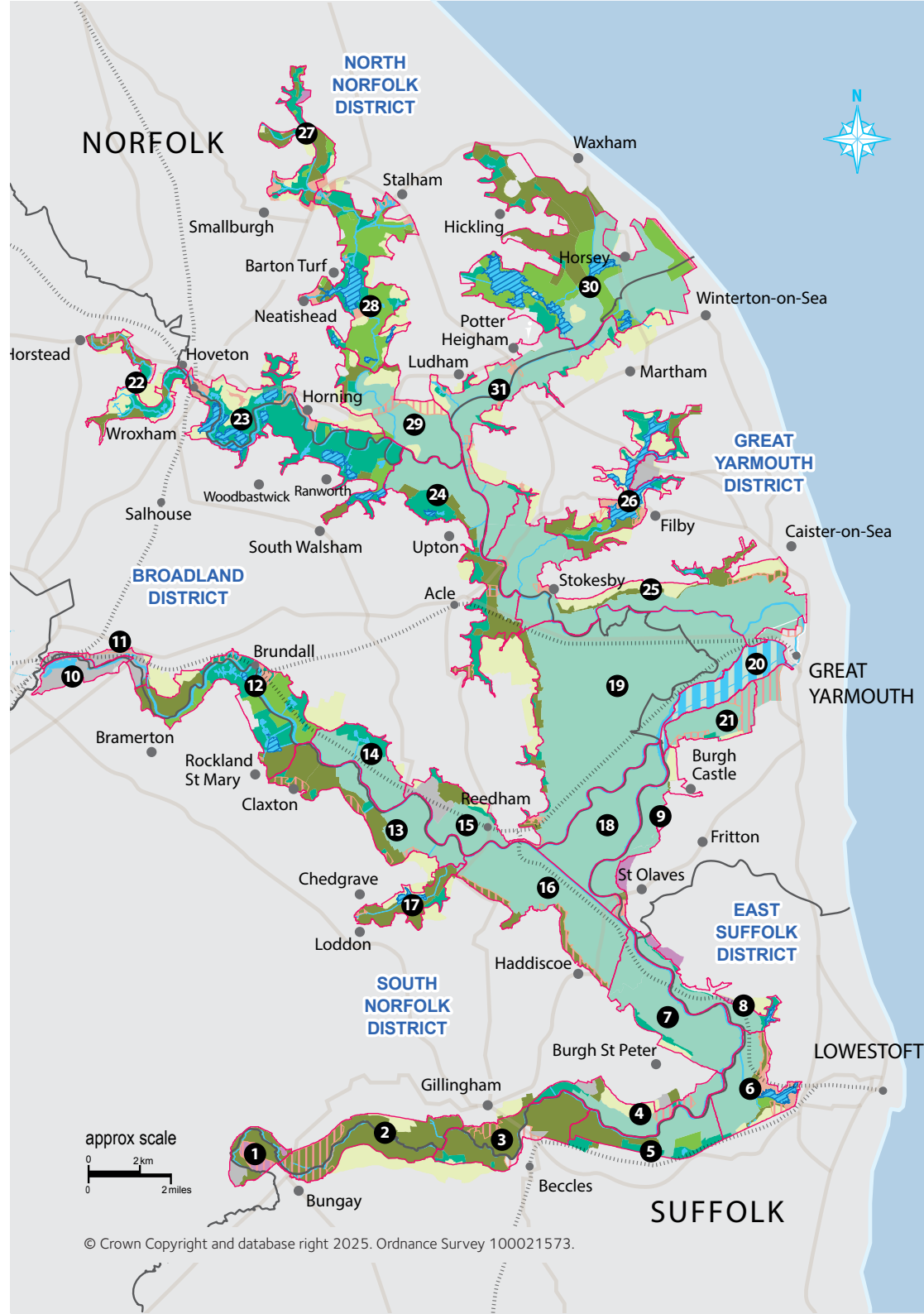


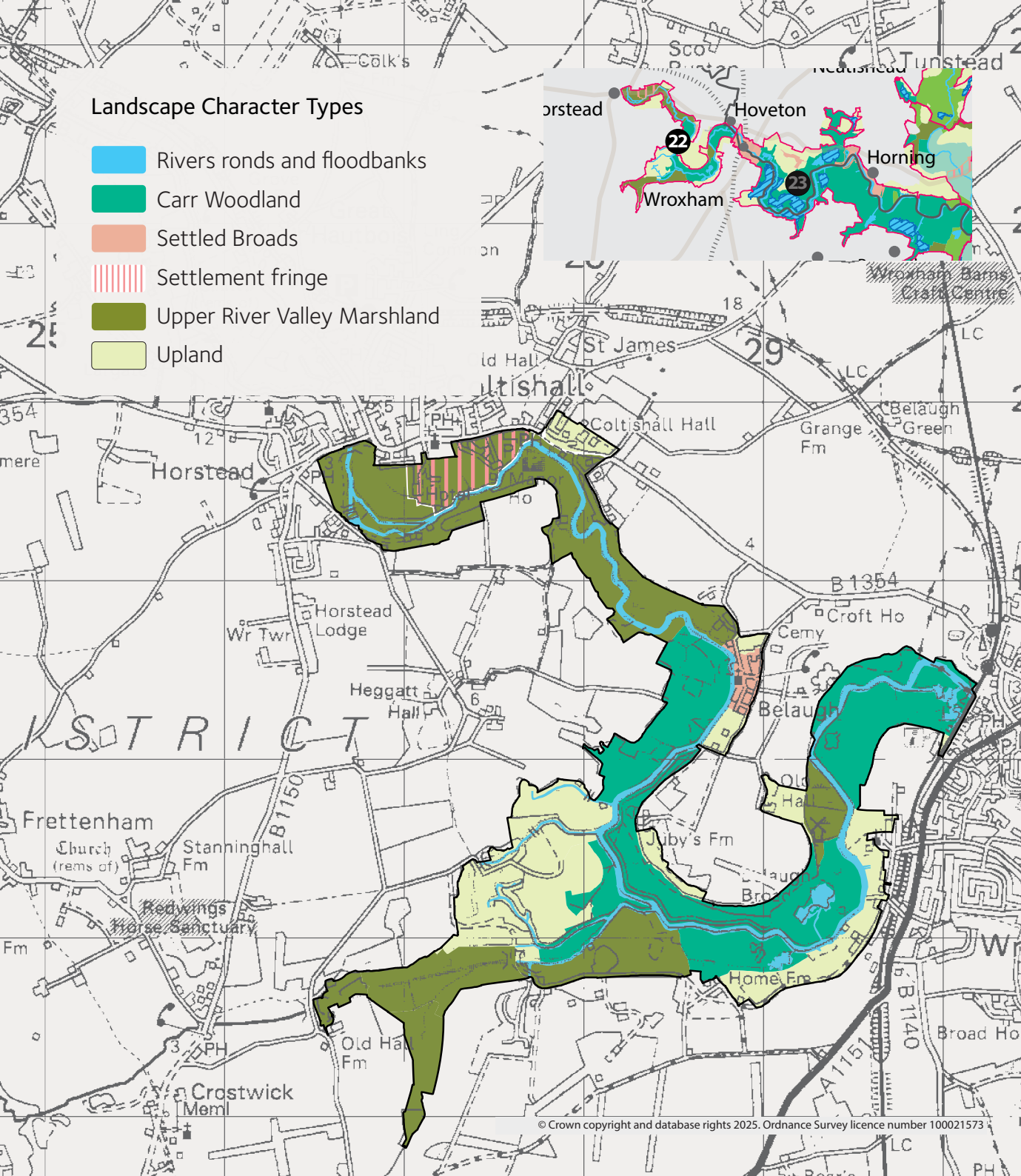
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22. Bure Valley - upstream of Wroxham Railway Bridge

Horstead watermill was the last mill on the Bure, it was also one of the biggest, best known and most photographed mills in the county.

The site was probably at least Saxon, it was recorded in Domesday and mentioned as belonging to the Benedictine Priory at St Benet's. When King Henry VIII dissolved the monasteries he presented it to King's College Cambridge. Ownership remained with King's College over the centuries until 1910, when R. J. Read bought the mill. The series of brick arches at the base of the mill survived into the 1980's but have now been demolished and railings erected. There is a river bypass cut around the mill to the north.

Why is this area special?

This section of river valley was one of considerable activity and significance in the 18th and 19th centuries. Coltishall enjoyed considerable prosperity in the malting and brewing trade, with at one time as many as 18 malthouses and an industry had grown up around the accessible chalk deposits around Horstead, Belaugh and Wroxham. The most famous of the chalk workings was the area in Horstead that became something of a tourist attraction after it was abandoned, known as Little Switzerland (other parts of the site were called Paradise and Hasboro' Gap). At these locations a network of artificial cuts which allowed wherry access to the workings can be

Landscape types

Within this character area there are the following landscape types. See section two where more information can be found about the individual types.

Settlement fringe

Upland

Upper River Valley Marshland

Carr Woodland

Settled Broads

Rivers ronds and floodbanks

Upland

Upland

Upper River Valley Marshland

Carr Woodland

Upland

Carr Woodland

GOOGLE earth - Image©2016 Getmapping plc, ©2016 Digital Globe, ©2016 Infoterra Ltd & Bluesky

Boat access is the only way to really view this area as much of it is private and inaccessible by foot. As the mediaeval bridge at Wroxham limits the size of boats upstream (the limit of navigation being Horstead Mill) there is

Once outside the settlements however, the area displays a strong sense of remoteness and the dense nature of carr woodland provides a high level of screening from the surrounding landscape both visually and aurally.

This is a narrow river valley around 2m OD with steeply sloping valley sides, tributaries and artificial cuts. Skylines are defined by a combination of carr woodland and rising valley topography (arable farmland) outside the character area. They are largely undeveloped, save for areas of vernacular settlement on the edges of the area, such as at Coltishall, although in the east, boatyards and other waterside development at Hoveton-Wroxham are apparent as horizon features.

Views are often foreshortened and greatly constrained (directed upwards rather than out into the distance) due to the density of the carr



▲ *The remains of Horstead Mill after a major fire in the 20th Century destroyed much of the structure. The area is owned by the local parish councils and it provides a recreational area for people. Fishing and canoeing being particularly popular as it is the only “white water” area in the Broads. Image courtesey of Norfolk Mills*

woodland which forms the skyline. However, at certain locations there are gaps in the vegetation allowing views of the undulating farmland within both North Norfolk and Broadland District. At Horstead and Coltishall, where the valley broadens out slightly there are more open views across the grazing marshes to the rising farmland outside the Broads area.

Geology and soils

The chalk which underlies the whole of Norfolk is at an accessible depth for this entire character area. The valley floor is peat bounded by gravel changing to silty clay bounded by sand and gravel moving upriver in Coltishall.

Enclosure, scale and pattern

This section of the Bure valley is of an intimate

scale, due to the relative closeness of the valley sides at approximately 300m apart. The area has a distinctly sinuous pattern of river and small broads. A strong sense of enclosure is provided by the density of carr woodland in the valley floor and lower valley sides.

The well-defined valley topography reinforces this enclosed corridor effect, with the valley crests at 10m OD located just outside the



▲ *Coltishall Common (open access land) is managed by a local trust which is responsible for the upkeep and day-to-day running of the site.*

Executive Area, within adjacent districts.

There are variations in enclosure however, created by the open riverside green and grazing marshes at Coltishall, Belaugh and Caen Meadow with views beyond the river corridor towards adjacent “upland”. This predominantly well wooded, often relatively dark landscape has variations in light created by more open stretches of the river such as that at Coltishall.

The meandering course of the Bure introduces considerable reflectivity, movement and contrast within the landscape. A closely knit, intricate pattern of elements comprising of dense carr woodland cover, dyke networks and the sinuous course of the river, with riparian vegetation to the edges providing further textural variation.

► *Carr woodland is a significant feature of the area. This aspect, as well as a lack of public access on land in the area, limit where the area can be viewed from. The grounds of Belaugh Church lying at around 10 metres OD afford panoramic views of these inaccessible areas.*





▲ ► Little Switzerland today (top left) showing the tangled mass of carr woodland. Image by Alison Yardy. Little Switzerland (top right) used to be the site of chalk excavations. Deep channels were cut to allow the wherries to access the workings. It became a tourist attraction after its closure. Image courtesy of Broadland Memories.



▲ Occasionally where vegetation is thin views of the surrounding "upland" and settlement can be seen. Many of the areas viewed in this way lie outside the Broads Executive Area. Bernd Jatzwauk – geograph.org.uk

Main features of land cover and use

Land cover is very mixed and includes fen, carr woodland, plantation woodland, broads, grazing marsh, arable uplands and settlement created by boatyards and leisure development at Wroxham/Hoveton, housing and commercial properties at Coltishall.

In relation to land use much of this area appears to be unmanaged other than some grazing use in the upper reaches.



► There is very little foot access available through the carr woodland. This boardwalk was provided to allow those mooring on the northern side of Wroxham bridge to walk to Hoveton village centre. Image by Glen Denny – geograph.org.uk

The considerable areas of carr woodland in the area, are particularly notable between Wroxham and Belaugh. There are three small broads – Bridge Broad, Belaugh Broad and Norton's Broad whilst some small grazing meadows can be found around Coltishall and Horstead. The valley sides can frequently display heathland type characteristics. There are no nature conservation designations in this area.

The area contains mainly linear settlements with a number of historic buildings and relicts of waterside industry. The settlements of Coltishall, Horstead and Belaugh lying along the higher



▼ *The publicly accessible historic staithes and commons in the area provide the best way to view the river and the landscape. Image by Renata Edge – geograph.org.uk*



▲ *Horstead mill marks the end of navigation in the area. Although canoe access is available through some upstream sections. A portage route having been installed to facilitate this.*

valley ground are designated conservation areas (built environment). The settlement areas are notably well vegetated and are often a neat and simple contrast to the apparently unmanaged surrounding valley. They also offer the main land based access points to the river valley for example the riverside green (open access land) alongside the public house at Coltishall. These settlements form principal bases for recreational boating activity.

The primary settlements within the area, often display a strong vernacular character, e.g. red brick and dutch gables, flint and dressed stone.



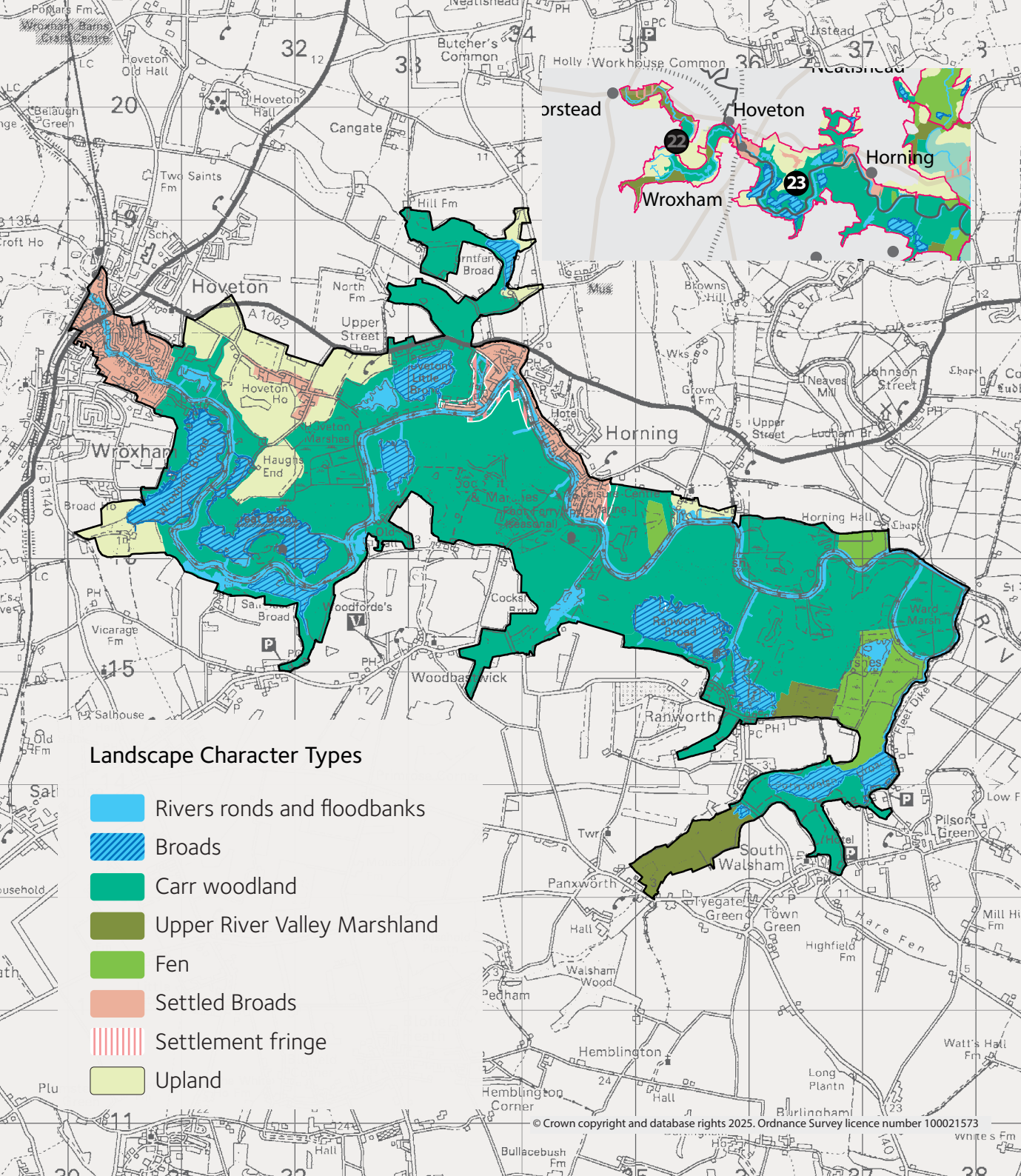
Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and enhanced. What follows are examples of local issues and opportunities.

Landscape – The overall perception of the landscape in this area is positive. Apart from the more urbanised area around Hoveton/Wroxham and the traffic noise associated with the bridge crossing, much appears very natural albeit unmanaged, with only tamed appearance in the settlement areas. The areas in between the settlements are remote and tranquil.

The area is not a particularly easy area to view from the land other than at main areas of Hoveton, Wroxham, Belaugh, Coltishall and Horstead. Each of these locations are honey pots for visitors.

◀ *The settlement area around Wroxham/Hoveton where boat yards, marina and other commercial enterprises can be found has some impacts on the tranquillity of the area.*



23. Bure Valley - downstream Wroxham to Fleet Dyke, South Walsham

Parts of the area have featured in some notable written work. Horning is central to two of Arthur Ransome's books in the Swallows and Amazons series – Coot Club and The Big Six. Whilst Burntfen Broad was owned as part of a 71 acre sporting estate by Broads writer George Christopher Davies who is credited with popularising the Broads as a destination.

Why is this area special?

Although this area includes two of the Broads' honeypot tourist areas at Wroxham/Hoveton and Horning and a seasonally busy waterway, much of the area is inaccessible by land. This inaccessibility and volume of carr woodland creates a sense of tranquillity in most of the area which sharply contrasts with the busyness around the settlements. At South Walsham Broad there is limited development along the southern and eastern edge, a sense of tranquillity is maintained due to the carr woodland surrounding the area and the use of vernacular materials for buildings and development.

