McGrail 1987, 99). The effect of local factors on MSL should not be under-estimated, and it is clear that much more work on transgression sequences in the Humber, tied in to radio-carbon dates, is needed before the inter-relationship between sea-levels and the availability for settlement of estuarine land in the region can usefully be discussed by archaeologists.

2.2.3 Food producing economy

The available evidence suggests that mixed farming was the common agrarian strategy in East Yorkshire throughout the Iron Age. The early palisaded site at

Staple Howe (Brewster 1963) produced a cache of club-wheat and a saddle-quern as well as large amounts of animal bone; granaries have been postulated at both Staple Howe and the nearby Devil's Hill (Brewster 1981; Stephens 1986, 2-3) though the structures in question are perhaps more convincingly interpreted as centrally-placed watchtowers (Challis and Harding 1975, 149-151). Loom-weights, animal bone and part of a saddle quern all suggest a mixed agricultural economy at Devil's Hill. Later, in the period c. 400 B.C. to c. 200 B.C., the open and undefended settlement in Garton/Wetwang Slack was characterised by circular structures, pits for the storage of grain (specifically wheat), and four-poster structures set among unditched fields along the valley floor; faunal assemblages throughout the period are dominated by sheep/goat, rather than cattle, a predominance which tends to distinguish the East Riding from other areas within north-east England (Haselgrove 1984, Table 1). The economy of the Slacks in the closing stages of the Iron Age presents a similar picture: cereals were certainly being consumed, attested by rotary querns found within the late rectilinear enclosures flanking the north side of the valley road, and a funnel-mouthed enclosure in Wetwang Slack would be consistent with some of the requirements of stock-raising, also indicated by burials of cow, horse, sheep and pig (Dent 1983c, 7); the emphasis of the economy, however, and the respective contributions of animal husbandry and arable production within it, are harder to assess. Dent (1983b, 38) has associated these roadside enclosures with a stock-rearing function, largely on the evidence of animal-burials within them, and has suggested the increasing importance of animal husbandry in the years before the Roman conquest; Haselgrove (1984, 18-19), however, demonstrates that these enclosures may just as easily

be interpreted as reflecting a process of arable intensification. Similarly, some of the East Riding dyke systems are seen by Challis and Harding (1975, 162) as enclosing areas of arable in the later part of the period and to imply settled communities engaged in mixed agriculture.

Unfortunately, simply to demonstrate a mixed farming economy is to demonstrate very little. We may now be sure that Iron Age agriculture in the north-eastern lowlands was much less "specialised", in the sense of pastoral, than Piggott (1958, 13 ff) supposed, but there is still insufficient data to answer the two most important questions for future research, namely: the respective importance of arable and pastoral components within these economies, and the rate at which the heavy, lower claylands were "colonised" by groups practising them. The questions are clearly inter-related, and neither is simple to answer, the constraints imposed by the nature and quantity of the evidence (noted in section 2.2.1, above) being formidable. Thus, the sheep/goat predominance in animal assemblages from sites on the eastern periphery of the Wolds can be interpreted in very different ways: on the one hand, as Clark (1947) was the first to point out, such a pattern can reflect a cleared landscape largely given over to arable agriculture and supporting a rising population, since sheep can be grazed, and outwintered, on fallow and recently-cropped fields, thereby releasing land for arable production as well as contributing to soil fertility; on the other, as Haselgrove has cautioned, their prevalence may suggest that the Wold tops were unsuited, due to previous agricultural practice, to anything other than low-grade grazing by the time of the middle Iron Age. The latter alternative might suggest that the apparent bias in the

distribution of square barrows towards the eastern Wold flanks and the Hull valley rather than the chalk plateau (Ramm 1978, 15-16 and fig.4) is itself reflecting the gradual clearance of heavier land for mixed agriculture. Too much must not be made of evidence which is both funerary and AP-derived, but there is another factor which would tend to support this view: since the Wolds are generally held to have been largely deforested at least by the beginning of the Iron Age (Turner 1981), the reasonably high percentages of pig-bones in the Garton Slack assemblages (13% - 14% in Haselgrove 1984, Table 1) should imply the utilisation of substantial tracts of woodland on the lower clays for pannage. (The extent of forest at the beginning of the period would clearly have varied considerably depending upon location; pollen evidence from the Hasholme log-boat excavation suggests heavy mixed oak-wood, already exploited and managed, on the drier clays in the area until at least c. 600 B.C., and the log used to make the boat itself indicates that woodland containing trees between c.600-820 years old was accessible to the boat's makers, presumably not too far distant, around c.300 B.C. [Millett and McGrail 1987, 87-88 & 84]).

Again, although we have no lowland sites to compare them with, even early sites such as Staple Howe and Devil's Hill seem sited to command both upland and lowland resources in the interests of a mixed agricultural strategy (Powlesland 1988, 106). If so, then this may be part of a wider phenomenon and be paralleled by developments in south-eastern England, where Bradley (1978, 123) has suggested that both the substantial utilisation of "heavy" and gravel soils, and the siting of settlements at the interface of two

or more natural zones, began earlier in the Iron Age than has often been supposed.

The attractions of the East Yorkshire lowlands must have been considerable at the beginning of the Iron Age and have grown throughout the period, with the increasing availability of new technology (including new types of crop) and in relation to the climatic conditions already discussed (section 2.2.2, above). Iron axes would certainly have facilitated woodland clearance, and Challis and Harding (1975, i, 156) invite us to envisage stronger ards with iron-tipped shares, which would probably have been needed to cultivate the heavier clays, in widespread use from the middle Iron Age onwards. Beehive querns may have been introduced into the region in the first century B.C. (Challis and Harding 1975, i, 157; but see also Haselgrove 1984, 23, note 12)), though they characterise the early Roman period also. An apparent paucity from the East Riding has led Ramm to suggest that native agriculture here was less concerned with corn-growing than the Pennines and areas to the west (Ramm 1978, 18). Haselgrove (1984, 19), however, points out that the distribution has more to do with the greater survival potential of large stone artefacts in upland areas, while Chitty has recently recorded (1987, 13) the folly of relying solely upon printed information where this class of small find is concerned. It should be noted that this type of quern, while it does not necessarily imply increased cereal production, represents a great advance in efficiency and would certainly have been more suited to the processing of large amounts of grain than its predecessor. Examples from the study area are dealt with in section 2.3.3, below.

Clay soils, once cleared, are better at withstanding continued cropping than the lighter soils of the Wolds themselves. There is, unfortunately, almost no evidence for the types of cereals being grown in the region, but the spelt already in use elsewhere in lowland England at this time is well suited for use on heavy, damp soils, as is also the related club-wheat discovered at Staple Howe. Spelt is also capable of being winter-sown and, although it is difficult to demonstrate that this ever took place, it has been pointed out that in "pioneer" agriculture winter-sown crops compete more successfully with weeds than those sown in spring (Bradley 1978, 34, after Coles 1976). The urgent need for excavation of Iron Age sites on the clays east of the Wolds, with thorough analysis of botanical and faunal remains, may be noted: it is possible that the earlier stages of forest clearance will prove to be reflected in animal assemblages, with cattle, to which open foliaceous woodland is congenial (Clark 1947), replacing sheep as the dominant.

In conclusion, it should be re-iterated that our knowledge of food-producing economies and their development in Iron Age East Yorkshire is severely constrained by the quality and limited geographical origins of the available evidence, a situation which is not going to change until sites east of the Wolds are properly investigated. A general progression towards an agriculture with a larger and larger arable component may be suggested as reasonable but there is as yet no way of ascertaining what part local factors may have played in determining strategies. Greater knowledge of previous landscape-exploitation is also needed, and terms such as "clearance" and "colonisation" in relation to the Holderness clays may need to be used with more caution. Excavations at

Barmston indicated utilisation of an already partially deforested fen landscape by a settled community around 1000 B.C., and sherds of early Iron Age pottery found on stratigraphically later peat at the site point to subsequent activity in the same locality (Varley 1968, 16 and 26, fig. 11). Varley suggested that there may be other such Later Bronze Age "hamlet"-type settlements in Holderness, buried under hillwash, and whether or not this proves to be the case it is worth remembering that the East Yorkshire lowlands were not virgin territories devoid of human population at the end of the first millennium B.C. In concentrating exclusively on the arable/pastoral question we may be in danger of forgetting that some Iron Age populations may have been just as concerned with the exploitation of the rich floral and faunal resources of Holderness as their Bronze Age predecessors.

2.2.4 Settlement and society

The characteristic sign of Iron Age settlement, as observed on aerial photographs, in north-east England as elsewhere, is the ditched enclosure. As Challis and Harding remark (1975, i, 130), "enclosures are a ubiquitous Iron Age trait". They may be of rectilinear, curvilinear or irregular shape, but shape alone has not proved a reliable chronological, cultural or functional indicator: curvilinear examples can not be seen as necessarily earlier than rectilinear ones; most types appear to continue into the Romano-British period also; and D-shaped enclosures, for example, which in north-east Yorkshire may have functioned as cattle enclosures, in Co. Durham often contain domestic settlement (Challis and Harding 1975, i, 130-131). The main enclosure- and settlement-types plotted by Challis and Harding (1975, ii, figs. 92-94) do not appear to

shew any significant differences in distribution as far as East Yorkshire is concerned; an apparent tendency for both their "curvilinear" and "extensive/unenclosed/unidentified" categories to be located on lower ground on both sides of the Wolds is probably due to the accidents of fieldwork, the relatively small number of sites plotted, and the breadth of the second category. Many more aerial photographs are now available, and a proper appreciation of the distribution of different types of potential Iron Age settlement must await publication of the work currently being undertaken by the RCHM.

Most of the evidence for the development of settlement in the Iron Age comes from sites on the eastern flanks of the Wolds. It is best observed at Wetwang Slack (Dent 1983b; Dent 1983c) where the changing organisation of settlement, burial and agricultural areas in relation to a major trackway in use throughout the Iron Age and into the Roman period allows some insights into social structure and the regulation of response to the environment. The type of open, undefended settlement existing in the Slacks c. 400 B.C. - c. 200 B.C. has already been alluded to (section 2.2.3, above). It is associated with the earlier stages of the "Arras culture" square-barrow burial rite, and the trackway served as a focus for the siting of these barrows and their gradual nucleation into a large cemetery. Dwellings with their associated unditched fields at this stage suggest to Dent (1983b, 36) "a series of independent units collected together", in contrast to the succeeding period. (c. 300 B.C. - c. 100 B.C.) during which there was large-scale enclosure of the landscape and the development of a central nucleated settlement-area surrounded by fields, "very much on the lines of a mediaeval village" (Dent 1983b,

36). An area of some 2 km² was defined by linear earthworks, and these, with the fact that burials were subsequently restricted to the communal cemetery, may indicate an increased amount of social regulation. Dent envisages a settlement pattern of nucleated villages taking corporate action to control land-use, and suggests that both the large size of cemeteries and the lack of exceptionally wealthy burials may indicate "an increasingly egalitarian society" (Dent 1983b, 43). In the second and first centuries B.C. barrows gradually reduced in size, had deeper graves, and were more closely grouped, facts which would again be consistent with the needs of an expanding population with limited living-space. Standardised burial mounds in this latest stage of the burial tradition (for the cemeteries seem to have been abandoned at some time during the first century B.C.) might also be taken as reflecting the equality of individuals. It is not difficult to believe that the abandonment itself was linked with population increase and pressure on land, but the mechanism by which it was accomplished is harder to discern; Dent himself is uncertain whether it was "a general response to a central authority" (Dent 1983b, 38) or a "communal decision" (Dent 1983b, 43).

It is changes taking place in the first century B.C. and into the first century A.D. which may have done most to determine the appearance of the settled landscape found by the Romans on crossing the Humber in c. A.D. 71, though once again much of the evidence comes from valley sites on the eastern edge of the Wolds. At sites like Bell Slack, small cemeteries of late barrows had been located, not alongside trackways, but beyond the ditched enclosures that now flanked them. Dent (1983b, 38) sees this development as possibly reflecting an increase in the importance of

animal husbandry within the farming economy; Haselgrove's objections to this view have already been noted (2.2.3 above). By the time of the Roman conquest there would seem to have been two distinct types of settlement in the area of the Wolds, namely the ditched farm enclosure with circular huts, and the extensive "linear", "trackway" or "droveway" settlement. Ramm (1978, 77) has associated these ditched farmsteads with a post-conquest intensification of settlement possibly linked with the establishment of veteran troops. It should be noted here that there is no evidence from elsewhere in Europe which would lend support to such an interpretation (pers.comm. Dr M.Millett); moreover, the excavated material from such sites is consistently characterised by late Iron Age pottery, chalk figurines and pre-conquest brooches (Branigan 1984, 27-28). At Wetwang Slack, one of the ditched farms occupies the site of the by-now abandoned barrow cemetery, and Dent interprets this expansion of existing settlement as representing an intensification of settlement density due to increased population, with new sites utilising the margins of the "village" territory.

It is only in recent years that information has begun to be available for the nature of Late Iron Age settlement in the lowlands in the south of the Riding. At North Cave, on the Wolds scarp just north of the River Humber, John Dent has recently (1986, 1987) conducted two seasons of excavation on an extensive Iron Age settlement and field-system, some four acres of which was initially revealed during commercial sand-extraction (Dent 1987, 10-11; Dent, lectures to East Riding Archaeological Society, 1987). Here, eight round houses with east-facing entrances survive as drainage gullies and comprise part of a domestic settlement area set among field- and smaller enclosures

visible on aerial photographs. Large amounts of iron-working debris, including both furnace- and smithing-slag, as well as the bowl of a tower-furnace, were discovered; there was also some evidence, in the form of "slag-tempered" wares, for some level of pottery production on site. A high water-table on the site allowed excellent preservation of wood remains: two lengths of carpentered woodwork, possibly originally part of an agricultural implement and a cart, had been re-used as steps into a shallow wicker-lined well. Eight or nine oval trenches are assumed to be platform drains for hay-rick structures, and stock raising may be implied by an animal burial. Occupation on the site continued throughout the Roman period. Enclosure ditches with first- to fourth-century pottery were aligned in the same way as earlier features, though occupation levels of this period have not survived. The evidence suggests that here was a mixed-farming settlement engaged in at least seasonal industrial activity. Ramm (1978, 24) had suggested that the distribution of square barrows west of Brough on Humber indicates re-settlement in the later Iron Age of lands which had been waterlogged for much of the period, and it may be that this area was absorbing some of the rising population which seems to be evidenced on the Wolds themselves. The area to the west of Brough is characterised by a high level of industrial activity in the Roman period, both along the roads leading north from the town (e.g. a Romano-British iron-smelting site at South Cave, v. Loughlin and Miller 1979, 35) and, especially, in the flatlands around Holme on Spalding Moor (Halkon 1983), and it now seems likely that Iron Age origins must be sought for some of this. A series of ditches and gullies at Bursea House Farm (SE 813338), excavated in April 1987 by the Field Studies Group of the East Riding Archaeological Society (Halkon

1987b, 3-4), contained iron slag in association with LPRIA pottery comparable to that in use at Dragonby in Phase 2 (May 1970) and dated to the turn of the millennium (v. also section 3.2.2.1 for similar pottery found at Fishpond Wood, Risby). Iron working in particular could be favoured by both geographical and environmental factors, with "bog-ores" as well as ore from the south bank of the Humber both theoretically obtainable. It is difficult to imagine, at present, what relationships such settlements may have had with those on the Wolds themselves, but in the light of the large amounts of iron slag from North Cave (1.2 metric tonnes from one pit) it is possible that economic links based on industrial processes were in operation.

There is increasing evidence, then, that by the time of the Roman conquest the economic infrastructure of the East Riding, in common with other areas of north-east England, was every bit as complex as that obtaining in many more southerly parts of the province (Haselgrove 1984, 22). If this is so, then it is in elements of the superstructure - the cultural, social and political organisation of Iron Age peoples in the region - that we must seek the reasons for the distinctive character of the area in the Iron Age and its subsequent low level of response to certain aspects of Romanisation (J. Evans 1988). Such archaeological indicators as we possess consistently point to the determining influence of environmental factors upon both economic strategies and social organisation. We have already seen (2.2.2, above) how climate may have contributed to the adoption of a distinctive burial rite by a favoured group wishing to assert its cultural identity, and subsequent adjustments in arrangements for the accommodation of the dead also probably reveal responses to situations which were at least in part

environment-related: thus, formalisation of areas for the disposal of the dead would be consistent with a situation in which group resources were under stress, either because a rising population had reached a critical level in relation to those resources, or because the resources themselves were deteriorating, through soil exhaustion or climatic factors perhaps, in relation to a fairly static population. The final abandonment of the cemeteries in the first century B.C. may itself reflect, as Haselgrove (1984, 19) points out, the success of a strategy of agricultural intensification in alleviating population pressure by an expansion onto heavier soils, made possible by a combination of climatic amelioration, improved technology, and suitable crops.

Haselgrove (1984, 20) has suggested that the lowlands around the Yorkshire Wolds were probably one of the most densely settled areas of north-eastern England at the end of the Iron Age, and that by the later first century B.C. these claylands were as densely populated in parts as areas of lighter soil. The estimated population density of $10 \pm 2.5/\text{km}^2$ for this area (Haselgrove 1984, 20) is based upon the assumptions that the population of England at the end of the Iron Age was roughly comparable to that witnessed by the Domesday Book and that relative settlement densities were approximately the same. Further than this it is impossible to go, and it is difficult to assess the role that population pressure may have played in stimulating colonisation of the clays or in the apparent increase in warfare which Dent (1983b, 39) sees as characterising the first century B.C. in the region. The small barrow cemetery east of the River Hull in Swine parish (G.152, and v. section 2.3, below) is probably a late one and may reflect such an

expansion of settlement. As far as warfare is concerned, Haselgrove has pointed out (1984, 23, n. 25) that the occurrence of martial objects and equipment in late contexts (chalk "warrior" figurines, sword burials) need not be linked to internal stress occasioned by population pressure but could just as easily reflect increased competition between groups for prestige goods consequent upon the re-integration into European trading networks which would be suggested by the re-appearance of exotic materials such as coral and the adoption of the Late La Tène method of brooch construction.

If the level of population density which Haselgrove posits for the East Riding be accepted then the area at the end of the Iron Age should have been capable of supporting a degree of settlement hierarchy and political centralisation which is not, however, clearly visible in the archaeological record. It may appear that Roman forts in the region are sited with communications in mind rather than in relation to sites of existing political status, but the case remains to be proven. There is, however, some evidence of a tendency for villas in the region to have been preceded by native sites enjoying LPRIA pottery- and metalwork-types (v. sections 2.3.3 and 3.2.2.1 below).

Whatever the state of political complexity in the area on the eve of the Roman conquest it contrasts strongly with what we know of the Corieltauian (Tomlin 1983) "tribal" territory south of the Humber. Haselgrove (1984, 20) points to the existence there of genuine nucleated settlements, and possible central places also. Rivet (1964, 46-47) divided the British tribes of the first century A.D. into three classes: "Belgic" peoples themselves; those displaying "secondary Belgic"

influence in their adoption of such innovations as coinage and the potter's wheel; and groups displaying none. The Corieltauvi and Parisi are conventionally regarded as falling into the second and third classes respectively, and Challis and Harding (1975, i, 84 & 99) accept this, though they prefer the term "para-Belgic" to "secondary Belgic"; the occurrence of LPRIA imports and coinage in Parisian territory is seen by both Challis and Harding (1975, i, 99) and Haselgrove (1984, 20) as representing limited estuarine and coastal trading contacts. This level of distinction between the Parisi and the Corieltauvi is unlikely to change, though discoveries of LPRIA materials on the north bank of the Humber in recent years (all of which are due to an increased level of fieldwork in the area) may well prompt a reconsideration of the extent of contacts with, and influence from, the south. (Whether this will eventually bring into question the status of the Humber as the boundary between two tribal territories remains to be seen).

If East Yorkshire, in contrast to regions south of the Humber, was not witnessing the rise of proto-urban centres and an "archaic state" society at this period, then how should it be viewed? Haselgrove (1984, 20-21) suggests a "generalised competitive tribal" model as being the most applicable. In this model, the basic social unit is the clan, which is formed out of local domestic groups (or households), and to which the individual owes loyalty and from which he derives status. Competition for rank is played out at the level of the domestic group, both within and between clans, and individuals who are the most successful at forming alliance networks, through such mechanisms as gift-exchange and marriage, may exert authority as mediators or war-leaders. The changing patterns of

alliance render this kind of status extremely unstable, however, and the tribe as a whole is not subject to permanent centralised authority. Common action is easiest to organise at the lower levels; at tribal level it tends to be concerned with matters such as ritual, ancestry and a sense of ethnic identity. There is at present insufficient data to test whether such a system is reflected in the spatial organisation of settlement in the area; it is easy to see, however, how it might have come about through the gradual colonisation of a sparsely settled landscape, with clans developing as household groups were brought into closer contact and larger corporate groupings being formed as settlement expanded and the population rose.

However one characterises British societies anthropologically on the eve of the Roman invasion it is plain that the Humber formed the approximate boundary between those "LPRIA" groups to the south (coin-using peoples with such offices as magistracy and kingship, and a social hierarchy detectable in the settlement pattern) and the looser, less socially developed tribal groupings to the north. These "genuine sociological distinctions" (Haselgrove 1984, 20) may lie behind Caesar's division of the island, culturally, into a pars maritima and a pars interior (De Bello Gallico Book V, trans. Handford 1951, 135). Haselgrove notes (1984, 21) that the incorporation of such "tribal" societies into expansive trading networks often results in the development of more absolute ranking of individuals within a society, and that political centralisation is stimulated in response to the demands that production for export makes upon society. The presence of a Roman province south of the Humber in the generation before c. A.D.71 offers precisely the kind of situation in which such

developments may have occurred. Haselgrove (1984, 21) sees Stanwick, with its imported Gallo-Belgic wares and other luxuries, as the "physical expression" of just such a process within Brigantia, and associates it with the policies of the philo-Roman Cartimandua. On this view of things, the site could have acted as a collection centre for commodities to be exported to the south in return for imported prestige goods and military support of Cartimandua's position. It is most unlikely that the southern part of East Yorkshire, separated from the Roman province only by the waters of the Humber, would have remained unaffected by such dynamic developments. As I have suggested, the north bank may already have been influenced more by contact with the Corieltauvi than hitherto supposed. The site at Redcliff/North Ferriby (G. 187) is crucial for the understanding of the effect of the Roman power upon the population of East Yorkshire on the eve of the conquest, and the series of excavations initiated there in 1986 may be expected to shed much light on the question. First results suggest that the settlement's floruit spans the decades A.D. 40-70, and that its existence at that period is intimately linked with the presence of Roman armies south of the Humber (Crowther and Didsbury 1988, 18). It will be sufficient at this point to note that Redcliff is admirably sited as an export centre for commodities such as cattle and slaves, although an appreciation of the political mechanisms involved will be dependent upon whether we can suggest where the imported goods were going after arrival on the north bank (if, indeed, they were travelling any further at all).

Finally, we must briefly consider the identity of the inhabitants of East Yorkshire at the close of the Iron Age. The Parisi are mentioned only once in antiquity,

in the Geography of Ptolemy of Alexandria, which may be dated to A.D. 140-150 (Rivet and Smith 1979, 103). Much of the information on which it is based, however, goes back to earlier sources, and that for northern Britain probably derives from the period of Agricola's governorship (Rivet and Smith 1979, 114). The British section of the Geography consists of two distinct parts: a list of natural features around the coasts of Britain, followed by a list of peoples together with the "cities" (poleis) in their territories. Entries in each list, which for convenience in the following discussion will be referred to as the "coastal" and "regional" lists, are accompanied by latitudes and longitudes. The Parisi make their appearance in the regional list, and are described as being "next to" the Brigantes and "beside the gulf suitable for a harbour", the only "city" attributed to them being Petuaria, in contrast to the nine "cities" of the Brigantes. (It should be borne in mind that "city"/polis probably means little more than "place with a name" to Ptolemy - Rivet and Smith 1979, 105). The bearings given for Petuaria and, in the coastal list, for the above-named gulf, leave no doubt that the Parisi are to be located in Eastern Yorkshire, but the exact limits of their territory and its relationship to that of other named groups in the area are more difficult to ascertain. Ptolemy normally proceeds from west to east in the regional list, and thus we seem to have a Parisian people which is distinct from a people called the Brigantes on the west, and whose eastern border is a coastline with a distinctive natural harbour. The first problem is caused by the fact that Ptolemy has already stated, in the same section, that the Brigantes stretch from sea to sea; however, since this need not have been the case everywhere in their territory, it is not perhaps a serious objection. (It must also be

evaluated in the light of the possible meaning of "Brigantes" noted below). The second problem is more difficult to resolve, and derives from the fact that the coastal feature which is called "the gulf suitable for a harbour" (Gk: eulimenos kolpos) has already appeared in the coastal list in the slightly different form "gulf of the Gabrantovices suitable for a harbour" (Gk: Gabrantouikon eulimenos kolpos), thus leaving us with a third named ethnic group in the area. It should be noted that Ptolemy's form of words is descriptive here and does not imply a place name actually in use (Rivet and Smith 1979, 364), a fact which is entirely consistent with an origin in a coastal survey carried out by Agricola's fleet, and one which is obscured by Ramm's translation of eulimenos kolpos as "Safe-haven Bay" (Ramm 1978,22). (His identification of the bay with Bridlington Bay, however, demands serious consideration). How then, is the matter to be resolved? The Gabrantovices have been claimed as a "sept" of both the Brigantes (Richmond 1954, 44) and the Parisi (Ramm 1978, 22), but without strict definition of terms like "sept" it is difficult to know what this might mean. At this point, it is helpful to consider the differences between the coastal and the regional lists. The coastal list is almost unique in the Geography since its concerns are exclusively geographical and it does not list, as is the case in sections dealing with other provinces, coastal peoples and their poleis inter alia; in the British section this is exclusively the prerogative of the regional list. A small number of ethnic names does, however, appear in the coastal list in the form "x + y" (or "y + x") where x = the name of a natural feature (bay, promontory etc.) and y = the name of a people in the genitive case. There are six such names, but one of them, Gagganon arcon/Ganganorum promontorium, may be

excluded for reasons which need not detain us here. (v. Rivet and Smith 1979, 365). The remaining five relate to the "tribes" of the Dumnonii, Novantae, Tazali, Setantii and Gabrantovices. Of these tribes, only the Gabrantovices and the Setantii do not re-appear in the regional list with poleis attributed to them. Since Setantion limen/Setantiorum portus may have been a short-lived establishment (Rivet and Smith 1979, 457) it need occasion no surprise that it does not get listed again as a polis, and that the name of an ethnic group living on the Lancashire coast around the A.D. 80s thus gets "lost" in the regional list. The case of Gabrantouikon eulimenos kolpos, however, is somewhat different, in that although the feature described in the coastal list re-appears in the regional list as an aid to defining the territory occupied by the Parisi, it does so without the ethnic component, a fact the importance of which seems generally to have been ignored. It will be helpful here to consider the date and nature of the information in the regional list. Rivet and Smith (1979, 114) have shown that much of the information relating to Northern Britain is to be regarded as Agricolaan in date and was probably mediated to Ptolemy by Marinus of Tyre (c. A.D.100), though Ptolemy may have made minor alterations to it. It is certainly the case that the legionary dispositions recorded by Ptolemy are Hadrianic and it should also be noted that the tribes of England and Wales to whom Ptolemy credits poleis correspond (with the addition of the Ordovices, and bearing in mind that there is no definitive proof of the existence of a civitas Parisiorum) to the civitates of early-mid Hadrianic Britain. It is suggested here that one of the "minor emendations" which Ptolemy might have made to earlier information is the deliberate deletion of the ethnic component of Gabrantouikon eulimenos kolpos when he

compiled the regional list, since its inclusion would have meant the recognition, unique in the regional list, of an ethnic group to whom he could assign no poleis and which was not a constituted civitas.

Both the Setantii and the Gabrantovices, then, are evidenced as named ethnic groups of the later first century A.D., some seventy years or so before the date at which parts of the north are conventionally held to have been "organised" into the two civitates of the Brigantes and the Parisi. (A third group may be the *Delgovices, an ethnicon which is apparently implied by the place-name Delgovicia in the Antonine Itinerary. If so, it is presumably the name of a small division within a larger ethnic unit - y. Rivet and Smith 1979, 331-332. There is, of course, no means of knowing at what date the *Delgovices may have existed as a named group). If it is the case, as Rivet and Smith (1979, 279) suggest, that the name Brigantes, which is common throughout Europe, is better interpreted as "upland people" rather than "high ones, mighty ones" (Jackson 1970, 75), then it may simply be the collective name given by outsiders to a variety of named groups in the highlands of northern England (Haselgrove 1984, 22). On this view, the coastal Gabrantovices and Setantii could be two constituent groups whose names were accidentally preserved in a military survey, and it is conceivable, at least, that the Parisi might have been regarded as "Brigantes", though possibly sufficiently distinctive to warrant later organisation into a civitas of their own. Alternatively, since Setantii, Gabrantovices and Parisi alike all inhabited the coastal lowlands of northern England it may be that they are indeed to be distinguished from groups called "Brigantes".

Ramm (1978, 21), in the same form of words as Challis and Harding (1975, 187), states that the equation of Ptolemy's Parisi with the practitioners of the Iron Age square-barrow burial rite in East Yorkshire has been argued and accepted by Stead (1965, 78-80). The case remains attractive, but it should be noted that in Stead's more recent work (1979, 93) he is decidedly more cautious about the link, as also about the relationship between the Yorkshire Parisi and the Gaulish Parisii which, although the names are etymologically identical (Rivet and Smith 1979, 436), he now regards as incapable of proof. It should not be forgotten that, while we may suspect that the Gabrantovices were in existence in the A.D. 80s, and have first-century literary references to the Brigantes in Tacitus and Seneca, all we can legitimately deduce from Ptolemy about the Parisi is that they had settled on the north bank of the Humber by the mid-second century A.D.

In conclusion, then, we note the evidence for the existence early in the Roman period of various presumably small ethnic groups in northern England, whether "clans", "septs" or "tribes", who may later have been subsumed by the civitates of the Brigantes and Parisi. This would be consistent with the sociological model, proposed by Haselgrove, of a decentralised tribal society, and some of these names may belong at the "clan" level in his system. Cerialis's experience with the Brigantes seems to indicate "the piecemeal reduction of a series of groups, each with their separate identities" (Haselgrove 1984, 22) and this, as well as the assumed lack of resistance on the part of the Parisi, may be a further indication of decentralised social formations.

Notes

1. The name Petuaria means "fourth" (Rivet and Smith 1979, 437-438), and it is now almost de rigueur to infer from this that the Parisi were divided into four pagi like some other Celtic tribes (the Gaulish Petrucorii are often cited, but we may also note the Helvetii - Caesar, De Bello Gallico, II, 1). Ramm (1978, 23-24) has pointed to concentrations of square barrows in the Riding which may correspond to three of these divisions; the lack of a similar emphasis around Brough is explained by the assumption that these estuarine lands were being colonised late in the Iron Age and would naturally not be as strongly indicated by the square barrow distribution as other areas. The suggestion is attractive, but, in view of our final inability to identify the Parisi as the builders of the square barrows, already discussed, it should not, perhaps, be given too much weight. Even Ramm had to admit that the name "the fourth" is a singularly unimaginative name, and one is forced to wonder whether or not it was originally possessed of some quite prosaic significance not now recoverable by us.
2. Jackson (1948) interpreted "Gabrantovices" as meaning "horse-riding fighters", a fact which has led to various speculations about the nature of the tribe and its economy (e.g. Bradley 1978, 38). We should rather follow Rivet and Smith (1979, 363-364) in seeing a meaning "kid (i.e. young goat) fighters", with emblematic or totemic significance. Similar overtones may attach to the *Delgovices, who are probably "thorn-fighters" (Rivet and Smith 1979, 331-332). There

is no justification at all for Ramm's interpretation of both these names as "ironic in intention" (Ramm 1978, 23-24).

2.3 Evidence for Iron Age settlement in the study area

2.3.1 Aerial photographic evidence

The difficulties of distinguishing late Iron Age from Romano-British sites on morphological grounds have already been noted (2.2.1, above). However, certain categories of AP feature enable us to discern, if not the density, at least the extent of Iron Age settlement by the time of the Roman Conquest. Additional evidence from excavated and non-AP derived sites (2.3.2), and from material finds (2.3.3), allows us to gauge with some confidence the range of landscapes being exploited by the first century A.D.

The key indicator is the square-ditched barrow. There are groups of square barrows at four locations within the study area (G.2, 21, 152, 166). With the exception of the cemetery in Swine parish (G.152), which with 30+ barrows is the largest group in the study area, they lie to the west of the River Hull. On fig. 2.1, these western barrows are shown in relation to drift geology. For the sake of completeness, important groups of barrows to the west and north of the study area are also plotted, as are two sites (G.169 and G.170) where apparently funerary ring-ditches seem to be included in IA/RB-type cropmark complexes, since Iron Age round-ditch barrows are common in East Yorkshire and occur alongside square-ditched barrows in the same cemeteries (Challis and Harding 1975, i, 167).

The distribution shown in fig. 2.1 allows certain observations to be made regarding the nature and chronology of Iron Age settlement in the study area. Before proceeding to this, however, two points must be noted:

1. Fig. 2.1 shows only funerary features. These are generally (G.17 is an isolated barrow and Scarborough a large cemetery) parts of complex cropmark areas. Adjacent settlements not exhibiting funerary elements, and which can only be attributed to the "IA and/or RB" periods, are not mapped. The picture of "settlement" afforded is thus possibly a distorted, and certainly a minimalist, one, concentrating, moreover, on a class of feature which spanned some four centuries. Its value inheres largely, as suggested above, in its indication of the variety of landscapes in which Iron Age peoples had operated by the close of the period. Undated settlement complexes not mapped here are shown on a later figure (Chapter 3, fig. 3.1), and this should be consulted with the possibility that many sites shown on it are of pre-Roman Iron Age origin borne firmly in mind.
2. The distribution of square-ditched barrows shown in fig. 2.1 is based upon information in Loughlin and Miller 1979, which itself derives from Loughlin's inspection, in 1975-6, of APs in the major collections up to 1974 (Loughlin and Miller 1979, 20). Where the author has been able to check the same sources as Loughlin (i.e. in the prints held by the NMR at Fortress House) his work seems quite comprehensively

accurate, and, as already remarked (1.4.3, above), little material seems to have entered the collection since his perusal. The distribution here plotted seems essentially similar to that published by Ramm (1976, 61, fig.; 1978, 15, fig. 4) though there appear to be certain differences, notably the fact that Ramm marks a group of 10+ square barrows just north of the Humber shore slightly to the west of the study area. Since the author has not been allowed access to RCHM records at York this can not be checked further. It remains clear, however, that, on present evidence, the study area is largely devoid of barrows in comparison with areas to the north and west and that in this, as in so much else, it is to be reckoned with southern Holderness east of the River Hull, an area in which, as Ramm points out (1978, 14-15), the paucity of barrows may not be due solely to the unsuitability of boulder clay as a cropmark agent. A number of cropmarks of IA/RB settlement sites in the study area south of National Grid northing SE/TA 36, compared with the absence of square-ditched barrows, appears to confirm this. Ramm's suggestion (1978, 24) that some of these southern areas were being resettled by the Parisi late in the period is attractive, but the possibility that they did not form part of the "territory" of the square barrow builders should not be overlooked.

The most important point to be noted about the distribution shown on fig. 2.1 is immediately apparent, namely the tendency for square barrows to be sited along the interface between the chalk and the drift,

and/or in close proximity to tongues and islands of fluvio-glacial gravels. In this, they exemplify a pattern of settlement already noted as characteristic of the Ridings as a whole (section 2.2.3, above). The precise relationship of mortuary to settlement areas is likely to prove of interest when much further work has taken place, and it should be borne in mind that some burials may have been located at social boundaries, as may have been the case in some parts of England in the pagan Saxon period (Bonney 1966, Bonney 1972). In view of the current lack of surface-fieldwork on AP-derived sites along the edge of the chalk there is insufficient evidence of contemporaneity to allow the reconstruction of the notional territories of these settlements, by means of Thiessen polygons for example (cf. Ellison and Harris 1972), but it seems reasonable to assume that each was organised to command areas of both chalk and drift, with their differing resources and potential, as well as with regard to the easier availability of water along this seepage zone from the chalk (section 1.3, above). Gravel tongues in the SW-NE aligned dry valleys are a physical link between the chalk and the clay which would presumably have facilitated incorporation of these resources within a settlement's territory, and which may have acted as socio-economic links between communities in the two areas.

Some ideas of the ways in which land-use may have been related to surface geology can be gained from later agricultural practice in the region, though caution must clearly be exercised here; at no period for which we have information has agriculture along the Wold edges conformed to a uniform pattern; local conditions have always played an important determining role and it is likely that they did so in the Iron Age as well.

With this in mind, however, it is clear that, until the advent of modern agricultural methods in the eighteenth century, the difference between the chalk and the drift was essentially a pastoral/arable one (Waites 1968, Harris 1959). The Wolds themselves were essentially sheepwalks, and though arable agriculture might have a place on the chalk it was both localised and intermittent. The mixed farming associated with the monastic granges of the thirteenth- and fourteenth-centuries (Waites 1968) featured a large arable component in places but this was made feasible by both the climatic optimum of the time and the organisational resources that the monasteries could bring to bear, the granges, in fact, anticipating the dispersed farmsteads of the Wolds today. Where an infield-outfield system operated before enclosure the outfield would tend to lie on the chalk and be put to arable use possibly only one year in ten or twenty, afterwards being allowed to fall back to pasture (Harris 1959, 6-7). In general, tillage before the modern period was concentrated on the drift clays; although it also had a place in some of the dry valleys this was usually where glacial material was present; in others, the gravel is covered with such a thin layer of soil that arable agriculture was impracticable (Waites 1968, 137).

Moving away from the foot of the Wolds, it is apparent from fig. 2.1 that by the close of the first millennium B.C. Iron Age populations were utilising the mixed clay, gravel and alluvial terrain west of the River Hull. Unfortunately, inference from the square barrow distribution about either the chronology of this settlement, or the relation of burial to domestic and food-producing areas is difficult. Known square barrows in, and on the fringes of, the study area tend to occur in ones and twos for the most part, and west

of the river only the large grouping at Scarborough constitutes a cemetery. This applies equally both on and away from the chalk, and while it could be argued that small groups of barrows along the chalk-clay interface might represent a relatively early stage of the burial tradition, before the rite had spread from selected individuals to the whole adult community (cf. Stead 1979, 92), similar small groupings on the drift might equally well be seen as reflecting the activities of small groups of "colonists" engaged in woodland clearance towards the end of the burial tradition. Associated features, in those cases where the barrows are part of complex cropmark areas, are not such as to afford clear indications of date. Stead's excavations at Scarborough (v. Gazetteer, sub Leconfield) produced a little material of ambiguous date (this section, below), and horse equipment from Greenwell's excavation of a cart-burial in a round barrow in the Beverley Westwood group (G.2) can not be dated (Stead 1979, 50); cart-burials themselves may well occur throughout the burial tradition (Stead 1984, and John Dent pers.comm.).

Similar difficulties of interpretation attend the question of spatial organisation. All the sites on fig. 2.1 are plotted from Loughlin and Miller's six-figure reference denoting the "centre" of each site. On the chalk, this allows us only to observe that settlement tends to be sited on the Wold slopes overlooking dry gravel valleys (though in the case of G.35 the settlement appears to be centred on the valley floor); when accurate plots of such sites have been published, surface fieldwork combined with detailed analysis of altitude, aspect and soil-types in different parts of the site may allow a better

appreciation of the organisation of spatial resources to be made.

Away from the chalk, only G.169, G.170 and G.2 are closely associated with settlement/agricultural cropmarks. Those barrows lying just outside the study area, in the north-eastern sector of fig. 2.1, illustrate the difficulties of interpreting settlement in this area of complex fluvio-glacial surface geology from burial features alone (fig. 2.2). The Scarborough cemetery of some 120 barrows (Stead 1975; but c. 170 according to Loughlin and Miller 1979, 30) is situated on a promontory of clay approximately 1 km wide between alluvial channels occupied today by the Ella Dyke and Scarborough Beck, streams draining eastwards into the Hull off the dip-slope clays. The site lies between 6.2m and 9.8m AOD, and even today is susceptible to waterlogging (Stead 1975, 3). The other barrows in the vicinity, including the cemetery's "outlier" in Leconfield parish excavated by Stead (1975, 8-9), all lie at the interface of two surface geologies, whether that between clay and gravel (LFD on fig 2.1), or between clay and alluvium (G.118, G.119 and the un-numbered barrow lying to the south of them on figs 2.1 and 2.2). The position of these latter barrows might suggest the pushing of burial areas to the very edge of inhabitable land, and that they date from a period when tracts of clay like that in Lockington parish (LKN on fig. 2.1), which may literally have been an island in the marshes, were supporting a growing population and being exploited to the full. The two barrows of G.119, in fact, appear to be placed on the alluvium itself, and, whatever the precise conditions obtaining when they were built, the site must always have been very wet. As late as 1570 the carr-lands in Leconfield parish were described as a "great fenne", and, although

they could be used for pasturing cattle "in dry yeres", the Earl of Northumberland had such profit from their swans, wildfowl and fish that he could afford to redeem his tenants' right of pasture for the sum of 14s 4d a year, as well as to pay each of four keepers 3s 4d annually for overseeing the tract ("Humberstone's Survey", PRO E 164/37/249, quoted in J.A. Sheppard 1956, 124). There is no reason to suppose that faunal resources in the wetlands would have been any less rich in the Iron Age, though to what extent they were exploited can at present only be imagined. If, as it is reasonable to suppose, the settlement to which barrows G.118 and G.119 "belonged" was sited on the clay, then fishing, wildfowling, and seasonal pasture in the low-lying carrlands could have supplemented a mixed agriculture on the island of drift itself. This "island" has an approximate area (established by point-analysis) of 130 hectares (321 acres) and in modern times has contained a single farm, sited just to the north of the barrows. (Some 9 hectares of the clay at the northern end is occupied by woodland). It is difficult to gauge what level of population this island could have supported in Iron Age times but we may note Proudfoot's calculation that rath-dwelling groups in mediaeval Ireland, practising an apparently mixed agriculture with cattle predominating on the pastoral side, in damp and partially forested lowlands, would have needed to exploit the resources of c. 24 hectares (60 acres) to support a family group of three adults and five children (Proudfoot 1961). Taking this as the most approximate of guides only, we may imagine the Lockington clay island supporting up to half a dozen such domestic groups; again, if the isolated barrow in Leconfield parish excavated by Stead belonged to a settlement on the adjacent gravel area of some 19 hectares (47 acres) then perhaps we are looking at an

isolated burial belonging to a single domestic group. Such calculations are inherently unsatisfactory but they may serve to point to the order of population level that these wet lowland landscapes may have supported. The Scarborough cemetery itself, with c. 120 barrows occupying about 3 hectares or 7.5 acres (Stead 1975, 1) need not have served a large population, since Dent has calculated a population of only 65 ± 20 individuals for the settlement using the Wetwang Slack cemetery of some 450 graves (Dent 1982). Without knowing its date, the duration of its use, and its catchment area (cf. Challis and Harding 1975, i, 173) there is little more that can be said: if it served a nucleated settlement over any length of time there is no need for that settlement to have consisted of many domestic groups. It could equally well have served a number of dispersed farmsteads in a late phase of clearance of the clays, and in either case its situation close to the Ella Beck may have been determined as much by the religious significance of water as by its proximity, or otherwise, to the communities which it served (Challis and Harding 1975, i, 172). It may be noted here that Powlesland points to the use of a number of slightly raised gravel islands in the Vale of Pickering wetlands for the construction of Arras culture square barrow cemeteries, and speculates that their location may be determined by a "water-cult" since there is apparently no indication of associated settlement (Powlesland 1988, 106). Unfortunately, there is little dating evidence for the Scarborough cemetery, though in view of its size and its position well away from the foot of the Wolds it would conventionally be regarded as fitting later rather than earlier into the burial tradition. Pottery from shallow features on the northern edge of the cemetery has been compared by Stead (1975, 9 and figs.2

and 5) to material from Danes Graves and Burton Fleming, and the burial rite also compares closely with that used at those cemeteries, i.e. contracted and oriented north-south. (It should be noted, however, that the latest burials at Burton Fleming are apparently extended east-west examples - Challis and Harding 1975, i, 168).

The largest group of barrows in the study area itself, and the only group east of the River Hull, lies in Swine parish (G.152 and fig. 2.3). It has certain features in common with Scarborough, notably its riparian siting, on the north bank of the Lambwath Stream, and its closely grouped small barrows. These include at least one round-ditched barrow, and it is worth noting that the evidence of horizontal stratigraphy at Burton Fleming, Boythorpe and Grindale, where round-ditched barrows appear to have been fitted into an existing pattern of square-ditched barrows, suggests that these forms are "later rather than earlier" (Challis and Harding 1975, i. 168). The small size of the barrows at Swine, and their close grouping, might also suggest a late date and, though this in itself need mean nothing more than "after 200 B.C.", the site's position on the edge of the square barrow distribution as the largest and most easterly group in southern and central Holderness might justify us in ascribing it to a period of expansion deep into the clay and alluvial areas, possibly as late as the first-century B.C. Unlike Scarborough, there are associated settlement features both here and close by (G.151) which include a trackway, field-ditches, and a linear ditch with possible enclosures (fig. 2.3).

The Lambwath Stream is one of the main natural drainage channels of southern Holderness, flowing westwards from

behind the North Sea coastal rim to join the River Hull. The wider central and easterly part of its valley was probably on open mere, the Lambwath Mere, in early mediaeval times (Sheppard, J.A., 1956, 72ff and fig. 16) and the two sites under discussion here, though well to the west of this mere, are sited where there is a localised broadening of the alluvial tract before the stream cuts through a north-south band of clay then leaves its well-defined course to turn south and drain the eastern part of the lower Hull valley. The alluvial areas here in the Iron Age may well have been in a similar condition to the Leconfield "fenne" in the sixteenth century, and it is possible that the north-south area of alluvium on the edge of which the cemetery and settlement complex stands was in fact a small lake. There is some suggestion, then, that both the two Lambwath sites, and the assumed settlements connected with G.118 and G.119 in Lockington parish, but especially the former, may have been sited to take advantage of the faunal and other resources of the carrlands as well as those afforded by their clay hinterlands. The example of the Lambwath settlement complex and the late IA site at Chapel Farm, Weel, in Tickton parish (G.159 and section 2.3.2.2, below), as well as those sites to the north already discussed, suggests that there is no reason why other sites should not exist in similar situations on the clay/carrland margin within the study area, though not revealed by aerial photography. It will be a great shame if excavation of square-ditched barrows in the region continues to be restricted to examples on the chalk, with a further bias towards those calculated to yield prestige items for museum display. There is a crying need for the excavation of lowland examples on the fringe of the distribution, especially of examples like those at Lambwath where waterlogged conditions should

have ensured excellent preservation of many classes of evidence.

Even the limited survey of Iron Age settlement here attempted, dependent as it is upon aerial photographs of one class of funerary feature, indicates that there was no combination of surface geologies, with the possible exception of the sea-affected marsh in the south of the valley, which had not attracted settlement by the beginning of the Roman period. (See, further, sections 2.3.2 and 2.3.3. below). Challis and Harding's statement (1975, i, 172) that examples of square barrows to the east of the distribution are often on gravel and rarely on boulder clay, while it may be statistically true, will give a misleading impression if it closes our eyes to the precise positioning of some of these barrows on the drift. Siting on clay in relation to wetland resources may have been as attractive for some groups as siting on well-drained gravel in relation to clayland ones. Equally misleading, in relation to the western part of the study area, is Stead's hyperbole in stating that, "there cannot be a parish on or adjoining the Wolds without its square barrows, and in some areas one looks with disbelief at fields which apparently lack them" (Stead 1979, 29). The southern extremity of the Wolds is notably deficient in square barrows, and the study area itself could almost be regarded as being outside the distribution.

Unfortunately, there is almost no evidence which will allow us to compare, in chronological terms, examples of the square barrow burial tradition on the chalk with those on the clays. Nor can it be assumed that any dating of the drift examples, even when arrived at, will necessarily reflect the date of the first movement

of Iron Age peoples into such landscapes, since it may have been the funerary rite itself which "colonised" the clays rather than actual population groups from further west. The probable ring-ditch burials in Walkington parish (G.169 and G.170, fig. 2.1) which are on clay close to the edge of the chalk may, as already noted, be relatively "late", though this need not mean any more than "after 200 B.C.", as Challis and Harding observe (1975, i, 168). Among the seven ring-ditch burials found in the Burton Fleming cemetery there was a slight bias in favour of east-west graves over north-south ones; although the evidence is inconclusive, it is possible that the difference between the two orientations at Burton Fleming is chronological, and, if so, then the east-west rite is the later, the only La Tène III brooch from the cemetery having been found in the only east-west burial containing a brooch (Stead 1979, 14-15).

Whatever the date of the Walkington ring-ditches, it is clear that Iron Age artefactual culture had made an early appearance in this area of the southern Wolds, the earliest Iron Age material from the study area being Hallstatt-type finger-ornamented pottery from a site on the chalk only 4.5 kms to the west (G.162). The only excavated barrows in the study area, both of them round types, were dug by Canon Greenwell in 1875 (G.2); one of them contained a dismantled cart-burial, its iron constituents in very poor condition. Stead's discussion of cart burials in Western Europe (1979, 20ff) makes it clear that, while the great majority of them dates to La Tène I, with a few La Tène II examples, they re-appear in some areas in La Tène III. Without clearly datable grave-goods there is thus no way of allocating the Beverley Westwood example a chronological place within the burial tradition, the

situation being further complicated by the fact that dismantled carts, a common Yorkshire rite, can not be matched in La Tène contexts on the Continent. (See further section 2.3.2, below). Most of the small number of Iron Age artefacts from the study area can be assigned a fairly late date (see section 2.3.3, below); until further fieldwork has been carried out in the study area we must be content to echo Haselgrove's conclusions in regard to settlement east of the chalk, i.e., that whenever "colonisation" started, it is likely to have been at its most intense in the first centuries B.C. and A.D. (Haselgrove 1984, 19).

