Appendix 5

Appendix 5

Green Infrastructure Priority Area (GIPA) descriptions

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Norwich to the Broads Green Infrastructure Priority Area (GIPA)

Summary

Summary description

The landscape of this corridor to the northeast of Norwich is dominated by agriculture, primarily arable with some areas of grazed grassland. This is an area partly developed on sandy soils of the former Mousehold Heath, which formerly extended over 6000 acres, and partly on loams and boulder clays. The landscape of the interfluve is generally flat, with mainly large arable fields, and lacking in tree and hedgerow cover although conifer plantations and 18th and 19th century parkland is present on the former heathland to the west. The valley margins to the north and south, and the tributary valleys which lead to the Bure and Yare are more densely wooded and also contain areas of fen and grassland. There are open views across the floodplain marshland in places. There are Geodiversity sites at Wroxham Hall Pit and Dobbs Plantation Pit. These are important for their sediment exposures.

Key issues

- There is extensive under provision of Natural/Semi-Natural Greenspace particularly away from the urban fringe of Norwich (much of the Broads is not readily accessible)
- A large area in the southwest of the GIPA forms part of a Strategic Growth location, including the proposed Rackheath Ecotown.
- New development in this area will place pressure upon the internationally important wetland habitats and features of the Broads through increased recreational use and pressure on water resources.
- Heathland remnants are inadequately managed and poorly connected
- There is a lack of connectivity of hedgerows, woodland etc
- There is a sparse, and poorly connecting public footpath network (except by fast and often dangerous roads): any increase in access would be of great benefit.

Key recommendations

- There is a general lack of small (2ha-20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 9kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- There is a scarcity of larger (>20ha) areas of accessible open space (much of the Broads floodplain is not strictly accessible): the density should be increased to a minimum of 1 site for every 12kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- Promote a new (>60ha) county park for the Rackheath area: this could incorporate recreation of historic Mousehold Heath landscape: a

mosaic of heathland, woodland and grassland between the Broads and Norwich and linking areas of woodland, particularly to the north of Norwich to provide a substantial landscape buffer to growth of the City and a green gateway to Norwich.

- Promote continued expansion of off-road permissive access through Stewardship schemes. This should be targeted to areas where there is opportunity to link existing PROW or where there is a general lack of footpaths
- Create green corridors, including dedicated routes for pedestrians, cyclists and equestrians from Norwich to Wroxham and from Norwich to Acle, linking areas of existing and planned new development
- Enhance the management of intensively farmed agricultural land, notably County Farms, so that it can act as a 'corridor' for wildlife, buffer existing wildlife habitats and enhance the landscape setting of settlements.
- Promote BAP habitat creation on the floodplain margins to help to buffer the internationally important wetland habitats of the Broads
- New development should protect and enhance the character and unique qualities of existing settlements, using vernacular in new building design in relation to existing tradition of settlements and building in SUDS. There should be no development on the indicative floodplain.
- Strengthen and enhance 'green wedges' of countryside that stretch into Norwich at Thorpe End and Preston: these have the potential to enhance Norwich's image as a visually green city with wooded hinterland
- Extend existing grassland, hedgerow and woodland habitats, increase connectivity and ensure adequate buffers are in place
- Expansion of Burlingham Woodland Walks to provide a continuous north-south linkage between wet woodland at Hemblington-South Walsham and Burlingham, with further opportunity to provide wooded linkages to Decoy Carr and Fishley Carr
- Create new geological exposures that add to public appreciation of the distinctive local geology and ensure appropriate management, presentation, accessibility and interpretation of these and existing sites

Landscape key characteristics

From Broadland Council's Landscape Character Assessment (2008); Figure 3.5 District Landscape Character Types and Areas:

A - Area between Wroxham, Crostwick, Sprowston, Thorpe End, Great Plumstead and Panxworth *[Wooded Estatelands (E2, E3, E4)]*

- Numerous copses, woodlands and small plantations associated with these estates, punctuating a landscape of underlying predominantly arable farmland.

B - North Burlingham to Panxworth and Great Plumstead to Blofield *[Tributary Farmland (D4)]*

- Medium to large scale arable farmland
- Shelving and gently undulating landform, which is cut by small tributary valleys.
- An intricate network of narrow, winding rural lanes often bounded by banks or ditches
- Pockets of remnant parkland

C - North Burlingham to west of Acle *[Plateau Farmland (C2)]*

- Distinct flat and elevated landform in comparison to surrounding landscapes.
- Large fields of predominantly arable monoculture farmland.
- Presence of boundary oaks within hedgerows.
- Long and expansive views of adjacent landscapes.
- Predominantly rural character and associated strong sense of tranquillity throughout.
- Small ponds and marl pits are often features of fields lying on clayey and chalky Till.

D - Areas to the west of Wroxham, south of South Walsham and west of Acle *[Marsh Fringe (F1, F2)]*

- Forms the transition zone between the elevated plateau edge and marshes which line the Broads river valleys.
- Gently sloping landscape which generally slopes up to the 10m contour from lower-lying flat landscapes of the Broads.
- Small copses of woodland are dotted along the slopes (particularly where the slopes are steeper).
- In places, open views across the marshes and Broads can be gained.

Refer also to Figure A below.

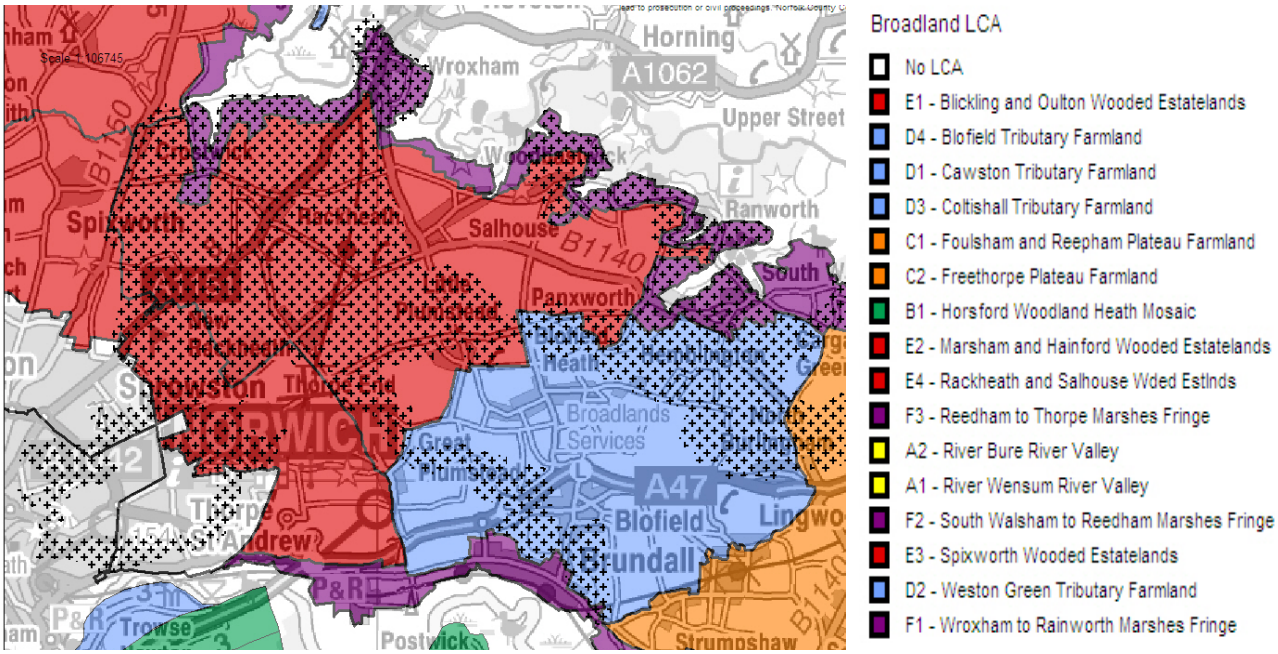


Figure A

Heritage key characteristics

The western part of the corridor is an area of mature landscape structure consisting of historic landscape parks, ancient woodland and a minor tributary of the river Bure known as Dobbs Beck or The Springs. The parklands are of at least 16th origin but what survives is predominantly of the 18th and 19th century. The establishment of the former WWII Rackheath Airfield erased much evidence of the earlier landscape. One important survival is the former boundary of Mousehold Heath to the south. Traces of the airfield survive, notably the line of the main runway although the area is predominantly in agricultural use. Mousehold Heath formerly extended over 6000 acres, as indicated by Faden's late 18thC Map. Settlement was historically located around the edge of the heath until the early 19thc parliamentary enclosures.

The main roads, plantation woodlands, farmsteads and hedgerows generally date from that period. The eastern part of the corridor lies on the interfluve between the Yare and Bure and is characterised by smaller fields with a longer agricultural history than much of the west of the area, with areas of common fields and enclosed arable land.

See also the GNDP Historic Characterisation and Sensitivity Assessment (2009)

Biodiversity & Geo-diversity key assets

The landscape of this corridor to the northeast of Norwich is dominated by agriculture, primarily arable with some areas of grazed grassland. However there are still some sizeable areas of semi-natural habitat, with many smaller pockets throughout the arable areas. There are several areas of ancient woodland and parkland, with smaller areas of woodland, coniferous plantation and tree belts found throughout the area. The river valleys feeding into the Broads form the other major semi-natural features and these contain areas of fen, grassland and wet woodland. There are several County Wildlife Sites within the corridor designated for their woodland flora and a single SSSI which is an example of the wet meadow grassland and fen which would once have made up many of the river valleys feeding into the Broads. The historic extent of Mousehold Heath is, along its western margin, from Norwich to Sprowston, Rackheath and Salhouse, and east to Great Plumstead and Blofield Heath. Small remnants of the former heathland are still to be found within modern coniferous plantations.