The character area sits between the rather smaller-scale upper Bure valley area above Wroxham Railway Bridge and the wide open marshland landscapes beyond Fleet Dyke, South Walsham. The habitats are varied within the area and they support many species of flora and fauna. This has resulted in the majority of this area being internationally and nationally

designated for its nature conservation value.

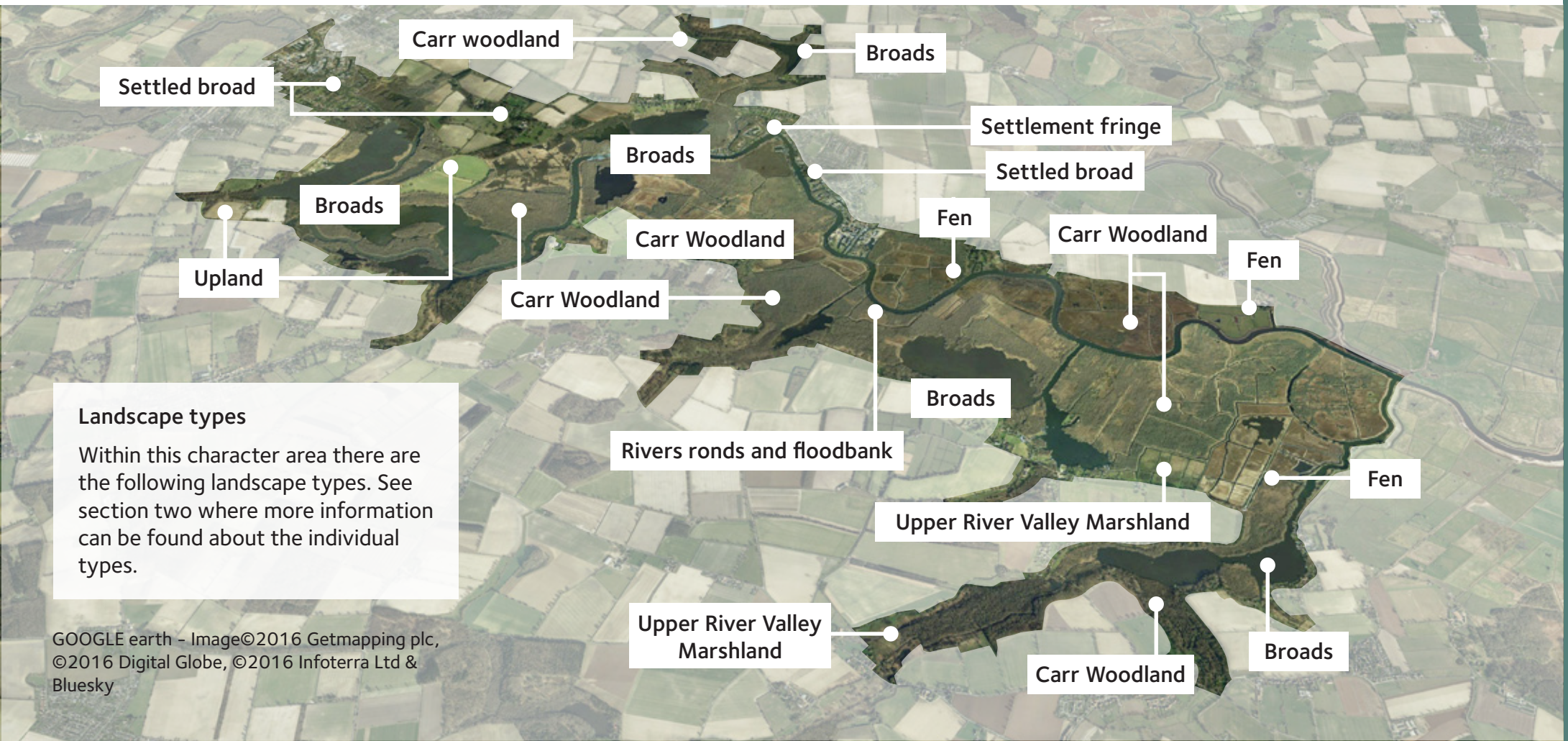
The upland area to the south of Salhouse and Woodbastwick once formed the outer extent of the extensive area of heathland that extended from the north-east of Norwich and of which Mousehold is the relict part. A particular feature of this upland area are the parklands and estate land, although they are not particularly visible from the river.

There are a significant number of

broads contained within this section of the valley. They are predominantly of the bypassed type (i.e. off the main river) located within the valley floor, although South Walsham Broad, Burnt Fen and Cockshoot are within tributary side valleys. Nineteenth century maps also show large areas of later shallow peat workings throughout this area. Two of the larger broads, Ranworth and Hoveton Great Broad, are closed to navigation. The majority of the broads have become enclosed in the carr woodland which



▲ The medieval bridge at Wroxham/ Hoveton, which is the only vehicular river crossing in the locality, restricts the size of boats that are able to travel upstream due to the low arches of the bridge. Image by Keith Evans – geograph.org.uk



Landscape types

Within this character area there are the following landscape types. See section two where more information can be found about the individual types.

rather dominates this character area although there are also some areas of open fen notably around Ferry Road, Woodbastwick at Ranworth and on the Hoveton Marshes.

Although drainage mills are not a particular feature of this area, there were attempts to drain parts of it in the nineteenth century. These broadly correspond with the rather more open areas today although drainage has now been abandoned. Three mills survive these being Dydall's Mill at Hoveton and Horning Ferry (both of which have been converted) while the skeleton mill Hobb's Mill, Horning stands amongst reedbed on an abandoned grazing level.

The area is home to Ranworth Church which is Grade I Listed and one of best known churches in the Broads Area and famed for its rood screen. It is in such a prominent location that it can be seen for many kilometres. The other significant historic structure in the area is Wroxham Bridge which is a Scheduled Monument. As a result of the height of the arches this ancient bridge significantly limits the size of boat which can travel upstream.

Topography and skyline

The valley sides are often more distinctive here than in the Ant valley, often rising from around 0 AOD quite steeply to around 10m OD. With the exception of riverside settlements and low waterside chalets, skylines are defined largely by carr woodland in the valley floor and lower valley sides. At points where a more open (fen) landscape persists, rolling unvegetated and

▼ *Much of this area is covered with alder carr. Image by Ashley Dace - geograph.org.uk*



▼ *Unless fen and the reed beds are managed, the natural vegetation succession is for the landscape to revert to carr woodland. Image by Ashley Dace - geograph.org.uk*



▲ *The woodland habitat makes much of the area impenetrable unless specific measures are taken. The majority of the area has been designated for its nature conservation value. Image by Ashley Dace - geograph.org.uk*



▲ *The broads within the area tend to be surrounded by alder carr woodland. Image by Evelyn Simak - geograph.org.uk*



▲ *Wroxham Broad is the only publically accessible broad in the area where property can be seen on the edge of the Broad. mage by Lesley Marsden*

undeveloped valley sides form the skyline, defined by mixed farmland, and predominantly arable farmland on the upper slopes. This is particularly apparent on the south side of the river near Woodbastwick, with horizons formed by rising land within the adjacent Broadland District.

A slightly more open character near Horning Church on the north bank of the river also results in rising land within North Norfolk District forming the skyline at this point. The church tower at Ranworth is a prominent feature on the skyline in the immediate area and can be viewed from a great distance both from within this character area and from the surrounding countryside.

Views are mostly contained within the valley due to the dense carr woodland cover and sloping valley sides. Carr woodlands essentially direct views upwards, and greatly reduce the potential

for more distant views, or views out. However, as described above, there are views towards the rural landscapes within Broadland District around Woodbastwick to the south of the area, and with Ranworth Church. There are also views to the farmland within North Norfolk District to the north of Horning Church, albeit filtered by trees and reed vegetation.

Geology and soils

This is predominantly an area of peat with sands and gravels to the valley sides. The peat was extracted during the medieval period resulting in the broads which has given the area its name.

Enclosure, scale and pattern

Relative to other broad's areas this is a medium scale landscape. The river valley is between 800 - 1000m wide, in the main surrounded by carr woodland edges with distinctive valley



▲ *Salhouse Broad is a location where the transition between the valley floor and the valley sides is obvious as are the changes in the soil type and vegetation. Image by Suse - geograph.org.uk*

sides rising to 10-15m beyond the Broads Executive Area. Valley sides are often masked by the density of carr woodland in the valley floor. At points the valley narrows and has a more pronounced valley side and ridge topography, e.g. tributary valley at Woodbastwick. Much of the area feels enclosed as a result of the vegetation surrounding the river. Areas of open

fen provide some contrast in landscape scale, notably on the Hoveton Marshes and closer to Ranworth.

Variation in terms of light and reflectivity is created by the carr woodlands fringing the river and the relatively intricate, enclosed broads within the valley (e.g. Wroxham Broad, Hoveton Great Broad and Ranworth and Malthouse Broads).

The meandering course of the River Yare also creates a strong sense of movement and light in contrast to the level of shade provided by carr woodland, fen, woodland, broads and sinuous reed fringed river.

The combination and intricacy of landscape

▼ *At Horning residential development is limited to the northern side of the river. To the south the area is heavily designated for its nature conservation interest. There is continuing pressure to expand mooring facilities on this side of the river. Image by Mike Page*

features of fen, woodland, broads and sinuous reed fringed rivers in the area form complex patterns.

Settlements, as in many other parts of the Broads, are mostly located on the perimeter of the area, with vernacular riverside villages such as Wroxham, Hoveton and Horning having frontage with the river. The diversity of waterside settlement adds to the variety of pattern and texture, from large Edwardian villas at Wroxham, minor country houses and parkland at Woodbastwick, original Boulton and Paul timber and reed chalets to later and modern development, particularly the waterside chalets at Crabbett's Marsh.

Main features of land cover and use

This area is essentially a wide valley floor of extensive areas of peat fen, carr woodland and a concentration of broads across which a range of nature conservation designations apply. Land cover is however generally dominated by regenerated carr woodland with some areas of more open fen vegetation. Management of the carr woodland to riverside edges is apparent along sections of the Bure, creating a softer transition from open water to reed and marshes to woodland, and this has resulted in the by-product of enhanced access (in parts) to the river edge for anglers.

Land use is split between nature conservation management and mainly recreational use of the water and land with some very concentrated areas of settlement where there is a mix of commercial and residential.

Settlement is dotted around the boundaries of this entire area. However, there are two very significant areas of settlement/development in the area around Wroxham/Hoveton and Horning with a smaller area around Ranworth. The first two are predominantly 20th century developments although with older historic cores. Wroxham and Hoveton form the western boundary of this Character Area and contain a contrasting range of settlement types. Wroxham is to the south of the river and Hoveton to the north although they tend to be regarded as one area. Wroxham settlement includes the Beech Road area of large detached properties with river frontage in well-established grounds. This area also includes some quite elaborate riverside



bungalows. Towards the A1151 and north of the river there are a number of large cuts, mooring basins and generally mixed uses with boatyards, modern redbrick housing and various commercial uses. Although a colourful, active place, the overall perception can be of a slightly chaotic, high density of built development with an absence of any significant open spaces and tree cover and a sometimes surprisingly poor connection with the river.

The other main settlement area is Horning, a long, linear waterside development. Much of the development along the river frontage took place in the early 20th century more than tripling that of the late 19th century. The main change since that time has been density and depth of the development area to the north. The settlement broadly splits between the Crabbett's Marsh area of chalet development, the historic core of Horning south of the Swan Inn (which now forms the Conservation Area) and the later infill south towards what was once an isolated ferry crossing site. The development around the ferry at the eastern end is rather mixed and more akin to the Hoveton development,

including marinas, boatyards, modern holiday homes and facilities.

Much of the area to the south of the river forms part of the Woodbastwick Estate. Although the Woodbastwick Hall and parkland and estate village are not within the Executive Area boundary, the estate's influence can be widely seen in the hedged fields, plantation woodland and distinctive estate cottages with black and white painted joinery. To the north of the river is

the Hoveton House Estate which includes one of the only parklands within the Broads Executive Area. The mature woodland and estate cottages are again a feature. The Avenues area of Wroxham was built into the parkland of the lost Wroxham House, which has contributed to the wooded feel of that area. The avenue towards Wroxham Broad is a surviving feature and the walled former kitchen gardens can also still be found. The Fairhaven Gardens at South Walsham (180 acres of woodland and water gardens

◀ ▼ *There are a range of developments types along the river and the adjacent dykes in Wroxham/Hoveton exhibiting many different styles. Large trees and shrubs help to integrate development with the natural environment.*



▲ Images by Steve Daniels – geograph.org.uk



▲ Image by Lesley Marsden – geograph.org.uk



▲ Image by Peter Trimming – geograph.org.uk



▲ Image by John Salmon – geograph.org.uk

which include South Walsham Inner Broad) are also part of this area.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and enhanced. What follows are examples of local issues and opportunities.

Landscape – The water side developments of Wroxham/Hoveton can appear to be chaotic and high density in nature, with many different development styles which are often out of scale to the size of the riverside plot. It would be beneficial if more structural vegetation was introduced within both the locality and the individual plots to mitigate this adverse characteristic and that re-development proposals are carefully assessed to ensure that further landscape impacts do not occur.

Subdivision of large dwellings/plots and pressure for additional mooring space around Wroxham add to development pressures in the area.

At Crabbett's Marsh there is pressure for the redevelopment of the more traditional riverside chalets which can sometimes result in over development of the plot and a loss of structural vegetation. Pressure for development on mooring plots can also increase urbanisation and needs careful management. It is important that development around the Broads reflect the predominant building materials in the area.



Nature conservation – There has been loss of open fen through decline of traditional fen management. Though efforts such as a recent Restoration scheme at Hoveton Great Broad are aimed at Fen creation.

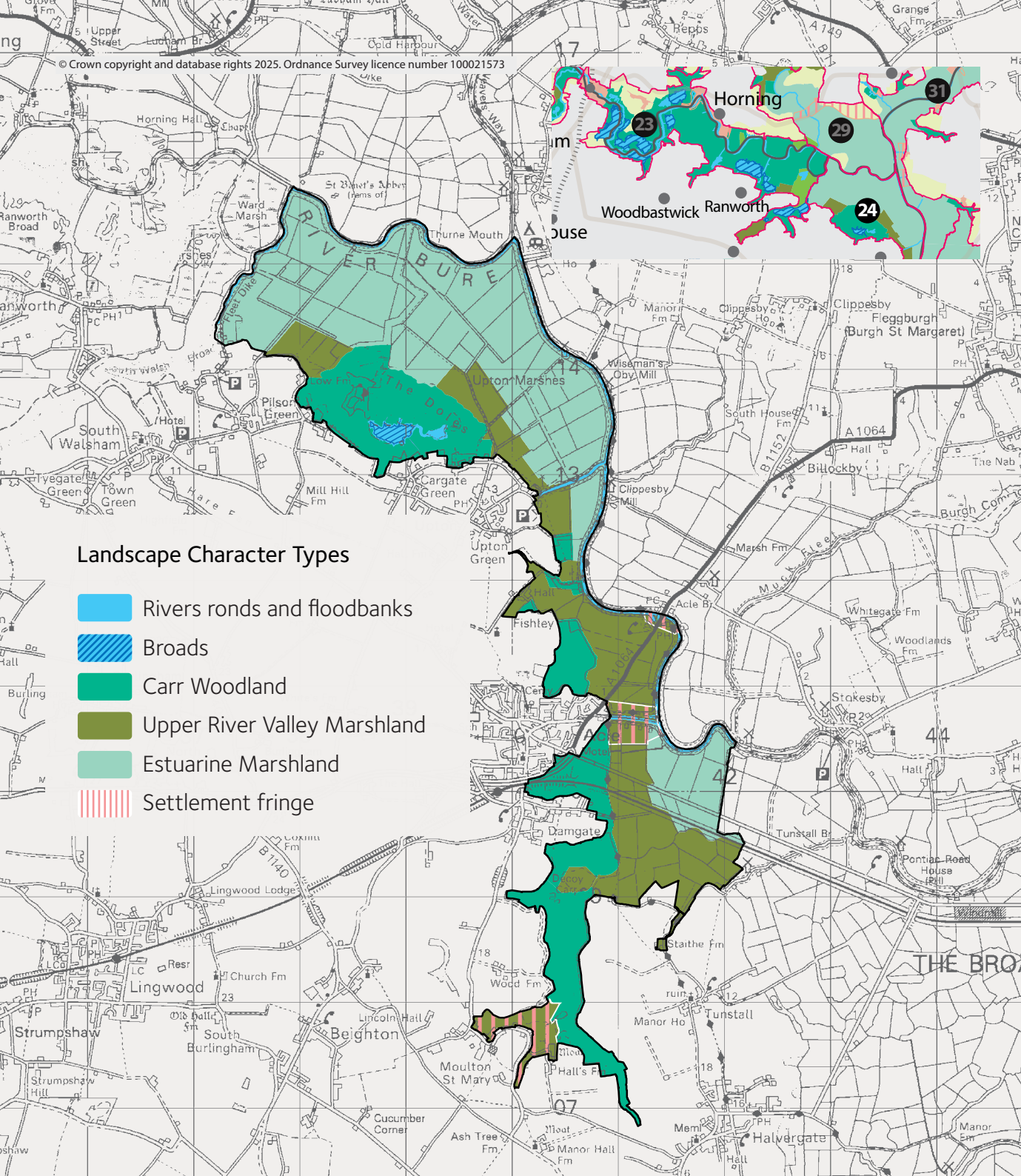


▲ *Common blue Damselflies*

▲ *Fen habitat at Horning Marsh Farm*

▼ *Fen survey Horning Marsh Farm*





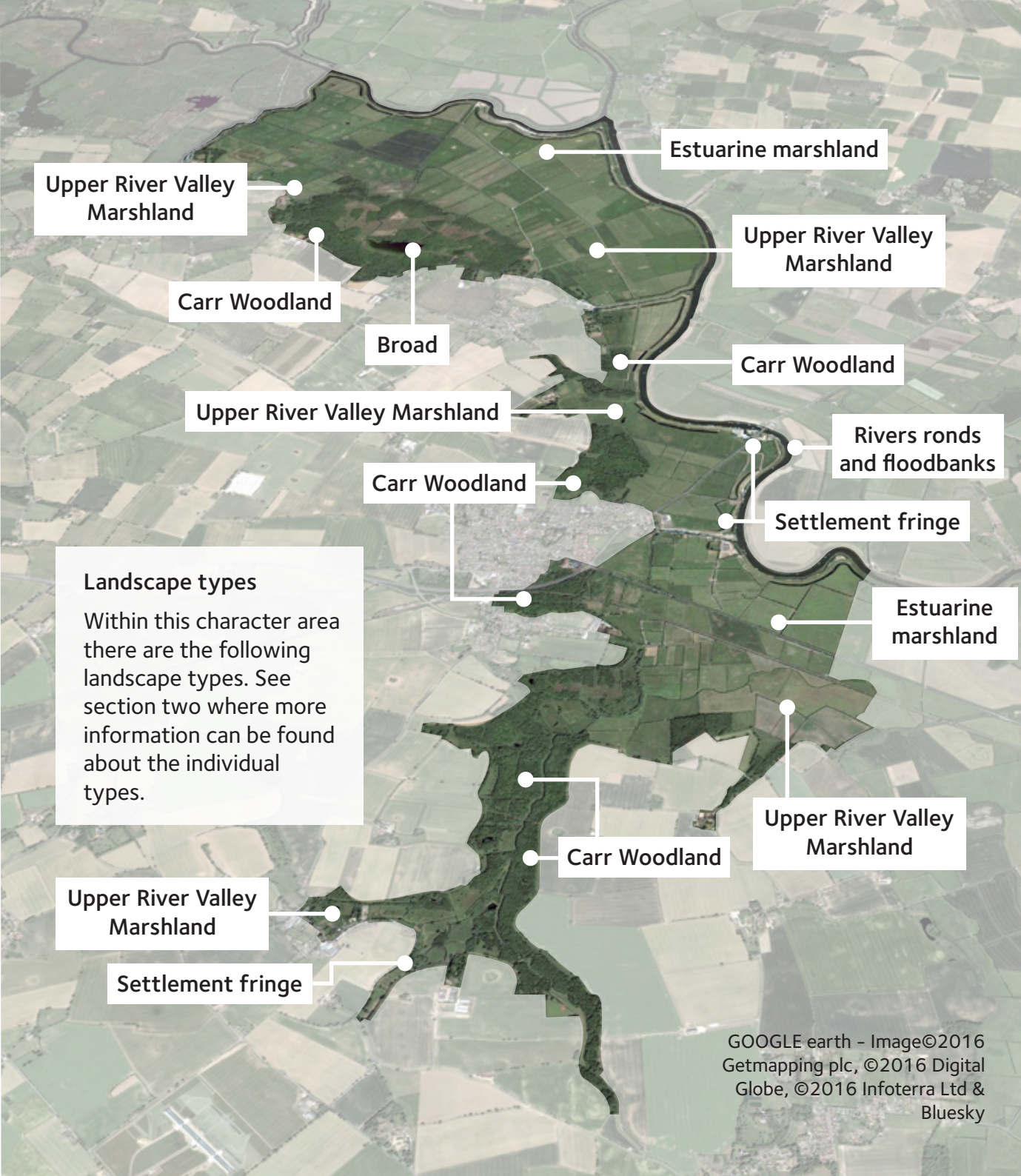
24. South Walsham to Acle Marshes and Fens

The village of Acle stands beside a vast marshland area which in Roman times was a great estuary called Gariensis. Trading ports were located on high ground and Acle was one of those important ports. Evidence of the Romans was found in the late 1980's when quantities of coins were unearthed in The Street during construction of the A47 bypass. Some properties in the village, built on the line of the beach, have front gardens of sand while the back gardens are on a thick bed of flints.

