open coastal marshes

Integrated landscape character

MAP 13a - Open Coastal Marshes Key Plan

An expansive coastal landscape of inter-tidal sand and mudflats, salt marshes, shingle banks, sand dunes, brackish lagoons and reed beds. The flat marshes are underlain by chalk (to the north) and Lower Greensand (to the west), but the area is dominated by soft or loosely aggregated glacial sands, gravel and clays, which have accumulated behind shingle banks or low clay ridges. The Open Coastal Marshes are a dynamic mosaic of inter-tidal habitats and features, shaped by the tides.

The North Norfolk coastline has long been subject to change as sea levels have risen and fallen in response to climatic cycles over the past 1.8 million years. For instance, around 10,500 years ago, at the time of an intensely cold phase, global sea levels were relatively low and much of the North Sea basin was an extensive lowland. There is some evidence of occupation of the North Sea basin from sites to the east of the AONB and a Late Palaeolithic site at Titchwell (exposed at extreme low tides) was probably occupied by hunters whose territory extended across a lowland plain to the north. By the end of the Mesolithic period, the coastline was similar to that of today. There is evidence of Mesolithic settlements along the coast near Titchwell and the pollen in sediment records associated with the Bronze Age 'Seahenge' site at Holme next the Sea suggests that the saltmarsh and reedswamp along the marshes were bordered by alder and lime-dominated woodland. The Open Coastal Marshes have generally been marginal to human settlement - in medieval times they are known to have been common land, supporting a range of hunting pursuits and flocks of sheep on the open salt marshes and extensive areas of common remain today between Burnham Overy and Holme. Today the landscape seems 'timeless' with limited built heritage.

These exposed marshlands are a rare wilderness, where natural forces predominate. They are dissected by meandering tidal creeks, which form intricate dendritic patterns in the mud. The shifting mosaic of coastal wetland habitats is of international ecological importance, as reflected in a range of overlapping biodiversity designations.

This is an exposed, uninterrupted landscape with a strong, simple break between land and sky. There is a sense of remoteness and wildness. The marshes are devoid of trees or settlement but the views inland are defined by woodland and agricultural land. Boats moored within the creeks are the focus in local views and the Open Coastal Marshes are popular for some fine beaches, as well as for walkers and naturalists.

Landscape sensitivity and change

The character of the Open Coastal Marshes reflects a rare combination of natural processes of deposition and ecological succession - in constant flux. The whole landscape type is internationally important for its geomorphology and its delicate coastal habitats, which are highly sensitive to change. The entire area is classified as core area of coastal habitat in the Norfolk ecological network[1]. Key environmental assets that are particularly vulnerable to change are:

- Open, expansive views northwards across a dynamic seascape - there is a strong sense of openness throughout the landscape type.
- The patchwork of dunes, shingle, mudflats, brackish lagoons and reed beds, which provide a cohesive visual unit and contribute to a generally undisturbed and natural character.
- The lack of buildings and structures, which ensures there are very few detracting elements and which enhances the overall sense of tranquillity and remoteness.

[1] *Norfolk Wildlife Trust on behalf of the Norfolk Biodiversity Partnership, 2006, Report of the Ecological Network Mapping Project. The coastal habitat zone incorporates the following BAP habitats – all intertidal habitats, sand dune, shingle beach, saline lagoon, grazing marsh and reedbed.*

Variations in character

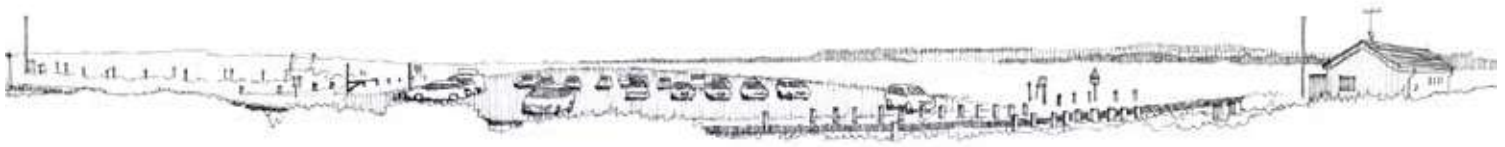
Variations in character and inherent landscape sensitivities are highlighted in the following distinctive landscape character areas within the Open Coastal Marshes (AONB area):

Landscape character area	Distinctive character	Inherent sensitivity
North Wootton Coastal Marshes - OCM1	Strikingly flat & low lying. Intertidal mudflats & reed-beds interspersed with sinuous tidal creeks, small brackish pools & lagoons. Valuable ecological habitat for range of vertebrates, wading birds & wildfowl.	• Very strong sense of remoteness & tranquillity • Predominantly isolated & rural character • Intricate network of intertidal creeks • Undisturbed bird feeding and resting area
Shepherd's Port Coastal Marshes - OCM2	A series of five saline lagoons dominate the character of this area. They are separated from the Wash by a narrow strip of shingle beach. Most of the area is within Snettisham Nature Reserve and is important for grey plover, knot, bar-tailed godwit, sanderling, pink-footed goose & shellduck. The shingle beach is also important as a nesting site for ringed plovers & oystercatchers. Lagoons are fringed by patches of scrub and scattered trees. Open views & wild character.	• Relatively strong sense of remoteness & tranquillity • Patchwork of key habitats for migratory birds & invertebrates • Lack of built elements & undisturbed, undeveloped character • Beach-nesting ringed plovers vulnerable to disturbance

Landscape character area	Distinctive character	Inherent sensitivity
Holme-next-the-Sea Coastal Marshes - OCM3	A relatively narrow intertidal area of sand, mud and peat beds in front of sand dunes, with an area of saltmarsh to the north of Broadwater Road.	• Internationally important inter-tidal habitats, including salt-mashes, mudflats and peat beds – bird feeding and resting areas • Archaeological interest of peat beds • Beach-nesting terns and ringed plovers vulnerable to disturbance
Thornham & Titchwell Coastal Marshes - OCM4	Extensive patchwork of saltmarsh & mudflats dissected by a complex network of ditches, creeks & lagoons along the coastal fringe. A dynamic landscape with panoramic open views, dominated by tidal influences and prominent in views from the Coastal Slopes to the south.	• Wide open panoramic views • Intricate network of intertidal habitats • Very distinctive, natural sense of place • Peat beds are an important and sensitive habitat and archaeological resource • Beach-nesting terns and ringed plovers at Titchwell vulnerable to disturbance
Scolt Head Island - OCM5	The sheltering 'barrier island' of Scolt is a classic coastal geomorphological feature, Behind it, the Burn Estuary and an extensive network of creeks & ditches wind through large expanses of saltmarsh & mudflats to create an ever changing, delicate environment. Very flat, with vertical elements. Golf course to north of Brancaster is surrounded by dunes and saltmarsh. Harbour with fishing and recreational craft at Brancaster Staithe.	• Dominated by open, expansive views of sea & sky and by the calls of sea birds • Overlooked by linear settlements of Brancaster & Brancaster Staithe along the A149 corridor to the south • Beach-nesting terns and ringed plovers, especially on Scolt Island, vulnerable to disturbance
Wells/Holkham Coastal Marshes - OCM6	Sand flats to the west with an area of marsh and harbour to the east, all of which is well used for recreation. Wells has a relatively busy working harbour with prominent moorings for commercial and recreational craft. Views to the town of Wells are dominant throughout from the eastern part of the area and the proximity of Wells beach gives a strong recreational character. The prominent dunes at East Hills are planted with some maritime & black pines which are prominent in long coastal views.	• Wide remote areas of marsh contrast with boating and recreational activities in the immediate vicinity of Wells • Area is highly sensitive to change and is unlikely to absorb further change without corresponding alterations to its character • Beach-nesting terns and ringed plovers vulnerable to disturbance

Landscape character area	Distinctive character	Inherent sensitivity
Stiffkey - OCM7	An ancient area of saltmarsh, this landscape feels exceptionally remote, although the local boat park at Morston Quay is a key feature in local views. Low density of settlement on adjacent rising land adds to this feeling. Stiffkey & Morston 'Greens' are thin strips of rising land between the marshes and the hedges of the enclosed agricultural land beyond. There are limited pedestrian trackways across the marshes.	• Very remote and highly sensitive wilderness character – probably the most 'remote' area remaining along the entire Norfolk coastline • Large open expanses of saltmarsh, with few (if any) interrupting features on the skyline • The Stiffkey & Morston 'Greens' are distinctive and vulnerable local features which are ecologically important – particularly the heathland (gorse) areas and hedgerows adjoining the Greens (many of which are in poor condition) • Pressures for car parks and from walkers • Beach-nesting terns and ringed plovers vulnerable to disturbance
Morston to Blakeney - OCM8	Popular and well used by visitors, with large car parks and many boats. Blakeney Point, with its shingle bank is an internationally famous coastal feature, Behind it, the large sandy lagoon (with boats and yachts) at Blakeney is a distinctive local landscape feature and the extensive dunes and shingle beach at Blakeney Point are in a highly dynamic state. A few buildings close to or on the saltmarsh at Morston, the Old Lifeboat House at Blakeney Point and the Watchhouse further east are the only form of settlement in the entire landscape type. Large car parks at the villages of Blakeney and Morston are very prominent. Important common seal and nesting tern colonies at Blakeney Point.	• Distinctive, strong local landscape character • Dunes, shingle beach and extensive saltmarshes surrounding the harbour are particularly vulnerable to change • Pressures from visitors – boat noise/ erosion, cars, disturbance to nesting birds etc – are a threat to this highly sensitive landscape • Scheduled monument of Blakeney Chapel and its setting • Beach-nesting terns and ringed plovers vulnerable to disturbance