If square-ditched barrows are the only AP features in the study area which can be claimed with certainty as Iron Age, there are other classes of feature which, by association with square barrows or comparison with examples outside the study area, may often be suspected of being so, and before leaving this section they may briefly be regarded. They lie almost entirely in the south-western sector of the study area and are plotted (along with sites and find-spots to be discussed in sections 2.3.2 and 2.3.3, below) on fig. 2.4.

a) Ovoid enclosures

Challis and Harding have noted that the oval enclosure seems to be a widely distributed pre-Roman Iron Age type. It is often associated with timber structures, and a pastoral function has been suggested for some of the larger examples (Challis and Harding 1975, i, 135). Ovoid enclosures of PRIA date are noted by Haselgrove (1982, 66ff) in his discussion of curvilinear enclosures in the Tyne-Tees lowlands. Ovoid enclosures are certainly included in the IA/RB

complex at Welton Wold (G.184; section 3.2.2 below) but there is no published discussion or assessment of their date and function. A large oval enclosure in Woodmansey parish (G.194) is part of a cropmark complex of almost certain "IA and/or RB" date. Also plotted on fig. 2.4 is an unassociated example from North Ferriby parish (G.121). In Rowley parish (G.138) apparent hut-circles within an ovoid enclosure, and possibly associated with a trackway and field-ditches nearby, are less than 2 kms away from Iron Age occupation at Fishpond Wood, Risby (G.139, and section 3.2.2.1, below). An Iron Age date for these features can only be suggested as a possibility, fieldwalking by the author having failed to find any material on the ground. An ovoid feature, possibly a structure, within a ditched enclosure of unspecified shape (G.188, Welton parish) may also be mentioned here (not plotted on fig. 2.4). The only example from the study area itself which is not plotted on fig. 2.4 is in Tickton parish (G.161a), an apparently isolated ditched example in an unusual position in that it is situated on the valley alluvia. This might point to a mediaeval or post-mediaeval date after the improvement of drainage in the area, but it should be noted that there are tiny "islands" of boulder-clay quite close by and it may be that this example is taking advantage of an unmapped patch of higher relief. (No mediaeval or post-mediaeval parallels in the Hull valley are, however, known to the present author). The three examples plotted on fig. 2.4 are sited in similar situations to square barrows in the study area, being either at the junction of the clay with chalk or gravel, or else close to gravel spreads

penetrating the chalk. Perusal of Loughlin and Miller (1979) shews a further fifteen examples in North Humberside, occurring in all parts of the county except for Holderness Division. Many are ditched, sometimes doubly so, and there are possible associations with square barrows in four cases, a large cropmark complex in Burton Fleming parish (Loughlin and Miller 1979, 82) containing an ovoid enclosure, ring ditches, square barrows and a large D-shaped enclosure.

b) D-shaped enclosures:

The D-shaped enclosure is another class of feature that is often considered to include Iron Age examples. Challis and Harding note that D-shaped earthworks in NE Yorkshire may have been used as stock enclosures, while to the north they often enclose domestic settlement, a ditched and banked example at West Brandon in Co. Durham being noted as typical of many recognised from aerial photography (Challis and Harding 1975, 131). Unfortunately, the type is no more susceptible to close dating than other shapes discussed in this section, and may indeed have had a life-span from the mid-first millennium B.C. into the Roman period. (Haselgrove 1982, 59ff). Ditched examples appear to be later than those with palisades; within the study area there is a ditched example in Skidby parish (G.140, fig. 2.4) and a possible example in the Burn Park Farm cropmark complex (G.145, fig. 2.4, and section 3.2.2.2, below). All that can be noted about their situation is that both are close to gravel tongues, a situation already noted as typical of other Iron Age features in the region. Loughlin

and Miller record only a further four examples in the whole of North Humberside. Although there may be more than this, since the term reflects the individual's choice of terminology to describe a certain kind of "sub-rectangular" enclosure, it seems clear that the type is less well represented in the region than either ovoid or polygonal examples and it is possible that cultural differences may be held responsible for its apparent paucity in comparison with areas to the north. A large ditched example appears at the centre of the settlement complex in Burton Fleming parish noted above; of the remaining examples, two are to the west of the study area, sited close to the eastern and western edges of the chalk in Dalton Holme and South Cave parishes respectively (Loughlin and Miller 1979, 26 and 35) while the third is sited (at TA 013468) on a tongue of north-south gravel some 3 kms long between the drift and the valley alluvia in Leconfield parish (see fig. 2.1, not plotted). The South Cave example is large, with a possible hut-circle inside it, and is associated with ditches, fields and a possible trackway.

c) Polygonal (including pentagonal) enclosures:

"Polygonal" is such a broad morphological term that it is of much less use in helping to describe Iron Age settlement than either of the two categories already plotted. It is, however (or perhaps in consequence), a widely distributed "type" in North Humberside, Loughlin and Miller using the term to categorise some twenty-four examples, of which three are in the study area (G. 135, G.145, G.192 - all plotted on fig. 2.4).

Unlike "ovoids", they occur in Holderness Division, but without detailed morphological study it would be foolish to try to suggest a reason for this. Examples occur in a cropmark complex of very probable "IA and/or RB" date in Rowley parish (G. 135); for the rest it is sufficient to note that occurrence alongside IA/RB type features, including square barrows, is evidenced elsewhere in the county (e.g. in Wetwang parish, SE 948605, Loughlin and Miller 1979, 140).

2.3.2 Archaeologically investigated Iron Age sites

Despite the abundant evidence for Iron Age, and potential Iron Age, sites revealed by aerial photography in the study area, very few of them have been archaeologically investigated, either by excavation or surface fieldwork. The only barrows to have been excavated are those two of the Beverley Westwood group (G.2, fig. 2.1, section 2.3.1, above) opened by Canon Greenwell in 1875, one of which contained a dismantled cart (Kinnes and Longworth 1985, 142). Unfortunately, there were no gravegoods which allow a specific date to be suggested for activity by practitioners of this burial rite on the western edge of the Hull valley. The metalwork assemblage consisted solely of cart components and horse-furniture, the two horse-bits, moreover, having recently been shown by X-radiography to be of a unique type, i.e. chain snaffles consisting of rings joined by seven-link chains (Stead 1984, 37, 39, fig. 4D, Table 1; Palk 1984, 58; Kinnes and Longworth 1985, Plate UN.65, no.4). There is a little evidence of possible Hallstatt influence on material culture in the study area, in the form of

finger-impressed pottery found unstratified during excavation at Walkington Wold (G.162; Challis and Harding 1975, ii, 36, no. 8, and fig. 77), but most of the rest of the material evidence appears to relate to the first centuries B.C. and A.D. (see section 2.3.3, below). Earlier material has not so far been discovered on AP sites in the study area, though this clearly need not imply a late and restricted date-range for such sites given such factors as the small amount of fieldwork so far undertaken, and the possibility that some sites may have been aceramic at earlier periods, or using less durable ceramics.

Six sites (figs. 2.4, 2.5, 2.8) may be enumerated at this point, viz:

1. Fishpond Wood, Risby (G.139)
2. Burn Park Farm, Skidby (G.145)
3. Redcliff/North Ferriby (G.187)
4. Welton Wold, Welton (G.183, 184)
5. Salthouse High School, Hull (G.97)
6. Chapel Farm, Weel (G.159)

Of the above, nos 1-3 have been alluded to in previous sections and form the subject of case-studies in sections 3.2.2.1, 3.2.2.2, and 2.3.2.3 respectively. No.4 still awaits publication, and most of the published information relates to the development of the site in the Roman period. The site as a whole is discussed in section 3.2.2, below. Nos 5 and 6 form

the subject of case-studies in the following two sections (2.3.2.1, 2.3.2.2).

2.3.2.1 Salthouse High School, Hull (G.97)

A late Iron Age settlement site at Salthouse High School, Saltshouse Road, Hull, was the scene of a rescue excavation by the East Riding Archaeological Society in 1962, on the occasion of the site's redevelopment as a school playing-field. The different spellings of school and road names have given rise to some confusion in site terminology (e.g. Challis and Harding 1975), and the school name has been adopted here as being the more specific.

The area investigated had already been stripped and levelled, and the archaeological work undertaken was restricted to the planning of ditches, gullies and hut-circle drainage trenches, with limited examination of their truncated profiles. The work was directed by John Bartlett whose plan of the features (fig. 2.6) survives in Hull Museums along with an album of drawn pottery. The plan is essentially the same as that reproduced in Challis and Harding (1975, ii, 33 & fig. 68), but there is no other paper or photographic archive extant, either in Hull Museums or the archives of the East Riding Archaeological Society; ditch sections and descriptions of their fills are to be found only in Challis and Harding (above reference). Large amounts of pottery were recovered, of which a representative sample of fourteen vessels has been published in Challis and Harding (1975, ii, 21 & fig. 41); several boxes of animal bone also fortunately survive in Hull Museums, though there is no record of their contents ever having been analysed.

That portion of the settlement which was recovered in plan consisted of two ditched enclosures, both best described as of sub-rectangular shape. Their ditches were between 0.7m and 1.3m in depth and, like all the other features, had been cut into the glacial till, described as "natural light reddish clay with flint and chalk" (Challis and Harding 1975, ii, 33). Each main enclosure was approximately 90m x 60m, and they lay some 70m apart. The northernmost enclosure (hereafter "A") has a single linear ditch joining it at its north-western corner, while the southernmost (hereafter "B") appears to have been far more complex, with five joining ditches in its northern and eastern sectors and the remains of some kind of internal sub-division by ditches or gullies. One ditch curves north and west from Enclosure B and may have joined Enclosure A. Enclosure B has at least two, probably three, curvilinear gullies exterior to it on its southern side, these having been interpreted as hut-circle drainage trenches (Hull Museums 1966; Challis and Harding 1975, i, 141). Two of these contain "central" hearths, of which, however, no other details are extant in the records. As planned, therefore, the focus of the domestic activity within the settlement would seem to have been to the south of Enclosure B (see, however, below). Challis and Harding propose the morphological term "complex ditched settlement" as suitable for describing this and similar late Iron Age sites in the region (such as Dragonby - May 1970).

The full extent of the settlement was not determined and, since it is known mainly in plan, it is difficult to detect chronological changes in its form, though there is some suggestion of the superimposition of hut-circle drainage trenches. The pottery assemblage comprises a limited range of types apparently in

contemporary use at other sites in the Humber region and no phasing can be suggested on these grounds. Both enclosure ditches were sectioned (that of Enclosure B at two points) and also a possible hut-circle drainage trench. This was not one of the two examples with associated hearths, unfortunately, and doubt about its actual function is compounded by the published section and plan, since according to the former it is c. 0.55m wide and some 0.2m deep, but c. 2.5m wide according to the latter. (Similar difficulties attend the dimensions of other features also, with, for example, the width of the Enclosure B ditch being c. 3.7m wide at point E-F according to the section, but c. 6.66m according to the plan). The published sections and soil descriptions are of limited usefulness, though they do serve to suggest recutting of both main enclosure ditches in parts. A functional difference between the two main enclosures may be indicated by the fact that animal bone seems mainly to have derived from the earliest silting of the earliest cutting of the Enclosure A ditch, which, as we have seen, is without the complex of associated ditches and settlement features characterising B. Enclosure A may therefore have been primarily of pastoral-related function, possibly including the slaughter of animals, though without analysis of the bone remains it is futile to speculate further. (The only bone recorded as coming from the Enclosure B ditch is burnt fragments with charcoal in a lens within the earliest fill). Against this interpretation, however, is the fact that the source of the bulk of the pottery recovered appears to have been a "black filling" which was encountered in both the enclosure ditches, which may indicate the proximity of (undiscovered) "domestic" settlement to Enclosure A as well as B.

A date for the settlement in the later first century A.D. has been suggested by Challis and Harding (1975, i, 97 and 141), entirely on the grounds of pottery typology. Although the pottery assemblage includes types of vessels shewn by these authors (1975, i, 94, 96) to be characteristic of the late Iron Age in the region (notably "S-shaped vessels", "pronounced bead-rim jars", and what might be termed proto-Knapton types) there does not seem to be enough evidence to warrant their implied assumption (1975, i, 94) that the site belongs specifically to the Roman period. A small number of possibly wheel-finished vessels (three of the fourteen illustrated by Challis and Harding - 1975, ii, 21 & fig. 41) should certainly indicate a fairly late date for the assemblage, but it would be unwise to go further than this. Wheel-thrown wares of Dragonby Phase 2 type (May 1970) are now known from three sites on the north bank of the Humber, and in the case of one vessel, from Risby, it seems possible that it was manufactured in Parisian territory rather than necessarily traded from South Humberside (y. section 3.2.2.1). There seems no inherent reason, in either case, why the potter's wheel could not have been in limited use in South East Yorkshire before c. A.D. 71.

However this may be, it seems certain that the portion of the site examined did not remain in use long enough to receive Roman or Romanising pottery; the ditches had, admittedly, been truncated by the developers, but it seems unlikely that unstratified Roman wares would have gone un-noticed during the course of the archaeological work. There is not enough evidence from the locality to shew how the date at which Roman pottery was first received was affected by site status or function, but it is clear that it was in use at at least one site within walking distance of Salhouse

High School by c. the second quarter of the second century A.D. at the latest, for the earliest Roman pottery from Greylees Avenue (G. 69), some 5 kms away, is represented by a South Gaulish Form 37 dated to 85-110 A.D. (Rollo 1985) and sherds of up to five rusticated jars, all unfortunately unstratified (Didsbury, in prep.).

No comparable site of the Roman period is known from the Sutton clays, though a number of casual finds (G. 86, 87, 175, 176) shew that these eastern clays continued to be occupied in the Roman period. A recent fourth-century coin hoard from the alluvium surrounding the Sutton island (G. 201) is of special significance and is discussed in sections 3.2.3.1 and 3.3.3, below.

The site's location is shewn on figs 2.5 and 2.7. It lies at the eastern end of the boulder-clay island of Sutton, which rises to at least 7.6m (25') AOD. The site itself is very close to the 3.8m (12.5') AOD contour plotted by Valentin (1957, Karte 2). It is separated from a smaller, outlying "island" of boulder clay to the east, which lies between OD and 3.8m AOD according to Valentin's contours (see fig. 2.7b), by a narrow band of marine alluvium which may have been a channel of open water in the late Iron Age, and it may be noted that this kind of positioning, on the edge of an island of till separated from another by a narrow alluvial channel, is also found at the Chapel Farm, Weel, settlement site (G. 159, section 2.3.2.2 below) as well as characterising square barrows G. 118 and G. 119 discussed in section 2.3.1, above (fig.2.2). The Scandinavian place-name element holmr, ranging in meaning from an "island of high ground" to a "generally marshy place" may also be noted in the names Risholm,

Bransholme and Sefholm (fig. 2.7), suggesting in broad terms the nature of the surrounding area in Anglo-Scandinavian times (Smith 1937, 42, 306).

Movement in this fenland landscape must, at least seasonally, have necessitated the use of boats, and settlements this close to the wetland margin would have been well sited with regard to such transport facilities, as well as to the exploitation of the fen resources, and also defensively. It will be argued in the following chapter, partly on the grounds of a coherent distribution of Romano-British small-finds from the silts, that much of the marine alluvium deposit of the southern valley was at least seasonally exploitable in the Roman period, probably in the interests of pastoral agriculture; there is no comparable body of evidence to point to a similar widespread use in the late Iron Age (see section 2.3.3, below), but it must be remembered that Roman coins, fibulae and pottery are classes of artefact that are much more likely to be recognised and reported as being of archaeological interest than, say, an abraded hand-made Iron Age potsherd. Although the stimulus to exploit the silts on any large scale could probably only have come from the demands of the Roman economy and taxation system, it is unlikely that seasonally available grazing resources close at hand would have been ignored by the inhabitants of such sites as Salthouse High School, and it is possible that the animal bone from the site derives from flocks and herds raised partly on the alluvium.

Blashill (1892) demonstrated how twelfth- to thirteenth-century agriculture in the Sutton region consisted of:

- i) an arable component on the clay itself, with rig and furrow (still visible in the late nineteenth century) laid out at right-angles to an "ancient trackway" running the length of the island;
- ii) "carrside meadow" and other "ings" on the south side of the island between the clay and the carr;
- iii) wet "carrland" surrounding the island and its meadows on all sides, open water for much of every year but exploited for summer grazing in average seasons.

Comparing Blashill's map (1892, frontispiece) which reconstructs this pattern of land-use with Valentin's (1957) Karte 2 (see figs 2.7a and b) it seems likely that the mediaeval "carrside meadow" occupied much of the area between OD and the 3.8m (12.5') AOD contour. The present author has suggested elsewhere that tidal ranges in the late Iron Age and the thirteenth century may have been very similar in the Humber estuary and that the mediaeval exploitation of the silts may have recapitulated to some extent what was the case at this earlier period (Didsbury 1988, Didsbury 1990). These arguments are rehearsed more fully in section 3.3.3, below; for the moment, it is sufficient to note the possible attractions of the marine alluvia surrounding the island for any population practising an agriculture with a pastoral component.

A further environmental attraction of the area may be suspected from the name of the pastures to the east of the site in the late twelfth and thirteenth centuries, for references in the Chronicle of Meaux Abbey (Rolls Series 1866-1868) to in salinis de Suttona suggest that "les Saltz" may have referred specifically to the presence of pits for the evaporation of salt (Med. Lat. salina) rather than simply to areas of saltmarsh grazing (Smith 1937, 42). In the light of present knowledge, however, one can unfortunately do no more than speculate as to whether such economic activity characterised the area in the early first millennium A.D., as in the second.

2.3.2.2 Chapel Farm, Weel (G. 159)

Iron Age and Romano-British material was collected at various times between 1968 and 1983 from the surface of arable land at Chapel Farm, Weel, in the parish of Tickton (TA 060402). The site lies on the smaller and more northerly of the two boulder-clay islands of Weel township, set in the alluvia east of the River Hull (fig. 2.8). The larger of the two islands lies mainly between 2.73m AOD (= 9') and 4.25m AOD (= 14'), and thus represents a fairly notable eminence in the flat landscape, the carmland in the vicinity lying fairly uniformly at an altitude of c. 1m AOD (= 3.29'). The two islands have approximate areas, established by point-analysis, of 246 hectares (= 608 acres) and 38 hectares (= 93 acres). Across the Hull at this point lies the major market town of Beverley, and just to the north, at Hull Bridge, is the southernmost of the three main crossing-points of the Hull valley, sited where firm boulder-clay closely approaches the river on both banks (J. Sheppard 1956, 76). Weel itself means "a

deep place in a river" (Smith 1937, 202); the name Figham (fig. 2.8), which means "cattle-track" (from Old Scandinavian fé and gang, Smith 1937, 198) suggests that some of the alluvial fen in the vicinity was put to pastoral uses by the Anglo-Scandinavian period, and J. Sheppard (1956, 88) points out that the three drainage dykes in the carrs surrounding the Weel "islands" (fig. 2.8), all of which are mentioned in twelfth- and thirteenth-century entries in the Chronicle of Meaux Abbey (Rolls Series, 1866-68), were probably boundary ditches in origin and that at least one of them, Parkdike, was in existence by A.D. 1150.

The material from the site is detailed in the gazetteer (TTN, G. 159). It falls into four main groups:

Group 1. 1967-1968

The upper stone of a sandstone beehive quern (fig. 2.9a), ploughed up by the farmer in 1967, and recognised by Mr. A.H. Place, of the East Riding Archaeological Society, in the farmhouse rockery in 1968.

Group 2. 1969

Flint scrapers, Iron Age and Romano-British pottery, and possibly Romano-British tile collected by Mr. Place on examining the vicinity of the quern findspot. The Roman material includes half of a perforated greyware disc (spindle-whorl?) in Hull Museum, and unspecified amounts of "greyware" and "Dalesware" not in the Museum's possession and which the author has not been able to examine.

Group 3. 1980

Large sherds of several handmade Iron Age, or Roman period in "native tradition", vessels (fig. 2.13) brought up from a depth of c. 2' (= 0.6m) during drainage operations in 1980 and collected by Mrs L. Patterson, a Weel resident and member of the East Riding Archaeological Society.

Group 4. 1983

Multi-period material collected during fieldwalking by Peter Armstrong and the East Riding Archaeological Society in April 1983, after having been shewn Group 3 material by its finder. The area fieldwalked by Armstrong, with the findspots of earlier material, is shewn in fig. 2.9b.

The original find of the quernstone, which is of "Yorkshire"/"unpierced" type, is mainly of interest for suggesting the consumption, if not the production, of cereals on the site at some point in the (later?) Iron Age or earlier Roman period (section 2.2.3, above.)

[The date-range of beehive querns is discussed in Hayes, Hemingway and Spratt 1980, 306-307, and Heslop 1988, 60-61. They would now appear to have been in use, at least in parts of Britain, for most of the Iron Age, though evidence for "early" use in the North-East is still rather scanty, despite a beehive upper stone from a context at Thorpe Thewles which has furnished an overall mean thermoluminescence "date" of 485 B.C. (Heslop 1987, 111). The type is usually held to have become obsolescent at some point in the earlier Roman period in Yorkshire, evidence from Crag Bank, Kildale,

suggesting use into the second century A.D. (Hayes et al. 1980, 307)].

If Museum records are correct in describing the Weel quern as made of "sandstone" then it may be the product of inter-regional trade. The most likely sources of sandstone would be from accessible Middle Jurassic formations which stretch in an arc from the Scarborough/Middlesborough area down into Lincolnshire, the nearest source north of the Humber probably being in the South Cave area at the western foot of the Wolds. Querns are known to have been manufactured from the outcrops at Spilsby in Lincolnshire (Owen, 1987), and if shell-tempered Dalesware could reach Weel, presumably by boat up the Hull after crossing the Humber, then there seems no reason why a quernstone could not have arrived by the same route at a somewhat earlier period. The author's HBMC-funded excavation at Park Grange Farm, Woodmansey, (G.219) yielded part of a lower quernstone in a very clastic sandstone which Liz Wright of the Yorkshire Quern Survey has provisionally identified as being of Spilsby origin (pers.comm.); it is uncertain whether this lower stone is that of a beehive or an early flat type, but it seems unlikely to post-date c. A.D. 150 and should probably be seen as evidence of inter-regional "trade" of the early Roman period. The Weel quern could, of course, have been made from a glacial erratic obtained locally from the boulder-clay; in the absence of a precise lithology further speculation is fruitless.

The Group 2 material does little more than suggest some level of activity nearby continuing into the Roman period, at least as late as the third century A.D if the Dalesware has been correctly identified. The spindle-whorl, if such it is, might indicate the

raising of sheep for wool here during the Roman period, but use of wool on the site could equally well reflect the operation of exchange mechanisms with communities on the nearby Wolds. Flax, also, needs to be spun and it is worth remembering that Ramm (1978, 109) has pointed out the suitability of this crop for the conditions then obtaining in the Hull valley. The only thing we may be reasonably certain about in regard to the Group 2 material is that the tile collected by Mr Place was not Romano-British, for most of his material was collected from the area later fieldwalked by Armstrong and among the ubiquitous tile and brick fragments from Group 4 there is none which suggests itself as Roman in either fabric or form.

The most important material from the site is undoubtedly the Group 3 pottery (fig. 2.13). It was described by the finder (on an annotated sketch map in Hull Museum archives) as having been discovered in a "heap" in the centre of the field, after drainage operations at a depth of some 2' (= 0.6m). The discreteness of the scatter, and the large average sherd-size and number of vessels involved, all suggest the presence of archaeological deposits below the plough horizon and not usually penetrated by agricultural operations.

A minimum number of 28 vessels is represented, of which 11 are illustrated herewith. All vessels to which a form could be assigned were jars, and all were handmade, exhibiting for the most part a fairly low standard of potting. Attempts had been made to smooth either the external or internal surfaces of some vessels, but finger impressions and uneven surfaces are common. Only about half the vessels were relatively hard-fired; most were at least partially

reduced, though there are oxidisation tones on both the interior and exterior of several vessels, suggesting some variation in the firing temperatures. The relatively low degree of control over the firing process suggested by these characteristics perhaps makes it more likely that clamps had been employed rather than more permanent types of kiln structure. The low temperature at which some of the vessels were probably fired would itself have necessitated the heavy tempering which is characteristic of most of them.

All vessels under discussion can be considered as being of a single fabric type, characterised by abundant to copious tempering with a heterogeneous variety of usually fairly ill-sorted stone and other temper. A distinctive light grey inclusion having the appearance of crushed limestone but shewing no reaction with dilute HCL appears in several vessels and is referred to as "Type 1" temper in the vessel descriptions. The angularity and ill-sortedness of many of the inclusions indicate the deliberate crushing of a variety of stones for tempering purposes, but there was clearly no attempt to attain a uniform fabric. Some inclusions, such as red haematite, would be present in the clay when dug and all deliberately added temper could probably have been obtained locally from erratics occurring in the boulder clay.

Armstrong records in his fieldwork summary (Humberside County Council Archaeology Unit, Sites and Monuments Record) information from the farmer that "a thick deposit of clay without inclusions has been identified by the soil survey [sic] nearby, and there are areas of sand within Weel vicinity too". However, the pottery found on site is clearly not of a type which would have necessitated a quality clay-source and, if manufactured

there, should rather be seen in the context of the potting and other fired-earth processes which have characterised areas close to the Hull bank at several periods up to the present day. A twelfth-century kiln (Albion House) and somewhat later tile-kiln complex have recently been discovered in the Beverley suburb of Grovehill, just across the river from Weel (Humberside County Council Archaeology Unit Information Sheets, nos. 10 and 13, not dated; also Archaeology Unit 1987); and the Chronicle of Meaux Abbey records the monks' dispute with the tilemakers of Beverley when, late in the fourteenth century, the latter took to removing clay from the river banks on monastic land at Sutton and Wawne to the south, carrying it away by barge (Cox 1893, 26-27). Several post-mediaeval brickyards and coarseware potteries are likewise known to have been situated near the river banks, especially in Sculcoates in Hull (Watkins 1987, 115). River transport facilities would clearly have been of as much importance to many of these operations as serviceable clay, but there seems to be no need to follow Armstrong in speculating whether this site may have been a production centre for this pottery serving a wider area. Ease of river transport could just as easily account for its presence on the site as an "imported" commodity. The pottery has all the hallmarks of a domestic or otherwise locally restricted product and, as Armstrong notes, there was no evidence of pottery manufacture on the ground (though this need not be expected if, as suggested above, clamps had been employed).

The fabric tradition represented by these vessels is both widespread and long-lived in East Yorkshire and it can be suggested in broad terms that it lasted from at least the third century B.C. to the first century A.D.



(Val Rigby, pers. comm.). The vessels may, in effect, be regarded as continuing the tradition of Erratic Tempered Wares discussed by Rigby in her report upon the pottery found at West Heslerton (Rigby 1986, 146). The fabric of most of the pottery from the Hull Museums/East Riding Archaeological Society excavations at Winestead in Holderness (TA 315255), which has been described elsewhere by the author (Didsbury 1986b), provides a very close parallel and gave thermoluminescence "dates" of 20 ± 400 BC, and 230 ± 440 BC. (DUR 87 TL-103-1AS/2AS). There was insufficient evidence of vessel form at Winestead to allow closer dating to be suggested on typological grounds, but there is an associated pedestal-footed bowl in a sand-tempered fabric which Val Rigby suggests (in litt., 10.1.90) has parallels at both Rudston and Dragonby and should date from between at ^{least} the mid-second (possibly mid-third) and early first centuries B.C.

[The site at Winestead is currently being written up by Angus Smith, who has excavated there on behalf of the East Riding Archaeological Society, and whom I thank for allowing me access to unpublished information and for the chance to examine the pottery].

The fabric type is certainly also employed in assemblages where form suggests a late Iron Age or early Roman date, for example at Salthouse High School, Hull (G. 97), which Challis and Harding (1975, i, 97) regard as probably belonging to the first century A.D. As those authors point out, however (Challis and Harding 1975, i, 13)), there seem to be no useful chronological inferences to be drawn from the size, nature and amount of tempering used in late Iron Age fabrics in the region, and it is to considerations of

form that we must look to suggest a date-range for the pottery from Weel.

The two main characteristics of the Weel vessels are a round-bodied, often quite globular, form, and the common employment of a rectangular-sectioned everted or sharply-everted rim. Several vessels may thus be ascribed to the first two of the three categories which Challis and Harding (1975, i, 96-97) suggest as being particularly distinctive of late Iron Age East Yorkshire, represented in the Weel assemblage by fig. 2.13, nos. 1, 7, and 11. The first of these vessels has a close parallel in a jar from Driffield Aerodrome (Challis and Harding 1975, ii, fig. 38, no.1), and the second, although small, is similar to a range of vessels from the foreshore settlement at Faxfleet "A" (SE 8624) on the Humber (e.g. Challis and Harding 1975, ii, fig. 40, no.7). The thickened upright rim (fig. 2.13, no. 3) and the upright rim above a round body (fig. 2.13, no. 6) are also held by the above-mentioned authors to be typical of the late Iron Age in the region, as are flattened bead-rims (fig. 2.13, nos 8 and 10), which appear in various shapes at Salthouse High School. In general terms, then, it is to assemblages from sites of the first centuries B.C. and A.D. in the Humber region (e.g. Dragonby, Salthouse High School, Faxfleet "A") that the Weel vessels must be compared, and "late Iron Age" must serve for the moment as the best description of their date, as long as it is understood that such vessels could have been produced for some time after A.D. 71. (The long life of some common Iron Age forms is illustrated by the only pot found at the Hasholme log-boat excavation; taken on stratigraphic grounds to be contemporary with the boat's deposition, it yielded a TL "date" of A.D. 190 \pm 270 and is stated to be of a type still in use in

the vicinity in the second century A.D. [Millett and McGrail 1987, 138, fig.29]).

Whether the complete absence of any evidence for the use of a potter's wheel in the manufacture of these vessels (in contrast to Salthouse High School, where three of the fourteen vessels described by Challis and Harding are suspected of being wheel-finished) should incline us to see them as earlier rather than later within this period is open to question. The use of the wheel is certainly a technological innovation which must have an overall chronological significance, and Challis and Harding suggest that it is possibly confined to the first century A.D. north of the Humber, but there is not enough data available to argue dating from the absence of its use in any particular assemblage of this period. Again, the relatively poor standard of potting at Weel, in contrast to the excellence of much handmade late Iron Age pottery from the region (Challis and Harding 1975, i, 12-13), can not be linked to any scheme of chronologically progressive improvement in technique, and it is probable that quite large variations in technical accomplishment, or indeed ambition, should be regarded as one of the characteristics of late Iron Age pottery from the region. Handmade pots of this period need not be "bad", but neither, quite certainly, need they be "good".

Group 4 material was collected during systematic fieldwalking by members of the East Riding Archaeological Society under the direction of Peter Armstrong on the 1st April 1983. Armstrong's field-notes in the Humberside County Council Archaeology Unit SMR shew that an almost square area of some 0.77 hectares/1.91 acres (fig. 2.9b) was line-walked in a

north-south direction with walkers spaced approximately three metres apart. The area walked was determined by the "limit of ploughed land" available at that date, and includes the findspots of much Group 2 material and all Group 3 material, though not the area where an annotated map in Hull Museums records "hint of square foundations" on an unspecified aerial photograph. It can be assumed from the number and size of sherds retrieved that the ploughed area had been left to weather for a considerable period during the preceding winter. After walking, the material was washed and marked with National Grid Reference and line-number (1-30) and stored by the Archaeology Unit. The material was analysed by the present writer in August 1987.

Since the area was fieldwalked along one axis only, the information retrieved is of limited use for the spatial interpretation of the Iron Age material, in that it cannot be used to suggest the location of buried archaeological features of this date. It is, however, extremely valuable in suggesting chronological periods when land-use in the vicinity resulted in the deposition of ceramic material, a process which can normally be linked to occupation sensu stricto or to the manuring of land put to arable use. This, as will be seen below, offers the possibility of relating periods of use of the higher clay island to the changing condition of the carrs surrounding it. Apart from its intrinsic interest, the subsequent history of the site as suggested by the fieldwalked material is of some use in evaluating the Iron Age occupation and is therefore presented in some detail below.

As a first step, as many sherds as possible were ascribed to named fabrics or fabric types. Sherds within the fabric range of the Group 3 material were

designated "Iron Age", and the small amount of Roman material could only be categorised as "Roman greyware". For subsequent periods, Gareth Watkins' two type-series of mediaeval and post-mediaeval pottery found in Hull and Beverley (Watkins 1987, Watkins 1989) were invaluable, and I take this opportunity of thanking him for his help in ascribing and dating some sherds. Given the abraded nature of some of the material, some sherds could only be assigned to a broad period (e.g. "post-mediaeval") and a relatively large proportion remained unclassified. The degree of refinement provided by the above process is unnecessary for present purposes, and a detailed breakdown into fabrics need not be presented here; its value is that it allowed the pottery to be regrouped in chronological periods rather more useful than the usual "mediaeval" and "post-mediaeval". The main chronological implications of the field-walked assemblage can be gathered at a glance from the pie-diagram (fig. 2.10).

The pie-diagram shews that activity resulting in ceramic deposition in the limited area investigated characterises only certain periods. Given the small size of the field-walked area we can deduce nothing from this which allows us to make statements about settlement on, or use of, the island as a whole at any given period; we are, however, justified in observing that, for example, the site's relationship to the centre generating the pottery found upon it was not the same in the Roman period as in the Iron Age. As already suggested, the best interpretation of the Group 3 Iron Age material, with its large sherds and high sherd-to-vessel ratios, is that it derives from features either within an actual settlement area or close enough to one to make rubbish disposal there, in

agricultural ditches, for example, appropriate. This may be supported by the spatial patterns revealed in Histogram 1 (fig. 2.11) where peaks in the distribution of Iron Age sherds (lines 6-7, 10-11, 16-17) could signify original foci of activity. The typical small, abraded, Group 4 Iron Age sherd would, in that case, reflect the weathering of material which had been in the ploughsoil for a considerable length of time, perhaps released by mediaeval ploughing from higher levels than those containing the Group 3 material. The small amount of Roman material, by contrast, as well as its restricted distribution, is suggestive neither of settlement nor of an agricultural practice such as manuring. It is interesting to note, however, the coincidence (fig. 2.11) of the majority of Romano-British sherds with both the westernmost Iron Age concentration, and with scatters of burnt cobbles which could be associated with either, neither, or both of these periods. The best one can say is that "use" of the island continued into the Roman period but that there appears to have been a re-organisation of land-use (perhaps reflecting a change of economic activity) which resulted in a different pattern of ceramic deposition on the site in question. Unfortunately, without more extensive fieldwork, it is impossible to suggest whether there was an actual shift of occupation site in the Roman period, or only a change of use in an adjacent area.

Turning to the post-Roman period, there is no ceramic evidence of any site activity from about the fifth to the thirteenth century. There is no way of gauging what this means in real terms for the earlier part of these eight centuries since it is quite possible that any population groups using the island in the Early and Middle Saxon periods would have been aceramic anyway.

The fabrics in use in nearby Beverley in the Late Saxon and Saxo-Norman periods, however, are both known and distinctive (Watkins 1989, Didsbury and Watkins 1990). Some of these (e.g. Torksey Ware and gritty York types) are beginning to be found on rural sites in the valley (author's fieldwork at Tranby and High Eske, G. 197 and 161), but nothing at all is known of the economic status of those using them and little can be learned from their absence on this site. It is perhaps marginally more likely that the fieldwalked area was wooded or under grass than put to arable use at this period, but it can not be conclusively demonstrated. The name Figham has already been mentioned in support of there having been pastoral activity in this part of the valley during the Anglo-Scandinavian period, and Arram, to the north (fig. 2.8), may also be mentioned in this context: it derives from the dative plural of Old Scandinavian erg and means "at the shielings" (Smith 1937, 190 and 70 - 80), and it may be noted that extensive fieldwalking at Arram Grange by the author in December 1987 suggested a similar absence of Saxon and Early Mediaeval material, though small amounts of Romano-British greyware were retrieved.

Over a quarter of the total sherds recovered during fieldwalking at Weel belong to the period c. A.D. 1200 - c. A.D. 1500. The spatial distributions of the two locally dominant fabrics during this period (i.e. Beverley Fabric 2 "Orangeware" c. A.D. 1200 - c. A.D. 1350, and Cowick-type Humberware c. A.D. 1350 - c. A.D. 1500) is shewn on Histogram 2 (fig. 2.12); similar quantities of each fabric were deposited over similar periods of time, and the evenly spread, low-density distribution of sherds in both fabrics is suggestive of the same cause of ceramic deposition operating throughout the whole period, a cause best interpreted

as manuring operations in the interests of arable agriculture. The complete dissimilarity between this and the Iron Age pattern is notable, and there is no indication that either results from the same set of causes. The sudden onset of arable agriculture on the island, or at least its "visibility", roughly coincides with monastic drainage of the surrounding alluvia (see above) and it may indeed have been facilitated by changed conditions in the carrs, e.g. by improved run-off from the clays, as well as by the climatic optimum centred on c. A.D. 1200. Improved access to such areas of potentially arable land may also have played its part.

Only about half as much material reflects activity on the site during the somewhat longer period from c. A.D. 1500 to the present day. This post-mediaeval material can valuably be sub-divided and ascribed either to the sixteenth and seventeenth centuries (27.58%), or to the eighteenth and nineteenth centuries (72.42%). A variety of factors may have contributed to this result (configuration of fields at any given period, variations in manuring practice etc.) but there would seem to be at least a prima facie case for suggesting that the land was put to arable use less often in the period c. A.D. 1500 - c. A.D. 1700 than in c. A.D. 1700 - c. A.D. 1900, and this again may be linked to the known state of the surrounding carrlands. June Sheppard (1956, 118ff) has shewn that the sixteenth and seventeenth centuries were a period of neglect in the drainage of the Hull valley in general, and a 1602 survey of "drowned Ground adjoining to Hull water" in North Holderness bailiwick revealed large tracts of carrland, including those in Tickton parish, at least seasonally under water (J. Sheppard 1956, 122). The improvements in drainage which finally produced the

relatively dry landscape of today did not get fully under way until the later eighteenth century. The average depth of water in these Holderness Levels in the winter of 1763 was between 2'4" and 4'6" (0.71m to 1.37m) (Grundy 1763, quoted in J. Sheppard 1956, 149-150) and similar conditions could occur in places well into the nineteenth century.

The main conclusions to be drawn from this brief study of finds at Chapel Farm, Weel, can be summarised as follows:

1. Iron Age ceramic material from the site is best dated on current knowledge to the first centuries B.C. or A.D. The nature of the Group 3 assemblage, and the distribution pattern revealed by analysis of the Group 4 material, are consistent with there having been actual settlement on or close to the site during this period. The site thus provides additional evidence for that exploitation of the complex clay and fenland landscapes of the Hull valley in the late Iron Age which is suggested by aerial photographic survey (section 2.3.1, above).
2. There was also activity on the site in the Roman period, but, given the small area fieldwalked, it is impossible to say whether this resulted from a direct continuation of occupation from the Iron Age or not. It seems clear from the different patterns of ceramic deposition in the two periods that there were changes of land-use, possibly including a shift in the position of the settlement itself.

3. Subsequent patterns of ceramic deposition on the site make it reasonable to posit a link between the kind of agricultural activity on the clay and the state of the surrounding fen. Much more fieldwork would be needed to demonstrate this conclusively, but it is at least conceivable that arable agriculture on the clay was only really possible with well-maintained drainage channels in the alluvia. If conditions in the carrs in the later Iron Age were similar to those documented for the sixteenth and seventeenth centuries then an economy oriented towards the exploitation of the fen for both grazing and floral/faunal resources seems most likely.

POTTERY CATALOGUE (FIG. 2.13)

Numbers in brackets are Humberside County Council Archaeology Unit Drawing Office Numbers. The original drawings are stored in the Unit Drawing Office in Beverley. The pots were drawn by Mr Chris Clarke, whom I take this opportunity of thanking.

1. (3432) Hard, extremely sandy fabric with abundant ill-sorted largely angular temper including quartz and Type 1 (most abundant) in the 5-10mm range. Temper extrusive on both faces, but exterior more smoothly finished. Reduced to dark grey in core; variable buff with yellow and reddish-orange patches over much of exterior and upper part of interior.
2. (3433) Fabric similar to 1, above, but probably not the same vessel.

3. (3434) Hard fabric, abundantly tempered. Angular quartz grains in the 1-2mm range. Type 1 up to 4mm, with some dark glassy grains, and crumbly red inclusions (possibly "grog"). Very micaceous surfaces. Interior surface very roughly finished, with extrusive temper. Reduced to dark grey in core, with brown core-margins and interior surface; patchy brown and dark grey exterior.
4. (3435) Hard sandy fabric with quartz inclusions up to 2mm. Occasional Type 1 inclusions up to 5mm. Well finished interior. Reduced to dark grey in core, with grey-brown interior and patchy red and orange exterior, dark grey where abraded.
5. (3436) Softish fabric with abundant ill-sorted inclusions, including: angular Type 1 in the 4mm range, grey rounded pebbles between 4mm and 9mm, and 5mm sub-rounded quartz pebble showing in the interior face. Many reddish-brown inclusions around 2mm are visible in both faces. Occasional voids left by burned-out vegetable matter. Grooves as of finger-marks below rim, and generally uneven exterior surface. Reduced to dark grey in core, with light yellow to buff interior, grey in places, and yellow buff exterior with reddish-orange and dark grey patches.

6. (3437) Softish fabric. Copiously gritted with very angular pink and light-coloured quartz temper around 3-4mm. Lumpy exterior surface. Reduced to dark grey throughout except for a sandy brown area below the rim on the interior.
7. (3438) Hard, very sandy fabric, having a very micaceous "sparkling" surface appearance. Heterogeneous grits up to 5mm (quartz) but most below 2mm. Angular quartz and mica most apparent. Dark grey, almost black, interior; brownish body shews through area of dark grey burnishing on the exterior shoulder of the vessel, which is quite abraded. Apparently pre-depositional residue on the interior of the rim.
8. (3439) Soft, sandy fabric with moderately abundant sub-angular quartz grits around 1mm, and various light-coloured inclusions in the 2-6mm range, possibly including flint and Type 1 temper. Single red (haematite?) inclusion. Reduced to dark grey in core with pinkish-yellow interior, and grey-buff exterior with pinkish patches on rim. Quite worn.
9. (3440) Soft fabric moderately tempered with quartz grits up to 7mm, extrusive on both faces, most in the 3-4mm range. One possible Type 1 inclusion. Temper more homogeneous than no.8, above, but fabric very similar and possibly from

same "batch" of clay. Reduced to grey in core with dark grey exterior and pinkish and yellow-buff interior.

10. (3441) Soft, very sandy fabric sparsely tempered with occasional Type 1 inclusions in the 2mm range. Reduced to dark grey with pinkish-orange patches on the top of, and inside, the rim. Interior surface rather worn. Exterior possibly originally smoothed.
11. (3442) Hard fabric with abundant angular temper around 5mm (mainly Type 1) set in a fine sandy matrix. Temper extrusive on both faces. Sandy buff with orange patches, unreduced. Many vertical finger smoothings and depressions.

2.3.2.3 The late Iron Age settlement at Redcliff, North Ferriby (G.187)

Redcliff is a low morainic cliff of till and glacio-lacustrine sands and gravels on the north shore of the Humber at SE 981250. It lies west of the village of North Ferriby, and is usually referred to as "North Ferriby" in both the geological and archaeological literature, although it actually lies in the neighbouring parish of Welton. The cliff is approximately two-thirds of a mile long, rising from a little over high water mark at each end to attain a maximum height of almost 10m AOD, representing the highest land close to the water's edge for several miles in each direction. Geologically the cliff is a section through a morainic ridge which once probably

blocked the Humber Gap and impounded Lake Humber in the Late Devensian period. The cross-bedded gravels which cap its sequence of Skipsea Till overlain by glaciolacustrine sands and silts were deposited by water flowing eastwards, possibly early overflow from Lake Humber (Crowther 1987b, 102). A similar cliff occurs at South Ferriby on the opposite bank of the river. There are several detailed descriptive accounts of the geological composition of the cliff, notably Stather 1896, Bisat 1931, and De Boer, Neale and Penny 1958 (196). (See fig. 2.14).

The cliff has been known as an archaeological site since at least 1904 (see further below), and intermittent collection there throughout most of the twentieth century has yielded an important body of first-century material, including Arretine and Gallo-Belgic pottery and LPRIA coinage. The loosely consolidated nature of the cliff's deposits, and its exposed south-facing aspect, dictate that it is continually subject to tidal and sub-aerial erosion, so that artefactual material and archaeological features are regularly exposed in the cliff face as it is cut back. The foreshore below the cliff has been a collecting area for amateur archaeologists for many years, and the last two decades have seen substantial activity by metal detectorists on and around the site. Some of the latter, in particular, have acted as human agents of erosion, and the tell-tale signs of uncontrolled digging, amounting on occasions to the wholesale plunder of archaeological data, are familiar to those who have kept a watching brief on the cliff during the 1980s. Artefactual material from the cliff and the beach below it will be discussed in greater detail below. Before proceeding to this, however, a survey of the published literature will provide a

useful guide to the history of work on the site and previous interpretations of its nature.

It has been stated that the site was "first discovered" by the brothers C.W. and E.V. Wright in the 1930s (Crowther, Creighton and Willis 1988, 40); the earliest record of archaeological material from the cliff known to the present author, however, is Thomas Sheppard's 1904 account of a "valuable collection of earthenware fragments from North Ferriby" donated by Mr Featherstone, who "excavates for the benefit of the Museum" (T. Sheppard 1904, 5). The donor is probably that Mr Featherstone who is mentioned on several occasions in the pages of Hull Museums Publications and who presented, amongst other antiquities, an important collection of prehistoric stone implements. The pottery collected on this occasion included, according to Sheppard, a piece of samian stamped "A q T". It seems most probable, however, that the sherd described was actually from a terra rubra vessel stamped by the potter ACUTUS. One of the most distinctive of this potter's several stamps consists of the three letters AQT, the Q being considerably smaller than the letters which flank it and occupying only the upper half of the die space (Hawkes and Hull 1947, Plate XLV, stamp number 9), a fact which Sheppard may have been trying to convey by utilising a lower case "q" in his transcription. Val Rigby, with whom the present author has discussed this matter, finds the interpretation reasonable and suggests (pers. comm., May 1990) that the stamp is probably best regarded as late Augustan in this context. The existence of this stamp has been ignored in all subsequent discussions of pottery from the site, though it ranks as one of the earliest pieces of imported pottery to be recorded from it, ACUTUS being active in the late Augustan to Claudian period

(Hawkes and Hull 1947, 208). Only three other Gallo-Belgic stamps are reported from the site by Rigby (Rigby 1976, 130), all of them being post-Claudian and on terra nigra. Perhaps the greatest significance of the sherd under discussion, if the author's identification is correct, is the implication that features which were being eroded almost a century ago may have contained earlier imported material than those currently under investigation. The importance of this point for site-interpretation and chronology can hardly be over-emphasised; principles of horizontal stratigraphy might certainly be expected to apply on a cliff-top site, if anywhere, and it may be that the earliest site activity was close to the contemporary shore-line and hence long since lost to erosion. As will be seen below, there are other suggestions in the site assemblage that there was considerable activity at Redcliff before the Claudio-Neronian floruit emphasised by the most recent investigations (see further below). Unfortunately, there appears to be no trace of the Featherstone material in the Museum's present collections, and it must presumably be accounted a wartime loss. Sheppard concluded his account of the material with the kind of evaluation of its local significance which, as we shall see in Chapter 3, he was extremely fond of making: "As Roman remains are never found in Hull, the site of Hull probably being in Roman times an impassable salt marsh, it is extremely gratifying to local lovers of antiquities that Roman remains are found within a few miles of the city."

This Featherstone collection is undoubtedly the same body of material which was referred to by Sheppard a few years later (T. Sheppard 1907): "recently at North Ferriby several interesting pieces of Roman pottery have been washed from the cliff, including a piece of

Samian ware with the maker's mark thereon, and a fragment of an exceptionally large vase of Roman date". Sheppard, as all connoisseurs of his career will be aware, was never averse to publishing the same material several times over, and his use of the word "recently" is explained by the fact that the 1907 paper was originally "read" in February 1905, the Featherstone material having been accessioned by the Museum in the first quarter of 1904. This 1907 paper is given as Authority No. 2 by the Ordnance Survey Site Index (reference SE 92 NE 6), though it converts Sheppard's "recently" into "1906"; similar error exists in Hull Museums SMR, which assumes the material was found in 1907. Authority No. 1 in OSSI is the OS 6" map of 1928 which records "Roman pottery found AD 1906" at SE 98202502. Both authorities clearly refer to the same find of material, the true discovery date of which is, therefore, not "1906" but "before March 1904".