There are Geodiversity sites within the corridor at Wroxham Hall Pit and Dobbs Plantation Pit. These are important for their sediment exposures.

Analysis and identification of issues

- There is a dearth of identified Green infrastructure projects which correspond to this GIPA.
- There is extensive under provision of Natural/Semi-Natural Greenspace particularly away from the urban fringe of Norwich (much of the Broads is not readily accessible): there is a scarcity of larger (>20ha) areas of accessible open space and only sparse GI in excess of 2ha.
- A large area in the southwest of the GIPA forms part of a Strategic Growth location, including the proposed Rackheath Ecotown.
- Large scale housing development within the GIPA may reduce opportunity for creation of areas of BAP habitat and delivery of landscape enhancements: conversely if well planned then they may enable delivery of large scale strategic open space

- A lack of brownfield development sites within the Norwich Urban Area will place pressure on greenfield land around the fringes of the City to accommodate the predicted levels of growth.
- New development in this area will place pressure upon the internationally important wetland habitats and features of the Broads through increased recreational use and pressure on water resources.
- Planned new settlements must provide high quality places to live, work and visit, through the development and management of green networks of infrastructure
- Part of the GIPA, between Blofield Heath and South Walsham, at Plumstead, and on the western outskirts of Acle, corresponds to the Econet Broads and Rivers Buffer Zone
- There is a lack of heathland management on residual heathland site
- There is lack of connectivity of residual heathland sites
- Development of land adjacent to the heathland remnants will reduce buffering, and opportunity for linkage and extension of sites: such areas should be protected from development
- Plantation woodland occupies former heathland sites
- There is a lack of connectivity of hedgerows, woodland etc
- There is a sparse, and poorly connecting rights of way network (except by fast and often dangerous roads). Therefore any increase in access would be of great benefit.
- There is under provision of Amenity Open Space
- There is under provision of Allotments
- There is minimal Local Nature Reserve Provision
- PPG17 found that quality of open spaces was poor or average
- The southwestern part of the GIPA includes, and lies adjacent to areas in the northeast of Norwich which have a high Index of Deprivation
- 17.5%of the population have a limiting long-term illness and the average age of the population is higher than in urban Norwich

Priorities and Actions: Landscape character

- Enhance the management of intensively farmed agricultural land to enhance the landscape setting of settlements within the Area.
- Strengthening and linking areas of woodland, particularly to the north of Norwich to provide a substantial landscape buffer to growth of the City.
- Strengthen and enhance ‘green wedges’ of countryside that stretch into Norwich at Thorpe End and Sprowston: these have the potential to enhance Norwich’s image as a visually green city with wooded hinterland
- Strengthen and enhance area of countryside (views, gateways and approaches) adjacent to Norwich
- Any new development and greenspace networks should seek to protect and enhance the character and unique qualities of existing settlements: ensure new developments utilise the characteristics of the local landscape setting to inform decisions regarding the position and design

of proposals and the integration of appropriate mitigation measures, taking into account Broadland District Council/Broads Authority Design Guides.

Priorities and Actions: Culture/Heritage

- Recreation of historic Mousehold Heath landscape: restoration of a mosaic of heathland, woodland and grassland between the Broads and Norwich, perhaps in tandem with a Country Park project
- Use of vernacular in new building design in relation to existing tradition of settlements
- Interpretation of special features eg former extent of Mousehold Heath

Priorities and Actions: Biodiversity/Geodiversity

General

- Identify BAP habitat creation targets
- Protect and enhance existing habitat of local value and above, including BAP habitats, through survey and designation
- Protect and enhance existing habitat of local value and above, including BAP habitats, through implementation of appropriate management regimes
- Identify habitat enhancement and creation areas for reinstating former habitats and buffering existing sites.
- Identify priority links to provide increased connectivity and buffering to link sites and reduce the adverse impacts from adjacent land-uses.
- Wider habitat management: There is a need to enhance the management of intensively farmed agricultural land so that it can act as a ‘corridor’ for wildlife and buffer existing wildlife habitats.
- Natural habitat creation between Blofield Heath and South Walsham, at Plumstead, and on the outskirts of Acle, should be a priority.
- Ensure new developments build in SUDS and maximise opportunity for capture and use of water and wetland habitat creation
- Habitat creation on the floodplain margins will help to buffer the internationally important wetland habitats of the Broads
- Enhance conservation management on County Farms to include hedgerows and or standard trees around all field boundaries and wide grass margins or verges (min 2m) to all field boundaries
- Create green corridors, linking existing habitats where possible, from Norwich to Wroxham and from Norwich to Acle

Woodlands

- Assess functional connectivity within woodland core areas.
- Expand existing woods, so that some are >25ha and all are over 3ha.

- Buffer woodland to 30m minimum through restoration or creation of habitats adjacent to sites or encouragement of more sympathetic land uses.
- Significantly increase connectivity through creating new woodland linkages and enhancing the matrix (land uses surrounding a woodland).
- Begin to 'convert' conifer woodland to broadleaved or heathland where appropriate
- Promotion and expansion of Burlingham Woodland Walks across County Farms land and beyond will help provide recreational opportunity for people moving to the Key Service Centres/Villages within the Joint Core Strategy.
- Expansion of Burlingham Woodland Walks could provide a continuous north-south linkage between wet woodland at Hemblington-South Walsham and Burlingham, with further opportunity to provide wooded linkages to Decoy Carr and Fishley Carr

Grasslands

- Identify areas of grassland that can form the nucleus for enhancement and expansion.
- Expand existing grasslands where possible, e.g., commons, verges, churchyards, pasture.
- Create new grasslands and associated habitats such as scrub close to rural communities.
- Buffer grassland through restoration/creation of habitats/encouragement of low input agri systems.
- Enhance connectivity through creating new grassland linkages and enhancing the matrix (land uses surrounding a grassland).
- Convert lower value agricultural land to low input grassland, especially in/adjacent to valleys

River Corridors

- Retain maximum extent of valley margins as undeveloped land. Enhance management of floodplain habitats and river. Create BAP habitats on floodplain (wetland habitats) and valley sides (woodland and grassland) to safeguard Econet buffer zone.
- Ensure that no development is permitted on the indicative floodplain
- Maintain and enhance lateral connectivity between interfluves and floodplains: link wetland habitats to woodland and grassland on the interfluve

Heathlands

- Produce heath-wood pasture creation plan
- Expand existing heathland where possible to minimum 50ha, ideally 100ha.
- Create new heathland through selective removal of conifer plantations
- Create new heathland adjacent to other habitats or on former heathland sites and in association with mineral extraction/restoration.

- Buffer heathland through restoration or creation of habitats adjacent to sites or encouragement of low input agricultural systems.
- Enhance connectivity through creating new heath/wood pasture linkages and enhancing the matrix (land uses surrounding a heath/wood pasture)

Geodiversity

- Identify important sites and ensure appropriate management, presentation, accessibility and interpretation
- Create new geological exposures that add to public appreciation of the distinctive local geology

Priorities and Actions: Access and Open Space

- Manage and enhance existing open spaces
- Create more accessible greenspace including amenity open space, in urban areas and urban fringe.
- Identify sites for new allotments close to settlements
- Encourage walking as a way to better health through advertisement of safe, easily negotiable and enjoyable footpath routes, particularly in the southwest of the GIPA
- Improve footpath linkages, especially of circular walks accessible from settlements, and where providing access to publically accessible open space by creation of new rights of way
- Where strategically-placed footpaths are linked by road sections create new off-road routes
- Promote new trails eg Harnser's Way (proposed trail from Thorpe St. Andrew to Reedham Ferry) or a Yare-Bure circular route
- There is a general lack of small (2ha-20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 9kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- There is a scarcity of larger (>20ha) areas of accessible open space (much of the Broads floodplain is not strictly accessible): the density should be increased to a minimum of 1 site for every 12kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- Promote a new (>60ha) county park for the Rackheath area: this might incorporate areas of heathland restoration and wood pasture as described in the biodiversity section
- Promote continued expansion of off-road permissive access through Stewardship schemes. This should be targeted to areas where there is opportunity to link existing PROW or where there is a general lack of footpaths
- Provide dedicated routes for pedestrians, cyclists and equestrians from Norwich to Wroxham and from Norwich to Acle, as part of a green corridor linking areas of existing and planned new development
- Promote and extend Burlingham Woodland Walks scheme

Norwich to Long Stratton Green Infrastructure Priority Area (GIPA)

Summary

Summary description

This area retains a high number of features of typical 'Ancient' countryside, with a significant number of surviving greens, cohesive settlements of timber-framed buildings grouped around them, dispersed farmsteads and tiny hamlets set in plateau farmland developed on boulder clay and dissected by numerous larger and smaller river valleys. The landscape of this corridor is dominated by arable farming on heavy clay soils, though there are still areas of grassland. Hedgerows are abundant, as are small pockets of woodland. In the river valleys wet woodland and grazing marsh are found. The valley and valley margin landscape is notable for scattered woodlands and an often intricate network of narrow, winding rural lanes bounded by hedgerows and hedgerow trees; the plateau farmland is more open, with large fields and straight roads. The Roman Road which runs from Caistor south to Long Stratton is highly visible in the landscape. Towards the northern Norwich end of the corridor are areas of parkland and ancient woodland, along with the open water habitats at Whitlingham. There are a few geodiversity sites in the corridor. These are predominantly sediment exposures in old quarry pits.