SMALL BUILT STRUCTURES AND CAR PARKS CAN HAVE A DISPROPORTIONATE IMPACT



Key forces for change

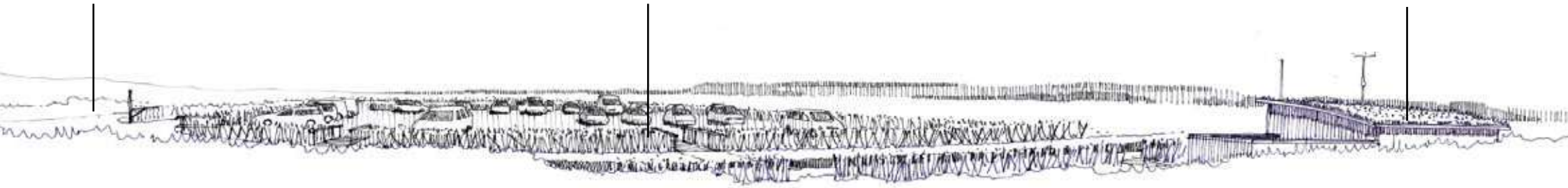
EXISTING

- Disturbance and erosion of sensitive coastal habitats and species as a result of both land and water-based recreation activities.
- Potential future sea-level rises, leading to changes in coastal habitats (loss of saltmarsh and mudflats) and land use.
- Car parks, golf courses and other visitor-related developments, as well as small scale improvements to the coastal footpaths.
- Potential new small-scale built developments or tall vertical elements within adjacent (Coastal Slopes and Drained Coastal Marshes) Landscape Character Types, which may block or dominate panoramic, open views northwards to the sea.
- Disturbance of sense of remoteness and tranquillity as a result of increased tourist and visitor pressure and increased traffic on rural lanes leading to the seashore.
- Flood protection or managed realignment; any changes could disrupt natural coastal processes and sediment supply.
- Potential visual impacts associated with offshore wind turbines.

remove clutter and integrate all facilities within one sensitively designed building

create natural boundaries (ditches with tall reeds) - avoid fencing and built structures

design small buildings to avoid impact on the skyline



GUIDANCE

20 year vision

conserve and enhance

A shifting mosaic of salt-marsh, mud and sandflats, shingle and dunes, which is shaped by the tides but conserved as a rare wilderness, teeming with birds, where natural forces predominate.

Integrated landscape guidance

1 Conserve the wild open nature of the intricate mosaic of saltmarsh, mudflats, lagoons, creeks and other inter-tidal habitats

- Conserve open views across the sea, marshes and adjacent coastal slopes.
- Avoid built structures generally, but where small structures (such as hides and lighting) are considered essential, ensure that they are designed to exceptionally high standards using natural materials so that they do not detract from the inherent 'wild' character of the landscape.
- Avoid vertical elements which would interrupt the skyline and distract from open views.
- Consider the character of built settlement along roads and on the fringes of settlements on adjacent inland landscape types, which could strongly affect the open views and natural character of the Open Coastal Marshes.

2 Allow natural coastal processes to predominate

- Enable the natural coastal processes to continually develop coastal habitats as long as this does not conflict with shoreline management plans.

3 Conserve and enhance the delicately balanced dynamic mosaic of coastal wetland habitats:

- Restore degraded areas of coastal vegetated shingle beaches along the North Norfolk Coast and lining The Wash (both core habitat areas)[2]
- Conserve the intricate network of intertidal mudflats and saltmarshes as important winter-feeding areas for waders and wildfowl.
- Protect and conserve dune systems along the coast as habitats for a rich diversity of flora and salt-tolerant species.
- Protect and conserve areas of natural brackish lagoons (for example at Holme), and artificial lagoons (for example, at Titchwell) as valuable habitats for invertebrate fauna and feeding sites for wintering and passage waders and waterfowl.
- Develop coordinated management of recreation throughout the Open Coastal Marshes to protect sensitive habitats and species
- Maximise the nature conservation value of saltmarsh vegetation on The Wash through re-introduction of grazing where appropriate and where there is an historical tradition of grazing.

[2] *Norfolk Wildlife Trust on behalf of the Norfolk Biodiversity Partnership, July 2006, Ecological Network Mapping Project for Norfolk*

Integrated
landscape guidance (continued)

4 Conserve the generally undisturbed, undeveloped character and related strong sense of remoteness and tranquillity

- Manage visitor numbers, taking account of the 'red or orange zones' identified in the Norfolk Coast AONB Visitor Management Strategy [3] where there are conflicts of interest, there must always be a presumption in favour of nature conservation interest so that people are steered away from the most sensitive wildlife sites towards more robust areas where there is less potential for damage
- Ensure development avoids prominent skyline locations and consider the visual impact of new development (particularly tall vertical developments) both within the Open Coastal Marshes and on adjacent coastal slopes.
- Conserve the generally rural nature of minor roads and lanes within the area.
- Encorage minimal and sensitive use of signage throughout the Open Coastal Marshes.
- Soften the visual impact of golf courses and car parking, taking account of the typical expansive views.
- Avoid further increases in the density of moorings at boat parks, which can become dominant and a significant distraction from the wild character of the landscape.

[3] *Norfolk Coast Partnership, 1995, Visitor Management Strategy for the Norfolk Coast Area of Outstanding Natural Beauty*