The next, and arguably most important, period of collection from the cliff began in the summer of 1932, when the Wright brothers, both then schoolboys, began to collect bones, oyster shells, pottery and metalwork from patches of loose dark earth exposed in the face. These finds received their first publication in the Yorkshire Archaeological Journal after Sheppard had notified them to Mary Kitson Clark for inclusion in her annual "Roman Yorkshire" compilation (Clark 1934, 199). Clark noted the presence of stamped terra nigra and fine white wares among the pottery, and described a copper alloy brooch of the "Aucissa profile", ornamented with lateral knobs (Collingwood Group P, or "Hod Hill" type). Further finds from the cliff were made in 1934 and recorded by Clark in the same journal (Clark 1936, 233); these included a brooch of Collingwood Group G, a twisted copper alloy chain which

may have belonged to it, and the possible pin of a penannular brooch. The two sets of finds, together with a bibliographical reference to the earlier Featherstone material, formed the basis of the North Ferriby entry in Clark's Gazetteer (Clark 1935, 81-82), where the terra nigra is dated to "not ... later than the third quarter of the first century A.D.". Sheppard is credited with advising the Wrights where to dig. A "forthcoming" account of the finds by Sheppard in Transactions of the East Riding Antiquarian Society is referred to by Clark in both 1935 and 1936 (see further below)

The first detailed description of the Wrights' finds from the cliff is contained in Corder and Davies Pryce 1938. The site was clearly calculated to be of great interest to Corder, who had been excavating at Brough/Petuarria, some $2\frac{3}{4}$ miles to the west, between 1933 and 1937. The paper opens with an account by C.W. Wright of the site and the work carried out by him and his brother, no mention being made of Sheppard's supposed initiating rôle in the discoveries. The features from which the artefacts derived are described as rubbish pits, and a possible hut floor. The bulk of the paper consists of a catalogue of the pottery and metalwork recovered by the Wrights, including those objects recorded by Clark in 1934 and 1936. Mentioned for the first time among the metalwork is a copper alloy stylus. A detailed typological discussion of the pottery led the authors to the conclusion (op. cit., 270) that it dated almost wholly to the first half of the first century A.D. and that much of it was typologically pre-Claudian. Its presence on the site is discussed in terms of "pre-Claudian ... Romano-Gaulish commercial penetration into Britain" (op. cit., 271). Similar assemblages of imported pottery were not

then known further north than Leicester, a fact which inclined the authors to favour sea-borne trade with the Continent, perhaps as a northward extension of the trade with Colchester, as the mechanism by which the material had arrived on site, and its presence in the territory of the Parisi was seen as "a striking instance of the extension of Romano-Gallic influence amongst a tribe which was not of the Belgic stock" (op. cit., 271). The possible Camulodunum connection was accepted by Hawkes and Hull (1947, 134), who stated unambiguously that "at North Ferriby on the Humber ... an assemblage of Belgic pottery similar to that of Camulodunum attests close relations (doubtless by sea) with Cunobelin's capital in the latter part of his reign". Careful consideration was also given by Corder and Davies Pryce to the locational significance of the site, on the only high land near the water's edge on the north bank of the Humber for some miles, and directly opposite equally high land at South Ferriby, where early first-century material had also been recovered (T. Sheppard 1906). The site at Redcliff was seen as being the northern terminus of a pre-Roman river crossing which would be abandoned when Ermine Street, which must have terminated some three miles west of South Ferriby, was constructed. North Ferriby was seen as being equally well placed, in the pre-Claudian period, for traffic with the inhabitants of the Lincolnshire Wolds and for sea-borne trade. The fact that Corder had excavated no similar pottery assemblages at Brough, the earliest pottery found there being confidently dated by him to the second half of the first century, led the authors to the conclusion that "the Parisi, who inhabited the settlement at North Ferriby, abandoned that site and established themselves at Petuaria soon after A.D.47" (op. cit., 264). It is important to note that this interpretation of the site

and its chronology remained unchallenged until a re-examination of the pottery by Rigby a generation later (Rigby 1976, see further below).

Corder followed up his paper with Davies Pryce by mounting exploratory excavations in September 1938, while the Wrights made further discoveries in the cliff face in January 1939. There is no extant archive from these excavations, but results were summarised in Corder, Wright and Wright 1939 (September); a single Arretine platter of Loeschke Form 2 from the 1938 excavations, ascribed to the late Augustan-Tiberian period, had been published by Corder and Davies Pryce a few months earlier (Corder and Davies Pryce 1939 [April]). Corder, Wright and Wright rehearsed the conclusions presented in Corder and Davies Pryce 1938 and published a selection of pottery and metalwork, the majority of which was from the 1938 excavations. There was little to report from the 1938 season apart from "somewhat indistinct pits and little ditches that could not be planned" (op. cit., 239), though the trenching did serve to show that the occupation extended some way inland from the contemporary cliff face and had not been entirely removed by erosion. The discovery by the Wrights of what was interpreted as a hut floor exposed in the cliff face in January 1939 yielded further artefactual material including the Arretine platter already referred to. The most important advance in site chronology was the conclusion that occupation "may have extended to A.D. 75 or 80" (op. cit., 240), for the 1938 excavations had produced a sherd of rusticated ware and a Dolphin brooch of Collingwood Type H, while a samian Dr 29 had also been recovered from the eastern end of the cliff. These finds were taken as "evidence of some overlap of occupation with that of Petuaria" (op. cit., 243).

The last, and by far the least useful, contribution to the literature of the site in the 1930s, but one that must be mentioned, is Sheppard's paper of 1938, published both in Transactions of the East Riding Antiquarian Society and as a Hull Museum Publication. It is an extremely garbled and careless account of finds from the site, accompanied by rudimentary sketches of pottery, among which may faintly be discerned a terra nigra cup and the rim of a butt beaker. The paper opens with a claim to have found, many years before, "four or five halves of plain bowl-shaped vessels ... which had evidently been washed from the cliffs". If this had been the case, then, most unusually for Sheppard, he had never published the fact, and it may be that the reference is a careless allusion to the finds made by Mr Featherstone, whom Sheppard appears to have forgotten by this time and who, indeed, has received only a single mention in the site literature between 1904 and the present day (Clark 1935, 81, referred to above). However this may be, Sheppard asserts that he has "recently" told the Wrights of his previous discoveries and that they have "since" found the material and features in the cliff face which have already been described (T. Sheppard 1938, 166). The word "recently" is hardly justifiable, given the six years of discovery and publication which had elapsed since 1932, and it may be that the paper is a hastily revised version of that which had been noted by Kitson Clark as "forthcoming" in Transactions of the East Riding Antiquarian Society some years before (Clark 1935, Clark 1936). The paper in its published form would seem to have been finalised in 1938, for it refers to "trenches" and "excavations"; neither Corder nor Davies Pryce receive any mention in the paper, however, despite their major involvement with the site and the fact that Sheppard describes metalwork already

published by them (Corder and Davies Pryce 1938). The paper would be of more interest to Sheppard's biographers than as a contribution to the site literature were it not for the fact that his descriptions of some of the pottery recovered would seem to have had important consequences for site interpretation. It must be noted at this point, firstly, that E.V. Wright recently left his audience in little doubt, in a public lecture at Hull University, of the deep inadequacy of Sheppard's knowledge of Roman pottery⁽¹⁾; and, secondly, that Sheppard refers in this paper to classes of pottery which neither Kitson Clark, Corder, nor Davies Pryce had recognised in the growing assemblage from the site. Thus, he refers to what, from the description given, is evidently a butt beaker as "Caistor ware", as well as to greywares of the "Throlum" (sic) type, and to shell-tempered wares, "the most common form of pottery ... characteristic of the fourth century A.D." (op. cit., 167; my italics). His apparent ignorance of the extant site literature is also suggested by the pottery descriptions employed, for he refers to "almost polished pieces of dark grey material", stamped, and "clearly originally shallow dishes", without employing the term terra nigra (op. cit., 167), and asserts that no "true", but only "bastard", samian had been found on the site (op. cit., 169), a truly astonishing claim given the publication by Corder and Davies Pryce of an

(1). The Humber and its Environs in History and Prehistory, day school held at Hull University, 19th September 1987. Papers delivered form the core of Ellis and Crowther 1990. See Wright 1990.

early South Gaulish platter of form 15/17 (Corder and Davies Pryce 1938, fig. 2, no. 1) and his own report of stamped "samian" from the site in 1907. Sheppard's assertion that later Roman (Caistor and Throlam), and specifically fourth-century, wares had been found on the site is the only such claim in the literature and must therefore be assumed to be the source of Wachter's statement that North Ferriby was "apparently still occupied in the fourth century" (Wachter 1974, 395). Since an unbroken occupation at Redcliff is an important part of Wachter's case in seeking the site of Petuaria near North Ferriby, rather than at Brough on Humber (Wachter 1974, 394-397), it is clearly most important to stress the utter unreliability of Sheppard's 1938 account of the pottery, and to note that there is no evidence at all to suggest that the site as presently known continued as a settlement focus much after the Flavian period (see further below).

The post-war period saw no resumption of detailed fieldwork on the cliff until the 1980s, though museum accession numbers shew clearly that the material archive continued to be enhanced during the 1950s and 1960s, partly as a result of a continuing interest in, and intermittent watching brief on, the site by E.V. Wright. "Recent" pottery from the cliff was displayed in Hull in the mid-1960s, and the exhibition catalogue reveals that the pre-war chronology of the site was still accepted (Hull Museums 1966). A Colchester brooch found on the foreshore in 1967 was described by Stead (1971) with other pre-Conquest material from Yorkshire. The site received occasional mention in wider studies in the 1970s, either in relation to Brough/Petuaria (Wachter 1974, 394ff), or as providing evidence of established trading relations between the Parisi and territories to the south before the conquest

of A.D. 71 (Cunliffe 1974, 113). The main contribution to the literature in this period was, however, Rigby's study of 1976, in which she compared the Gallo-Belgic assemblages from North Ferriby and Old Winteringham and found them not only remarkably similar in composition but "both scarce in forms which are demonstrably pre-Claudian in date", with the emphasis "on forms which are most common in Claudian and later contexts" (Rigby 1976, 134). This Claudio-Neronian emphasis among the Gallo-Belgic wares received support from B.R. Hartley's examination of the three pieces of samian then known from the site, a report on which is included in Rigby's paper. Two were South Gaulish and of Claudio-Neronian date, and the third, the Loeschke form 2A already published by Corder and Davies Pryce (1939), was held to be Tiberian or very early Claudian and unlikely to have arrived on site after the 40s of the first century A.D.

The last reference to the site which need be noted before proceeding to a discussion of the present author's fieldwork, and the subsequent excavations, is an undergraduate dissertation in the University of Wales by D.G. Reid (Reid 1980). Its principal value lies in the fact that Reid drew the cliff in section for a distance of 160m west of Long Plantation, apparently in September 1979 (Reid 1980, fig. 1). It represents the first attempt to draw the cliff face for archaeological as well as geological purposes. It shews various features which Reid interprets as archaeological, including the supposed remains of two of Corder's 1938 trenches, and clearly marks the "grey occupation layer" west of Long Plantation which was later to be the focus of the present author's fieldwork and subsequently of Hull Museums' 1986-1989 excavations (Feature 1, figs. 2.15 and 2.16). There are also

valuable photographs of the cliff, including this "occupation layer", taken in January 1980, which complement various late nineteenth- and early twentieth-century photographic archives of the cliff held in Hull Museum (e.g. the Mason albums of the 1890s, part of the Natural History collections).

The present author began a watching brief on the cliff in the summer of 1984, a period when it was being subjected to a disconcertingly large amount of unauthorised digging. Pottery and animal bone dislodged during these operations, and overlooked by the "excavators", could be found in the loose material at the foot of the cliff and were collected by the author. He had also during this period compiled new lists of metalwork from the foreshore below the cliff, specifically LPRIA coinage, reported to Hull Museums by metal detectorists. In September 1984, David Crowther initiated the Melton Pilot Project, the aims of which are outlined in an unpublished document (Crowther 1984) written specifically for the members of the Field Studies Group of the East Riding Archaeological Society, which was to provide the field team for the project. The main aims as stated in this document were twofold: firstly, to investigate an exposure of estuarine clay and peat in the intertidal zone of the foreshore west of Redcliff, an exposure containing wooden structures of "probable later prehistoric date"; and, secondly, to measure erosion and plot the archaeology of the cliff, "the [erosional] threat to which is undoubtedly compounded by ploughing and treasure hunting" (Crowther 1984, 1). The intertidal investigation was stated as the "immediate priority" and the work on the cliff would use "conventional 'dry' methods [which] need not be explicitly stated here" (Crowther 1984, 1). The intertidal fieldwork was

planned to take place "in the autumn and spring of 1984-5" (loc. cit.). Having already noted an urgent need for a watching brief on the cliff, and given the fact that the rest of the field team were to be occupied with the intertidal work until the following spring, the author suggested that he should be responsible for the Redcliff component in the project, donating to it the research which he had already commenced, and this was agreed. A synopsis of the work carried out by the author on the cliff is provided below, and this work, together with a new chronological examination of the site archive, an assessment of its implications for site interpretation and chronology, and an interim report on the pottery from the excavations of 1986, formed the basis of the author's contribution to Crowther and Didsbury 1988.

The author wishes to correct, at this point, certain misleading impressions in recent literature regarding what he sees as his own leading role in the fieldwork which resulted in the excavation programme which began in 1986. In Crowther and Didsbury 1988 it is subsumed in the description "assessment and investigation by Hull City Museums and Art Galleries" (op. cit., 1), whereas the work was actually undertaken, as stated by the author in 1986 (Didsbury 1986a, 29) "on behalf of [the East Riding Archaeological] Society, Durham University and Hull Museums". The author's field notebooks record a total of thirty-one working visits to the cliff between November 1984 and the opening of excavations in Summer 1986; on only three of these occasions was Hull Museums represented by its archaeological staff and the only operation out of those summarised below in which "Hull Museums" was physically involved was the laying out of a datum line along the cliff top and the commencement of erosion monitoring by offset

measurements from it. It must also be stressed that, pace the statement in Crowther 1987a, the only person who assisted the author in the measured drawing of a 30m section of the cliff-face was Mr Gordon Ostler, his co-discoverer of the villa site at Fishpond Wood, Risby (section 3.2.2.1, below). Excavation at North Ferriby was not originally envisaged as arising out of the Melton Pilot Project, and it is clear to the present author that it is his own research and fieldwork from summer 1984 onwards which highlighted the urgent need for such excavation and enabled the case for it to be made to the landowners and to other funding bodies.

The main components of the fieldwork undertaken by the author are discussed below (see also figs. 2.15, 2.16):

1. Investigation of the cliff face.

The cliff was initially scrutinised for archaeological features along its length by observation from the beach below and, where possible, from the heavily overgrown talus which obscured the lower half of the face for much of its length. (Exceptionally severe storm damage has recently [March 1990] removed these deposits entirely, an indication of the sudden erosional stress to which the cliff is subject). Three areas of archaeological interest were noted during this initial survey (fig. 2.16). The first was an "occupation layer" of coarse grey loam occupying a length of some 30m of face immediately west of Long Plantation at grid 1120E (Feature 1, figs. 2.15, 2.16). This must be equated with the feature(s) noted by Reid in a similar position four years earlier (Reid 1980, fig. 1). The grey layer exposed in the face lay immediately below the plough and sub-soil horizons and appeared on first inspection to represent ditches cut into the underlying

sands and gravels. The layer had not been described in detail by Reid, and he recorded no artefactual material as deriving from it. In 1984, however, bone and pottery was easily recovered on a regular basis from collapsed cliff material below these features and could be seen exposed in situ within the grey layer. The base of the layer at its western end also contained a line of apparently deliberately laid large cobbles, while the eastern end coincided with the point at which there is an abrupt change in the natural drift deposits, where the gravel, dominant to the west, lenses out completely and where modern land use changes to planted woodland.

A second clearly defined archaeological feature was visible in the cliff face some 325m further to the west at grid 825E (approx.), where a shallow cut with a ditch like profile (Feature 3, fig. 2.16) proved to contain animal bone and hand-made pottery in association with imported white wares and body sherds in a flagon fabric which will be discussed further below (KINCM:1171.1986.100-145). Finally, a ditch-like cut was noted some metres to the east of the grey occupation layer, below Long Plantation itself at grid 1176E (Feature 2, fig. 2.16). This feature contained animal bone in similar condition to that from the grey layer, some of which was collected from the beach below (KINCM:1171.1986.51-53), but no artefactual material was recovered and the date of the feature must therefore remain in doubt.

The features described above suggested the possibility of an original occupation stretching over at least 300m in an east-west direction. The grey layer at the eastern end of the cliff was particularly rich in occupation debris and it was clear that here was an

opportunity to record, for the first time in the history of the site, the exact location of archaeological features, to draw them, and to examine artefactual material in relationship to the context from which it derived. Accordingly, the author undertook to draw the relevant sections of cliff face (fig. 2.15) and, while so engaged, to record the position of exposed material and remove it. It quickly became apparent that the grey layer contained Gallo-Belgic and other wares of comparable date to those examined by Rigby (1976). Several fragments of butt-beakers and terra nigra platters, particularly Camulodunum Forms 113 and 16 (Hawkes and Hull 1947) were recovered from the grey loam, and, wedged among the cobbles which it sealed, was almost half the base of an imported, wall-sided, gritless mortarium of c. A.D. 40-55 (pers. comm., Val Rigby). A sherd from a Camulodunum Form 163 flagon may also be mentioned. An initial inspection of the bone recovered during these operations suggested that it derived from "unimproved" native breeds of animal (pers. comm., Sue Stallibrass). The feature observed toward the western end of the cliff also contained terra nigra fragments, in association with the rims of two native jars in vesicular fabric and of similar form to examples found in mid first-century A.D. contexts at Old Winteringham (Rigby and Stead 1976, fig. 74, nos 10 and 11). The fill of the feature also contained three rouletted sherds of a butt beaker of Camulodunum Form 112 in TR3 with "chocolate"-coloured fumed surfaces. Most importantly, there were also four body sherds of a flagon in a fabric identical to the augite-rich "black sand" fabric used for Italian Dressel 1 and later (Dressel 2/4) amphorae. This identification, by Val Rigby, was subsequently confirmed by thin-section analysis of one of the sherds at the British Museum.

Flagons in this fabric were previously only known from Braughing/Skeleton Green, and the precise form was still unknown in 1985 (pers. comm., Val Rigby). The dating of these forms is also still uncertain; if their Campanian fabric is to be linked with that of Dressel 1 then it may be that they should be considered as being no later than the end of the first century B.C.; as noted above, however, the same fabric was one of the two principal ones employed for Dressel 2/4 which date from the late first century B.C. to the mid second century A.D. on the Continent (Peacock and Williams 1986, 105-106).

A more detailed survey of the pottery collected during recording of the cliff face is unnecessary in this context. It may be noted here that all artefactual and bone material collected during all aspects of the author's pre-excavation fieldwork is accessioned in Hull Museums under the number KINCM:1171.1986. As stated in Crowther and Didsbury (1988, 9), the two main factors which lay behind the decision to excavate at Redcliff in 1986 were the continuing erosional and other damage to the cliff (see below) and the "quantity and range of material" which the cliff recording exercise had revealed as being still available for study. The "grey layer" and the cut feature further west dictated, in fact, the positioning of two of the three excavation trenches in 1986 (Trenches 1 and 3, Crowther and Didsbury 1988, 9ff).

2. Assessment of threat to archaeological deposits.

Two threats to the surviving archaeology of Redcliff were apparent from the outset. That the cliff was subject to regular tidal and storm damage was well

known, but the damage had never been quantified; that the foreshore below the cliff was a favourite haunt of metal detectorists, and that parts of the cliff were being dug into by unauthorised persons, were equally obvious, and possibly not un-connected, facts. In view of this twofold threat to the archaeology a base-line was established some way north of the cliff face. This datum was designed as the zero northing of a grid expressed in metre units, the zero easting lying 1150 metres west of the western edge of Long Plantation. As well as allowing the accurate location of finds and features for the first time in the site's history, the cliff-edge profile could now be drawn by offsets from this base-line and the rate of erosion monitored on a regular basis. This exercise was first undertaken in November 1984 and repeated in April 1986 (fig. 2.15). The exercise suggested that natural erosion over the eighteen-month period had caused an average land-loss of c. 0.5m along much of the cliff face, but that up to a metre had been lost immediately above the grey layer west of Long Plantation, confirming the real damage being done to the cliff and its archaeology by treasure hunters. The erosion monitoring exercise continues, and a loss of up to 1m per annum is claimed as being "amongst the most rapid rates of erosion in the British Isles" (Crowther, Creighton and Willis 1988, 40).

3. Fieldwork on the cliff-top.

Two pre-excavation exercises were carried out on the cliff-top in August and September 1985.

A block of land measuring 60m x 20m lying north of the grey occupation layer, and with its long axis parallel to the cliff face, was subjected to resistivity survey

using a Geoscan RM 4 machine provided by Durham University; the work was carried out by the author with Messrs Bryan Sitch and Angus Smith. The aim of this limited exercise was to test the value of this method of sensing as a means of detecting archaeological features against the complex background geology. A hand drawn plot of the results revealed an obvious distorting "edge-effect" as the cliff edge was neared; the plot was shewn to Dr J. Pocock, who was of the opinion that the meter was reacting mainly to geological variations rather than to archaeological features. The first season of excavation revealed, however, that the meter had almost certainly traced the course of a major ditch feature running obliquely from north-west to south-east through the survey block (ditch 55, Crowther and Didsbury 1988, 11 and fig. 1.5). Further geophysical work has since been carried out and Steven Willis informs me (in litt.) that a magnetometer survey of the eastern end of the field by HBMC in May 1989 detected an area of enclosures in the vicinity of the excavated site.

Field-walking north of the cliff was also undertaken by the author and members of the ERAS Field Studies Group (fig. 2.16). The presence of small amounts of first-century pottery, including terra nigra, Arretine or early South Gaulish samian, and white flagon fabrics had been noted on the ploughed field up to 20m north of the eastern end of the cliff during the winter of 1984/1985 and could be accurately plotted in relation to the cliff-top datum line. Permission to field-walk was, however, initially refused by the farmer, and it was not until September 1985 that the exercise took place, on a far from ideal surface of partially ploughed-in barley stubble. A block of land stretching 120m north of the cliff, and for 180m west of Long

Plantation, was walked in lines 10m apart, each line being subdivided into 30m lengths. Insufficient material was found to justify any conclusions about the plough threat to archaeological deposits, but relevant material was found towards both the western and northern extremities of the field-walked area. Taken together with the evidence from the cliff-face itself, the exercise was valuable in suggesting a block of land of at least 300m x 150m as being of potential archaeological interest. Even if this was "the back of a settlement largely lost to erosion" it was "important by any standards" (Crowther 1987, 285).

The ensuing four seasons of excavation at Redcliff, under the supervision of Steven Willis and John Creighton, have concentrated mainly in an area of some 1000 m² west of Long Plantation, north of the artefact-rich grey layer already discussed. Interim reports on the annual excavations are published as follows:

1986 season.....Crowther and Didsbury 1988;

Crowther 1987a;

1987 season.....Crowther, Creighton and Willis 1988;

1988 season.....Willis and Creighton 1989;

1989 season.....Creighton, Willis and Crowther 1989.

The whole excavation programme is most usefully summarised in Crowther, Willis and Creighton 1989. It is neither the intention nor the prerogative of the present author to enter into a detailed discussion of the excavations in advance of the excavators' own final assessment, and it will be sufficient here to note the most significant findings in outline, summarised from the above-mentioned paper:

Three phases of intense activity, involving extensive remodelling of the site, are compressed into the middle decades of the first century A.D. A ditch and flanking pits (Phase 1) were succeeded by a pebble-surfaced hollow feature which may have functioned as a roadway leading towards the waterline (Phase 2). In Phase 3 the eastern part of this hollow was infilled by construction of a revetted earthen surface upon which were found a hearth, gully, and occupation debris in the form of pottery and burnt bone; at the same time, the now narrower hollow feature was resurfaced with a second layer of pebbles. (A fourth phase, for which there is no dating evidence, sees a narrow ditch cut into the final fill of the hollow feature and respecting its line, with a shallow square hollow closely adjacent to it on the east. The authors hint at the possibility of an Anglo-Saxon date for this phase, while stressing that Anglo-Saxon settlement at Redcliff remains unproven).

Attempts to understand the function of the settlement at Redcliff have always concentrated on discussion of its chronology and its location, and these two aspects are likely to continue as the mainstay of assessment of the site in the foreseeable future. The nature of the excavated evidence so far published suggests that the main contributions made by the excavation programme to site interpretation will lie in the large body of stratified artefactual material now available, and, what is completely new, in economic interpretation of the floral and faunal data from ditches, pits, and occupation layers. Little of this latter class of data is currently available, though its potential was already evident in the first season's work, when a carbonised vetch seed spotted during excavation of one of the pits was of a size and nature to suggest to

Carol Palmer the likelihood that it derived from Vicia faba (sp.) cultivated as an economic crop (Crowther and Didsbury 1988, 11).

The remainder of this section consists of a review of the principal dating evidence for the site (substantially a revised version of that published by the author in Crowther and Didsbury 1988) and a concluding discussion of the locational significance of the site in relation to this chronology.

The principal dating evidence

As already noted, an examination of all available pottery from the cliff by Val Rigby (Rigby 1976) had suggested a Claudio-Neronian floruit for the settlement a decade before the most recent series of excavations. This floruit was also, in the main, confirmed by material collected by the author from the cliff-face, cliff-top and foreshore between 1984 and 1986. By the close of 1986 it was possible to further examine this chronology in the light of the pottery and metalwork from the first season's excavations, and also to assess the significance of a body of unstratified metalwork from the foreshore below the cliff which had been reported to Hull Museums by metal detectorists during the 1970s. This latter exercise was felt to be particularly valuable, for it had sometimes been suspected that "Ferriby Foreshore" had functioned as the local "safe provenance", to be used when reporting artefacts, actually from other locations, to which the finder feared he might otherwise lose claim. Any marked chronological discrepancy between the bodies of material from the foreshore and the excavations would imply, therefore, either that such suspicions were well founded, or that there were periods of site activity

which had formerly been represented in deposits now lost to erosion.

The Gallo-Belgic and related wares from the 1986 excavation have been summarised by the author in Crowther and Didsbury 1988, Table 1.1, and need not be re-presented here. Identification was based almost entirely on rim sherds and formal attributions were made in terms of the Camulodunum type-series (Hawkes and Hull 1947).

Comparison of this table with Rigby 1976, fig.3, is remarkable for its similarities rather than its differences. Forms already noted by Rigby in the Redcliff assemblage but not represented in the material from the 1986 excavations are restricted to cup Form 8 (of which she recorded a single example), beaker Forms 72/81, 82/84 and 114, and the flagon 154. Given the interim nature of the author's analysis, and the fact that it was based upon only one season's excavation, it is likely that the list of forms finally published from the site will have undergone extensive modification, and all these forms may eventually prove to be represented. Forms which were found for the first time at Redcliff in 1986, i.e. platter Form 2 and flagon forms 163 and 172, may be considered more closely.

The Form 2 platter, like the Form 3, is generally considered to be a pre-conquest import into Britain. It is found as a single example at Old Winteringham, so that its appearance at North Ferriby in a similar overall assemblage is not remarkable. Like the additional Form 3 here recorded it does little to modify the Claudio-Neronian bias of the group as a whole. The two-handled flagons 163 and 172, which were commonest in periods 4 to 6 at Colchester (Hawkes and

Hull 1947) may likewise be seen as consistent with a date in the 40s to 60s A.D., the form 172 having a much less massive rim than Flavian examples (e.g. Corder 1930, fig. 1, no. 17). It may also be noted that the ratio of the later white-ware Butt Beaker 113, which is the commonest beaker on the site, to the Tiberian-early Claudian 112 (in terra rubra) is in the order 5:1.

In addition to Gallo-Belgic wares some half dozen sherds of Arretine/samian were found. Two of these were provisionally identified as being Dr 17/Ritterling 4 (probably Claudian) and a Loeschke 2A. It is interesting to note that the forms are two of those discussed by Hartley (see above), and a similar conclusion as to dating may be confirmed by specialist analysis. Small amounts of samian were also found during pre-excavation fieldwork, as already noted, and these included the very worn footring of a Dr 15 or 15/17 of Arretine or very early South Gaulish manufacture (pers. comm., Val Rigby; Hull Museums accession no. KINCM: 1171.1986.49).

Three first century mortaria were known from the site by 1986, two from the excavation being of similar gritless wall-sided types to that from the cliff-face already discussed, and provisionally dated to the period 40-55 A.D.

It will be evident from the above that an interim assessment of the pottery from the first season's excavations did not produce any evidence for the arrival of imported wares at the site, as presently known, before the late Tiberian to early Claudian period. As far as can be gauged from the most recent statement on the site (Crowther, Willis and Creighton

1989) the pottery from subsequent excavations would not seem to have modified the overall Claudio-Neronian bias of the assemblage. There were, in 1986, slight indications that the site was not totally abandoned before the Flavian period. Sherds of rusticated ware found in the cliff-face by the author (also reported by Corder, Wright and Wright 1939, 240) indicate some continuing level of activity; and a local imitation of a TN platter, also from the cliff-face, was thought by Val Rigby to be similar to a type of probable Flavian and later date found at Old Winteringham and Dragonby (KINCM:1171.1986.48, cf. Rigby and Stead 1976, fig.75, no.17; Elsdon and Rigby 1987, 64).

There was very little, however, to suggest that activity at the site was at all pronounced after the Neronian period. A handful of possibly later greyware sherds found in the ploughsoil may represent Romano-British agricultural operations.

Turning to metalwork from the site, the principal body of evidence in 1986 was the large number of coins and fibulae reported to Hull Museums by metal detectors in the previous decade. These are discussed under specific categories below and relevant published material from the 1986 excavation is alluded to where necessary.

1. Fibulae.

Metal detected fibulae from the site to 1986 may be divided as follows:

Earlier types		Later types	
La Tène III types	2	Dolphin	2
Thistle	1	Head Stud	2
Aucissa	2	Dragonesque	1
(Debased) Eye	1	Fowler Type C	1
Colchester	2		

The eight brooches in the left-hand column would all generally be regarded as pre-Flavian. Of the six in the right-hand column, the first five are of types which, although they would be available well into the second century, have their beginnings in the Claudian and Neronian periods. Again, the Type C penannular brooch was regarded by Fowler as "the Belgic type par excellence", although it persists throughout the Roman occupation (Fowler 1960). When Fowler published her survey the distribution of this type of fibula was interpreted as being almost entirely restricted to the so-called "Belgic" areas of the civil province, those outside this area appearing only on military sites or on those shewing signs of "Belgic" influence. With the exception of two such sites (Great Chesters in Northumberland and Eldbottle in East Lothian) the northernmost concentration of finds was in Lincolnshire, where three out of four recorded came from South Ferriby. The emphasis of the group as a whole thus falls decidedly upon those types which were available during or before the Claudio-Neronian period. The brooches from the 1986 excavations (Crowther and Didsbury 1988, 15) were two Langton Down types, two

Colchester types, and a Colchester derivative. The first two of these categories have a similar date range of c. 10 - 60/65 A.D., while the Colchester derivative could be Flavian. Both Langton Down and Colchester types are common in south-eastern Britain, and, while examples of the latter are known from Lincolnshire and Yorkshire, the Langton Down types are well outside their normal distribution.

2. Iron Age coins.

Twenty-eight Iron Age coins from Ferriby Foreshore were reported to Hull Museums between September 1979 and February 1984. All but three were reported before the end of 1980, and the material would seem to reflect a fairly short period of intense activity by at least five metal detectorists. (The importance of this body of finds can be judged from the fact that sixteen coins from Dragonby formed, in 1970, the largest collection from any site in the Corieltavian area apart from the South Ferriby Hoard [May 1970]). Unfortunately, and for a variety of reasons, local detectorists have tended to have finds from the same site identified by different individuals and institutions within and without the region, and it is certain that the aforementioned coins are only a fraction of the material found at Redcliff in the early 1980s. May, for example, records a total of thirty-nine Iron Age coins from North Ferriby known to him in 1984 (May 1984, 21). Information on these finds is held neither by Hull Museums nor by the Humberside County Council Archaeology Unit, and the following discussion is therefore limited to the present author's list of material gathered from Hull Museum Records.

Of the twenty-eight coins in question, three are non-Corieltauvian: a silver of Eppillus, a bronze of Cunobelin, and an uninscribed bronze described as "Prob. IA Southern Tribe rather than Coritani" (Hull Museums ID of 10.10.1979). It may be noted here that a coin of Cunobelin (= Mack 243) was also found during John Dent's excavations at Brantingham villa in 1983.

As far as can be judged from descriptions in Hull Museum records, the remaining twenty-five coins would all appear to be Corieltauvian, and to consist of seventeen uninscribed and eight inscribed issues, a ratio of 2.1:1. The only details given by May (1984, 21) of his list of thirty-nine coins from North Ferriby are that they comprise twenty-six uninscribed and thirteen inscribed issues, an almost identical ratio (2:1).

The author's already published discussion of the coins from North Ferriby (Crowther and Didsbury 1988, 17) was in light of the dating for Corieltauvian coins proposed by Allen (1962). It is now possible, however, to reconsider them in terms of the dating suggested by May and to compare them with his full list of coins from the Dragonby excavations (May 1987, 70-71). May suggests four "phases" of Corieltauvian coinage, as follows:

- | | |
|---------|--------------------------------|
| Phase 1 | gold and silver prototypes |
| Phase 2 | South Ferriby type uninscribed |
| Phase 3 | earlier inscribed series |
| Phase 4 | later inscribed series |

According to May, Phase 1 coins probably belong to the second half of the first century B.C., while Phase 2 may also have begun in the closing years of the century. The earlier inscribed series is accorded a probable date-range of from at least c. A.D. 25 to the early years of the Roman occupation, with Phase 4 continuing until perhaps the A.D. 60s.

Twenty-two of the forty-two coins from the Dragonby excavations belong to the Phase 2 uninscribed series, a pattern which May sees as typical of many sites in the East Midlands and as reflecting "considerable activity" at this period (May 1987, 71). Eleven inscribed coins are all of earlier, Phase 3, types. Once again, the ratio of uninscribed to inscribed issues is of the order 2:1, and North Ferriby and Dragonby would in this respect seem to be similar assemblages. A notable point of difference, however, lies in the composition of the inscribed corpus at the two sites. Six of the eight Ferriby coins are of Phase 3 issuers (AVN AST, ESVP ASV, VEP CORF, VEP), and two of Phase 4 (VOLISIOS DVMNOV, DVMNO TIGIR). Phase 4 coins are entirely absent at Dragonby and it is difficult at the moment to suggest why they should be represented at a site outside the assumed Corieltauavian territory but absent from a major one within it and known to be occupied at this period. It will be noted that the Iron Age coinage from the foreshore, assuming it to be an authentic assemblage, suggests a longer span of activity on the site than any other class of material so far considered (see further below).

3. Roman coins.

Roman coins found on the foreshore at North Ferriby and reported to Hull Museums are as follows:

Republican:

<u>denarius</u>	"Second century B.C."
<u>denarius</u>	Q. Antonius Balbus, 82 B.C.
<u>denarius</u>	L. Hostilius Saserna, 48 B.C.

Imperial:

<u>denarius</u>	Nero
<u>denarius</u>	Hadrian
clipped <u>siliqua</u>	late fourth century A.D.

Once again, the early bias of these finds is noticeable (though it must be remembered that, given the expertise which many metal detectorists possess with regard to Roman coins, common later issues may not have been thought worthwhile having identified by Hull Museums). Republican silver can be expected to appear in circulation until the last quarter of the first century A.D. or later, and only the clipped siliqua falls outside the date-range of the metalwork already noted. A coin of Licinius I, A.D. 308-324, was found in a garden in North Ferriby village, some way north-east of the site, and is now in Hull Museum (KINCM: 24.67)

Discussion and conclusions

Until the results of the 1986-1989 excavations are published any interpretation of the site at Redcliff must be offered in the knowledge that its conclusions may need to be revised in the near future. Having said this, the nature and chronology of the material assemblages discussed above, when considered in relation both to the site's geographical location and to socio-economic developments taking place south of the Humber in the closing century or so of the pre-Roman Iron Age, permit some basic observations to be made regarding the settlement's nature and probable functions.

Perhaps the most important fact to emerge from consideration of the material assemblages is that the coinage from the foreshore appears to suggest a concentration of activity from at least the beginning of the first century A.D. This need not necessarily be seen as a discrepancy in relation to the largely Claudio-Neronian assemblages from the cliff, for the latter, as we have seen, include a certain amount of Tiberian to early Claudian material, and the first appearance of imported Roman wares in the ceramic record need not anyway be coincident with the beginnings of settlement on the site. Some of the metal-detected fibulae could also easily be taken in support of there having been activity on the site from the earlier first century A.D., and it may be noted that, as far as one can judge from the available details, the coin-list from the foreshore does appear to be comparable, in its ratio of uninscribed to inscribed issues, with those from sites south of the Humber. Some doubts about the coin assemblage must invariably remain, but the author can see no valid

reason at present for utterly discounting this material and its implications for the history of the site. Given the nature of the site, we are surely, at least provisionally, justified in regarding this material as deriving from a settlement phase either lost to erosion or not represented in the limited portion of the total site which has been excavated.

In terms of the material assemblage it is to sites south of the Humber that we must look for comparison. Drawing on evidence from excavated sites such as Dragonby, Old Sleaford and Ancaster, as well as the distribution of LPRIA coinage, pottery and imported Roman material, May (1976a, 1984) has suggested the presence of at least thirteen "major" nucleated settlements in the north-east Midlands on the eve of the Roman conquest. Eleven of these sites are in the area bounded by the rivers Trent, on the west, and Slea, on the south, a region where large (10-30 ha. - May 1984, 18), rich, undefended, nucleated settlements would appear to have characterised the upper levels of the settlement hierarchy in the later Iron Age, in contrast to hillfort-dominated landscapes further to the south.

The dating of these settlements is still far from certain. It seemed to May in both his 1976a and 1984 papers that there was little evidence of occupation on any of these sites before the second century B.C. His most recent and detailed examination of the chronology of Dragonby, however, after considering all classes of dating evidence, suggests that settlement may have begun on the site "perhaps as early as c. 400 b.c., although the most prolific years of occupation correspond to continental La Tène III or D" (May 1987, 72).

The impetus behind the development of these settlements is not fully understood, though it has been linked by both Cunliffe (1976b, 142) and May (1984, 20) to similar phenomena in much of La Tène II Europe. The European developments are discussed in detail by Collis (1976, 1984) who notes the oppidum as a type of settlement which appears "in a broad zone from southeast Britain to Slovakia" in the second and first centuries B.C. (Collis 1976, 19) as well as those characteristics to do with siting, industrial activity and involvement with trade which appear to characterise the settlement type in both Britain and continental Europe. The growth of the British settlements during the first century B.C. need no longer be related to incursions of "Belgic" immigrants, and at Dragonby the La Tène III-related pottery which would once have been taken as evidence of such immigration is now to be seen rather as the culmination of an indigenous ceramic tradition lasting some centuries (May 1987, 68-69).

A detailed account of the Lincolnshire sites is inappropriate here, but some of their salient characteristics, and the interpretations of site function to which these have given rise, may be briefly discussed.

The settlements are fairly regularly spaced at c. 15-20 mile intervals, and appear to be related to the high ground of the Jurassic Uplands and the Lincolnshire Wolds. They are, however, rarely situated in elevated positions and would appear to have been sited primarily in relation to assumed prehistoric routeways and major river crossings (May 1984, 20). In general terms they may thus be compared with the "enclosed oppida" in valley-side situations which Cunliffe (1976b, 148) sees as beginning to replace the older hillforts in the

south-east around the beginning of the first century B.C., a major reason behind their preferred siting being interpreted as the desire to command river crossings and major trade-routes. Cunliffe, indeed, sees the enclosed oppida of the south-east and the open nucleated sites of the north-east Midlands alike as one of a set of associated phenomena attendant upon an "increased concern with trade" in the first half of the first century B.C., the others being the distribution of common coin-use and the manufacture of high-quality wheel-made pottery (Cunliffe 1976b, 148).

The reasons for considering such routes as the Jurassic Way, High Street and Barton Street (fig. 2.17) as being pre-Roman in origin are cogently set out by May (1976b, 7-9), and it seems reasonable to concur with suggestions of "good regional organisation and communications in the pre-Roman period" (Elsdon 1987, 62). The rôle of these routeways within an assumed general "trading" milieu in the late Iron Age, however, is less clear, and there is scarcely more evidence of trade along them, however defined, than in 1976, when Haselgrove cautioned that "if we cannot demonstrate the existence of trade networks from the archaeological record, we are not entitled to assume them, and we certainly cannot test models concerning their development" (Haselgrove 1976, 40).

A direct link between coin use and trade in the region during the first century B.C. has been made by both May (1976a) and Cunliffe (1976b). May suggested the likelihood that "increasing trade ... stimulated the use of coinage as a means of exchange and wealth accumulation" (May 1976a, 172), and Cunliffe proposed that "the local minting of increasing quantities of coins after c. 30 B.C. would suggest the existence of a

complex market economy (Cunliffe 1976b, 153). However, while it is certainly true that the development of a two-denomination silver coinage among the Corieltauvi during the later first century B.C. would have opened up the possibility of relatively small-scale transactions between individuals or communities, it remains a matter of debate to what extent the market principle may have operated in late Iron Age Britain (Haselgrove 1976, 27); Collis, moreover, suggests that the use of lower-value coins for direct exchange probably remained a "matter of secondary usage" until the end of the period, and that much of Iron Age economies "must still have been embedded in the social structure" (Collis 1984, 18, 145).

Bearing the above strictures in mind, it remains possible to suggest some commodities which may have moved along such routes as the Jurassic Way. Several sites in Lincolnshire and the East Midlands, including Dragonby, may have owed some of their prosperity to the easy availability of ironstone, and Haselgrove has suggested (1976, 43) that their growth may be connected with "an increased demand for iron from the South-East, at first for local use, and later for export to the continent". Again, there is widespread evidence of a late prehistoric salt industry along much of the Lincolnshire coast. Many of the Lincolnshire sites appear to be best explained as places for moulding salt into cakes of various "denominations" suitable for trading, and salt as well as agriculture has been suggested as a possible factor behind the prosperity and power in the region which is reflected in its exceptional items of La Tène metalwork dated from the third century B.C. onwards (May 1976b, 142, 152-153). The date-range of this salt industry is not entirely clear and is likely to have been long-lived, but

pottery from a site investigated by Baker, south of Ingoldmells Point, may be contemporary with the earliest pottery at Dragonby (May 1976b, 154-155). Finally, Elsdon has suggested the emergence at Dragonby of "craftsman potter(s) producing fine wares for some kind of market" and that Dragonby could have been "a centre of pottery production for the late northern Lincolnshire style of decorated pottery in the first half of the first century A.D." (Elsdon 1987, 62-63).

Fig. 2.17 shews North Ferriby's relationship to the sites already discussed. As will be seen, it lies directly opposite South Ferriby on the Lincolnshire bank of the Humber, where a late Iron Age settlement, now completely destroyed by erosion, is attested by a hoard of c. 137 uninscribed coins (Allen 1963b), as well as many other single finds, including coins, La Tène III fibulae, and other metalwork (May 1984, 22). May (1984, 20) notes South Ferriby's proximity to the major settlements of Dragonby and Kirmington, and suggests that a close grouping of settlements on the south bank of the Humber may have developed as a result of the need for "ferries, staithes or ports of trade". The settlement has also been suggested as a possible east coast port of trade by Cunliffe (1976b, 143). The present name of the two Ferribys is Scandinavian, meaning "village near the ferry"; Smith (1937, 218) records "many allusions to the ... ferry itself", and there seems no reason to doubt that a similar crossing between the two settlements could have existed in the late Iron Age also. South Ferriby stands at the northern end of the Lincolnshire Wolds and can be seen as an obvious terminus for the routeways now known as High Street and Barton Street; North Ferriby stands in a similar situation at the southern end of the Yorkshire Wolds, and its suitability as a point of

access into the Parisian heartland would have been even more marked in the late Iron Age, when it would have been flanked by extensive littoral wetlands both up- and down-stream. It may be noted that the Ferribys may not have been the only pair of settlements along this reach of the Humber which were linked by a river crossing. An assumed late Iron Age settlement at Old Winteringham, from the vicinity of which May (1984, 21) records thirty-six Iron Age coins, would be close to the northern end of the Jurassic Way, and a ferry nearby would have been suitably placed for contact with Brough, on the northern bank. Gallo-Belgic pottery has recently been identified at Brough in late Iron Age assemblages from the 1977 excavations by Peter Armstrong and the East Riding Archaeological Society (Dr Martin Millett, pers. comm.; Goodburn 1978, 427, and 1979 287), and Petillius Cerialis may, therefore, have been choosing between two already established crossings in c. A.D. 71, rather than instituting one de novo.

Though Redcliff may clearly be linked, in terms of both location and material assemblage, with sites south of the river (as it is in May 1984), there is what may amount to a notable difference in size. As presently known, Redcliff would appear to be somewhat smaller than the nucleated settlements discussed by May, the author's fieldwork having suggested possible activity over some 4.5 ha (see above). It seems at present unlikely that, even allowing for further fieldwork and those parts of the site already lost to erosion, that a settlement comparable in extent with the Lincolnshire sites is represented. It may be noted that settlements such as Dragonby appear to have been primarily engaged in mixed agriculture, whatever manufacturing or exchange functions they might also have possessed, and

it is conceivable that the comparatively small size of the Redcliff settlement could reflect a more specialised function related to trade/communications. Such matters cannot, however, be assessed until the full range of environmental evidence from Redcliff is published, and the relative proportions of, for example, agriculture and trade/exchange functions within the site's economic strategy must remain for the moment a matter of speculation.

There has been increasing awareness among archaeologists in the last two decades of the several different kinds of primitive trade and exchange, interest centring particularly upon the degree to which social values and exchange mechanisms are inter-bedded in any system, and on the ways in which the distribution of traded commodities can reveal aspects of social organisation within a society. Trade and exchange models are valuably summarised by Hodges (1982, 13-20), Collis (1984, 15-23), and Haselgrove (1976). Unfortunately, in the case of Redcliff, the data necessary before the site could usefully be examined in such terms is largely lacking. Our knowledge of the social organisation of the Parisi is still at a rudimentary stage (section 2.2.4, above), so that it is difficult to suggest who may actually have controlled the site, and for what purposes; there are, moreover, no other known sites with comparable material assemblages from the Parisian interior, and we have no idea of the kind of settlements to which imported commodities may have travelled, or their spatial relationships to Redcliff, the kind of information which could clearly be valuable in attempting to identify the social hierarchy and exchange mechanisms involved. Given the low level of excavation and surface fieldwork in the region in modern times

(section 1.4), it would be premature to assume that such settlements do not exist. At present, the largest single body of relevant data concerns the growing amount of LPRIA coinage found by metal detectorists within Parisian territory, the distribution of which would be invaluable in suggesting further lines of enquiry; the information remains, however, unpublished, inaccessible, and bedevilled by a plethora of ethical and "security" considerations. In the light of these difficulties, the approach adopted below is to try and articulate some of the questions that need to be asked concerning Redcliff and the Parisi in the seventy years or so before the Roman conquest of the North. For the purposes of this exercise the chronological implications of the coinage from the foreshore are taken at face value, and the site's functions are examined in relation to two broad chronological "phases".

The postulated first phase of activity which can be recognised is defined by the presence of uninscribed and early inscribed coinage and may have spanned the first half of the first century A.D. Some brooch types from the beach could also have arrived on site in the opening years of the century; imported pottery which may belong to this phase is at a minimum (see above); it is hardly common even at sites like Camulodunum, however, and it should be remembered that most pottery found on the foreshore has probably only been eroded relatively recently from the cliff face, and that the chances of recovering pottery from chronologically earlier features which may have been destroyed centuries ago are much less favourable than those of finding coins and fibulae using metal detectors.

A site at Redcliff in this period would be contemporary with that at South Ferriby, and the coin assemblage would imply some level of socio-economic contact across the river, though its nature is not at all obvious. Assuming that the Humber was the boundary between Parisian and Corieltauvi territories then exchange of goods need at first have constituted no more than barter across a cultural, regional or political boundary, such boundaries quite commonly providing favoured locations for "markets" to grow up (Collis 1976, 19; Haselgrove 1976, 40-41). This is especially so when there is a difference in raw materials or commodities between the two regions involved (Haselgrove 1976, 40-41), though in this case it is difficult to suggest such differences, both regions being capable of supporting similar subsistence economies. Although the Corieltauvi may be described as being more advanced, in the sense of having achieved a higher level of social organisation, any exchange of goods between them would have been taking place in an essentially similar cultural milieu and little more than local trade need be involved. Whether the coinage represents fairly small-scale collective or individual transactions cannot be ascertained, though the coinage itself may have been one of the "commodities" being sought by a Parisian elite for purposes of prestige, together with items such as fibulae and pottery. If this is so, then a "port of trade" explanation for the site might be invoked, for which its position on the edge of the tribal territory would make it suitable, and it is possible that the settlement was itself actually occupied by Corieltauvi, an arrangement which would have allowed the effects of external trade on the native social structure to be regulated.

One of the major difficulties in interpreting Redcliff, given the present lack of sites with similar material assemblages to the north, lies in deciding whether it is an integrated part of a long distance exchange system, perhaps concerned with the procurement of raw materials, or whether it lies outside that system and has a different, i.e. essentially localised, kind of interaction with it. If the former, then it should not be forgotten that the Parisi, who, it has been suggested, were a people with a strongly developed sense of identity (section 2.2.2), were geographically very well placed to act in a "middle-man" role between the Corieltauvi and the Brigantes of the northern uplands.

The dearth of LPRIA material inland has been noted, but the cordoned pottery from Risby, Brantingham and Bursea House Farm (sections 3.2.2.1, 2.2.4), which is likely to belong to the first half of the century, has some relevance to the discussion. Whether traded across the river, or made on the north bank (as Elsdon has suggested in the case of the Risby vessel - see section 3.2.2.1), it is through sites like Redcliff that acculturating influences or actual pottery may have been transmitted. Ramm (1978, 27 and fig. 8) noted that the distribution of the small amount of LPRIA material known from Parisian territory was almost entirely from the eastern side of the Wolds; cordoned pottery, La Tène III metalwork, and a coin of Cunobelin from Brantingham (Dent 1989, 28) may now be taken to suggest, however, a line of communication with regions to the south which ran along the western edge of the Yorkshire Wolds, perhaps using the crossing between Old Winteringham and Brough which was postulated above.

The second "phase" of activity on the site is defined by the Claudio-Neronian assemblages of imported pottery which characterise the site as it exists today, and spans the generation between the conquest of Lincolnshire in the 40s and Petillius Cerialis' advance across the Humber in c. A.D. 71, a period when the river would have been the de facto boundary of the Roman Empire in Britain. The presence of the Roman power a mile to the south would clearly have constituted a major political event which must have had its effect on whatever socio-economic links across the Humber were already in existence. It is difficult to gauge the impact of this event in the material record because we have no excavated assemblages from the postulated pre-Claudian occupation of the site to compare with those from the site as presently known. The changing ratio of imported to indigenous pottery throughout the site's history would clearly be invaluable in this regard, and it may be that the site's apparent sudden and "extraordinary floruit" (Crowther, Willis and Creighton 1989, 9) in the Claudio-Neronian period is to some extent over-emphasised by our inability to make such comparisons. Many of the questions posed by the site in this phase remain those which need to be answered in relation to the earlier period, the major new area of interest concerning relationships between the Parisi and the Roman power and the extent to which these can be assessed from the nature of the imported materials from the site.

