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 auantities 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.

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.

Why is this area special?

south.

This area is located to the west of the River Bure from 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

the boundary between an area with few modern

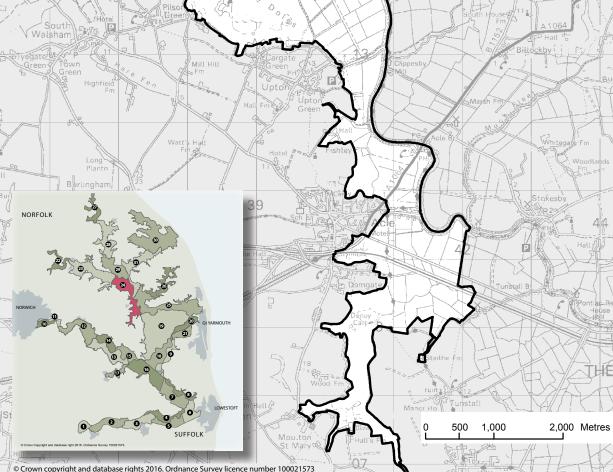
impacts to the north and a more fragmented area

affected by roads and built development to the

The area is basically a transitional zone between

valleys. At a larger scale, this area might have been divided into two with Upton Dyke forming

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.



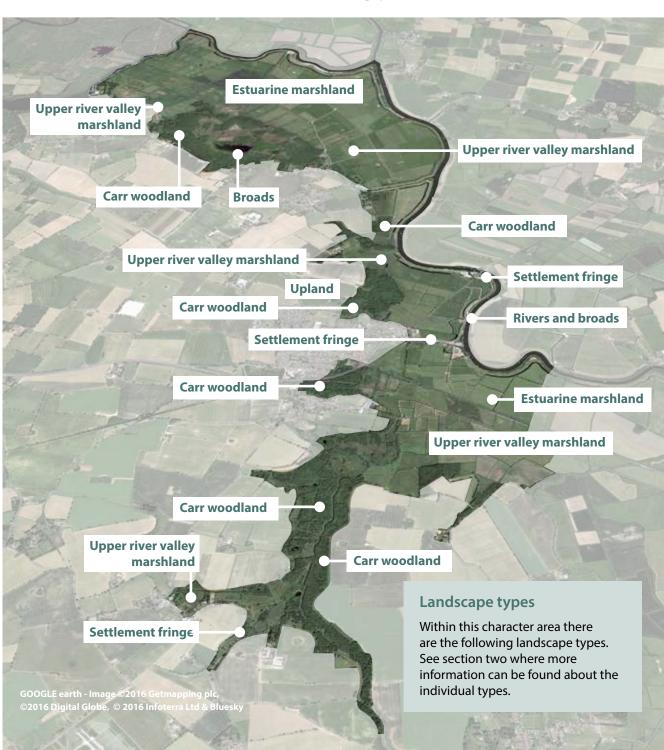
However, Upton Marshes retain a listed grouping of mill, engine house and millman's cottage. The contribution of Oby and Clippesby Mills across the river along with Palmer's Mill at Upton Dyke means the drainage mills remain a distinctive feature of this area.

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 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 areas sense of tranquillity is heightened by the site of boat sails as they appear to glide through the marshes.



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. Lesley Marsden





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.

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.



Alder carr woodland or fen meadow can be found on the peat soils at the valley sides. Evelyn Simak - geograph.org.uk







To the north and east the open, low lying marshland valley character continues into the adjacent Broads Authority LCA 25, 29 and 31, with the valley sides in the adjacent Great 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 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 is possible to make out these long parallel lines which presumably represent lines of uncut peat. There are smaller areas of **carr woodland** around Fishley and Acle along with a long, wooded tributary valley to the south of Damgate, Acle 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.

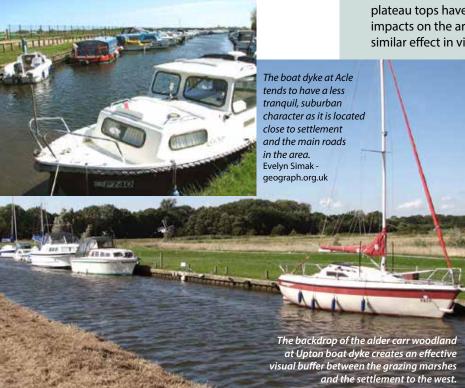
There is little actual **settlement** within the area other than the boatyards, moorings and ancillary built development associated with the long boat dykes that connect the river to the **settlements** in South Walsham, Upton and Acle and around Acle Bridge, otherwise settlement within the area is restricted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

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



Infrastructure - the area is crossed by the A1064 at the southern end. This provided the only vehicular crossing point between Gt. 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, between Norwich and Gt. Yarmouth, line run parallel to each other across the marshes.