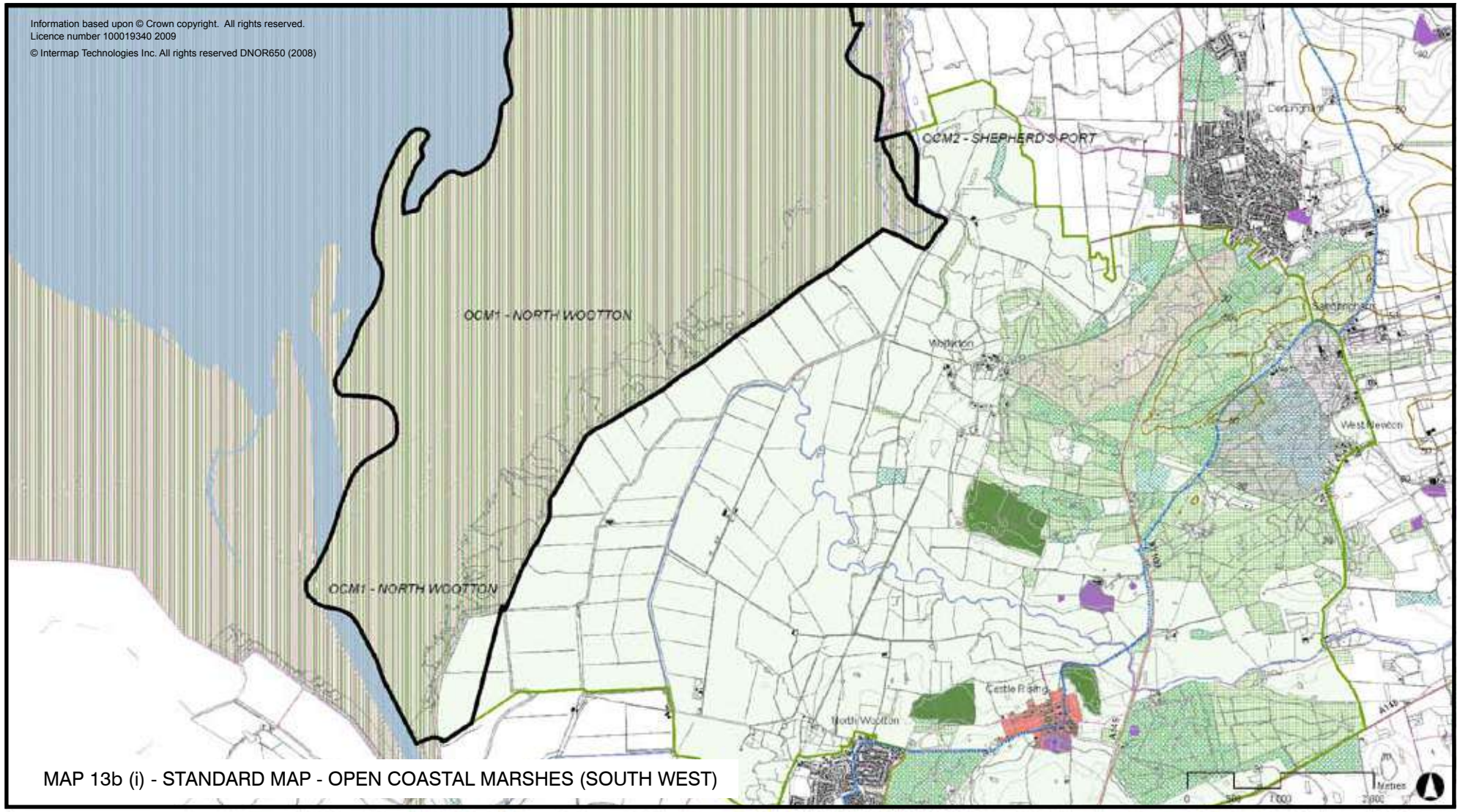
Detailed maps

- **Standard** - landform, drainage, rights of way and statutory designations
- **Biodiversity** - ecological networks [4]
- **Historic landscapes** - broad historic landscape character types [5] and data from the Historic Environment Record [6]

[4] *Norfolk Wildlife Trust on behalf of the Norfolk Biodiversity Partnership, July 2006, Ecological Network Mapping Project for Norfolk*

[5] *Norfolk Landscape Archaeology, january 2009, Norfolk Historic Landscape Character - a report on the Norfolk Landscape Characterisation (HLC) Project*

[6] *www.heritage.norfolk.gov.uk - provides a computerised, searchable database (with integrated digital mapping) of all areas of known archaeological activity, sites, finds, cropmarks, earthworks, industrial remains, structures and historic buildings in the county*



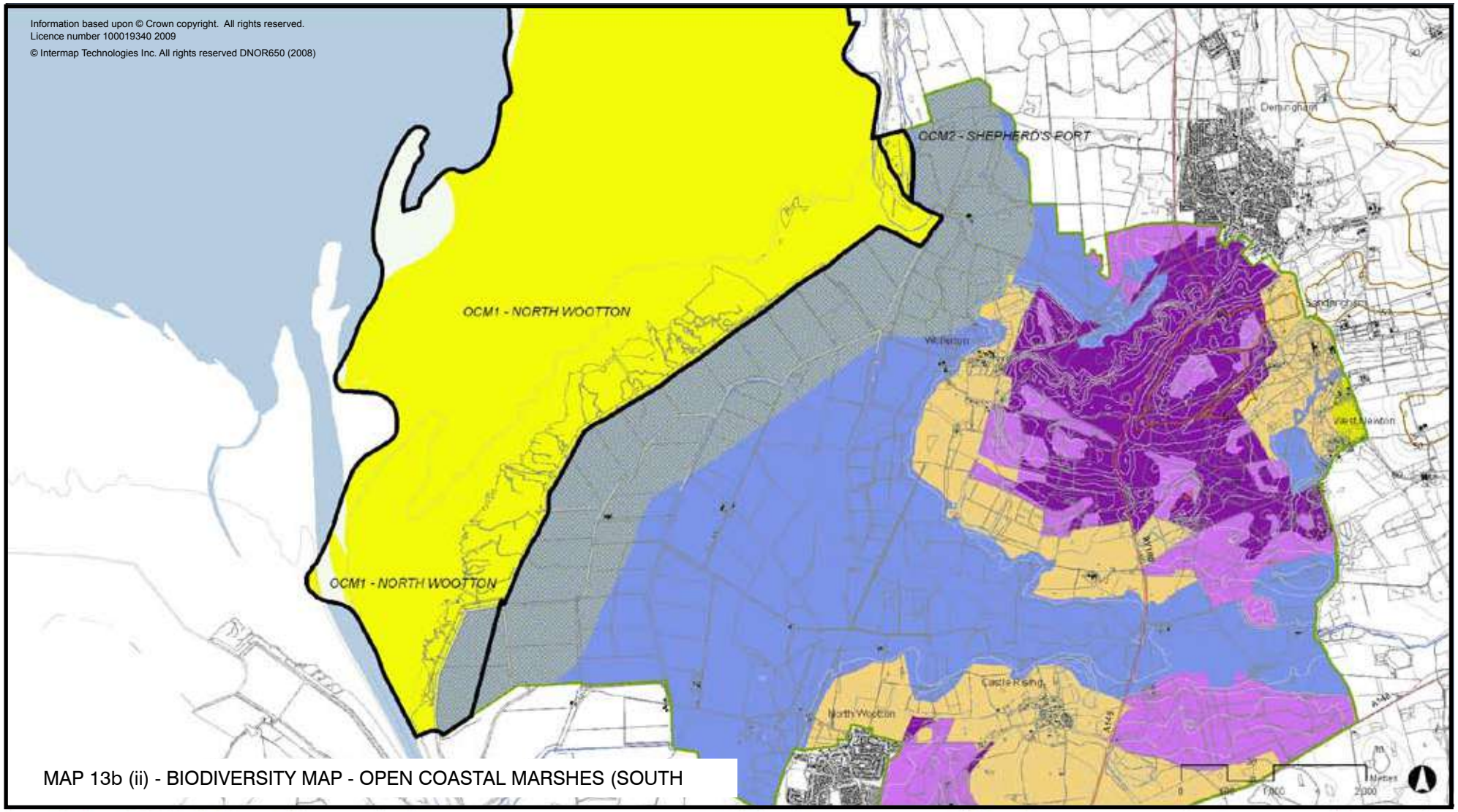
MAP 13b (i) - STANDARD MAP - OPEN COASTAL MARSHES (SOUTH WEST)

Statutory Designations
- Ramsar Site
- Special Protection Area
- Ancient Woodland
- Site of Special Scientific Interest
- County Wildlife Sites
- Local Nature Reserve
- Forestry Commission Woodland
- Special Area of Conservation

Heritage
- Scheduled Ancient Monuments
- Conservation Areas
- Historic Parks and Gardens

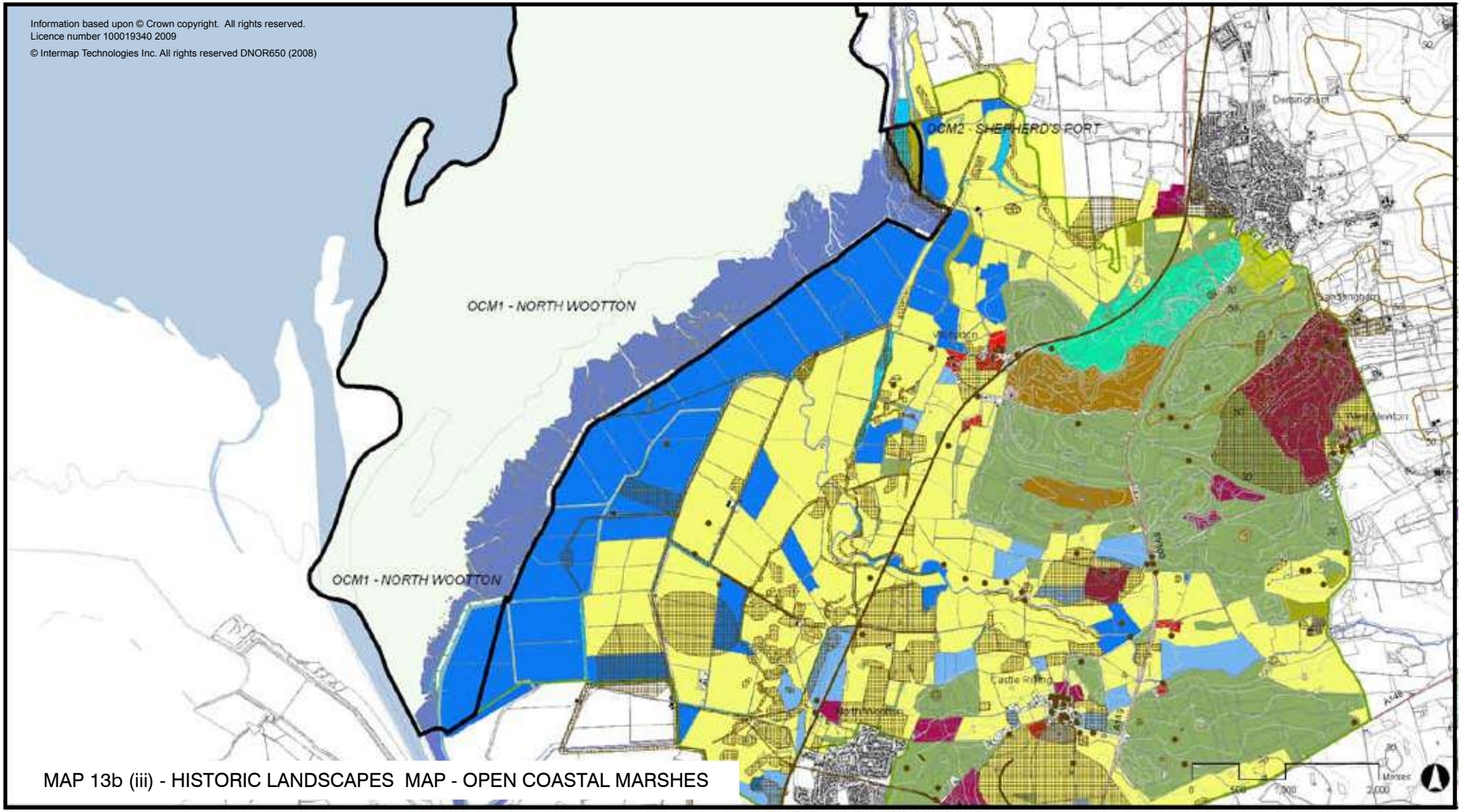
Connections
- National Cycle Route
- Cycleways
- Long Distance Path
- Footpath
- Bridleway
- Restricted Byway