A philo-Roman attitude on the part of the Parisi has often been assumed, though archaeological evidence for it has been scanty. Richmond (1955, 37) made the sweeping claim that the Parisi had been "receptive of Roman goods" ever since the Claudian conquest of the

south, and considered that, given their geographical position between the Roman frontier and the Brigantes, "their choice of adherence to Rome can never have been in doubt" (loc. cit.). The latter argument is speculative and need not be given undue weight in itself, since, however reasonable and politic such a choice may seem to us on the basis of our limited data, it need not have seemed so to the Parisi; the former is scarcely more supportable, given the fact that evidence for imported Roman goods in Parisian territory still amounts to little more than the "scatter of Claudio-Neronian brooches together with the large quantity of imported Gallo-Belgic wares from North Ferriby" noted by Cunliffe, a body of material which scarcely justifies his view that "awareness of the material advantages of romanisation may have been instrumental in encouraging the tribe to offer no resistance to the eventual penetration by the Roman army in 71-72" (Cunliffe 1974, 113). Ramm (1978, 28ff) discussed the matter fully, and was inclined to see Parisian "allegiance" to the anti-Roman faction among the Brigantes led by Venutius as more probable, interpreting the same small body of Claudio-Neronian metalwork, and its eastern distribution (see above), as evidence that Venutius had established trade-links with southern Britain which ran through Parisian territory and were conducted "through their agency". It is sufficient for present purposes to note that much of Ramm's argument depended upon an identification of Stanwick as the seat of Venutius, whereas it now seems almost certain, rather, to have been the base for Cartimandua, its wealth and rare imported luxuries reflecting the benefits of her treaty with Rome (Haselgrove 1990). Whether some of these goods arrived at Stanwick through Parisian territory is not at present known, though a sea-route would perhaps seem

more likely for some of them; we can, in any case, envisage a whole generation in which Parisian territory would have lain between the Roman military power and a philo-Roman polity on its northern border, and during which it may well have had a part to play in the developing socio-economic relations between them. However this may be, there are two simple facts which deserve to be stressed. Firstly, that, whatever Parisian attitudes to Rome in A.D.71, the forts along Cerialis' line of advance into Brigantia would probably have constituted a sufficient supervision of their territory; and secondly, that if political, diplomatic, and mercantile initiatives between Rome and the Parisi are in question in the Claudio-Neronian period, then it is through sites like Redcliff that they are likely to have been articulated.

Further light on these matters will eventually only be shed by further fieldwork in East Yorkshire as a whole and by detailed information regarding the imported pottery from Redcliff itself. The most important questions about the Gallo-Belgic pottery are, as usual, the simple ones: the method of its arrival on site, the identity of its consumers (and its meaning to them), and the ultimate destinations to which some of it may have travelled on. It would be premature to attempt to answer these questions in detail, but limited observations may be made about one major point of interest, i.e. the sources of supply of some of the Gallo-Belgic pottery found at both Old Winteringham and Redcliff. Crowther, Creighton and Willis (1989, 9) suggest that "the similarity of forms of early imported fineware pottery with those of Old Winteringham ... is ... surely indicative of either a common source of supply or indeed the traffic of these goods from the south bank into Redcliff". Rigby (1976, 134), however,

has pointed to a striking dissimilarity of terra nigra fabric between the two assemblages, which appear, however, to be contemporary, and has therefore specifically suggested that the two sites were "importing their T.N. from different sources". It is not clear how this should be accounted for, though it does at least suggest that the Redcliff terra nigra was not simply a commodity which was "traded on" across the river as an element of local trade, either by the army or by members of the indigenous community. This does not necessarily mean, however, that we should envisage the terra nigra arriving at Redcliff by sea, either from south-east England or directly from the Continent. The Roman army may well have had to place contracts with more than one producer, and it may be that one of these contracts was entered into specifically to supply goods for transport to the north bank, either as payment for produce and raw materials provided by the Parisi, or as prestige items provided as part of a diplomatic initiative. It may be noted, however, that such truly luxurious and exotic materials as those found at Stanwick and interpreted as "diplomatic gifts rather than normal trade goods" (Haselgrove 1990, 385) have not so far been reported from Redcliff or elsewhere in Parisian territory.

Whatever the nature of the contact between the Parisi and Rome in the generation preceding the conquest of the North, and Redcliff's role in it, it seems clear that the site's functions were no longer relevant in the new political situation obtaining after c. A.D.71; and here, at least, the explanations would seem relatively straightforward. Petillius Cerialis' point of entry into the north would presumably have been determined in the main by a variety of purely military considerations including the existing communications

network south of the river and, undoubtedly, the choice between a sheltered haven at Petuaria and an exposed south-facing stretch of shore at Redcliff. Occupation to some degree may have continued into the second century, but the site's brief floruit was over, and it was destined to play no part in the new administrative structure of the tribal territory.

2.3.3. Iron Age material finds from the study area

The number of finds of Iron Age artefacts from the study area is small, and stands in marked contrast to the large number of settlement sites known or suspected from aerial photographic survey. The main reason for this discrepancy is undoubtedly the low level of surface fieldwork in the study area, though the nature of Iron Age material culture itself is also probably partly responsible: there is a smaller range of durable artefacts which is likely to be recognised by members of the public as being of archaeological interest and worth reporting to the appropriate authorities.

Almost all the material discussed in this section is "late", and, apart from finger-tipped Hallstatt-type pottery from Walkington already alluded to (section 2.3.2, G.162), there is nothing that need be much earlier than the first century B.C.

The material may be grouped under three headings, viz.: pottery, quernstones, and metalwork. The most important finds in the first two of the above categories are the subject of more detailed treatment elsewhere in this study and it is the metalwork which receives the fullest discussion below. The majority of

the objects are from the southern part of the study area, and their findspots are plotted on fig. 2.5.

1. Pottery.

In addition to the large assemblages of late IA/early RB pottery from Salthouse High School and Chapel Farm, Weel (sections 2.3.2.1, 2.3.2.2, above), there are finds of small numbers of sherds in the same fabric tradition from two places on the alluvium deposit within the Hull city boundary (G.94, 204). (Remarks on the dating of this fabric tradition are to be found in section 2.3.2.2). G.94 consists of the base of a large vessel and a large body sherd and is ascribed to the later Iron Age or early Roman period entirely on fabric grounds; its precise provenance and circumstances of discovery are, moreover, uncertain. G.204 is a squarish upright jar rim of undoubted later IA form, but there is some doubt as to whether it was in situ when found (see Gazetteer for details).

The most important Iron Age ceramic find from the study area is a LPRIA cordoned and pedestal-footed jar in the Aylesford-Swarling tradition, discovered during the author's field work at Risby. This is described and discussed in section 3.2.2.1, below, to which the reader is referred.

2. Quernstones.

Two beehive upper stones of "Yorkshire"/"unpierced" type from Chapel Farm, Weel, and Fishpond Wood, Risby, are discussed elsewhere, together with remarks on the dating of this form of quern (sections 2.3.2.2, 3.2.2.1). There is, in addition, an upper stone of a beehive quern found built into a garden wall in the

village of Walkington in 1970 (G.168). No petrological description exists, but there is a drawing by Peter Armstrong in Hull Museum Archives and, as far as the author is aware, the stone remains in its find-spot at the time of writing. As with the examples referred to above the possibility that the quern may be early Romano-British in date has to be borne in mind. It is perhaps unlikely that the stone was moved any great distance before being incorporated into the wall, and it may be noted that there are extensive settlement and burial complexes of IA/RB date revealed by aerial photography less than 1 km to the north on both the chalk and the drift (G. 167, 170). Sheppard (1907, 56) claimed that "both upper and lower stones [of "British" date] are found in different parts of Holderness, sometimes built into walls", though he unfortunately left little other record of these observations.

3. Metalwork.

The largest body of late Iron Age metalwork from the study area consists of the coins and fibulae from Redcliff, North Ferriby, already discussed (section 2.3.2.3, above). There is, in addition, a small but interesting group of stray finds which is discussed below.

The most outstanding object is an enamelled copper-alloy bridle-bit of "derivative three-link type" from Rise parish, in the extreme north-eastern corner of the study area in central Holderness (G.130; MacGregor 1976, ii, item 10). The circumstances of its discovery, before 1885, and its precise provenance within the parish, only part of which lies within the study area, are unknown. Loughlin and Miller (1979) record no APs of possible IA/RB date within the parish,

which is, however, mainly boulder clay, with all the constraints upon AP survey which that implies (section 1.4.3, above). The Soil Survey of England and Wales (1983) shews, however, spreads of Aeolian sand in the parish which may have been attractive to, or now be masking traces of, settlement. It may also be noted that a late IA/early RB linear ditch containing hand-made pottery in the "native tradition" was discovered by the author beneath mediaeval house platforms during excavations at Sigglesthorne (TA 155455), only 4 kms to the north, in 1988 (Mediaeval Settlement Research Group 1988, 22).

MacGregor (1976, i, 25-30, and 52, Map 1) shews that derivative three-link bits have a largely Pennine and Lowland Scotland distribution, with only a handful of examples, including the one from Rise, lying outside that area. The small amount of dating evidence marshalled by McGregor suggests a date-range of at least c. A.D. 40 - c. A.D. 100 for this type of bit, and stylistic considerations lead her to describe it as "a product of the Brigantes and/or Iceni, displaying decorative contributions from the Belgic South and an extended popularity in the Tyne-Forth and Solway-Clyde provinces" (op. cit., 30). A more specific date for the Rise example cannot be determined, though MacGregor finds a stylistic parallel for its "muzzle motif" of slender back-to-back trumpets on a decorated metal strip from a Flavian deposit at Newstead, and a similar treatment of petal-motifs on a Flavian/Trajanic ovoid mount from Corbridge. Stead (1965, 74) agrees that the Rise bit has little in common with other East Yorkshire metalwork and suggests that it might post-date the Roman conquest of Lincolnshire in c. A.D. 47, and might also possibly be pre-Flavian. His suggested Claudio-Neronian date for the piece is, however, unsupported by

argument. Whatever the date or precise stylistic affinities of the piece it does seem to suggest the presence of high-status individuals in central Holderness towards the close of the period and might possibly be regarded as another example of that material acculturation from regions south of the Humber which seems to be evidenced by the occurrence of LPRIA coinage, pottery, and Colchester fibulae (G.51, 123; section 2.3.2.3, above) in the south-east of Parisian territory.

A second piece of horse equipment is a small copper-alloy terret from Snuffmill Lane, Cottingham (G.56; not included in Macgregor 1976), on the boundary between the Hull alluvium deposit and the boulder-clay west of the river. It can be classified as a "simple terret with thick bar and unemphasised collars" in MacGregor's system (MacGregor 1976, i, 38-42). The "simple" terret may have a life-span of at least two-hundred years, from c. 100 B.C. to the early second century A.D. (op. cit., 41). The example under discussion was provisionally dated to the late first century A.D. by John Bartlett, Keeper of Archaeology at Hull Museums at the time of its discovery in 1964, though MacGregor feels there may be grounds for considering small examples with unemphasised collars as earlier rather than later within the date-range given above (op. cit., 41). There are no grounds for believing that the object was not in situ when discovered by chance excavation, and it is mainly of interest as an indicator of activity on the very margin of the alluvium deposit during the closing stages of the period.

Finally, there is a La Tène sword with iron blade and cast bronze hilt discovered in a Hull garden in c. 1977

(G.72). The object has been published by Dent (1983 a) in the context of a discussion of weapons and warfare in late Iron Age East Yorkshire. There is, unfortunately, an element of doubt as to whether it was found in its original place of deposition; if it was, then its main interest lies in the fact of its being an item of warrior's equipment which had been lost or deposited in a wetland environment (Didsbury 1988, 32; see further section 3.3.3, below).

CHAPTER 3

ASPECTS OF ROMANO-BRITISH SETTLEMENT IN THE STUDY AREA

3.1 Introduction

The aims of the chapter are twofold:

1. To make a general survey of settlement in the study area during the Roman period, using the gazetteer and the author's fieldwork to shew how our perceptions of the settlement pattern are being changed and to indicate some research priorities suggested by this new database. (Section 3.2)

2. To examine specifically, and in greater detail, the evidence for settlement in, and utilisation of, the alluvial areas of the lower Hull valley. The case which can be made for use of these wetlands during the Roman period is regarded as one of the most important results of the whole study, such use scarcely having been suspected before the present research started. It is, moreover, a case that would have been impossible to make without the prior construction of a detailed gazetteer, the value of which it exemplifies. (Section 3.3)

Both the following sections will make use of site studies of varying degrees of detail. The chapter as a whole is essentially a more detailed exposition of conclusions already published in Didsbury (1988) and Didsbury (1990).

It may be noted here that this study of settlement is not prefaced by a general treatment of socio-economic

matters pertaining to the region at this period, as was provided when dealing with the late Iron Age in the previous chapter. Some such background material, together with the political and historical framework of the period, is readily accessible, most notably in Ramm (1978), though it should be noted that such general surveys are soon likely to stand in need of extensive revision in the light of recent and current research in East Yorkshire. Dent's work on the economy of a rural settlement at North Cave (in prep.), Sitch's on the Humber foreshore site Faxfleet "B" (Sitch 1987), and Halkon's on the landscape and industries of Holme on Spalding Moor (Halkon 1987a, Millett and Halkon 1988) may be mentioned as examples.

3.2 Settlement in the study area in the light of recent research.

3.2.1 Introduction

The general physical constraints upon settlement in the study area have already been examined (sections 1.2, 1.3), as have those acting upon our ability to interpret the archaeological data relating to it, most notably the varying susceptibility of the different drift geologies (chalk, till, gravel, alluvium) to aerial photographic survey (section 1.4.3). The surface fieldwork which is needed before the chronological development of sites, which at present can only be categorised as of "IA and/or RB date", may be understood, has been almost totally lacking, and morphological differences between and within settlement areas cannot yet be understood in chronological terms. Plots of AP sites on the Wolds (by Kathy Stoertz, of the NMR) have become available for consultation in the

Humberside SMR only as this thesis is being completed, and relate only to the western edge of the study area. As plotting continues eastwards it will be important to examine settlement morphology in the light of data gained from properly structured surface fieldwork. In the light of present knowledge neither synchronic nor diachronic overviews of rural settlement in the RB period are possible except in the most general terms; it is the intention in these sections to indicate some aspects of the settlement pattern, and of socio-economic relationships implied by them, which have become apparent in recent years, and which the gazetteer now allows us to discuss in relation to the drift geology of the area. Fig. 3.1 plots three main categories of information against this background:

1. AP sites of Categories 1 and 2 (see Introduction to Gazetteer, Appendix 1) of "IA and/or RB" date.
2. Excavated RB settlement features, and sites with surface RB material in amounts which indicate settlement.
3. Find spots of small quantities of RB material.

At this level of plotting three simple observations may be made:

1. AP1 sites of possible RB date appear in almost every part of the study area, with the exception of the marine alluvium in the south, now largely covered by the urban area of Hull. With the exception of the Woodmansey gravels (on which see further section 3.2.2 and fig. 3.1) there is no significant landscape unit within the study area with this category of possible RB settlement which cannot be shewn already to have been

penetrated to some extent before the end of the square barrow tradition (see above, section 2.3.1).

2. There are RB settlement sites discovered by surface fieldwork (e.g. G.139) or excavation (e.g. G.5) which occur in areas where AP evidence for possible settlement is sparse, and which suggest the value of further field work in such areas, specifically the till-mantled dip slope of the Wolds west of the River Hull.

3. Find-spots of small amounts of RB artefactual material in various parts of the study area may be used in several ways to elucidate other categories of evidence; for the moment, it is most important to note that a large number of small-finds has been made on the marine alluvium, an area where only a few IA finds were noted (section 2.3.3) and where AP evidence of settlement of either period is entirely lacking.

These observations form the starting-point for the evaluation of RB settlement in the study area which follows. Given the general nature of this survey, and the complex interpenetration of different surface geologies within a relatively small area, it is most convenient to discuss settlement under the two headings "west of the River Hull" and "east of the River Hull" (sections 3.2.2 and 3.2.3 respectively). The evidence for utilisation of the marine alluvium is considered separately, and in greater detail, in section 3.3.

3.2.2 Settlement west of the River Hull

The physical geography of the study area has already been described (sections 1.2, 1.3) but it will be

convenient at this point to recapitulate the four main surface geologies in the area west of the Hull. From west to east these are:

1. The eastern edge of the chalk Wolds. This southernmost block of the Wolds is nowhere greater than c. 11 kms wide, and reaches a maximum height of 160m AOD (in Rowley parish, within the study area).

2. The band of glacial till which mantles the dip slope of the Wolds to the east of the c. 50m AOD contour and which on average is c. 6 kms wide.

3. Two extensive spreads of fluvio-glacial gravels, around Leconfield in the north of the study area, and Woodmansey/Cottingham in its central part. Gravel tongues aligned in a SW to NE direction act as natural routeways between these "islands" and the clay and chalk to the west.

4. Marine and freshwater alluvia lying to the east of the clay and gravel. This zone has roughly the shape of an equilateral triangle with its apex to the south-east of Beverley and its base along the Humber shore, and it is through the centre of these alluvium deposits that the River Hull takes its present course southwards.

To consider the chalk first, it will be seen from fig. 3.1 that there are numerous AP1 settlement sites of "IA and/or RB date" along the eastern edge of the Wolds, within 1.5 kms of its interface with the clay, and generally in close proximity to the gravel-floored dry valleys which penetrate the chalk. (The advantages of such siting have been discussed in sections 1.3 and 2.3.1). Whatever their individual date-ranges they

shew a preference for the same kind of situation as those square-barrow sites which were discussed in section 2.3.1 (see figs 2.1 and 2.4). It is probably legitimate to see the distribution of AP1 sites on fig. 3.1 as reflecting in general terms the pattern and density of "native" settlement obtaining on the chalk on the eve of the Roman occupation, but this is really to say very little, and the information which is needed before we can even begin to understand how such communities were affected by the Roman power, their changing subsistence strategies during the next four centuries, what factors may have caused them to flourish or fail, their "life" in short, will depend upon properly conceived research programmes. Given the complicated nature of many of these AP complexes, some of which may have been occupied for over half a millennium, it is clear that plotting of photographs and the collection of surface material, though necessary first steps, are unlikely to represent a sufficient response, and that selective excavation, in response to questions of site morphology, for example, or in the interests of environmental research (especially with a view to understanding inter-site relationships, v. Millett 1982) is going to be essential. It seems unlikely at present that such programmes can be mounted without the involvement of one or more universities.

None of the author's fieldwork has taken place on the chalk. As far as he is aware, the only AP1 complexes on fig. 3.1 which have been fieldwalked are G.19-22, by Karen Waugh (Waugh 1984, her "Areas 1-4"). Despite the work being carried out within the limitations imposed by an undergraduate dissertation, and the paucity of material recovered from these sites, it valuably illustrates both the complexity and scale of

the late IA and RB agricultural landscape on Bishop Burton Wold, and the problems of responding to it archaeologically.

Waugh studied an area of some 5 sq.kms of agricultural land to the south west of the village of Bishop Burton. (Refer to figs. 3.1 and 3.2 during this and the succeeding two paragraphs). The present village lies on the clay to the north and east, and the AP sites on the chalk between c.50m and c.90m AOD (Waugh 1984, fig.5.). Any parts of the complex which may have extended onto the clay are thus covered by the site of the village. Bishop Burton is one of a string of villages with Anglian and Scandinavian names sited along the interface of the chalk and the clay, generally on clay within 1 km of the chalk edge (see section 1.3). From Lund (SE 9748) to Skidby (TA 0133) these villages are spaced approximately 2 kms apart. Bishop Burton itself is situated at the point where a major cross-Wolds route between Market Weighton, on the Wolds scarp, and Beverley, at the head of the lower Hull valley, comes down off the chalk, having taken advantage of the lower relief of the Market Weighton gap.

That the vicinity contained one or more high status or villa establishments during the Roman period is shewn by the eighteenth-century discovery of two mosaics (since lost) near the village (G.24 for details). Ramm points out (1978, 99) that the pavements were ploughed up in fields next-but-one to each other and that they derive, therefore, from buildings that were not immediately adjacent to each other. Without knowing the meaning of the word "field" in the original sources (for the discoveries were made before enclosure), or the distances between the two find spots, it is

impossible to ascertain whether two villas are represented, or two mosaic-floored buildings within a fairly extensive villa complex. The latter seems more probable, though Ramm (1978, fig.40) marks Bishop Burton with two symbols on his map of East Yorkshire villas. The phenomenon of "double", or "unit system", villas in Britain and Gaul is discussed by Smith (1978), where such establishments are held to express a pre-existing Celtic system of social relationship and land tenure, viz. joint proprietorship or occupancy. It may be noted that at least one example of this type of villa, Beadlam, is held by Smith to occur within Parisian territory.

The area was crossed by a Roman road (G.20) oriented roughly south-west to north-east. Although it is unwise to assume too much from the alignment of comparatively short stretches of road, it seems probable that this road represents a cross-Wolds route which can be projected in a south-westerly direction to meet the junction of Margary 2e (Brough-York) and Margary 29 (Brough-Malton) at Newbald on the Wolds scarp; in a north-easterly direction it is well placed to have continued across the drift, perhaps by way of one of the gravel tongues leading to the Leconfield gravels, to cross the River Hull in the vicinity of one of the traditional crossing-points of the valley at Hull Bridge, to the north of Beverley (section 2.3.2.2, and fig. 2.8). Beverley was the collection centre for the produce of the central and southern Wolds throughout the mediaeval period, and a route leading to the head of the lower valley, whence cereals and wool could be moved south by river transport, may have been important during the Roman period also. If the road does indeed represent a cross-Wolds route on this alignment then it could have linked the Bishop Burton

villa(s) with similar high-status establishment(s), possibly of third- and fourth-century date, at Newbald (SE 904361 and 905355 according to Loughlin and Miller 1979; and see Corder 1941). [It should be noted here that Ramm's (1978, 99-100) discussion of the Newbald site(s) is marked by extreme confusion as to their location as well as bibliographical error]. The possibility that there were contemporary villas on either side of the Wolds, linked by road and each sited to command the resources of the adjacent chalk, is worthy of further investigation. The dependence of villas on urban centres is a familiar concept, and the road in question would have brought Brough/Petuaria within relatively easy reach. Branigan (1980) uses a market model to explain the grouping of Parisian villas around Brough and Malton, which, he says, "presumably fulfilled market functions". Perhaps more important is his observation that, "even more noticeably", many villas are close to main roads; he interprets this as shewing their need for quick access to urban centres functioning as markets, though, as Hodder and Millett (1981) and Millett (1982) have pointed out, the administrative status of towns may have been more important in determining the siting of villas around them; officials or aristocrats working in the towns may have been willing to own farms at greater distances from major centres than minor ones, and produce coming into major administrative centres from surrounding villas may, anyway, have enjoyed the benefits of a better road-system and a larger market on arrival (Hodder and Millett 1981, 74).

While on the subject of this road, it may also be noted that the excavated fourth-century site at Walkington Wold (G.162), on the high chalk slightly to the west of the study area lies close to its presumed line and

could have been "served" by it. The site's excavators suggested fourth-century use of a Bronze Age barrow as an inland signal station (Bartlett and Mackey 1973), though Bailey (1985) offers a rather more convincing and functionally-based interpretation as a temple site. IA/RB ditches are visible on APs in the vicinity and the find of a coin of Gordian III (G.163) about a kilometre to the south, and also close to the roadline, may indicate mid-third century activity in the area. Further observations on the Roman road system within the study area are dealt with in this section below.

The main value of Waugh's work, when it was undertaken, lies in the fact that she plotted extensive soil- and crop-marks and undertook limited field-walking over parts of them. A concordance of her numbered field-walked areas with references in the present gazetteer is as follows:

Area 1 = part of G.22 (fig. 3.3, after Waugh fig. 7.).

Area 2 = part of G.21 (fig. 3.4, after Waugh fig. 8.).

Area 3 = part of G.19 (fig. 3.5, after Waugh fig. 9.).

Area 4 = part of G.20, the Roman road.

These areas may be described briefly: Areas 1 and 3 are both trackway/droveyway complexes with attached rectilinear enclosures of varying sizes, the kind of apparently planned settlement of late IA to RB date which is common on aerial photographs in the region. The main trackway in Area 1 is triple-ditched for part

of its length. It may be noted here that in neither area do the main trackways make use of the gravel-floored valleys which intersect Bishop Burton Wold (fig. 3.1) but lie adjacent to them; neither is there any suggestion that these gravel tongues defined the "territories" of these settlements by enclosing them, at least in their latest stage as reflected on the APs, since linear features cut across both the northern and southern gravel spreads. Both areas are probably interlinked by their trackway systems and, indeed, may join with similar AP complexes in both Walkington (G.169-170) and Cherry Burton (G.27) parishes, a point worth stressing if it reminds us that we are looking at artificially differentiated fragments of an extensive and integrated agricultural landscape. Area 1 contains both funerary and occupation features, having three square-ditched barrows and at least two penannular ring-ditches which are probably those of hut-circles. Each of the barrows, as it presently appears on the APs, is in an isolated position and sited close to the edge of a trackway, possibly suggesting that they do not belong to the latest phase of the Arras burial tradition (section 2.2.4). The probable hut-circles lie behind the enclosures flanking the main trackway. In both areas, different enclosure sizes probably reflect different enclosure function, and in Area 1 the western side of the main trackway has field-sized areas meeting it at right-angles and separated by ditches which may have served to control the access of livestock to arable land. IA and RB pottery found on the surface in Area 1 probably derives from the smaller enclosures, and reflects their use in some way, but the fieldwalking data is insufficient in both quantity and quality to suggest what that use may have been (see below).

Of the remaining two fieldwalked areas, Area 4 is the Roman road already discussed, and Area 2 contains a large ditched rectangular feature which will be considered below.

It is clear that a later IA date for at least part of this landscape is shown by the Arras tradition burials, and that the morphology of much of what is now visible on the APs is of a type which we have already seen as distinctive of both the late IA and RB periods. It could have been hoped that fieldwalking would have proved valuable in differentiating the IA and RB components in such complexes, but several aspects of the work undertaken mean that its value is severely limited in this respect. Firstly, only a very small amount of IA and RB pottery was recovered from these sites, as the present writer's analysis of Waugh's results shows (Table 3.1. See following page):

The time of year at which walking took place is not specified, though the land is described as "ploughed"; personal experience suggests that the land was unweathered and may not have been harrowed, factors which greatly enhance the recovery of artefacts from the ploughsoil. Secondly, all areas were linewalked (lines not sub-divided) and the lines used do not always seem to have been oriented in the best interests of spatial analysis, as may be seen below. Finally, almost no evaluation of the results is attempted and, although Waugh's Area plots show the position and direction of the lines used, the latter are not numbered and can not be related to the line numbers used in her "Results" tables. In the case of Areas 1 and 3, only small portions of which were walked, the net result is that little more can be said than that IA (i.e. handmade and calcite-gritted) and RB wares

TABLE 3.1. BISHOP BURTON. Recovery rate of pottery by chronological period and field-walked area.

AREA NO.	Total sherds	IA		RB	
		no.	%	no.	%
1	116	6	5.2	10	8.6
2	191	2	1.0	42	22.0
3	55	4	7.3	4	7.3
4	32	5	15.6	3	9.4

AREA NO.	Total sherds	Med.		P/med.		Mod.	
		no.	%	no.	%	no.	%
1	116	3	2.6	82	70.7	15	12.9
2	191	7	3.7	73	38.2	67	35.1
3	55	4	7.3	36	65.5	7	12.7
4	32	0	0	15	46.9	9	28.1

(described as "grey" or "orange-grey") were found. No criticism of Waugh's work is intended in saying that if fieldwalking is to make a contribution to the understanding of such sites then it is essential, especially if they are going to be characterised by low-yield artefact recovery, that retrieval takes place using a closely-spaced grid in the interests of both chronological and functional interpretation.

In the case of Area 4 (the road) six lines of c.150m in length, and only 5m apart, were laid out parallel with the road and with the road at their centre; the small amount of IA and RB material recovered came from the two lines coincident with the edges of the road and is of almost no evidential value, whereas for the same

expenditure of effort more widely spaced lines could have been laid at right angles to the road and there would have been the possibility of observing chronological or functional differences relating to a depth of some 70m either side of its course.

Only in the case of Area 2 is it possible to make some worthwhile analysis of the results which Waugh presents (see fig. 3.4). The area contains a rectangular double-ditched enclosure c.80m x 60m which lies c.40m away from the Roman road and which is linked with Area 3 by a trackway shewing faint traces of field-ditches along its length. It is possible that a feature of these dimensions represents a simple rectilinear farmstead of the kind that is known to have developed elsewhere into villa establishments, as at Welton Wold (this section below) and Langton (Ramm 1978, 71ff.) Although there are no traces of internal structures visible on the APs the field walked area within which the feature lies was the only one investigated which yielded Roman pottery in any quantity (Table 3.1) and was also differentiated from other Areas by its almost complete lack of IA material and by the nature of the Roman pottery and other material recovered, which included the only samian and amphora sherds found during the project, as well as fragments of hypocaust box-tile and painted wall-plaster.

All the samian ware was of East Gaulish manufacture with a production date-range of c. A.D. 120-260, but generally of the later second or third century as an import into Britain; the fabric of the amphora sherd is not described, but is said to be of buff colour with pinkish surface, and is tentatively identified as deriving from an amphora of "Rhodian" type (Peacock and Williams 1986, Class 9). This class of vessel was

widely traded during the period from the late first century B.C. to the very early second century A.D., but is most frequently found on mid-first-century sites in Britain (Peacock 1971, 167). Its principal contents were wine, though not necessarily of Rhodian vintage. If the date-range of the greywares from Area 2 is similar to that of the East Gaulish samian then it may be that this sherd is to be linked, chronologically, with the small amount of IA pottery from the field. If the sherd were "Rhodian" (and Dr Millett tells me he doubts this, so a petrological confirmation or otherwise would be valuable) then it might be evidence of trade/exchange links with the Mediterranean world before or in the generation after the Roman conquest of the north. Rigby has recently (1988) discussed a Dressel 1 (probably 1B) amphora handle from the villa site at Beadlam, North Yorkshire, in similar terms. Our knowledge of this class of traded commodity in the region might be valuably increased, and cost-effectively, by further field-walking. At present, the vast majority of amphora sherds from both North Cave and Wetwang belong to globular (Dressel 20) olive-oil forms (info. Val Rigby).

All these finds, as well as the majority of the rest of the Roman pottery, come from Waugh's "lines 8-14". It will be seen from fig. 3.4 that Waugh's lineation does not allow us to be certain that the finds derive from the ploughsoil above the rectilinear feature, though it does seem likely in view of the fact that over 75% of the building lies beneath these lines if numbering is taken as beginning in the south. Once again, the need for closely structured retrieval procedures is evident. Given the present data, one can do no more than suggest the strong possibility of the presence in Area 2 of a villa-type establishment, though not necessarily that

to which the afore-mentioned mosaics belonged, which local tradition is inclined to place elsewhere in the parish.

It is hoped that this brief examination of Waugh's work will serve to indicate the scope for fieldwalking as a basis for further work on these AP sites on the western edge of the Wolds.

The majority of sites in the category under discussion, i.e. AP1 sites of "IA and/or RB" date on the chalk edge, lie in the northern half of the study area. South of northing SE/TA 36 there are only three sites of this category (G.122, 137, 141), in addition to Welton Wold (G.184) which is known both from aerial photographs and excavation. There is, in addition, a handful of sites graded AP2 which are situated in similar positions and which field-work may shew to be of IA/RB date. There is no obvious explanation for this relative scarcity of AP1 sites in the south of the area; it seems unlikely that it can be accounted for in terms of differential flying or geological constraints upon AP survey, so it is at least possible that settlement frequency was actually lower at the southern tip of the Wolds at the beginning of the Roman period. We have already seen (section 2.3.1 and fig. 2.4) that Iron Age settlement in the south of the chalk is difficult to detect, and that there are grounds for questioning whether the south-west of the study area should be regarded as falling within the "territory" of the Arras burial tradition. It has perhaps been too easy to think of the Humber as a political boundary between the "territories" of the Parisi and Corieltauvi; should an area c. 10 kms deep on the north bank of the Humber prove, after further fieldwork, to be characterised by a lower settlement density, as well

as the use of LPRIA artefacts and the absence of a square barrow burial rite then there would be grounds for at least considering whether or not this estuarine strip did not form part of Corieltauavian rather than Parisian "territory", or possibly a "buffer" zone between the two. (The use of LPRIA pottery could, of course, simply reflect a process of acculturation from the south in a limited area of Parisian territory).

Much valuable information on the economy of one chalk-edge settlement during the Roman period will become available when Rodney Mackey's excavations at Welton Wold (G.184) are published. This complex of agricultural and settlement features covering some 8.5 ha. was investigated by excavation and aerial photography between 1971 and 1976, in advance of chalk quarrying. It lies within one km of the southernmost edge of the Yorkshire Wolds, less than three kms due north of the pre-Conquest foreshore site at Redcliff, North Ferriby, and only three kms north-east of Brough/Petuarria.

Brief annual excavation reports are available in the "Roman Britain in 197-" sections of Britannia (1972-1977), and the site has received interested, if necessarily brief, attention in various regional surveys and articles (e.g. Ramm 1978, 100; Branigan 1980, 22, 25; Dent 1983b, 42); more detailed information on some specific aspects of the agriculture practised on the farm can be found in Morris 1979 (passim). A skeleton outline of the site's development, as it can be gleaned from these sources, is presented below and integrated with an assessment of its potential value for the study of rural settlement and economy in the study area.

The site was occupied from some point in the Iron Age until the end of the Roman period. A small five-roomed corridor house constructed around A.D. 100 lay in the centre of the west side of a ditched compound 60m square and there was a round-house 11m in diameter adjacent to it. The compound was the direct successor to an adjacent Iron Age sub-rectangular enclosure of c. 30m side on the same alignment, and which itself may have contained a round-house evident during excavation as an eroded hollow. The round-house in the villa enclosure is equidistant between the end wall of the villa and the corner of the new enclosure, and its diameter is the same as the width of the villa. Its construction is rather more elaborate than other round-houses in the region, for it has four pairs of posts arranged to form a cross in the centre, and an outer construction trench containing a further ring of posts. The entrance was to the south. The excavator interprets this structure as a building planned at the same time as the corridor house, perhaps to house a labour force during its construction, and possibly remaining in use during the early life of the villa. (The above paragraph is based on personal communication from R. Mackey, 1990).

The villa house itself is considered to have remained in use, and unchanged in plan, until its demolition in c. A.D.340. Ramm (1978, 100), follows the excavator in considering that, since the site continued to be occupied until at least the end of the fourth century, there must have been another house, as yet undiscovered, on the farm. (Britannia IV, 1973, 281; V, 1974, 414). It ought to be said that this is a large assumption for which there appears to be no direct evidence yet published, and one can certainly imagine a variety of scenarios in which the "estate"

could continue to be farmed without the need for a central villa house.

The corridor house may not have been the only stone building on the farm in its earliest years. Traces of another were associated with two large enclosures to the north laid out in the early second century. Unfortunately, its remains were too damaged for its plan to be recovered or its purpose recognised (Britannia VI, 1975, 237). The associated enclosures were demarcated by shallow ditches which may have been hedge-bedding trenches. Without detailed evidence it is impossible to decide the function of these putative hedges, but they may have served to protect crop-growing areas from both wind and trespassing livestock. The enclosures evidently continued in this form for over a century after the building of the corridor house to the south, since it was not until the earlier third century that they were provided with substantial banks and ditches, presumably connected with a change in enclosure function, and also animal-related, since the excavator notes trampled areas within the enclosures which he interprets as marking the position of "shelters, mangers, or other temporary installations for pastured animals" (Britannia VI, 1975, 237). Morris refers to these enclosures as being suitable for cattle or horses and considers the trampled areas as marking "mangers or temporary shelters such as hay racks or wind shields" (Morris 1979, 45-46).

It is in the earlier third century, also, that other signs of a major re-organization of the farm have been detected; the deep (30m) well in the south-east corner of the villa enclosure had already been deliberately backfilled with refuse and dead livestock by this period, and the ditched enclosure surrounding the

corridor house was now suppressed and a new ditch dug to enclose both the house and the agricultural complex to its south-west. This may be the same as a long double ditch which is said, in the report of the first season's work (Britannia III, 1972, 311) to have enclosed the whole 8.5 ha. site and to have been traced for 1.6 km of its length without turning. Branigan (1980, 25) is right in saying that this re-organization "might" be related to "significant changes in the pattern of agriculture, but until full details of the enclosures and their sequence are available we can only speculate ..."; but we should bear in mind that the implications of the re-organisation are not necessarily agricultural. If they are, one would like to know, for example, whether the changes in enclosures represent simply a re-arrangement of functionally differentiated areas within the farming unit (and, if so, why) or whether there may have been a significant change in agricultural practice, with increased emphasis, say, on stock-raising at the expense of crop-growing. It seems puzzling, in this respect, that Branigan seems to suggest that an increased emphasis on crop, specifically cereal, production, perhaps to provide grain for the Pennine garrisons, is suggested by these early third-century changes (Branigan 1980, 25). The whole premiss of increased army demand as a stimulus to major changes in supply has, moreover, recently been challenged by Millett, who calculates that a crop surplus equal to the entire grain equivalent of annual army expenditure could have been produced on an area of land as small as 108 kms square and that the economic impact of the army in Britain "need only have been comparatively small, and certainly not the stimulus or burden that it is often taken to be" (Millett 1984, 68). Again, one would like to know if the enclosure changes and the

construction of the major ditched "boundary" were closely contemporary, since taken together they might at least suggest a change in ownership. Until the data are published these remain tantalising questions, and it is probably safest to conclude, with Dent (1983b, 42), that the farm economy was mixed throughout the period and that the pastoral/arable ratio probably fluctuated.

This northern area of the farm seems to have seen a variety of uses during the period. A drove-road with flanking enclosures ended here in a funnel-shaped system of ditches which may have been related to stock-control; some of the total of nineteen "corn-driers" excavated on the farm were located here; two timber buildings are said to have been in use as dwellings during the second and early third centuries; and there was evidence of the quarrying of large blocks of chalk. Finally, there was an absolutely square enclosure of c. 20m side in the north-eastern corner of the site which the excavator has suggested (pers. comm) may be a temple compound.

It would be interesting to know which of these activities were contemporaneous. The excavator records that fourth-century finds were noticeably absent from the northern part of the farm and postulates that this might indicate "shrinkage" at this period; "corn-driers", enclosures, and "dwellings" found in the eastern area of the farm are, however, dated from the mid-third to the mid-fourth century and may indicate, rather, a shift in the focus of activity on the estate away from its earlier centre. Both northern and eastern areas are, moreover, stated to have contained sunken-floored structures (apparently of a variety of functions) in use in the period c. A.D. 250-350, so the

term "shrinkage" may be inappropriate. Without evidence for the alteration of tenurial boundaries it is difficult to know what this might mean. Anything which pointed to a diminution of economic activity within the farm boundaries in the fourth century would certainly be of great interest and need examination, though it is doubtful whether one would be able to do more than suggest a range of environmental and socio-economic factors which might result in an under-utilisation of the estate, e.g. land exhaustion, depressed "markets", unavailability of labour, or even, it has to be said, fluctuation in the personal/family fortune of the owners. Hard evidence for the oft-supposed reduction in status of Brough at this period (Ramm 1978, 124 - 125) is lacking and a link between the fortunes of the town and the villa can not, therefore, yet be posited.

It should be clear, even from this brief account based on interim excavation reports, that the site's eventual publication in detail should provide an immensely valuable picture of the development of a chalk-edge villa estate during the Roman period. Data relating to its dwellings and agricultural and industrial structures (some already available in Morris 1979) should, when examined alongside environmental and artefactual evidence, enable such matters as changes in the site's economy, its place in the redistribution system and the status of its labour force to be assessed. In the context of the present discussion, however, it is most important to ask how far it will be of value in interpreting the other chalk-edge sites within the study area, for there are several indications that its development may not have been typical; indeed, most of the little published discussion of the site stresses its unusual elements.

That it developed from Iron Age beginnings into a fully Romanised farm/villa, of course, places it in a minority category to start with, but there are factors which make it unusual even when compared with other Parisian villas. The most obvious of these is the early date at which the farm was provided with a Romanised house. In the present state of knowledge, Welton Wold must rank as one of the earliest villa foundations in Parisian territory and its corridor house certainly antedates other examples of this type of building in the area by some two centuries, though the 60m ditched compound in which it is set is reminiscent of the early farms at Langton and Rudston (Ramm 1978, 100). The other corridor houses in East Yorkshire are all of fourth-century date (e.g. Langton, Beadlam, Brantingham). Ramm points out (1978, 92) that the corridor house seems to have been the norm in this civitas, though it should be borne in mind that such judgements are based on the plans of only seven Parisian villas, out of the twenty-two listed by Branigan (1980, 19, fig. 3.1). Dent (1983b, 42) remarks that the villa may have owed its early prosperity to its closeness to Petuaria "where a town was developing at this time", and Ramm takes the existence of the villa as supporting his view that the Parisi were organised into a civitas sometime between c. AD 125 and AD 144, i.e. he implies that a villa at this period might most reasonably be expected in an area with a constituted civilian government. Branigan (1980, 22-23) classes it as one of a group of half a dozen villas in the north-east where ownership by members of the native aristocracy might reasonably be inferred from the evidence of continuity from Iron Age establishments, though he finds it unusual within this group in being in close proximity to a tribal capital. (Since he wrote, however, Dent has suggested continuity

of occupation on the Brantingham villa site, close to Petuaria, where first-century ditches contained wheel-thrown and cordoned pottery of Aylesford-Swarling type which might possibly be considered as indicating the high status of its owners - Dent 1988, 98).

Morris (1979, 19), on the other hand, thinks that villa development at Welton might have been stimulated by military occupation at Brough, though she does not offer any model to explain how such a stimulus might have operated. Again, it is unclear how this can have been the case if Mackey's date of c. A.D. 100 for the construction of the corridor-house is accepted, for Petuaria is conventionally held to have been without a garrison between c. A.D. 80 and 125, functioning only as a stores depot (Wacher 1969, 3). Until the dating evidence is published, and, indeed, until current re-appraisals of the development of Petuaria are completed, this kind of question is going to be impossible to resolve. Morris almost seems to imply that Welton may have been under some kind of official control, since she discusses its possible link with military occupation at Brough in the context of the drying and transport of grain for military use, and alongside what she considers to be a possibly military-run supply farm at Hambleden, which, she admits, is "far from centres of military activity". There would appear to be no convincing examples, in fact, of such farms controlled by the military for their own local supply purposes (pers. comm, Dr M. Millett) and once again the Roman army would seem to be a spectre improperly summoned from the shades. Her statement that "the simplicity of the house argues against a normal villa" (1979, 19) is also surely open to question, since in plan it is only differentiated from other Parisian corridor houses by its slightly

smaller size. It is true, however, that it shews none of the elaboration of buildings, or the provision of mosaics in the fourth-century, which might have been expected in a villa which had been successfully and continuously farmed by one or more resident families for over two centuries. Finally, her suggestion that the "summary disposal of bodies" on the site might point to low-status occupants such as convicts or slaves is little more than an unsupported contention coloured by modern and culture-bound notions of what constitutes "summary", as opposed to "proper", burial, and would need detailed examination in the light of evidence for mortuary practice on a wide variety of rural sites before it could be accepted. However this may be, it will certainly be important to try to determine the relationship between the labour force necessary to construct and maintain such great lengths of boundary ditch, or a well c.30m in depth, for example, and the estate's owner. If the farm is to be regarded as developing out of aristocratic ownership then it may be that the ability to command the necessary labour originated in patterns of social obligation which pre-date the conquest.

It will be seen, then, that our knowledge of rural settlement on the eastern edge of the chalk Wolds for some 20 kms north of the Humber consists of an AP-derived distribution map, supplemented by limited fieldwalking data for a single site, and the unpublished excavation of a villa which may be of restricted value in interpreting other rural settlements of the period.

Moving eastwards onto the glacial till and gravels, much of the evidence for Romano-British settlement has, until recently, consisted of surface finds of small

amounts of material and the chance excavation of features. This is in direct contrast to the edge of the chalk, where artefactual evidence is at a minimum, and aerial photography has provided the bulk of the data. AP1 sites of IA and/or RB date on the clay, of which there are only four (G.1, 2, 169, 170), all lie north of northing TA/SE 37. Two of the sites mentioned (G.1 and 2) are on the mediaeval common pasture of Beverley Westwood, and the fact that they have possibly not been ploughed since the Roman period may have helped to preserve them in a form suitable for aerial photography. Elsewhere on the clay, it is easy to propose the combination of factors which has resulted in a dearth of photographic evidence; these have been discussed in section 1.4.3, and it is only necessary here to stress that much of the area south of northing 33 is now occupied by Hull's western suburbs in the clayland parish of Haltemprice. That there are important sites on the clay which have not been revealed by aerial reconnaissance has been demonstrated by the author's fieldwork at Fishpond Wood, Risby (G.139) and, east of the river, at High Eske Farm (G.161), both of which sites are discussed in this chapter below.

The only area west of the river where aerial photography has been as revealing as on the chalk is the Woodmansey/Cottingham gravel spread. Three AP1 agricultural complexes (G.190, 191, and 146) occur on the northern half of this gravel "island", with a fourth (G.194) occupying the interface between gravel and drift. Aerial photographs of these sites have not yet been plotted by the NMR, and it is important to stress here that they are extremely extensive and interconnected, the northern half of these gravels appearing to represent as integrated an agricultural

landscape as that on Bishop Burton Wold already discussed. AP2 sites (G.189, 193, 195) probably form part of this complex; G.145 (Burn Park Farm) has been fieldwalked by the author, and although it lies at the end of a gravel tongue approaching the main "island" from the south-west, data from it may be expected to be of relevance in interpreting these other gravel sites (see discussion below, section 3.2.2.2).

The only dating evidence relating to these gravels is provided by the stray find of a silver denarius of Septimius Severus (G.196), which, however, is not closely provenanced. [See however, G.213].

It is interesting to note that the southern part of the main gravel spread has no sites revealed by aerial reconnaissance, a fact which probably has to do with present land-use in the south of the "island", where market gardens, glasshouses and allotments are concentrated to the north of the large village of Cottingham; the recent chance excavation of third- and fourth-century greywares near Cottingham parish church (G.55), as well as other occasional finds from the village (G.58, G.216), suggests that settlement may have been more evenly distributed over the whole gravel spread. The value of a detailed database in enabling this to be posited is self-evident.

The dangers in assuming that the aerial photographic evidence west of the river indicates a preference for freer-draining chalk and gravels during the Iron Age and Roman periods have already been discussed (section 1.4.3); before leaving this brief discussion of the Woodmansey sites it is worth noting that the gravel spreads in the study area are far from homogeneous in nature, that the gravel component in some of the

glacial till can be extremely high, and, indeed, that the presence of gravel does not necessarily indicate better-drained land: Varley (1975, 13-14), for example, points out that when (as at Woodhall Manor, north of Beverley) gravels and sands occur at about the level of the regional water table they are capable of acting as underground reservoirs which, at times of prolonged rainfall, can give rise to severe flooding. Although it is probably true in broad terms that the Woodmansey gravels are better drained than the surrounding area of drift it will be important in future fieldwork to relate individual sites to detailed studies of their geological settings.

Finally, it must be observed that this gravel spread seems to have been environmentally attractive during both the Neolithic and Later Bronze Ages (fig. 3.6). In addition to the Hall Ings group of "tumuli" (Loughlin and Miller 1979, 29), which includes at least one definite round barrow, and one of which lies within AP1 site G.146, there are four gold bracelets from "Cottingham" (Loughlin and Miller 1979, 29; Challis and Harding 1975, 29) which suggest the presence of high-status individuals in the area in the eighth to seventh centuries B.C., while its attraction to Neolithic populations is evidenced by the group of stone axes found near Northmoor Farm (TA 052349; OS 1:25000 sheet TA 03, 1953 edition) in 1926, and a highly polished flint discoidal knife discovered during the author's fieldwork on White Hall Farm (TA 038372 - to be deposited in Hull Museum).

Before moving on to consider the sites at Fishpond Wood, Risby, and Burn Park Farm, it will be convenient to discuss the evidence of material finds and chance excavations on the clays and gravels west of the river.

It will be seen from fig. 3.1 (which plots mainly those finds for which a precise provenance is available) that there are two main areas of find-spots on the clay, one to the north of the Woodmansey gravel spread, and the other on the clay south of northing TA 32. Both groups co-incide with built-up areas, the northern one consisting of finds from the town of Beverley, and the southern one occurring in the suburban villages of Haltemprice, west of Hull, viz. Willerby, Kirk Ella, Anlaby and Hessle. Both groups result largely from various kinds of earth-penetrating operations in densely populated areas in modern times, and the resulting data-sets are similar to that produced by similar causes in Hull (section 3.3.3, below). It suggests that the absence of find-spots in the rural areas of the clay probably reflects its present-day low population density rather than an original absence of settlement. There are important differences in the two main groups of material, which are discussed separately below.

Most of the Beverley group of material has been found during Humberside Archaeology Unit excavation of mediaeval sites in the town since the mid-1970s (G.5, 7, 9, 10, 198); most of these excavations have produced small amounts of RB pottery, glass, coins and building materials, suggesting that nineteenth-century records (for the most part of rather poor quality) of finds in and around the town are to be trusted (G.4, 6, and especially 11). Only three finds (G.8, 13, 14) are by "members of the public" in recent years, and each of these is of limited value in terms of information: G.13 is a Greek provincial coin issue which caution suggests it may be safest to regard as a "souvenir loss". (The debate that arises whenever Eastern coins are found in this country is well exemplified by Collis 1975 and

Biddle 1975). There are problems of provenance attaching to both G.8 and 14 (see Gazetteer for details). The general nature of the material from the archaeological excavations is indicated above, and specific details are recorded in the Gazetteer.

