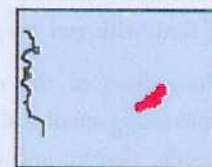


Appendix A

East Anglian Chalk



Key Characteristics

- Distinctive, open, variable topography of the Chalk a continuation of the Chilterns.
- Large-scale rolling downland, mainly arable, with distinctive beech belts along roads and in hilltop clumps and ash-dominated woodland.
- Long straight roads, open grass tracks, isolated 19th century white or yellow brick farmhouses and distinctive nucleated villages, generally within valleys.
- Few large towns (Baldock, Royston and influence of Cambridge) on major transport routes and enlarged commuter villages which still retain their rural character.
- Generally muted colour range with distinctive white soils and building materials but relatively lively landform.
- Manicured character of stud landscape around Newmarket, with domesticated smaller-scale settled landscape to the east with rows of pine.
- Significant linear ancient or Roman earthworks: Devil's Dyke, Fleam Dyke and Icknield Way.

Landscape Character

The East Anglian Chalk of Cambridgeshire and North-West Essex form a narrow continuation of the Chalk ridge that runs south-west/north-east across southern England, continuing in the Chilterns and along the eastern edge of the Wash. It is an area bounded to the west by the Fens around Cambridge and to the north by the Breckland and by the Fen edge around Mildenhall. To the south and east it is bounded by the over-lying chalky boulder clay of the South Suffolk and North Essex Clayland which includes Saffron Walden despite its somewhat transitional character.

The chalklands are fundamentally of a distinctive and simple character which is largely influenced by agricultural changes and the growth of one local industry: horse-racing. The Chalk has given the area its rolling topography and its poor

soils, which affect the colour of the landscape: bedrock chalk breaks through the thin pale soils and this bleaching effect is echoed in the colour of the isolated farmhouses, which are of pale brick.



JOHN TYLER/COUNTRYSIDE AGENCY

The chalklands have a fundamentally distinctive and simple character: open rolling topography, accentuated by features such as beech belts, and pale, 'bleached' soils exposed by modern arable farming. This scene is at Barley, Hertfordshire.

The smooth rolling chalkland hills, now covered by cereals more frequently than by grass, offer a broad-scale landscape of large, very late enclosure fields with low thorn hedges and few trees. Roads are often lined with shelter belts of beech, particularly to the eastern end and these, together with hill-top clumps and copses, offer a little diversity and occasional reference points. This is a visually continuous landscape, historically very open, uninterrupted and flowing, with occasional long views over the lower land to north and west.

Around Newmarket the rectilinear landscape is subdivided to give a more closely geometric feel, as the fences and shelter belts of the stud farms provide a more enclosed pattern, both to shelter their valuable occupants and to protect them from external movement that might startle them. Roads in this area are therefore frequently tree-lined



to the point, sometimes, of oppression although this disappears as a Breck character begins to emerge, with a more open landscape, pine trees with the beech and the use of flint with red brick as a building material.

The valleys of the rivers Granta, Rhee and Cam have a contrasting small-scale intimacy which is increased by small woods, pasture and wetland vegetation.