Topography
- Contour Line (Interval 5 m)
- 30 m Contour Line
- 50 m Contour Line
- 'A' Road
- 'B' Road
- principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary



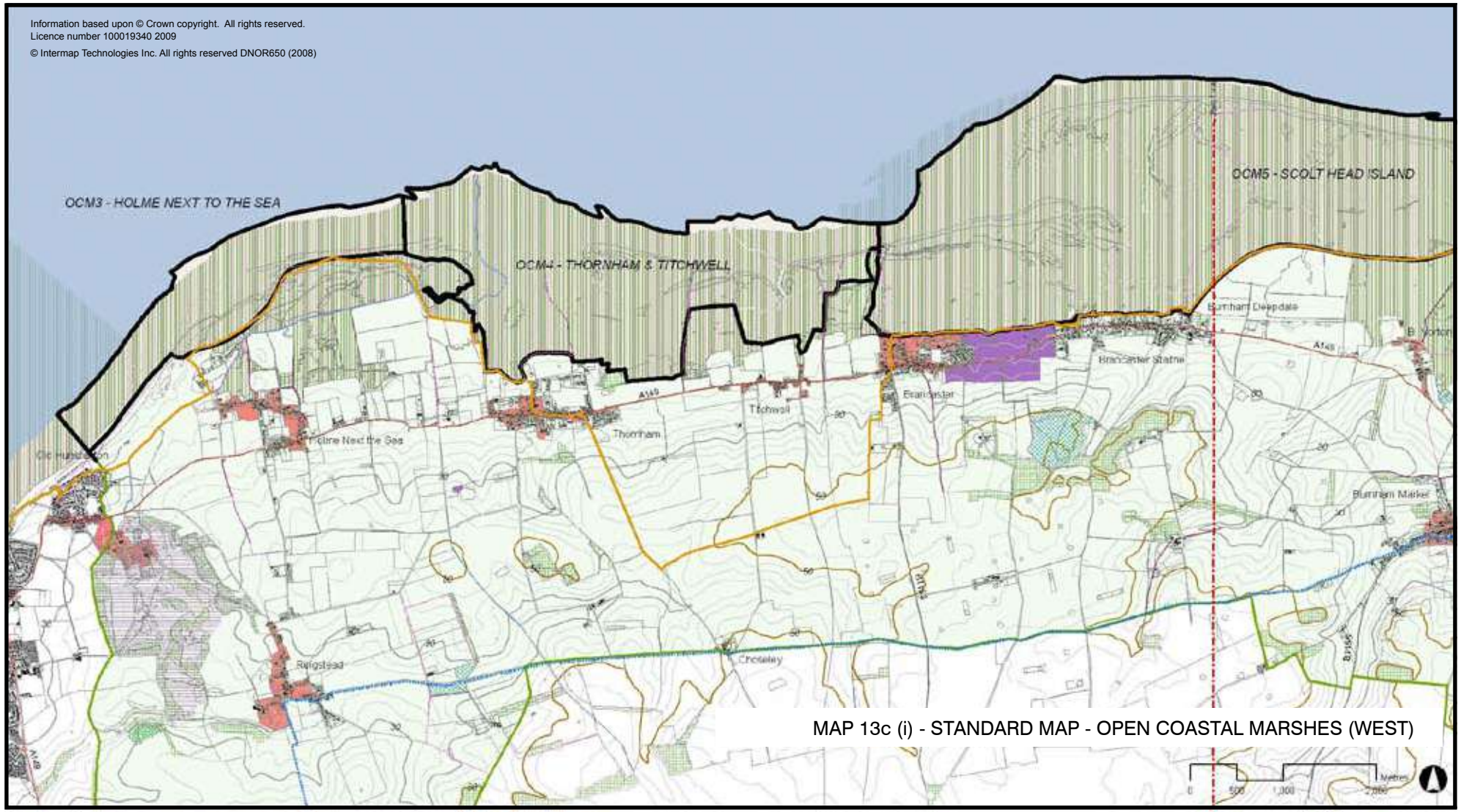
OCM Open Coastal Marshes

- Core Woodland Area
- Zone of General Habitat Enhancement
- Zone of Grassland-Heathland -Woodland Enhancement
- Wetland Habitat Enhancement Zone
- Coastal Habitat Enhancement Zone
- Calcareous Grassland Core Area
- Core Habitat Corridors
- Paston Bam Bat Site Management Area
- Coastal Buffer Zone
- Broads & River Buffer Zone
- Priority 1 Heathland Creation Areas (Scores 33 or Above)
- Priority 2 Heathland Creation Areas (Scores 21-32)
- 'A' Road
- 'B' Road
- Principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary



MAP 13b (iii) - HISTORIC LANDSCAPES MAP - OPEN COASTAL MARSHES

- 18th-19th Century Enclosure
- 20th Century Agriculture
- Built up Areas - Historic
- Built up Areas - Modern
- Coastal - Drainage Enclosure
- Coastal - Managed Wetland
- Commons, Wastes, Heaths
- Historic Earthwork
- Horticulture
- Industry
- Inland - Managed Wetland
- Marginal
- Miscellaneous
- Parks, Garden, Recreation
- Water Features
- Woodland
- HER 'point'
- HER 'line'
- HER 'area'
- 'A' Road
- 'B' Road
- Principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary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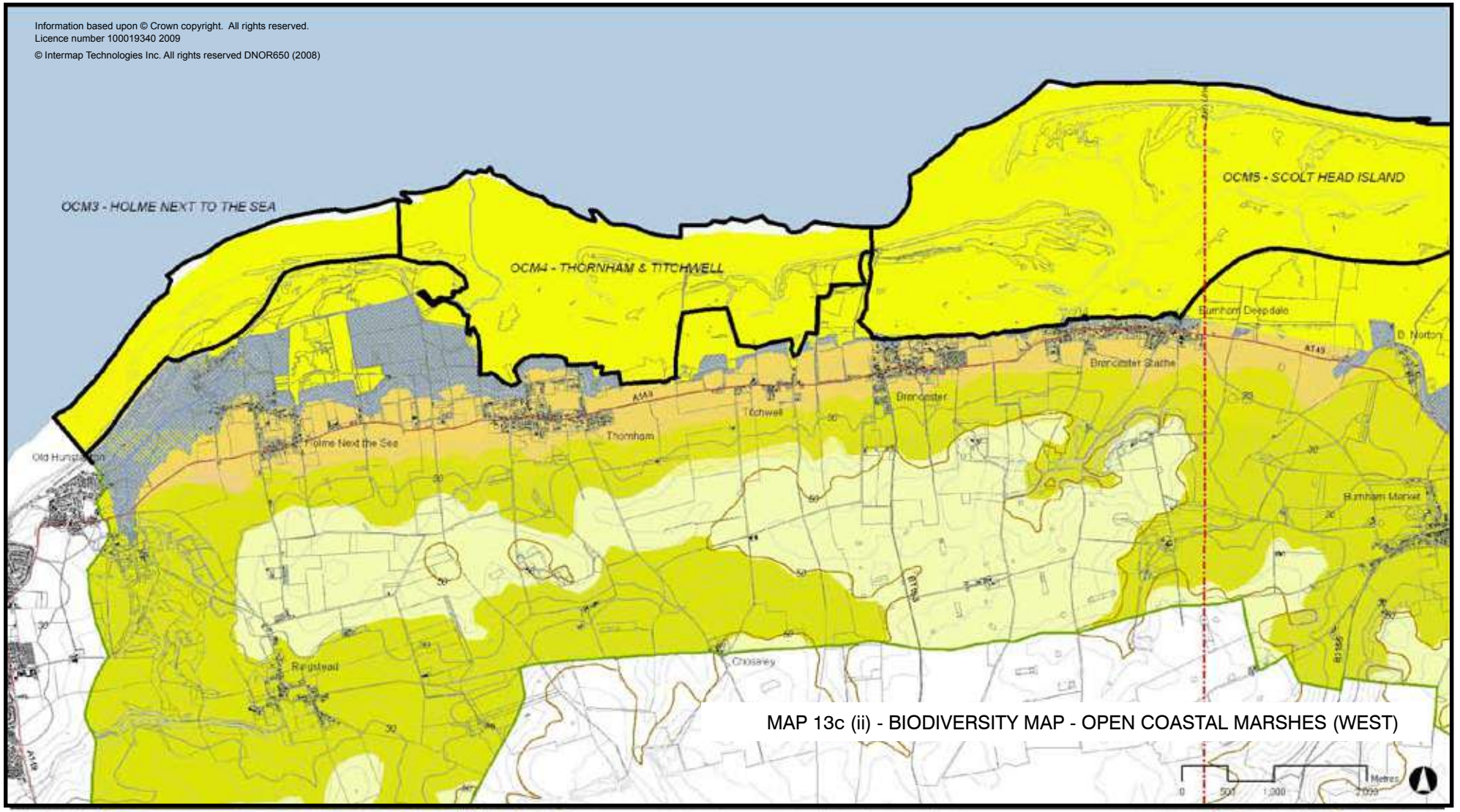
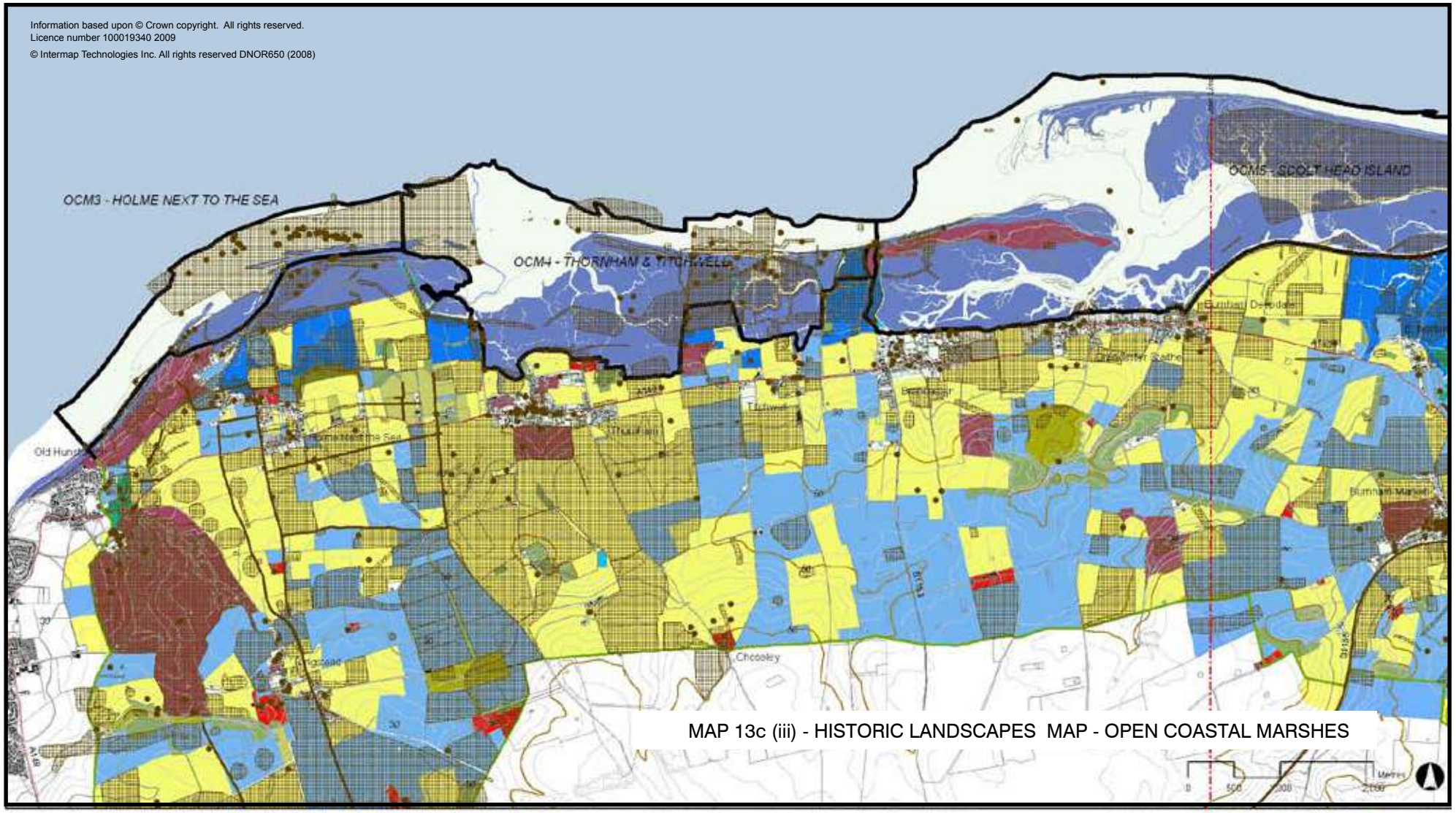
© Intermap Technologies Inc. All rights reserved DNOR650 (2008)
OCM3 - HOLME NEXT TO THE SEA
OCM4 - THORNHAM & TITCHWELL
OCM5 - SCOLT HEAD ISLAND
Thornham
Titchwell
Brancaster
Brancaster Staithe
Burnham Deepdale
Burnham Market
Holme Next the Sea
Ringstead
Choseley
A149
A148
MAP 13c (i) - STANDARD MAP - OPEN COASTAL MARSHES (WEST)
Statutory Designations
Ramsar Site
Special Protection Area
Ancient Woodland
Site of Special Scientific Interest
County Wildlife Sites
Local Nature Reserve
Forestry Commission Woodland
Special Area of Conservation
Heritage
Scheduled Ancient Monuments
Conservation Areas
Historic Parks and Gardens
Connections
National Cycle Route
Cycleways
Long Distance Path
Footpath
Bridleway
Restricted Byway
Topography
Contour Line (Interval 5 m)
30 m Contour Line
50 m Contour Line
'A' Road
'B' Road
Principal river
Area of Outstanding Natural Beauty
Settlement
District Council Boundary



MAP 13c (ii) - BIODIVERSITY MAP - OPEN COASTAL MARSHES (WEST)