Across the area there are a number of overhead cables (electricity) which intrude on the panoramic views. The most significant of these are across South Walsham marshes which comprise a double pole. On the opposite side of the River Bure, the same lines have been undergrounded to improve the visual amenity 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 areas 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 jeoparised as a result of Local Authority cuts.

Overhead electricity wires and poles intrude on the panoramic views.

To the western edge of the area development, plateau tops have 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.

Mill House Farm, Acle. the house was originally a miller's cottage adjoining the now derelict drainage mill pump, Hermitage mill. Evelyn Simak - geograph.org.uk Other historic features include South Walsham Mill which was atterly 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.

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 a 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.



Some of this area seems to have been part of 25 Fleggburgh to Bure Loop the Dean and Chapter of Norwich Cathedral **Arable Marshlands** lands known as Fowlholme and Skeetholme. It also seems to have been a detached part of Acle rather bizarrely called 'No-where'! CE THE THE LEVEL ! Hole THE BROADS 3,000 Metres © Crown copyright and database rights 2016. Ordnance Survey licence number 100021573

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 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.

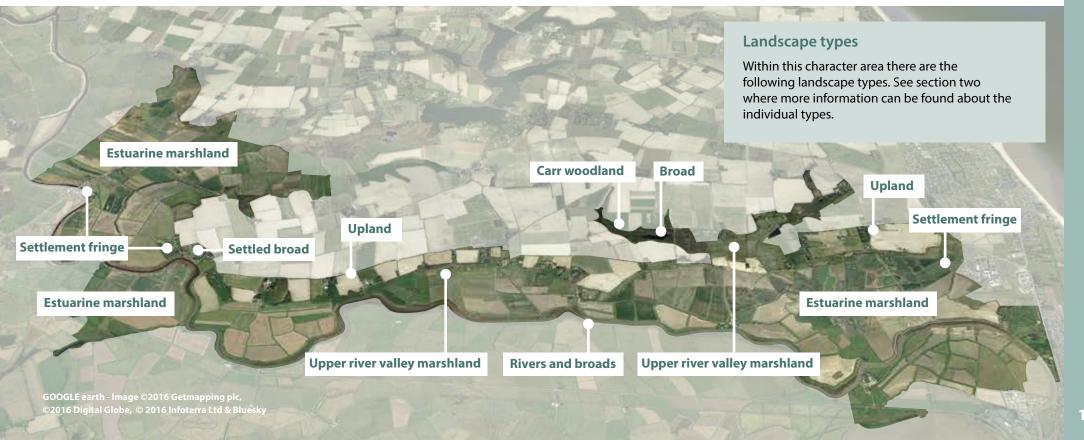
One of the most important historic features in this area is the remains of the 15th century Caister Castle (a scheduled ancient monument) associated with two important medieval families (the Fastolfes and the Pastons) and important as it is one of the earliest brick residences to have been built in England, 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 form 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

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. Evelyn Simak - geograph.org.uk





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. 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 around1km 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 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 comprises 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.

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 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 ronds** are particularly wide in parts of the River Bure in this area, notably so between Herringby and Runham Swim, 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.



▲ Development around Caister and Gt Yarmouth effects the sense of remoteness within the area. Alison Yardy





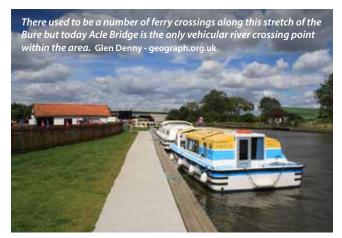
Proximity to industrial areas and edges of towns can bring with it some associated problems.

Alison Yardy

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 bunded 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 areas unique sense of place are conserved and 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 of 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 is 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.

■ Much of this area is now under arable cultivation which has resulted in the loss of dyke networks along with their associated features.