Key issues

- A large area of land at Long Stratton forms part of a Strategic Growth location; further areas in the north of the GIPA have been identified as having potential for housing
- Formerly well-hedged landscape is often degraded, with sparse and/or overgrown hedgerows. There is a lack of connectivity of hedgerows, woodland etc
- At the southern and northern end of this corridor rights of way are quite numerous. In the central section they are largely absent and so increases in access in this area would be of great benefit.

Key recommendations

- There is a scarcity of larger (>20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 12kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- Promote continued expansion of off-road permissive access through Stewardship schemes. This should be targeted to areas where there is opportunity to link existing PROW or where there is a general lack of footpaths and should include new river crossings where necessary to improve access to the floodplain. Target new footpaths to the central section of the corridor, where they are largely absent

- Enhance the management of intensively farmed agricultural land so that it can act as a 'corridor' for wildlife, buffer existing wildlife habitats and enhance the landscape setting of settlements. Encourage re-creation of historic landscapes e.g. pastoral landscape of small fields with irregular boundaries
- The scattered network of settlements to the south of Norwich is a key asset. New development should protect and enhance the character and unique qualities of existing settlements, using vernacular in new building design in relation to existing tradition of settlements and building in SUDS. There should be no development on the indicative floodplain.
- Expand existing grasslands where possible, e.g., commons, verges, churchyards, pasture, particularly close to rural communities and in appropriate locations eg along watercourses.
- Expand, strengthen and link areas of hedgerow and woodland, particularly to the south and southwest of Norwich to provide a substantial landscape buffer to growth and a green gateway to the City. Prioritise woodland creation to the east of Long Stratton, where it corresponds to the Econet Woodland Core Area
- Restore existing ponds to an ecologically favourable state and create new ponds
- Restore existing hedges to an ecologically favourable state and encourage new planting (where this does not compromise species rich grassland/verge habitats)
- Encourage parkland restoration or management on suitable sites
- Retain maximum extent of valley margins as undeveloped land. Enhance management of floodplain habitats and river. Create BAP habitats on valley sides to provide buffer.
- Create new geological exposures that add to public appreciation of the distinctive local geology and ensure appropriate management, presentation, accessibility and interpretation of these and existing sites
- Protect and improve the presentation, accessibility, interpretation and management of buildings, sites and landscape features of historic value

Landscape key characteristics

From the South Norfolk Landscape Assessment (2006); Figure 11: Indicative Landscape Character Areas:

A - The Tas Valley between Norwich and Tasburgh *[Rural River Valleys (A1)]*

- distinct valley landform with wide flat valley floodplains
- semi-enclosed landscape with long internal and restricted external views
- presence of watercourse clearly recognisable as a 'river', although often invisible within the wider landscape
- areas of pastoral floodplain set within arable landscape valley sides

B - Postwick to Dunston, Mangreen and Tasburgh to Long Stratton *[Tributary Farmland (B1)]*

- shelving and gently undulating landform created by small tributary valleys;
- transitional landscape between the upland plateaux and the river valleys;
- tamed and peaceful medium to large-scale arable farmland;
- scattered small farm woodlands and sparse and/or overgrown hedgerows and hedgerow trees;
- intricate network of narrow, winding rural lanes bounded by banks or ditches;
- presence of occasional remnant parklands;

C - Long Stratton to west of Hardwick *[Plateau Farmland (E2)]*

- distinct flat and elevated landform;
- large fields of arable monoculture;
- strong sense of openness and exposure due to scarcity of enclosing elements;
- long views of the district from the plateau edges and across the plateau;
- presence of some mature remnant oak hedgerow trees;
- straight plateau-top roads with wide grass verges and ditches;
- wooded horizons;

D - Keswick Area *[Valley Urban Fringe (F1)]*

- distinctive broad meandering valley form with broad flat flood plain and enclosing valley sides opening up where joined by tributary valleys;
- large river flanked by characteristic wetland vegetation often with well-wooded valley sides;
- presence of gravel workings and remnant flooded gravel workings on the valley floor;
- inaccessible valley floor with relatively few river crossings resulting in a sense of remoteness and solitude;

• visibility of Norwich urban fringe along parts of the upper valley sides;

Refer also to Figure B below.

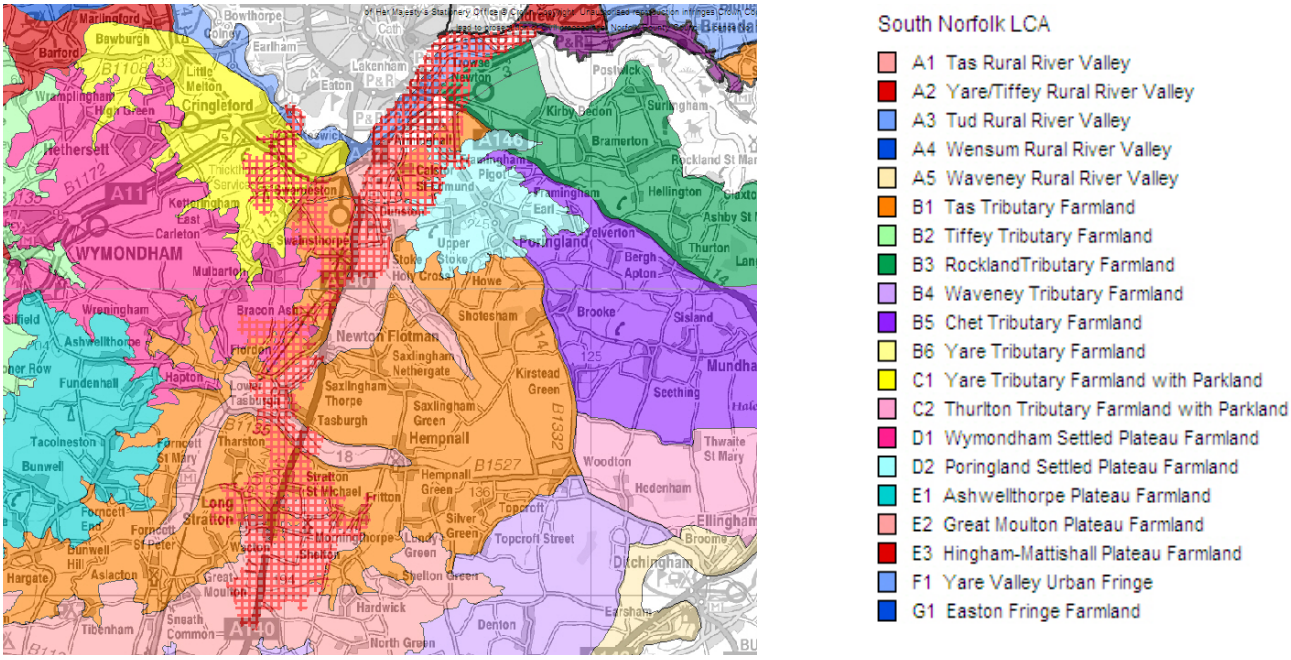


Figure B

Heritage key characteristics

This area retains a high number of features of typical 'Ancient' countryside, with a significant number of surviving greens, cohesive settlements of timber-framed buildings grouped around them, dispersed farmsteads and tiny hamlets focused around church/halls and an extensive network of ancient track ways linking them together. In addition, the zone contains a rare grid system of lanes which dates from at least the medieval period, and may well be much earlier. The Roman Road which runs from Caistor south to Long Stratton is a highly visible and easily understood archaeological feature in the landscape. There is some evidence of modern housing development, but in general the area has a strong 16th/17th century character. The most significant change in recent times has been considerable loss of hedgerow boundaries, particularly adjacent to the settlements.

The historic core of Long Stratton is still an easily visible coherent grouping of 16th and 17th century timber-framed houses and shops which provided goods and services for the dispersed settlements in the surrounding countryside – and still does. The Roman Road which forms its spine, is the reason for its location, and for its linear shape, but in modern times, increased traffic on the road has brought an erosion of character through dirt, noise and preventing easy passage from one side to the other. Modern infill between the old

church/hall complex and the market has diluted the historic cohesion of the settlement – but has continued its role as a service centre. Although extensive development either side of the road has distorted the linear pattern, this is not at present easily perceivable when travelling through the historic core. Further development in the hinterland either side of the road would be likely to have more impact on the wider landscape of other zones than within the inward-looking and largely contained historic street – unless the new development was taller and out of scale with the historic buildings. The cohesive group of historic buildings and the recognisable archaeological feature of the Roman Road which has shaped the settlement pattern of the village influences significance.

See also the GNDP Historic Characterisation and Sensitivity Assessment (2009)

Biodiversity & Geo-diversity key assets

The landscape of this corridor is dominated by arable farming on heavy clay soils, though there are still areas of grassland. These soils allow the existence of the large numbers of ponds which are a characteristic of the area. Hedgerows are abundant, as are small pockets of woodland. In the river valleys wet woodland and grazing marsh are found. Towards the northern Norwich end of the corridor are areas of parkland and ancient woodland, along with the open water habitats at Whitlingham.

There are a few geodiversity sites in the corridor with the majority at the northern end. These are predominantly sediment exposures in old quarry pits.