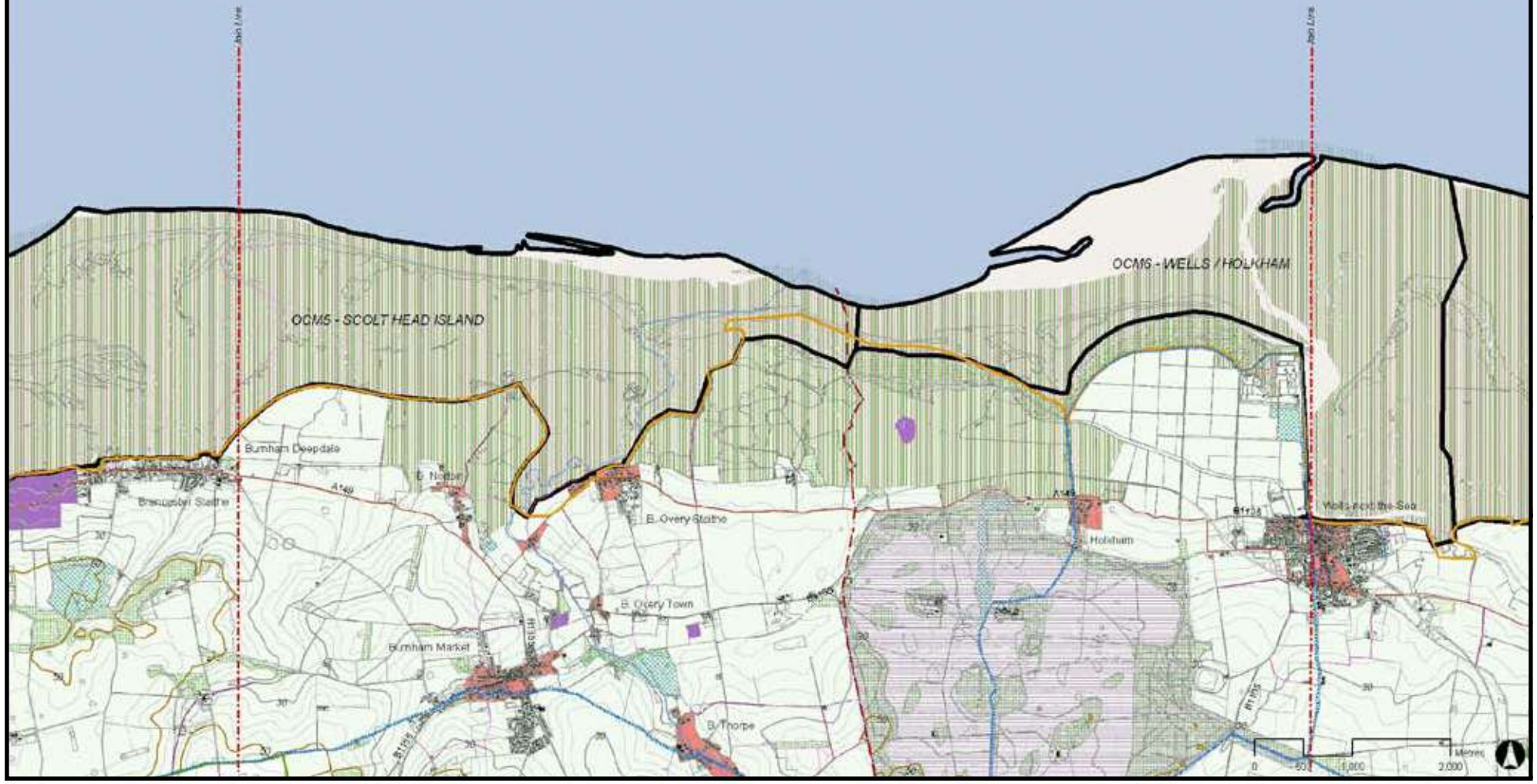
- Core Woodland Area
- Zone of General Habitat Enhancement
- Zone of Grassland-Heathland -Woodland Enhancement
- Wetland Habitat Enhancement Zone
- Coastal Habitat Enhancement Zone
- Calcareous Grassland Core Area
- Core Habitat Corridors
- Paston Bam Bat Site Management Area
- Coastal Buffer Zone
- Broads & River Buffer Zone
- 'A' Road
- 'B' Road
- Principal rver
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary



MAP 13c (iii) - HISTORIC LANDSCAPES MAP - OPEN COASTAL MARSHES

- 18th-19th Century Enclosure
- 20th Century Agriculture
- Built up Areas - Historic
- Built up Areas - Modern
- Coastal - Drainage Enclosure
- Coastal - Managed Wetland
- Commons, Wastes, Heaths
- Communications
- Historic Earthwork
- Horticulture
- Industry
- Inland - Managed Wetland
- Marginal
- Military
- Mineral
- Miscellaneous
- Parks, Gardens, Recreation
- Pre- 18th Century Enclosure
- Water Features
- Woodland
- HER 'point'
- HER 'line'
- HER 'area'
- 'A' Road
- 'B' Road
- Principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary

MAP 13d (i) - STANDARD MAP - OPEN COASTAL MARSHES (CENTRE)



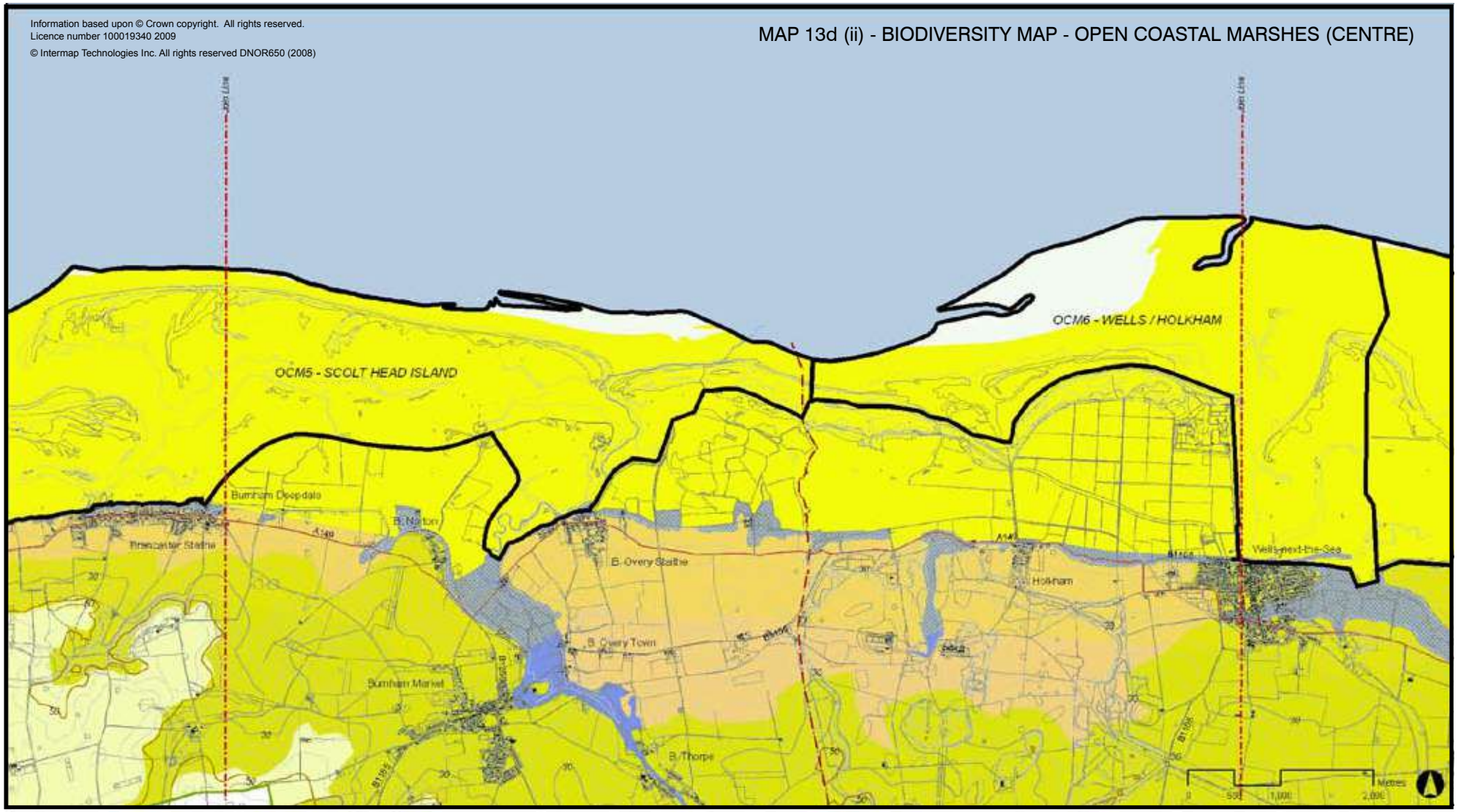
Statutory Designations
- Ramsar Site
- Special Protection Area
- Ancient Woodland
- Site of Special Scientific Interest
- County Wildlife Sites
- Local Nature Reserve
- Forestry Commission Woodland
- Special Area of Conservation

Heritage
- Scheduled Ancient Monuments
- Conservation Areas
- Historic Parks and Gardens

Connections
- National Cycle Route
- Cycleways
- Long Distance Path
- Footpath
- Bridleway
- Restricted Byway