Evelyn Simak -geograph.org.uk

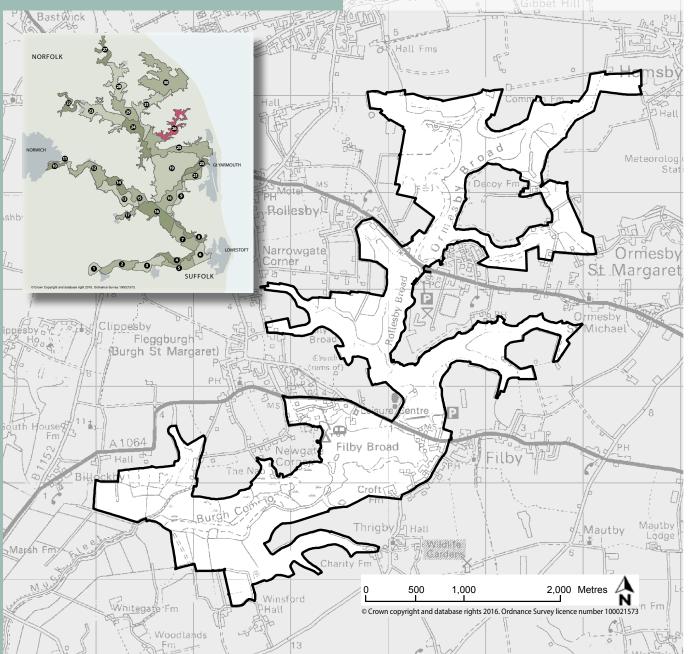
Mill images below (left to right), Evelyn Simak - geograph.org.uk, Pierre Terre - geograph.org.uk, Broads Authority



Orainage mills in the area provide a significant landscape feature. Views of mills in adjacent areas are also available.

26 Muck Fleet Valley - The Trinity Broads

Within the area, examples of the simple earth-built cottages that once existed across much of the northern broads around the edges of Commons, can be found.



Why is this area special?

This character area primarily comprises a network of large, deep broads known as the Trinity Broads which occupy the upper part of the Muck Fleet Valley, which is a tributary valley of the River Bure. Despite the name that has been attached to these broads, five individually named broads are mapped, along with the detached Little Broad on Fleggburgh Common. In addition to the network of broads, two adjacent areas within the valley, Fleggburgh Common, which is an area of more open fen vegetation to the south of the broads, and Hall Farm Fen, Hemsby, which is an area of species rich fen grazing to the north east of the area, are notable examples of their type.

Aside from the roads, parking opportunities near them via a couple of commercial developments, access is quite limited and the broads themselves often appear empty and tranquil. Boating in this area is limited mainly to nonpowered craft.

The area sits in the middle of an area known as Flegg, an 'island' of higher ground between the Rivers Bure and Thurne. Flegg was historically separated into the two administrative units of East and West Flegg by the Muck Fleet Valley. The soils of the Flegg area are a deep, fertile 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 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 Broads although isolated from the Broads 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 Broads are 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 guite limited although two 'A' roads – the A1064 and the A149 cross the broads - both old-established crossings, allowing views across the open loses nothing by leaving the district without seeing the

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 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 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 Broads are sands and gravels.

Enclosure, scale and pattern

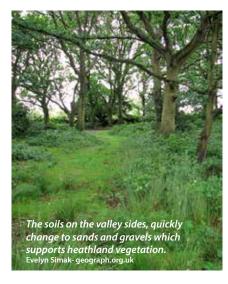
This is a landscape of small/intimate spatial scale due to the woodlands which fringe the area, although landscape scale varies according to the width of the broads in proportion to wooded valley sides. Valley sides are relatively gently sloping, rising to 4m OD, with the crests outside the Broads executive 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.

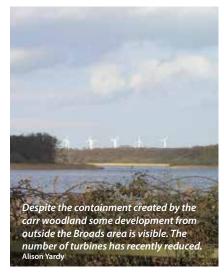
There is a strong variation in terms of light and shade due to the mix of broadleaf (carr – lower ground/water's edge) and coniferous woodland at the top of the slopes, and their visual interaction with the water. Further variation in reflectivity and visual interest is provided by the moving nature of the water in the broads and the Muck Fleet tributary.

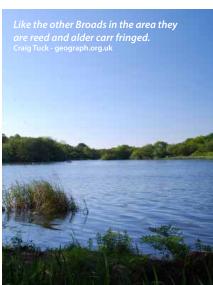
The patterns in the landscape are created by a richly textured and complex mix of intricate waterways, open broads surrounded by reedbeds and clusters of carr and plantation woodland, with some smaller areas of fen. Only at the road crossings and settlement areas are these patterns noticeably disturbed.