Why is this area special?

This area is located to the west of the River Bure with Moulton St Mary in the south to Fleet Dyke in the north. It encompasses a large area of marshland with considerable areas of peat located away from the river along the valley edge and along tributary valleys. At a larger scale, this area might have been divided into two areas with Upton Dyke forming the boundary between an area with few modern impacts to the north and a more fragmented area affected by roads and built development to the south.

The area is basically a transitional zone between the peat valley of the Upper Bure and the areas of silty clay estuarine marshland soils of the lower reaches of the Bure; these being deposited when the marshland area was a great estuary. Both of the areas have nature conservation area designations based on the



two soil types which provide different habitats. Upton Broad and Marshes and Damgate Marshes and Decoy Carr have both been designated SSSIs.

South Walsham and Upton Marshes are separated by an embankment, which probably follows the rather modified line of a former watercourse. The marshland has an entirely rectilinear drainage pattern, originally the product of early nineteenth century enclosure acts that included provision for drainage schemes. Although these have seen a certain amount of boundary loss since then, usually associated with modern conversion to arable use, they retain their broadly rectilinear pattern.

Acle, South Walsham, Upton and Fishley Marshes were all drained by steam engines in the late 19th/early 20th centuries although both Upton and Acle also retained their mills. The mills and engine houses at South Walsham, Fishley and Acle have been cleared away.

However, Upton Marshes retain a listed grouping of mill, engine house and millman's cottage. The contribution of Oby and Clippesby Mills across the river along with Palmer's Mill at Upton Dyke means the drainage mills remain a distinctive feature of this area.

The River Bure and Upton Dyke are both heavily used for recreational boating. There is public access across the marshes and the Weaver's Way crosses a small part of the area close to Acle and linking with the boatyards and the Bridge Inn. A number of public footpaths follow the riverbanks and dykes, as well as crossing the



▲ *South Walsham tends to have more land in arable cultivation. Where water levels are kept higher and water quality good the dykes are exceptional. Infrastructure in the form of electricity cables cross the area at a number of points. Image by Jeremy Halls – geograph.org.uk*

marshes, within this area.

Away from the noise and movement created by the traffic on the A47 and A1064, the area can provide uninterrupted, panoramic views across the valley. The area's sense of tranquillity is heightened by the site of boat sails as they appear to glide through the marshes.

Topography and skyline

This is an area of level floodplain at around –1m OD and a tributary valley to the south of Acle. The valley sides appear quite distant, rising to a height of around 15m OD.

To the south, some larger scale built development is visible on the skyline which lies outside the Broads executive area interrupting the mostly simple, open, relatively flat skylines elsewhere – arable farmland with a backdrop formed by woodland. This contrasts with the

blocks of carr woodland which contribute to the horizon in the south and west. Drainage mills are also a distinctive feature of this area and are visible against the wide open skyline across the marshes to the north, and north east with arable farmland and occasional woodland beyond in the district of Great Yarmouth.

Geology and soils

The marshland areas are predominantly silty clay with a fringing peat area towards the upland and along the tributary valley.

Enclosure, scale and pattern

This is a wide river valley landscape (of up to 2km width to the western end) formed by the confluence of the Bure and Thurne. To the west (near South Walsham) the area is predominantly a large scale simple rectilinear landscape,

while to the east is a smaller, more intricate tributary valley and woodland network associated with a decoy pond. Drainage windmills are a repeated feature of the grazing marsh areas.

The landscape is formed by an open, broad, flat valley generally at –1m OD gently sloping towards Upton. Within the adjacent Broadland District to the south, valley sides rise to 15m although they appear distant due to the open expanse and scale of the floodplain.

On the southern and western edges of the character area, blocks of carr woodland enhance a sense of enclosure. The flood banks to the river create localised enclosure to the northern area boundary.

To the north and east the open, low lying marshland valley character continues into the adjacent Broads Authority LCA areas 25, 29 and 31, with the valley sides in the adjacent Great

▼ *Views across the grazing marshes are panoramic. The skyline is created by the vegetation on the opposite side of the valley. The estuarine marshes have silty clay soils*





▲ Alder carr woodland or fen meadow can be found on the peat soils at the valley sides.

Yarmouth Borough character areas at some distance from the area. The wooded character of the south-western edge of the area (Upton Broad) is in contrast to the more open expansive marshes and the sense of light and reflectivity provided by the meandering course of the River Bure. The more complex landscape pattern of wooded tributary valley fingers at Moulton St. Mary creates a darker landscape of dense carr woodland and an enclosed valley floor.

Other than those areas interrupted by settlement and infrastructure around Acle and Acle Bridge, the patterns and textures of this area are defined primarily by a mix of both sinuous and rectilinear field patterns where land cover is predominantly grazing marshland, with clusters of carr woodland and broads at Upton. The southernmost part of the area at Moulton

St. Mary is defined by densely wooded valley tributaries. These features create texture and visual interest in a landscape of otherwise very simple character.

Main features of land cover and use

Land cover is predominantly of grazing marsh with some relatively large blocks of carr woodland towards the upland at the valley sides and along the tributary valley.

Land use is a mix of both pastoral and arable farming, nature conservation management and some recreational use. Much of the Upton Marshes have in recent years been acquired by Norfolk Wildlife Trust. This has seen a number of marshes converted back to seasonal grazing use, the installation of new marsh gates and even dyke networks restored.

Upton Fen or The Doles has a more substantial block of peat fen than the more common marshland fringe. The western half, which is actually in South Walsham, includes an area of fen vegetation adjacent to the marshes, the remainder is carr woodland enclosing Upton Broad and other open water. The Upton tithe

▼ Drainage mills are a feature of the marshland landscape. Mills located in other character areas can also be viewed from this side of the valley.





▲ *The modern Acle Bridge carries the A1064 over the River Bure. A bridge has stood here since the year 1001. Image by Glen Denny – geograph.org.uk*

map indicates the long thin doles, being shallow turf allotments, to the north of the broad. There is nothing on recent maps or aerial photographs to indicate these doles. However, as with Surlingham Broad, on older aerial photographs, it which also includes reedbed and a decoy site. All these areas appear to have been subject to drainage schemes during the 19th century, indicated by a number of extant dykes within the woodland.

There is little actual settlement within the area other than the boatyards, moorings and ancillary built development associated with the long boat dykes that connect the river to the settlements in South Walsham, Upton and Acle and around Acle Bridge, otherwise settlement within the area is restricted to isolated marsh houses. Towards the south of the tributary that edge

around Moulton, the area is lined with some settlement and Settlement Fringe Type uses and activities.

Infrastructure – the area is crossed by the A1064 at the southern end. This provided the only vehicular crossing point between Great Yarmouth and Wroxham/Hoveton. As is typical of the river crossing points some settlement including moorings, a public house and other commercial premises has become established. Within the same part of the area the A47 and the railway line, between Norwich and Great Yarmouth, run parallel to each other across the marshes.

Across the area a number of overhead cables have been removed over recent years, improving the panoramic views, although there

are still areas where further undergrounding work would be of benefit, for example on Upton Marshes.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and enhanced. What follows are examples of local issues and opportunities.

Landscape – Traffic movements along the A1064 and A47 create significant localised visual impacts. Pollared willows help provide some mitigation in views towards the two roads. Funding for their maintenance could be jeopardised as a result of Local Authority cuts.



▲ *Bittern over Upton Marshes*

To the western edge of the area, development which can be seen above the plateau tops has impinged on the skyline, this impacts on the area's sense of remoteness. This has a similar effect in views south from LCA 25 and 31.

Historic environment – drainage mills, sometimes with their marsh cottages, are a repeated significant feature of this landscape. Palmer's Hollow Post Mill, Upton Dyke, is an unlisted rarity which was originally from Acle. Its remains were salvaged and reconstructed here.

Other historic features include South Walsham Mill which was latterly a steam engine house site; Fishley Mill and Engine House Site; Acle Marsh Farm Mill and Engine House; Acle Hermitage Mill with its truncated tower remains and a small millman's cottage adjacent.

There are a number of WWII defensive remains

surviving around Acle that are collectively regarded as being of national importance.

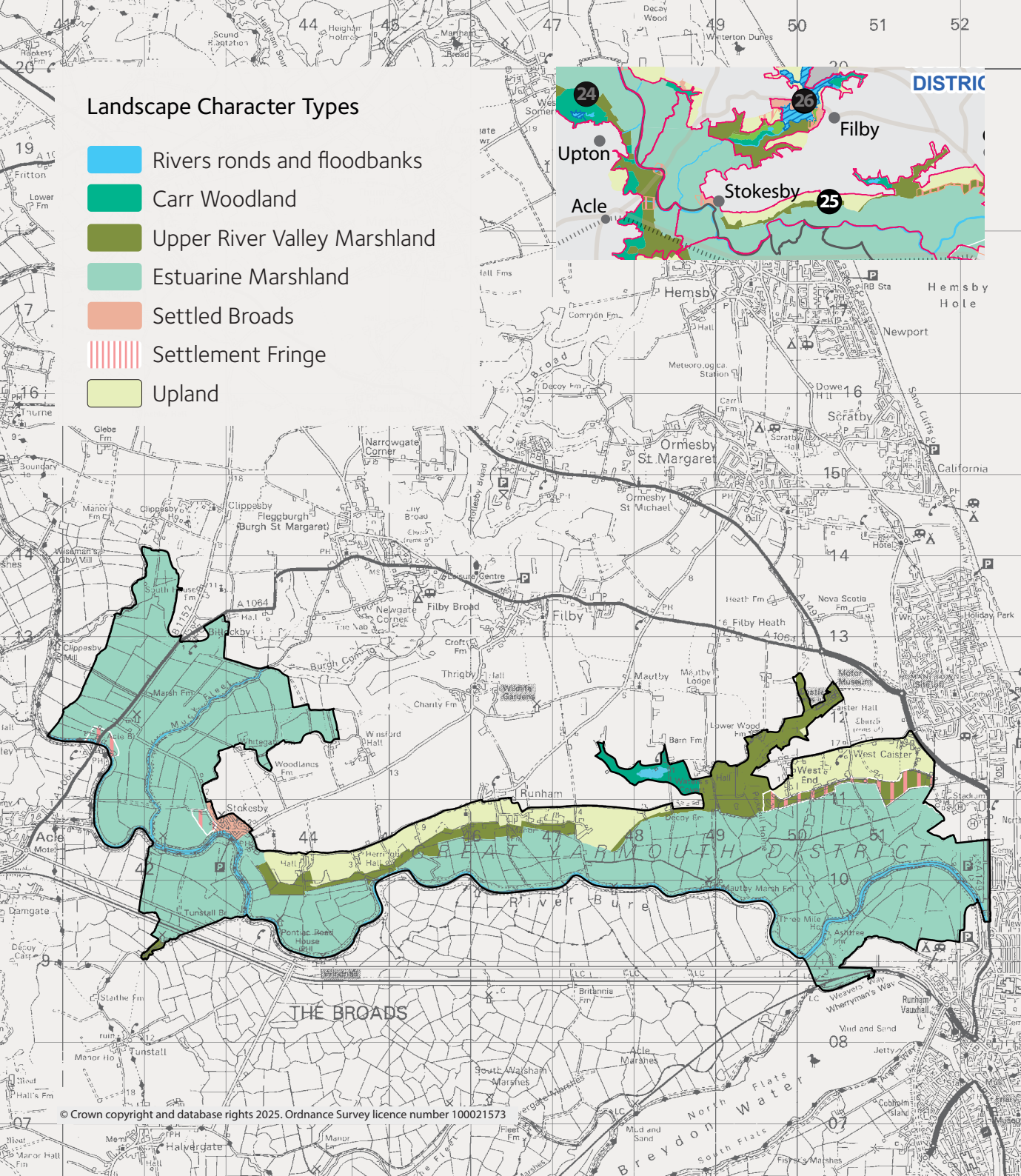
▼ *Mill House Farm, Acle. The house was originally a miller's cottage adjoining the now derelict drainage mill pump, Hermitage mill*
Image by Evelyn Simak – geograph.org.uk



Nature conservation – Conversion or reversion to arable land, driven by changing land economies, require lower levels in the dyke networks or even their total removal having an effect on the historic drainage patterns and loss of potential habitat. Within this area, large areas are managed for nature conservation purposes and land management techniques have seen the reinstatement of some dyke networks which provides positive landscape benefits. However care needs to be taken that the conservation management techniques do not adversely affect the historic dyke patterns.

▼ *The boat dyke at Acle tends to have a less tranquil, suburban character as it is located close to settlement and the main roads in the area. However the backdrop of alder carr woodland at Upton boat dyke creates an effective visual buffer.*





25. Fleggburgh to Bure Loop Arable Marshlands

Some of this area seems to have been part of the Dean and Chapter of Norwich Cathedral lands known as Fowlholme and Skeetholme.

It also seems to have been a detached part of Acle rather bizarrely called 'No-where'!

Why is this area special?

This character area lies, in the main, to the north of the River Bure although at both the eastern and western ends of the area it straddles the river. A significant number of drainage mills survive in this area as do several small millman's or marshman's cottages, although they are now rather out of context in their arable setting. The presence of the drainage mills and their contribution to the Broads landscape has meant that much of this area has been included in the Halvergate Marshes Conservation area.

A number of historic features of interest survive locally. Part of the former estuary cliff can be seen along the Low Road at Caister - used as a source of roadmaking materials in its more recent past. The valley sides are dotted with churches, farmsteads and manorial sites at regular intervals, and the settlements of Stokesby, Runham and West Caister have stayed relatively small scale and retain a number of traditional buildings.

One of the most important historic features in this area is the remains of the 15th century Caister Castle (a scheduled ancient monument) associated with two important medieval families

(the Fastolfes and the Pastons) and important as it is one of the earliest brick residences to have been built in England, and the sophistication of the brickwork in the inner court, particularly in the great tower, is exceptional. The Castle remains have various later additions and now forms part of a motor museum. The Castle is located at the head of a tributary known as the Pickerill Holme or Fleet which although much diminished today, was once maintained at a width of 16 feet allowing barges to reach the Castle from the River Bure.

The River Bure in this character area is well

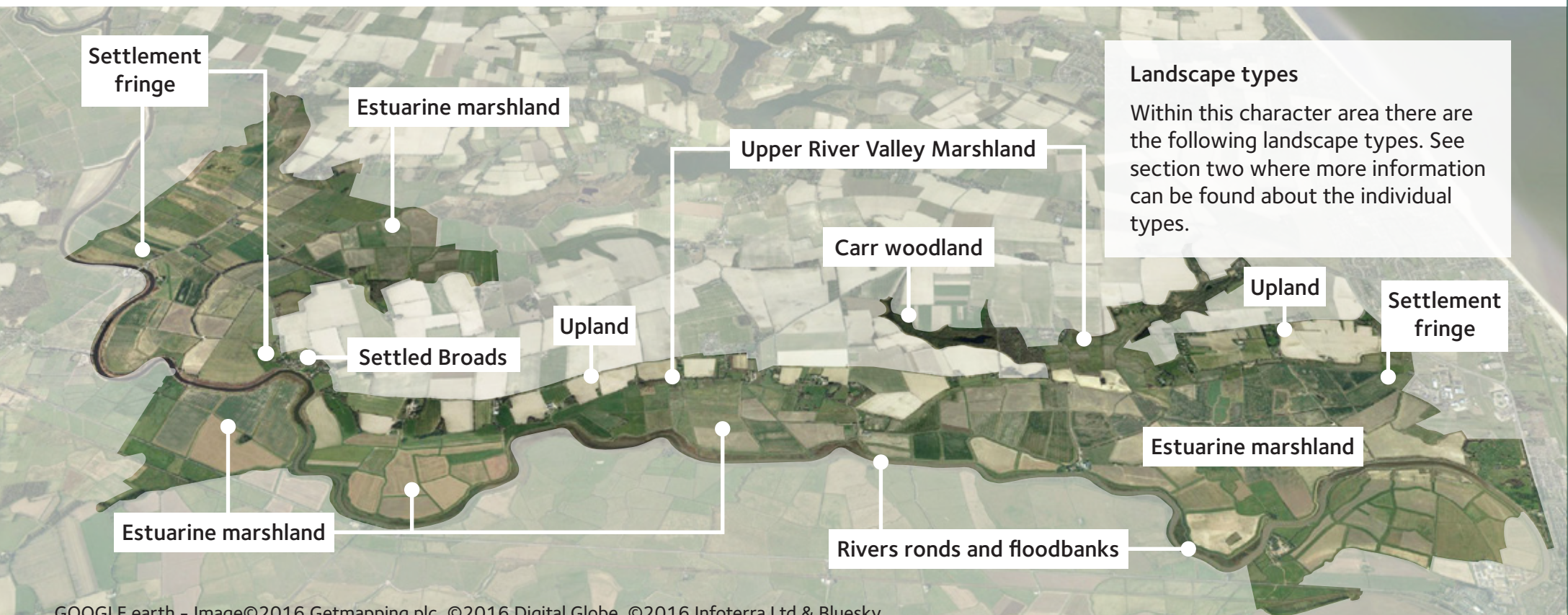
used for recreational boating and there are also a number of footpaths in the area, particularly along the river's course. Part of the footpath route at the western end of the area forms a section of the long distance route of the Weaver's Way. Other footpaths follow tracks from the upland to the lower lying areas to meet up with the main river footpath. At Stokesby, the village green is open access land, with similarly designated land also to the northwest of the village.