Analysis and identification of issues

- There is a dearth of identified Green infrastructure projects which correspond to this GIPA.
- Areas of land in the north of the GIPA have been allocated for housing or have been identified as having potential for housing
- A large area of land at Long Stratton forms part of a Strategic Growth location; further areas have been identified as having potential for housing
- Large scale housing development within the GIPA may reduce opportunity for creation of areas of BAP habitat and delivery of landscape enhancements: conversely if well planned then they may enable delivery of large scale strategic open space
- A lack of brownfield development sites within the Norwich Urban Area will place pressure on greenfield land around the fringes of the City to accommodate the predicted levels of growth.
- There is potential for new development on valley sides to compromise function as a corridor for wildlife and its role in buffering urban edge of Norwich

- Formerly well-hedged landscape is degraded, with sparse and/or overgrown hedgerows
- Exposed plateau landscape due to scarcity of enclosing elements and loss of standard oak trees;
- Inaccessible valley floor with relatively few river crossings
- There is a need to protect and improve the presentation, accessibility, interpretation and management of buildings, sites and landscape features of historic value
- A substantial area of the GIPA corresponds to the River Tud Floodplain, part of the Econet Broads and Rivers Buffer Zone
- The northeastern part of the GIPA corresponds to the River Yare Floodplain, part of the Econet Broads and Rivers Buffer Zone
- That part of the GIPA which lies to the east of Long Stratton, corresponds to the Econet Woodland Core Area
- At the southern and northern end of this corridor rights of way are quite numerous. In the central section they are largely absent and so increases in access in this area would be of great benefit.
- There is a lack of connectivity of hedgerows, woodland etc
- There is under provision of Amenity Open Space
- There is under provision of Allotments
- There is minimal Local Nature Reserve Provision
- New developments will put pressure on water resources
- PPG17 found that quality of open spaces was poor or average
- 17%of the population have a limiting long-term illness and the average age of the population is higher than in urban Norwich

Priorities and Actions: Landscape character

- Enhance the management of intensively farmed agricultural land to enhance the landscape setting of settlements within the Area.
- Strengthening and linking areas of woodland, particularly to the south and southwest of Norwich to provide a substantial landscape buffer to growth.
- Strengthen and enhance area of countryside (views, gateways and approaches) adjacent to Norwich to enhance Norwich's image as a visually green city with wooded hinterland and river valleys
- Encourage parkland restoration or management on suitable sites
- The scattered network of settlements to the south of Norwich is a key asset. Any new development and greenspace networks should seek to protect and enhance the character and unique qualities of existing settlements: ensure new developments utilise the characteristics of the local landscape setting to inform decisions regarding the position and design of proposals and the integration of appropriate mitigation measures, taking into account South Norfolk District Council Design Guides.
- Formerly well-hedged landscape is degraded, with sparse and/or overgrown hedgerows

- Ensure woodland and tree planting takes place to increase sense of enclosure of exposed plateau landscape

Priorities and Actions: Culture/Heritage

- Re-creation of historic landscapes e.g. pastoral landscape of small fields with irregular boundaries
- Use of vernacular in new building design in relation to existing tradition of settlements
- Interpretation of special features
- Protect and improve the presentation, accessibility, interpretation and management of buildings, sites and landscape features of historic value

Priorities and Actions: Biodiversity/Geodiversity

General

- Identify BAP habitat creation targets
- Protect and enhance existing habitat of local value and above, including BAP habitats, through survey and designation
- Protect and enhance existing habitat of local value and above, including BAP habitats, through implementation of appropriate management regimes
- Identify habitat enhancement and creation areas for reinstating former habitats and buffering existing sites.
- Identify priority links to provide increased connectivity and buffering to link sites and reduce the adverse impacts from adjacent land-uses.
- Wider habitat management: There is a need to enhance the management of intensively farmed agricultural land so that it can act as a 'corridor' for wildlife and buffer existing wildlife habitats.
- Ensure new developments build in SUDS and maximise opportunity for capture and use of water and wetland habitat creation

River Valleys

- Retain maximum extent of Yare valley margin as undeveloped land. Enhance management of floodplain habitats and river. Create BAP habitats on valley sides to safeguard Econet buffer zone.
- Maintain maximal width of Tas and Intwood valleys. Create BAP habitats on floodplain (wetland habitats) and valley sides (woodland and grassland) to safeguard Econet buffer zone.

Woodlands

- Assess functional connectivity within woodland core areas.
- Expand existing woods, so that some are >25ha and all are over 3ha.

- Buffer woodland to 30m minimum through restoration or creation of habitats adjacent to sites or encouragement of more sympathetic land uses.
- Significantly increase connectivity through creating new woodland and hedgerow linkages and enhancing the matrix (land uses surrounding a woodland).
- Prioritise woodland creation to the east of Long Stratton, where it corresponds to the Econet Woodland Core Area

Grasslands

- Identify areas of grassland that can form the nucleus for enhancement and expansion.
- Expand existing grasslands where possible, e.g., commons, verges, churchyards, pasture.
- Create new grasslands and associated habitats such as scrub close to rural communities and in appropriate locations eg along watercourses.
- Buffer grassland through restoration/creation of habitats/encouragement of low input agri systems.
- Enhance connectivity through creating new grassland linkages and enhancing the matrix (land uses surrounding a grassland). Meadows associated with watercourses could form key corridors

Ponds

- Restore existing ponds to an ecologically favourable state and create new ponds

Hedges

- Restore existing hedges to an ecologically favourable state and encourage new planting (where this does not compromise species rich grassland/verge habitats)

Geodiversity

- Identify important sites and ensure appropriate management, presentation, accessibility and interpretation
- Create new geological exposures that add to public appreciation of the distinctive local geology

Priorities and Actions: Access and Open Space

- Manage and enhance existing open spaces
- Create more accessible greenspace including amenity open space, in urban areas and urban fringe.
- Identify sites for new allotments close to settlements
- There is a scarcity of larger (>20ha) areas of accessible open space (the density should be increased to a minimum of 1 site for every 12kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.

- Encourage walking as a way to better health through advertisement of safe, easily negotiable and enjoyable footpath routes
- Improve footpath linkages, especially of circular walks accessible from settlements, and where providing access to publically accessible open space by creation of new rights of way
- Create new footpaths in the central section of the corridor, where they are largely absent
- Encourage new footbridges across watercourses to increase accessibility of • inaccessible valley floor
- Promote continued expansion of off-road permissive access through Stewardship schemes. This should be targeted to areas where there is opportunity to link existing PROW

Water City Green Infrastructure Priority Area (GIPA)

Summary

Summary description

This corridor follows two river valleys around and through the city of Norwich. The core of Norwich contains a wealth of historic buildings. Some areas of the City, such as Cathedral Close have retained a strong historic character; others incorporate a mixture of older buildings interspersed between many more recent industrial buildings. Norwich also contains attractive riverside walks, panoramic views across the flood plain and a wealth of mature trees. The city centre has several parks, open spaces and school recreation grounds which contribute greenery and open space. The riverside area has been the focus of activity for most of Norwich's history and contains remnants of its former importance. Within the City, the riverside area is undergoing significant change as many of the buildings formerly associated with industry and the river are either being replaced or converted, and the riverside areas, particularly those with the heart of the City, are rapidly becoming a popular residential location. Outside of the city centre the corridor is predominantly wet grassland and woodland much of which is designated in some way and is characterised by lack of substantial settlement. There are two areas of relatively high ground; Mousehold Heath to the north and east and the Ber Street escarpment to the south and west which forms a prominent and quite steeply wooded ridge. Within the city centre the biodiversity interest of the corridor is largely limited to the river itself with some small areas of municipal park alongside. There are a number of geodiversity sites located throughout the corridor, largely sediment exposures in old pits.

Key issues

- The riverscapes are of particular importance of to the character, identity and setting of Norwich
- There is potential for new development on river banks to compromise the wildlife corridor and remove possibility of future habitat enhancements
- There is a need to protect and improve the accessibility, habitat connectivity and management of the river corridors and reduce intrusion of traffic upon quiet enjoyment of river corridors
- There is a need to protect and improve the presentation, accessibility, interpretation and management of buildings, sites and landscape features of historic value – such as those connected to the City's maritime history, historic parks and gardens and Roman archaeology
- A large proportion of the GIPA corresponds to areas of the City which have a high Index of Deprivation
- A Green Grid for Norwich has been set up to identify underused spaces both in public and private ownership. The aim is to provide a network of accessible linked routes which maximise potential for using

sustainable transport, encourage non-car use, and provide routes for walkers / cyclists to move through the spaces.