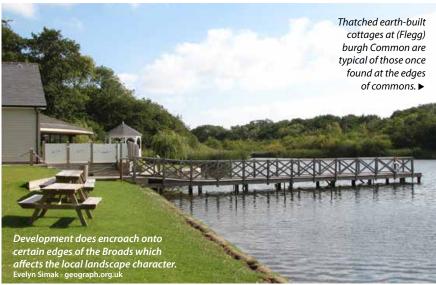












Main features of land cover and use

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.

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an areas 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.

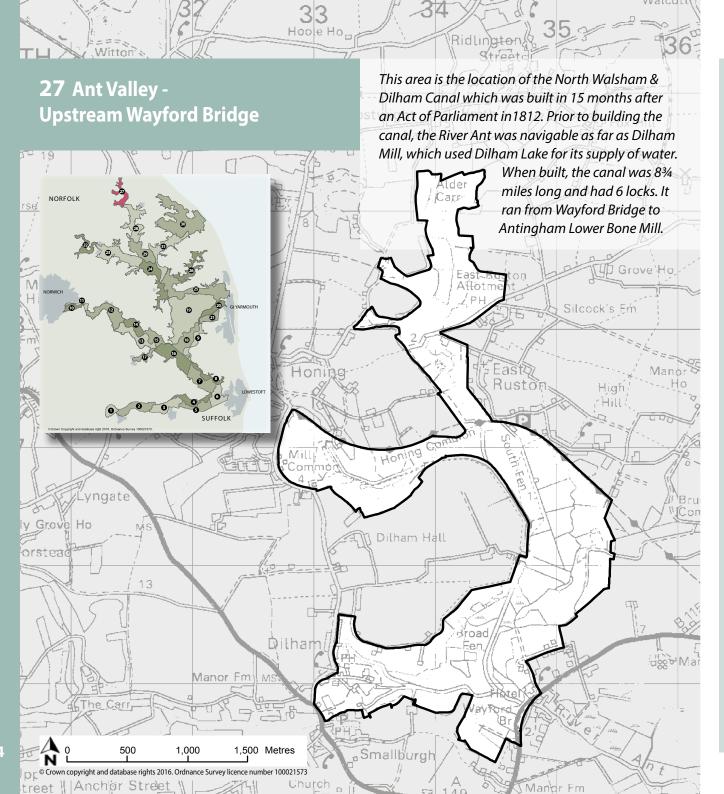
Nature conservation – water quality is an issues for the Broads in part as a result of the adjacent farming activities. Initiatives are currently underway in relation to catchment management to help resolve these issues.



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 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 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. Other settlement types within the area include glass houses, horticultural areas, cafés and public houses.



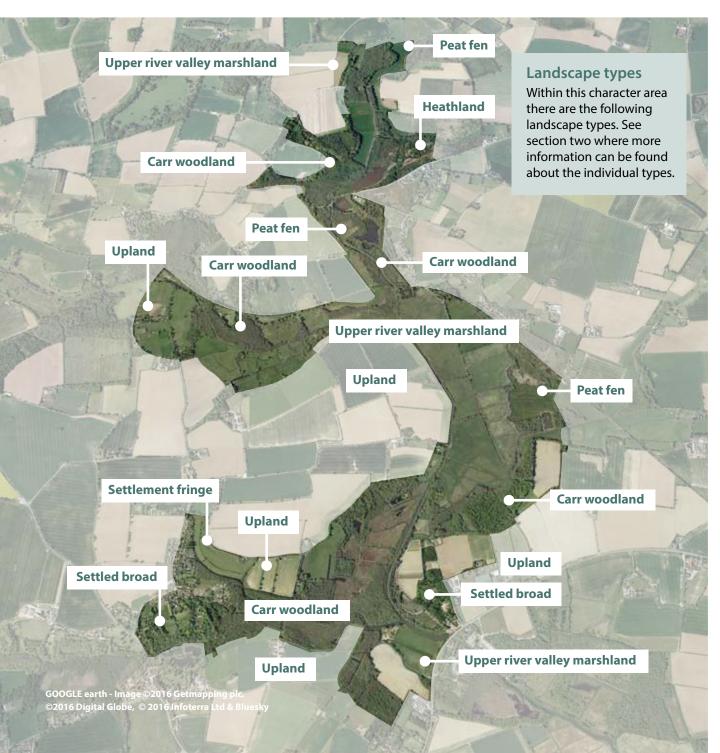
Why is this area special?

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 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 Area.





Tonnage Bridge one of the remnant pieces of "infrastructure" on the North Walsham and Dilham. © 2004 Shorebase

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.