In an area where there are few bridge crossings, former ferry sites can be found at Stokesby,

Runham and Mautby. Three Mile House to the north of Breydon Water, is a single storey marshman's house which was the home of Harry Smith, marshman, taxidermist and one of the last of the Breydon puntgunners

Topography and skyline

This area comprises the valley floor and part of the valley side of the northern Lower Bure floodplain along with the Pickerill Holme tributary area in Mautby/Caister. It crosses over to the southern side of the Bure to include both 'Bure Loop' and Calthorpe Marshes near Acle.





▲ *Caister Castle, built in 1432 on the site of an earlier fortified manor house is one of the earliest brick residences to have been built in England. Image by Evelyn Simak – geograph.org.uk*

The floodplain area is located at around –1m OD and the valley side to the north rises to around 10m OD with settlement located on the valley side at around 5m OD.

Skylines remain relatively undeveloped within the area due to presence of open marsh and arable cultivation, although built development at Caister-on Sea and Great Yarmouth forms part of horizons to the east, with associated prominent features such as the water tower and of offshore wind farm.

Views are expansive across the area and into the adjoining Halvergate Marshes Character Area (LCA 19) particularly from higher valley sides. The proliferation of drainage mills is a distinctive feature of many middle distance views whilst Caister Castle also remains a focus in many views. Views are available of the landscape beyond the Broads area to the north although this is partially foiled by carr woodland at the edge of the character area.

Geology and soils

This area comprises Breydon formation silty clay with small sand and gravel and peat exposures along the northern edge.

Enclosure, scale and pattern

This is a large scale, open marsh landscape comprised of a wide valley floor (often around 1km in width) at –1m OD with rising valley sides to 10m OD in the adjacent Great Yarmouth Borough. The valley sides provide an element of enclosure, reinforced by intermittent blocks of carr woodland on the northern valley side and that which is associated with Mautby Decoy. The woodland also provides a degree of visual filtering. To the south is the open, expansive landscape of Halvergate Marshes. The tall river flood banks create localised enclosure and the sense of this is especially prominent in downstream locations along the river.

Drainage mills are a landscape feature repeatedly viewed from this area lying both within this

▼ *Stokesby is a small scale settlement on the northern side of the River Bure. Much of the remaining settlement in the area comprises of isolated farmsteads on the valley side. Image by Pierre Terre – geograph.org.uk*



character area or adjoining ones. In general, the landscape pattern is predominantly defined by large scale marshes in arable cultivation which has led to dyke boundary loss and the loss of associated boundary features along with a reduction in the biodiversity interest.

The marshes are predominantly rectilinear in drainage pattern although with some long thin parcels north of Acle Bridge and some curving dykes surviving in the Mautby/Caister area. The settlement pattern is primarily comprised of isolated farmsteads and small scale vernacular settlements (Stokesby, Runham and West Caister) located on the higher valley sides (at 5m OD) just outside the area, with the exception of Stokesby which lies within the character area.

Closer to Great Yarmouth, the landscape pattern has been severely eroded due to urban fringe development and the industrial estate at Paddy's Loke on the eastern edge of the area, near Breydon Water. In recent years a development has been approved in the marina area adjacent Bure Park for residential dwellings and moorings

▼ *Development around Caister and Gt Yarmouth effects the sense of remoteness within the area. Image by Alison Yardy*





▲ *Proximity to industrial areas and edges of towns can bring with it some associated problems. Image by Alison Yardy*

which when implemented will increase the sense of urbanisation and activity along this section of the Bure.

Local variation in texture and pattern is provided by the backdrop of a wooded tributary valley on higher ground at Caister Castle, and the Trinity Broads which contrasts with the simple marsh landscape of the area. Further seasonal variation in colour and texture is created by arable cropping. Within this simple landscape of muted colour, the wide meandering course of the Bure and the adjacent Breydon Water provide some

▼ *There used to be a number of ferry crossings along this stretch of the Bure but today Acle Bridge is the only vehicular river crossing point within the area. Image by Glen Denny - geograph.org.uk*



contrast in light and reflectivity.

Main features of land cover and use

Although the valley floor of this area was traditionally an area of grazing marshes, the land cover of both valley sides and valley floor is now almost entirely in arable cultivation although some grazing marshes are retained around Ashtree Farm for horses. The occasional poultry unit can also be found within the area. Reversion to arable has resulted in significant boundary loss with many dykes being filled in. The reed beds are particularly wide in parts of the River Bure in this area, notably so between Herringby and Runham Swim, where these are commercially cut.

Settlement is predominantly isolated farmsteads located along the higher ground to the north along with the small scale settlements of Stokesby, Runham (now part of Mautby) and West Caister. In the latter settlement, there is a distinct building tradition of using beach cobbles mixed with redbrick for decorative effect.

As the River Bure nears Great Yarmouth it turns southwards creating a loop of marshland to the north of Breydon. This is known as the Bure Loop. Part of this area has been developed as a caravan park and part as an industrial estate. It also includes Ashtree Farm drainage mill (recently restored) and a plant hire and banded crushing site. A footpath runs around the interior of the loop. The path follows an old track, Paddy's Loke, which has been retained through the industrial estate. This has been an area which is prone to fly tipping. Settlement fringe

activities and land use can be found within the area notably around West Caister.

Infrastructure exists in the form of the A1064 providing one of the few valley crossing points via Acle Bridge. As is typical of river crossing points in the Broads, it also provides a focus for various types of settlement including moorings, a public house and commercial enterprises. Across some of the open marshes overhead cables supported on timber poles can sometimes be seen within views. The A47 Acle straight crosses the western part of the area.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and

▼ *Much of this area is now under arable cultivation which has resulted in the loss of dyke networks along with their associated features. Image by Evelyn Simak - geograph.org.uk*





▲►▼ Drainage mills in the area provide a significant landscape feature. Views of mills in adjacent areas are also available. Images courtesy of – geograph.org.uk



enhanced. What follows are examples of local issues and opportunities.

Landscape – Traditional land use for grazing within this marshland area has been mostly lost.

The reversion to arable within much of this area has led to a significant loss of the dyke networks, with their associated marginal and aquatic vegetation. Within those dykes that are retained, water levels are kept at a lower level than on the grazing marshes, to facilitate arable cultivation. This has an effect on the biodiversity

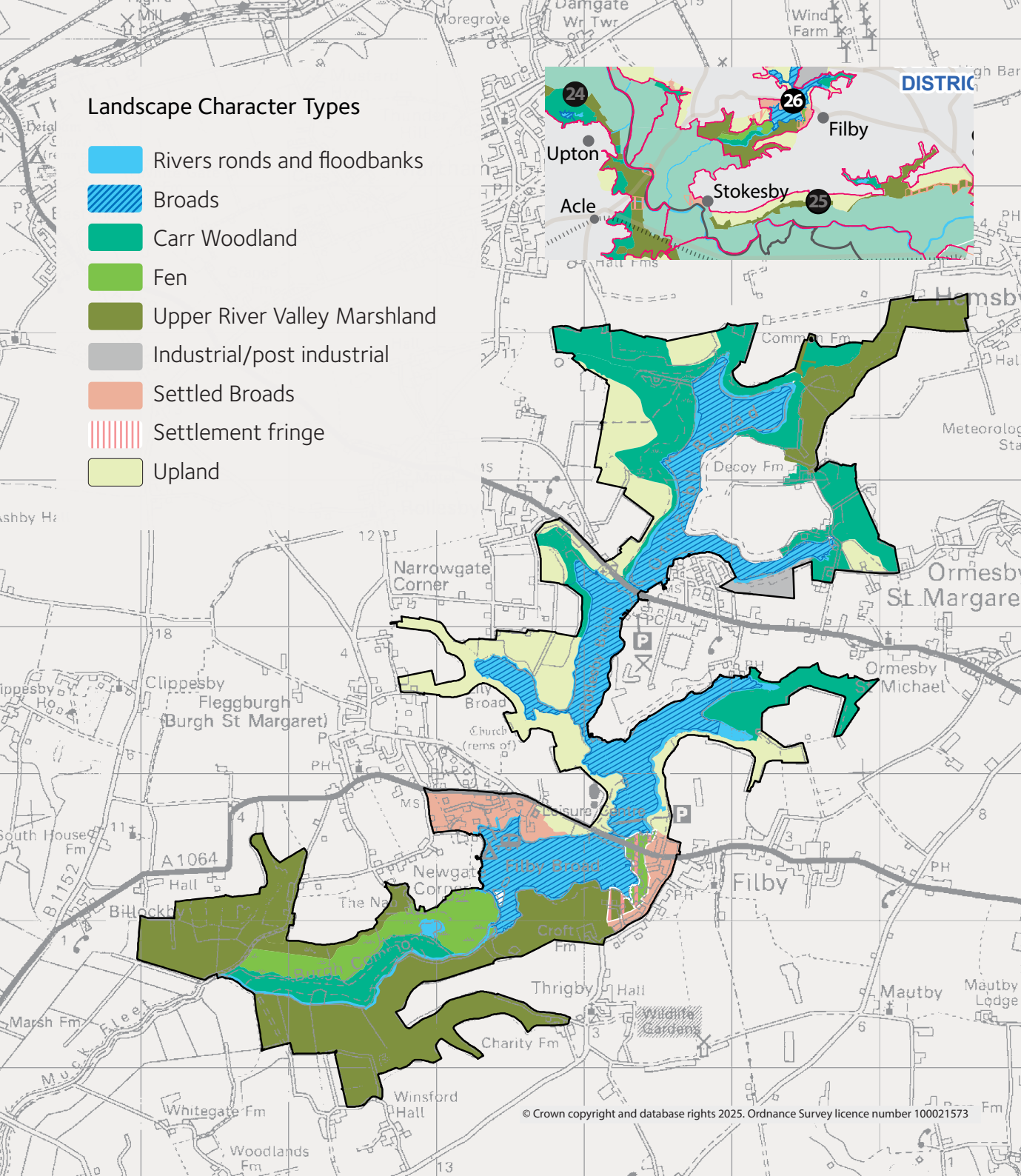
value of the water body.

The potential for enhancement opportunities for these areas is very much linked to the agricultural subsidy system, the long term future of which is currently unknown.

Opportunities for removal of overhead wires and associated infrastructure should be sought to help reduce the urbanising effect on the marshes.

There are considerable visual impacts from built development of Great Yarmouth and Caister at the eastern end of this area. These include the industrial estate to the south of the Bure Loop, along with the sewage works and heliport to the east of Caister Marshes. The area is subject to noise and views of traffic along the Acle Straight. Both aspects detract from the sense of remoteness and the tranquillity of the area. Care needs to be taken to assess the effects on the landscape of any new development within these areas whilst opportunities should be sought to provide mitigation to address the current effects. Settlement Fringe Type uses and activities are significant around West Caister and the Bure Loop with horse-keeping a particular feature.

Historic environment – the drainage mills are a distinct feature of this area lying within this and adjacent areas. They are an important national assemblage. Opportunities to conserve and enhance these features should be sought.



loam which have made this one of the most intensively farmed areas in the county. Faden's Map indicates extensive areas of heath or dry common land around much of the network of broads and traces of heathland type vegetation are still apparent today. Arable farming now

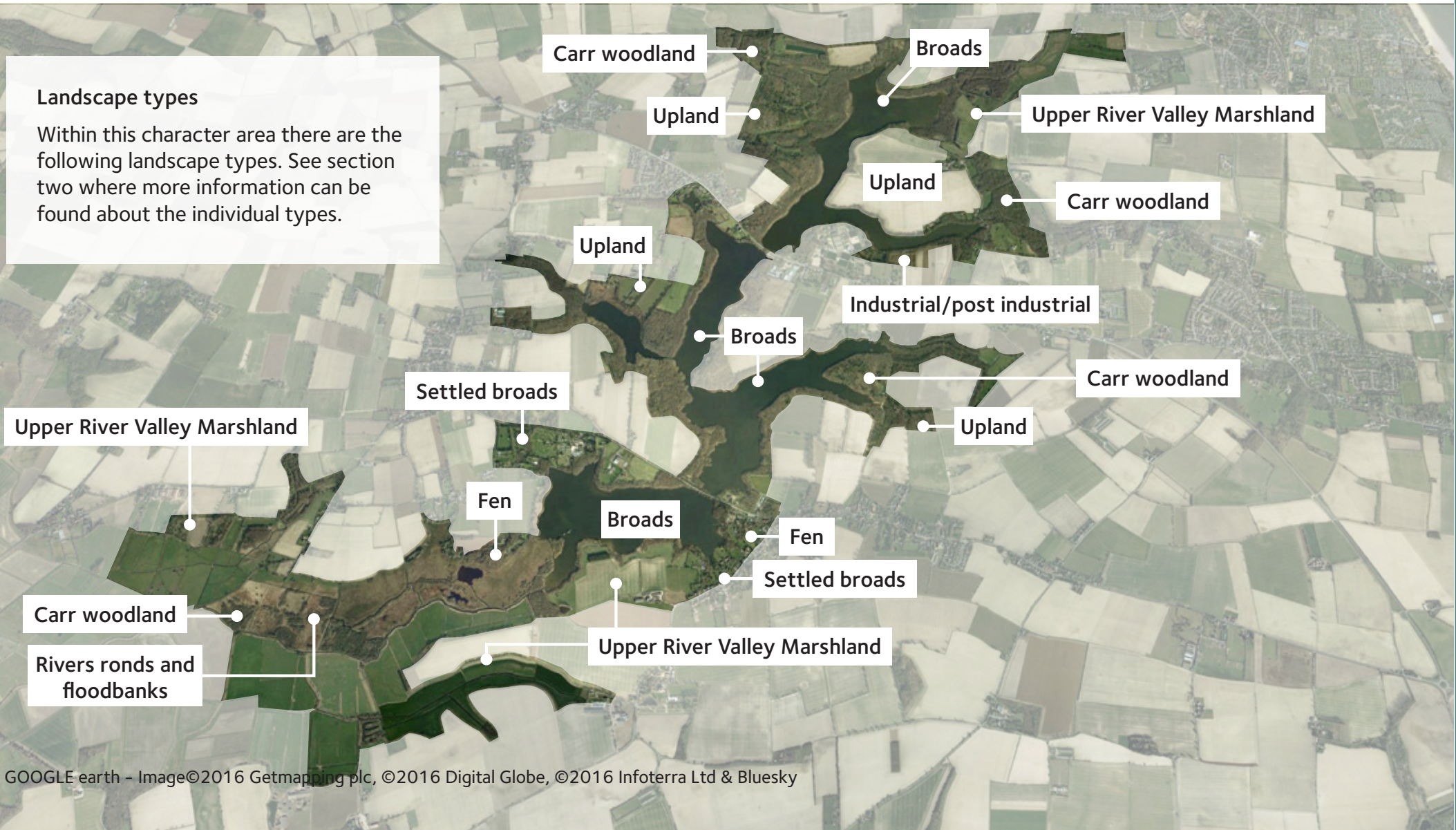
comes very close to the broads, often separated only by the woodland periphery. The perimeter of Filby Broad is a little more mixed with landing stages of the educational sailing base just visible from the A1064. Private gardens extend towards the south eastern corner and a caravan

and camping site is located to the north west of the broad.

A Victorian waterworks complex, originally the Great Yarmouth Waterworks Company, occupies a former part of Ormesby Heath, to the south

Landscape types

Within this character area there are the following landscape types. See section two where more information can be found about the individual types.



of Ormesby Broad. The site today is run by the Essex and Suffolk Water Company with the broads forming a large reservoir isolated from the river system to sustain water quality. The Broad although isolated from the Broad navigation were once connected to the Bure by the Muck Fleet although contemporary accounts (Suffling, 1895 and Dutt, 1902) suggest this had become choked with vegetation by the late nineteenth century.

Like a number of other broads located in tributary valleys, the Trinity Broad is deep and have been excavated of peat to the maximum width of the valley. Although interconnected by water today, they are separated by uncut baulks of peat. Public access is quite limited although

two 'A' roads – the A1064 and the A149 cross the broads – both old-established crossings, allowing views across the open water. To the unfamiliar eye, the broads can look rather similar. This has long been the case as Dutt declared in 1902 that: 'having seen one [the visitor] may rest assured that he loses nothing by leaving the district without seeing the others.'

The area is generally heavily designated for nature conservation reasons. To the south of Filby Broad, Fleggburgh Common, now technically a Poors' Allotment, is an area of peat fen that has seen a continuation of traditional grazing and mowing regimes and a drier more heathy area towards the upland. The SSSI notification claims it to be 'one of the most

important unreclaimed wetlands in Broadland'.

Hall Farm Fen, Hemsby similarly designated, is a small area of species rich unimproved fen grassland with dykes grazed by cattle and

▼ *The area is surrounded by high grade arable land which forms part of the catchment for the water reservoirs.*
Image by Evelyn Simak – geograph.org.uk



▼ *Lily Broad is one of the smaller of the five broads.* Image by Rob Walker – geograph.org.uk





▲ *Alder carr woodland at the edges of the broads needs to be managed regularly to ensure that it doesn't encroach on the reed fringe edges. Image by Rob Walker – geograph.org.uk*



▲ *The soils on the valley sides, quickly change to sands and gravels which supports heathland vegetation. Image by Evelyn Simak – geograph.org.uk*



▲ *Development does encroach onto certain edges of the Broad which affects the local landscape character.*

horses.

The area once incorporated a number of Decoys with Decoy place-names mapped east and west of Ormesby Broad (Decoy Wood, Decoy Carr and Decoy Farm). The site of one is known which apparently had 4 arms or pipes and an island.

Ormesby Waterworks steam beam engine house



▲ *Despite the containment created by the carr woodland some development from outside the Broad area is visible. The number of turbines has recently reduced. Image by Alison Yardy*

was brick built in the Byzantine style in 1884 and now contains a Ruston diesel engine.

Topography and skyline

The area is a series of deep interconnected broads occupying a large tributary valley of the River Bure. The valley sides are very gentle rising

to around 4m OD.

The skylines are wooded and mostly undeveloped, with adjacent settlements heavily foiled by woodland. However at points to the north and north east (Ormesby Broad), turbines within the Somerton Wind Farm form skyline elements.

Views within the character area are framed and filtered by woodland and reed vegetation. Due to the density of this fringing woodland cover, there is very little visibility with character areas outside the Executive Area, although the Somerton Windfarm can be seen within Great Yarmouth district.

Geology and soils

The valley is predominantly peat directly adjacent to the upland whilst part of Ormesby Little and Filby Broad are sands and gravels.

Enclosure, scale and pattern

This is a landscape of small/intimate spatial scale due to the woodlands which fringe the area, although landscape scale varies according to the width of the broads in proportion to wooded valley sides. Valley sides are relatively gently sloping, rising to 4m OD, with the crests outside the Broad executive area. The valley floor is often no more than 500m in width although widens to around 1km at the confluence of the three broads which give the area its name.