Key recommendations

- Encouraging the use of the rivers for active and passive recreation, consistent with the protection of environmental resources and character; create better access to the river corridors (access outside the city centre is poor)
- Promotion of the Norwich Urban Fringe Project and associated enhancements to the landscape, wildlife habitats and countryside amenities (i.e. to steer recreational pressures away from sensitive sites to robust habitats on the urban fringe which are designed and managed to accommodate recreational activity;
- Ensure new developments, and any refurbishment of existing, build in SUDS and maximise opportunity for capture and use of water and wetland habitat creation
- New developments in the City should provide opportunities for riverside walks and green links to achieve a co-ordinated network that maximises access, for people and wildlife. Potential links between existing areas are mapped on a Green Grid
- Mark & enable creation of circular walks (signposted + info) walks and cycling routes for open space and cultural links within the city
- Promote a future country park at Harford Bridges (Lakenham Way), with potential for educational facilities dealing with climate change/waste/recycling/water issues
- Improve the local environment and contribute to sustainable development through increasing trees in and around urban areas to link existing woodland habitats, improve air quality, reduce noise pollution, improve visual amenity and to act as long-term carbon sinks to offset carbon emissions.
- Protect and enhance the woodland setting of Norwich, particularly the wooded valley sides and ridgelines Ensure functional connectivity of city 'woodlands' through creation of orchards, tree planting and woodland creation on the arable areas between the A47 and the city boundary
- Retain, reinforce and extend existing hedgerows
- Ensure that no development is permitted within the remaining undeveloped river corridor sections and seek to 'reclaim' corridor sections from Brownfield sites as these become available
- Ensure retention or restoration of key heritage buildings, spaces and structures which have contributed to the rivers' role in the history of the area;
- Identify, protect and enhance views to local landmarks within and around the City - e.g. the Castle, the Cathedral and the wooded ridges.
- Protect and enhance existing wildlife habitat through survey, designation and implementation of appropriate management regimes

- Seek to reduce current level of lighting intrusion into river corridors and prohibit new lighting schemes which are likely to result in intrusion.
- Enhance river corridors to actively enable movement of mammals and aquatic life, both along the river channel and the riverbanks. This is especially important through the city;
- Raise public awareness of existing Geodiversity sites and ensure appropriate management, presentation, accessibility and interpretation

Landscape key characteristics

From the South Norfolk Landscape Assessment (2006); Figure 11: Indicative Landscape Character Areas:

A - The Tud and Wensum Valleys between Wensum Park in Norwich and Old Costessey *[Rural River Valleys (A4)]*

• distinct valley landform with wide flat valley floodplains
• semi-enclosed landscape with long internal and restricted external views
• presence of watercourse clearly recognisable as a 'river', although often invisible within the wider landscape
• areas of pastoral floodplain set within arable landscape valley sides

B - Area North of New Costessey *[Tributary Farmland with Parkland (C1)]*

• gently undulating landform created by small tributary valleys;
• transitional landscape between the upland plateaux and river valley landscapes;
• wooded parkland with areas of pastoral farmland and horse grazing;
• medium to large-scale arable farmland with occasional small fields
• scattered small farm woodlands including ancient woodland;
• sparse hedges and hedgerow trees;
• intricate network of small rural roads often bounded by banks or ditches;

C - The Yare Valley between Earlham and Whitlingham *[Valley Urban Fringe (F1)]*

- distinctive broad meandering valley form with broad flat flood plain and enclosing valley sides opening up where joined by tributary valleys;
- large river flanked by characteristic wetland vegetation often with well-wooded valley sides;
- presence of gravel workings and remnant flooded gravel workings on the valley floor;
- inaccessible valley floor with relatively few river crossings resulting in a sense of remoteness and solitude;
- visibility of Norwich urban fringe along parts of the upper valley sides;

D - Bowthorpe to Keswick *[Fringe Farmland (G1)]*

- gentle ridge of land marking the dividing line between the valley landscapes;
- history of mineral extraction, particularly sand and gravel workings, resulting in scarred and reclaimed areas;
- rural farmland origins and context including both arable and pastoral farmland;
- absence of large wooded areas.

E - Urban area (Wensum)

From the Norwich River Valleys Strategy – A Water Plan (2000);

- the riverbanks through the city centre (conservation area) are almost entirely artificial
- there is very little open space within the city centre,
- it is difficult to define the valley floor because land levels have been artificially raised through the centuries.

From the Norwich City Centre – Conservation Area Appraisal (2007):

- two areas of relatively high ground; Mousehold Heath to the north and east and the Ber Street escarpment to the south and west which forms a prominent and quite steeply wooded ridge between Rouen Road and King Street
- the ridges, created by the cutting of valleys by the Rivers Yare and Wensum, are generally well wooded
- the City Centre has several parks, open spaces and school recreation grounds which contribute greenery and open space. In addition, most of the historic churches in the city centre have churchyards.

Refer also to Figure C below.

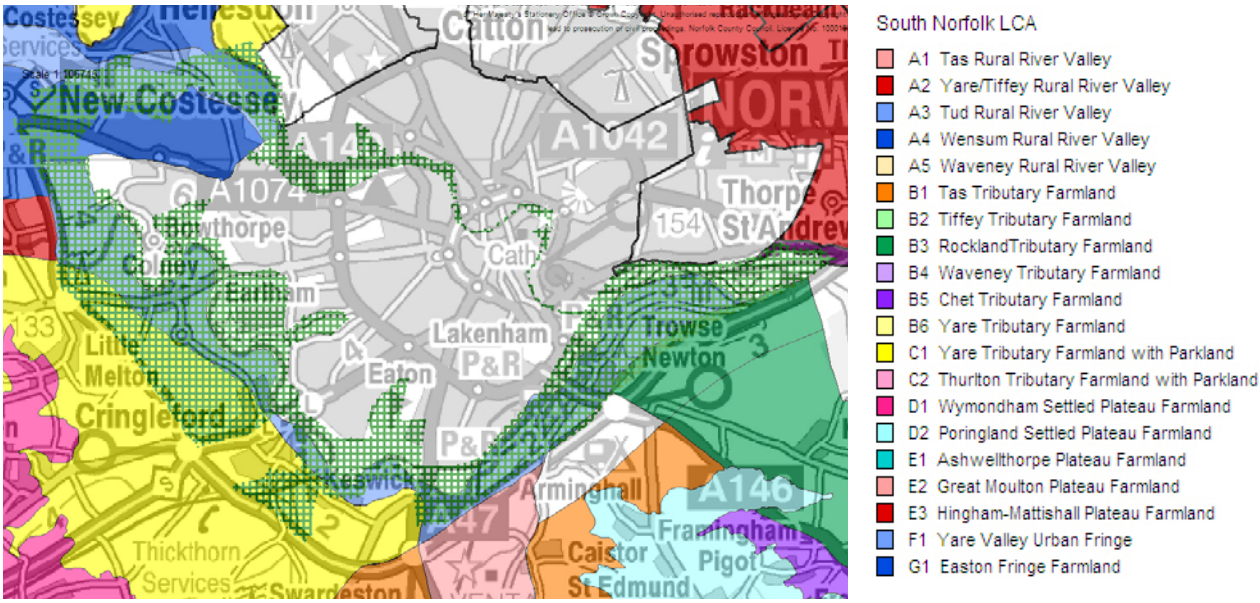


Figure C

Heritage key characteristics

The historic core of Norwich contains a wealth of historic buildings spanning the last 900 years, it also contains attractive riverside walks, panoramic views across the flood plain and a wealth of mature trees. Some areas of the City, such as Cathedral Close have retained a strong element of this historic character; others incorporate a mixture of some very important old domestic buildings interspersed between many more recent industrial buildings. The riverside area has been the focus of activity for most of Norwich's history and contains remnants of its former importance. The land adjacent to the river was marshland during Saxon times and the area around the Cathedral Close remains a functional flood plain today. Within the City, the riverside area is undergoing significant change as many of the buildings formerly associated with industry and the river are either being replaced or converted, mostly into residential use. Today, the focus of this activity has shifted from industrial concerns to leisure pursuits and the riverside areas, particularly those with the heart of the City, are rapidly becoming a popular residential location. Further from the centre, the river corridors are characterised by lack of substantial settlement,. Evidence of prehistoric activity is strong, though visible evidence in the landscape is sparse. The later settlement pattern of dispersed farmsteads has largely survived. River meadows were anciently enclosed, and away from the river bottom other land was enclosed early and turned over to arable. Earlier field boundaries are more eroded in Bawburgh and Hethersett than Colney and Cringleford. Colney Park is a significant feature in the landscape.

See also the GNDP Historic Characterisation and Sensitivity Assessment (2009)

Biodiversity & Geo-diversity key assets

This corridor follows two river valleys around and through the city of Norwich. The underlying geology of Norwich is chalk (with flint and occasionally sandstone deposits) though glacial sand and gravel up to 7m thick form terraces in the river valley bottom. Outside of the city centre this corridor is predominantly wet grassland and woodland much of which is designated in some way. There are also areas of arable and woodland on the higher areas to the north of the A47. Within the city centre the biodiversity of the corridor is largely limited to the river itself with some small areas of municipal park alongside.

There are a number of geodiversity sites located throughout the corridor, largely sediment exposures in old pits

Analysis and identification of issues

- Several areas of land within or adjacent to the GIPA have been identified as potential housing or employment land
- Large scale development within the GIPA may reduce opportunity for creation of areas of BAP habitat and delivery of landscape enhancements: conversely if well planned then they may enable delivery of large scale strategic open space
- The riverscapes are of particular importance of to the character, identity and setting of Norwich
- There is a need to protect and improve the accessibility, habitat connectivity and management of the river corridors
- Much of the GIPA corresponds to the Econet Broads and Rivers Buffer Zone
- Light pollution of corridors reduces their corridor function and ecological interest
- Potential for new development on river banks to compromise function as a corridor for wildlife and remove possibility of future habitat enhancements
- There is a need to protect and improve the presentation, accessibility, interpretation and management of buildings, sites and landscape features of historic value – such as those connected to the City's maritime history, historic parks and gardens and Roman archaeology
- There is a need to reduce intrusion of traffic upon quiet enjoyment of river corridors
- A lack of brownfield development sites within the Norwich Urban Area will place pressure on greenfield land around the fringes of the City to accommodate the predicted levels of growth.
- Norwich is the main employment centre for the Study Area
- There is under provision of Amenity Open Space

- Within the city centre rights of way usually exist on at least one side of the river. Outside of the city centre rights of way are limited, with some access at sites as UEA and Marriot's Way.
- Parts of Norwich are classified as being deprived (Norwich City District is divided into 79 Super Output Areas (SOA's) when assessing deprivation at small area level. In terms of the Index of Multiple Deprivation 29 (37%) are amongst the 20% most deprived SOA's in England and 38 (11%) are in the 10% most deprived SOA's in the East of England (2001 Census data ONS).
- A large proportion of the GIPA corresponds to areas of the City which have a high Index of Deprivation
- 19.4% of the population have a limiting long-term illness. Almost 22% of the population have mental Health problems
- A Green Grid for Norwich has been set up to identify underused spaces both in public and private ownership. The aim is to provide a network of accessible linked routes which maximise potential for using sustainable transport, encourage non-car use, and provide routes for walkers / cyclists to move through the spaces.