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

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 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 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

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.

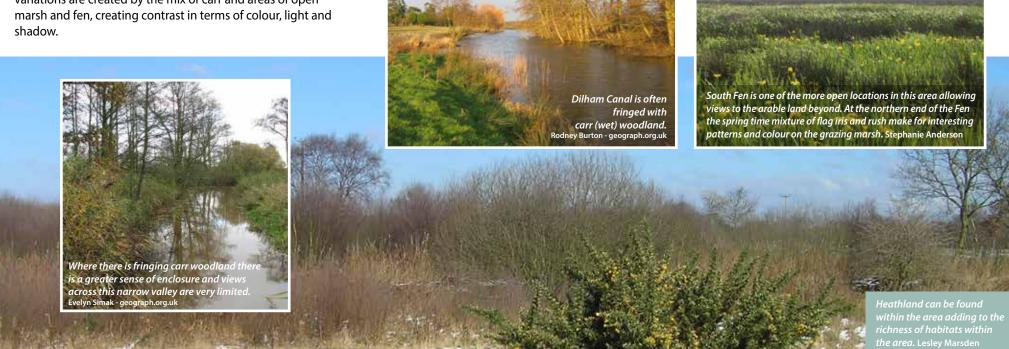
Main features of land cover and use

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 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 bridges 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.



accommodation is located in proximity

to the Wayford Bridge hote

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an areas 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 gazing 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 Walshaw 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.

■ 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

The "Hitler Oak" which can be found at How Hill was 28 Ant Valley grown from an oak sapling given to all gold medal **Wayford Bridge to Turf Fen** winners at the 1936 Olympics. It received the nickname because of the Nazi leader's association with the Berlin Games. Christopher Boardman, who lived at How Hill at the time, won the medal as the helmsman of the British yacht Lalage, winner of the 6-metre class. Catfield. hmanhaugh 32 Holly Workhouse Common Cangate How Hit Crown copyright and database rights 2016. Ordnance Survey licence number 100021573

Why is this area special?

The Ant Valley Fens, which make up a large part of the land cover of this Character Area, are known for being the least saline influenced of the Broads fens and consequently the most diverse. During the nineteenth century and into the twentieth century these areas were subject to various forms of management. As with the Bure Valley between Wroxham and Ranworth, a number of areas were exploited as shallow turf cuttings. The number of drainage windmill remains are also testimony to attempts to drain some areas of the land. Drainage generally seems to have been abandoned in the 1930's and 40's and the mill surrounds have reverted to fen. The amount of carr woodland has also increased since the late nineteenth century reflecting the decline of traditional fen management practices including the cutting of reed for thatch. Today most of the fen is managed for nature conservation purposes.

The River Ant is narrow and winding despite considerable alterations to straighten its course, with tributaries both east and west and valley sides which are generally very low although slightly more apparent to the west. This is often a difficult area to view – much is inaccessible and carr woodland often terminates views within the area and to the landscape beyond. How Hill provides a rare point to see a section of the valley floor.

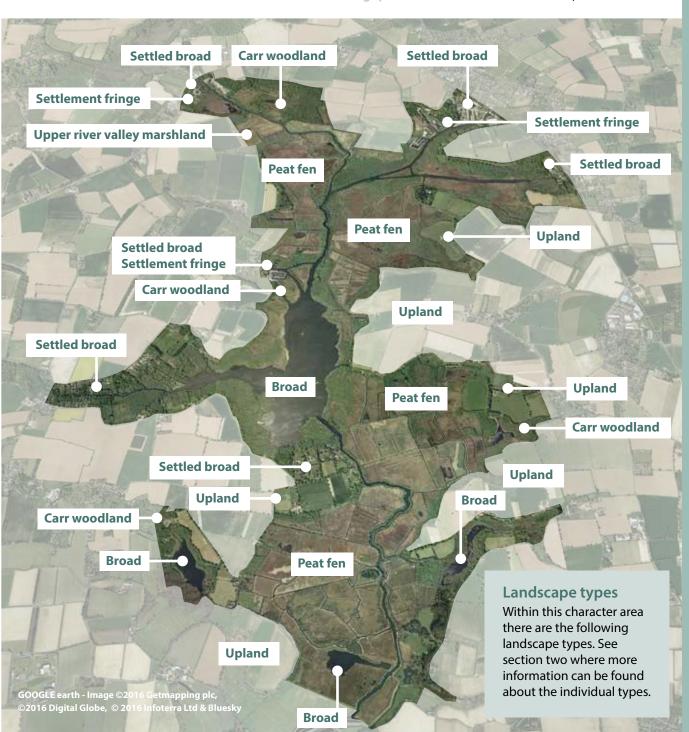
This is a particularly affluent area of the Broads with a number of large detached homes. Of particular note within this area is the How Hill estate one of best-known locations in Broads. It was formerly the residence of Norwich architect Edward Boardman and family. How Hill comprises of a large thatched Arts and Crafts style house and gardens along with a marshman's cottage and windmills. Now its 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. 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 and 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 and conservation area (built environment) at Neatishead/Barton Turf (Limekiln Dyke Area) and Stalham Staithe.