The name Beverley is held to mean "beaver stream" (Ekwall 1960, 40) and this, together with the facts that excavations in the town's historic centre, focussed around the Minster, have nowhere revealed occupation earlier than the eighth century A.D., and that an impermeable boulder-clay subsoil underlies most of the town (Armstrong 1985, 3), suggests that the area may have been a wooded swamp in the Roman period, as, presumably, the mid-Saxon. The only RB feature to be encountered in these excavations was at Wylies Road (G.5) at the northern end of the town, where a ditch containing second- to fourth-century greywares (not third- to fourth-, as suggested by Armstrong 1985 and Humberside Archaeology Unit 1985) was found cut into a natural well-drained chalk-gravel horizon relatively close to the surface. It is probable (Armstrong and Didsbury 1990) that all the Roman material found in the south of the town was imported in the mediaeval period along with building materials from the surrounding neighbourhood, some of it perhaps from areas of RB settlement on Beverley Westwood to the north and west (G.1 and 2), an area where mediaeval quarrying is known to have taken place (Miller et.al. 1982, 30a). At Lurk Lane (G.9) Roman brick/tile had been used to line an industrial furnace in the eighth or ninth century, and one brick had been converted into an ingot-mould. The presence of Roman brick and tile (Evans 1990) in several of these excavations suggests that there may have been robbable RB buildings in the vicinity well into the mediaeval period. Interestingly, there would

seem to be a bias in the pottery finds towards samian and other fine wares, and this may reveal a selection process on the part of the mediaeval inhabitants of Beverley; a sherd of rubbed-down samian from Lurk Lane may have been acquired for its medicinal properties (Musty 1983, 171), and a counter of Nene Valley colour-coated ware could just as easily have been cut in the mid-Saxon as in the Roman period. It is, of course, possible that the fine ware bias reflects nothing more than a difficulty on the part of mediaeval pottery researchers in differentiating RB coarsewares from some mediaeval regional greywares, though the author's own work on the pottery from the Eastgate excavations (G.10, Didsbury and Watkins 1990) suggests that this is not the case.

The Haltemprice group of artefactual material consists for the most part of small amounts of pottery and/or coins, though it also includes a first- or second-century A.D. bronze figurine of a comic actor, found in Willerby (G.39). Of the fourteen find-spots under discussion, six (G.41, 44, 49, 54, 55, 197) reflect the activities of local amateur archaeologists, mainly members of the East Riding Archaeological Society; four or five were garden finds reported to Hull Museum by members of the public (G.39, 42, 45, 50 and ?52); and only one results from an archaeological excavation, that of a mediaeval moated site at Anlaby (G.53).

There is no reason to suspect that the majority of these finds does not represent original settlement in the area of their discovery. The amount and type of material from Wolfreton Garth, Willerby (G.47), where a small mediaeval hamlet was developed for housing in the 1960s, strongly suggests that drainage trenches had cut a Roman ditch or similar feature, and it is noticeable

that RB material west of the river has been found on or closely adjacent to several mediaeval centres of population: in addition to such present day villages as Cottingham (G.55), and Hessle (G.42, 49, 51), material has also been discovered on or close to the deserted sites of Wolfreton Garth (G.47); Moat Hill, Anlaby (G.53); Haltemprice Priory (G.54) on the interface between the clay and the valley alluvium; possibly on the fourteenth-century moated manor of Pighill, north of Beverley (G.4); and close to the DMVs of Risby (G.139), Tranby (G.197), and (east of the river) Eske (G.161, section 3.2.3.2), these last three as a result of the author's fieldwork.

The Haltemprice finds occur in a parish where the village names are almost entirely of Scandinavian origin. The only village names in the area which possibly reflect early Anglian settlement are Cottingham, on the south of the Woodmansey gravels, and Kirk Ella, on the Haltemprice clay. Manby (1980, 64) suggests that woodland regeneration on the Wolds in the post-Roman period is unlikely, pointing to the significant absence of the -leah place-name element on the chalk and concluding that only Rowley and Hunsley parishes give any indication of clearance in the Anglian settlement phase. It is noteworthy, therefore, that -leah names, which are rare in the East Riding as a whole, do occur three times towards the south of the clay-covered dip slope, at Kirk Ella (TA 025295), Bentley (TA 020360) and Loatleys (TA 053319). That the only Anglian village name on the Haltemprice clays should contain the -leah element, and that this area should also contain one of the most significant concentrations of woodland names, both English and Scandinavian, in the whole of East Yorkshire (Smith 1937, distribution map "Topographical Names: Woodland")

may suggest that the Roman finds under discussion reflect RB settlement on clayland that went out of agricultural use for a sufficient length of time after the fourth century for woodland regeneration to occur (fig. 3.7).

Although there are sufficient material finds from Haltemprice to suggest that the area, like parts of the clay to the north, was settled during the Roman period (and the probability that the Wolfreton Garth finds derived from an earth-fast feature should be remembered here) they are not enough to allow more than general descriptive observations on the dating of this settlement. First- and second-century finds consist of the Willerby figurine (G.39), a sestertius of Hadrian from Anlaby (G.50), and a first-century ceramic lamp and Colchester fibula from Hessle (G.49, 51). Mortaria from two sites (G.47, 54) may be second-century but most of the pottery, where datable, consists of third- and fourth-century wares, the Wolfreton Garth material containing Huntcliff lid-seated jars, the latest datable ceramic type available in the area. The coins, also, are largely of the third and fourth centuries, but this is consistent with the normal pattern of British coin loss (Reece 1972), and the sample is, moreover, too small to make analysis meaningful. All the coins from the clays and gravels west of the river are listed for convenience in Table 3.2. (following page).

Finds around the village of Hessle are particularly interesting. In a catalogue of pre-Flavian brooches from Yorkshire, Stead (1971, 41, fig.8, no.20) lists a Colchester brooch found in Hessle (G.51) and remarks, "no other Romano-British or Early Iron Age remains are known from Hessle, but it is only two miles east of

TABLE 3.2. Roman coins from clay and gravel areas west of the River Hull.

G.No.	No. of coins	Denomination	Reigns
4	2	AE; ?	Vespasian; ?
6	"some"	?	?
7	1	<u>denarius</u>	Sept. Severus
11	"some"	?	?
13	1	<u>sestertius</u> (Gk)	L.S.Geta
14	1	<u>follis</u>	Constantine I
29	1	AE 3	Valentinian I
42	7	?	Cl. Gothicus Constans Valentinian I
45	1	<u>follis</u>	Constantine I
50	1	<u>sestertius</u>	Hadrian
52	1	<u>follis</u>	uncertain
53	1	AE	Constantine I
58	1	AE	"Constantine"
126	1	"AE3 or <u>follis</u> " (mint of Alexandria)	Licinius I
139	8	see section 3.2.2.1	
160	1	<u>denarius</u>	Sept. Severus
163	1	<u>sestertius</u>	Gordian III
196	1	<u>denarius</u>	Sept. Severus
208	1	AE	Magnentius
209	1	AR	Caracalla
210	1	<u>denarius</u>	Diocletian
216	1	?	?

North Ferriby", whence comes another brooch of the same type (G.123). Since he wrote, however, a small number of finds has been made which suggests that there may have been actual settlement at this point, where a gravel cliff similar to that at North Ferriby overlooks

the Humber, and where there is a natural harbour from which a ferry crossing to Barton in Lincolnshire was in operation at least as early as A.D.1300 (Fitz Gerald 1885, 6, 8-9). Seven coins found in a domestic garden in 1983 (G.42) may represent the remains of a dispersed fourth-century coin hoard, the latest identifiable issues being two of Valentinian I. Four other third- and fourth-century coins, the latest of Constantine I, were found in 1977 on the foreshore near the mouth of the Haven, and a first-century ceramic picture-lamp was excavated from the foreshore bank at this point by the same finder (G.49). (Their discoverer, Mr L.Barker, is a member of the East Riding Archaeological Society, and it may be worth recording his information that this area of the shore was a focus of metal-detector activity at the same period, when the construction of the Humber Bridge tower was taking place, and that many Roman coins are supposed to have been found, though none was evidently shewn to Hull Museums.)

The existence of a settlement at Hessle would certainly make sense in terms of the site's natural advantages, and it would be an obvious terminus for the road Margary 813, the route down the eastern side of the Wolds from Malton which Ramm (1978, 52-53, fig.16) traces tentatively as far as the Bishop Burton area and which he implies should continue south towards the Humber when he writes that it must have had a junction with the road (G.148, 186) which leaves the east gate of Brough/Petuaria and heads east-north-east, passing close to the villa on Welton Wold, towards the Hull valley and Holderness. Such a road junction would occur on the Haltemprice clays, somewhere in the region of Willerby, precisely the area where we have already noted a concentration of artefactual material. Kitson Clark (1935, 38-39) thought the road early and that it

may have turned westwards to end at North Ferriby, but this now seems unlikely in view of the apparent dearth of Flavian and later material from that site (Crowther and Didsbury 1988, 15, 17-18) and the fact that excavation and fieldwork there have revealed no traces of it. Indeed, the abandonment of the North Ferriby site seems even more understandable if it were bracketed between road termini on either side of the Wolds, though in the absence of further finds from Hesse itself it is perhaps unwise to speculate further than this at present. (The assumed approximate route of the road to the west of Beverley is shown in Miller et. al. 1982, fig.3.)

An unpublished typescript in Hull Museums (Whitcombe, Grice and Armstrong 1969) records the most recent, very detailed, attempt by members of its staff to trace the southern termination of Margary 813 from RAF AP coverage of 1946 stored in Hull University Library collections. This is alluded to further in the discussion of Fishpond Wood, Risby (G.139) below and it is sufficient here to note only that it argues persuasively that Hesse represented the road's most likely destination. The existence of a terminus on the Humber shore might possibly help to resolve some of the problems connected with the location of named settlements in the area (Creighton 1988 for the most recent discussion) and fieldwork to trace the continuation of Margary 813 southwards might be thought one of the more important contributions which could be made to knowledge of the regional infrastructure in the period. (The RCHM transcriptions of APs on the Yorkshire Wolds became available in the Humberside Archaeology Unit SMR only as this thesis was being completed, and may prove to be useful in this regard). Finally, in this context, it is interesting to note

that one of the few Anglian cremations in the study area was found near to the presumed road line just to the north of the present village (G.43), and that the Colchester brooch discussed above, according to original accession details held in Scarborough Museum and not mentioned by Stead, is supposed to have been found "on an old Roman road", though since the find was made in 1846 the evidential value of this information must be limited.

The limited amount of evidence for settlement provided by surface finds and chance excavation outside the two main areas already discussed may be summarised briefly before turning to the two case studies. Most of it concerns the extensive spread of gravels at Leconfield and its vicinity (fig. 3.8).

The apparent absence of settlement from that part of the Leconfield gravel spread which lies within the study area probably results from the fact that the south of the gravel island is largely covered by the expanding village of Leconfield itself and by an extensive airfield and RAF and Army base, installations which have been present since before the Second World War and hence before much of the archaeological flying in the area took place. Settlement evidence is known from the northern part of the parish (see note at end of Gazetteer entries for this parish) and a few finds from the south of the gravels suggest similar activity here also, most notably a cremation burial (G.112) within the present village. The cremation jar itself is noted as being reminiscent of a Crambeck form, which would make it an unusually late example of this burial rite; the comparison was, however, made in the 1940s, and it may be safer to keep an open mind as to the date of this burial. Definite late fourth-century

material, in the shape of Huntcliff-ware cooking-pots, comes from the site of the aerodrome (G.114) and from the clay adjacent on the west (G.113). As already noted, the Roman road which crosses Bishop Burton Wold seems to head towards these gravels on its way to the head of the lower valley, and two chance finds (G.29 and 31) have been made on the central one of the three gravel tongues which link the Leconfield gravels with the chalk.

The only RB structures discovered on the western clays and gravels, both of which afford limited evidence of the rural economy during the period, also lie in the vicinity of Leconfield, both slightly outside the formal limits of the study area: the first is a T-shaped "corn-drier" (G.36) which was discovered by chance c. 1874 in the vicinity of Etton, a village situated on the northernmost of the gravel tongues mentioned above (fig. 1.5). An associated quernstone and animal bones are of very limited value in suggesting a mixed farming economy in the area of the Wold edge, but an exact provenance is not available and the surface geology cannot be determined; the T-shaped class of "corn-drier" apparently occurs throughout the Roman period, though most numerous from the third century onwards (Morris 1979, 146-148, Table 1). It is conceivable that further research using information in Clark (1935, 81) might locate the associated pottery and allow a date for the structure to be suggested. A more exact provenance might also be obtained by these means. Secondly, a pottery kiln producing greywares (G.115) was excavated by the East Riding Archaeological Society in 1968 at Woodhouse Farm, situated on clay to the south of the above mentioned gravel-tongue and about mid-way between the corn-drier and the main Leconfield gravels (fig. 1.5). The kiln

was probably in production in the second half of the second century; its wares, which have not yet been recognised on other sites, were probably intended to meet a very localised need, though it should be borne in mind that its undistinctive fabric and forms will be difficult to detect elsewhere by their very nature (J.Evans 1985, 216-219). The kiln has the present distinction of being the only one known to have been in operation in East Yorkshire before the rise of the Holme-on-Spalding Moor and other third-century industries, and it is significant that its structure appears to have links with types found in North Lincolnshire, the area which seems to have supplied much of the greyware in use in south-east Yorkshire before the rise of the Holme industry, as at Greylees Avenue, Hull (G.69), and North Cave (Didsbury in prep.). Jeremy Evans (op.cit.) considers there are other kilns of similar date awaiting discovery in the region, and it does seem possible that small production units sited on the clay could have sprung up by this date to meet the needs of the local agricultural communities, especially in view of the fact that even fairly low status establishments such as North Cave were receiving Romanised wares in quantity by c. the A.D. 140s (Didsbury in prep.). They might also have been stimulated by the existence of villas in the vicinity, which might have needed, whether at this date or later, such structures as "corn-driers".

There follow the two site-studies relating to the clay and gravels west of the river: Fishpond Wood, Risby (section 3.2.2.1) and Burn Park Farm (3.2.2.2).

3.2.2.1 The IA and RB settlement site at Fishpond Wood, Risby (G.139)

Introduction

In November 1982, the author, working in conjunction with Messrs G. Ostler and N. Jackson, discovered an extensive Romano-British pottery scatter near Fishpond Wood, Risby, North Humberside (TA 01013577). A brief note is necessary at this point to explain how and why subsequent work was undertaken, facts which have determined the nature and scope of this case-study: all three persons involved were at that time unemployed members of a University of Hull Adult Education class in archaeology, taught by R.T. Schadla-Hall, then Principal Keeper of Hull Museums and Art Galleries. None of us had had previous tuition in the subject or experience of surface fieldwork, and our first excursions into the field were undertaken mainly for experience in collecting and identifying multi-period artefactual material. A variety of sites was visited in the ensuing months, resulting in discoveries which convinced us of the almost untapped potential for fieldwalking in the region (see, for example, Didsbury 1984), but the main focus of our attention was an area of some 2 square kms at Risby, initially visited because a fellow class-member had reported seeing Roman greywares on a public footpath there a few years previously. The tenant of Park Farm, Risby, Mr Peter Clappison, generously allowed us unlimited access to all his fields, and this enabled us very quickly to gain an intimate knowledge of the locality. The precise methods adopted will be dealt with below, but the work may conveniently be summarised in retrospect

as semi-structured archaeological survey of an entire present-day farming unit, conditioned by limited manpower, resources, and, initially, expertise. As much enthusiasm was expended on the identification of iridescent post-mediaeval bottle-glass as on a struck flint or sherd of Roman greyware, and the area tackled would have daunted any but a novice; despite these facts, however, the result was a multi-period survey of an archaeologically important tract of land, the value of which will be demonstrated below. Our methods were directed to the location and approximate definition of artefact-scatters rather than to their detailed internal examination, but, in view of increasing destruction of rural sites, this may be thought to be of value in itself. Further work remains to be done at Risby, particularly as regards quantification of the very large amount of material collected, but it is to be hoped that what follows will demonstrate the value of that already undertaken.

Location

The site lies in the township of Risby, in the parish of Rowley, North Humberside (fig. 3.9). The parish varies between c. 2 kms and c. 4 kms in width, and stretches SW to NE for nearly 10 kms from the high chalk Wolds to the boulder-clay mantled fringes of the Hull valley. Altitude drops from over 160m AOD at Hunsley (SE 938348) to 30m AOD at Bentley (TA 019359).

According to the Victoria County History (Allison 1979, 142) almost the only surface drainage in the whole parish is a stream (now subsumed among field drainage ditches) flowing eastwards in Risby township towards the River Hull.

Four of the parish's six mediaeval settlements are largely or wholly depopulated (Rowley, Hunsley, Riplingham and Risby); there are extensive DMV remains at Riplingham and Risby; and the only modern settlements are the large village of Little Weighton, and the hamlet of Bentley to the east of Risby.

All these settlements have English names and may have been Anglian in origin, except for the Scandinavian Risby. All of them are etymologically connected with woodland and scrub. Manby (1980) points out that the -leah placename element is extremely rare on the Wolds, and that only Rowley and Hunsley give indication of clearance in the Anglo-Saxon settlement phase. Whether this was the clearance of primary woodland or of woodland regenerated after the collapse of the Romano-British economic system is unknown. Manby regards serious woodland regeneration as unlikely on the Wolds as a whole, but it may have occurred for some reason in Rowley parish. In addition to the evidence of the names Rowley and Hunsley, already cited, there is Risby itself, which may not have been cleared until the Scandinavian period. Its name probably means "the farm near the clearing" (Smith 1937, 204-205). As already noted, -leah placenames also occur on the lower slopes and the edge of the valley, as at Bentley, and Loatleys (TA 053319), both to the east of Risby, and it is possible that scrub regeneration was a phenomenon of the lower clay slopes rather than the higher chalk Wold.

Deep dry valleys run back from the Wold escarpment into the western part of the parish, where the ground is high and exposed. In the east of the parish, on the Wolds' dip slope, the valleys are shallow and more gentle, forming the parish boundary in many places.

There are deposits of gravel in some of the valley bottoms. In Risby township the chalk is mostly covered by the boulder clay (unlike the townships to the west where the chalk is near to the surface) and its landscape is cut by two glacial meltwater channels, of which more below (De Boer et al., 1958). It will be seen (fig. 3.10) that these glacial spillways enclose a plateau rising from 125'-175' AOD (38m - 53m), an area of some 1.1 sq. kms which forms the core of the township and the lands of the mediaeval village.

The archaeology of Risby township as known in 1982

The whole of Risby township has, since 1976, been owned by the Alliance Assurance Co., Ltd, and the plateau at its heart, together with much of the land between the southern glacial spillway (along which Dunflat Road now runs) and the southern parish boundary, is farmed by the tenant of Park Farm, Mr Peter Cla_uppison. A large part of the central part of the farm is taken up with woodland, the DMV is under pasture, and parkland covers the site of Risby Hall and Cellar Heads (see below, and figs 3.10 - 3.12).

The fields walked, with the field enumeration used during the work, are shewn in fig. 3.11. Fig. 3.12 shews archaeological features known in the township before work started. These are listed and discussed briefly below:

1. The DMV of Risby (TA 007349)

An estate of four carucates was sold in the time of William I to the Archbishop of York. It was waste in

1086. Depopulation may have begun c. 1510, with enclosure for deer parks, at which period one of the open fields was also inclosed and used for arable in severalty. Inclosure was probably completed before 1702. There is some indication of sheepwalks at this time, and part of the township had apparently reverted to scrub. In 1377 the township had rendered the greatest number of payers of poll tax (55) in the whole parish, but there were only six households, including the Manor House, by 1672, and eight families in 1743.

2. Risby Hall (TA 006251)

Apparently built c. 1684, replacing an earlier manor house supposed to have existed in c. 1275 according to Loughlin and Miller (1979, 33). It is supposed to have been destroyed by fire c. 1775, rebuilt, and destroyed again c. 1784 (Neave and Waterson 1988, 51). Local tradition attributes these burnings to a deranged Lady of the Manor. An undated drawing of the imposing house, its formal gardens and pavilions, survives (Wakefield Art Gallery). The site is now under grassland and, although unscheduled, its gardens have been designated "of historical interest".

3. Cellar Heads (TA 004355)

A rectangular earthwork complex thought by Loughlin and Miller (1979, 33) to be a possible moated site overlooks the Hall in parkland to the north. A moated site at this altitude would be unusual; Neave and Waterson suggest (1988, 51) that it is the site of the manor house where Henry VIII was entertained in 1540. Local tradition holds that it was the site of a final attempt to rebuild the Hall after its burning, being abandoned after foundations had been dug. This,

however, seems to have been on an adjacent piece of land and not to have been attempted until after 1883.

4. Risby Head (TA 003344, G. 138)

Loughlin and Miller (1979, 33) record aerial photographs of a ring-ditch inside an ovoid enclosure (section 2.3.1). Nothing was found on the surface during fieldwalking by the author.

5. Possible round-barrow (TA 012348)

This feature is contoured by the Ordnance Survey, and is visible at ground level. A tertiary flint flake of blade form was found on the centre of the mound, and it is surrounded by a discreet scatter of fourteenth-/fifteenth-century Humberwares, the field being otherwise signally devoid of pottery. If of Bronze Age date, the mound may have seen secondary use in the mediaeval period, perhaps as a windmill mound.

Work undertaken, method, and summary of results

The fields numbered 1 to 15 (I-XV on fig. 3.11) were all initially surveyed by thorough, but not spatially controlled, fieldwalking. The fields to the south of Dunflat Road, the southern glacial spillway, yielded only small amounts of material of any period (see below). Although they were revisited over the next three seasons at various stages of the agricultural process this situation changed little, and the fields are differentiated in this respect from those to the north and east of the woodland, fields 1-6, where multi-period artefactual material was locally abundant.

The fields south of the road are on heavy clay soils without the gravel component of fields 1-6.

In the early stages of the work the field was adopted as the unit of collection for the following reasons:

1. The original intention was an overall survey of the entire farm.
2. A maximum number of three walkers was permitted at any one time.
3. Individual finds or scatters of material could be located quite accurately by pacing from fixed landmarks. When it became clear that "sites" were being found, in addition to individual objects, pacing was used to define the approximate edges of material scatters, a method which experience in subsequent seasons shewed to have been remarkably accurate. Finds judged to be individually "important", for one reason or another, were located within scatters by pacing; all material was washed, bagged and dated, and can be linked to a comprehensive set of field-notes recording location, state of crop, weather conditions, personnel and other relevant information. (Copies of a report on the first season's work [Didsbury 1983a] were deposited in the libraries of Hull Museum and Hull University).

The main results of the initial work can be summarised as follows (fig. 3.12):

1. Worked flint was ubiquitous on the east and north of the woodland, with two dense scatters located in Fields 6 and 5.

2. There was a Romano-British artefact-scatter occupying the northern third of Field 2, the density and general nature of which suggested an occupation site (fig. 3.13).

3. Mediaeval pottery was characteristic of Field 5, but scarcely in evidence elsewhere. The field contained very evident rig and furrow, and had been ploughed in 1981 for the first time in living memory, having previously been part of the post-mediaeval estate parkland. A general lack of post-mediaeval material suggested that the field may have been under grass for most of that period. The mediaeval pottery is interpreted as "midden" material originating in the DMV.

4. There was a dense scatter of post-mediaeval brick and pottery at the southern edge of Field 12, on the parish boundary, and information from Mr Clappison suggested that cellarage or footings of a post-mediaeval building had been ploughed out two or three years previously.

The Romano-British material will be discussed below. The western flint scatter is located on the highest point of the plateau, above 175' AOD (53m), and is almost entirely late Mesolithic to early Neolithic in character, including blade and other cores, two flint axes, a flint adze, and numerous scrapers, flakes, blades, and debitage. The assemblage has been examined and quantified by Don Henson, who confirms this dating (pers. comm.). The date of the eastern flint scatter is more difficult to assess: it has not yet been subjected to expert opinion, but it may be noted that it is characteristically different from the western scatter. It appears to be much more flake-

orientated and includes a barbed and tanged arrowhead and thumbnail scrapers. It appears to extend westward into the modern woodland, on the edges of which flints were found during scrub clearance and replanting. De Boer et al. (1958, 193) note a patch of gravel in the mouth of the southern glacial spillway at this point, and the scatter seems to be approximately co-terminous with it. It seems possible that the earliest prehistoric activity consisted of woodland clearance on the high plateau, with the eastern scatter representing a later phase of expansion down the lower slopes and into the valley, which much later provided the site of the mediaeval village (figs 3.10, 3.12). The high plateau is today very exposed and inhospitable in winter, but, apart from the fact that it may have been more sheltered in prehistoric times, it affords commanding views over a wide tract of country with its variety of resources, including, to the east, the fen of the valley bottom. It is also worth noting that a permanent spring (Gillan Spring, today brick-vaulted) is located in the centre of the scatter and may have provided a source of water in the Neolithic also. Small amounts of late fourth-century pottery in the vicinity may suggest its use in the Roman period; within living memory it was the main domestic water source for Park Farm, in the valley below. Its etymology is uncertain, but, if "Gillan" is not a personal name, it seems possible that it contains the Scandinavian element gil, ravine, referring to the steep-sided northern glacial channel. A general background scatter of flint occurs all the way up the slope (Fields 2-5), especially marked in the area of Romano-British occupation in Field 2, where flint tools and a few sherds of Beaker pottery have been identified by Peter Wardle of Bradford University.

It thus seems that the environmental attractions of this area of land had been appreciated during much of prehistory, and the Romano-British settlement must be seen as taking place in a landscape already substantially modified by human activity.

The Romano-British material scatter

The scatter covers an area of some 2.75 hectares, centred on TA 01013577, and effectively covers the northern half of a modern field given over to arable agriculture, cereals, legumes and potatoes having been grown there since the field has been observed. The northern half of the field is distinctly gravelly in comparison with the southern part, though it is not shewn as a gravel spread on the OS 1" Drift Geology sheet. No aerial photographs of the field shewing archaeological features have been located, though a high altitude vertical in Humberside County Council's Planning Department collection (Meridian Airways photo no. 66/75 of 8th December 1975) shews a neatly demarcated area of lighter toned soil at the northern end of the field. This area is geometrical enough to have been the result of agricultural operations, but may, alternatively, have to do with drilling carried out by an oil company in the early 1970s. Precise information has been difficult to obtain, but it is said that "topsoil" from an area at the northern end of the field was moved to the field edges and later replaced. If archaeological features were seen during these operations they were not reported. It is certain that soil was not brought onto site from elsewhere, and the evidence of large joining sherds yielding the complete profile of an Iron Age jar (see below, and fig. 3.14) suggests that features such as ditches

remain undisturbed on the site; it may be, however, that an "original" spatial distribution of artefacts in the plough soil across at least part of the site has been much altered, though this question has not yet been examined by gridded fieldwalking.

A trial resistivity survey was undertaken in November 1984 by Dr J. Pocock, using a Geoscan meter. The principal object of the exercise was to assess the potential of such survey on this site, though it was hoped that the orientation of the linear survey block north to south through an area with much surface material (fig. 3.13) would result in the detection of major features such as ditches or concentrations of stone. The position of this survey strip, and its relationship to some of the main finds within the scatter, is shown in fig. 3.13. The resulting resistivity plot is reproduced as fig. 3.15, and Dr Pocock's interpretation of it appears, with his permission, below:

".... the plot does reveal a series of parallel anomalies running very roughly SSE to NNW, showing as alternate strips of higher and lower resistance. This I interpret as ridge and furrow. Superimposed on the higher resistance strips are three regions of highest resistance (marked A, B and C on the plot). Although rather spread, and generally following the direction of the suspected ridge and furrow, there is a tendency, at C, for the high resistances to turn towards the south and east. The evidence is rather shaky, but I would venture to suggest that these areas of highest resistance might be associated with concentrations of stone etc. some distance beneath the surface. I would not want to commit myself further than that. Examination of the areas surrounding the southern end

of our survey strip i.e. west of B, south of C and east of A, might be worthwhile." (J.Pocock, in litt., 27.11.1984).

There is very little RB material in the fields to east and west of Field 2, but it does not appear that this can be accounted for by differential agricultural practices in modern times. The fall-off in ceramic material to the south is also sharply delineated, though it appears to be more gradual on the north. The "site", as defined by the present-day artefact-scatter, occupies a roughly rectangular area approximately 200m x 200m. It was first observed as the presence of RB greywares, though it later became clear that roofing tile in a fabric known from other Roman sites in the region, and including several definite tegula flanges, was also present, as well as other classes of artefact which will be discussed below.

What follows seeks first to establish a date-range for activity on the site, after which individual artefacts and classes of material are examined both for their intrinsic interest and for their contribution to an interim interpretation of the site's status and function. Concluding paragraphs attempt to indicate the site's place in the RB landscape of the study area as it is now beginning to emerge, its importance for future field strategy in the region, and proposals for future fieldwork. The main finds mentioned in this discussion are plotted on fig. 3.13.

Dating evidence

1. Pottery

As already noted, a Bronze Age component in the assemblage is represented by a base sherd in a sandy Beaker fabric identified by Peter Wardle (pers. comm.). I.A. Thorpe has also suggested that some body sherds are best accorded a Later Bronze Age/Early Iron Age date. Whether this material derives from actual settlement on Field 2 cannot at present be assessed, but it should be noted that this area is the only one investigated where flint tools (mainly scrapers) and prehistoric pottery occur together.

That there was actual occupation on site around the beginning of the first millennium A.D. is strongly suggested by the discovery of a cordoned pedestal urn in the Aylesford-Swarling tradition (fig. 3.14) towards the south-western corner of the material scatter (fig. 3.13). A large rim-herd of this vessel was found on the surface during fieldwalking in January 1984, and subsequent excavation of the ploughsoil of two square metres around the find-spot yielded enough sherds to reconstruct very nearly the whole profile of the vessel. Fifty-six sherds were recovered in all, twenty-seven belonging to the jar under discussion. The remaining material included two body-sherds of first- or second-century fabric type, a bead rim fragment of Central Gaulish samian, the rim of a Dales Ware jar, a fourth-century straight-sided flanged bowl rim, and a sherd of fifteenth-century Humberware. The large sherds, high sherd-to-vessel ratio, and number of physical joins among the Iron Age material suggest the presence at this point of a feature perhaps being penetrated by the plough for the first time. The only

other vessel represented by more than one sherd, and which may therefore derive from the same feature, is the greyware jar shown as fig. 3.18, no. 2 (eight joining sherds). Probably a two-handled jar, its form is, unfortunately, not closely datable, though it is perhaps unlikely to be earlier than the first half of the second century.

The cordoned jar is closely comparable, both in fabric type and form, with Phase 2 material from Dragonby (May 1970, 236 and fig. 8), conventionally held to have been made from c. 50 B.C. into the earliest years of the first century A.D. Challis and Harding (1975, i, 92) noted the "accumulating evidence" for "a quite widespread occupation with pottery of Belgic type" in Lincolnshire before the end of the first century B.C., but almost all the similar material now known from the north bank of the Humber, a region once held to have been entirely devoid of "Belgic" influence (Rivet 1964, 46, 51), has been found since publication of their survey. This type of pottery has now been found north of the Humber in the following places, listed in chronological order of discovery (see map, fig. 3.16).

1. Rudston Villa (TA 089667 ; Rigby 1980, fig. 37, no. 122). Excavations of 1962-1972. Cordoned jar, compared by Rigby to late Iron Age and early Roman material from Hertfordshire. ^{Found} in a group considered to be pre- or early Flavian.
2. Brantingham Villa (SE 932287; Fairhurst 1985, 16; Dent 1988, 98, and fig. 6.2). Several bowls from ditch preceding construction of villa. Excavations by John Dent for HCCAUI, 1983. (Site code BCP 83, context 5).
3. Risby (Didsbury 1988, 26).

4. Bursea House (SE 813338; Halkon 1987b, 3; Halkon 1987c, 7). Bowl during excavations by Peter Halkon, 1987, with the East Riding Archaeological Society.

Two salient points may be noted about this new body of material: firstly, it displays an estuarine and coastal distribution, none of the three southern sites being more than c. 7 miles/11 kms north of the river, and Rudston within c. 6 miles/10 kms of the modern coastline. The pattern is thus essentially similar to that of late Iron Age coinage in the East Riding, with several finds along the Humber littoral (including Brantingham, where a coin of Cunobelin [Mack 243] was found unstratified during the aforementioned excavations) and scattered finds along the Holderness coast (see also, however, G.213). Secondly, two of the finds are from sites, Rudston and Brantingham, which later had villas built upon them, and it is possible that Risby is a candidate for that status. It may thus be that the distribution of this material reflects the socio-political relationships of high-status groups on the north bank with communities to the south rather than what might be called "trade" in more modern senses of the term. Against this interpretation must be set the possibility that the Risby jar, at least, was manufactured north of the Humber, either as part of a process of LPRIA acculturation of local high-status groups, or by immigrant groups accustomed to this kind of pottery. Sheila Elsdon, who has examined the vessel, points out in support of this view (pers. comm. and in litt.) that it contains some chalk temper, so soft that most of it has leached out. She also recommends further investigation of the find-spot to determine whether or not it was deposited in a cemetery context. Carbonised deposits on the interior of the vessel have not yet been analysed, but have the

appearance of food residues. Judgements on all these questions will have to await scientific analysis and further discoveries; in the meantime, the author and John Dent intend to prepare a corpus and discussion of this class of material north of the Humber in the near future.

The material discussed above provides a convenient chronological indicator suggesting occupation on site around the beginning of the first millennium A.D. Analysis of the pottery assemblage so far undertaken has not, however, revealed any of the wares which one would expect on a site in this region in the first to late second centuries. Dragonby Phase 3 material, including Gallo-Belgic wares, is absent, as is the Flavian repertoire found at military sites like Hayton (Johnson, S., 1978, 87-97); furthermore, the typical indicators of Hadrianic and Antonine occupation in the region are likewise absent: such products as rusticated jars (found at Welton Wold and un-stratified at Greylees Avenue); greyware bowls imitative of mid-second century BBI forms (North Cave and Greylees Avenue); products of the Roxby (Rigby and Stead 1976, 138-147) kilns (North Cave, Greylees Avenue); or the carinated jar forms from a variety of North Lincolnshire sources which were so popular in the Humber basin in the Antonine period (Rigby 1980, 93; North Cave, Greylees Avenue). The evidently low-status site at North Cave (above, section 2.2.4) appears not to have been receiving Romanised greywares until the second quarter of the second century, with most of the samian post-dating the 160s, though even here late first-century forms such as a campanulate bowl similar to those stamped by Reditas (Buckland 1986, 19, fig. 12, no.8; Rigby and Stead 1976, 188, fig. 93, no.1) could find their way onto site (author, report in

prep.); and at Greylees Avenue, the status of which is unknown but where pottery reception may have been influenced as much by geographical location, the pottery assemblage was dominated by Romanised greywares from at least the mid-second century onwards. Without further work it is impossible to interpret this apparent hiatus in the pottery sequence at Risby, though two explanations readily suggest themselves: either the bulk of the material assemblage in the ploughsoil comes from later features penetrated by the plough, with earlier material remaining undisturbed at some depth, a possibility also suggested by the resistivity survey; or, alternatively, the dearth of "early" material in the plough-soil may reflect a combination of low level of pot use with the employment of less durable ceramics at this period. (A totally aceramic occupation of the site is considered unlikely). It is possible, of course, that the site was unoccupied for much of the first two centuries A.D., though an hiatus of this length in the use of the site perhaps seems a less convincing solution than those mooted above. It will also be noted (below) that the second half of the second century, at least, is represented in the ceramic record by samian and other imported finewares.

Samian from the site amounts to a score or more of sherds, mostly small and heavily abraded "scrap". The assemblage does, however, include a basal sherd stamped with the letters BΘ- (fig. 3.18, no. 1) about which Brenda Dickinson reports as follows (in litt., 23.5.1989):

"It is on form Dr.33 and reads BΘ[RILLIOF], a stamp of Borillus i of Lezoux (Die 5d in our Leeds index of stamps). Borillus's stamps are common in Antonine

Scotland and also occur in a group of burnt samian of c. A.D. 140-150 at Castleford. He stamped a wide range of forms, some of which are thought not to have been made after c. A.D. 160, such as Dr.27 and 42 and others which only started being made about that time, such as Dr.31R and Walters 80. For this die the later forms outweigh the earlier, and so the stamp is likely to have been in use c. A.D. 155-175".

Specialist opinion on the rest of the samian has not yet been sought.

A small amount of other material of late second-century date can be recognised, most notably the base of a Lezoux "Rhenish Ware" vessel (fig. 3.17, no. 1) datable to c. A.D. 175-200. This sherd was submitted for examination to Dr Grace Simpson, who kindly supplied the following comment (in litt., 29.vii.1984):

"It certainly is quite an unusual formalthough, as so much is missing, the following reconstruction is a guess. I think that it is not true samian ware, but the closely related so-called 'Rhenish ware' as it once was called, but now known to have very similar productions at Lezoux in Central Gaul. You will have noticed the quantity of mica sparkling in the clay. This is typical of Lezoux.

.... After its original fracture, I suggest that the tall footstand was chipped off very neatly, to make a small container. The best illustration of such a vessel is in Bushe-Fox, Wroxeter 1912 (1913) Antiq. Research Reports I, p.16, fig.5 at $\frac{3}{4}$ scale, where it is called Rhenish ware. But, clearly, is not a Rhineland production, as I have explained above, from the clay. I have seen another complete vessel in the Nat. Mus.

Wales, given by John Ward, and possibly from the Pudding Pan Rock. Another example was in the Pudding Pan Rock finds from the wreck in the Thames estuary.

Two handles, with en barbotine decoration....Last quarter of the second century is about the time of production."

(Dr Simpson enclosed a sketch of the vessel in the N.M.W., a copy of which is reproduced as fig. 3.17, no. 2).

Apart from its chronological significance the sherd is of interest in shewing a fairly rare class of import reaching a site in the rural hinterland of Brough at this period, possibly, though not necessarily, as a result of trade direct from the Continent to the Humber estuary. (The author's work on the sources of mortaria supplied to sites on the north bank of the Humber [in prep.] shews Rhineland imports dated c. A.D. 150-250 appearing at such sites as Greylees Avenue, North Cave, and Faxfleet "B" [Sitch 1987] and it may be that some of these were indeed landed directly at various points on the Humber shore). Specialist opinion on the remaining colour-coated component in the assemblage, for the most part quite fragmentary, may reveal further continental imports, since not all of them appear to lie within the fabric range of the Nene Valley industry; one small beaker sherd may tentatively be ascribed to an East Gaulish source (Moselkeramik, fabric as described in Dyson 1986, 118, with a date range of c. A.D. 180/190 - 250 as an import in Britain.)

The third and earlier-fourth centuries are characterised by the regionally dominant greywares of

the Holme-on-Spalding Moor industry, mortaria with moulded down-turned flange or hammer-headed rim, and jars in classic (shell-tempered) Dales Ware fabric. Once thought to be rare in East Yorkshire (Rigby 1973, 106), the latter is now known from several sites in the valley, its former apparent absence from Holderness more likely reflecting a lack of fieldwork, as Loughlin (1977, 114) suggested. The differently tempered Dales-types of the Holme-on-Spalding Moor industries appear far less frequently, and the area seems to have remained at least partially within a Lincolnshire ceramic orbit during the third and early fourth centuries. Other evidence of trading contacts with Lincolnshire is possibly represented by a quern of Spilsby Sandstone (see below).

The second half of the fourth century is represented by the most distinctive range of wares in the assemblage, comprising HOSM greywares, Huntcliff lid-seated jars and other Signal Station types (Hull 1932), and painted Crambeck parchment wares and mortaria. This repertoire is wholly typical of this period in the East Riding, and finds a close parallel in the excavated assemblage from Walkington Wold (G.162), some 5 kms away.

Continuing reception of some wares from south of the Humber at this period is indicated by several sherds of a Nene Valley painted parchment ware flagon identical in decorative scheme to Howe, Perrin and Mackreth 1980, fig. 8, no. 96, probably a product of the Stibbington kilns.

2. Coins.

Coins found during fieldwalking are listed below. No. 3 was found near the northern end of Field 3, and no. 8 in Field 6; the remainder are from the artefact-scatter on Field 2. The coins are generally in a fairly poor state of preservation; identification of nos 2 and 3 was made by Dr James Booth of the University of Hull. Nos 4 and 5 were found in the author's presence by a metal detectorist claiming (falsely as it happened) to have permission to "work" the field. (These coins remain in private possession; the incident is mentioned to illustrate the field's potential as a coin-yielding site. As far as the author is aware no other use of metal detectors has occurred on the site before or since).

1. Worn AE. Unidentified third-century radiate.
2. Constantinian small AE. Apparently SARMATIA DEVICTA.
3. Large AE of Vespasian or Domitian.
4. Constantinian small bronze, reverse not legible.
5. Constantinian AE. URBS ROMA.
6. AE antoninianus of Tetricus II. SPES AVGG reverse.
7. Constantinian AE. GLORIA EXERCITVS (two soldiers, two standards).
8. Worn AE on 12 mm flan.

The coin sample is too small to warrant detailed analysis. Its later third- and fourth-century bias is, in addition, the normal pattern of coin loss on British sites occupied throughout the Roman period (Reece 1972, 272, fig. 1, 2730) and therefore adds nothing to the site chronology not already indicated by the pottery.

Other classes of artefact

1. Roofing tile.

Roofing tile is present in large amounts and is co-extensive with the pottery scatter. Like the RB pottery, it is very rarely found in the southern half of the field or elsewhere in the fieldwalked area. Several large flanged fragments are identified as being from tegulae. They occur in a hard, orange, sandy fabric, most often with a thick grey core, which bears little resemblance to that of known mediaeval products in the locality (e.g. the Grovehill tileries at Beverley, see above, section 2.3.2.2); tegulae in a similar fabric do, however, occur in fieldwalked assemblages from South Humberside in Hull Museum. Identifiable mediaeval tile is readily distinguishable from the material under discussion, the distinctive fabric of which has enabled many small fragments to be recognised. A fairly common component of the tile assemblage consists of cubes of 1-2 cm side, which led R.T.Schadla-Hall to suggest derivation from floors composed of tile tesserae; this remains a possibility, but analysis of the size and distribution of these cubes would be needed to resolve the problem. In favour of the interpretation is the fact that tile might not

be expected to shatter into sherds of such form; against it, perhaps, is the fact that very few pieces appear to shew traces of mortar.

2. Querns.

The consumption, if not the production, of cereals on the site, is indicated by portions of three quernstones, their findspots shewn on fig. 3.13. All are from upper stones and each is made from a different variety of gritstone. They comprise two of flat-quern type and one of beehive/oscillatory type (Yorkshire/unpierced variety). They are described in more detail below, with petrological notes based upon macroscopic examination in 1984 by Paul Edwards, then of Hull Museums' Natural History Department. They are listed in order of discovery and numbered in the same way in fig. 3.13.

i) Flat quern. Broken through central hole, which has a slightly raised lip. A ridge runs concentrically midway between the perforation and the perimeter (cf. Curwen 1937, 146).

"A quartzose sandstone of 'Millstone Grit' type. Some pebble inclusions as well as quartz. Almost certainly not Jurassic, and therefore not from Yorkshire. Possibly of Pennine provenance." The stone has since been examined by Liz Wright and Don Spratt, who consider that it is probably Spilsby Sandstone from Lincolnshire (pers.comm). Owen (1987, 197), in his discussion of the petrology of querns from Goltho (Beresford 1987), notes that "large cemented concretions [from the Spilsby strata] are common, and would have been very suitable for millstone manufacture". Querns 1A and 1B from Goltho, dated to the first century A.D., are of this stone, the other

querns from the site being coarse-grained Pennine sandstones ("Millstone Grit").

ii) Flat quern.

"A gritstone, possibly Millstone Grit. Quite a coarse grit-grade in a fine matrix. Well sorted, slight bedding. Well rounded, clear quartz grains."

iii) Beehive/oscillatory. Central hole and lateral handle perforation in fracture. "Yorkshire" type.

"A gritstone. Fine- to medium-grained, with grains more angular to sub-angular than those of [no.ii, above]. Reddish tinge of ferric oxides over much of the external surface." Liz Wright considers (pers. comm.) that this quern may have been equipped with an iron handle.

The two types of quern involved may be noted. Quern iii) is perhaps associated with the "cordoned jar" phase of occupation, though it could have been in use into the second century A.D. (section 2.3.2.2, Hayes et al. 1980).

The possible Lincolnshire provenance of quern ii) is of interest in connection with the presence of Lincolnshire shell-tempered Dales Ware on the site. Mixed cargoes including pottery and querns could have reached the site via the Trent, Humber and Hull; alternatively, the last stage of the journey up the eastern side of the Wolds could have been by road from the haven at Hessele, if Margary 813 did in fact

terminate there. A possible route for this road passes slightly less than 1 km west of the site (see section 3.2.2, and fig. 3.19).

It is worth noting that all these querns were found between November 1983 and March 1984, when the field had been left fallow, and unploughed, because of excessively wet conditions after the lifting of the previous potato crop. For an arable field to be left fallow all winter is now extremely unusual in this region, and the prolonged weathering and settling of the ground was certainly instrumental in enabling large objects of this kind to become apparent.

3. Bog ore?

A further result of the "shrinkage" of the field surface during this season was the discovery, in February 1984, of a mass of conglomerated ferrous material which was at first taken to be metallurgical debris. This material was lying in a discrete scatter, less than one square metre in area, at the point marked on fig. 3.13. The pieces ranged in size from fist-sized lumps to slabs of up to c. 4 kg in weight, and appeared to be composed of clay, ferrous "slag", pebbles and charcoal inclusions. Probing revealed more below the surface and eventually some 20 kg of the material was recovered from the top 20 cms of the ploughsoil. More probably remains in situ.

It was possible to have this material analysed at BP's Divisional Chemical Laboratories, and the results of this analysis are shown below:

SA 1808 16th May 1984

As received

SiO ₂	51.46%
Al ₂ O ₃	7.11%
CaO	0.46%
MgO	0.59%
Na ₂ O	0.34%
K ₂ O	1.06%
Total C	0.93%
CO ₂	0.16%
FeO	2.10%
Fe ₂ O ₃	24.00%
Metallic Fe	0.20%
Total S	0.032%
Total Mn	0.89%
Loss on ignition at 1000 deg.C	11.02%
	<hr/>
	100.352
	89.332

The only interpretation of these results was a marginal note reading "Cleveland iron ore? Other possible sources?" Subsequently, however, a small sample was inspected by Drs J. Pocock and G. McDonald. The latter thought at first that it was iron slag, but on breaking the sample open concluded that it was a "natural (bog?) ore consisting of a clay matrix containing ferruginous nodules (the brown bits!). The analysis (supplied) supports this opinion ..." (J.Pocock, in litt.).

Dr McDonald offered to organise the geological examination of this sample by thin-sectioning, but this has not yet taken place, and the identification rests

upon a macroscopic inspection only. It makes no mention of charcoal, which may not have been present in the small sample submitted, and takes no account of the facts that certain of the larger pieces seem to display an artificial regularity of feature and that one of them appears to include a fragment of brick or tile in its matrix. For the moment the identification must stand, but it is the writer's opinion that, in the absence of thin-sectioning, a secure identification has not yet been obtained. Whether the material eventually proves to be an ore, or the residues of an industrial process, the material is of interest for the interpretation of the site as a whole. A naturally occurring ore may have been one of the environmental attractions of the site, while any evidence of iron-working within the confines of the IA/RB scatter, although undated, would need further examination.

4. A decorative copper-alloy fitting.

This item (fig. 3.18, no. 3; Didsbury 1988, 26, fig. 2.2) is the only non-ferrous metal artefact apart from coins to have been found on the site.

It is a richly patinated openwork copper-alloy mount consisting of two opposed peltae, each ending in a perforated roundel, presumably to allow attachment to wood, leather or other material.

Peltaform copper-alloy fittings are common in a wide variety of specific forms, and have been found on villa sites in Yorkshire (e.g. Langton, Corder and Kirk 1932, fig. 18, no. 11). There are, however, reasons for thinking that this particular type may be essentially military in character. A broken fragment from South

Shields Roman fort (Allason-Jones and Milet 1984, catalogue no. 3.884) appears to have formed half of a similar example to the Risby one, although it has an attachment stud at the rear rather than being flat-backed. Lindsay Allason-Jones kindly provided a drawing of a more complete example from Chesters Roman fort (Budge 1903, no. 1555), essentially identical to the Risby example apart, again, from having a stud rather than a perforated roundel attachment. Finally, an example from Cirencester (Webster 1982, fig. 37.108) is identical to the Risby example in all significant respects, and is catalogued by Webster as an item of military equipment.

Although it is clear that similar items commonly occur on Roman military sites in this country, its presence on this site need not be taken to imply a military presence (see below).

Summary and discussion

North of Fishpond Wood, Risby, there is an extensive and well-defined material scatter suggesting occupation on the site in both the very late Iron age and much of the second half of the Roman period. A break in occupation during the first and second centuries may be reflected in the surface material but can not at present be conclusively demonstrated. The environs of the site can be shown to have been extensively exploited from the Late Mesolithic onwards; the attractions of the well-defined physical unit in which the site is set include areas of gravelly drift, an elevated position, probable nearby water supply, and the fact that it is bounded by natural routeways (that on the south now occupied by a modern road).

The Iron Age occupants of the site around the beginning of the first millennium A.D. possessed LPRIA-type wheel-made cordoned pottery of a kind more usually associated with regions south of the Humber, a fact which may have a bearing on the question of their status. At some point in the Roman period the site appears to have been equipped with tiled-roof buildings, some possibly having stone foundations. The consumption, if not the production, of cereals may have been a feature of both early and late phases of occupation. There may also have been iron-working activity at the site, though its nature and date are not yet demonstrable. The site was part of a coin-using economy in the third and fourth centuries A.D. at least. From at least the later second century it was in a position to receive imported ceramic fine wares other than samian.

Wightman (quoted in Gregson 1988, 25) defines a villa as "any solid building or building-complex in the country, provided that it appears to be the centre of an agricultural unit". In the light of present evidence it is certainly simplest to regard this scatter of material as deriving from an agricultural settlement with Romanised buildings. Should subsequent work indicate that the term villa is appropriate, then it would be the only such site on the eastern slope of the Wolds apart from Bishop Burton (above, section 3.2.2).