Priorities and Actions: Landscape character

- Within and around Norwich, 'green wedges' of countryside that stretch into the city, especially along the river corridors, have the potential to be strengthened and enhanced (i.e. enhance Norwich's image as a visually green city)
- Increase the number of trees in general within Norwich, strengthening its identity as a 'city of trees'
- Improve the local environment and contribute to sustainable development through increasing trees in and around urban areas to link existing woodland habitats, improve air quality, reduce noise pollution, improve visual amenity and to act as long-term carbon sinks to offset carbon emissions.
- Protect and enhance the woodland setting of Norwich, particularly the wooded valley sides and ridgelines (generally at about 25m contour line) that define a striking and attractive backdrop to the built form of Norwich
- Restoration of the rivers and waterfront, congenial to the local character and wildlife habitats along the river;
- Opportunities should be taken to ensure new developments are sympathetic to their urban setting. For example: the positioning of new buildings is important and important views/vistas to local and district scale landmarks and important natural features must be maintained; the scale of development proposals should respect the local topography and context; use of locally distinctive building materials and techniques, paving materials and street furniture; historic street patterns are retained; important visual and historical links are

enhanced where appropriate; promotion of the sustainable nature of new developments through design and accessibility.

- Retention of those relatively unmodified areas of the river valleys that have not been developed for urban purposes;
- Reconcile the needs to improve the experience of accessing Norwich by river and enhancing navigational activities with protecting the 'natural' river character, particularly riverbanks;
- Retention or restoration of key heritage buildings, spaces and structures which have contributed to the rivers' role in the history of the area;
- Restoration of areas of derelict industrial land adjacent to the rivers, particularly for residential purposes and for enhanced access;
- Ensure new development/redevelopment within or adjacent to the river corridors utilises 'visibly green' technology such as green roofs and green walls
- Identify, protect and enhance views to local landmarks within and around the City - e.g. the Castle, the Cathedral and the wooded ridges. Care should be taken to ensure that any new developments within and around Norwich do not detract or obscure views of citywide landmarks.

Priorities and Actions: Culture/Heritage

- Protection of archaeological and cultural resource
- Interpretation of special features
- Retention or restoration of key waterside heritage buildings, spaces and structures that contribute to the character of river corridor landscapes.
- Protection of key views and viewpoints of cultural importance: the view of the City and the cathedral from St James Hill on the edge of Mousehold Heath is of particular note. This view was immortalised by the paintings of the 'Norwich School' painters – including Cotman, Crome and Ninham.
- Provide for the restoration and management of historic parks and gardens that contribute to the character of the Norwich urban area.
- Access via narrow lanes to the riverfront must be retained and where opportunities occur always consider access to the rivers
- Encourage management of churchyards as nature reserves/ areas of tranquillity
- Co-ordinated interpretation strategy to link together cultural and physical history and wildlife associated with the rivers

Priorities and Actions: Biodiversity/Geodiversity

General

- Identify BAP habitat creation targets
- Protect and enhance existing habitat of local value and above, including BAP habitats, through survey and designation
- Protect and enhance existing habitat of local value and above, including BAP habitats, through implementation of appropriate management regimes
- Identify habitat enhancement and creation areas for reinstating former habitats and buffering existing sites where possible.
- Identify priority links to provide increased connectivity and buffering to link sites and reduce the adverse impacts from adjacent land-uses.
- Ensure new developments, and any refurbishment of existing, build in SUDS and maximise opportunity for capture and use of water and wetland habitat creation
- Declare more Local Nature Reserves

River Corridors

- Retain maximum extent of river corridor as undeveloped land. Enhance management of river frontages.
- Ensure that no development is permitted within the remaining undeveloped river corridor sections
- Seek to 'reclaim' corridor sections from Brownfield sites as these become available
- Maintain and enhance lateral connectivity between river corridors and other urban habitats
- Seek to reduce current level of lighting intrusion into river corridors and prohibit new lighting schemes which are likely to result in intrusion.
- Removal of contaminants from river sediments and prevention of further contaminants entering the river systems;
- Habitat creation should concentrate on wetland habitats such as wet grassland, wet woodland, marginal fen, marsh & encourage management e.g harvesting & grazing etc.
- Create opportunities to actively enable movement of mammals and aquatic life, both along the river channel and the riverbanks. This is especially important through the city;
- Ensure water flows moving downstream; reduce nutrient enrichment to rivers
- Encourage reedbeds & associated traditional skills such as reedcutting, thatching etc.

Woodlands/Trees

- Assess functional connectivity of city 'woodlands' and areas with dense tree cover.
- Ensure appropriate management of the wet woodland areas.
- Create more orchards – and plant more fruit trees – e.g. edges of settlement; churchyards (cf Norwich Cathedral Priory)

- Retain existing hedgerows, however sparse and reinforce these; create more hedgerows
- There is scope for woodland creation on the arable areas between the A47 and the city boundary

Geodiversity

- Identify important sites and ensure appropriate management, presentation, accessibility and interpretation
- Raise public awareness of existing sites e.g. Catton Chalk Pit (SSSI) [opportunity for city to buy it?] ; Mousehold Heath

Priorities and Actions: Access and Open Space

- Encouraging the use of the rivers for active and passive recreation, consistent with the protection of environmental resources and character;
- Manage and enhance existing open spaces
- Create more accessible greenspace including amenity open space, in urban areas and urban fringe.
- Encourage walking as a way to better health through advertisement of safe, easily negotiable and enjoyable routes
- Promotion of the Norwich Urban Fringe Project and associated enhancements to the landscape, wildlife habitats and countryside amenities (i.e. to steer recreational pressures away from sensitive sites to robust habitats on the urban fringe which are designed and managed to accommodate recreational activity;
- Create better access to the river corridors (access outside the city centre is poor)
- Mark & create circular church (signposted + info) walks for open space and cultural links within the city
- Mark & enable creation of circular walks (signposted + info) walks and cycling routes
- New developments in the City should provide opportunities for riverside walks and green links to achieve a co-ordinated network that maximises access, for people and wildlife: to and along the valleys of the Rivers Yare and Wensum; between the river valleys and the City's other areas of green open space and to the City's areas of green open space from the developed parts of the City; in particular, residential areas and schools; from the City, out to the urban fringe and surrounding countryside. Potential links between existing areas are mapped on a Green Grid
- Promote a future country park at Harford Bridges (Lakenham Way), with potential for educational facilities dealing with climate change/waste/recycling/water issues

Five Rivers Green Infrastructure Priority Area (GIPA)

Summary

Summary description

Although much of this area once conformed to the 'Ancient' countryside settlement pattern, it was eroded at an early stage, and its current character, with a few exceptions, is now largely 19th or 20th century. Settlement pattern is characterised by very dispersed isolated farmsteads related to 19th century enclosure and hamlets derived from common-edge settlement. The distinctive feature of the area is plateau farmland developed on boulder clay, which is dissected by larger and smaller river valleys. The landscape of this corridor is dominated by arable farming on heavy clay soils with the characteristic hedgerows and ponds of the clayland plateau and surviving areas of grassland. The northern end of the corridor includes relict ancient woodland. In the river valleys wet woodland and grazing marsh are found. The valley and valley margin landscape is notable for scattered woodlands and an often intricate network of narrow, winding rural lanes bounded by hedgerows and hedgerow trees; the plateau farmland is more open, with large field and straight roads. The area to the south of Wymondham was dotted with moated manors in the medieval period, and a relatively high number survive as visible features in the landscape. Urban Wymondham has been extensively re-developed during the second half of the 20th century, with a series of large housing estates built within a network of estate roads and cul-de-sacs laid out between the historic road framework, and more recent business and industrial parks. Several geodiversity sites are found at the northern end of the corridor, and several more at the southern end. These are largely sediment exposures in gravel pits.

Key issues

- There is extensive under provision of Natural/Semi-Natural Greenspace: there is a scarcity of larger (>20ha) areas of accessible open space and only sparse GI in excess of 2ha.
- Parts of the GIPA at Easton and Longwater have been identified as strategic growth areas, with further areas identified as having potential for housing or employment land
- A large area of land at Wymondham forms part of a Strategic Growth location; substantial tracts of land surrounding Wymondham and extending southwest along the A11 corridor have been allocated for housing or identified as having potential for housing
- New development in this area will place pressure upon water resources.
- The distinctive green gateway of western approach to Norwich along the A47 has been compromised by development
- There is a need to protect and improve the accessibility, habitat connectivity and management of the river valleys and create connections between each river system

- Formerly well-hedged landscape is often degraded, with sparse and/or overgrown hedgerows. There is a lack of connectivity of hedgerows, woodland etc
- This corridor is poorly served by rights of way other than roads, although there has been some off-road provision through Countryside Stewardship and Environmental Stewardship. Any increase in access would be of great benefit.