There is a strong variation in terms of light and shade due to the mix of broadleaf (carr – lower ground/water's edge) and coniferous woodland

at the top of the slopes, and their visual interaction with the water. Further variation in reflectivity and visual interest is provided by the moving nature of the water in the broads and the Muck Fleet tributary.

The patterns in the landscape are created by a richly textured and complex mix of intricate waterways, open broads surrounded by reedbeds and clusters of carr and plantation woodland, with some smaller areas of fen. Only at the road crossings and settlement areas are these patterns noticeably disturbed.

Main features of land cover and use

Land Cover is mainly open water (broads) enclosed by fringe of reedbeds and carr and some coniferous plantation woodland. Drier heathland type vegetation can be found around Ormesby Little Broad. The Burgh Common area contains more open fen and some heathland.

The Broads retain a narrow fringe of reed but in general, areas of former reed and sedge beds have succeeded to carr woodland as traditional management practices have declined. There has also been deliberate plantation of coniferous woodland around the perimeter of the Broads during the nineteenth century. As a consequence the broads are almost entirely enclosed by woodland, screening the gentle valley sides and surrounding area.

The majority of land use in the area is unique within the Broads as it comprises of a reservoir and waterworks for the Essex and Suffolk Water Company. In addition there are some restricted



▲ Like the other Broads in the area they are reed and alder carr fringed. Image by Craig Tuck - geograph.org.uk

leisure uses, angling and sailing (for educational purposes at Filby only), some grazing, mowing and other nature conservation management and caravan, campsite.

Residential settlement can be found to a limited extent within the character area and tends to be linear in form along the A149 and A1064, whilst there is some well-preserved common edge settlement e.g. at Fleggburgh. Elsewhere settlement pattern is scattered with isolated single farmsteads on the edge of and just beyond the area. Some of these such as Manor Farm in Mautby have large scale sheds and are visually dominant. Other settlement types within the area include glass houses, horticultural areas, cafés and public houses.



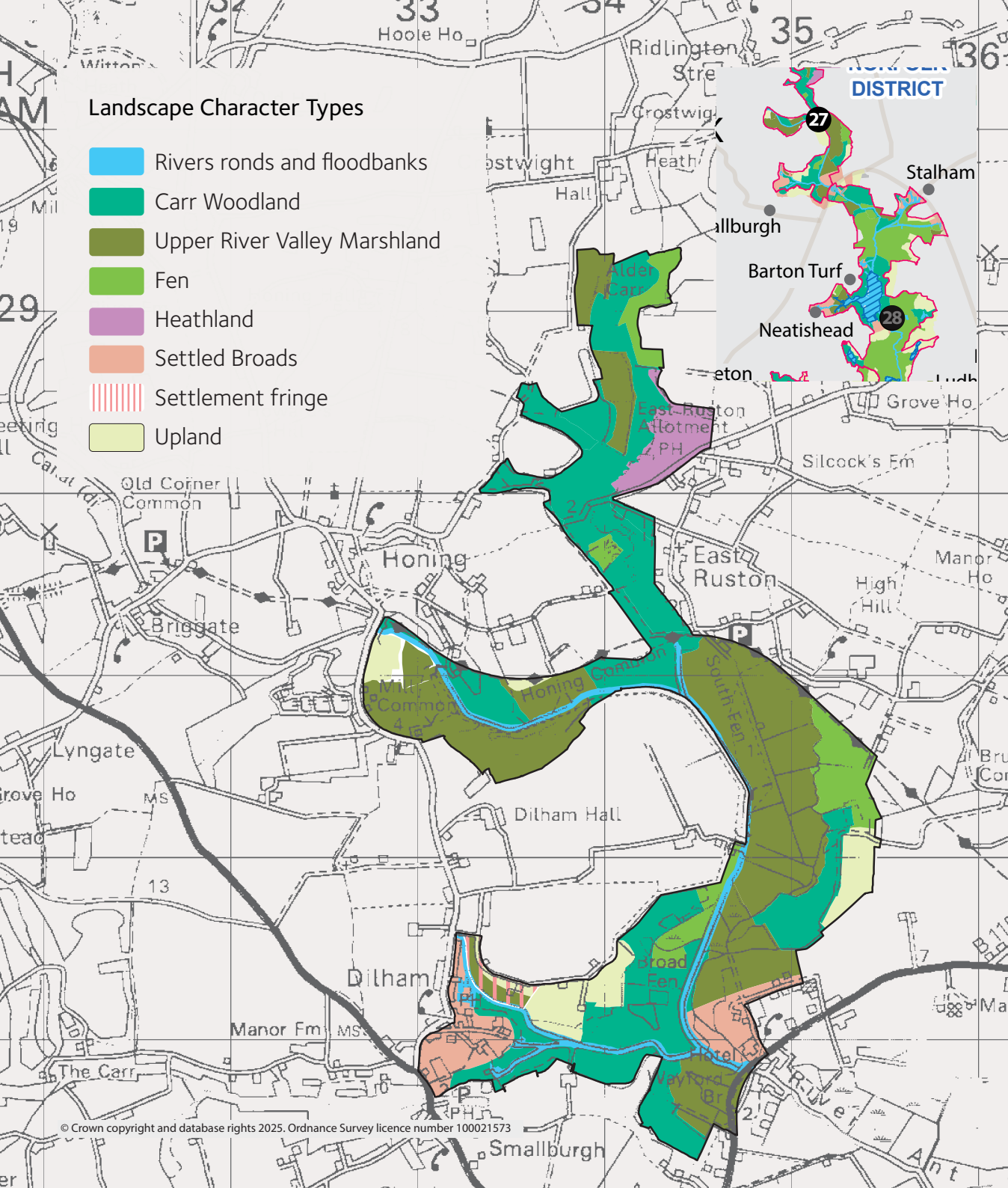
▲ Thatched earth-built cottages at (Flegg) burgh Common are typical of those once found at the edges of commons.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and enhanced. What follows are examples of local issues and opportunities.

Landscape – Although settlement is limited in the area, where it does exist it can impact on the tranquillity and naturalness of the area. Where new development opportunities are being pursued, care needs to be taken to ensure that proposals do not adversely affect the key landscape characteristics of the area.

Nature conservation – water quality is an issues for the Broads in part as a result of the adjacent farming activities. Initiatives are currently underway in relation to catchment management to help resolve these issues.



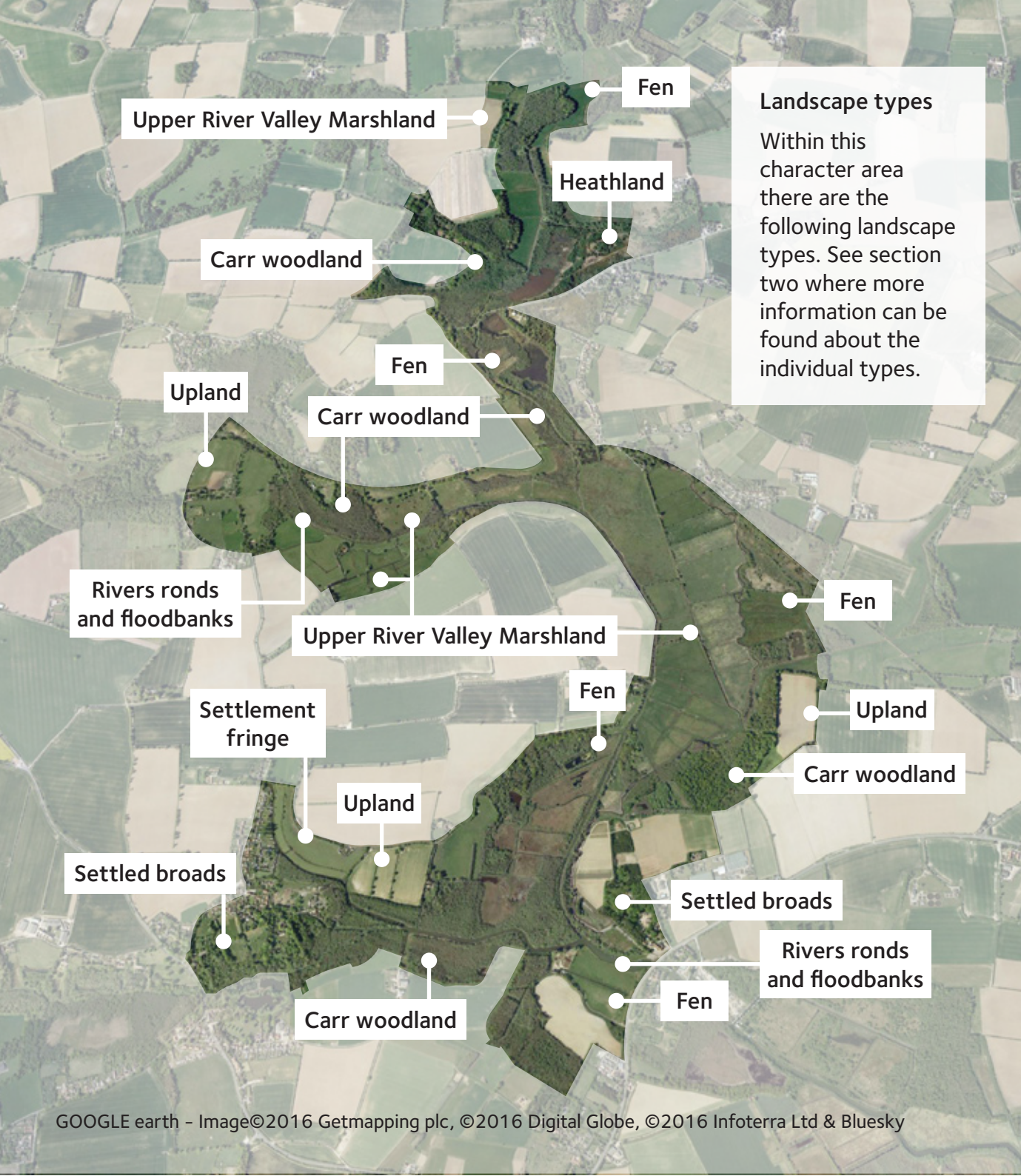
27. Ant Valley - Upstream Wayford Bridge

This area is the location of the North Walsham & Dilham Canal which was built in 15 months after an Act of Parliament in 1812. Prior to building the canal, the River Ant was navigable as far as Dilham Mill, which used Dilham Lake for its supply of water. When built, the canal was 8¼ miles long and had 6 locks. It ran from Wayford Bridge to Antingham Lower Bone Mill.

Why is this area special?

Away from the immediate vicinity of the roads, particularly the A149 which crosses the river at Wayford Bridge, much of this area is particularly tranquil with a notable absence of traffic noise. This is in part because Wayford Bridge creates a barrier to larger river craft with the limit of navigation just to the north of it. There has therefore been less pressure to accommodate the larger craft.

To the north of the Wayford Bridge the old course of the River Ant has been straightened and canalised in part, forming a section of the North Walsham and Dilham Canal. The canal had six locks, the first being at Honing, the only one within this area and now the extent of water access for canoes and small craft. The main function of the canal was to improve the navigation for wherry trade including those serving the series of watermills along the Ant from Dilham northwards. The canal suffered commercially and eventually closed, following the building of the Great Yarmouth to North Walsham railway. The disused route of that too



▲ *Tonnage Bridge: one of the remnant pieces of “infrastructure” on the North Walsham and Dilham.*

crosses this area and now forms part of the long distance Weaver’s Way footpath

The north of this area follows the Hundred Stream, a tributary of the Ant, as far as Alder Carr, Honing. To the west of the area is Dilham Dyke, part of a further tributary, which forms the parish boundary between Smallburgh and Dilham with an artificial cut known as Tyler’s Cut, built to serve the former Dilham brickworks, branching northwards.

A significant proportion of the area is designated as SSSI. Broad Fen is part of the Broads Special Area of Conservation and the Broadland RAMSAR designation. Potter’s Grove in Honing is classified by Natural England’s criteria as Ancient Woodland (replanted) the only official ancient woodland site within the Authority’s Executive



▲ *Where there is fringing carr woodland there is a greater sense of enclosure and views across this narrow valley are very limited.*

Area.

Topography and Skyline

This relatively small-scale part of the upper Ant Valley has a number of curving tributaries which lie at around 1-2m OD which branch off from the course of the Ant, which has been canalised.

▼ *Heathland found here adds to the richness of habitats within the area. Image by Lesley Marsden*



▲ *Carr (wet) woodland fringed section of Dilham Canal.*

The valley sides are slight and not always apparent with skylines formed by dense areas of valley floor carr woodland, or in the slightly more open stretch between Tonnage Bridge and East Ruston, by an interlaced pattern of field boundary hedgerows, arable fields and woodlands.

At East Ruston, some of the village properties (red brick and rendered) can intrude on an otherwise naturalistic and undeveloped skyline

whilst dwellings within Dilham form skyline elements in this part of the area.

The density of the carr woodland fringing the area means that views of adjacent landscapes are unlikely from much of the area, being essentially directed upwards rather than out. In the central part of the area around the disused North Walsham and Dilham Canal and north of Dilham where valley side, vegetation is less dense and the valley edges marginally more pronounced. Adjacent valley crests and farmland beyond the Executive Area can be seen however.

Geology and soils

This valley floor is predominantly peat bounded by sands and gravels at the valley sides.

Enclosure, scale and pattern

▼ *South Fen is one of the more open locations in this area allowing views to the arable land beyond. At the northern end of the Fen the spring time mixture of flag iris and rush make for interesting patterns and colour on the grazing marsh. Image by Stephanie Anderson*





▲ *Upstream of the low bridge the waters are quieter. Floating holiday accommodation is located in proximity to the Wayford Bridge hotel. Image by Evelyn Simak – geograph.org.uk*

This area comprises of small scale, upper river valley (valley floor width ranges from 250m in the northern tip of the valley to around 700m at the extents of navigation) and sinuous woodland fringed tributaries which give the area an often enclosed quality. Some variety can be found where the landscape opens out to areas of grazing marsh which is fringed in part by carr woodland.

The valley sides are low and gradually sloping, often going unnoticed due to the fact that they are masked by valley floor woodlands. The sides are more readily perceived in more open pastoral areas such as around Wayford Bridge

▼ *Urbanisation of the water's edge has occurred at Dilham through the provision of mooring and leisure facilities. Image by Nick Smith – geograph.org.uk*



and Dilham, where structural vegetation forms a backdrop rather than being drawn close to the water's edge. The valleys tend to crest around 10m OD, the majority lying outside the Broads Executive Area.

Much of the area has a wooded, shaded character, although variations are created by the mix of carr and areas of open marsh and fen, creating contrast in terms of colour, light and shadow.

This intricate mix of dense carr woodland, heathland, fen, open water, settlement and areas of open grazing including rush pasture creates a rich landscape mosaic, and much textural variation.

Main features of land cover and use

Land cover is notably mixed with large areas of open grazing marshland and heathland along with carr and plantation woodland, fen, upland, open water and settlement areas.

The area has considerable industrial archaeological interest as well as two sites of particular nature conservation importance: an area of fen at Broad Fen, Dilham and the heathland and fen of the Poors Allotment, East Ruston.

There are some small areas of open water at Broad Fen, Dilham and Anglian Water's reservoirs at East Ruston, however there are no extant broads within this area. There are however, at least three terrestrialised ones – Dilham is still mapped; another existed to the south of Broad Fen, Dilham and another at Honing Common

was mapped in the early 1700's.

Woodland cover is a feature of this area which includes the only ancient woodland site within the Broads Executive Area at Potter's Grove, Honing. The nursery site near Wayford Bridge also occupies an old woodland site – marked on Faden's Map as Stalham Wood. Otherwise, carr woodland is found throughout the area.

South Fen and North Fen – East Ruston includes a considerable area of what was formerly both wet and dry common land previously mapped as South Fen and North Fen. The management of the commons was detailed in 1909 by M.C.H Bird, a naturalist and Rector of nearby Brumstead parish, at which time peat was still being cut from the fen.

The East Ruston Poor Allotments, a large area of heathland and fen in the valley of the Hundred Stream, is essentially a relic of the common land to the north. The eastern part of the site has developed over sands and gravels producing acidic grassland and heath, while carr woodland

▼ *The A149 road bridge at Wayford Bridge forms the most significant piece of modern day infrastructure within the area. There is a loss of tranquillity in the area due to road noise and traffic movement. David Medcalf – geograph.org.uk*



has developed along the wetter area adjacent to the Hundred Stream. The site has been affected by water abstraction. A fire, in 1990 at King's Fen to the north of the site, burnt the unconsolidated top layers of peat revealing the pattern of old peat cuttings.

South Fen by contrast, whilst still an area of peat, has been grazed over a long period and is distinctive as a large area of grazing (currently for beef cattle) in this upper river valley location. The disused North Walsham and Dilham Canal marks the western boundary of South Fen here butting up against the contrasting arable upland to the west of it. Public access within the area is good with 'Tonnage Bridge' crossing the canal and providing a pedestrian link with Dilham.

There are a small number of settlements which tend to be linear roadside or common edge type settlements. The long boundaries between the wetter and common land areas has resulted in some settlement fringe activities, many as a result of annexing parts of adjacent land for gardens or leisure activities. The A149 road bridge at Wayford Bridge is the largest piece of modern day infrastructure in the area, although Tonnage Bridge and Honing Lock hint at a far more industrial era. A series of overhead wires cross the open marshes and the canal at South Fen, introducing clutter into the landscape.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's



▲ *The Silver Studded Blue butterfly can be found on the heathland vegetation at East Ruston (the male is blue, the female is brown). Image by Stephanie Anderson*

unique sense of place are conserved and enhanced. What follows are examples of local issues and opportunities.