Since an item of probable military equipment has been found there, it has to be considered whether the site could conceivably have been a military one. The Roman material scatter covers an area of approximately 2.75 ha., which is certainly large enough to accommodate, for example, an auxiliary fort of typical size (Johnson,

A., 1983, 31); Hayton, the most recent fort to be discovered in Parisian territory (Johnson, S., 1978) escaped detection by aerial photography until 1975, so the existence of further military installations, perhaps on soils not amenable to aerial photography, is not inherently improbable. However, all known military stations in the tribal territory, apart from the fourth-century coastal Signal Stations, lie west and north of the Wolds and reflect the line of advance taken by Petillius Cerialis in his advance into Northern Britain. A fort at Risby would thus be unique in terms of its situation, and one would have to ask what purpose, and at what period, it could have served.

It is conventionally held that Parisian territory was always sufficiently controlled by the military's ability to patrol from Malton and Brough and, presumably, by the ease with which forces could be landed along the shores of its long estuarine and coastal border. A fort at Risby could have served a purpose in the aftermath of the invasion by overlooking populations settled on the Woodmansey gravels and allowing patrolling of the valley and the south-eastern Wolds, but, as we have seen, there is no artefactual evidence at the moment to suggest occupation of the site in the late first century A.D. The only other period at which one can imagine a fort here having any purpose at all would be in the later third and fourth centuries A.D., when its position overlooking the lower valley could have been used to observe and intercept sea-borne incursions up the Hull or raiders moving north up a road from Hessle after a landing on the Humber shore; however, it seems unlikely that such emergencies could not equally well have been dealt with by forces stationed at Brough/Petuaria, only some 12 kms away, and, as we have seen, pottery from the site

may indicate occupation from at least the last quarter of the second century A.D., considerably before the period for which there is any evidence of a threat from the east. (It may also be noted that the item of "equipment" in question is of too early a date to have resulted from a late third- to fourth-century military presence). Finally, as John Dent has pointed out in a similar context, discussing possible military finds from Seamer, Rudston and Wetwang Slack (Dent 1983b, 41), "army issue equipment has rarely, if ever, been used solely by the soldiers for whom it was intended", and it would be foolish to do more than examine the possibility that here was a military site on the basis of a single piece of equipment.

Whatever its nature, the primary importance of the site lies in the fact that it has shewn that occupation sites represented by substantial scatters of surface material, including finds of intrinsic importance for the study of the period, can still be discovered in an area where aerial photography has failed to make a significant contribution to our knowledge of settlement. At present, it is the only site on the clay-covered dip of the Wolds, within the study area, to have yielded more than a handful of artefactual material.

The site's situation in regard to the local drift geology is of particular interest. Neolithic and Bronze Age activity seems to have been focussed on the two small areas of glacial gravel which lie to east and west of it, whereas by the late Iron Age and Roman periods the optimum place for settlement has become the area of clay, albeit with a fairly high gravel component, which lies between them. There is insufficient data at present to suggest the reasons for

this, though clearly it will reflect the inter-reaction of such factors as continuing woodland clearance on the plateau over some 4000 years with the changing demands of the subsistence strategy, and the importance of these in determining land-use (fig. 3.12). The site's location perhaps emphasizes the danger of assuming that settlement was biased towards areas shown as "gravel" on the Ordnance Survey drift geology sheets, and of concentrating fieldwork in such areas.

We have seen how the geographical unit bounded by the glacial spillways forms the core of the mediaeval township of Risby, and it is conceivable that it may have formed the basis of a tenurial unit, perhaps a villa "estate" in the Roman period also. Unfortunately, further fieldwork is unlikely to do much to shed light on this question. As noted above, RB material is very sparsely represented outside the main Field 2 scatter, though very small amounts have been found along the northern edge of fields to both east and west (Fields 1 and 3-5, see further below and fig. 3.20). Occasional sherds have also been found immediately south of the southern glacial spillway (Dunflat Road), the greatest amounts where the suggested route of Margary 813 crosses Dunflat Road and climbs towards the southern parish boundary at Risby Head (fig. 3.19). The fact that so much of the area bounded by the spillways is now covered by mediaeval and post-mediaeval plantations and parkland, however, means that fieldwalking data for the central core of any putative estate is not obtainable (fig. 3.11).

Assuming that the site is that of a farm in the Roman period, we may examine what light the distribution of surface material sheds upon the agricultural economy being practised. At its simplest, the phenomenon of a

settlement site marked by a high density of surface material, surrounded by a large area where similar material is very sparse, could indicate that a pastoral economy was being practised, since the background scatter of pottery which is usually held to result from the manuring of arable fields with midden material containing domestic refuse is not apparent, as it certainly seems to be in the case of Burn Park Farm (section 3.2.2.2 below). It should be noted, however, that mediaeval pottery is also extremely uncommon over most of the fieldwalked area, despite the fact that we know from documentary sources that the area was occupied by arable open fields at this period. Field 2 itself, although resistivity survey seems to shew a clear pattern of rig and furrow, has yielded only a handful of mediaeval sherds compared to well over a thousand of RB date.

The site's proximity to the possible Roman road is of obvious interest, especially in regard to the importance of road communications to villas which has already been remarked upon (section 3.2.2, above). Fig. 3.19 shews the relation of the site to the road route postulated by Whitcombe, Grice and Armstrong (1969), as well as fields along its route walked by the author and the presence or absence of RB material in them. It may be noted here that much of the small amounts of RB material (including coins) from Fields 1 and 3-5 comes from the extreme northern end of these fields where they are bounded by a footpath leading west to the highest point of the plateau and then to the road. This footpath is certainly at least of mediaeval date at its western end, where it is marked by a boundary bank and respected by the alignment of ridge and furrow now under pasture. It is worth bearing in mind, perhaps, that a trackway on a similar

line could well have served to give the Roman site access to a main road nearby.

Further work is planned at Risby. The first aim of this will be to quantify fully the material already collected, and to re-examine some of the questions raised by this interim study in the light of that quantification; the second will be to carry out detailed grid-walking designed to interpret the main Roman scatter, and to locate areas where geophysical survey and trial excavation are likely to be worth undertaking. The present study is essentially an examination of fieldwalking data collected by novices, and of a project which work on a wider regional study has caused to be held in abeyance. It may be agreed, however, that it amply demonstrates the value of surface fieldwork on the dip-slope clays and the exciting nature of that which may remain to be discovered.

3.2.2.2 The IA and RB settlement site at Burn Park Farm, Skidby (G.145)

Introduction

The subject of this study is a cropmark complex at Burn Park Farm, which is situated at the eastern end of an interrupted gravel tongue, some 11 kms in length, which almost links the Cottingham/Woodmansey gravel spread with the chalk Wolds to the west (fig. 3.1). Both areas of gravel are of glacial, not fluvial, origin and are overlain in places by boulder clay (De Boer et al. 1958, 193-194). Detailed soil information has not

yet been published, but according to the OS 1" Drift Geology sheet the settlement under discussion is located on the narrow area of glacial till which lies between the eastern end of the gravel tongue and the main gravel spread. The site is less than 5 kms ESE of Fishpond Wood, Risby, and 6.5 kms due west of the River Hull. There is an API trackway and enclosure complex (G.137) close to the western end of the gravel tongue, on the chalk, and two findspots of RB material along its course (G.143, 144).

Fieldwork at Burn Park grew out of the chance discovery by the writer of a rim-sherd from a third- or fourth-century colour-coated beaker on a public footpath at TA 033348 in September 1984, during general reconnaissance of the study area. Consultation of Loughlin and Miller (1979, 34) showed that aerial photography by Rodney Mackey had located a settlement complex at TA 038349, some 0.6 kms to the north-east, a site regarded by Loughlin and Miller as "of primary significance for the study of the period". It was felt that the Roman sherd may have originated from the cropmark site, which was accordingly visited, and permission obtained for preliminary survey. Initial walking over several fields on the farm suggested that RB material was to be found over a much larger area than the cropmark complex itself, and that here was a chance to examine the chronological and spatial distribution of material around a settlement focus known only from aerial photography. There was no record of fieldwalking having been carried out on any other AP complex sited on clay or gravel within the study area, and it was felt that the resulting data would be invaluable in planning further fieldwork in the region. The tenants of Burn Park Farm, Malcolm and Jane Taylor, kindly allowed a considerable number of visits over three

seasons, and Rodney Mackey generously made available his black and white prints and colour transparencies of the cropmarks.

The Aerial photographs

The difficulties of making an accurate plot of the cropmarks photographed by Mackey were considerable, for the field undulates markedly and the majority of the information was contained on a very oblique and poorly exposed colour transparency. Fig. 3.21, accordingly, is a sketch designed to do no more than illustrate the general nature of the cropmarks on Field 1. Three main observations may be made:

1. A double ditched semi-circular enclosure abuts the modern field boundary ditch on the south. The farmer reports this area of the field as being generally wetter than the rest of the field and crops sown there noticeably slower to germinate. The cropmarks are more blurred than fig. 3.21 suggests, and the feature's relationship with the various ditches which approach it from the north are unclear. Almost no artefactual material was found within the area enclosed by the double ditches, and it may be noted that the feature does not appear to continue into the field to the south on any of the photographs, despite the two fields being planted with the same cereal crop at the time. In view of these uncertainties it would be unwise to regard it as certainly contemporary with the features enumerated below.

2. A clear example of a D-shaped enclosure (section 2.3.1) occurs in the south-western corner of the field, flanked by at least two sub-rectangular enclosures.

3. There are at least two clear trackway elements in the south-eastern corner of the field, flanked by cellular enclosures of varying size. At least two linear ditches run northwards into a possible field system; the northern half of the field was, unfortunately, under a different crop at the time the photographs were taken and the cropmarks were too fragmentary and faint to be drawn satisfactorily.

Archaeological and historical background

The purpose of what follows is to summarise what is known of settlement and land-use in the immediate vicinity of Burn Park and to draw attention to aspects of its documented history and environmental setting which have a bearing on the interpretation of the fieldwalked data. It is based entirely on such general sources as as Loughlin and Miller (1979), the HCCAU SMR, and, especially, the Victoria County History (Allison 1979, quoted hereafter as "VCH" followed by page number).

Prehistoric activity in the environs of the farm has already been dealt with during discussion of the Woodmansey gravels in section 3.2.2, above. The Hall Ings group of round barrows and ring-ditches already referred to lies on the main gravel spread, c. 1.5 kms to the north-east on the neighbouring farms of Wanlass and Lawns (fig. 3.6). That activity before the Iron Age was not confined to the gravels is indicated by the flints and prehistoric pottery found during fieldwalking (see further below).

The nearest findspots of IA/RB material have likewise been referred to (this section and sections 2.3.3, 3.2.2, above). Relevant data for the Saxon period is

entirely lacking, but land-use in the mediaeval and post-mediaeval periods is known in some detail, and can be used to explain some aspects of the fieldwalking data, for example the tiny amounts of mediaeval material recovered, and to draw attention to those aspects of the mediaeval agricultural economy which were conditioned by environmental factors which may have functioned similarly in the RB period also.

Although now in the parish of Skidby, Burn Park lay, throughout the mediaeval period, in the manor(s) of Cottingham, a unit whose eastern boundary was a c. 5 km stretch of the River Hull, and which extended some 11 kms westwards, narrowing as it climbed to over 200' (61m) AOD on the edge of the chalk near Eppleworth (TA 0032). Land use in the manor in the early post-mediaeval period is known in some detail (fig. 3.22, after VCH 60) and shews a basically tri-partite organisation of the manorial lands established some centuries earlier:

i) The narrower western part of the parish, reaching west from the village for c. 5 kms. This section climbs from 50' - 200' (15m - 61m) AOD and consists of boulder clay gradually thinning as it nears the chalk edge. It was devoted to the arable agriculture of the village's open fields and also contained the subsidiary hamlet of Eppleworth and the remnants of its once extensive woodland.

ii) A band of clays and gravels in the centre of the manor, between 1 and 3 kms wide, and lying between 25' and 50' (7.5m - 15m) AOD. The village of Cottingham lay on gravel in the narrow central part of this band, with extensive ancient woodland both to north and south, that on the north including a large

manorial deer-park in which Burn Park Farm is now situated (see further below).

iii) The broad, eastern, part of the parish, stretching some 4 kms from the village to the River Hull and lying between 25' and c. 4' (7.5m - 1.2m) OD. These lands are marine alluvium and were given over entirely to common pasture and meadow, these uses being reflected in their -ing and -carr field-names. The arable inclosures in the south of this section, and along parts of the Hull bank, reflect drainage improvements throughout the mediaeval period, Humber floods in the mid-twelfth century having reached as far north as the woodland immediately south of the village itself (VCH 72).

The organisation of manorial resources can thus be broadly summarized as: arable on the higher clay slopes; settlement and woodland, including lightly forested deer-park, on the better-drained gravels; and pasture and meadow on the low alluvial lands between the village and the river. Eeleries, turbaries and hemp-dikes in the alluvial areas also made a valuable contribution to the manorial economy, as perhaps they had done at earlier periods, and there is documentary evidence of woodland management and the sale of faggots from the woods and parkland of the central part of the parish (VCH 72-77).

The deer-park in which Burn Park is situated is first mentioned in 1241, and in 1282 is described as well enclosed, four leagues in circumference, and having pasture for 500 deer and other animals (VCH 72). In the early seventeenth century the park is said to have enclosed some 500 acres, though it may not have held deer since the sixteenth century, various shares by

this time being let out for herbage (VCH 73). Of the woodland which flanked the park only Birkhill Wood, to the north (TA 032356) survives today. This is designated "Ancient Woodland" and it would appear that the Burn Park settlement may have been set in a still fairly heavily wooded landscape in the Roman period.

The surviving woodland around the present farm had been extensively felled by the beginning of the seventeenth century (VCH 74); large parts of the park are noted as "decayed" in 1610, and it is around this period that isolated houses began to be built in both wood- and parkland. It was, however, not until the earlier eighteenth century that the area was sub-divided into tenurial farming units, with much the same boundaries as today, after the building of an access road, Park Lane, leading north from the village. The present farm-house at Burn Park was in existence by 1731. It is sufficient here to note that both the small amount of mediaeval pottery recovered during the fieldwork, and the date of the earliest post-mediaeval wares on the farm eloquently illustrate the documentary evidence (see further below).

Project design: aims and methodology

The work had three main aims:

- i) To evaluate the amount and date-range of surface material on a cropmark site which had been categorised on morphological grounds as of IA and/or RB date. It should be stressed that a close analysis of the relation of amount, date, or type of material in the ploughsoil to specific classes of feature within the cropmark complex was not intended.

ii) To examine the chronological and spatial distribution of surface material over as large an area as possible surrounding the cropmark complex itself.

iii) To gather various kinds of methodological data which would be of use both in interpreting the fieldwork and in planning future fieldwalking projects in the region. The amount of time spent on the project was recorded, as were data relating to state of crop, weather conditions, and such factors as "walker bias", among other aspects. Not all of this data has been used in the present study, but is referred to where relevant.

Three "levels" of fieldwalking were employed, namely "general survey", linewalking, and gridwalking. Each field in which work took place was initially inspected by "haphazard" but fairly thorough walking to assess the amounts of material present and to aid in the design of subsequent work. This was followed by linewalking, at approximately 10 metre intervals, the distances between lines being paced out and directional accuracy maintained with the aid of compass and garden canes. On the cropmark complex itself, lines were measured with tapes, and subdivided into 30m lengths (see further below). Where general survey had indicated very small amounts of archaeological material could be expected lines were not subdivided and it was a simple matter to record on the collector's bag the approximate position of each find within its line. This subsequently allowed contour maps of the pottery distributions to be prepared using grid generalisation techniques (Orton 1980, 124-127). One particular area (in Field 3, see below) was grid-walked on an accurately surveyed 10 metre grid.

The areas surveyed are shown on fig. 3.23. Areas are numbered 1-7 and are based on existing field boundaries. Field 1 contains the cropmark complex and numbering continues in a clockwise direction. A total area of 137.89 acres (55.80 ha) was submitted to general survey, 93.80 acres (37.96 ha) or 68.02% of which was subsequently linewalked. Most of the work was done by groups of up to three walkers. A total of 14 walkers was involved in the project, their ages ranging from c. 20 - 65 years, and most belonging to the East Riding Archaeological Society. Seventeen different visits were made to the farm between September 1984 and January 1987, a total of c. 140 person/hours being spent in the field. It is estimated that a further 40 person/hours were spent on washing, marking and bagging the finds. Time spent on analysis of the material and presentation of the results has not been quantified but is considerable.

Results

Results are presented by chronological period. Evidence relating to prehistoric and mediaeval-to-modern activity is examined briefly under general headings below, followed by a more detailed discussion of Iron Age and Roman material organised according to fieldwalked area:

1. Prehistoric material

Neolithic and Bronze Age material in the field-walked area is represented both by pottery and by worked flint. Only two sherds can be ascribed to these two periods with reasonable certainty: a large rim sherd, apparently from a Food Vessel, found towards the north-

western corner of Field 4, and a rim sherd (identified as "Neolithic" by I.J. Thorpe) from the south-western quarter of Field 1. Small body sherds in a variety of fabrics which may be of Bronze or earlier Iron Age date occur in small quantities in all the areas where flint also occurs; these are discussed for convenience in the section dealing with fabric classification which accompanies the discussion of IA/RB material, below.

Flints recovered during fieldwalking are classified typologically in Table 3.3. No attempt has been made, at this interim report stage, to ascribe them to chronological periods, for which specialist analysis would be necessary, though it may be noted that both Neolithic and Bronze Age types are represented among the scrapers. Even at this level of analysis, however, certain points emerge which are worthy of note: Table 3.4 shews the density of the distribution of worked flint in the different fieldwalked areas, expressed as the number of flints per hectare of land recovered during linewalking at c. 10m intervals. This kind of data will ultimately allow inter-site comparison as further sites in the study area are fieldwalked. It should be noted that the lowest value, for Field 3, is almost certainly due to walker bias: the flints in this area were found by only two of the four walkers involved, the other two persons being elderly and (self-assessed as) unfamiliar with worked flint. The figure for Field 3, therefore, can reasonably be adjusted to double its value, giving an overall range of between 1.23 and 2.05 worked flints per hectare. There is no body of similar data from any site in the study area available for comparison; it seems reasonable to suggest, however, that this is the kind of density which might be expected in the general environs of a settlement area (perhaps in this case

sited on the nearby gravels to north and east) rather than at the actual occupation focus. It is certainly far lower than, say, at Risby Field 5 (section 3.2.2.1, above). The absence of worked flint from Fields 5 and 6 (and also apparently from Field 7, though this area was not line-walked after general survey) is of interest in light of the facts that: a) the ground in these areas seems to be of far heavier clay than that to the south and east; and b) there is also an absence of IA/RB material, indeed of any material before the nineteenth century, in Fields 6 and 7. Fields 6 and 7 appear to have formed the extreme western edge of the mediaeval deer-park, with woodland to west (Pratwood and North Wood), north (Jilly Wood and Birkhill Wood) and east (Wanlass Wood), and the absence of any archaeological material suggests that they may never have been put to arable use until relatively recent times, remaining as uncleared ancient forest, or as partially cleared grazing along its edge. (The names of Pratwood, Jilly Wood and Wanlass Wood are preserved in the names of adjacent modern farms). It is certainly possible, therefore, that the settlement activity associated with the cropmark complex took place in an already deforested area which Romano-British agricultural activity did not cause to be extended further west.

TABLE 3.3. Burn Park Farm. Flint types recovered.

TYPE	Number per fieldwalked area.							
	Area:	1	2	3	4	5	6	7
P'ry flake	-	-	1	1	-	-	-	-
P'ry flake (ret.)	-	-	-	-	-	-	-	-
S'ry flake	1	-	4	1	-	-	-	-
S'ry flake (ret.)	1	-	-	-	-	-	-	-
T'ry flake	2	-	4	2	-	-	-	-
T'ry flake (ret.)	-	-	4	-	-	-	-	-
Core	2	1	3	1	-	-	-	-
Core (ret.)	1	-	3	-	-	-	-	-
Blade	1	1	1	-	-	-	-	-
Blade (ret.)	1	-	1	-	-	-	-	-
Snapped blade	1	-	-	-	-	-	-	-
Scraper	1	2	2	2	-	-	-	-
Point	1	-	-	1	-	-	-	-
Pebble (ret.)	-	-	1	-	-	-	-	-

N.B. The following abbreviations are used in Table 3.3:
P'ry = primary, S'ry = secondary, T'ry = tertiary, ret.
= retouched.

TABLE 3.4 Burn Park Farm. Flints per hectare, by area.

AREA	Flints/ha
1	1.60
2	1.48 (adjusted from 0.74)
3	2.05
4	1.23
5	0
6	0
7	0 [?]

2. Mediaeval and post-mediaeval material

Only 5 sherds of mediaeval pottery, weighing 83 grams, were recovered from the line-walked areas, representing 2.3% (by sherd number) or 2.1% (by sherd weight) of the total pottery recovered. These low figures are taken to reflect the area's documented use as a deer park during the mediaeval period. All are in the Orangeware/Humberware regional fabric tradition of the twelfth to sixteenth centuries (Watkins 1987, 82ff, 98ff).

Post-mediaeval pottery (defined here as pottery of the period c. 1485 - c. 1850) was represented by 56 sherds, weighing 1498 grams, i.e. 25.8% (by sherd number) or 37.0% (by sherd weight) of the total assemblage. A detailed analysis of these wares is not presented here, and it is sufficient to note that the majority fabrics were eighteenth- and nineteenth-century Brown Glazed Coarseware and Late Humberware (Watkins 1987, 115-117,

106), the two dominant late post-mediaeval regional coarsewares. The only sherd of intrinsic interest was a sherd of imported seventeenth- or eighteenth-century Westerwald stoneware from Field 4 (Watkins 1987, 139-140). The main post-mediaeval fabrics characteristic of the period c. 1485 - c. 1700 (e.g. Cistercian Ware, Raeren and Frechen/Cologne stonewares, and Ryedale Ware - Watkins 1987, 114, 138, 139, 113-114) are absent, and once again the documented history of the farm seems to be reflected in the pottery types recovered, there being almost nothing which need have been deposited before c. 1731.

It will be seen from Table 3.5 that the great majority of the post-mediaeval pottery (96.5%) was recovered from Fields 1, 4, and 3, perhaps indicating dispersal of midden material onto arable fields close to the farmhouse itself. The spatial distribution of post-mediaeval pottery around Field 1 (fig. 3.24) is essentially similar to that of the RB material, lying to the south and south-west and it is possible that this illustrates a similar set of constraints upon arable agriculture in both periods, the westernmost part of the field-walked area (Fields 5-7) remaining more suitable for woodland and pasture until relatively recent times (figs. 3.24, 3.31). There does not seem to be any suggestion that this distributional similarity could be the result of a modern pattern of agricultural constraints since the agriculture practised on the farm is essentially similar from field to field. The major difference between the pottery distribution from a similar focus in the two periods is that most of Field 3 (i.e. that part lying to the south of the old hedge-line marked on fig. 3.26) is devoid of post-mediaeval pottery and was possibly pasture rather than arable; that this situation had changed by the late nineteenth

century is evidenced by the vast amounts of night-soil material of that date found on the field (see below), material which could only have been deposited on arable land.

[Table 3.6 shews mediaeval and post-medieval pottery as a proportion of the total pottery collected from each field].

3. Iron Age and Romano-British material

The remainder of the material collected (with the exception of late nineteenth- to early twentieth-century pottery deriving from night-soil disposal on Field 3 - see below) is of late prehistoric or Romano-British date, or is unasccribed to a chronological period. Much of the pottery recovered was very abraded or had been subject to "sand-attack". Detailed fabric description was felt to be inappropriate for such a body of material at this stage in the project, and would have been too time-consuming to undertake. The approach adopted, therefore, was to group material into fabric categories of varying degrees of chronological significance. These are described below:

Fabric category A:

This consists of Roman greywares in fabric-types in use in the region from the early to mid-third century onwards, i.e. they are broadly comparable to Holme-on-Spalding Moor ("Throlam") fabrics, though it is not suggested that they are all products of that industry. The commonest vessel form in this fabric is the straight-sided flanged bowl; although available in the North from c. A.D. 180, in both BB and greywares

(Gillam 1973, 59-60), it is not until the mid-third century that the form becomes truly characteristic of East Yorkshire and East Midlands assemblages.

Fabric Category B:

This is a soft to fairly hard fabric, very dark grey to black, frequently with an oxidised (buff or brownish) exterior surface. It is liberally tempered with ill-sorted angular glassy quartz, from sand-grain size up to c. 5 mm, and/or blocky angular sandstone fragments up to c. 8 mm, the latter often extrusive on the sherd's exterior face. The temper is set in a fairly fine, close-bodied matrix. Body sherds are generally over 10 mm, and up to 13 mm, thick, and shew no evidence of wheel construction. No rims in this fabric were recovered, but its general characteristics suggest a later Iron Age date, being comparable with fabrics present at Chapel Farm, Weel (section 2.3.2.2), Salthouse High School, Hull (section 2.3.2.1) and North Cave (section 2.2.4). For a basal angle in this fabric, see fig. 3.32, no. 3.

Fabric category C:

This category includes all vesicular, hand-made wares, the original temper of which has been leached out by acid ground conditions or usage. C¹ denotes late fourth-century Huntcliff ware, and C² vesicular handmade wares which vessel form or subjective appraisal suggest are of late IA or early RB date. C by itself denotes vesicular wares which can not be placed with confidence within the late IA to RB period. Two handmade jars in category C² are shewn in fig. 3.32, nos 1 and 2.

Fabric category D:

This is a broad grouping of wheelmade RB grey and oxidised wares in fabrics which do not fit categories A, C¹, or the named RB fabrics listed below. Although they probably include some wares contemporary with category A, they are generally sandier fabrics (of the Roxby type - Rigby and Stead 1976, 138ff), including dark-faced red-bodied wares, which tend to be characteristic of the second century in the region.

Named Roman fabrics:

In addition to Holme upon Spalding Moor greywares and Huntcliff Ware, the following named fabrics were recognised: Crambeck greyware, Nene Valley colour-coated ware. A small number of Central Gaulish samian fragments was found during general survey of Field 1, but none during line-walking. None of the mortaria has yet been ascribed to a source.

"RB/PH" and Unclassified

Sherds which could not with certainty be ascribed to a chronological period, but which were felt definitely to be Romano-British or earlier were categorised as RB/PH. The remainder were designated "unclassified". It will be seen from the pottery data tables for each field (Tables 3.14-3.20) that both these categories frequently exhibited low average sherd weight, a factor which, together with poor condition, is clearly of importance in determining diagnosis.

The basic ceramic data for the farm as a whole, and for each field-walked area within it, are presented in Tables 3.5-3.20, and in figs. 3.25-3.31, below. Before

proceeding to an analysis of the results, the work undertaken in each field, with factors of importance to its interpretation, is described below:

Field 1

The aerial photographs of Field 1 have already been described. Full investigation of this large field (40.64 acres/16.3 ha.) was precluded by lack of both personnel and time.

The field was initially subjected to general survey on three occasions in the autumn and winter of 1984/1985. Each sherd recovered was located in relation to a fixed point using tapes and magnetic compass and then plotted onto a large scale map of the field (fig. 3.25). This exercise suggested that resources would best be devoted to sampling the eastern two-thirds of the field by line-walking. Most of the pottery belonged to the third and fourth centuries, and Table 3.21 shews the analysis of pottery collected in this way in 1984. In the light of this exercise a block of land of 14.06 acres/5.69 ha. was selected for line-walking the following season (shewn on figs 3.30, 3.31), this work being undertaken in November 1985 when the land was under an autumn-sown cereal crop. The fabric types recovered during this exercise are presented in Table 3.14. The work was undertaken by only three walkers and there was insufficient time available to sub-divide the lines, which would have made a more detailed spatial analysis possible. However, as already stated, the aim of the work on this field was initially to determine the extent and date-range of material being released from the ploughsoil, not to relate it to groups of features visible on the APs. The distribution of pottery by line is shewn on fig. 3.27.

It was also the impression of the walkers that there was an overall increase in pottery density within each line, with the bulk of the pottery recovered coming from the second half of the line-walked area. To check this impression, lines 1-3 were re-walked in January 1987, each line being subdivided into sections of 30m (fig. 3.30) labelled A to G. As fig. 3.28 shews, this assumption was confirmed, and it would thus seem that the greatest concentrations of surface material on the site are located in the south-eastern quarter of the modern field, where, as already noted, there are clear indications of trackways with flanking enclosures. It was also in this area that a small number of undoubted tegula fragments were recovered, and that a chalk scatter apparently associated with a localised high-density sherd distribution was observed (fig. 3.25).

Fields 2-6

All these fields were line-walked at c. 10m intervals in the winter of 1984-5 when under autumn-sown cereal crops. Preliminary survey of these fields had suggested that relatively small amounts of material were likely to be involved, and a decision was therefore taken at the outset to record the approximate position of each sherd within its line by annotating the outside of the collection bag. This subsequently enabled maps shewing the "real" (sherd by sherd) distribution of various classes of material to be prepared, as well as contoured sherd-density maps using the grid-generalisation technique (Orton 1980, 124-127, see discussion below).

The only one of these fields to yield large amounts of material was Field 3, where late nineteenth- and early twentieth-century pottery, glass and other artefacts

were so ubiquitous as to crunch under foot. This material undoubtedly derives from the disposal of Hull night-soil on the farms and market-gardens of the Cottingham area, a traffic which had begun by c. 1750 and which continued as late as 1934, when conversion from earth- to water-closet systems in the city was finally completed (Gillett and MacMahon 1980, 201, 381-382). Although RB greywares stood out clearly among this material, it was felt that it might "mask" such types as colour-coated, oxidised and samian wares where inexperienced walkers were concerned and they were therefore instructed to collect a large and representative sample of such material from each line in order to counteract this.

Field 3 was walked in east-west lines, starting in the north of the field. As the southern field-boundary was approached the number of IA/RB sherds per line suddenly rose from c. 1-3 to c. 5-12, and an apparently discrete high density area lying slightly to the north and west of the centre of the boundary was easily located by random field-walking (figs. 3.26, 3.29, 3.30, 3.31). In the winter of 1985-6 a grid measuring 70m x 40m, and sub-divided into 10m squares, was laid in this area. Each square was walked 5 times on each axis, boustrophedon fashion, in order to ensure close coverage and to minimise the effects of light direction on recovery rate. The opportunity was taken to examine the extent to which recovery rate was improved by walking both axes by recording material from each axis separately; it may be noted here that 18 of the 58 sherds recovered (or 31%) were found on the second traverse of the grid squares, i.e. crosswalking resulted in a 45% increase in recovery rate, despite what could have been regarded as the close coverage ensured by walking on a single axis. Material from

this scatter is discussed further below, where it is referred to as the "Field 3 gridded scatter".

It should be noted that ceramic data for Field 5 and part of Field 6 are presented together in the tables. Only a single sherd of pottery was found in Field 6 west of the point at which the southern field boundary makes a sharp turn to the south (fig. 3.23), the land becoming noticeably more heavy west of the Field 5/6 boundary. The "Field 5/6" data should therefore be taken as referring to Field 5 and an area of c. 75 x 150m of the eastern end of Field 6.

Field 7

This area was subjected to general survey only. As already noted, it was heavy land on which there was an almost complete absence of material of any period.

Discussion

The field-walked IA/RB material is discussed below, first in terms of date, and then of spatial distribution.

Pottery suspected of being Iron age or early Romano-British in the "native" tradition (Fabric categories B and C²) accounts for only 7.1% (by no. of sherds) or 7.0% (by sherd weight) of the total prehistoric, RB and unclassified pottery recovered by line-walking (Tables 3.9 and 3.10b). Expressed as percentages of the total pottery recovered by line-walking these figures fall to 5.1% and 4.1% (Table 3.10a). As already noted, the only drawable sherd in Fabric B was a basal angle from the Field 3 "gridded scatter". The only drawable

forms in Fabric C² were also recovered from the Field 3 gridded scatter, not by line-walking, and are shown in fig. 3.32, nos 1 and 2. These three vessels are catalogued and discussed below. It should be noted that both Fabric C² vessels are drawn from small single sherds and that rim diameter and orientation are far from certain.

3.32.1 Small jar. Fabric category C². Hand-built, but there are broadly spaced and irregular marks on the interior which might be rill marks, in which case it could have been wheel-finished. Soft, soapy textured, vesicular ware, dark greyish-brown throughout. Moderate ill-sorted voids in the 0.5 to 10.0 mm range, most c. 1.0-2.0 mm. Carbonised deposits on exterior rim and shoulder. The upright, slightly everted, flat-topped rim and slack shoulder could place this vessel in a broad date bracket either side of the Roman conquest. At North Cave (section 2.2.4, Didsbury in prep.) it might be expected to occur from the pre-Roman "roundhouse" phase (not yet closely dated but probably second to first century B.C.) until at least the end of the first century A.D. At least one similar vessel occurs at Salhouse High School (section 2.3.2.1, v. Challis and Harding 1975, ii, fig. 41, no. 6), and there is a close formal parallel from West Furze (Challis and Harding 1975, ii, fig. 38, no.5), the latter being regarded by Challis and Harding (op. cit., 96) as belonging to the third of their three "major rim-forms of late Iron Age Yorkshire".

3.32.2 Jar of similar size to 3.32.1, above. Fabric category C². Construction method not apparent. The fabric is similar in colouration and general characteristics, but is somewhat harder, though still easily scratched with the finger-nail. It is also

slightly sandier in the paste, and the voids are sparse to moderate and do not exceed c. 1.5 mm. A similar stubby, squarish bead rim with internal bevel also occurs at Salthouse High School (Challis and Harding 1975, ii, fig. 41, no. 2), and the relative fineness of the fabric might also suggest a "late" date.

3.32.3 Basal angle, diameter unmeasurable. Fabric category B. Hand-built. Very dark grey fabric with brown exterior surface on wall and parts of the under-base. Fairly hard sandy matrix with blocky sandstone (?) inclusions c. 3mm and a rounded dark pebble inclusion of similar size, the former extrusive through the outer face of the pot.

It will be seen from Table 3.12 that the putative IA material recovered by linewalking has a range of values between 0.17 and 0.42 sherds per hectare per line-walked area, these low values contrasting sharply with the range of 0.57 to 8.08 sherds per hectare displayed by the Romano-British material. Average sherd-weights of the IA fabrics are on the whole comparable with those of the Romano-British fabrics, except in the case of Field 1 (Tables 3.13 and 3.14), where they are 9.0 and 20.2 grams respectively; the IA value for this field represents only a single sherd, however.

Fig. 3.30 (a) shews the spatial distribution of Fabric B sherds, tentatively regarded as of Iron Age date. It will be seen that line-walking at 10m intervals revealed no focus to this distribution; fig. 3.30 (b) (inset) shews the distribution of Fabric B sherds as recovered by gridded walking from within the Field 3 gridded scatter, and may suggest that this was the centre from which at least some of the fabric B sherds were being dispersed. The fabric B distribution

suggests either that its use predates the establishment of the Field 1 settlement focus or, perhaps equally likely, that the single sherd of this category from Field 1 was residual in a third- or fourth-century layer, deeper strata being as yet untouched by the plough.

Turning to consider the date of the RB pottery, the data relating to Fabric categories A (probably c. mid-third to later fourth century) and D (incorporating much second-century material) reveals that the majority of the pottery now on the surface dates from the second half of the Roman period: Table 3.12 shews that over the whole field-walked area Fabric A occurs at 2.1 sherds per hectare, compared to 0.57 per hectare for Fabric D. There is no field-walked area where Fabric A is not in the majority (as percentage of sherd numbers) except for Fields 5/6, where A and D sherds are equally represented. Fields 5/6 are also the only area where Fabric D is in the majority calculated by sherd weight (Tables 3.14-3.20). Category D sherds display a slightly higher average sherd weight over the whole area (Table 3.13), probably due to the coarse quartz sand tempering employed in many of them.

There is definite evidence of mid- to late fourth-century activity, represented by Huntcliff ware (Fabric category C1) only on Field 1, where it amounts to 8.2% - 10.2% (by sherd number) of the total pre-mediaeval and unclassified pottery (Tables 3.14 and 3.19), though it should be noted that some of the unclassified vesicular body sherds from Field 3 may belong to Huntcliff types (Tables 3.16 and 3.20).

We may move now to consider the spatial distribution of the IA and RB material.

Table 3.22 shews the density of all IA/RB sherds per 0.25 ha in each line-walked area. These figures relate to line-walked material only, and are a simple expression of "area divided by number of sherds". Since the areas walked are arbitrary units of varying size, determined by modern field boundaries, they would be of limited use by themselves; they do, however, shew high values in areas where actual settlement is either known from AP coverage (Field 1) or can be suggested by more detailed fieldwork (Field 3).

A more useful representation of IA/RB pottery distribution in the fields south and west of the Field 1 settlement complex is shewn in fig. 3.31, which contours sherd density in units of 0.25 to 5.0 sherds per 0.25 ha. It was impossible to draw such contours for Field 1 itself. The ratio between overall density value (Table 3.22) and highest contour value (fig. 3.31) in the case of Field 3 makes it plausible to suggest, however, that there will be parts of Field 1 where a similar contour map based on line-walking at 10m intervals would shew values well in excess of 5 sherds per 0.25 ha, and possibly more than 10 sherds per 0.25 ha. It is clear, in any case, that there is a rapid fall-off in sherd density to the south and west of the Field 1 settlement focus, and this is possibly to be interpreted as reflecting the disposal of midden material containing pottery from the settlement onto arable fields. If this is the case, then it is not reflected in lower average sherd weights in Fields 2, 4, 5/6, as might perhaps have been expected (Table 3.13). Whatever the types of land-use involved, it can be stated that there is an area of at least 65.24 acres/26.4 ha. to the south of the Field 1 settlement complex which is characterised by a low density (0.25-1.0 sherd per 0.25 ha) distribution of IA/RB pottery.

Only Fields 6 and 7, of the total area investigated, yielded no pottery at all, and this may be taken in support of the contention, already mooted, that these areas remained as uncultivated woodland not cleared until the post-mediaeval period. Further work to allow contouring of the Field 1 distribution, and investigation of other fields to north, east and south of Field 1 is obviously desirable.

One of the most interesting and promising results of the linewalking is the fact that it enabled a second, smaller, focus of activity to be recognised towards the southern boundary of Field 3, c. 0.8 kms from the centre of the Field 1 complex, and not itself known from aerial photographs. This is represented in fig. 3.31 by a density of 5.0 sherds per 0.25 ha. Contour maps of the pottery distribution and density in this scatter were prepared after it had been walked on a 10m grid (see above), and these show a discrete high density distribution (2.5-7.5 sherds per 100 m², or 25-100 grams per 100 m²) in an area approximately 50m x 30m, or 0.37 acres/0.15 ha. (figs 3.26, 3.29). It is impossible to suggest at present what has given rise to the high density in this area, but it is at least plausible to suggest that a settlement area not revealed by aerial photography is involved. It is proposed to investigate this further by geophysical survey in coming seasons. It is also impossible at present to know whether this is an outlying element of the Field 1 settlement, or whether it "belonged" to a different socio-economic unit. Once again, fieldwalking which might locate other discrete foci of activity around the AP site would be most valuable.

It will be noted that the Field 3 gridded scatter contains high percentages of what are taken to be

earlier RB and IA fabrics (categories D and B) as well as third- to fourth-century greywares (category A) [Table 3.20], and it has already been suggested that it may have been the centre from which Fabric B sherds were dispersed. An IA or early RB component among the vesicular wares (Category C) is suggested by the rim forms already discussed (fig. 3.32). It may tentatively be suggested that this scatter represents activity/occupation lasting from the IA into the later RB period, though whether or not it was un-interrupted is impossible to say. To examine this hypothesis further, the distribution of each fabric category was contour-mapped separately, by both number and weight of sherds (fig. 3.29, a-k). It will be seen that all categories, despite slightly different orientation of their contours, occur in a similar area and also have their highest values around a similar point. A comparison of the maximum values of the two most chronologically distinctive categories (B and A) shows the putative IA fabric having a maximum density of 1.25 sherds or 17 grams per 100 m², compared with 3.25 sherds or 29 grams per 100 m² for the later RB greywares. These figures may be interpreted in various ways: they may reflect an increase in pottery use during the period represented, different rubbish disposal methods, or the fact that plough-disturbance of earlier deposits is not yet so far advanced as in the case of the latest occupation layers. However this may be, the two facts of importance are the similarity in spatial distribution and the fact that this is the only area so far examined where material of IA to later RB date occurs in association. It is clear that in this area there is a disturbance of IA deposits which is not in evidence in Field 1, a fact which may be of relevance in explaining why the Field 3 scatter has not been recorded on APs.

Concluding remarks

Work that remains to be done at Burn Park includes a gridded fieldwalk of the Field 1 complex in relation to accurate cropmark plots, as well as geophysical survey of the Field 3 gridded scatter. The work already undertaken, however, should serve as a firm base from which to examine a much larger area by surface methods. It is so far the only such work to have been undertaken on and around a cropmark site of the IA/RB period in the lower Hull valley, and the hierarchy of fieldwalking methods employed, ranging from random survey to closely gridded collection, has yielded a body of data which should prove invaluable in responding to and interpreting other such sites in the study area. The densities of sherd distribution in a substantial tract of land around one cropmark site are now known for the first time, and it will be instructive to see if this proves to be a typical pattern on the till and gravels or whether a variety of fall-off patterns will suggest differences in land-use. The late date of most of the pottery on the Field 1 cropmark complex itself suggests that plough damage on this site at least is still not too far advanced, though whether this will prove to be locally typical again remains to be seen. Not least among the project's results, perhaps, has been its confirmation that foci of activity not revealed by aerial survey can be located by the kind of fieldwork described, and in demonstrating once again that AP evidence is an almost wasted resource if it is not to be subjected to a variety of surface responses.

[Tables 3.5 - 3.22 begin on the following page].

TABLE 3.5 Mediaeval and post-mediaeval pottery as percentages of the total pottery from each line-walked area.

Field	Total	Total	Mediaeval		Post-med.	
	sherds	wt(g.)	no.	wt.	no.	wt.
1	67	1405	2	71	16	371
2	10	143	1	3	1	53
3	70	1024	1	6	9	186
4	38	1027	1	3	29	895
5/6	30	333	-	-	1	3
	Mediaeval		Post-mediaeval			
	% by no.	% by wt.	% by no.	% by wt.		
1	3.0	5.1	23.9	26.4		
2	10.0	2.1	10.0	37.1		
3	1.4	0.6	12.9	18.2		
4	2.6	0.3	76.3	87.1		
5/6	-	-	3.3	0.9		

TABLE 3.6 Mediaeval and post-mediaeval pottery in each area as percentages of the total mediaeval and post-mediaeval pottery from the farm. [Total mediaeval = 5 sherds, 83 g.; total post-mediaeval = 56 sherds, 1498 g.].

Field	Mediaeval		Post-mediaeval	
	% by no.	% by wt.	% by no.	% by wt.
1	40.0	85.5	28.6	24.8
2	20.0	3.6	1.8	3.5
3	20.0	7.2	16.1	12.5
4	20.0	3.6	51.8	59.1
5/6	-	-	1.8	0.2

TABLE 3.7 Average sherd weights of mediaeval and post-mediaeval pottery (g.).

Field:	1	2	3	4	5/6	Whole Area
Med:	35.5	3.0	6.0	3.0	-	16.6
P/med:	23.2	53.0	20.7	30.9	3.0	26.9

TABLE 3.8 Sherds per hectare of mediaeval and post-mediaeval pottery.

Field:	1	2	3	4	5/6	Whole Area
Hectares:	5.69	5.39	10.97	6.49	9.42	37.95
Med:	0.35	0.20	0.10	0.15	-	0.13
P/med:	2.82	0.20	0.82	4.47	0.10	1.48

TABLE 3.9 Prehistoric, RB and unclassified sherds. Number and weight (grams) per area.

Field:	1		2		3		4		5/6		Whole Area	
Period	n	wt	n	wt	n	wt	n	wt	n	wt	n	wt
BA	-	-	-	-	-	-	1	27	-	-	1	27
IA	1	9	2	22	3	69	1	8	4	55	11	163
RB	46	929	3	54	53	725	5	92	12	211	119	2011
RB/PH	-	-	2	8	2	17	-	-	10	53	14	78
UNCL.	2	25	1	3	2	21	1	2	3	11	9	62
Totals	49	963	8	87	60	832	8	129	29	330	154	2341

TABLE 3.10 Chronological distribution of pre-mediaeval pottery per line-walked area. As % by sherd no. and sherd wt of: a) total pottery per area, b) total pre-mediaeval and unclassified pottery per area.

a)

Field:	1		2		3	
Period	% (no)	% (wt)	% (no)	% (wt)	% (no)	% (wt)
BA	-	-	-	-	-	-
IA	1.5	0.6	20.0	15.4	4.3	6.7
RB	68.6	66.1	30.0	37.8	75.7	70.8
RB/PH	-	-	20.0	5.6	2.9	1.7
UNCL.	3.0	1.8	10.0	2.1	2.9	2.1
Totals	73.1	68.5	80.0	60.9	85.8	81.3

Field	4		5/6		Whole area	
BA	2.6	2.6	-	-	0.5	0.7
IA	2.6	0.8	13.3	16.5	5.1	4.1
RB	13.2	9.0	40.0	63.4	55.3	51.1
RB/PH	-	-	33.3	15.9	6.5	2.0
UNCL.	2.6	0.2	10.0	3.3	4.2	1.6
Totals	21.0	12.6	96.6	99.1	71.6	59.5

b)

Field:	1		2		3	
Period	% (no)	% (wt)	% (no)	% (wt)	% (no)	% (wt)
BA	-	-	-	-	-	-
IA	2.0	0.9	25.0	25.9	5.0	8.3
RB	93.9	96.5	37.5	62.1	88.3	87.1
RB/PH	-	-	25.0	9.2	3.3	2.0
UNCL.	4.1	2.6	12.5	3.4	3.3	2.5
Totals	100.0	100.0	100.0	100.6	99.9	99.9

Field	4		5/6		Whole area	
BA	12.5	20.9	-	-	0.6	1.2
IA	12.5	6.2	13.8	16.7	7.1	7.0
RB	62.5	71.3	41.4	63.9	77.3	85.9
RB/PH	-	-	34.5	16.1	9.1	3.3
UNCL.	12.5	1.6	10.3	3.3	5.8	2.6
Totals	100.0	100.0	100.0	100.0	99.9	100.0

TABLE 3.11 Totals, by weight and number per linewalked area, of: a) all pottery, b) mediaeval and post-mediaeval pottery, c) prehistoric, RB and unclassified pottery.

Field:	1	2	3	4	5/6	Whole area
a) All periods						
no	67	10	70	38	30	215
wt	1405	143	1024	1027	333	3932
b) Mediaeval/post-mediaeval						
no	18	2	10	30	1	61
wt	442	56	192	898	3	1591
c) Pre-mediaeval and unclassified						
no	49	8	60	8	29	154
wt	963	87	832	129	330	2341

TABLE 3.12 Sherds per hectare of main IA and RB fabric types in each fieldwalked area.

Field:	1	2	3	4	5/6	Whole area
Hectares:	5.69	5.39	10.97	6.49	9.42	37.95
<u>RB:</u>						
Fab. A	5.09	0.57	3.46	0.62	0.64	2.1
Fab. D	1.58	-	0.54	0.15	0.64	0.57
All RB	8.08	0.57	4.84	0.77	1.28	3.14
<u>IA</u>						
Fab. B	0.17	0.37	0.27	0.15	0.32	0.27
All IA	0.17	0.37	0.27	0.15	0.42	0.30

TABLE 3.13 Average sherd weights of selected IA and RB fabric categories per linewalked area (grams).

<u>Field:</u>	1	2	3	4	5/6	Whole area
<u>RB:</u>						
Fab. A	20.3	18.0	11.9	19.3	13.2	15.6
Fab. D	16.8	-	16.7	15.0	22.0	18.1
All RB	20.2	18.0	13.7	18.4	17.6	16.9
 <u>IA</u>						
Fab. B	9.0	11.0	23.0	8.0	16.3	15.7
All IA	9.0	11.0	23.0	8.0	13.8	14.8

TABLES 3.14 - 3.18 Basic data Fields 1 - 6, all pre-mediaeval and unclassified fabric categories. [N.B. the "% by no." and "% by wt" columns contain two sets of figures - the first is as a percentage of all pottery from the field, the second (bracketed) is as a percentage of all pottery excluding mediaeval and post-mediaeval sherds. ASW = average sherd weight].

TABLE 3.14 Field 1

Total sherds 67 (Adjusted total 49)
 Total weight 1405 g. (Adjusted total 963 g.)

Fabric	No.	Wt	% by no.	% by wt	ASW
<u>RB</u>					
Fab. A	29	589	43.3(59.2)	41.9(61.2)	20.3
Fab. D	9	151	13.4(18.4)	10.7(15.7)	16.8
Fab. C ¹	5	85	7.5(10.2)	6.0(8.8)	17.0
Crambeck					
greyware	1	18	1.5 (2.0)	1.3(1.9)	18.0
Col.-coat	1	16	1.5 (2.0)	1.1(1.7)	16.0
Mortaria	1	70	1.5 (2.0)	5.0(7.3)	70.0
Total RB	46	929	68.6(93.9)	66.1(96.5)	20.2
<u>IA</u>					
Fab. B	1	9	1.5 (2.0)	0.6 (0.9)	9.0
Total IA	1	9	1.5 (2.0)	0.6 (0.9)	9.0
Unclass.	2	25	3.0 (4.1)	1.8 (2.6)	12.5

TABLE 3.15 Field 2

Total sherds 10 (Adjusted total 8)
 Total weight 143 g. (Adjusted total 87 g.)

<u>Fabric</u>	<u>No.</u>	<u>Wt</u>	<u>% by no.</u>	<u>% by wt</u>	<u>ASW</u>
<u>RB</u>					
Fab. A	3	54	30.0(37.5)	37.8(62.1)	18.0
Total RB	3	54	30.0(37.5)	37.8(62.1)	18.0
<u>IA</u>					
Fab. B	2	22	20.0(25.0)	15.4(25.9)	11.0
Total IA	2	22	20.0(25.0)	15.4(25.9)	11.0
<u>RB/PH</u>					
<u>Unclass.</u>	3	11	30.0(37.5)	7.7(12.6)	7.0

TABLE 3.16 Field 3

Total sherds 70 (Adjusted total 60)
 Total weight 1024 g. (Adjusted total 832 g.)