Key recommendations

- There is a general lack of small (2ha-20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 9kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland or grassland creation or help buffer a river corridor.
- There is a scarcity of larger (>20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 12kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- Promote continued expansion of off-road permissive access through Stewardship schemes. This should be targeted to areas where there is opportunity to link existing PROW or where there is a general lack of footpaths and should include new river crossings where necessary to improve access to the floodplain.
- Enhance the management of intensively farmed agricultural land so that it can act as a 'corridor' for wildlife, buffer existing wildlife habitats and enhance the landscape setting of settlements. Encourage re-creation of historic landscapes e.g. pastoral landscape of small fields with irregular boundaries
- The scattered network of settlements to the south and west of Norwich is a key asset. New development should protect and enhance the character and unique qualities of existing settlements, using vernacular in new building design in relation to existing tradition of settlements and building in SUDS. There should be no development on the indicative floodplain.
- Expand, strengthen and link areas of woodland, particularly around Wymondham and to the east of Norwich, to provide a substantial landscape buffer to growth of these settlements.
- Expand existing grasslands where possible, e.g., commons, verges, churchyards, pasture, particularly close to rural communities and in appropriate locations eg along watercourses.
- Restore existing ponds to an ecologically favourable state and create new ponds
- Restore existing hedges to an ecologically favourable state and encourage new planting (where this does not compromise species rich grassland/verge habitats)
- Encourage parkland restoration or management on suitable sites

- Strengthen and enhance area of countryside adjacent to Norwich to enhance Norwich's image as a visually green city with wooded hinterland and river valleys, particularly new woodland planting to enhance A47 Green Gateway to Norwich. Ensure no further woodland loss to development in this area
- Retain maximum extent of valley margins as undeveloped land. Enhance management of floodplain habitats and river. Create BAP habitats on valley sides to provide buffer.
- Create new geological exposures that add to public appreciation of the distinctive local geology and ensure appropriate management, presentation, accessibility and interpretation of these and existing sites

Landscape key characteristics

From the South Norfolk Landscape Assessment (2006); Figure 11: Indicative Landscape Character Areas:

A - River Valleys at Ringland, between Bawburgh and Wymondham and between Newton Flotman and Hempnall *[Rural River Valleys (A1, A2 and A3)]*

- distinct valley landform with wide flat valley floodplains
- semi-enclosed landscape with long internal and restricted external views
- presence of watercourse clearly recognisable as a 'river', although often invisible within the wider landscape
- areas of pastoral floodplain set within arable landscape valley sides

B - Barnham Broom to Wymondham *[Tributary Farmland (B2)]*

- shelving and gently undulating landform created by small tributary valleys;
- transitional landscape between the upland plateaux and the river valleys;
- tamed and peaceful medium to large-scale arable farmland;
- scattered small farm woodlands and sparse and/or overgrown hedgerows and hedgerow trees;
- intricate network of narrow, winding rural lanes bounded by banks or ditches;
- presence of occasional remnant parklands;

C - Wymondham to Newton Flotman *[Plateau Farmland (E1)]*

- distinct flat and elevated landform;
- large fields of arable monoculture;
- strong sense of openness and exposure due to scarcity of enclosing elements;
- long views of the district from the plateau edges and across the plateau;
- presence of some mature remnant oak hedgerow trees;
- straight plateau-top roads with wide grass verges and ditches;
- wooded horizons;

D - Area around Easton *[Fringe Farmland (G1)]*

- gentle ridge of land marking the dividing line between the valley landscapes;
- history of mineral extraction, particularly sand and gravel workings, resulting in scarred and reclaimed areas;
- rural farmland origins and context including both arable and pastoral farmland;

- absence of large wooded areas.

Refer also to Figure D below.

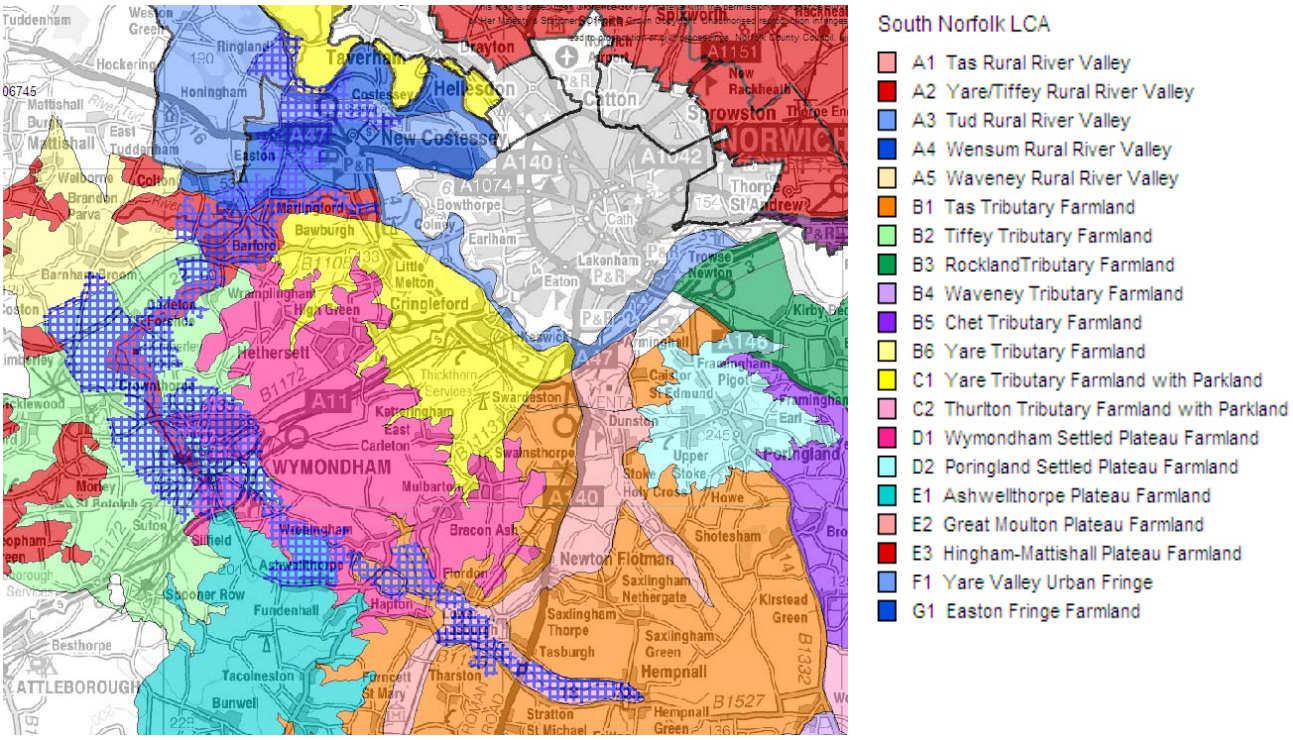


Figure D

Heritage key characteristics

Although much of this area once conformed to the 'Ancient' countryside settlement pattern, it was eroded at an early stage, and its current character, with a few exceptions, is now largely 19th or 20th century.

Much of Wymondham has been entirely re-developed during the second half of the 20th century, in a series of large housing estates built within a network of estate roads and cul-de-sacs laid out between the historic road framework, and more recent business and industrial parks. The area around the station consists of a 19th century industrial landscape imposed upon formerly unsettled land, and is typical of many other 19th century developments around railways, with its associated station building, goods yard, hotel and workers houses. The Victorian cemetery contributes to the planned 19th century character of the zone. Some 20th century industry has developed adjacent to the station which erodes this 19th century flavour, but also continues the industrial function of the area. There is little or no surviving evidence of previous historic landscape features.

Development of traffic corridors near Wymondham have brought about an extension to the town settlement pattern into this zone, for the first time. The rest of the area remains sparsely populated with relatively little 20th century in-fill but retains few survivals of historic field and land use systems, or cohesive evidence of the post-medieval common-edge settlement pattern.

The area to the south of Wymondham was dotted with moated manors in the medieval period, and a relatively high number survive as visible features in the landscape, three of them associated with post-medieval halls. The southern deer park is difficult to see as a cohesive whole on the ground due to its isolation and lack of access. However, most of its outer boundary survives in current field boundaries, emphasised by road routes; and survival of the moat, and further evidence in place names provide enough evidence to understand this area as a piece of landscape originating in the 12th century.

The Tiffey Valley is characterised by very dispersed isolated farmsteads related to 19th century enclosure, and retains a largely 19th century field boundary pattern fossilised in ditches and some hedges. The river Tiffey and its wet meadows have prevented more extensive settlement or intensive land use so that a relatively cohesive historic landscape of the 19th century has been preserved.

Elsewhere in the corridor, post-medieval settlement was associated with commons, all of which have been enclosed and taken into arable. Relatively few of the 16th/17th century houses associated with common-edge settlement have survived, though a number of later buildings mark their sites. Pre-nineteenth century enclosure boundaries have been eroded to a great extent through field amalgamation in the 20th century.

See also the GNDP Historic Characterisation and Sensitivity Assessment (2009)

Biodiversity & Geo-diversity key assets

As its name suggests this corridor largely follows river valleys with these dominated by wet grassland and woodland. In the higher areas arable farmland is the main land use with the characteristic hedgerows and ponds of the clayland plateau. Areas of ancient parkland are present and these include large woodland areas. The northern end of the corridor includes areas of woodland including some ancient.