Physical Influences

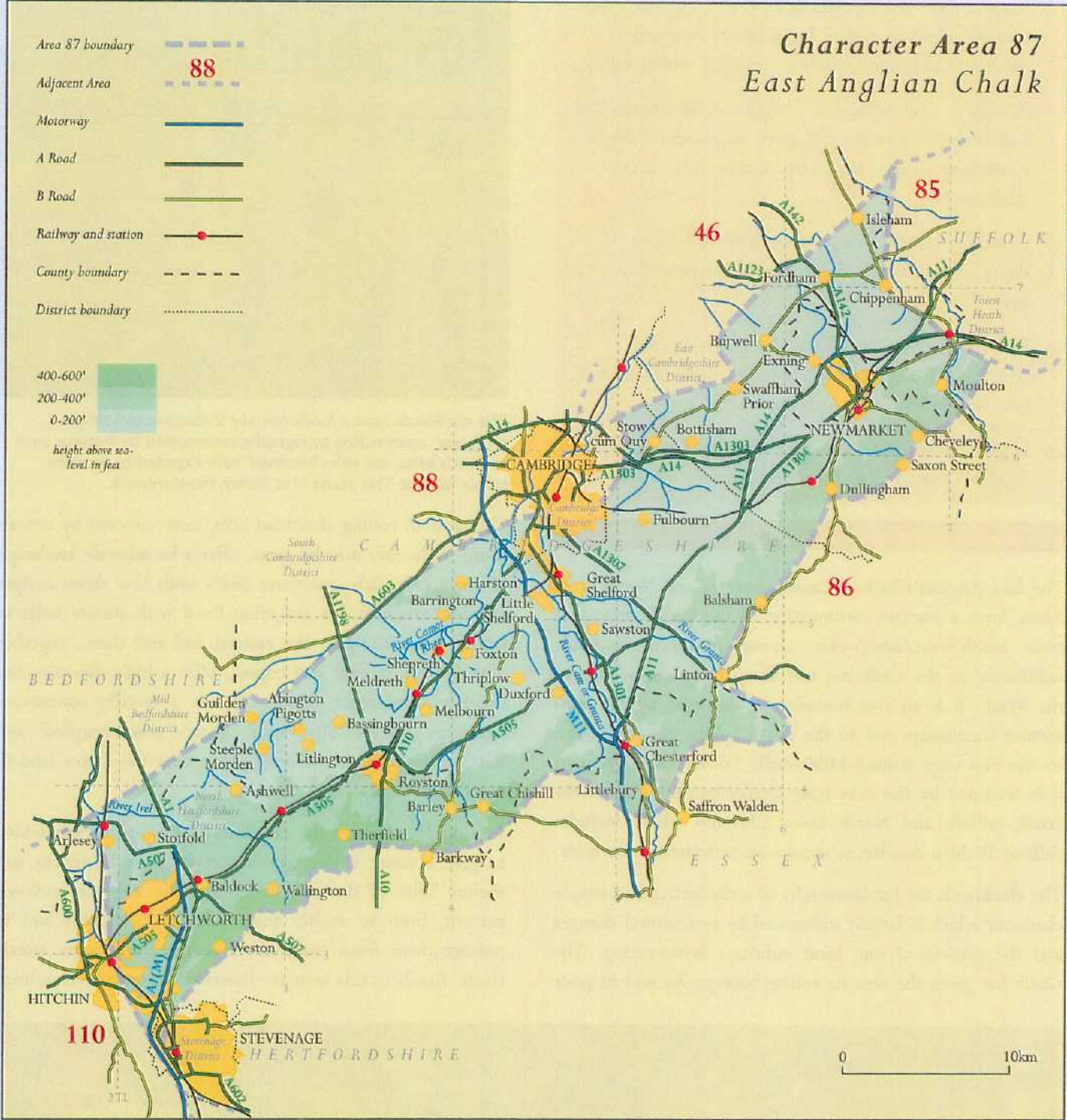
A narrow band of Chalk, an extension of the Chilterns and precursor of the Chalk that surfaces in North West Norfolk, skirts the eastern fringes of Cambridge and the southern Fens but is overlain by boulder clay (glacial till) to the east and west and by Breck sands to the north. The hills are dissected

by the two shallow valleys of the rivers Granta and Rhee which converge to form the Cam just south of Cambridge. Although the area lacked water, it offered a good transport corridor – as witness the major historic highway, the Icknield Way – which encouraged early settlement.

Quarrying of chalk is evident in some places, but the main influence of chalk bedrock is on the limited fertility of the soil and the effect this has on the landscape, both in colour and diversity of habitat.

Historical and Cultural Influences

Historically, this dry chalkland area has not encouraged settlement but provided a good transport corridor, particularly where bordered by heavy, poorly-drained clay.



The history of these chalklands is therefore primarily related to the long-distance transport route, the Icknield Way, which has existed since prehistory and was of particular importance during Roman times. Its strategic value is demonstrated by the Iron Age Wandlebury hill fort and the four great Anglo-Saxon linear dykes (Devil's, Fleam, Brent and Bran dykes) that lie across it, spanning the Chalk from the Fen edge east of Cambridge to the wooded edge of the clayland. One of these, the Devil's Dyke, is seven miles long, 6 metres high and 4 metres wide.



JOHN TYLER/COUNTRYSIDE AGENCY

The area was historically sparsely populated and villages tended to develop on the valley sides of streams running off the chalk and towards the surrounding claylands. Elmdon in Essex is a typical example of these 'transition' villages, an attractive mixture of brick, 'clunch' (building chalk) and timber-framed houses under thatched and tiled roofs.

Subsequent settlement occurred along the sides of the river valleys where small villages, such as Linton, developed which have, many centuries later, become commuter villages for Cambridge. On the hill tops the isolated white- or yellow-brick farmhouses are mainly 19th century, reflecting a period of agricultural growth, and they often stand bare and gaunt against the hillside.

The Chalk downland was used for sheep farming well into the last century, since when it has been used to grow barley and other high-value crops despite the thin, poor soils. The clean spring water of the chalk has also had an influence on local industry, reflected in the local paper and parchment tradition and frequent watercress beds. A significant influence around the southern edge of Newmarket has been that of horse-racing and stud farms which have brought localised wealth and a manicured appearance to the landscape. The town itself is dominated by racchorses, who have their own car-free routes and rider-controlled traffic lights through to the Heath (downland) on which they exercise.

Newmarket developed in the 13th century as a new market. It has been a centre of racing and horse breeding excellence since the early 17th century. By the early 18th century the thoroughbred racehorse was the aristocratic

status symbol *par excellence* and people crowded to the racecourse on top of the rolling downland, where the Devil's Dyke has changed in function over time and now provides a viewing platform over the racecourse.



JOHN TYLER/COUNTRYSIDE AGENCY

The development of Newmarket as a centre of horse breeding and racing since the early 17th century has created a distinctive local character in this part of the chalklands, with the stud farms in particular adding a strong geometry and manicured appearance.