<u>Fabric</u>	<u>No.</u>	<u>Wt</u>	<u>% by no.</u>	<u>% by wt</u>	<u>ASW</u>
<u>RB</u>					
Fab. A	38	451	54.3(63.3)	44.0(54.2)	11.9
Fab. D	6	100	8.6(10.0)	9.8(12.0)	16.7
Fab. C	4	65	5.7 (6.7)	6.3 (7.8)	16.3
Crambeck greyware	2	59	2.9 (3.3)	5.8 (7.1)	29.5
Col.-coat	3	50	4.3 (5.0)	4.9 (6.0)	16.7
Total RB	53	725	75.7(88.3)	70.8(87.1)	13.7
<u>IA</u>					
Fab. B	3	69	4.3 (5.0)	6.7 (8.3)	23.0
Total IA	3	69	4.3 (5.0)	6.7 (8.3)	23.0
RB/PH	2	17	2.9 (3.3)	1.7 (2.0)	8.5
<u>Unclass.</u>	<u>2</u>	<u>21</u>	<u>2.9 (3.3)</u>	<u>2.1 (2.5)</u>	<u>10.5</u>

TABLE 3.17 Field 4

Total sherds 38 (Adjusted total 8)
 Total weight 1027 g. (Adjusted total 129 g.)

<u>Fabric</u>	<u>No.</u>	<u>Wt</u>	<u>% by no.</u>	<u>% by wt</u>	<u>ASW</u>
<u>RB</u>					
Fab.A	4	77	10.5 (50.0)	7.5 (59.7)	19.3
Fab.D	1	15	2.6 (12.5)	1.5 (11.6)	15.0
Total RB	5	92	13.2 (62.5)	9.0 (71.3)	18.4
<u>IA</u>					
Fab.B	1	8	2.6 (12.5)	0.8 (6.2)	8.0
Total IA	1	8	2.6 (12.5)	0.8 (6.2)	8.0
BA	1	27	2.6 (12.5)	2.6(20.9)	27.0
<u>Unclass.</u>	1	2	2.6 (12.5)	0.2 (1.6)	2.0

TABLE 3.18 Field 5/6

Total sherds 30 (Adjusted total 29)
 Total weight 333 g. (Adjusted total 330 g.)

<u>Fabric</u>	<u>No.</u>	<u>Wt</u>	<u>% by no.</u>	<u>% by wt</u>	<u>ASW</u>
<u>RB</u>					
Fab.A	6	79	20.0(20.7)	23.7(23.9)	13.2
Fab.D	6	132	20.0(20.7)	39.6(40.0)	22.0
Total RB	12	211	40.0(41.4)	63.4(63.9)	17.6
<u>IA</u>					
Fab.B	3	49	10.0(10.3)	14.7(14.8)	16.3
Fab. C ²	1	6	3.3 (3.4)	1.8 (1.8)	6.0
Total IA	4	55	13.3(13.8)	16.5(16.7)	13.8
RB/PH	10	53	33.3(34.5)	15.9(16.1)	5.3
<u>Unclass.</u>	<u>3</u>	<u>11</u>	<u>10.0(10.3)</u>	<u>3.3 (3.3)</u>	<u>3.7</u>

TABLE 3.19 Field 1 (1987. "Sub-divided line" walk,
Lines 1 - 3).

Total sherds 52 (Adjusted total 49)
Total weight 775 g. (Adjusted total 750 g.)

<u>Fabric</u>	<u>No.</u>	<u>Wt</u>	<u>% by no.</u>	<u>% by wt</u>	<u>ASW</u>
<u>RB</u>					
Fab.A	26	460	50.0(53.1)	59.4(61.3)	17.7
Fab.D	7	71	13.5(14.3)	9.2 (9.5)	10.1
Fab.C ¹	4	60	7.7 (8.2)	7.7 (8.0)	15.0
Col.-coat	1	2	1.9 (2.0)	0.3 (0.3)	2.0
Mortaria	1	45	1.9 (2.0)	5.8 (6.0)	45.0
Total RB	39	638	75.0(79.6)	82.3(85.1)	16.4
<u>IA</u>					
Fab.C	8	83	15.4(16.3)	10.7(11.1)	10.4
Unclass.	2	29	3.8 (4.1)	3.7 (3.9)	14.5
Post-med.	3	25	0.1 (-)	3.2 (-)	8.3

TABLE 3.20 Field 3 "Gridded Scatter"

Total sherds 58

Total weight 616 g.

(No mediaeval or post-mediaeval pottery present)

<u>Fabric</u>	<u>No.</u>	<u>Wt</u>	<u>% by no.</u>	<u>% by wt</u>	<u>ASW</u>
<u>RB</u>					
Fab.A	21	185	36.2	30.0	8.8
Fab.D	10	143	17.2	23.2	14.3
Total A+D	31	328	53.4	53.2	10.6
<u>IA</u>					
Fab.B	12	151	20.7	24.5	12.5
<u>IA/RB</u>					
Fab.C	15	137	25.9	22.2	9.1

TABLE 3.21 Field 1. Analysis of pottery collected by "general survey" in 1984.

Total no. of sherds 46 Total weight of pottery 896 g.

<u>Fabric</u>	<u>no.</u>	<u>wt</u>	<u>% by no.</u>	<u>% by wt</u>	<u>ASW</u>
Neolithic	1	6	2.17	0.67	6.0
IA Fab.B	1	5	2.17	0.56	5.0
IA Fab.C ²	1	8	2.17	0.89	8.0
RB/PH	4	27	8.69	3.01	6.8
RB Fab.A	14	282	30.43	31.47	20.1
RB Fab.C ¹	7	215	15.21	24.00	30.7
RB Fab.D	4	46	8.69	5.13	11.5
Samian	4	8	8.69	0.89	2.0
Crambeck					
greyware	2	101	4.35	11.27	50.5
Mediaeval	4	89	8.69	9.93	22.3
Post-med	3	105	6.52	11.72	35.0
Unclass.	1	4	2.17	0.45	4.0

TABLE 3.22 Overall densities of IA and RB sherds per 0.25 hectare in each fieldwalked area.

<u>Field</u>	<u>Sherds per 0.25 hectare</u>
1	2.15
2	0.23
3	1.28
4	0.23
5/6	0.42

3.2.3 Settlement east of the River Hull

3.2.3.1 General survey

This section surveys briefly the evidence for RB settlement on the non-alluvial areas east of the River Hull, i.e. upon the till and glacial sand/gravel deposits of western Holderness. It is followed by a site specific study of High Eske Farm (G.161, section 3.2.3.2).

The topography of the area has already been discussed in Chapters 1 and 2 and it will be sufficient here to remind ourselves of the main difference between this landscape and that west of the river, namely that it presents a much more complex combination of surface geologies, a partially eroded morainic landscape only the highest parts of which protrude above the deposit of post-glacial estuarine alluvium. Only small areas of gravel occur within the study area east of the river, and there is nothing to compare in size with the extensive Cottingham/Woodmansey and Leconfield gravel deposits on the west. (Extensive deposits do, however, occur just to the north of the study area in Brandesburton and Leven parishes). These more coarse-textured deposits are also distinguished on the Geological Survey Drift Sheet (Sheet 72, 1909) as glacial "sands and gravels", characteristically distinguishable from the glacial "dry chalk valley" and "terrace" gravels west of the river.

The constraints upon AP survey in this landscape have also already been discussed (1.4.3). Most of the AP sites lie to the north of the study area, little aerial survey having taken place before the till island of Sutton/Wawne was developed as housing estates in the

1960s and 1970s. Of the AP1 and AP2 sites shown on fig. 3.1 two main clusters may be distinguished: firstly, there are three areas of trackway, ditch and enclosure systems sited close to the banks of the Lambwath Stream in Skirlaugh and Swine parishes (G.147, 151, 154) which have already been alluded to in discussion of the nearby square barrow cemetery (G.152, section 2.3.1); secondly, there is a group of six sited on and around two sand and gravel deposits in Routh and Wawne parishes (G.132-134, G.173-174). These are of especial interest in that they appear to show settlement extending off the sand/gravel onto surrounding alluvium and till (see Gazetteer for Loughlin's assumption of inter-relationship between these sets of features) and it may thus be that here we can see settlement of IA/RB date exploiting the economic advantages of three different surface geologies. Surface fieldwork designed to test whether IA/RB occupation is in fact the case at sites such as G.132, G.134 and the alluvial part of G.173, and hence whether the alluvium deposit in this area was manageable at this period, could profitably be undertaken.

Material finds and excavated features from the till areas east of the river are few but of considerable interest. The continuing occupation of the Sutton/Wawne island of higher relief (at the southern end of which was located the late IA/early RB settlement of Salthouse High School) is evidenced by the 12 metre length of ditch containing third-century (?) pottery excavated by Peter Armstrong during road construction on the Bransholme estate in 1975 (G.86). Other indications of RB settlement in the vicinity were reported by workmen, and two small finds have been reported to Hull Museum from the clays north of the

site, a sestertius of Marcus Aurelius (G.87) and a decorated lead spindle whorl (G.176).

Occupation of the till islands close to the river in Tickton parish is shewn by fieldwalked assemblages from Chapel Farm, Weel, already discussed (G.159, section 2.3.2.2) and High Eske Farm, where a coin of Septimius Severus reported to Hull Museums led to fieldwalking by the author which located a third- to fourth-century settlement site discussed in section 3.2.3.2 (G.160, 161). Small amounts of RB pottery are also recorded from mediaeval sites in Paull, Swine and Wawne parishes (G.128, 153 and 202), a phenomenon already noted on the west bank (section 3.2.2). The possibility that the blade of a gladius may have been found in Hatfield parish (G.59) is intriguing, but the records relating to the find are of little value in enabling the matter to be pursued further.

The remaining finds from the area are all coin hoards (G. 150, 155, 156, 175, 201 and, possibly, 207). All these hoards are from Swine parish except for G.175, which is from the neighbouring parish of Wawne, and G.201, which is from the alluvium deposit at Sutton, now within the Hull city boundary, but is discussed in this section for the sake of completeness (full details of all hoards are given in the gazetteer). There are complete coin lists, recorded to modern standards, of only two hoards (G. 155 and 201) and we only know the total coin numbers originally deposited in the case of G. 150, 155 and, possibly, 175. The hoards, as recorded, appear to involve two distinct periods of deposition, Antonine (G.175 and 156) and Constantinian (G.150, 155 and 201). The latter are large bronze and silver-washed bronze hoards (c. 1500 and 3100 coins respectively). Both were buried in containers, that of

G.155 shewn in fig. 3.33. The Antonine hoards are either denarii or a mixture of denarii and sestertii; they terminate with coins of Marcus Aurelius and Faustina Junior and may represent a reaction to the sharp decline in the silver content of the denarius from the reign of Marcus onwards (Casey 1980, 54). Bi-metallic hoards are unusual, if not rare, but are not yet fully understood. The hoard in question (G.156) apparently (Whiting 1969, 75) comes from the same farm as the larger of the two Constantinian hoards (G.155), but its discovery in 1940, by Thomas Sheppard, is characterised by an unfortunate dearth of information. Taken as a whole, the interest of these hoards lies in the simple fact that they demonstrate the existence, in what until recently would have been regarded as a marginal settlement area, of individuals or communities able to bury relatively large sums of money, or numbers of coins, from the mid-second to the mid-fourth century. (The particular significance of G.201 is discussed in section 3.3.3, below).

The rest of this discussion of settlement east of the river is devoted to a consideration of field-walked material from High Eske Farm (G.160 - 161).

3.2.3.2 A fourth-century occupation site at High Eske Farm (G.161)

[This section is a modified version of a paper which will appear as an appendix to a documentary and fieldwork survey of the DMV of Eske by Barbara English and Keith Miller. The position of the site, on till

close to the east bank of the River Hull, is shewn on fig. 3.34].

In 1984, a Roman coin supposed to have been found at High Eske Farm was identified at Hull Museums as a denarius of Septimius Severus (G.160). Subsequently, on three occasions in the winters of 1985/6 and 1986/7, the author undertook surface fieldwork at High Eske and Eske Manor farms to establish whether there was other evidence of Romano-British activity there.

On the first visit, six fields were assessed for their fieldwalking potential by general, "haphazard", survey (fig. 3.35) but only one of them (Field 3, fig. 3.36) yielded more than a handful of sherds, and the author was able to record a scatter of late RB grey and parchment wares centred on TA 06084335. Most of the subsequent work was devoted to collection of material from this field.

Sampling strategy was determined by the limited number of walkers available (maximum three) and the varying condition of the field surface. The field, whose long axis lies east to west on the high boulder clay between the two farms, was accordingly divided into three approximately equal sectors (fig. 3.36), within which material was collected by thorough but essentially random fieldwalking. A total of 148 sherds of pottery, weighing 2473 grams, was collected from the field, together with worked flint, clay pipes, brick and tile.

Despite the weathered condition of some of the post-Roman material, it proved possible to categorise most sherds in terms of named fabrics, using as a basis for this the Hull pottery type-series formulated by Gareth

Watkins (Watkins 1987). Groups of fabrics were then assigned to periods (fig. 3.37) designed to reflect the main ceramic developments in the region. The method is a refinement of that developed for analysis of the Chapel Farm, Weel assemblage (section 2.3.2.2) and the principal fabrics assigned to each chronological period are summarised briefly below. Further information on these fabrics may be found in Watkins 1987, Watkins 1989, and Didsbury and Watkins 1990.

<u>Period</u>	<u>Date</u>	<u>Main fabrics assigned</u>
III	850-1100	Torksey-type wares
IV	1100-1200	Beverley (Fabric 1)
V	1200-1350	Beverley (Fabric 2) regionally dominant fineware. Coarse Sandy cooking-pots.
VI	1350-1500	Humberwares regionally dominant. Siegburg stoneware.
VII	1500-1700	Ryedale Ware. Cistercian and Black Wares. Raeren stoneware. Beauvais slipwares.
VIII	1700-1988	English salt-glazed stoneware. Staffordshire slipwares. Brown-glazed Coarseware. Late Humberwares. Factory white-wares.

Further, gridded, fieldwalking is planned for this field but it is felt that the existing material

assemblage is large enough to warrant limited quantified analysis, and to enable some interim observations on the field's past usage to be made. These are presented in chronological order below, reference to material from other fields being made where necessary.

1. Prehistoric

Prehistoric material was represented only by worked flint, convincing examples of which were recovered only from Field 3. Given the differential coverage of areas walked, it is impossible to say that prehistoric activity was restricted to this higher ground, especially as the floral and faunal resources of the low-lying carrs are likely to have been of considerable interest to early communities here. Of the eleven worked flints recovered, only a "thumbnail" scraper is at all chronologically diagnostic.

2. Romano-British

Romano-British pottery was recovered from the eastern end of Field 3 in 1985 (Frere 1986, 386), the bulk of the material seeming to occur within a 30 metre radius of the point marked on fig. 3.36. It will be seen from fig. 3.37 that Romano-British pottery accounts for a greater percentage of the total from the field than that of any other period, representing 37.8% by sherd number, and 45.8% by sherd weight. Analysis of the spatial distribution of the material shews that it occurs almost exclusively in the highest, eastern, sector of the Field (Table 3.23), and although downhill soil-wash into the lower-lying trough which forms the central sector of the field may be acting to protect pottery-bearing features such as ditches from plough

disturbance, it seems likely that the observed east to west fall-off of ceramic material reflects an original situation.

TABLE 3.23. Spatial distribution of material of periods I, VI and VIII compared. [No. of sherds and percentage of total].

PERIOD	WEST	CENTRAL	EAST
I [n=56]	4 [7.1%]	5 [8.9%]	47 [83.9%]
VI [n=32]	9 [28.1%]	1 [3.1%]	22 [68.8%]
VIII [n=26]	2 [7.7%]	11 [42.3%]	13 [50.0%]

The density and general nature of the Roman assemblage, including the large size and relatively fresh condition of many sherds, suggests that it derives from an actual settlement focus, or its primary rubbish deposits, on the high land, rather than from manuring carried out from a centre located elsewhere. Indeed, the average sherd-weight of the Romano-British pottery as a whole (20.2 grams) is exceeded only by that of the most recent ceramic material from the field (Period VIII, c. 1700 onwards, 23 grams) which includes, as might be expected, very large sherds of heavy vessels such as Victorian pancheons (fig. 3.38). It will be noted that the average sherd-weight of mediaeval and post-mediaeval pottery, much of which is likely to derive from rubbish disposal onto arable fields, increases as

one approaches the present day (fig. 3.38), whereas the average sherd of Romano-British greyware (at 18.3 grams) is significantly heavier than the average sherd of fourteenth- to sixteenth-century Humberware (14.0 grams), despite the fact that the latter is generally a thicker, harder and denser, lead-glazed fabric deposited a full millennium earlier (n = 34 for RB greywares, 29 for Humberware).

A detailed analysis of the Roman pottery is not presented here but it includes mortaria, Nene Valley beakers and a flagon, Huntcliff ware and Crambeck grey and parchment wares, the bulk of the rest of the coarsewares being characteristic of the Holme upon Spalding Moor industries of the third and fourth centuries A.D. Some of the HOSM products may belong to the second half of the third century, but in essence the assemblage is wholly typical of the fourth-century in the region, the Huntcliff lid-seated jars shewing activity continuing into the second half of the century and possibly into the early part of the fifth. All the above wares appear on riparian sites of this period further downstream, such as Greylees Avenue (G.69, section 3.3.2) and Haworth Hall (G.76, section 3.3.3) and it is interesting to reflect that all of them may have finished their journeys from their respective production centres by river transport along the Humber and/or the Hull. The earlier settlement which is evidenced at the other sites mentioned above is not indicated in this assemblage. It is possible that earlier settlement should be sought elsewhere in the vicinity, but it should also be borne in mind that modern agricultural practice may simply be disturbing, for the first time, only the topmost layers of ditches or yard surfaces, and that earlier material may be released into the plough soil in due course.

On present evidence, it does not appear that the Roman settlement extended eastwards across the modern road into Field 6, which yielded only nine sherds to random survey, five of them of the eighteenth to twentieth centuries, two of the thirteenth to sixteenth centuries, and two unclassified. The nearest find spot of Roman material lies directly across the River Hull at Arram grange (G.199, section 3.2.2), where the author discovered sherds of greyware in December 1987.

3. Saxon

There is no evidence of activity resulting in ceramic deposition on the field between the end of the Roman period and Saxo-Norman times. In view of the fact that high status sites such as Lurk Lane, Beverley (Armstrong, Tomlinson and Evans 1989) were virtually aceramic throughout the Middle Saxon period this absence of pottery should not be taken to imply an absence of occupation.

Saxo-Norman material is represented by three sherds of Torksey-type ware, one of them a diamond-rouletted rim. It is impossible to date the material closely within the period A.D. 850-1100. Another DMV with a Scandinavian name which has recently yielded Saxo-Norman pottery including Torksey ware as well as late RB wares is that of Tranby, on the south-western fringes of the valley (G.197).

4. Mediaeval and Post-mediaeval

A detailed treatment of material from these periods would be inappropriate here. The main point of interest lies in the almost total break in ceramic

deposition on the field in the sixteenth and seventeenth centuries. There is nothing in the medieval assemblages characteristic of either occupation or night-soil deposits, and it thus seems likely that sherds of these periods largely originate from midden material spread onto the land in the interests of arable agriculture. If this is so, then there is a prima facie case for suspecting that such use of the land characterised the later mediaeval period but not a substantial portion of the sixteenth and seventeenth centuries. Unless there was a change in manuring practice during the latter period, which seems unlikely, the best explanation would seem to be that the land was being put to non-arable use during this period, perhaps down to pasture. Such change in agricultural regime could be attendant upon the depopulation of the village and the reorganisation of its lands (though the date at which this occurred is uncertain) but it might also have been partly conditioned by the state of the surrounding carrs, as has already been suggested in the case of Chapel Farm, Weel, where a precisely similar situation was observed. Standing water in the carrs may well have made arable agriculture less attractive than before, even on the higher clay, by impeding run-off and making access more difficult.

In conclusion, it is hoped that the above analysis shows the value of surface fieldwork on such sites, not only for locating occupation not revealed by aerial photography, but also for interpreting past patterns of land use. Chapel Farm and High Eske Farm suggest that the boulder clays on both banks of the Hull, where agriculture was probably only viable in the mediaeval period because of major drainage work in the carrs, could also accommodate settled populations in the late

Iron Age and Roman periods. There is, as yet, no evidence for large-scale RB drainage in the carrs, but the low RB sea-levels postulated in section 3.3.3 may have meant that their condition in the Roman period was less of a problem to local populations than a millennium later. Further work on similar boulder clay sites near the river will be needed before these patterns can be understood.

Thanks are due to Mr Robert Byass, for permission to carry out this work, and to Messrs Bryan Sitch and Ian Chorlton, and Miss Diane Brown, without whom it would have been impossible.

3.3 Settlement in the alluvial areas of the lower Hull valley in the Roman period

3.3.1 Introduction

Section 3.3 considers the evidence for settlement on, and the utilisation of, the alluvium deposit of the lower Hull valley in the Roman period. The physical origin of this deposit was discussed in outline in section 1.2, above, and receives further attention in 3.3.3, below.

The author's interest in these matters began after he had worked on the excavation of RB ditches at Greylees Avenue, Hull (G.69), in 1984, and arose out of the need to understand the site within the context of other finds of Roman material from the alluvial areas, notably from within the city of Hull itself. This research resulted in the compilation of a greatly expanded data-base relating to the alluvium deposit;

and analysis of the spatial distribution of RB material in relation to the height of the till surface buried beneath the alluvium, as well as as to what is now known of the ways in which post-glacial sea-levels were re-established, provided the theoretical background against which it could be interpreted. Greylees Avenue is discussed in section 3.3.2, below, while the compilation and interpretation of the new database is dealt with in section 3.3.3.

3.3.2 Excavations at Greylees Avenue, Hull (G.69)

Greylees Avenue forms part of the Greenacres housing development, which lies along the west bank of the River Hull, immediately south of the city's northern boundary. The estate forms the last substantial development of "Hull Bank" as a residential area, completing a development process which began in the early 1960s. Building on the west bank since 1984 has been mainly confined to the infilling of small vacant plots with housing (G.203, 205).

Excavations on the site in question were mounted by Hull Museums, under the direction of David Crowther, after the discovery of substantial amounts of Roman pottery and animal bone in the back garden of No. 33 Greylees Avenue by Mr Gil Smith, the first owner of the new property.

The pottery was discovered when Mr Smith began to "double-dig" the garden in order to bury a surface make-up of sterile clay left behind by the building developers; that he was able to recognise the material as Roman was due entirely to the fortuitous fact that he had been a schoolboy volunteer on excavations of the

fort at South Shields half a century before and had retained vivid impressions of the appearance and "feel" of samian ware. He reported his finds to Hull Museums in face of the amused incredulity of his wife and neighbours, and his identification was confirmed by Tim Schadla-Hall, then Principal Keeper.

A fortnight's excavation to investigate the nature of the deposits yielding the pottery was subsequently carried out by a team of three, of whom two, including the writer, were MSC personnel, in February 1984. These excavations revealed evidence of at least two ditches containing pottery dating from the first to fourth centuries A.D., animal bone, tile and a range of metal, glass, and building materials. Investigation of the neighbouring building site revealed another ditch containing RB pottery c. 30m north-west of the site (context 5) and suggested that the excavated features constituted only elements of a wider regime of land management in the vicinity.

An interim report on the excavations (Crowther and Didsbury 1985) has already been published, but funding to enable full post-excavation and publication has not so far been available. The present writer carried out a preliminary survey of the pottery in 1984 and his dating has been confirmed in outline by Val Rigby, who inspected the material. The large amounts of bone from the site still await professional inspection and should yield invaluable evidence for the production and consumption of animal products in the alluvial zone; environmental samples likewise await examination but it is worth noting that, although it may still be possible to obtain macro-botanical data from them, they have already deteriorated too far for insect remains to be preserved (pers. comm., Pat Wagner). What follows must

clearly be severely constrained by the lack of post-excavation analysis so far undertaken. Despite such limitations, it is hoped that the following description and discussion of the excavations will serve to illustrate the importance of the site for the study of settlement in the alluvial area between the first and fourth centuries A.D.

1. The site in its setting.

The site lies between 1m and 2m AOD, approximately 300m to the west of the present meandering, embanked course of the River Hull. Fig. 3.39 shews the site's location in relation to finds of Roman material in the vicinity as known in 1984, from the only published source then available (Loughlin and Miller 1979).

The modern landscape to the north of the site, which at present remains free of urban development, consists of an intensively drained, level extent of winter-sown arable interspersed with a certain amount of grassland used for pasture. The poor drainage properties of the underlying boulder clay give rise to ground-water gley topsoils developed in alluvium, the "Wallasea I" association of the Soil Survey of England and Wales (1983). Prior to the large-scale management and control of the River Hull, which has been alluded to throughout this thesis, the site would have been highly susceptible to seasonal flooding, with a constantly high, if fluctuating, ground-water table. As already indicated (section 1.4.3), there is no aerial photographic evidence for pre-mediaeval land-management in the vicinity. Given the inferred unsuitability for settlement at earlier periods of such low-lying wet land within the river's flood-plain this lack of

evidence appeared logical enough. However, as will be demonstrated, the discovery of Romano-British land-use and rubbish management at Greylees Avenue was to lead to an extensive revision of accepted ideas of settlement in the alluvial zone.

2. The excavations.

The area investigated was necessarily constrained by the garden space available, spoil management, and the limitations of time, labour, and resources (see above). All the work took place within an area measuring 5m by 4m.

Messrs Barratt, the building developers, kindly provided a JCB 3C, and this was used to remove approximately 30 cms of mottled silty clay topsoil from the site. This machining revealed in plan a linear feature (Feature 1) with a dark silt-loam tertiary infill, c. 2m wide, running obliquely through the site. The feature was cut through "natural" grey to orange clay, and subsequent excavations isolated a second feature (Feature 2) running at right-angles to the first, and produced evidence for a more substantial sub-circular feature (Feature 3) which is interpreted either as the butt-end of a ditch (most probable) or a pit. Textural and colour differences between "natural" and infilled deposits were not always clear, and, because of the limitations on the work, such problems could not be resolved by the opening of a larger area. Despite these difficulties, however, the excavations provided the first firm evidence of the construction, adaptation and abandonment of land-management features in the area between the second and fourth centuries A.D.

A synopsis of the features encountered, with phasing, is presented below, and is illustrated by a series of schematic diagrams (fig. 3.40, a-f) and a section through Feature 1 shewing the principal recuts (fig. 3.41).

Phase 1 (fig. 3.40 a)

The earliest event within the excavated area is the cutting of Feature 1. The primary filling of the ditch (contexts 13, 15 - fig. 3.41) is a reduced grey (10 YR 5/1) clay formed in standing water. Contexts 19 and 20 are interpreted as slip from the ditch-side and weathered ditch-side respectively.

Phase 2 (fig. 3.40 b)

The primary filling of Feature 1 is then re-cut, and Feature 2 is constructed to meet it at right-angles. The portion of Feature 1 beyond this junction is backfilled with a deposit of oxidised silty clay (context 14). Feature 1 then begins to fill with a very dark grey (10 YR 2/1) silty clay loam (contexts 7 and 12 - fig. 3.41) while Feature 2 fills with a reduced clay filling (context 18). The establishment of the site as a corner, or entrance point, is retained for the rest of the life of the site.

Phase 3 (fig. 3.40 c)

This phase is characterised by an event in the infilling of the Phase 2 features which leads to the deposition of an artefact-rich lens of oxidised, mottled (7.5 YR 6/6) clay (context 11, fig. 3.41). Whether or not the domestic refuse and clay entered the ditch as a dumping operation is uncertain but seems

likely in the light of Phase 4 neglect of both features.

Phase 4 (fig. 3.40 d)

Both ditches now infill with grey silty loams and mottled clay loams (contexts 6 - fig. 3.41 - and 9) and are thus neglected as components of the established drainage scheme.

Phase 5 (fig. 3.40 e)

Where Feature 2 had been, a wide feature (Feature 3) is cut (see above) which subsequently fills with reduced clay silts (contexts 16 and 17). In the interim report already published (Crowther and Didsbury 1985, 14) it is also stated that this phase sees the cutting of a narrow, shallow ditch on the same line as Feature 1, and butting at the point where it would have met the now infilled Feature 2. Unfortunately, however, there appears to be serious confusion in the site archive regarding the fill of this feature (context 4 - fig. 3.41) which is shown as a fill cutting 6 and sealed by 3 in section, but which is described in the context list as cut by 3, under 2, and present over the whole excavated area; it is further described as an orange-brown clay silt with "scattered evidence for Roman material" of the first to fourth centuries, and is interpreted as "B horizon below original turf.....: part of old land surface?". It seems probable that the correct context number for this ditch infill is actually "3", which is described in the context list as: "Grey-black silty clay. Reduced. Ditch-filling. Homogeneous, stone-free", and said to contain early modern material in the upper fill and Roman pottery throughout. Unfortunately, context 3 is also described

as being under 2 and cutting 4, so that a simple transposition of contexts 3 and 4 in section still fails to establish a correct set of stratigraphical relationships, as fig. 3.42 shews. These contradictions between the drawn and the written archives unfortunately seriously affect the interpretation of the latest phases of the site, and the least unsatisfactory conclusion is now probably to suggest that the construction of the narrow ditch on the line of Feature 1 is an early modern event, and that it was cut from a land-surface which had formed over the subsided infill of the Roman ditches. (It can certainly not be sealed by the postulated former land-surface, as shewn in the published section, since it contains considerable amounts of eighteenth/nineteenth century material). The matter is not at the moment capable of resolution, but the above suggestion seems inherently more reasonable than the excavator's published phasing (Crowther and Didsbury 1985) which would require a shallow (20 cms) Roman "ditch" in a seasonally flooded environment to infill so gradually over a millennium and a half that it could eventually incorporate early modern material in its topmost fill.

Phase 6 (fig. 3.40 f)

The latest phase in the site's history is represented by context 2, which is a humic loam layer with turf and sods which occurs over the whole excavated area and is interpreted as the original "A" horizon of pasture which occupied the site until the commencement of building operations and the deposition of context 1, a modern clay overburden, in 1984 (properly = Phase 7). Context 2 contains mid-eighteenth- to nineteenth-century material with some Roman pottery which may have been incorporated into this horizon by natural

processes, e.g. worm action, or by early modern episodes of arable agriculture.

3. Finds and dating.

Some four thousand finds were recovered, emphasising the site's position as one from which it was easy and/or appropriate to dispose of a variety of rubbish. The proximity of domestic buildings suggests itself as a possible explanation, and that Feature 1 was functioning as a place of primary rubbish deposition in Phases 1 and 2 is strongly suggested by the large number of vessels which it was possible to reconstruct almost completely. The two largest categories of find were pottery and animal bone and these are briefly described below, the pottery discussion concentrating on the chronology of the phasing already outlined:

a) The pottery.

Initial inspection of the pottery recovered by Gil Smith shewed a chronological range from the late first or early second century (represented by a few sherds of greyware with low linear rustication) through to the later fourth (represented by Huntcliff and other "Signal Station" types). A similar overall date-range for the samian ware was suggested by Lindsay Rollo (Rollo 1984). The earliest samian from the site is represented by two sherds of a South Gaulish Dr 37 dated to A.D. 85-110 and found residual in Phases 2 and 4, while the latest are Lezoux and Rheinzabern sherds belonging to the period A.D. 180-200. The stratigraphically lowest samian is a micaceous body sherd, which is almost certainly from Lezoux, found in the primary silting of Feature 1 (Phase 1, context 13).

The samian thus establishes a terminus post quem of c. A.D. 125 for the earliest disposal of rubbish in this feature, while the greywares include forms generally characteristic of the mid- to later second century but not closely datable within it, such as carinated jars similar to those from the "Antonine" kiln at Roxby, North Lincolnshire (Rigby and Stead 1976, 139-147: Form E, fig. 66, nos 29-32).

The dating evidence for Phase 2 is strongly suggestive of a closing date in the early years of the third century, for it contains Antonine greywares similar to those from Phase 1 in association with Central Gaulish samian dated A.D. 160 - 190 and the earliest appearance of small amounts of shell-tempered Dalesware from Lincolnshire, a fabric which Rigby and Stead suggest was in use at Winterton villa by c. A.D. 200 (Rigby and Stead 1976, 189-190).

No clear dating evidence for the Phase 3 dumping episode (context 11) is afforded by the pottery, but Phase 4 contains the earliest Holme on Spalding Moor wares from the site, again in conjunction with shell-tempered Dalesware. The later forms in the Holme repertoire do not appear to be represented and a date centred on the mid-third century would seem plausible for this phase. Phase 5 is dominated by Holme products including straight-sided flanged bowls of probable early fourth-century date, while Phase 6, as already noted, includes some of the latest Roman pottery forms available in the region.

Further work on, and quantification of, the pottery should allow this broad chronology to be refined but its main elements are already clear. There is, of course, no way of establishing when the main ditch was

first cut, for it may have been kept clear of rubbish for a considerable time after its construction. Some later first- to earlier second-century activity in the vicinity is hinted at by both the rusticated ware and the South Gaulish samian, but rubbish disposal and primary silting in Feature 1 appears to have been a mid- to late Antonine process which necessitated the Phase 2 recut in the opening years of the third century. The area remained an appropriate place for the disposal of domestic rubbish until the end of the Roman period.

It is also possible that more detailed work on the pottery assemblage will suggest functional changes within the overall pattern of rubbish disposal during the third and fourth centuries. It is, for example, noteworthy that, whereas the ditches had been an appropriate place for the disposal of "tablewares" during the period of samian supply to Britain (at least nineteen vessels dated A.D. 85/110 - 180/200 having been recovered from the excavated area), only two small body sherds of third- to fourth-century colour-coated ware are represented. This seems unlikely to reflect either a fall in site "status" or difficulties in supply of this kind of commodity to the site, for Nene Valley colour-coated wares appear in some quantity during this period at the "low status" agricultural settlement at North Cave, some 20 kms west along the Humber. It may be rather that a change in the functional relationship of these ditches to the centre generating the domestic rubbish is indicated here, but it is clearly impossible to say more than this in light of the small area excavated.

Other pottery from the site points to the inter-regional and international "trade"/communications which

have characterised the Humber throughout its history. Val Rigby has suggested to me (in litt.) that a greyware bowl with horizontally inturned rim finds its best parallel in a mid second-century form from Speicher, in Germany (Gose 1950 ,Tafel 46, Nr 485), while Kay Hartley, who kindly examined some of the mortaria, notes the presence of forms made in both Lincoln (c. A.D. 130 - 180) and the Rhineland (A.D. 150 - 250) [pers. comm.].

Rhineland and North Gaulish mortaria and other products are now known from an increasing number of sites close to the north bank of the Humber including, in addition to Greylees Avenue, Faxfleet "B" (Sitch 1987), North Cave (Didsbury in prep.) and Brantingham villa (author's unpublished information) and it is likely that further work in the area will reveal more evidence of shipping contacts between the Humber and the Continent. Although Greylees Avenue is the only large stratified assemblage of RB pottery on the north bank of the Humber east of Brough/Petuaria there are several unstratified collections (including the very large amounts of second- to fourth- century material from Haworth Hall/Marsden's Landing - G.69/G.205) the detailed study of which would valuably increase our understanding of pottery supply in the Humber Basin. This may be regarded as a research priority now that landscape and site studies such as those by Halkon (1987a), Sitch (1987) and the present author have provided the general background against which it may be interpreted and it is to be hoped that funding to enable such research to be undertaken will be forthcoming.

b. The animal bone.

A large amount of animal bone was recovered. As already stated, this material has not yet received detailed specialist attention and the brief remarks which follow are based on a preliminary inspection kindly undertaken by M.J.Boyd, Assistant Keeper of Natural History at Hull Museums, whom I take this occasion to thank.

Initial survey reveals the presence of Bos ("cow"), horse, sheep and pig, listed in descending order of abundance. Measurements so far available for Bos indicate a size close to the mean found at Rudston Villa (Stead 1980). Primary butchery material including jawbones and horn-cores is well represented. At least one horse bone shows clear evidence of having been cut prior to being snapped, possibly for the extraction of marrow. Avian bone is so far represented by a single tibiotarsus, which is not, however, from a domestic fowl.

c. Other finds.

The largest other category of finds comprised building materials, which were common in all the undisturbed layers. They included large iron nails with square-sectioned shanks, and very many fragments of burned daub, some with unmistakable wattle impressions; among the fragments of brick and tile is an example with combed decoration which appears to be part of a box-flue tile and which could conceivably indicate the presence of a Romanised building in the vicinity.

Personalia are also present and include a bone pin with spatulate head; the bowl of a silver spoon; a fragment of green glass bangle with white trailed decoration;

and a bronze finger ring. Unfortunately, all these finds are unstratified, having come to light in gardening operations subsequent to the excavation.

4. Discussion.

Greylees Avenue is, so far, the only site in the alluvial area of the lower Hull valley to have been excavated in a controlled manner. The full benefits of the excavation, and its implications for our understanding of Romano-British utilisation of this marginal landscape, have yet to be realised, dependent as they are bound to be upon the necessary funding becoming available. Discussion of the site's significance is further hampered by the small scale of the excavations and, moreover, must be conducted in the knowledge that the chance to excavate larger areas in a similar situation, close to the Hull bank, is now extremely unlikely to occur, given the area's development for housing.

Despite these constraints, it is, however, possible to make some important observations about the site which are no less valuable for being obvious. The most significant of these, clearly, is that it should exist at all in an environment conventionally held to have been unavailable for settlement (see 3.3.3 below), and that economic strategies which would allow settled occupation of at least parts of this environment were available for the greater part of the Roman period.

What these strategies may have been can not be determined from the data presently available, and the best hope of understanding them lies in detailed analysis of soil-samples and the bone assemblages. Our interpretation of these strategies will also need to

take into account the site's proximity to the "River Hull", which, whatever its precise position or character during the Roman period, cannot have been far distant. If, for example, the site's economy was pastorally based, making use of rich, possibly seasonally inundated, grazing on its broad alluvial hinterland, then the simple killing of livestock for domestic consumption is not the only possible explanation for the presence of primary butchery waste on the site; it could, for example, reflect animal slaughtering prior to the movement of meat products along the Humber estuary and its tributary waterways, a movement for which there is ample precedent, if any were needed, in the contents of the Hasholme log-boat (Stallibrass 1987).

Whatever the nature of the community at Greylees Avenue it was clearly able, and found it worthwhile, to engage in what the interim report sees as "a noteworthy investment of labour in the maintenance and modification of a drainage system" which throughout its life had undergone a "steady process of waterborne infilling (silty clays and clays)" (Crowther and Didsbury 1985, 15). It was certainly the tenor of the two authors' interpretation at that point to see these operations as a response to a critical drainage situation occasioned by a steadily rising ground-water table and a growing problem of seasonal flooding; they were seen, in other words, as an attempt to maintain a presence in an increasingly difficult environment, an attempt the abandonment of which "should occasion no surprise".

One is now inclined, though, to question these basic assumptions, and to wonder whether the flooding potential of the site was ever quite as serious as once

imagined. One's perceptions of this threat were largely influenced by modern conditions along this stretch of the Hull, where settlement of modern type is only made possible by its eighteenth-century embankments, and by the recently-constructed tidal barrier at the Hull mouth. There is evidence, however, to suggest that Mean Sea Level in parts of the Humber estuary could have been as much as 3m lower than Ordnance Datum at the beginning of the Roman period (see further section 3.3.3, below), in which case parts of the Greylees Avenue settlement may have been as much as 5m above MSL at that time, and flooding hardly as critical a factor as previously imagined. Indeed, had there been a constant need to maintain and modify drainage systems in order to enable settlement to take place at all, it is somewhat surprising that they would have been rendered increasingly less effective by the constant practice of disposing rubbish in them. Whatever the reasons for these ditches falling into disuse as drainage channels, they continued to fulfill a rubbish disposal function into the later fourth century, and it is difficult to imagine that the community which generated this rubbish was very far away. There is, in short, no reason to suppose the abandonment of this settlement for environmental reasons before the end of the Roman period.

3.3.3 Romano-British finds from the alluvium deposit: their significance and interpretation

The aim of this section is to present and evaluate the evidence for Romano-British settlement on the "marine alluvium" deposit within the study area. It describes the author's correction and augmentation of the published database relating to this deposit, summarizes previous interpretations of its condition in the Roman period, and offers a re-interpretation based both on a greatly increased body of archaeological information and the most recent research into changes in Mean Sea Level and the valley's geomorphology.

As noted in the previous section, it was the need to understand the site at Greylees Avenue in the context of other sites and findspots of RB material in Hull that led, first to the compilation of a new database relating to the alluvium deposit, and then to the full gazetteer which forms an integral part of this study.

In 1984, as today, the only two modern sources which listed RB material from the study area were Loughlin and Miller (1979), and Eagles (1979, ii); Clark (1935) treated the half dozen or so finds then known to her usual painstaking scholarship; Whiting (1969) included a useful list of Roman coins found in the study area, but was unfortunately unknown to the present author before he had compiled his own coin-list.

In relation to Hull, within whose present boundaries the bulk of the alluvium lies, both Loughlin and Miller and Eagles were disappointing, because the few entries which each contained were severely marred by inaccuracies. Loughlin and Miller (1979, 63-64) listed ten findspots of IA/RB material from the city, of which the first two were

duplicates (v. G.65 for discussion) and the tenth entirely erroneous (v. G.109), so that only eight "real" findspots were represented (v. G.65, 76, 78, 81, 86, 87, 93, 97); Eagles (1979, 437), though published in the same year, listed a mere four "places [in which RB] pottery [had] been found" (G.61, 65, 78, and 90) and mistakenly transferred a further Hull find (v. G.73) to a Haltemprice provenance. The two sources concealed accurate information relating to a combined total of eleven actual IA/RB sites and findspots within the city.

The correction of the existing database was, in itself, not a simple matter, and it is doubtful whether it could easily have been undertaken by a non-local researcher. It involved, for example, the tracing and interviewing of the original discoverers of finds made twenty years before, especially in relation to the 1964 finds on both sides of the River Hull at Haworth Hall and Frog Hall (G.76, 78). The quality of misinformation which had to be corrected is best illustrated by the facts that one of Loughlin and Miller's Hull sites apparently had its source, quite inexplicably, in Mary Kitson Clark's Gazetteer entry for Thwing (G.109; Clark 1935, 133); and that a jar found at "Newbould's bakery" in Hull (G.61) was listed in museum archives as coming from the village of Newbald and therefore did not enter the Hull section of Loughlin and Miller's (1979) gazetteer. To point out such inaccuracies is not to indulge in facile criticism of earlier researchers, for whom "Roman Hull" was not of central importance, but to stress the need for an accurate and reliable database at the outset of the present writer's research.

It is also important to note, in this respect, that inaccuracies in the two above-mentioned sources had seriously compromised their authors' interpretation of

the material. This is best illustrated by their treatment of the very large quantities of first- to fourth-century material from "Haworth Hall" (G.76), recovered during rescue excavations undertaken on behalf of Hull Museums in 1964, when a small-scale sewage disposal facility was dug on the "Scruton's" building site, after the developers had neglected to install the main drains. Confusion exists, in both sources, between this very large body of material (which presents a very similar assemblage to that from Greylees Avenue, c. 1 km upstream) and the much smaller amounts from the Sutton (Frog Hall Lane) Sewage Disposal Works (G.78), built on the opposite bank of the river in the same year; furthermore, an apparent unawareness of the quantity, quality, date-range and condition (i.e. large sherd size, number of joining sherds, lack of abrasion etc.) of the Haworth Hall pottery made it inevitable that its significance as an indicator of actual settlement close to the present course of the river would go un-noticed. Thus Loughlin (Loughlin and Miller 1979, 63) could write, despite an already published reference to the large quantity of material from Haworth Hall (Bartlett 1971), "in no area has sufficient material been found to suggest by its quantity or variety that a major Roman site existed either within the lower reaches of the Hull valley or actually as a crossing point on the river itself" (my italics); and Eagles' treatment of the site (1979, i, 152) is in some ways even more disappointing since, although he quotes a valuable communication from the geographer Dr P. Bracchi regarding the site's position on a relative eminence by the water's edge, he also implicitly supports the latter's tentative suggestion that the finds might represent "a fishing/hunting site of irregular use", an interpretation which archaeological judgement based on an awareness of

the nature and amount of the material could not have supported.

It is, in short, allowable to suggest that, had an accurate body of information relating to findspots within the city been available in 1984 (fig. 3.43 reconstructs what it would have shewn), then the discoveries at Greylees Avenue might have seemed less surprising, occurring, as they would have done, in a context in which the possibility of long-lived settlement close to the present course of the river would already have been noted.

Having corrected the existing database, it became possible to augment it through the normal research methods of museum and literature search, and fieldwork. The first and third of these methods of enhancement are discussed briefly below.

The advantages enjoyed by the present writer in being employed at Hull Museums during the initial stages of his research have been noted in Chapter 1. The entire material collections of the Archaeology Department were searched, as well as all existing paper archives, the main components of which are listed here for the benefit of future researchers:

1. Accessions Register from 1944 onwards. Previous Day Books destroyed in wartime bombing, but main elements of pre-war collection re-acquisitioned.
2. SMR files, most entries reflecting activity in the early 1960s and not kept up thereafter.
3. MDA catalogues relating to various parts of the collection, compiled during the first half of the 1980s.

4. Annotated 6" map coverage of the Museum's collection area. A valuable resource containing much information from the 1960s and early 1970s, mislaid during Museum re-organization c. 1975 and re-located by the present writer in 1985.

5. Object Identification files (see section 1.4.4).

6. Hull Museum Publications (see section 1.4.4).

7. Site files, correspondence and miscellaneous documents stored in the office of the Keeper of Archaeology.

Where it has been thought necessary to do so, the Gazetteer lists specific sources within these "Museum Records". Accession numbers are always given where they have been allocated, as are Object Identification Nos, and references to annotated map coverage. The only archive within Hull Museums which has not been exhaustively searched is a mass of unsorted correspondence (from all departments within the Museum) dating from the end of the Second World War to c. 1975. This is in store above the Museum's administrative premises in Victoria Square and is difficult of access; a one-day pilot assessment of the material by the present writer shewed that it contains information which deserves to be re-incorporated into the archive and which can be expected to add further sites and findspots of RB material to the Gazetteer (v. G.98, and discussion of the correspondence relating to this find below).

A small amount of surface fieldwork resulting in Gazetteer enhancement has been undertaken by the writer in the city, largely to assess the extent of any possible linear settlement along the west bank of the present

course of the River Hull (v. G.203, 205). Finally it must be noted that the author's initial publication and discussion of Roman material from the city (Didsbury 1988) has resulted, firstly, in exploratory excavation in advance of housing development being carried out by the Humberside Archaeology Unit at sites close to the River (G.206), and, secondly, other local archaeologists, notably Messrs John Tibbles and Tony Bibby, beginning to keep watching briefs on building development in their own areas of the city, thereby adding valuably to the Gazetteer (G.201, 212, 214, 217).

A summary and description of the Gazetteer's contents relating to the alluvium deposit will be dealt with later in this section. Before proceeding to this it will be instructive to consider previous assessments of the significance of RB material from the alluvium.

Previous interpretations of Roman material from within the city have all depended, to a greater or lesser extent, on a perception of the valley's geomorphological development which was prevalent throughout this century but which recent research, both archaeological and geomorphological, now suggests must stand in need of revision. Simply expressed, received opinion held that the lower Hull valley had been unavailable for settlement, by virtue of being underwater, until the early mediaeval period. Thus, writing to Mary Kitson Clark in 1931 (T.Sheppard 1931, in Clark 1935) about a complete greyware jar discovered when digging the foundations for a laundry (G.65), and which he had published some twenty years before (T.Sheppard 1912, 188-189), Thomas Sheppard could bring great assurance to bear on his explanation of its presence: "embedded in Humber silt", it must surely, "if in situ", have "been dropped overboard from a Roman ship, as the Humber extended over

the present site of Hull in Roman times". There will be occasion to discuss this find further below.

The origins of the alluvium deposit of the lower Hull valley have been referred to in section 1.2, and may briefly be recapitulated here. The River Hull had probably originated as a pro-glacial stream, running south along the western margin of the retreating Dimlington Stadial ice-sheet (J.A.Sheppard 1956, 28-29; Catt 1990) and, in common with other drainage channels in the Humber Basin in the early post-glacial (Flandrian or Holocene) period (Gaunt and Tooley 1974, 25), appears to have undergone a phase of pronounced fluvial incision, cutting through great depths of glacial deposits in response to the low sea level then occurring in the estuary. As higher temperatures began to melt the ice-sheet, sea-level in the Humber estuary rose quite rapidly, from a postulated 18m below OD at c.8000 years ago to 9m below OD at c.7000 years ago, and ultimately there commenced processes of alluviation within the deeply incised channels which have continued to the present day.

Human activity in the area may thus be seen as responses to a physical base comprising two main elements: first, the heavy, clayey till margins of the valley, interspersed with better-drained areas of coarse-textured glacio-fluvial deposits, and, second, the valley "floor" itself, where a partially eroded morainic topography is submerged beneath alluvium deposited under water and later supporting either saltmarsh or freshwater fen, and through which protrude higher "islands" of till, as at Sutton, Tickton and Wawne (fig. 3.44).

Clearly, any consideration of human activity in the lower valley must take close account of the geomorphological

processes to which it has been subject throughout the Flandrian, for at any given period this activity will be heavily determined by the environment obtaining, and the stage in the alluviation process already reached. It is also important to note that these changes affect not only the interpretation of archaeological material but also its very availability. For example, a "peat and bog-oak" layer occurring between 9.15m below OD and 11.58m below OD at the Market Place, Hull (Gaunt and Tooley 1974, 27-29), represents an early Flandrian mixed-forest environment which, although it may well have been exploited by later Mesolithic groups before the onset of estuarine conditions c.7000 years ago, is unlikely ever to yield archaeological evidence of such exploitation simply because it is deeply buried beneath later overburden and rarely penetrated. There is, in fact, no period from the early Flandrian to the eighteenth century A.D. (Harris 1959, 13) in which the valley, whatever its morphological state, would not have represented a rich variety of floral and faunal resources to nearby populations, though our expectations regarding the exploitation of these resources have tended for obvious reasons to be determined by what could be learned of settlement on the higher and drier clay and gravel components of the landscape where the archaeological evidence is more accessible.