Topography and skyline

This section of narrow, winding river and floodplain lies in a shallow valley at around 1 to 2m OD with gentle valley sides particularly to the east. The skyline is mostly wooded and undeveloped, with the exception of that at Stalham Staithe, with the backdrop formed by the settlement at Stalham. Occasional historic wind pumps form skyline features e.g. 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.

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 staithe sites and small vernacular hamlets clustered around the tributary valleys, such as Neatishead and Irstead.



Fringing carr woodland at Barton Broad filters views of the arable landscape or development lying beyond. Katy Walters - geograph.org.uk

How Hill provides 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. lan Russell - geograph.org.uk





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 staithe areas 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 although isolated farmsteads are 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, here creating a gravely bottom to the river. To the north of this area (at Wayford Bridge and Stalham) are two areas of boatyards and marinas of significant scale. That at Stalham is particularly large and includes a number of vast hangar like buildings and long rows of large holiday boats. At Sutton and Barton Turf there are smaller boatyards, one modern with adjacent holiday chalet complex. Both have seen expansion in the recent past.



The **broads** in this area are rather mixed in scale. 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 me 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 has recently won a National design award for architecture for its residential extension.



Hunsett Mill at Stalham on the Rver Ant. ► hunsettmill.co.uk

◀ Carr woodland found around Barton Broad is situated on saturated peat soils. Suse - geograph.org.uk



◀ Historic staithes in the area often announce the presence of village settlement beyond.
Phil Champion - geograph.org.uk





Houses by the River Ant viewed from Wayford Bridge. 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.

Gareth Hughes - geograph.org.uk

Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an areas 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 only 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.

Evelyn Simak - geograph.org.uk



29 Ant/Bure - Ludham, Horning and Neatishead Marshes

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

Abbey with nearby Horning Hospital as an associated site.

Heath Fm

The area contains an important historic site in

the monastic precinct and remains of St. Benet's

urne Mouth

Boundary



2,000 Metres

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 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.

500

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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.

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.

Carr woodland Upland Upper river valley marshland Settlement fringe **Estuarine marshland Upland** Fen Landscape types Within this character area there are the following landscape types. See section two where more information can be **Upland Rivers and ronds** found about the individual types. GOOGLE earth - Image ©2016 Getmapping pl ©2016 Digital Globe, © 2016 Infoterra Ltd & Bluesk

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 mill 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.



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. Norfolk Museum Service

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

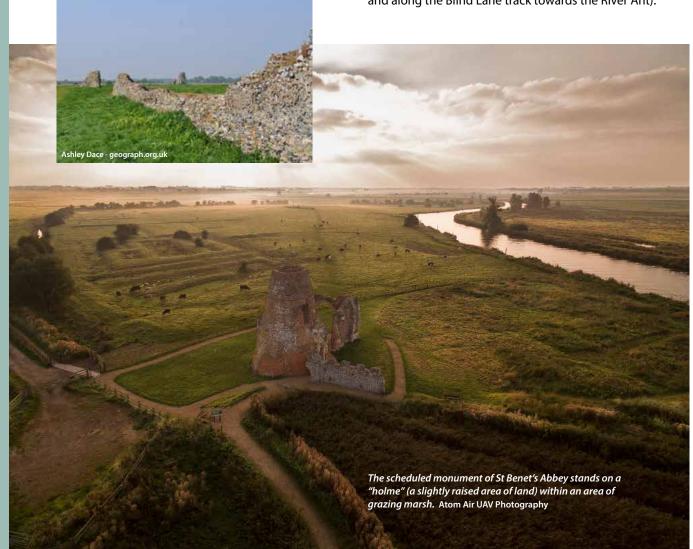
To a degree, context and containment is provided by the carr woodlands at Upton Fen to the south, (LCA 24) and, at greater distance, by the carr fringed Trinity Broads (character area 26) and woodlands around Hickling Broad to the north (LCA 30).