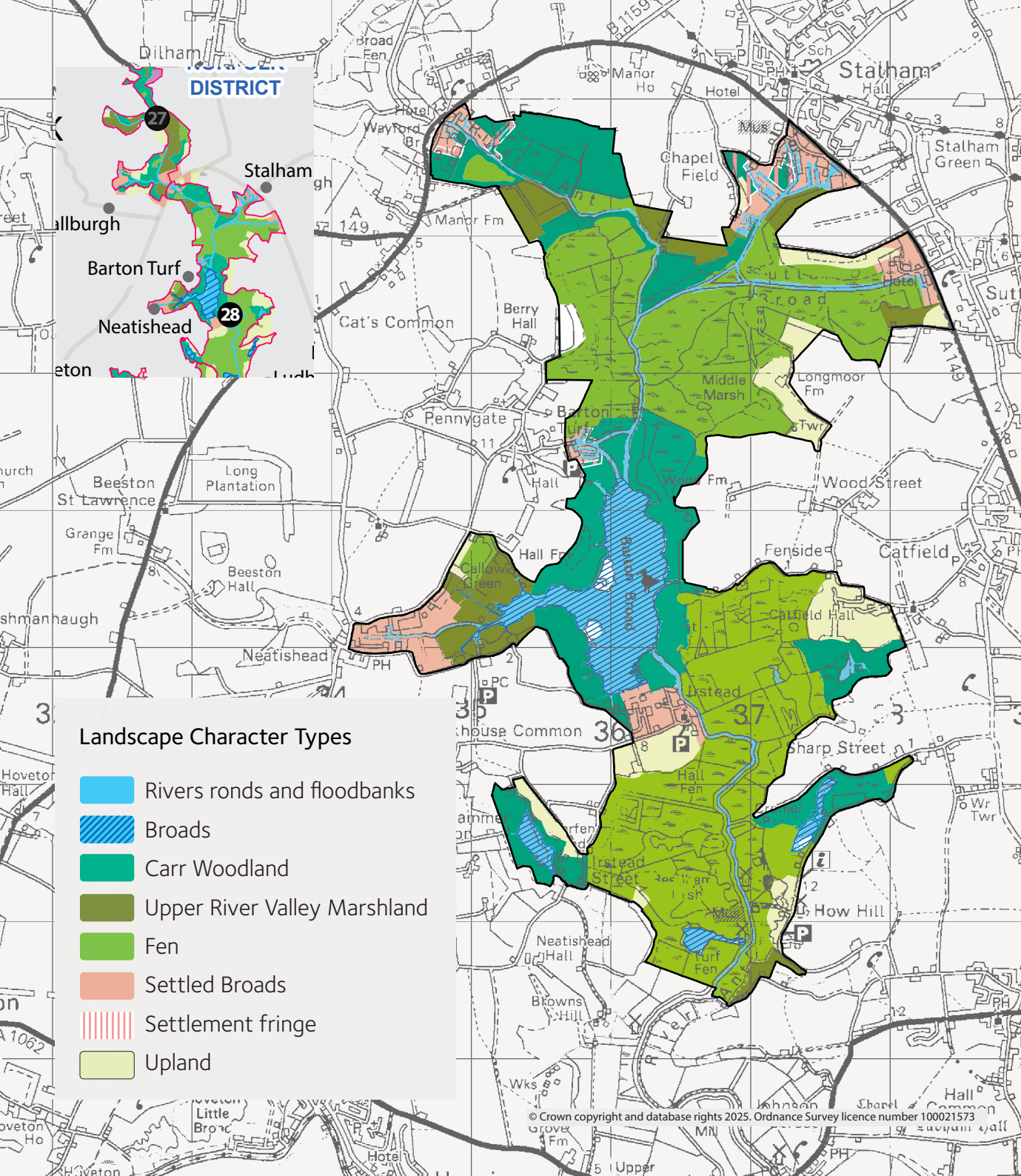
Landscape – The area does not generally suffer from the high levels of boat traffic and the sometime piecemeal and garish development associated with tourism. However river frontage development at Dilham (mainly associated with the provision of mooring for adjacent houses) has tended to introduce a significant amount of urbanisation to this locality. Some of the larger gardens in the area have been developed resulting in the loss of carr woodland.

Within these upper valley areas Nature Conservation Projects have been taking place which involve the “wetting up” of some of

the areas of grazing marsh to provide more extensive freshwater fen habitats in anticipation of increased incidences of saline inclusion into the Broads. This will result in changes in land management practices and vegetation types.

As with elsewhere in the Broads, the future for grazing marsh is strongly linked to the agricultural subsidy system, the long term future of which is currently unknown.

Historic Environment – There is an active society; The North Walsham and Dilham Canal Trust; who are involved in conserving and repairing a number of the structures along the canal having been successful in obtaining external funding for some of the project work.





particular note within this area is the How Hill estate one of best-known locations in the Broads. It was formerly the residence of Norwich architect Edward Boardman and family. How Hill comprises of a large thatched Arts and Crafts style house and gardens along with a marshman's cottage and windmills. Now it's a residential educational centre run by the How Hill Trust.

The marshman's cottage (Toad Hole) is a visitor information centre run by the Broads Authority who own and manage the wider estate.

A strong sense of tranquillity persists throughout the area, with the only intrusions being the A149 which crosses the area to the north at Stalham, and the Stalham boatyards and marina, and to a lesser degree the river crossing at Wayford and Wayford Marina. However, the rest of the area is lightly settled and often remote in character, with only small villages and hamlets around the valley, such as Barton Turf and Neatishead. These settlements often have specific physical and cultural connections to the river and broads system.

Broads are a significant landscape feature in this area. The scale of activity on these and the rivers is such that the waterspace here can be very congested in the summer months with holiday makers and local boating events. There is however, a complete contrast between the busyness of the waterways (during the summer months) and the limited land-based access where complete isolation can be found. The sense of isolation and tranquillity which can

be found on both on water (at certain times of the year) and land is compounded by the valley side carr woodland which provides an effective screen from much of the development (commercial and domestic) in the area.

There are a significant number of areas designated for their nature conservation value in this character area. Recent projects at Sutton and Catfield Fen by the RSPB have been aimed at eradicating invasive species and restoring the hydrological cycle to support the area's use as a nature reserve. The areas of Neatishead/Barton Turf (Limekiln Dyke Area) and Stalham Staithe are covered by built environment conservation areas.

Topography and skyline

This section of narrow, winding river and floodplain lies in a shallow valley at around 1

▼ *Barton Turf staithe. Historic staithees in the area often announce the presence of village settlement beyond.*



to 2m OD with gentle valley sides particularly to the east. The skyline is mostly wooded and undeveloped. The exception is at Stalham Staithe, where the backdrop is formed by settlement at Stalham, occasional historic wind pumps form skyline features within the area, for example at Turf Fen. Around Irstead, the surrounding predominantly arable farmlands on the valley sides lie beyond the Executive Area and form features of the skyline, due to gaps in valley floor vegetation.

The density of valley floor carr woodland often truncates views out from within this area, although at Irstead there are some views available of areas beyond the Executive Area. However, a combination of topography and boundary vegetation results in visibility rapidly receding. As such, only small parts of the North Norfolk District are visible from within the area.

▼ *The view of Turf Fen Mill seen from How Hill. One of the few viewing points in the area where the valley can be seen. The sandier soil leads to a different vegetation type to that found on the valley floor.*



▲ *Fringing carr woodland at Barton Broad filters views of the arable landscape or development lying beyond. Image by Katy Walters – geograph.org.uk*

Geology and soils

This area is predominantly peat with much of the area having been dug during the medieval period to create the broads of today. These areas of peat are bounded by sands and gravels.

Enclosure, scale and pattern

The scale of the central and lower parts of the Ant Valley varies considerably due to the mix of intimate, enclosed reed fringed broads (such as Sutton Broad) with more expansive areas of marsh, narrow carr woodland fringed stretches of river, and large wooded broads such as Barton Broad. These characteristics also broadly correspond to valley width, with a narrower valley (700–800 metres width) in the wooded landscape around Barton Broad and a wide valley floor (up to 2.5km width) at the confluence of the Ant and Sutton Broad, which is associated with more open, marshland areas.

Barton Broad is the second largest in the Executive Area, whilst the character area contains a number of others of much smaller scale, such as Sutton, Alderfen and Crome's. Enclosure is provided by carr woodlands which fringe much of the area, and by topography to the west beyond the Executive Area, where the valley crests at 10 – 15m OD. Valley slopes are rather less pronounced to the east and these are often not readily perceived due to the presence of carr woodland.

The mix of woodland cover, open water bodies and narrow reed edged broads creates considerable variation in terms of colour, light and shade within the area. Larger expanses of water such as Barton Broad introduce a sense of reflectivity, space and contrast. These areas allied to open fens, also create a mixed pattern.

The River Ant follows a meandering course through the valley and adds to this diverse landscape mosaic.

The settlement pattern is generally confined to the historic sites and small vernacular hamlets clustered around the tributary valleys, such as Neatishead and Irstead.

Main features of land cover and use

Land cover is a mixture of large areas of freshwater fen, large and small areas of open water (broads and rivers), carr woodland and some settlement and development. The adjacent upland is largely arable farmland and settlement areas. The land use for most of the area is a mixture of management for nature conservation purposes, some commercial reed and sedge cutting, and mainly water based

recreation. The settlement within this area is generally limited, clustering around the tributary valleys (Stalham, Sutton, Neatishead, and Limekiln Dyke) where the historic sites became established or at the only river crossing point at Wayford Bridge which although a modern bridge this is an ancient crossing point.

Much of this area however, is characterised by an apparent lack of built development, with farmsteads scattered loosely around the perimeter of the wetland. Irstead is unusual here as a waterside settlement, however this reflects one of the locations where the river has been re-routed up against the upland, creating a gravelly bottom to the river. To the north of this area there are boatyards and marinas of significant scale, at Wayford Bridge and Stalham. That at Stalham is particularly large and includes

▼ *Of the boatyards, marinas and moorings those at Stalham are the largest catering for large numbers of hire boats and create a significant landscape feature within the area. Image by Alison Yardy*





▲ *Carr woodland found around Barton Broad is situated on saturated peat soils. Image by Suse – geograph.org.uk*

a number of vast hangar like buildings and long rows of large holiday boats. At Sutton and Barton Turf there are smaller boatyards that have seen expansion in the recent past.

Barton Broad, the largest here (and second largest in the Broads area) was a bypass type broad with the river to its east. However the river has been re-routed at some point in the past to pass through the broad. Carr woodland, although a longstanding feature to the south west of the broad, has become established around much of the perimeter, albeit very thinly in places, framing the large expanse of water. Sutton, Alderfen and Crome's Broads are all located in minor side valleys. Sutton Broad, although once a considerable size has shrunk from its former expanse, apparently since the early 1900's, and is now little more than a wide channel surrounded by floating fen vegetation.

This area has seen good survival of traditional staithe buildings. Of particular note is the fine grouping at Stalham Staithe reflected in its

Conservation Area status. An imposing granary building also stands adjacent to the A149 at Wayford Bridge (although partially rebuilt in modern Fletton bricks). The only significant area of residential development in this Character Area is around Lime Kiln Dyke, part of which forms the parish boundary between Barton Turf and Neatishead.

The drainage mills in this area tend to be less obvious in the landscape due to lack of expansive views. The most visually obvious include 3 around How Hill – Turf Fen; Boardman's; and Clayrack Mill which is the relocated Hollow Post Mill from Ranworth. Hunsett Mill at Stalham holds a National design award for architecture for its residential extension.

▼ *Hunsett Mill at Stalham on the Rver Ant.*



▲ *House owners that have water frontage properties often urbanise the water front. The use of quay heading removes the natural bank*

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and enhanced. What follows are examples of local

issues and opportunities.

Landscape – Overall the condition of this area appears positive with a good sense of unity, perhaps only interrupted by the scale of the boatyards and marinas at Stalham. Opportunities to integrate this commercial area more effectively with the open countryside could be considered.

In the main the area is tranquil and feels remote. Future development either domestic/commercial/recreational on either the river or the broad edges should be designed to conserve this sense of isolation and minimise urbanisation.

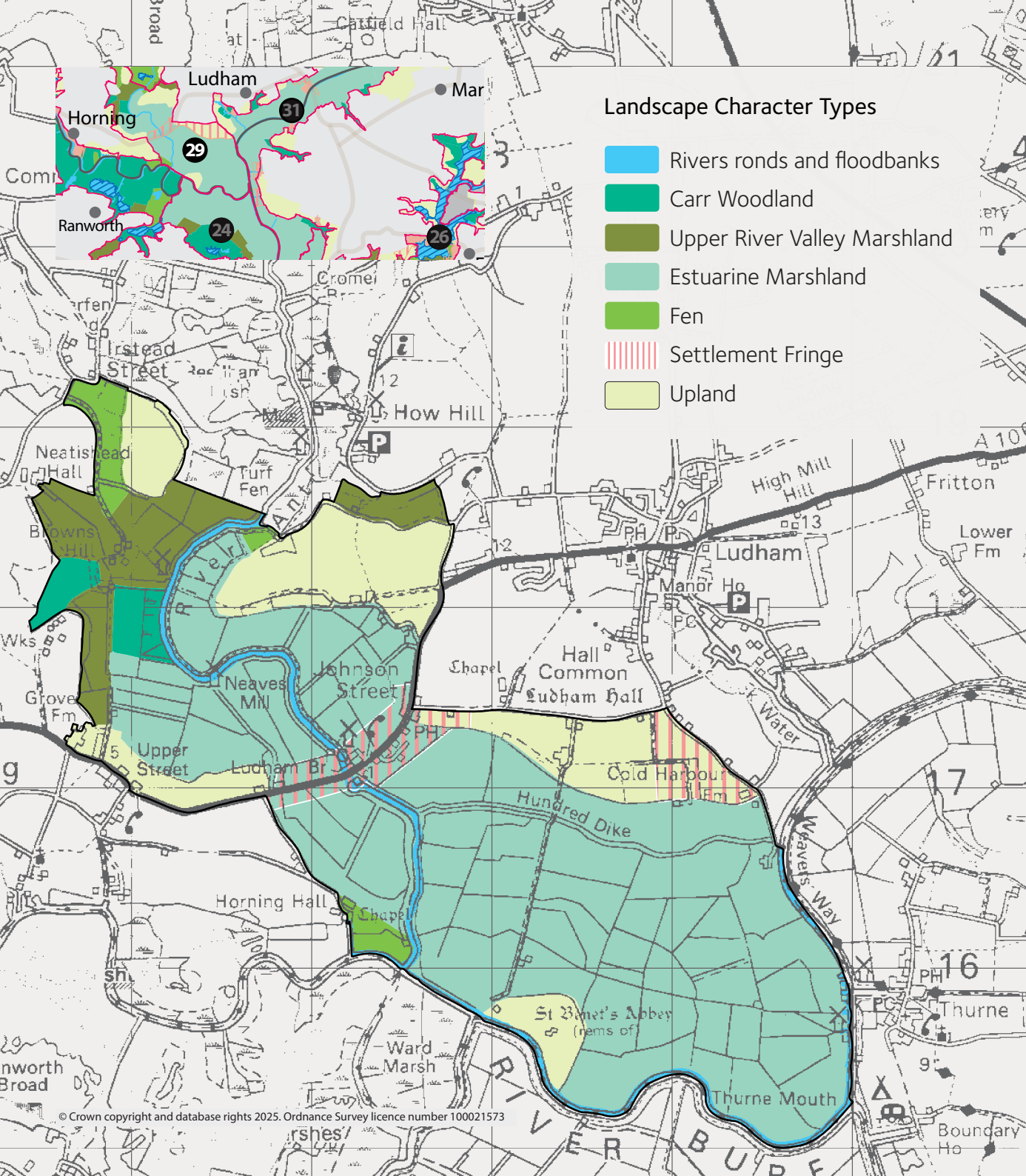
▼ *The species rich fen meadow within the Broads is often managed using careful grazing regimes. Image by Evelyn Simak – geograph.org.uk*



▲ *Houses by the River Ant viewed from Wayford Bridge. Image by Evelyn Simak – geograph.org.uk*

▼ *Drainage pumps are a feature of the area but because of the extent and location of carr woodland and scrub in the area they are not as obvious in views as those on the grazing marshes.*





29. Ant/Bure - Ludham, Horning and Neatishead Marshes

The area contains an important historic site in the monastic precinct and remains of St. Benet's Abbey with nearby Horning Hospital as an associated site.

The scheduled St Benet's Abbey site, the only pre-conquest Benedictine foundation in Norfolk, is sited on an 'island' of higher ground called Cowholme, along the River Bure. A good series of earthworks survive along with the remains of the gatehouse (with an 18th century drainage mill built into it) and parts of the perimeter wall and church. A causeway linking the site with the scheduled medieval Horning Hospital building is still clearly visible.

Why is this area special?

This area, which includes parts of the Rivers Ant, Bure and Thurne, is a transitional zone between types of landscape, habitat and land use. Its character marginally changes from north to south. In the northern part of the area, the marshland around Ludham Bridge across which the A1062 is routed, feels more contained as the low valley sides are clearly visible and as one of the few river crossings in the Broads, introduces traffic and movement into the marshland landscape. Towards the south of the area where the river valleys converge and the valleys widen out, more expansive views are available with the valley sides appearing very distant. In this southern section away from the traffic noise a real sense of isolation can be experienced.

The dyke pattern on St. Benet's Level is distinctive for its survival of ancient curvilinear dykes contrasting with the more rectilinear drainage pattern of the South Walsham/Upton marshes to the south. This older pattern of drainage survives because the site was privately owned and drained from an early date, rather than common land enclosed by parliamentary act. The Hundred Dyke is thought to be a former course of the River Ant. In addition to Cowholme, there is a further 'island' of

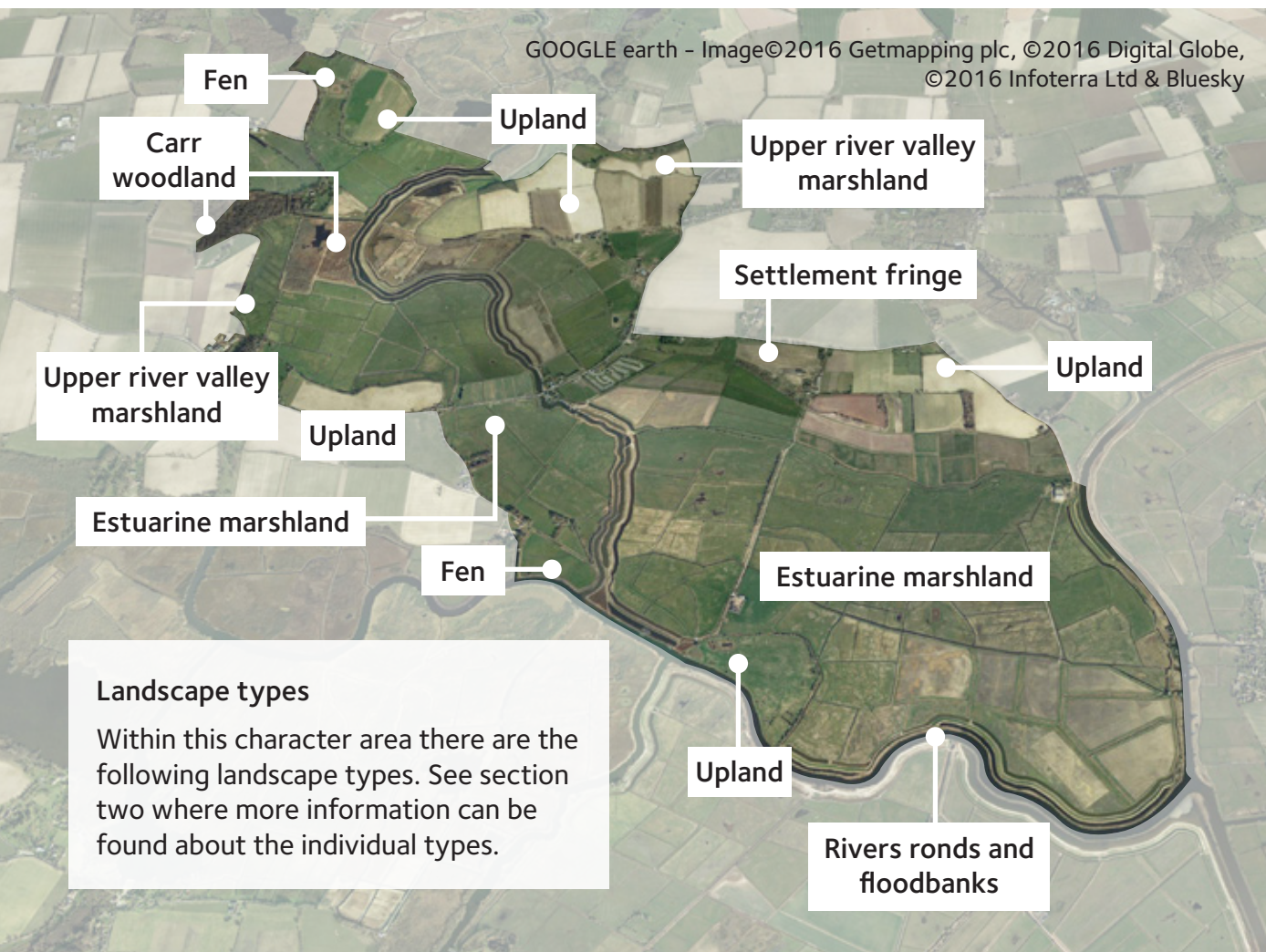
high ground within this area at Neatishead formerly mapped as Bisley or Bistley which was subdivided into a number of hedged fields. The 'island' now appears to be one large arable field.