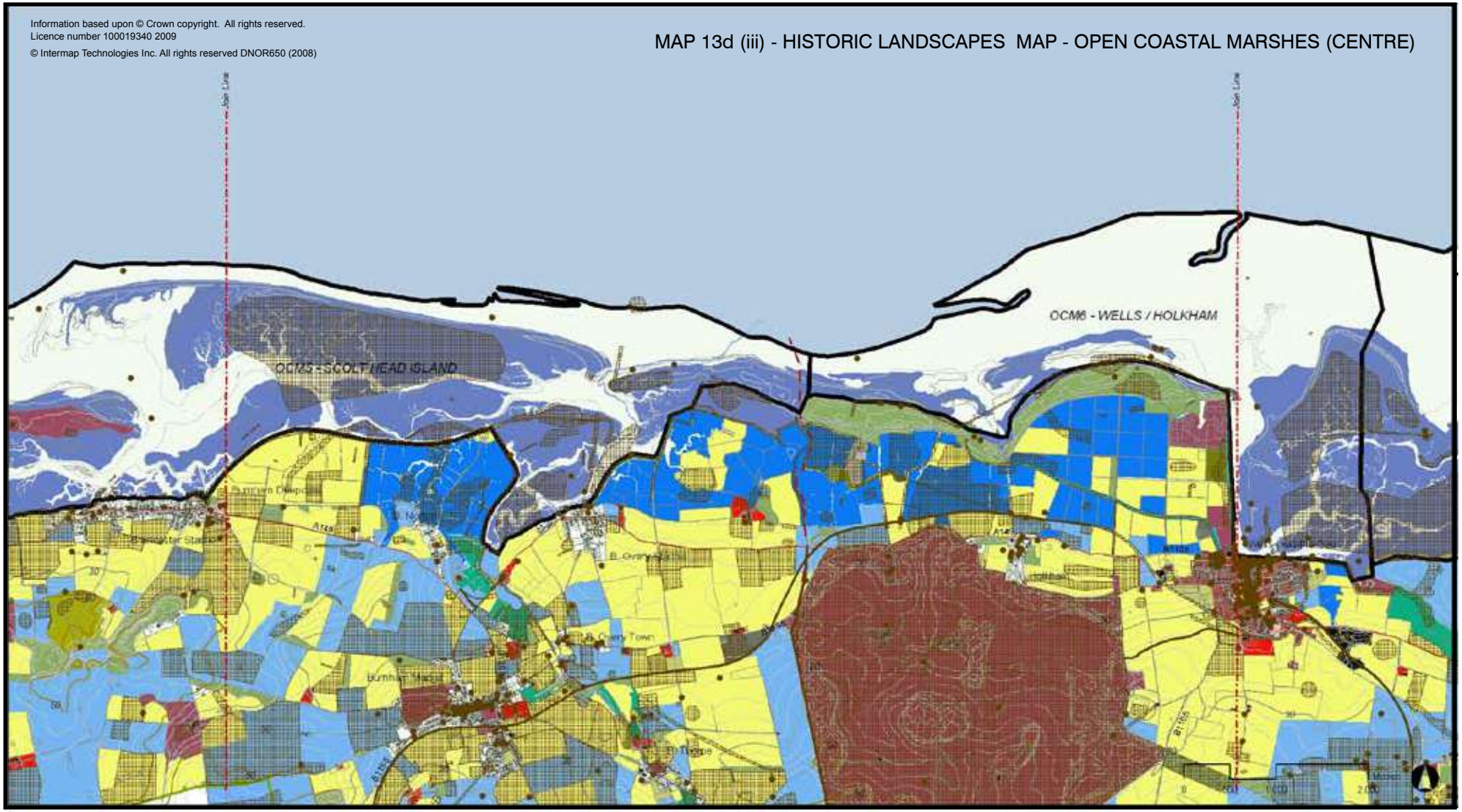
Topography
- Contour Line (Interval 5 m)
- 30 m Contour Line
- 50 m Contour Line
- 'A' Road
- 'B' Road
- Principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary

MAP 13d (ii) - BIODIVERSITY MAP - OPEN COASTAL MARSHES (CENTRE)



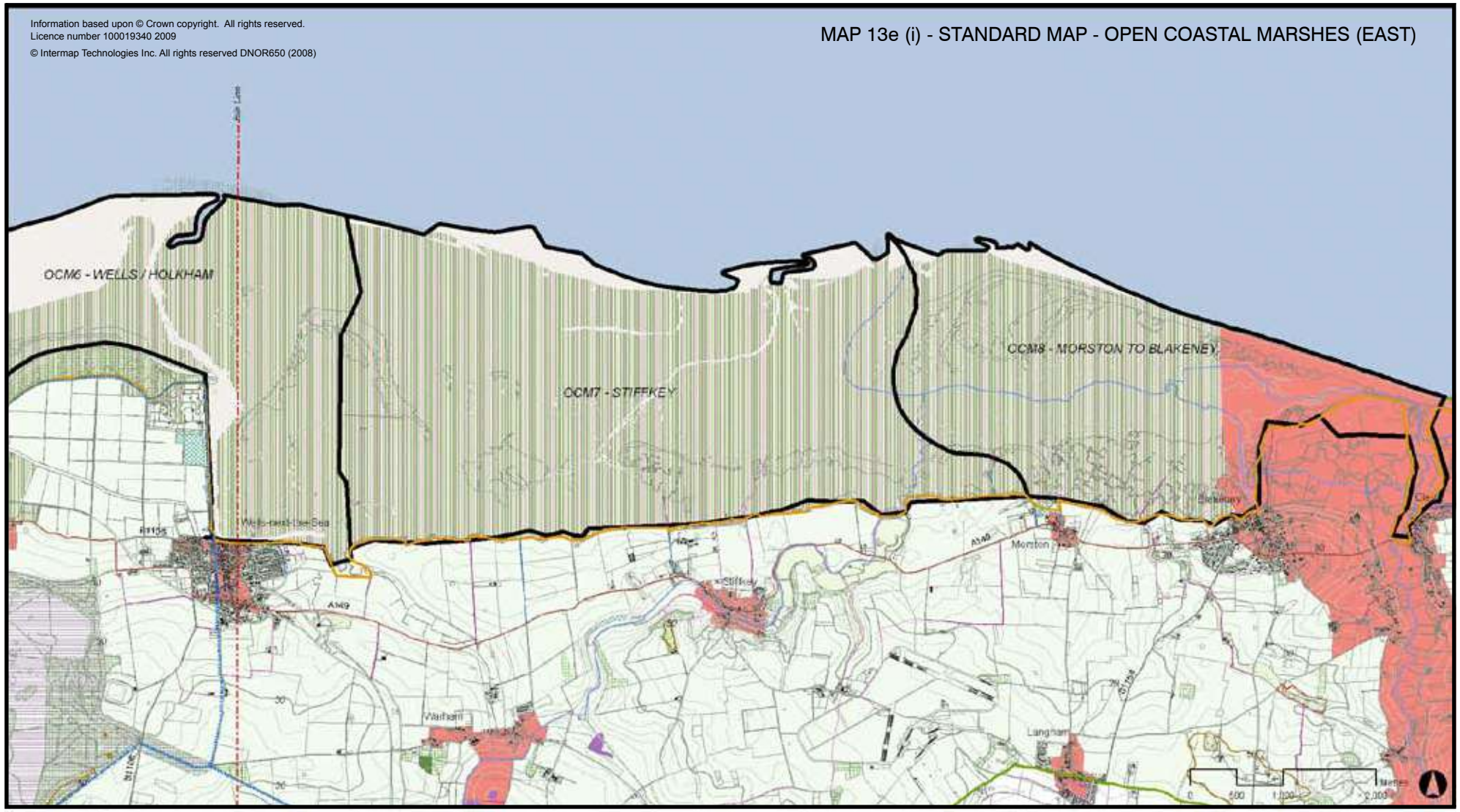
- Core Woodland Area
- Zone of General Habitat Enhancement
- Zone of Grassland-Heathland -Woodland Enhancement
- Wetland Habitat Enhancement Zone
- Coastal Habitat Enhancement Zone
- Calcareous Grassland Core Area
- Core Habitat Corridors
- Paston Bam Bat Site Management Area
- Coastal Buffer Zone
- Broads & River Buffer Zone
- 'A' Road
- 'B' Road
- Principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary

MAP 13d (iii) - HISTORIC LANDSCAPES MAP - OPEN COASTAL MARSHES (CENTRE)



- 18th-19th Century Enclosure
- 20th Century Agriculture
- Built up Areas - Historic
- Built up Areas - Modern
- Coastal - Drainage Enclosure
- Coastal - Managed Wetland
- Commons, Wastes, Heaths
- Communications
- Historic Earthwork
- Horticulture
- Industry
- Inland Managed Wetland
- Marginal
- Military
- Mineral
- Miscellaneous
- Parks, Gardens, Recreation
- Pre- 18th Century Enclosure
- Water Features
- Woodland
- HER 'point'
- HER 'line'
- HER 'area'
- 'A' Road
- 'B' Road
- Principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary

MAP 13e (i) - STANDARD MAP - OPEN COASTAL MARSHES (EAST)