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 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. Mike Page

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.



- ▲ At the northern end of the area the valley floor narrows and there is a greater sense of enclosure. Katy Walters - geograph.org.uk
- 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. Evelyn Simak geograph.org.uk

Settlement in the area 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.



Steve Daniels - geograph.org.uk



Helping to keep it special

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

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.

2,000 Metres



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 Hundred 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.

Rather than natural looking tributaries flowing towards the Thurne, this is an area of New Cuts and Commissioners Drains and a grid like drainage pattern, the only sinuous element being the natural edge to the floodplain, the outline and dyke connections of the broads. Faden's Map also indicates that the Hundred Stream to the east of Candle Dyke was a rather straight and artificial line in comparison with that to the west.

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 1771 and another is already marked as 'old') - the only part of the northern broads area, north of St Benet's Level, where they

appear at this time. Heigham Holmes also retains some ancient sinuous dykes, testimony to an early drainage scheme.

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

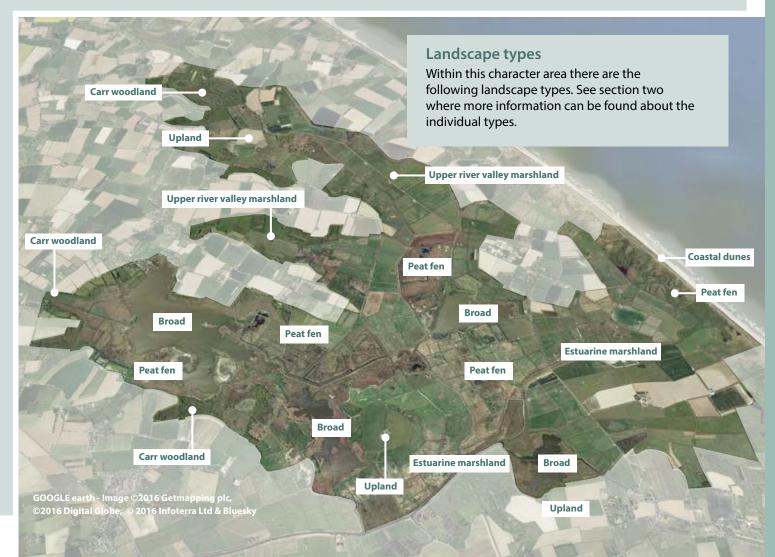
was achieved by embanking across the long watery arms that extended out from the main body of water. The Waxham New Cut was developed in 1820's or 30's between Horsey and Lound Bridge, Sea Palling, partly extending navigation and partly as a main drain. In the second half of the 20th century both the 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.

The proximity to the coast is very apparent in the area through the presence of large sand dunes to the north eastern part of the area, strong winds and saline influence.

Much of the area is designated for its nature conservation value and West Somerton is a Conservation Area (built environment). The area is characterised by its open, exposed and often remote, tranquil character apart for 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 an 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 Whiteslea Estate was raised and extended by Lord Desborough in 1930's. 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) 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 the somewhat complex land drainage patterns around Hickling are obscured by the very simple vegetation and water features. ▼ ▶



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 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.

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.

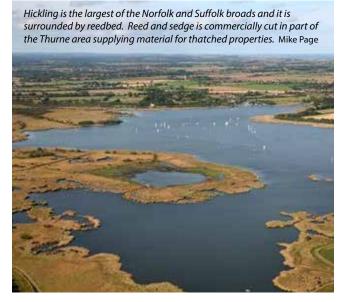
Main features of land cover and use

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.



Horsey Mere is reed fringed much like Hickling. A significant amount of reed and sedge is cut for thatching material in this area. ▼ Maigheach Gheal - geograph.org.uk

This very unusual landscape feature on Long Gores Marsh Hickling was created by Marietta Pallis (1882-1963) who is buried on this "island". ▼ Mike Page