Drainage windmills are a feature of this area. That built into St. Benet's Abbey gatehouse, is one of the oldest surviving mills in Norfolk. The restored St Benet's Level Mill, links visually with Thurne Dyke Mill on the opposite bank and views of other mills down river along the Bure.

Two brick tower mills also survive to the north of Ludham Bridge one of which was converted to provide a reinforced lookout for the home guard in the 2nd World War.

There are two former ferry crossing points in the area. The first was from the site of the Chequers Inn, the last habitable building in the precinct of St Benets Abbey, across to South Walsham Marshes and the second between a lost marshman's house to the north of the St Benet's Level Mill and Thurne Dyke.

▼ *John Sell Cotman (1782 - 1842) was one of a number of notable British artists who have found inspiration in the ruins of St Benet's Abbey with its later very different use. Image courtesy of Norfolk Museum Service*





▲ *The scheduled monument of St Benet's Abbey stands on a "holme" (a slightly raised area of land) within an area of grazing marsh.*

The winding rivers in this area are very popular with recreational boaters and can become a little congested during the summer period especially around the moorings and boatyards at Ludham Bridge. As the two remaining trading wherries in the area are moored in the vicinity, it is not unusual to see their sails along with other craft, passing through the grazing marshes. A somewhat surreal sight as at ground level the rivers are not always evident in views.

The area is relatively well served by both public rights of way and permissive routes. Recently a new public right of way was designated to connect the truncated restricted byway at Horning Hall to the A1062.

Topography and skyline

This is predominantly an area of open level low-lying marshland located at around -1m to -2 m OD. The adjacent valley sides to the north and west are low rising up to around 5m OD but visibly mark the transition to upland. The general impression, however, is of an open, exposed marshland landscape with wide, open views to simple skylines, with horizons formed by arable and mixed farmlands outside the Executive area, and by distant woodlands.

Other skyline features are the prominent ruins of St Benet's Abbey and a number of drainage mills both within and external to the area. Large buildings on higher ground, such as large agricultural sheds and the buildings at an industrial site near Acle and on the Repps bank of the River Thurne form some of the less attractive skyline elements whilst the Somerton

wind turbines are prominent in some views. These have reduced in number recently as the original turbines were replaced with more efficient models.

The RAF Neatishead complex, although outside this area, is a feature to the west with the largest elements visible from within the area.

Enclosure, scale and pattern

This area is defined predominantly by the low lying, open and expansive grazed marshes, which presents a considerable contrast with the more intimate and wooded central and upper Ant Valley to the north.

At St. Benet's Levels the landscape is of large scale, with the valley being very broad in width due to the river confluence (valley width in this

▼ *The landscape patterns in the area have been radically altered as a result of the Broadland Flood Alleviation Scheme. Some of these areas will be backfilled with dredged material. Image by Mike Page*





▲ *The area lies at the confluence of the Bure, Thurne and Ant rivers with the valley sides lying at a distance. Grazing marsh is the predominant land use. Image by Evelyn Simak – geograph.org.uk*

area is approximately 2km).

The land rises slightly at St Benet's Abbey and causeway, creating a low but distinctive ridge in an area which otherwise largely lies at below 0 AOD. Localised enclosure is created by the flood banks in the area. Elsewhere in this area at both Horning and Ludham between Blind Land and Turf Fen Lane, the upland is almost a peninsula jutting into the wetland. In these instances the valley sides are more pronounced and good vantage points over the adjacent valley floor are

▼ *At the northern end of the area the valley floor narrows and there is a greater sense of enclosure. Image by Katy Walters – geograph.org.uk*



▲ *To the south of the area some small holiday chalets can be found opposite Thurne Dyke. Drainage mills and sailing boats are both a feature of the area. Image by Tom Mackie*

available (notably to the north of the A1062 and along the Blind Lane track towards the River Ant).

To a degree, context and containment is provided by the carr woodlands at Upton Fen to the south, (LCA 24) and, at greater distance, by the carr fringed Trinity Broads (character area 26) and woodlands around Hickling Broad to the north (LCA 30).

The wide, open marsh landscape is relatively limited in variety in terms of colour, light and shade. But some contrast and a sense of reflectivity is provided by the confluence of the Rivers Thurne, Bure and Ant and the bank side vegetation, plus the parallel soke dykes of the Ant.

The patterns in the landscape have changed significantly in the past few years as the Flood Alleviation Scheme which has seen the consolidation of the flood banks in the Broads

has seen the excavation of some very wide soke dykes to "win" the necessary material for the bank improvements. Elsewhere, there are a significant number of old curving dykes surviving on the St Benet's Level. The remaining area has a more rectilinear drainage pattern. Adjacent upland areas have generally lost all field boundaries barring those along the roads.

Main features of land cover and use

The bulk of the area is estuarine marshland which is predominantly grassland with pockets of arable conversion and further arable land (formally heathland) on the upland. There is also some carr woodland at Horning and Neatishead. Land use is a mix of grazing formally for dairy cows but now in the main for beef cattle.

Settlement in the area is generally subservient to the wide expanses of marshland and comprises of isolated cottages and farmstead dotted around the roads and tracks along the

valley sides. The exception to this is a small linear hamlet in Johnson Street, Ludham, which connects to the area around Ludham Bridge where a series of leisure related sites can be found which include; a small boatyard, marina, a seasonal shop and restaurant, whilst the riverbanks provide popular mooring spots.

On the edge of Horning Marshes to the south of the bridge is a complex of holiday cottages and to the north of the bridge is a caravan and camp site and further along, The Dog public house with caravan/camp site. Both are quite well screened. These various uses are generally low key with none of the elements particularly dominating the area.

Between Hall Common Road, Ludham and the wetland edge is the former Ludham dry common. The easterly part was later used as a tip and is now home to parish allotments and a small new plantation. The remainder is under arable cultivation although the various access tracks exhibit heathland type vegetation.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and enhanced. What follows are examples of local issues and opportunities.

Landscape – the changing fortunes of the dairy farming industry over the past few years have been reflected in the land use of the grazing marsh in the area. Some land owners and tenant

farmers have now completely switched farming interests whilst others rely on beef cattle grazing. Any future changes to the agricultural subsidy system have the potential to have profound effects on the landscape of the grazing marsh areas.

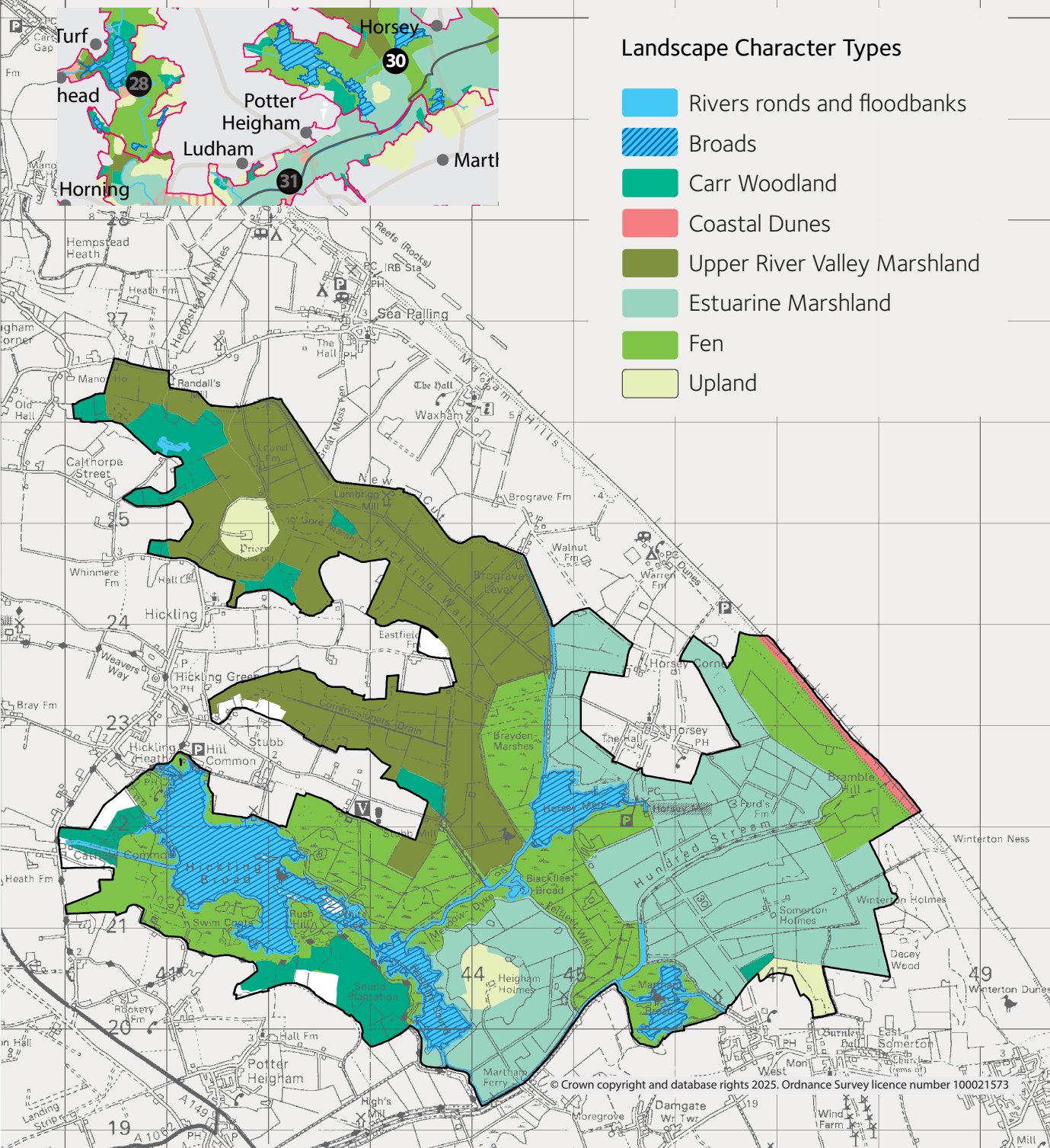
The most significant changes to the flood banks and soke dyke networks as a result of the Flood Alleviation Scheme have now occurred and from the raw state during the construction work, vegetation has become quickly re-established.

Large areas now await backfilling with dredged material.

The simple, in the main uninterrupted, skylines which frame the area contribute to the sense of isolation and tranquillity of the area. Much of these are located outside the Broads executive area. Planning applications for development within neighbouring districts need to be carefully assessed to consider what effect they may have on the setting that they provide for the Broads area.

▼ *Ludham Bridge is the focus for a range of leisure developments and services.*





30. Upper Thurne Open Marsh, Broads and Fen

Despite the all of the changes to the landscape in this area, perceptions of wilderness and naturalness associated have endured, perhaps rivalling Halvergate for its sense of being 'away from it all'.

Why is this area special?

This character area is, after Halvergate (LCA 19) the second largest character area in the Broads. This is a vast area of open and exposed marsh, fen, broads (including the largest of the broads) and areas of marginally higher ground with areas of carr woodland towards the upland edges to the west. It also includes a length of coastline with sand dunes. It is an area that has seen a series of quite radical alterations to the landscape over time yet has long been perceived as a rather wild and natural place. Folklore has also perpetuated many of the notions of this area - flooding, shipwrecks, drownings and smuggling, coastal erosion & lost villages - along with the rather infamous Brograve family of Waxham Hall, have all provided rich material.

This area does not follow a typical upper river valley pattern. The River Thurne is believed to have once flowed out to sea along the line of the Hundert Stream between Horsey and Winterton. The old course of the river is still visible as a wide, rush filled depression. Much of the floodplain however is located to the north, extending well beyond the Broads executive area boundaries.

Landscape types

Within this character area there are the following landscape types. See section two where more information can be found about the individual types.

Upper river valley marshland

Carr woodland

Upland

Carr woodland

Broads

Fen

Broads

Fen

Carr woodland

Upland

Broads

Estuarine marshland

Carr woodland

Rivers ronds and floodbanks

Estuarine marshland

Coastal dunes

Fen

Broads

Fen

Broads

Upland

Estuarine marshland

Carr woodland

GOOGLE earth – Image©2016 Getmapping plc, ©2016 Digital Globe, ©2016 Infoterra Ltd & Bluesky

The alterations to drainage, has been partly through efforts of large landowners such as the Brograve and Rising families, partly through Enclosure Acts and latterly the combination of farmers and the Internal Drainage Boards. Faden's Map shows drainage mills already in this area by the 1790's (one is Brograve Mill dated

The sites of a number of small broads have also been drained since the early 1800's. Faden's and Bryant's Maps show now lost broads at Hickling, Horsey and three at Somerton. Hickling although still the largest of the broads, was reduced in size as part of an enclosure scheme. This was achieved by embanking across the long watery arms that extended out from the main body of water. The Waxham New Cut was developed in 1820's or 30's between Horsey and Lound Bridge, Sea Palling, partly extending navigation and partly as a main drain. In the second half of the 20th century both the Brograve and Somerton Levels have been reorganised and deep drained. In both cases detailed topographical data shows the land has become notably lower than surrounding areas.

Much of the area is designated for its nature conservation value and West Somerton is a Conservation Area (designated heritage asset). The area is characterised by its open, exposed and often remote, tranquil character apart from a small area to the south around the coastal settlement of Winterton-on-Sea and



to the west along the A149 deemed to have an intrusive influence although this is barely perceptible once away from the edges and due to the small proportion of the area affected. The area is also crossed by the Horsey Road in the east and by the minor Sea Palling Road – Hickling Road in the north-west. Wind turbines are apparent in certain views introducing a 20th century influence to the area.

There is scant settlement in the area other than at West Somerton and Hickling. However, a limited number of chalet developments can be found along the river and broads including a grade II listed Eel sett with eel catcher's hut and a Boulton and Paul riverside bungalow in near original condition on Candle Dyke. On Hickling, Whiteslea Lodge – former shooting lodge of Lord Desborough in 1930's and is now grade II listed. It has a remarkable interior feature of long friezes painted by the bird artist, Roland Green.

Topography and skyline

This is a level low-lying area of floodplain to the north and east of the remnant Thurne River but includes a number of "islands" or holmes and peninsulas of marginally higher ground largely surrounded by wetland. The area is so low-lying that valley sides are generally not perceptible other than to the south where they rise to around 20m OD. The Somerton Marshes and Brograve Level are particularly low lying at around –1 to –2 m OD.

A distinct valley side to the south of the line of the Hundred Stream runs from Martham towards Winterton, rising quite steeply in places to around 20m OD and allowing views across the area from this elevated position.

It is a landscape of mainly undeveloped skylines – coastal dunes at distance to the north east and the wooded backdrop of Hickling Broad to the west, although part of the (arable farmland)

◀ *At eye level the somewhat complex land drainage patterns around Hickling are obscured by the very simple vegetation and water features.*

southern skyline is settled in character due to the presence of West Somerton and Martham on and adjacent to the area boundary.

Historic drainage mills such as that at Horsey, form locally prominent skyline elements, although more recent tall structures such as the Somerton Wind Farm are also apparent. The more elevated ground south of Hundred Stream affords distant views across the character area, as do the tops of the dunes north of Winterton (views west towards Horsey Mill and Mere). Gaps in the carr woodland in the west of the area create framed views into the adjacent North Norfolk District Council area.

Geology and soils

The floodplain is a rather complex mix of peats and silty clays interspersed with islands of glacial (sands and gravel) deposits. This mix of soils and their subsequent land use and management form the landscape type – upper river valley marshland.

Enclosure, scale and pattern

This is a very broad, mostly flat valley floor of a minimum width of approximately 2km, which appears to have historically marked the mouth of the Thurne. The valley floor is of such scale that the valley sides are generally not apparent,

although south of Hundred Stream along the eastern edge of the area the land rises to create a distinct valley side. There is little sense of enclosure within the area except along this edge. The sand dunes on the coast provide some local sense of enclosure and separation from the sea at the north eastern end of the area. The western most extents of the area are defined by blocks and bands of carr woodland.

At eye level it is a large scale, simple landscape of big skies, with reflectivity and variation in light created by expansive, reed fringed water bodies such as Hickling Broad and Horsey Mere. On plan however it is a different picture as nature conservation schemes following on from the newly aligned flood banks and allied

to extensive dyke works to wet areas up, create new patterns on the marshes. This work continues with recent projects at Hickling to reconstruct historic reedbed footprints and restore vegetation.

The mix of grazing marsh, arable cultivation, reed ronds, rush and sedge pasture, blocks of carr woodland and large broads and meres, plus coastal marsh, dunes and beach north of Winterton creates a colourful landscape with much textural variety.

Settlement pattern is mostly comprised of small farmsteads, with hamlets and villages mainly located either at the edge of the area (West Somerton) or just beyond the boundary, for example small linear villages such as Hickling.

▼ *Hickling is the largest of the Norfolk and Suffolk broads and it is surrounded by reedbed. Reed and sedge is commercially cut in part of the Thurne area supplying material for thatched properties.*



Main features of land cover and use

Land cover is a mixture of marshland used both for grazing and some arable, broads, reed and sedge beds (managed for both commercial and nature conservation purposes) and carr woodland. Settlement within the area include leisure, recreational developments and small areas of housing and farmsteads which are located on the “islands” and peninsulas of higher ground including the north-western corner of Hickling Broad and the head of Somerton Dyke.

Where settlement exists the landscape has the perception of being rather more “tamed”. There are a number of isolated farmsteads lying within the coastal plain area outside the executive area. The area within which these lie with the

▼ *Horsey Mere is reed fringed much like Hickling. A significant amount of reed and sedge is cut for thatching material in this area.*



▼ The area is home to an extraordinary landscape feature created by ecologist and artist Marietta Pallis (1882–1963) on Long Gores Marsh Hickling in the form of a double headed eagle, a Greek imperial symbol (she was of Greek decent). The feature was used as a swimming pool in her lifetime and became the final resting place for her and her long-term companion. Image by Mike Page



aforementioned farms, have a direct visual connection with the Broads landscape and can influence the local character.

Openness is a particular feature of much of this area, with the large areas of near continuous open fen and the largest area of sedge beds. Scrub encroachment of the fen areas appears less of an issue here than in other valleys, thought to be partly due to the saline



▲ Horsey Mill lies at the end of a mooring dyke which is connected to the Horsey Mere. Faden's map shows drainage mills already in this area by the 1790's.

influence. As a result the broads in this area are generally surrounded by open fen rather than carr woodland as they usually are elsewhere (Calthorpe Broad excepted).

Although there is some recreational/leisure development, influences of tourism are also less here than in many places as land-based access is quite limited and boat traffic is restricted upstream of Potter Heigham Bridge by the low

▼ Settlement in the area is focused around Hickling (left) and West Somerton Staithes (right).