Buildings and Settlement

The East Anglian Chalk was historically sparsely populated due to a shortage of wood and water and such villages as did develop clung to the valley sides where conditions were less harsh. These villages have a traditional appearance, with houses constructed of brick or 'clunch' (building chalk) under thatched roofs. Many of them have absorbed significant 20th-century development, as more villages have become dormitories for Cambridge, Baldock and Royston and improved transport systems have made commuting to London possible. These villages, like the lonely hill-top farmhouses, have a pale appearance due to the brick used in their construction which is usually of a grey or yellowish tone. Cambridge lies outside the area but exerts influence upon it, not least students' memories of visits to Wandlebury Ring and the Gog Magog hills as described by EM Forster in *The Longest Journey*.

To the east of Newmarket the villages tucked into the more undulating terrain are often of the Georgian era, built of red brick and flint with either slate, pegtile or thatched roofs. In villages such as Exning 'clunch' has been used as a building material. Further south there is a transitional zone around Saffron Walden onto the till which supports a series of attractive villages such as Barley, Barkway and the Chishills. The second world war airfield at Duxford is now part of the Imperial War Museum and is a significant leisure attraction.



The dry chalkland ridge has provided a transport corridor for thousands of years. Its strategic importance is demonstrated in the four great Anglo Saxon dykes that lie across it. The greatest of these, the Devil's Dyke, Cambridgeshire, is seven miles long, six metres high and four metres wide.

Land Cover

This area has long been sheep-grazing chalk downland but, since the 19th century, it has increasingly been given over to large-scale cereal production despite the poor, thin soils, thanks to modern farming techniques. It is an open, generally tree-less landscape, within which beech shelter belts and copses are a prominent feature. The large-scale fields are often very open but in some parts of the area are divided by usually low thorn hedges. Chalk pits are scattered throughout the area.

Remnants of chalk grassland remain, often associated with linear features such as road verges and the margins of golf courses, which have become an increasing influence in recent years.

There is very little grazing pasture or livestock except within the tight river valleys and around Newmarket, where the stud farms impose a distinctive, smaller-scale field pattern, marked out by regular, well-maintained fences with frequent shelter belts between them. This gives a well-wooded character within an area that extends in a broad sweep from the south-west (Six Mile Bottom) around to Moulton in the east.

In the transitional area bordering the Breckland, pine belts begin to take over from beech, as at Saxon Street, but the roadside hedges are still tall and immaculately maintained. Ancient woodland and spring-fed meadows also feature here.

The Changing Countryside

- The East Anglian Chalk has one unusual feature of human influence on the landscape: the Newmarket studs. This 'stud landscape' may encroach further on the

transitional zone between chalkland and adjacent areas blurring the distinction between them.

- Recent years of drought have adversely affected mature trees in this area and may impact on agriculture.
- Loss of existing woodland would be unfortunate because it is so limited and therefore visually significant.
- Lack of hedgerow management in some areas is leading to loss of enclosure.
- Development of the major transport infrastructure and of this area as a commuter belt has increased development of leisure facilities, such as golf courses, equestrian centres and garden centres, as well as significantly increasing sometimes inappropriate potential tree cover along major routes.

Shaping the Future

- The area would benefit from a discouragement of both large-scale development on hilltops and the widespread use of red brick (which is, however, an appropriate material when used with flint towards Breckland and in the valleys).
- Maintaining the contrast between different landscape types in this area would reinforce characteristic features, such as beech trees and white brick structures on hilltops, more woodland and flint/red brick in river valleys, retaining open grass tracks without hedgerows.
- There are opportunities to manage and retain beech woods and copses and to use pine in appropriate areas north-east of Newmarket. The distinctive ash, maple and hazel woodlands are important.
- The management of distinctive historic linear features such as the dykes and open grass tracks should be addressed.
- There may be scope to return some arable areas to downland.

Selected References

- Cambridgeshire County Council (1991), *Cambridgeshire Landscape Guidelines*, Cambs C.C., Cambridge.
- Bedfordshire County Council (1995), *A Rural Strategy for Bedfordshire/Public Consultation Draft*, Beds C.C., Bedford.
- Fincham, P (1976), *East Anglia*, Faber, London.
- Jebb, M (1995), *Suffolk*, Pimlico County History Guides, London.
- Ravendale, J & Muir, R (1984), *East Anglian Landscape*, Michael Joseph, London.

Scarfe, N (1983), *A Shell Guide to Cambridgeshire*, Faber & Faber, London.

Scarfe, N (1988, 4th edn), *The Suffolk Guide*, Alastair Press, Suffolk.

Timpson, J (1990), *Timpson's Travels in East Anglia*, Heinemann, London.

Trist, P J O (1969), *A Survey of the Agriculture of Suffolk*, R.A.S.E.



Abrupt interface of housing development with arable land at Fulbourn. This photograph also illustrates the typical close ploughing of hedgerows which limits the habitat value of the hedge and may cause the death of shallow rooted trees such as ash.