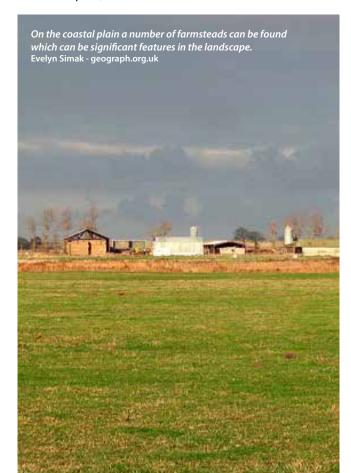


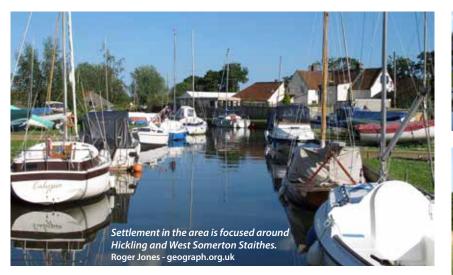




Where settlement exists the landscape has the perception of being rather more "tamed". There are a number isolated farmsteads lying within the coastal plain area outside the executive area. The area within which these lie with the aforementioned farms, have a direct visual connection with the Broads 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 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 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 are reinstating a large reedbed at Duck Broad to what it would have been like in 1946 based on aerial photography.

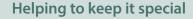


Drainage mills are a feature in the landscape but due to the vastness of the area not particularly obvious other than at Horsey. Other mills structures include Randalls Mill at Ingham; Stubb Mill at Hicklingwhich includes a house and small outbuildings; Lambridge Mill and Steam Engine House; Brograve 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.



▲ Brograve Mill by Waxham Cut has fared badly in terms of maintenance to the structure. Evelyn Simak - geograph.org.uk

◆ 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.



Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an areas 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 areas 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.

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. Evelyn Simak - geograph.org.uk



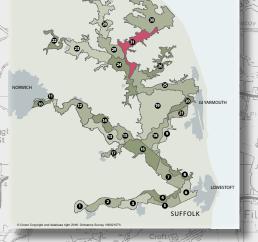
31 Thurne and Bure East Marshes

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.

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 rail bridge in this photograph has now been replaced with a road bridge which is the route of the A149.





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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.

Away from the two road river crossings at Potter

Heigham (the older of the two is a Scheduled

Why is this area special?

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?

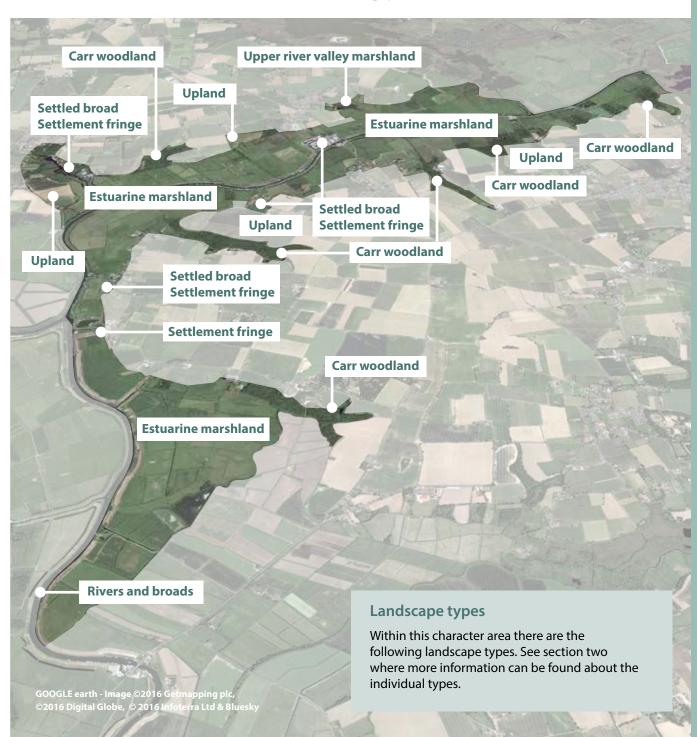
A significant number of drainage windmills survive in this area at Martham, Potter Heigham, Repps, Womack, Thurne, Oby and Clippesby with the St. Benet's Level and Upton mills in adjacent character areas adding to the total. Several of these have lost their open marshland setting, being enveloped within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

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 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.



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. Jeremy Halls - geograph.org.uk

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.











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 Gt Yarmouth. The rear of the chalets often suffer from the effects of a mix of close boarded fencing and electricity and telephone wires. Evelyn Simak - geograph.org.uk

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 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 staithes at Ludham and Thurne and other houses and farmstead are dotted around the edge of the floodplain.







Helping to keep it special

Care needs to be taken when landscape change occurs, to ensure that those positive characteristics that contribute to an areas 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.

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.

◆ The area has a number of boatyards and marinas dotted around the area. They range in scale with the largest located next to the old bridge at Potter Heigham. ▼ Drainage mills in various states of repair are a feature of the area. Evelyn Simak - geograph.org.uk

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.