▲ *Hickling is the location of a series of thatched “wet” boatsheds which are particular to this area.*

arch of the medieval structure.

Despite the all of the changes, perceptions of wilderness and naturalness associated with this area seem to have endured for a number of reasons. Proximity to a dangerous and vulnerable stretch of coastline (where the coastal dunes landscape type can be found) is one factor, along with the absence of any significant built development in the area (although wind turbines have recently become part of the wider landscape). Much of the land has been part of sporting estates or larger estates,

and later nature reserves, creating a certain amount of protection from fragmentation and built development. Some landscape change is occurring within the areas driven by two aims. Firstly nature conservation organisations have taken the opportunity to have a more naturally functioning floodplain within land in their ownership and secondly the Broads Authority have reinstated a large reedbed at Duck Broad to what it would have been like in 1946 based on aerial photography.



▲ *On the coastal plain a number of farmsteads can be found which can be significant features in the landscape. Image by Evelyn Simak - geograph.org.uk*

Drainage mills are a feature in the landscape but due to the vastness of the area not particularly obvious other than at Horsey. Other mills structures include Randalls Mill at Ingham; Stubb Mill at Hickling which includes a house and small outbuildings; Lambridge Mill and Steam Engine House ; Brograve Mill with a date stone of 1771 barely legible. Other historic features includes duck decoys, the first one in the Country was thought to be at Waxham. A mystery surrounds Heigham Holmes which is thought to have been a secret airfield used by Special Operations Executive Lysander aircraft during WWII.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and enhanced. What follows are examples of local issues and opportunities.

Landscape – This character area is particularly vulnerable to change due to its proximity to the coastline, sea level rise and the salinity intrusion.

The lack of settlement, 20th/21st century visual intrusions and quiet waterways all contribute to the area's sense of tranquillity. Development of any scale or type needs to be carefully assessed to ensure that this characteristic is not impacted upon.

The main landscape and nature conservation issue currently affecting the area is one of deep drainage in the Brograve Level with resultant ochre problems. Both Brograve and Somerton Levels also appear to be shrinking.

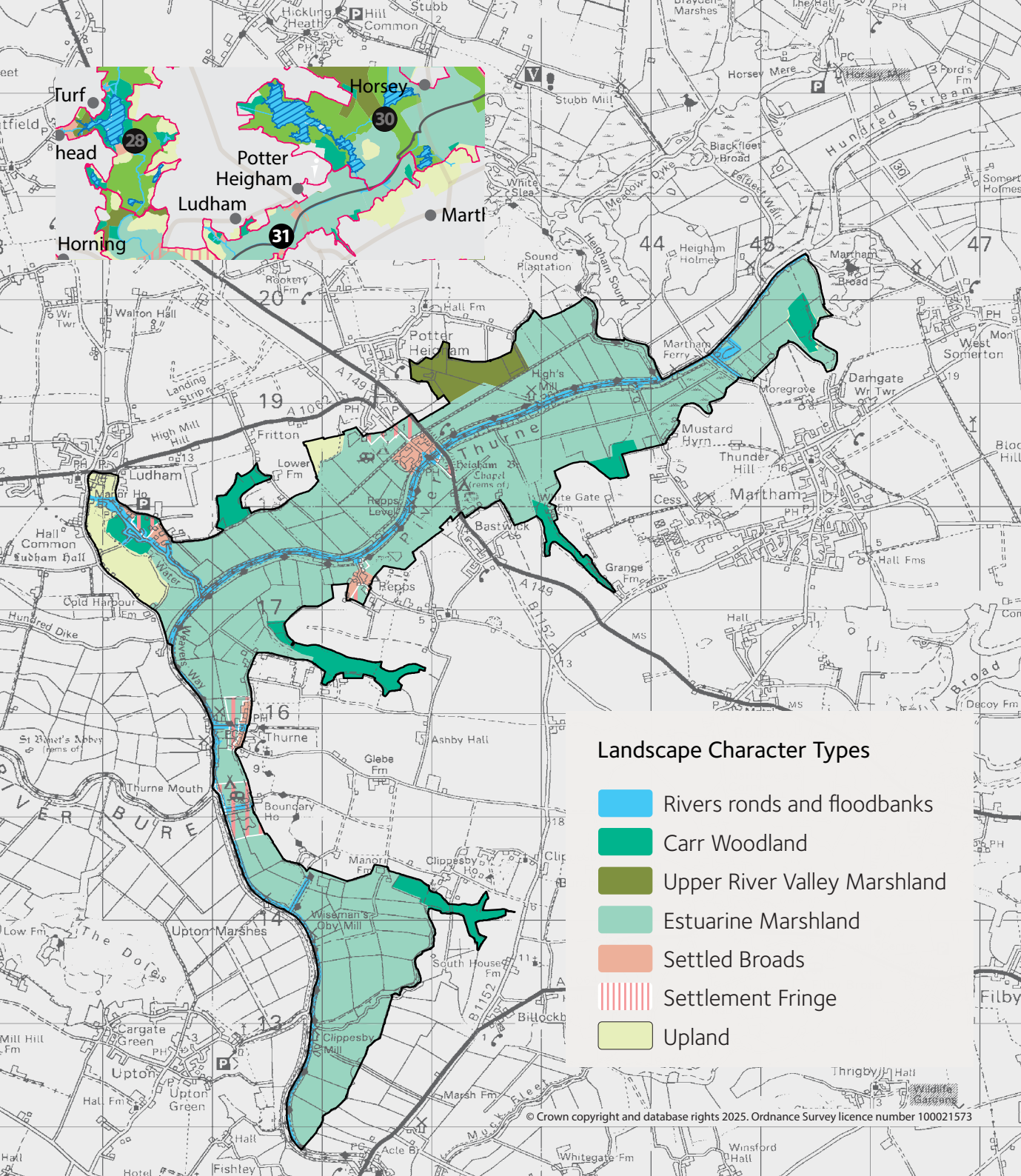


▲ *Brograve Mill by Waxham Cut has fared badly in terms of maintenance to the structure.*

► *Folklore has perpetuated many of the notions of flooding, shipwrecks, drownings, smuggling, coastal erosion & lost villages in the isolated coastal area. Only the sand dunes provide protection from the worst of the sea storms.*

◄ *The reed beds between Duck Broad and Heigham Sound are being re-established to how it would have looked in 1946, based on aerial photography to provide space for dredged material and ultimately wildlife. Image by Mike Page*





31. Thurne and Bure East Marshes

A railway line once passed through this area and a bridge was constructed across the River Thurne upstream of the medieval road bridge. The line was part of the Midland and Great Northern Railway which was known locally as the “Muddle and Get Nowhere”.

The railways contributed to the tourism boom in the Broads as they used to bring thousands of holiday makers to the area. Local people still remember the time steam trains passed through, occasionally causing field fires as burning coals escaped the locomotive and set crops alight. This particular line was closed in 1959 and the bridge demolished in 1960. A road bridge to accommodate the A149 has subsequently been built.

Why is this area special?

Away from the two road river crossings at Potter Heigham (the older of the two is a Scheduled Monument) the area exhibits a relatively strong sense of tranquillity. However, it is an area that feels rather more tamed and smaller in scale than the adjacent LCA 30 and 29 as the area is rather more inhabited and accessible being well served by footpaths including the long distance Weaver’s Way.

The marshes were generally parish wet common until the enclosure acts of the early 1800’s which saw the establishment of the drainage mills here and the organised rectilinear drainage pattern. The Ludham and Potter Heigham marshes, which have remained in grazing use,

are recognised as one of the richest areas of traditionally managed grazing marsh and dykes now remaining in the Broads and some are designated as SSSI.

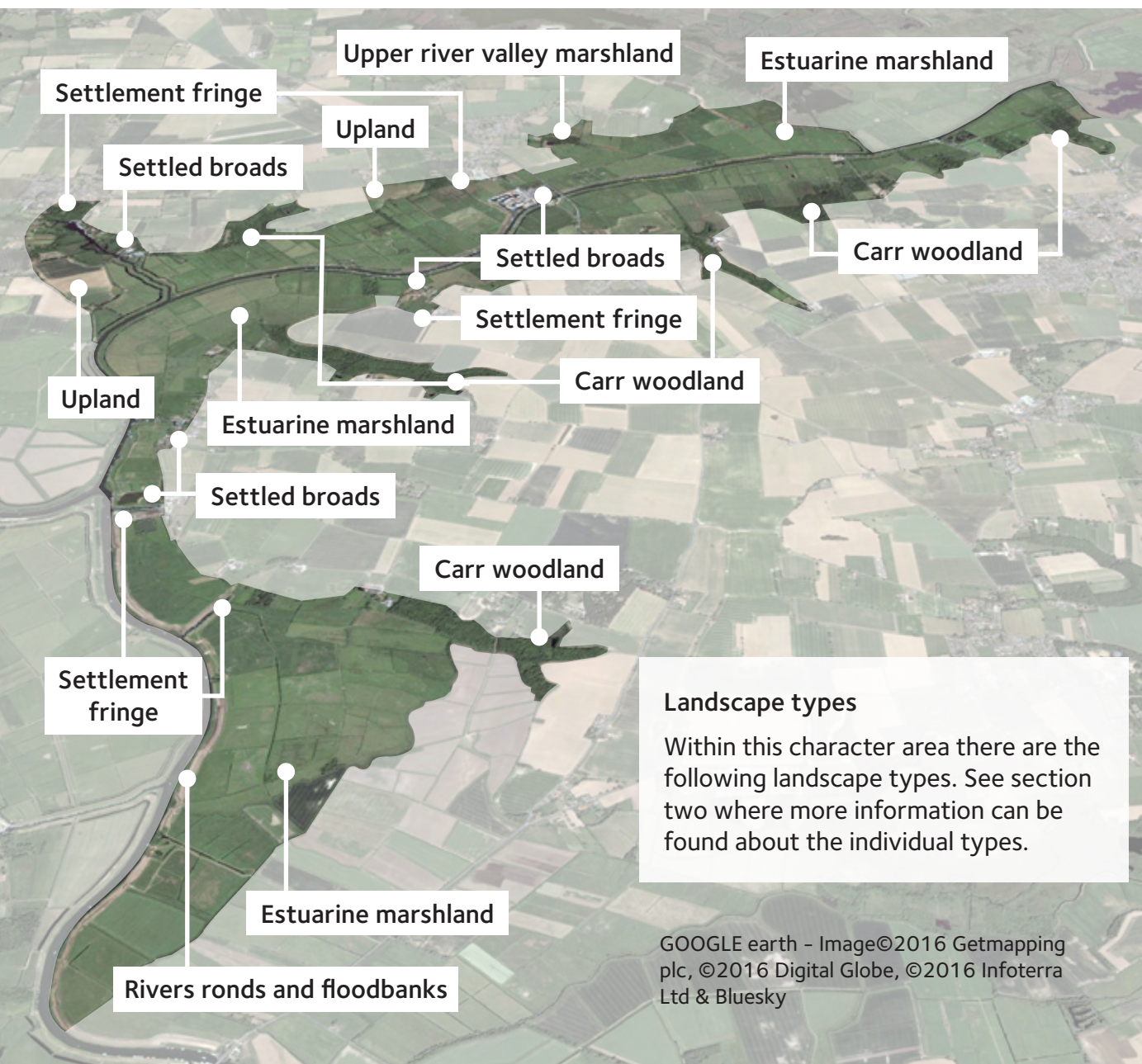
Timber riverside chalets of the interwar years are a particular feature of this area. These are generally constructed from lightweight materials such as timber and corrugated iron, usually

with a small veranda. The River Thurne chalets tend to be of rather simpler style than many of those found in Horning and Wroxham but still displaying considerable variety.

Waterside chalets are part of the unique Broads landscape. Most of the chalets we see today stem from holidaymaking in the Broads from the 1880's to the 1960's. They are a distinct group of buildings which significantly contribute to our understanding of the history of the Broads. In the late 1800's, if you had some disposable income, what better way to dispose of it than on a waterside chalet in the Broads?

A significant number of drainage windmills survive in this area at Martham, Potter Heigham, Repps, Womack, Thurne, Oby and Clippesby with the St. Benet's Level and Upton mills in adjacent character areas adding to the total. Several of these have lost their open marshland setting, being enveloped within riverside chalet development and are themselves domestic conversions.

This is not today an area of broads although Womack Water, which occupies a minor tributary valley, is a former medieval turbary (peat cutting area) and later broad but now much diminished from its former size. From the late nineteenth century onwards, it was often commented upon by various Broads' writers in terms of its picturesque qualities which included gently decaying timber boathouses tucked amongst the surrounding trees. Today the area is home to some of the historic river craft of the Broads including both the Heritage Fleet of



Landscape types

Within this character area there are the following landscape types. See section two where more information can be found about the individual types.

GOOGLE earth - Image©2016 Getmapping plc, ©2016 Digital Globe, ©2016 Infoterra Ltd & Bluesky



▲ Grazing marsh or areas cut for hay are the predominant land use in the area. At Horse Fen the grazing marshes which are under the management of Natural England, are designated as a National Nature Reserve.

Carr woodland is often a feature at the edges of the valley sides or the tributaries on the peat soils. Image by Jeremy Halls – geograph.org.uk

traditional sailing boats and the last two trading wherries.

Faden's Map (published 1797) marks a further broad at Ludham occupying an area known as the Hulver to the north of the Horsefen Marshes and part of the Horsefen Marshes. The Hulver was made a Poors' allotment at Enclosure. Much of this area today is dry carr woodland. Faden also marks a broad in the marshes at Thurne though there is nothing today to suggest this was the case and the Shallam Dyke Area would seem a more likely context.

▲ Significant landscape features in the area are the riverside chalets which became popular in the interwar period. Unsympathetic replacements or alterations have taken place over the years on some plots, but at other locations the original chalets remain. One of the more unusual chalets started off life at the top of a helter skelter in Great Yarmouth and is now grade II listed. The rear of the chalets often suffer from the effects of a mix of close boarded fencing, electricity, telephone wires. Image by Evelyn Simak – geograph.org.uk

The area has a number of literary and artistic associations including Arthur Ransome's who included parts of this area as locations for his children's books 'Coot Club' and 'The Big Six'. The artist Edward Seago (1910 to 1974) lived for many years at the Dutch House, Staithe Road,

Ludham and painted extensively around this area.

Land based access through the area is good with a number of rights of way following the river or along the route of tracks from the higher



▲ *The area has a number of boatyards and marinas dotted around. They range in scale with the largest located next to the old bridge at Potter Heigham. Images by: top to bottom: Ian S, Jeremy Halls, Colin Park. Geograph.org.uk*

ground to the river. The Weavers Way follows the floodbank on the southern side of the river from Thurne to Potter Heigham crossing over at the old Potter Higham bridge before continuing

along the river towards Hickling.

Topography and skyline

The valley floor, excluding the series of small tributary valleys, is in the order of 1–1.3km wide with the valley crests at 10m OD which lie outside the executive area to the south, surrounding the settlement of Martham and to the north at Ludham. The valley opens out to the north-east into the 'mouth' of the Thurne in the adjacent LCA 30. For the most part, the valley sides rise gradually over a wide area with the traffic along the B1152 marking the plateau top to the east. In places such as at Martham and Thurne, the valley sides are more pronounced.

Views are often distant within the area and a large water tower at Herbert Woods boatyard is visible for miles on the horizon. Generally though, the character area in its entirety has an undeveloped skyline, although immediately surrounding the settlement at Potter Heigham Bridge, modern riverside development and the A149 flyover impinges on the skyline influencing directional views. To the south, skylines east of the river are defined by arable fields, with occasional blocks of carr woodland.

Geology and soils

The area is of predominantly silty clay marshland with peat areas towards the upland and along the tributary valleys.

Enclosure, scale and pattern

This character area consists of a relatively

narrow valley in Broad's terms. It accommodates a series of small-scale grazing marshes along with a number of narrow tributaries incised through the adjacent upland. This is a landscape of small to medium scale grazing marshes lying at 0 to 1m OD linking to gently sloping valley sides. Some sense of enclosure is provided by carr woodland associated with minor tributary valleys in the area to the south, in addition to the north around Horsefen and Ludham.

There is a distinct variation in terms of light and shade due to the mix of woodland cover and the meandering course of the Thurne which creates a source of movement and visual interest in the landscape. The marsh and dykes drainage with clusters of carr woodland create textural variation in this lush, predominantly pastoral landscape. The main area of settlement in the area has a distinct pattern in that the chalets and boatyards line the opposite banks of the river for some considerable distance.

Main features of land cover and use

The estuarine marshes are predominantly pastoral with some carr woodland and there are a range of settlement patterns. The marshes are generally retained in grazing or mowing use, although a number of the Martham Marshes have developed carr woodland and the majority of the tributary valleys are also wooded.

Settlement in the form of linear riverside chalet development is a significant feature of this area being located along both banks of the river for about a distance of 1.5km. The riverside chalets both here and elsewhere tend to have



▲ *Drainage mills in various states of repair are a feature of the area. Images by Evelyn Simak – geograph.org.uk*

tall hedges and fencing of varying styles to their rear. This has the effect of obscuring connection between the marshes and river for stretches. New uniform groupings of chalets have been built in recent years around the Potter Heigham Bridge area away from the riverside. Also at this location, additional housing has become established on the west bank plus some commercial development.

Other settlement in the area which is more nucleated in form is located around the historic staithe at Ludham and Thurne and other houses and farmstead are dotted around the edge of the floodplain.

Drainage mills are a distinctive feature of the area with many of them still surviving today and some converted to domestic dwellings. The area has a mixture of large and small boatyard/ marinas. Most of the villages within this area have small-scale boatyards and facilities which have developed around their parish staithe areas. This area also contains one of the largest boatyard/marina areas in the Broads, centred



on the medieval Potter Heigham Bridge. On the opposite side the road is a discount superstore. There is considerable open car parking on the Potter Heigham side of the bridge, little used in the winter months.

Martham Pits, the water filled former clay pits associated with the extensive brickmaking trade that was carried out at Martham, are now used for fishing.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an area's unique sense of place are conserved and enhanced. What follows are examples of local issues and opportunities.

Landscape – The waterside chalets undoubtedly influence the character of the riverbank. Historically there was concern that in some locations this was starting to become negative.

For example back in 1982 the Broads Authority was keen to remove some of the chalets on the River Thurne at Potter Heigham and Martham. Residents disagreed and the chalets remained. Over time the contribution that the chalets make to the character of the area began to be

more widely appreciated. When in 2015 the Authority, in consultation with local residents, wished to add waterside chalets to its Local List, 58 waterside chalets, including a number on the River Thurne, were given the status and protection of local heritage assets with three of them since being nationally listed for their historic and architectural value.

There are continuing pressures to replace original period chalets or adapt /modernise them. Some of these changes are unsympathetic as a result of poor material choice or scale. Rear boundary areas, often fenced, limit views from the river and public footpaths to the grazing marsh beyond. Electricity and telephone provision to the chalets has resulted in electricity and phone lines and poles being installed which does detract from the scenic quality of the area.

The parking provision in the area is considerable to accommodate traffic to the discount super store and for holiday makers. These vast expanses of car park are significant landscape detractors. Opportunities should be sought to landscape the areas to reduce their adverse impacts.

On the valley side a number of large/modern agricultural buildings are visible across the valley. These are usually either light coloured and therefore reflect light or prominent because of their placement on high ground. Future development needs to take account of the potential effects on skyline views.