Statutory Designations
- Ramsar Site
- Special Protection Area
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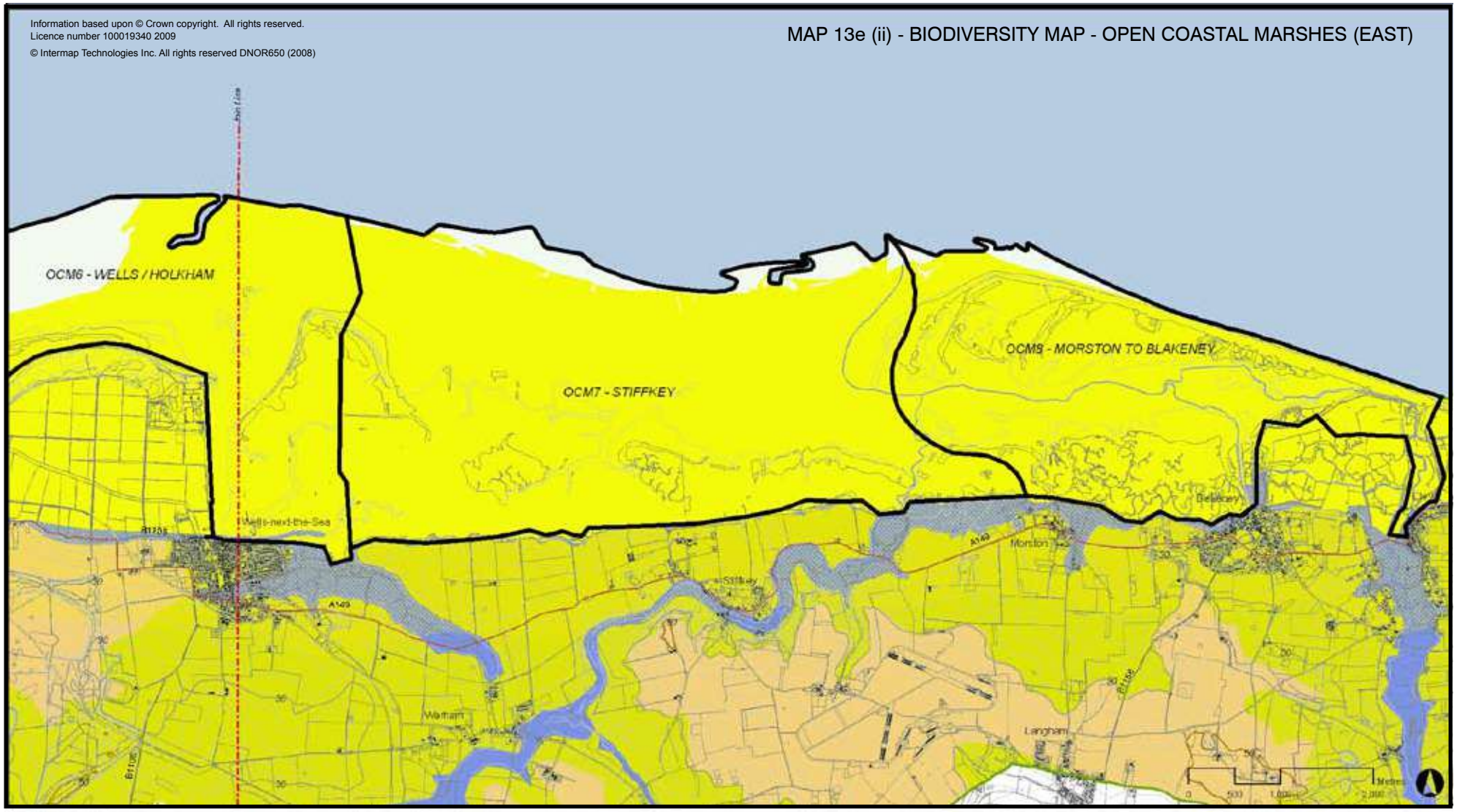
- Site of Special Scientific Interest
- County Wildlife Sites
- Local Nature Reserve
- Forestry Commission Woodland
- Special Area of Conservation

Heritage
- Scheduled Ancient Monuments
- Conservation Areas
- Historic Parks and Gardens

Connections
- National Cycle Route
- Cycleways
- Long Distance Path
- Footpath
- Bridleway
- Restricted Byway

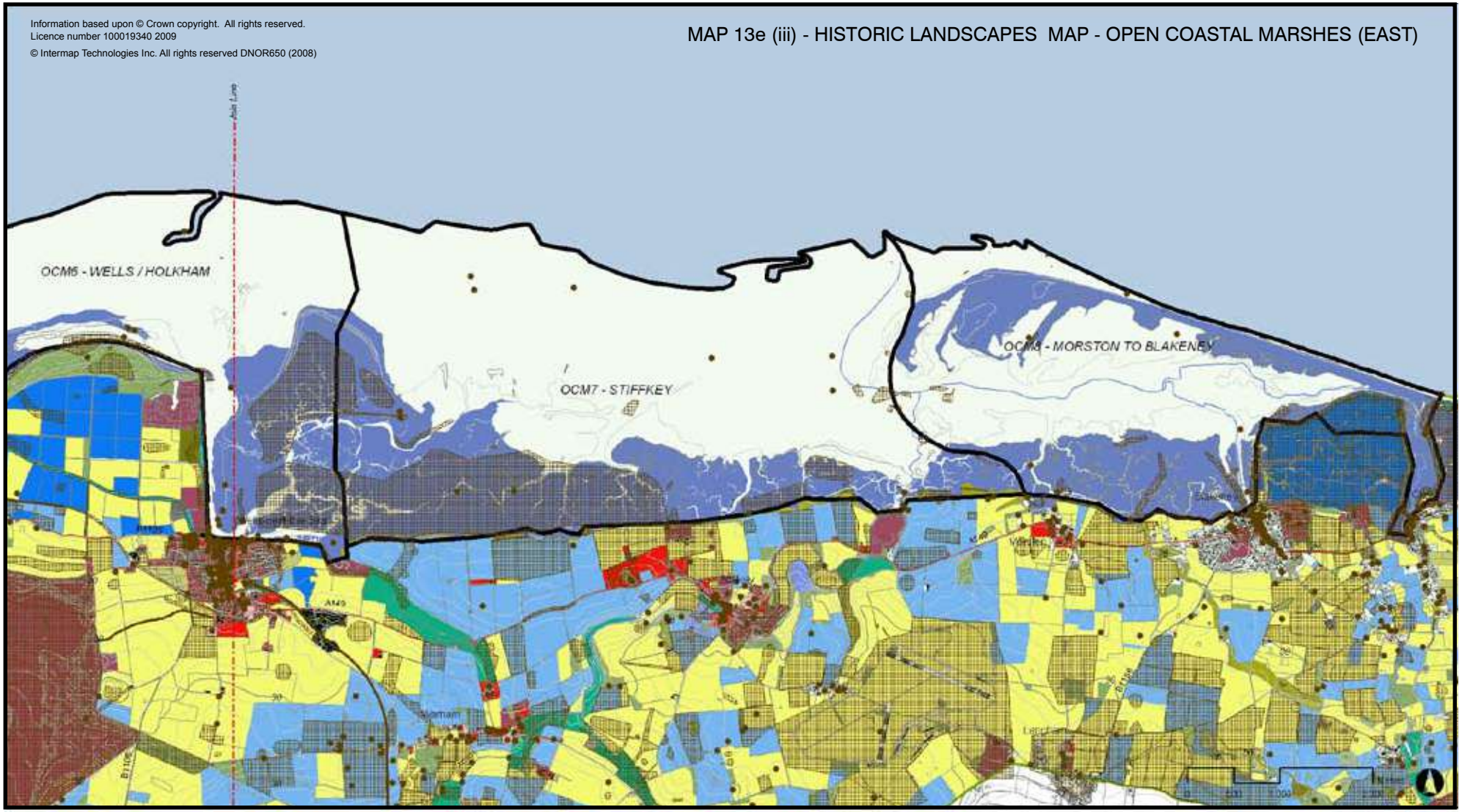
Topography
- Contour Line (Interval 5 m)
- 30 m Contour Line
- 50 m Contour Line
- 'A' Road
- 'B' Road
- principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary

MAP 13e (ii) - BIODIVERSITY MAP - OPEN COASTAL MARSHES (EAST)



- Core Woodland Area
- Zone of General Habitat Enhancement
- Zone of Grassland-Heathland -Woodland Enhancement
- Wetland Habitat Enhancement Zone
- Coastal Habitat Enhancement Zone
- Calcareous Grassland Core Area
- Core Habitat Corridors
- Paston Bam Bat Site Management Area
- Coastal Buffer Zone
- Broads & River Buffer Zone
- 'A' Road
- 'B' Road
- Principal rver
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary

MAP 13e (iii) - HISTORIC LANDSCAPES MAP - OPEN COASTAL MARSHES (EAST)



- 18th-19th Century Enclosure
- 20th Century Agriculture
- Built up Areas - Historic
- Built up Areas - Modern
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- Coastal - Managed Wetland
- Commons, Wastes, Heaths
- Communications
- Historic Earthwork
- Horticulture
- Industry
- Inland - Managed Wetland
- Marginal
- Military
- Mineral
- Miscellaneous
- Parks, Gardens, Recreation
- Pre- 18th Century Enclosure
- Water Features
- Woodland
- HER 'point'
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- HER 'area'
- 'A' Road
- 'B' Road
- Principal river
- Area of Outstanding Natural Beauty
- Settlement
- District Council Boundary