The conventional view of the valley's geomorphological development receives its clearest expression in June A. Sheppard's classic studies of the historical topography of the East Yorkshire wetlands (J.A. Sheppard, 1956, 1958). Millennia of gradual deposition of alluvium within the "tidal hollow" of the lower valley was held to have resulted in the first land surface high and dry enough to support small settlements as late as the tenth and eleventh centuries A.D. (J.A. Sheppard 1958, 1-2);

while from the twelfth or thirteenth century onwards there commenced those drainage schemes and improvements which, initially under monastic or seigneurial impetus (Blashill 1892, 4), and then overseen by Commissions of Sewers and subsequent statutory bodies, would allow the area to be colonised and give rise to the orderly landscape of today. June Sheppard's map reconstructing the physical geography of Holderness in A.D. 400 (J.A. Sheppard 1956, fig. 9, on which fig. 3.45 is based) shews the whole of the lower valley as an inlet of the River Humber, and the text of a map produced in c. the early 1970s by the Hull City Engineer (Lucas, n.d.) is similarly unequivocal: "The valley of the Hull and other large areas were arms of the Humber and the City of Hull itself is built upon an accumulation of silt which was not existing in Roman times."

This judgement, given the data which was available to June Sheppard, was an eminently reasonable one. It was also, it must be stressed, essentially an almost entirely archaeological one. Geomorphological data relating to depth of glacial and post-glacial deposits in the lower valley had not been yet been collated, and changes in Mean Sea Level were not understood in the same detail as today (for further discussion of both these points, see below); her opinion as to the date at which the alluvium had first afforded an inhabitable land surface was thus heavily dependent on archaeological evidence. Her view that the valley had witnessed little human activity before the Anglo-Saxon period, when the till was supposed to have witnessed the first large-scale clearance of its natural forest cover, was fully in accord with the then current archaeological opinion as to the late exploitation of the heavy lowland clays of eastern England. None of the IA/RB sites on till in the study area which we have already discussed (Salthouse High

School; Chapel Farm, Weel; Fishpond Wood, Risby; Burn Park Farm; High Eske Farm) had yet been discovered when June Sheppard was writing and there was little reason to suspect settlement on these higher and drier areas, let alone on the lower and wetter alluvium deposit. Historical-documentary evidence for the beginning of settlement on the alluvium was dominated by Domesday Book and the Edwardian charter founding the city of Kingston upon Hull in 1292 and confirmed by a negligible body of pre-mediaeval material. The progress of alluviation, in short, was being inferred from documentary and (negative) archaeological evidence.

The two pre-requisite conditions for a re-evaluation of the history of the alluvium deposit, i.e. a body of archaeological data needing to be "explained", and a more detailed understanding of the valley's physical structure, slowly began to be met in the twenty-five years after June Sheppard's 1956 thesis. The 1960s and early 1970s saw the discovery of IA/RB settlement on both the higher clay within the city (Salthouse High School, Bransholme North - G.97, 86) and the banks of the present course of the Hull ("Haworth Hall", G76). In addition to these, smaller amounts of Roman material, ranging from small pottery assemblages and near complete pots (G.61) to single coins, and coming from almost every area of the modern city, were continually being reported to Hull Museums. An important contribution to the geomorphological understanding of the lower valley had also been published, as early as 1957, by Hartmut Valentin, who "mapped" the boulder clay surface sealed by the alluvium (see further below) but whose conclusions, being in German, entirely escaped the notice of local archaeologists. This fact, combined with the inadequate storage of archaeological information (above and chapter

1), resulted in the necessary synthesis not being undertaken until the present writer began his researches.

The few references to the presence of Roman archaeological material in Hull which exist from the period 1956-1980 are strongly influenced by a process of "negative expectation" operating to influence the response to archaeological data. Roman coins found in the city were generally seen as modern or "souvenir" losses, and no systematic attempt made to record them; thus, John Bartlett, then Keeper of Hull City Museums, could write to the notifier of a Hull coin-find in 1959 (G.98, referred to above), "We are continually getting single Roman coins brought in to us for identification from local sites, and where no other Roman remains are known from the spot in question it seems best to assume that the coins are recent losses. In many cases the coins themselves are ones that never circulated in Roman Britain, and appear for the most part to have been brought back to this country from the Middle East during the last war...." (my italics) (Bartlett 1959). Souvenir deposits can present real problems, as Casey (1985) has demonstrated, and the Second World War serviceman returning from foreign parts and casually disbursing coins with which to confuse the numismatic record is probably not an entirely spectral figure; the coin under discussion here, however, was an entirely unremarkable Constantinian coin from the Trier mint which the finder had dug up in the garden of a house he had occupied for over thirty years. It may be pointed out here that there eventually proved to be almost nothing out of the ordinary in the coin-list compiled by the present author, only one coin out of the score or more from the alluvia of Hull and Haltemprice having to be excluded from serious consideration on these grounds (G.105, a third-century billon tetradrachm from Alexandria). Whatever

this body of coins represented, there was certainly nothing in it to suggest that it consisted of souvenir material.

Roman finds appear to have been recorded somewhat more systematically after the discovery of actual settlement at Salthouse High School and Haworth Hall, and seven recent sites and findspots from Hull and Haltemprice (including the two above-mentioned) were reported in a Hull Museums exhibition catalogue in 1966 (Hull Museums 1966), though once again their significance was treated with great caution: "Despite the proximity of Brough there is little evidence for Roman occupation in the vicinity of Hull. Occasional finds of pottery have been made in and near the city, mostly during the course of building work, but these serve rather to stress the paucity of Roman material in the area". The words are John Bartlett's, who clearly re-considered his interpretation of the Hull material during the following five years, for in 1971 we find him writing, "It seems likely that a Romano-British land surface exists below the town at considerable depth sealed by sterile layers of river alluvium laid down in Saxon times" (Bartlett 1971, 26). This re-appraisal seems largely to have been prompted by the discovery of sherds of greyware during excavation of the mediaeval city walls in 1969. These were from the clay rampart itself, and Bartlett concluded that they therefore, "must have been excavated by the mediaeval rampart builders from an underlying level, no doubt when the ditch was dug". Whether these two sherds will actually bear the weight of such an interpretation, especially in the light of documentary evidence for the robbing of Roman building materials from Brough by Hull men at this period (Corder and Richmond 1942), an activity which could have resulted in Roman pottery being trampled into the rampart material, is open to question;

they did, most importantly however, cause Bartlett to look at the nature of some of the Hull finds again and to note the presence among them of material suggestive of actual settlement, such as a near complete pot from National Avenue (G.61, fig. 3.46); it is here also that the quantity of material from some of these sites is now referred to for the first time, including the "extensive collection of sherds from the neighbourhood of Haworth Hall", in noteworthy contrast to the almost casual dismissal of "occasional finds of pottery" quoted above (Hull Museums 1966). He concluded, quite categorically, "It is therefore not true, as has sometimes been suggested, that before the foundation of mediaeval Wyke the site that was to become Hull had always been uninhabited. How important Romano-British settlement was around the lower reaches of the River Hull cannot yet be estimated."

John Bartlett thus became the first to suggest settlement on the future site of Hull in the early first millennium A.D. Unfortunately, no work was done to examine this possibility further, though John Rumsby, Bartlett's successor as Keeper of Archaeology at Hull Museums seems to have had no doubt that a succession of coin finds from the west bank of the Hull north of Haworth Hall betokened the existence of an extensive area of settlement there in the second century A.D. (Museum correspondence, July 1980, y. G.77).

By the time the present writer completed his initial data-base research, then, Bartlett's suggestion of the possibility of RB settlement on the Hull alluvium deposit had received its first confirmation from the excavation of ditches at Greylees Avenue, a discovery which enabled previous large material assemblages from the banks of the Hull to be put into context, and made it plausible to

suggest the existence of a settlement focus possibly stretching along more than a 1 km length of the present west bank between the mid-second and fourth centuries A.D. (fig. 3.47). There was also a number of IA and RB finds from the alluvium deposit as a whole sufficiently large to have aroused interest in a rural area of similar size. Before proceeding to an interpretation of this body of material it will be helpful briefly to summarize its composition: at the time of writing (November 1989) the gazetteer contains records of a total of fifty-seven finds of late IA and RB material from the alluvial areas shewn on fig. 3.48 (see further below), coming from the city of Hull and parts of the neighbouring parishes of Haltemprice, Woodmansey, Bilton, Preston and Paull. Not all these finds are of equal value, of course; the criteria for inclusion in the statistical account which follows will be set out below, but for the moment it will be sufficient to note that they include, in addition to single coin or sherd finds, an Iron Age sword (G.72), a silver trumpet fibula (G.57), two complete or near-complete pots (G.61, 65), and some fifteen pottery assemblages containing sherds of two or more vessels. Some of these assemblages are very substantial indeed.

There was thus a prima facie case for investigating whether actual settlement away from the river bank itself could possibly be indicated by such finds. They came from every part of the modern city and presented no "pattern" which was immediately apparent. It seemed clear that information relating to the depth of the alluvium in various parts of the deposit, the height of the underlying till surface, and changes in former sea-levels would all be necessary in order to determine whether the finds displayed a meaningful spatial distribution. The first two requirements, which will be discussed first, were met by the research of Hartmut

Valentin already alluded to (Valentin 1957), and the author is grateful to Dr George De Boer, formerly Professor of Geography at Hull University, for acquainting him with Valentin's work.

Valentin investigated the glacial morphology of Holderness, and as part of his research used the considerable amount of stratigraphical data then available from borehole records to reconstruct the underlying topography of the pre-alluvial boulder-clay surface. The greatest number of borehole records related to the city of Hull and its neighbouring parishes, and it is upon his 1:50,000 map of this area, comprising almost the entire alluvium deposit of the lower valley, that fig. 3.48 is based (Valentin 1957, 33-34, Karte 2). His map contoured the buried till surface at intervals of $12\frac{1}{2}'$ (3.8m) below Ordnance Datum, and can be taken as representing the topography of the lower valley at about 10,000 B.P., after fluvial incision had taken place, but before the onset of marine alluviation. It shows deeply incised drainage channels, including that of the River Hull, cutting to depths in excess of 50' (15.2m) below Ordnance Datum, set in a broad "plain" occupying some two-thirds of the alluviated area and lying between Ordnance Datum and 3.8m below it. This picture of the boulder-clay topography will clearly be more accurate and detailed in some areas than others, and it may be noted here that data from the great number of boreholes sunk since Valentin's day could profitably be used to refine this mapping considerably; it did, however offer the first opportunity to relate IA and RB finds, in broad terms, to the glacial topography, which must itself have been a major factor determining the configuration and height of the alluvial surface above it. Furthermore, and for the first time, a stratum of known altitude could

be related to postulated values of Mean Sea Level in the Humber in the Roman period (further below).

(The great depths of biogenic and minerogenic sediments which can overlie the buried till surface within the city boundary may be gauged from the stratigraphic succession at Stoneferry (TA 101321, Gaunt and Tooley 1974, 31, fig.4) where a till surface lying at -4.5m OD is overlain by peat, sands and clay to a height of c. 1.5m AOD).

Iron Age and Romano-British finds from the alluvium deposit were plotted onto a large-scale photographic enlargement of Valentin's map (fig. 3.48). Being urban finds, the majority of them were much more precisely provenanced than finds from rural areas, many of them coming from domestic gardens and therefore allowing for very accurate plotting indeed. A simple statistical examination of the relationship between finds and the depth of the buried till surface was then undertaken (Tables 3.24 - 3.28). The areas between each of Valentin's sub-surface contours were designated as numbered "Zones", and the percentage of the total (mapped) alluviated area occupied by each zone was calculated by means of a close point-analysis (Table 3.24).

TABLE 3.24

Zone	Valentin's contours	% of alluviated area
1	OD to - 3.8m OD	64.0
2	-3.8m OD to -7.6m OD	22.9
3	- 7.6m OD to - 11.4m OD	9.1
4	-11.4m OD to - 15.2m OD	3.2
5	below -15.2m OD	0.8

To qualify for inclusion in the statistical tables a find had to satisfy various criteria:

1. Its provenance had to be known sufficiently accurately to make it certain which "zone" it originated from. Finds whose provenance was given as a city district or "area" encompassing more than one zone (e.g. G.99, from "the Bilton area") were thus excluded. Finds which, although of this more general provenance, could only have originated from a single zone were, however, included (G.64, from "the 21st Avenue area", all of which lies within Zone 1).

2. There had to be no standard objection that the find could be a "souvenir" loss. G.105, a third-century billon tetradrachm from Alexandria, was excluded on this ground, as was G.89, a sestertius of Domitian found during the excavation of a mediaeval tenement and thus more likely to be "imported" than residual.

3. There had to be no doubt as to the chronological period to which the material or site in question belonged. Thus, G.83, pottery from Fish St, though

regarded as Roman by its excavator, was excluded because of the present writer's doubts as to its date; and G.16, a square-ditched enclosure graded "AP2" in the gazetteer, because of a similar lack of certainty.

4. Finds which were clearly not in their original area of deposition were also excluded, e.g. G.92, Roman coins dredged from the River Hull.

The largest category of exclusions consisted of vaguely provenanced or imperfectly recorded finds, and it may be noted that no antiquarian records proved acceptable. All except three finds eventually included in the analysis (G.65, 74, 79) were made after the Second World War.

The eventual number of sites and finds accepted for analysis was forty-two, namely:

G.49, 57, 60-69, 72-81, 84, 88, 90-91, 93-94, 96, 98, 100-102, 111, 128-129, 200, 201, 203, 206, 212, 214.

[Hull finds with Gazetteer numbers higher than 214 were added to the Gazetteer too late to be included in the quantification].

These are all plotted on fig. 3.48. For the sake of completeness, sites and find-spots on the non-alluvial parts of the mapping area are also included, as are some finds which, while too loosely provenanced to be analyzable, can usefully be placed in their general find area. As an aid to clarity, only Valentin's 0, -3.8, and -11.4m contours are shown. The figure is an up-dated version of Didsbury 1988, fig. 2.3, which plotted thirty-five IA and RB sites and find-spots.

The sample was analyzed to provide the following information:

1. Percentage of sites and finds per "zone" (Table 3.25).
2. Percentage of sites and finds in relationship to "nearest contours" (Table 3.26).
3. Distance of sites and finds in Zone 1 from - 3.8m contour (Table 3.27).
4. Distance from - 3.8m contour of all Zone 1 and 2 finds having this as their "nearest contour" (Table 3.28).

TABLE 3.25. Distribution of sites and finds per zone.

Zone	% of alluvial area in zone	% of finds in zone (n = 42)
1	64.0	69.0 (n = 29)
2	22.9	9.5 (n = 4)
3	9.1	14.3 (n = 6)
4	3.2	2.4 (n = 1)
5	0.8	4.8 (n = 2)

TABLE 3.26. Percentage of finds having any contour as nearest.

Nearest contour	% of finds (n = 39)*
0m	5.1 (n = 2)
-3.8m	71.8 (n = 28)
-7.6m	10.3 (n = 4)
-11.4m	7.7 (n = 3)
-15.2m	5.1 (n = 2)

* Three of the finds included in Table 3.25 (G.64, 94, and 203) are excluded here because, although their zone is certain, their precise position within it is unknown.

TABLE 3.27. Distance of Zone 1 finds from -3.8m contour (n = 27) *. (% of zone within 200m of contour = 37.0).

Distance from contour	% of finds
0 - 200m	63.0 (n = 17)
201 - 400m	25.9 (n = 7)
401 - 600m	7.4 (n = 2)
more than 600m	3.7 (n = 1)

* Two of the 29 finds from the zone (G.64 and 94), although provenanced to Zone 1, can not be accurately related to the -3.8m contour. (G.203, although not closely plottable, occurs in a part of the zone which scarcely exceeds 200m in width).

TABLE 3.28. Distance from -3.8m contour of all Zone 1 and 2 finds having it as "nearest contour" (n = 28).

Distance from -3.8m contour	% of finds
0 - 200m	71.4% (n = 20)
201 - 400m	17.9% (n = 5)
401 - 600m	7.1% (n = 2)
more than 600m	3.6% (n = 1)

What follows can not pretend to be a detailed statistical account, to which the material is hardly suited. The relatively small size of the sample, and the fact that equal weight is accorded to each unit of data, whether a "site", a large material assemblage, or a single find, precludes this. As more data becomes available in future it may be possible to refine the statistical approach; for the moment, the figures presented here will at least serve to facilitate discussion of IA and RB material from the silts and, as will be shewn, help to elucidate the theoretical background against which its presence may be examined.

The first observation which can be made is that 69% of all sites and finds occur in Zone 1 (Table 3.25). This may not, by itself, however, be taken as indicating a preference for settlement on the higher land of Zone 1, for 64% of the entire alluviated area is occupied by this zone, and the figure is therefore close to what one would expect if a random distribution were operating. The variables affecting the figures in Table 3.25 are, in fact, too many and complex to allow any worthwhile conclusions to be drawn from it. For example, differential rates of alluviation from zone to zone

cannot be estimated; the ease and frequency with which an occupation level will be disturbed will depend not only on the depth at which it is located but also by the kind of earth-penetrating activity being undertaken, and the latter will tend to be different in the inner city from the suburbs; again, continued disturbance of strata within the Old Town, including a shift in the course of the Hull in the early mediaeval period (Frost 1827), makes assessment difficult.

An examination of the relation of sites and finds to their nearest contour (Tables 3.26 - 3.28) is, however, more interesting. Not only do 71.8 % of all sites and finds have the -3.8m contour as their nearest (Table 3.26), but 63% of all sites and finds in Zone 1 are from within 200m of it (Table 3.27). Since only 37% of the land in Zone 1 lies within 200m of the contour, this may be significant. When all sites and finds from Zones 1 and 2 are considered, it is seen that 71.4% occur within 200m of the contour (Table 3.28).

It is noteworthy that the distribution of sites and finds within Zone 1 (Table 3.27) should shew such a marked and rapid fall-off away from the -3.8m contour towards Ordnance Datum, rather than vice versa. There appear to be no factors operating within this limited area inside Zone 1 which would account for a much higher rate of discovery than elsewhere in the zone. It is true that the concentration of finds south of Greylees Avenue occurs in an area developed for housing during the last twenty years, but much of the area to the west has been similarly developed and is "empty" of finds. It may tentatively be suggested, then, that this contour, marking the edge of the highest alluviated zone, was somehow functioning critically in regard to settlement; it may not be unreasonable to suppose, in fact, that it

represents, in broad terms, the effective "shoreline" of this part of the Humber estuary in the early first millennium A.D. If this is the case, then occupation sites along it would have been close to the main river channel of the Hull and to whatever remained of the other drainage channels in the area (it should be remembered that one of them, the Old Fleet, survived to be named in mediaeval times). They would also have been well placed to exploit the transport facilities afforded by the river, and the broad wetland zone behind, which could have offered rich ecological resources including pasturage for livestock. Land lower than Zone 1 would presumably have been progressively subject to tidal influence.

It is essential to ask, of course, whether such a view of things can be supported by what is known of the height of Mean Sea Level (henceforth MSL) in the Humber estuary at this period, and this will be discussed below.

[It should be noted here that MSL may be defined in a variety of ways, and to such a degree that it has been suggested that it is almost an illusory concept (Everard 1980, 3). It has also been suggested that Mean Tide Level (MTL) would be a better datum for archaeological purposes (Jardine 1976, quoted in Everard, loc. cit.). The MSL values used in the following discussion are derived from a graph of sea-level changes in north-west England published by Tooley (Gaunt and Tooley 1974, fig. 6; Tooley 1980, fig. 35), discussed further below. The sea-level curve presented in these graphs is referred to as the "mean sea-level curve" in the earlier of the two papers quoted above, but the later makes it clear that the curve is actually that of MTL and that it has been postulated by assuming a constant relationship between MTL and the Mean High Water Spring Tides Level (which is

what Tooley actually measured) throughout the Flandrian stage. MSL in the discussion below should therefore be understood to be equivalent to MTL].

It is now generally accepted that restoration of sea-levels during the Flandrian has been accomplished by a series of oscillations, successively higher marine transgressions being separated by regressive periods of lower MSL (Thompson 1980, passim). Each oscillation comprises a transgressive contact and a regressive contact, and the whole cycle may be referred to as a "transgression" (Tooley 1980, 80). Many local factors affect both the exact timing of these events and the altimetric levels at which they occur, but evidence from several parts of Britain suggests that the Roman period effectively co-incident with the transgressive phase of one of these cycles, occupation horizons dependent on early low sea-levels having to be abandoned or protected from the mid-third century onwards (Devoy 1980, 145; Simmons 1980). In the Humber itself the shingle-bottomed haven at Brough provided attractive harbourage in the first century A.D., but had silted up by the middle of the fourth (Wacher 1969, 80-81, fig.33), and at South Ferriby, on the southern bank, Smith (1958) recorded two marine transgressions, one culminating before Romano-British times and the other occurring during the first to fourth centuries A.D. For some areas of Britain, time/depth curves of changes in MSL can be established, one of the most detailed of these being that constructed by Tooley (1980, 82, fig.35) for north-west England, where ten transgression maxima, designated Lytham I - X, have been recognised between c. 9,500 radio-carbon years BP and the present day.

The importance, for the present study, of Tooley's work in north-west England is that, although sea-level changes

in the Humber estuary are not known in comparable detail, there is sufficient evidence to suggest a closely similar pattern of fluctuation (Gaunt and Tooley 1974). Where transgressions can be compared directly with those in north-west England, they appear to occur some 4m lower (Gaunt and Tooley 1974, 39). The earliest period for which this systematic displacement can be demonstrated occurs around 5300 radiocarbon years BP (Lytham VI, Gaunt and Tooley 1974, 36) and it appears to have been maintained at least until the Late Bronze/Iron Age transgression Lytham VIII (Gaunt and Tooley 1974, 38, fig.6). The transgressive contact of this latter cycle peaked at c. 2600 radio-carbon years BP, with MSL occurring at c. 1m AOD in the north-west and probably c. - 3m OD in the Humber Basin; during the following regressive contact MSL fell to around Ordnance Datum in the north-west by c. 2150 radio-carbon years BP, implying an altitude of c. -4m OD in the Humber estuary.

There seems to be no reason why this c. 4m displacement should not have been maintained during Lytham IX (which Gaunt and Tooley - 1974, 38 - equate with Smith's Romano-British transgresssion at South Ferriby referred to above) though at present this cannot be demonstrated. If such were the case, however, then MSL in parts of the Humber estuary could have been as low as c. -3m OD at the beginning of the Roman occupation, rising to c. -2.3m OD during the later part of the period. These figures can scarcely be regarded as precise, calculated as they are by direct measurement from Tooley's published MSL curves (Gaunt and Tooley 1974, fig. 6; Tooley 1980, fig.35) but they may serve to indicate the range of sea-levels under discussion.

One possible objection to this range of values is that it does not accord well with Wachter's calculations of MSL at

Brough between the late third and the late fourth century, which he suggested could have been -1.52m (5') OD and 0.61m (2') AOD respectively (Wacher 1969, 78, 80, fig.33). It might be thought that Wacher's figures have the advantage of being based upon measurement of sedimentary deposits actually observed during excavation only some seven miles west of the Hull, and should therefore be preferred to the figures proposed above; there is, however, ground for treating Wacher's calculation with extreme caution and for regarding it, at best, as reflecting a very localised phenomenon. (Everard [1980, 6] points out, for example that MSL is extremely sensitive to changes in the form of the shore, depth of tidal channels, and other shore features, and that along an irregular coast such changes can result in fluctuations in measured MSL of up to c. 0.6m). The main objection rests in the fact that his figures necessitate a rise in MSL of some 2.13m in a little over a century, a truly massive and rapid rise when one considers that the total altimetric range of the transgressive contact of Lytham IX in north-west England is only 1.7m and that this occurs over a time-span of some 600 years; indeed, to find a transgressive contact of similar altimetric range in north-west England one has to go back to Lytham VII, which encompassed a rise of 2.3m over a period of some 800 years between c. 4200 and c. 3400 radio-carbon years BP.

Enough has been said to show that it is impossible, in the light of current knowledge, to arrive at a MSL/MTL value for the Humber estuary in the Roman period which is anywhere near precise enough for archaeological purposes. It seems at present unlikely that the work needed to remedy this situation will be undertaken in the foreseeable future, though it might be thought that a research programme designed to investigate and date the

stratigraphic succession in selected parts of the alluvium deposit would be a matter of urgent interest to archaeologists and palaeo-geographers alike. Let us assume for the moment, however, that the postulated value of MSL between c. -3m and c. -2.3m OD is broadly correct; if this is the case, then, in light of the fact that two thirds of the valley silts have an underlying boulder clay surface between -3.8m OD and OD, it is clearly not out of the question that by the Roman period, after several thousand years of biogenic and minerogenic deposition, they may already have supported a depth of sediment high enough to form an exploitable "land" surface.

The present-day tidal range in the lower Humber is in the order of 19' (5.76m) (Sheppard 1956, 422-424, and fig. 86). The highest spring tides rise to c. 3.9m AOD and fall to c. -1.8m OD. The surface from which the early Roman ditch at Greylees Avenue was cut lay at 1.56m AOD, i.e. between 4.56m and 3.86m above the Mean Tide Levels we have postulated for the beginning and end of the Roman period. Put another way, the height of the Greylees Avenue land surface above Roman Mean Tide Level was equivalent to between 67.0% and 79.2% of the entire twentieth-century tidal range, a fact which suggests that it would have been out of reach of the highest spring tides throughout its occupation if a similar tidal range were then in operation. These altimetric relationships are depicted diagrammatically in fig. 3.49.

Unfortunately, there are as yet no other RB occupation levels within the alluviated area whose heights are known (see, however, G.206 and 220, which may provide such information). It should be clear, however, that if the above figures are broadly correct, a fact implied by the

by the Greylees Avenue occupation, then there must have been large areas in Zones 1 and 2 where the alluvium was already in the early first millennium beyond the reach of the highest spring tides. There is also, in fact, a little evidence to suggest that inter-tidal conditions obtained in the lower parts of Zone 3 in the second half of the Roman period: the complete jar from Thoresby Street (G.65) referred to earlier in this section was described by Thomas Sheppard (1912, 188-189) as having been closely entwined in the roots of a tree when found, the marks of which it bore upon its surface. Inspection of these marks suggested to the present author, however, that they had been caused by a marine organism, a view which was subsequently confirmed by Dr Neville Jones, of the Department of Marine Zoology at the University of Hull. Dr Jones, to whom I am grateful for examining these marks, is of the opinion that they could only have been caused by neréis diversicolor, or ragworm (pers. comm., 28.4.1986). This animal lives in an inter-tidal habitat (Dales 1967) with salinity similar to that obtaining in the estuary near Hull at the present day. It normally adopts a vertical life-posture, its lower parts rooted in reduced mud, and its head in oxygenated mud aerated by tidal action upon the silts. When stones or other objects occur, however, preventing aeration of the silts beneath, it tends to burrow laterally beneath them, commonly leaving the branchy, angular traces of its living tunnels on the underside of such objects. The tunnels are mucus-lined, and their irrigation with oxygenated water would have caused the accretion of iron oxides which are visible on the object under discussion. Dr Jones pointed out that the marks in question occurred over a limited surface area on only one side of the pot and that this was consistent with its having been lying on its side, only partially buried, on mud flats in a shallow, brackish environment not subject to great

disturbance. The jar is described as a "probable" Crambeck product by Mary Kitson Clark (1935, 93) but Vivien Swann has suggested to me (pers. comm., November 1989) that it is better regarded as of third-century date. It may be noted that a La Tène 2 type sword from Hymers Avenue (G.72) came from very close by in the same zone, a fact which may hint at the reasons for its presence. Whatever the precise conditions prevailing there in the later Iron Age, the sword (if it was truly found in situ) derives from a zone which is likely to have been a littoral one nowhere far removed from water, and it may thus be that here we have another expression of those "religious traditions involving warriors and wetness" noted by Challis and Harding (1975, 176).

Given the limitations of our present data it would be foolish to attempt a detailed picture of the environment of the alluviated area in the Romano-British period, and thus of the economy which it might have sustained. We might not be far wrong, however, in believing the situation to have been similar in its main aspects to that supposed by June Sheppard (1958, 1) to have obtained during the early second millennium A.D.: "Centuries of flooding....had led to the accumulation of....silt in the lower valley, and this had raised the level of the land, especially close to the main channel of the Hull. It seems likely that by the tenth century some land was above the danger of tidal flooding except during particularly high spring tides, but much was subject to regular floods and carried salt-marsh vegetation. A few small hamlets, e.g. Drypool, Marfleet. Myton and Southcotes, had emerged on the dry sites by 1086 but the rest of the salt-marsh was avoided" (my italics).

There are reasons for supposing that the two main areas of land supposed by Sheppard to have been capable of

supporting settlement, i.e. the river bank and the sites of the early mediaeval hamlets which preceded the foundation of Hull, actually did so in both periods. Pottery assemblages collected by the author from the Haworth Hall area of linear Romano-British settlement along the west bank of the Hull include twelfth-century wares which do not appear in the Hull ceramic record (pers.comm., Gareth Watkins, 1988), the first time that "pre-Hull" activity has been demonstrated in this area. Three of the hamlets noted by Sheppard (Drypool, Marfleet and Southcotes) lie within Zone 1 to the east of the Hull, and it is noteworthy that there are now three finds known from the Marfleet area, two pottery assemblages and one find of coins (G.214, 102, 101), suggesting that the early medieval hamlet may have been preceded by an area of Romano-British settlement in the same area, on the western bank of the Old Fleet, which formerly drained the eastern part of the lower Hull valley, as noted in section 1.3 (fig. 3.50).

The economic strategy of settlements on the alluvium would doubtless have varied according to their precise locations. It is likely that animal husbandry would always have been a major component, and Devoy (1980, 144) has pointed out that an intertidal area can be particularly suited to livestock grazing during a transgressive period. Military involvement in the development of similar estuarine tracts for stock-raising has been postulated in the Wentlooge and Caldicot Levels in Gwent (Boon 1980, Allen and Fulford 1986) and, while no such evidence is at present available for the Hull valley, it may be borne in mind that the existence of large tracts of rich potential grazing within the hinterland of Brough/Petuaria, some 11 kms to the west, might not have gone un-noticed by the authorities there. There is as yet no evidence to shew whether a road

heading E.N.E. from Petuaria and visible as far as Swanland (G.148, 186; section 3.2.2; fig. 3.1) continued any further to give access to the lower valley and Holderness proper but, if it did so, it could have crossed the higher alluvium somewhere in the north of the present city, serving such sites as Greylees Avenue and linking Petuaria with an economically valuable resource base.

A road terminus on the west bank of the Hull in the Greylees Avenue/Haworth Hall settlement area could also have allowed goods and/or passengers brought downstream from the East Yorkshire interior and destined for Petuaria to be off-loaded to finish their journey by road. The River Hull was one of the main export routes for the arable produce and wool of North-east Yorkshire, the Wolds and Southern Holderness in the fourteenth century (Waites 1968, 140-141), these commodities being loaded onto boats at collection centres at Wansford (TA 0656), in the upper valley, and Beverley. It may be noted that, in addition to wool and foodstuffs, commodities such as Crambeck pottery would have been suited to distribution by way of the Hull in the Roman period. The high cost of road in comparison with waterborne transport in the Roman period is well known (Greene 1986, 39-42), but a vessel coming down the Hull on the ebb tide to make use of the current would probably have had to tie up near the mouth of the Hull to wait for the flood if it wished to turn into the Humber to make westwards for Petuaria. It could thus have been easier and cheaper in certain circumstances to off-load in the lower Hull, especially if the vessels used on the Hull were not also suited to the notoriously hazardous conditions prevailing in the middle reaches of the Humber (Wacher 1969, 76-81). This is to speculate, of course, but it serves once again to indicate the possibility that

the raison d'être of the Greylees Avenue/Haworth Hall settlement complex may have had as much to do with transport facilities as anything else, in which case its development may find parallels in such small roadside "towns" in the region as Shiptonthorpe (Millett 1985) and Hibaldstow rather than in other classes of settlement.

If pastoral agriculture and transport facilities were the main reasons for settlement on the silts, they need not have been the only ones. The ecological resources of these wetlands have been stressed throughout this study, but it should also be noted that there are crops which could have been both economically profitable and suited to the environmental conditions. Flax (Ramm 1978, 109) and hemp are obvious candidates for such a habitat, and it might also be noted that barley is very tolerant of saline conditions. The range of uses to which the Hull Bank area was put in the mediaeval period has also been demonstrated in the case-study of Burn Park Farm (G.145, section 3.2.2.2). The possibility that salt may have been evaporated in the thirteenth century in the alluvial flats south-east of the Sutton clay "island", and thus conceivably in similar environmental conditions at an earlier period also, has likewise already been mooted in the case-study of the Salthouse High School settlement (G.97, section 2.3.2.1).

Confirmation that parts of the carrland surrounding the Sutton clays were accessible in the Roman as well as in the mediaeval period has recently come with the discovery in 1987, by Tony Bibby, of seventeen bronze coins between the North and East Carrs (G.201). The coins all date to the period A.D. 330-335, and those with legible mint-marks all come from western mints (Sitch n.d, Didsbury 1990). There are indications that the coins were originally in rouleaux, and they undoubtedly represent

the remains of a hoard which, unlike the other hoards in the vicinity, had been deposited, not on an island of higher till, but in Zone 1 alluvium. The find suggests not only the probability of as yet undiscovered late Roman settlement on the adjacent till itself but also that these lower areas in the fourth century were still in a state which made it both possible and appropriate to conceal coin there in the reasonable expectation of its later recovery.

There would thus seem to be several grounds for suspecting that the early mediaeval settlement of the alluvium deposit was to some extent re-capitulating a pattern of colonisation, and possibly of economic strategy, which had first obtained a millennium earlier, a parallelism which Boon (1980, 28-29) has shewn to have occurred in the Gwent Levels. Blashill's reconstruction of twelfth- and thirteenth-century agriculture on the alluvium has already been discussed (Blashill 1892; section 2.3.2.1), and it is worth noting in this context that he regarded the expanse of "ings and carrs" between the high clay-land of Sutton and the Hull as having been of economic importance not only to settlement on the till "island" itself, but also to areas of (already established by the twelfth century) "ancient enclosures and tillage" along the east bank of the River Hull.

It is, finally, of further interest, in regard to parallels between Roman and mediaeval use of the alluvium, that in north-west England the Romano-British transgression Lytham IX is replicated almost exactly in height and duration by Lytham X, which reached its highest levels about A.D. 1300, a period for which there is documentary evidence for severe flooding in the lower Hull valley (Frost 1827, 32). Any RB colonization of the alluvium deposit might thus be seen as occurring at a

similar point in relation to the marine transgression cycle (i.e. established during the transgressive contact) as the historically attested occupation in mediaeval times. The mediaeval colonists of the lower valley alluvium maintained a somewhat precarious foothold despite these events, aided by their ability to strengthen and maintain previously established flood banks along the Humber shore (J.A.Sheppard 1956, 101-102); whether or not Romano-British populations managed to continue to live in the alluvial areas despite similar conditions is unknown and is likely to remain difficult to ascertain for the very reason that the Romano-British marine transgression must have been nearing its height at the very period during which sub-Roman populations become difficult to locate in the archaeological record.

CHAPTER 4

SUMMARY AND CONCLUSIONS

The aim of this concluding chapter is to offer a brief synthesis of what has gone before, summarising some of the ways in which our views of the study area have been changed by recent research; it attempts to elucidate some major questions arising from this research and to suggest the kinds of further work which will be necessary to resolve them.

The construction of a fully comprehensive and up-to-date gazetteer of sites and find-spots, which may be regarded as a pre-requisite for any regional study of this kind, was, as noted from the outset, a particularly urgent priority in the case of the lower Hull valley. It is perhaps worth stressing at this point, therefore, the sheer amount of information which the author's researches have added to the record, to which end some simple quantifications may be offered. As the Introduction to the Gazetteer makes clear, some 72 sites and findspots, almost exactly a third of the entire Gazetteer, are here listed for the first time, while over half of its entries do not appear in Loughlin and Miller (1979), the most recent published data resource for the region. While it is fieldwork since 1983 that has added such sites as Fishpond Wood, Risby (G.139) to the settlement pattern, much of the increase in the database stems from archival research and collation, the importance of which should not be overlooked: such classes of evidence were crucial to postulation and interpretation of a Romano-British

settlement of parts of the Hull alluvium deposit, perhaps the most radical revision of established opinion offered by the thesis. Equally, while the bulk of the present work has been concerned with primary interpretation of this new body of data, rather than with initiating a fieldwork programme based upon it, it should be noted that it was response to a simple "findspot" entry (G.160) which led to the discovery of an hitherto unknown occupation site at High Eske Farm (G.161).

Some further archive work which may be expected to yield valuable data still remains to be undertaken (above, p. 311), but this initial stage of the enquiry is essentially now over. The main task for the future is the maintenance and augmentation of an established SMR, rather than (as at the outset of the author's work) the necessity of constructing one. The mechanisms of SMR enhancement and data retrievability are now firmly in place at both Hull Museums and the Humberside Unit and there should be little further occasion for the kind of information loss which was noted at the outset of this study (section 1.4.4, above). The way is now open both for the design of fieldwork programmes based on the present gazetteer and the incorporation into it of the "data explosion" which the experience of other area sampling programmes, for instance the Holme on Spalding Moor Project (Halkon 1987), suggests will follow. That our expectations of greatly increased site densities are probably justified also gains support, indeed, from the fact that rural sites such as Fishpond Wood and High Eske Farm, consisting of surface scatters in areas devoid of aerial photographic evidence, owe their discovery to a relatively low level of fieldwork "input". A description of the fieldwork and other research which

will be needed to enable us to extend our understanding of settlement in the study area is integrated into the brief chronological survey which follows.

That the mixed clay and alluvial landscapes east of the Wolds were to some extent being utilised before the end of the Middle Iron Age is evident from the distribution of square ditched barrows. As we have seen, however, both the significance and the chronology of this distribution are far from clear. Excavated barrows at Scarborough and on Beverley Westwood (G.2) have produced almost no dating evidence, and the small cemetery on the banks of the Lambwath Stream (G.152) is conventionally accorded a "late" date within the Arras burial tradition solely on morphological grounds. The precise location of the barrow groups, and their relation to nearby undated settlement cropmarks, where these exist, are also susceptible to a variety of interpretations. Thus, isolated or small groups of barrows, which on the edge of the Wolds might be considered as belonging to an early stage of the burial tradition, before the rite had spread from selected individuals to the whole adult community, might equally convincingly in the landscapes under discussion be seen as reflecting the activities of small domestic groups engaged in woodland clearance and colonisation of the clays towards the end of the Middle Iron Age. The role played by the religious significance of water in determining the siting of some of these barrows close to watercourses also needs to be taken into account, especially where there is an apparent absence of associated settlement, for it is a factor capable of confusing any simple model of clayland colonisation which accords a "late" date to such features solely on the grounds of their easterly location.

The major questions which need to be asked of this period in Holderness all centre upon the chronology and rate of forest clearance and lowland "colonisation", and the relationships between this process and the dynamics of social changes which can be observed on the Wolds at sites such as Wetwang Slack, where the nucleation of the settlement and formalisation of the burial area during the third and second centuries B.C. are consistent with a situation in which there was growing pressure on available land, whether due to soil exhaustion, rising population, climatic deterioration or a combination of such factors. Haselgrove (1984, 17) has suggested that the pollen evidence from the north-east of England as a whole is better interpreted as reflecting a process of forest clearances which culminated in the closing stage of the Iron Age, rather than a sudden intensification associated with an increase in arable farming, and has pointed (loc. cit.) to the Middle Iron Age settlement of boulder-clay lowlands north of the Tyne and the likelihood that colonisation of similar areas such as Holderness was already well under way. Unfortunately, the research biases which have favoured the Wolds over other areas of East Yorkshire, and funerary over settlement features, have resulted in an almost complete lack of evidence with which to assess the progress of this colonisation, the subsistence strategies by which it was accomplished, its underlying causes and, it must be said, the core territories from which it was carried out. Here again our Wolds-centred view of things tends to make us overlook the probable presence of long-established populations deep within the claylands themselves (above, pp. 51-52). Research which will allow us to compare the Wolds and Holderness at this period is an urgent priority, and the excavation of both funerary and settlement complexes such as those by

the Lambwath Stream could provide invaluable comparative data. It should not need stressing that the archaeology of the Wolds themselves is not well-served by the exclusion of other areas and that a more balanced approach to the Iron Age in East Yorkshire is required if we are to approach a more holistic understanding of the period.

It is in the Late Iron Age and Conquest period that actual settlement in the study area has begun to become more visible. Before the present work was undertaken our knowledge of settlement in the landscape block in the first centuries B.C. and A.D. was confined to material assemblages from Redcliff (G.187) and Salthouse High School (G.97), and part of the plan of the latter, the result of rescue excavation. Both of these sites are examined more fully than in any other published account, Salthouse High School with particular reference to its environmental setting. In the case of Redcliff, detailed recording of the cliff-face and archival research have provided a firm foundation for the five seasons of excavation which followed and allowed the site to be discussed in terms of an updated corpus of artefactual finds. Material assemblages from Risby (G.139) and Weel (G.159) have added two further settlement sites on boulder clay and valuably expanded our knowledge of the range of ceramic material available in the study area.

Perhaps the most important link with the Middle Iron Age is that we now begin to see actual settlement in the valley in the kinds of location where previously we have only funerary features and as yet undated cropmarks. Weel and Salthouse High School are both on the edge of boulder clay eminences rising from the alluvium deposit, similar situations to those of the

square ditched barrows in Scarborough and Lockington, slightly to the north of the study area (fig. 2.2). The location of the settlements served by these barrows will only be resolved by further fieldwork, as already noted, but there seems a strong possibility that the late occupation horizon visible in these landscapes at Weel and Salthouse School will indeed prove to have its origins before the abandonment of the Arras burial tradition. It may also be noted that sites in such situations appear to have remained a viable element of the settlement pattern through to the end of the Roman period, as evidenced by the occupation site at High Eske Farm (G.161). Neither of the Late Iron Age sites under discussion shows much evidence of subsequent Romano-British activity, though there are signs of it in the vicinity of both, and, given the limited and partial nature of the evidence, it would be premature to suggest that the Salthouse School site was short-lived. It will be interesting to see the patterns of settlement duration which develop as more such sites are discovered, and survey designed to locate them along the till/alluvium interface seems likely to offer rapid results. However, it needs to be borne in mind that surface indications of date are likely to be biased by the greater durability of Roman ceramics and that an excavation programme would probably be needed to ascertain earlier origins. Excavated environmental assemblages of the period are also urgently needed in order to ascertain agricultural strategies in these landscapes. The author has initiated this kind of investigation by arranging for the environmental analysis of the contents of a recently discovered pit which probably formed part of the Salthouse School settlement (G.217); the bone assemblage from this site, which fortunately still exists, would be admirably suited to the needs of an undergraduate dissertation.

To the west of the River Hull it seems probable that much of the agricultural landscape represented by undated cropmarks on the Woodmansey gravels is of relatively late Iron Age origin, at least in its present form, and it is notable that no square ditched barrows appear to occur. That some of these sites were occupied late in the period is suggested by the recent discovery of Corieltauvian coins on one of them (G.213) and pottery disposed of in spring deposits excavated by the author at Park Grange Farm (G.219). These excavations have, in fact, revealed the environmental complexity of this landscape from the fifth millennium B.C onwards, and shew the inhabitants of an adjacent cropmark site (part of G.190-191) using the lower-lying peaty area on the margins of their settlement for rubbish disposal and, arguably, for ritual activity connected with a water cult. Once again, a fieldwalking programme followed by excavation is desirable on these sites.

Perhaps one of the more interesting results of the author's research is the increase in evidence relating to a specifically LPRIA horizon in the study area, the only previously known site with this class of material being Redcliff. While the quantitative increase may be small, the discovery of Corieltauvian coinage as far north as Beverley and of cordoned wheel-thrown pottery at Risby, when considered alongside the same classes of material from Brantingham and Bursea House Farm to the west of the study area, are of the greatest significance for our understanding of Parisian society on the eve of the Conquest. A zone of material acculturation in south-east Yorkshire, with the Humber acting as a medium for the transmission of influences from Southern Britain, rather than as the political, tribal and cultural divide hitherto supposed, was

scarcely to be suspected before the mid-1980s. One effect of this has been to make Redcliff itself seem rather less unusual a site than it once did, especially if we accept the slightly longer chronology which posits some level of activity there from at least the early first century A.D. This is not, of course, to deny the site a Claudio-Neronian floruit intimately connected with the presence of the Roman power to the south or, indeed, a fate attendant upon the events of A.D. 70-71; it is rather to suggest it as a point of contact of the kind through which the transmission of material/cultural influence may already have been taking place.

Two of the sites on which cordoned Dragonby-style pottery has been found were to develop into villas but it would be too simplistic to see such material solely as a reflection of contacts between elite individuals or groups. A broader milieu of cross-Humber contact in both the Later Iron Age and Roman period is suggested by such facts as the occurrence of Spilsby quernstones in the study area, the influence of a North Lincolnshire tradition on both pottery forms and kiln technology in the Vale of York (Evans 1985) and the possible use of Lincolnshire as well as locally obtained ores in the Iron Age iron working industry located along the banks of the River Foulness (Millett and Halkon 1988). Evans (1988, 332) suggests that LPRIA material of the kind under discussion may be seen as markers of a socially stratified society, "and the arrival of these attributes might mark either the emergence of an elite, or social conflict between an existing elite and a developing one". Whether, and to what extent, a basically acephalous social structure was being modified in south-east Yorkshire on the eve of the Conquest is at present, however, barely

discernible and material assemblages from many more sites will be needed before such questions can be sensibly approached.

Turning to the Roman period, the major contribution made by the author's research is essentially a palaeogeographic one, and it may not be thought over-enthusiastic to stress the importance he attaches to work which has added a millennium to the "history" of a site now occupied by one of England's larger cities, and made a contribution to our knowledge of the physical shape of Roman Britain which is comparable, though on a smaller scale, to that which has resulted from investigations into the Iron Age and Roman coastlines around the Wash (Simmons 1980).

Evidence for exploitation of the deposit in the Later Iron Age is minimal, though this is probably due rather to the nature of the Iron Age evidence rather than anything else. Certainly, it is plausible to suggest that a site such as Salthouse High School may have been located partly with the use of fenland resources in mind (section 2.3.2.1). Attempts to reconstruct the kinds of exploitation to which the Hull alluvium deposit may have been subject during the Iron Age and Roman periods are, moreover, severely hampered by present-day urbanisation and for the most part we are limited to suggesting the kinds of use to which similar environments are known to have been put both in Roman times and later. In this respect it is unfortunate that Roman finds from Hull were ignored for so long and that the large-scale housing developments of the 1960s and 1970s thus took place without any watching-brief being maintained. The author's research has gone a long way towards remedying this situation, however, and awareness of Hull's Roman past among other local

fieldworkers has already begun to make valuable additions to our knowledge (e.g G.201, 220).

The greatest amount of evidence for actual settlement of the deposit comes from close to the present course of the river itself and allows us to suggest a linear occupation probably stretching for at least a kilometre along both banks. It is likely that transport and distribution functions were part of the reason for the growth of this settlement, and some degree of exposure to both international and inter-regional trade is visible in the ceramic record at both Greylees Avenue and Haworth Hall in the shape of Rhineland and Lincoln mortaria and shell-tempered Dalesware. It seems difficult to avoid the conclusion that the best comparisons for such a site are provided by small roadside towns in the region; indeed, quantification of the second-century pottery groups at Greylees Avenue may well reveal a similar situation to that at Shiptonthorpe, where Evans (1988, 330) has suggested that urban status is visible in the high proportion of greywares, including carinated jars. This contrasts with rural sites in the region at this period where assemblages continue to be dominated by "native-style pottery".

The substantial pottery assemblages from this settlement all agree in suggesting a span of occupation stretching from at least the mid-second century through to the end of the fourth or early fifth, and unstratified material at Greylees Avenue hints that occupation in the environs of the site may even have begun before the end of the first century A.D. What is certain, however, is that a substantial settlement focus which was to endure for the whole of the period had developed along the lower reaches of the Hull

within two generations of the Conquest. There are no signs as yet of any Iron Age material at all in these riparian assemblages and it seems reasonable to conclude that the settlement's growth was directly stimulated by the Roman economic and transport system.

It is in the Roman period, then, that we first have direct evidence for the settlement and economic management of all the constituent topographies of the study area, from the chalk of the Wolds edge to the till and alluvia of western Holderness. Sites and stray finds from the vicinity of most of the later settlement foci in the study area, including such DMVs as Risby and High Eske, suggest that it was probably as widely settled as during the Middle Ages, though it would be premature to attempt to gauge the density of this settlement. Neither is the quality of our data yet of the kind to permit detailed discussion of its development during the early first millennium A.D. or such matters as change in economic strategies within the context of Romanisation. However, such evidence as we do possess points to a large degree of continuity in settlement and, presumably, in power. Risby appears to have developed from a Late Iron Age site receiving LPRIA pottery into a villa still occupied in the late fourth century. Similarly, Welton Wold shows unbroken occupation, and we may suspect the same to be true of much of the agricultural landscape which occupies the Cottingham/Woodmansey gravels, though much further fieldwork on these cropmark sites will be needed to test such assumptions.

In conclusion, it may be suggested that a firm foundation for further research into the study area has now been laid. There is an urgent need for bodies of data which will allow inter-site and inter-period

comparison if many of the questions raised in the present work are to be answered. The author hopes he has shewn that the progress of this research will depend on properly designed, problem-oriented strategies, whether these are concerned with surface fieldwork, excavation, or the collection of environmental data; he is certainly convinced that the results of such research promise to be exciting. As regards the Iron Age and Roman periods in the Hull valley in particular, and Holderness in general, there is still, almost, everything to do.