Several geodiversity sites are found at the northern end of the corridor, and several more at the southern end. These are largely sediment exposures in gravel pits.

Analysis and identification of issues

- There is a dearth of identified green infrastructure projects which correspond to this GIPA.
- There is extensive under provision of Natural/Semi-Natural Greenspace: there is a scarcity of larger (>20ha) areas of accessible open space and only sparse GI in excess of 2ha.
- Parts of the GIPA at Easton and Longwater have been identified as strategic growth areas, with further areas identified as having potential for housing or employment land
- A large area of land at Wymondham forms part of a Strategic Growth location; substantial tracts of land surrounding Wymondham and extending southwest along the A11 corridor have been allocated for housing or identified as having potential for housing
- Large scale housing development within the GIPA may reduce opportunity for creation of areas of BAP habitat and delivery of landscape enhancements: conversely if well planned then they may enable delivery of large scale strategic open space
- There is a need to protect and improve the accessibility, habitat connectivity and management of the river valleys and create connections between each river system
- The distinctive green gateway of western approach to Norwich along the A47 has been compromised by development
- Much of the GIPA corresponds to the Econet Broads and Rivers Buffer Zone
- That part of the GIPA which surrounds Wymondham and extends to the northwest and southeast, corresponds to the Econet Woodland Core Area
- The northernmost part of the GIPA lies adjacent to areas in the west of Norwich which have a high Index of Deprivation and includes areas which experience a moderate degree of deprivation
- There is lack of connectivity of hedgerows, woodland etc
- There is potential for new development on valley sides to compromise function as a corridor for wildlife
- There is under provision of Amenity Open Space
- There is under provision of Allotments
- There is minimal Local Nature Reserve Provision
- New developments will put pressure on water resources
- This corridor is poorly served by rights of way other than roads, although there has been some off-road provision through Countryside Stewardship and Environmental Stewardship. Any increase in access would be of great benefit.
- PPG17 found that quality of open spaces in the corridor was poor or average
- 17%of the population have a limiting long-term illness and the average age of the population is higher than in urban Norwich

Priorities and Actions: Landscape character

- Enhance the management of intensively farmed agricultural land to enhance the landscape setting of settlements within the Area.
- Strengthening and linking areas of woodland, particularly around Wymondham to provide a substantial landscape buffer to growth of this settlement.
- Strengthen and enhance area of countryside (views, gateways and approaches) adjacent to Norwich to enhance Norwich's image as a visually green city with wooded hinterland and river valleys.
- Encourage parkland management or restoration on suitable sites.
- New woodland planting to enhance A47 Green Gateway to Norwich. Ensure no further woodland loss to development in this area.
- The scattered network of settlements to the south and west of Norwich is a key asset. Any new development and greenspace networks should seek to protect and enhance the character and unique qualities of existing settlements: ensure new developments utilise the characteristics of the local landscape setting to inform decisions regarding the position and design of proposals and the integration of appropriate mitigation measures, taking into account South Norfolk District Council Design Guides.

Priorities and Actions: Culture/Heritage

- Re-creation of historic landscapes e.g. pastoral landscape of small fields with irregular boundaries
- Use of vernacular in new building design in relation to existing tradition of settlements
- Interpretation of special features

Priorities and Actions: Biodiversity/Geodiversity

General

- Identify BAP habitat creation targets
- Protect and enhance existing habitat of local value and above, including BAP habitats, through survey and designation
- Protect and enhance existing habitat of local value and above, including BAP habitats, through implementation of appropriate management regimes
- Identify habitat enhancement and creation areas for reinstating former habitats and buffering existing sites.
- Identify priority links to provide increased connectivity and buffering to link sites and reduce the adverse impacts from adjacent land-uses.
- Wider habitat management: There is a need to enhance the management of intensively farmed agricultural land so that it can act as a 'corridor' for wildlife and buffer existing wildlife habitats.

- Ensure new developments build in SUDS and maximise opportunity for capture and use of water and wetland habitat creation

River Corridors

- Retain maximum extent of valley margins as undeveloped land. Enhance management of floodplain habitats and river. Create BAP habitats on floodplain (wetland habitats) and valley sides (woodland and grassland) to safeguard Econet buffer zone.
- Ensure that no development is permitted on the indicative floodplain to safeguard Econet buffer zone.
- Maintain and enhance lateral connectivity between interfluves and floodplains

Woodlands

- Assess functional connectivity within woodland core areas.
- Expand existing woods, so that some are >25ha and all are over 3ha.
- Buffer woodland to 30m minimum through restoration or creation of habitats adjacent to sites or encouragement of more sympathetic land uses.
- Significantly increase connectivity through creating new woodland linkages and enhancing the matrix (land uses surrounding a woodland).
- Prioritise woodland creation in the vicinity of Wymondham, where it corresponds to the Econet Woodland Core Area

Grasslands

- Identify areas of grassland that can form the nucleus for enhancement and expansion.
- Expand existing grasslands where possible, e.g., commons, verges, churchyards, pasture.
- Create new grasslands and associated habitats such as scrub close to rural communities and in appropriate locations eg along watercourses.
- Buffer grassland through restoration/creation of habitats/encouragement of low input agri systems.
- Enhance connectivity through creating new grassland linkages and enhancing the matrix (land uses surrounding a grassland). Meadows associated with watercourses could form key corridors

Ponds

- Restore existing ponds to an ecologically favourable state and create new ponds

Hedges

- Restore existing hedges to an ecologically favourable state and encourage new planting (where this does not compromise species rich grassland/verge habitats)

Geodiversity

- Identify important sites and ensure appropriate management, presentation, accessibility and interpretation
- Create new geological exposures that add to public appreciation of the distinctive local geology

Priorities and Actions: Access and Open Space

- Manage and enhance existing open spaces
- Create more accessible greenspace including amenity open space, in urban areas and urban fringe.
- Identify sites for new allotments close to settlements
- Encourage walking as a way to better health through advertisement of safe, easily negotiable and enjoyable footpath routes, particularly in that part of the GIPA to the west of Norwich
- Improve footpath linkages, especially of circular walks accessible from settlements, and where providing access to publically accessible open space by creation of new rights of way
- Encourage construction of new footbridges where appropriate, to enable increased access to the floodplains
- There is a general lack of small (2ha-20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 9kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland or grassland creation or help buffer a river corridor.
- There is a scarcity of larger (>20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 12kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- Promote continued expansion of off-road permissive access through Stewardship schemes. This should be targeted to areas where there is opportunity to link existing PROW

Norwich to Wymondham Green Infrastructure Priority Area (GIPA)

Summary

Summary description

This area represents a much fragmented area of the 'Ancient Countryside' landscape type. Former commons have all been enclosed and turned to arable, and 20th century field amalgamation has eroded earlier field boundaries. Settlement pattern is characterised by hamlets derived from common-edge settlement, although these are difficult to recognise due to expanding development and infill. The distinctive feature of the area is plateau farmland developed on boulder clay and the landscape of this corridor is dominated by arable farming on heavy clay soils with some surviving areas of grassland and the characteristic hedgerows and ponds. There are also some sizeable pockets of woodland, and two large parkland areas. Where the corridor joins Norwich it follows river valleys, and here wet grassland and woodland are the main habitats, with an often intricate network of narrow, winding rural lanes bounded by hedgerows and hedgerow trees; the plateau farmland is more open, with large fields and straight roads.

Key issues

- There is extensive under provision of Natural/Semi-Natural Greenspace: there is a scarcity of larger (>20ha) areas of accessible open space and only sparse GI in excess of 2ha.
- A large area of land at Hethersett forms part of a Strategic Growth location; substantial tracts of land surrounding Hethersett and extending to the A47 have been identified as having potential for housing
- Large scale housing development within the GIPA may reduce opportunity for creation of areas of BAP habitat and delivery of landscape enhancements: conversely if well planned then they may enable delivery of large scale strategic open space
- There is potential for new development to compromise landscape buffering of urban edge of Norwich
- There is potential for new development to result in 'aggregation' of settlements
- New development in this area will place pressure upon water resources.
- Formerly well-hedged landscape is often degraded, with sparse and/or overgrown hedgerows. There is a lack of connectivity of hedgerows, woodland etc
- This corridor is poorly served by rights of way other than roads, although there has been some off-road provision through Countryside Stewardship and Environmental Stewardship. Any increase in access would be of great benefit.

- There is a need to protect and improve the presentation, accessibility, interpretation and management of historic parks and gardens

Key recommendations

- There is a general lack of small (2ha-20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 9kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland or grassland creation.
- There is a scarcity of larger (>20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 12kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- There is an absence of larger (>60ha) areas of accessible open space: a new county park is therefore proposed for the Hethersett area: this might incorporate areas of grassland and woodland as described in the biodiversity section
- Promote continued expansion of off-road permissive access through Stewardship schemes. This should be targeted to areas where there is opportunity to link existing PROW or where there is a general lack of footpaths.
- Enhance the management of intensively farmed agricultural land so that it can act as a 'corridor' for wildlife, buffer existing wildlife habitats and enhance the landscape setting of settlements. Encourage re-creation of historic landscapes e.g. pastoral landscape of small fields with irregular boundaries
- The scattered network of settlements to the south and west of Norwich is a key asset. New development should protect and enhance the character and unique qualities of existing settlements, using vernacular in new building design in relation to existing tradition of settlements and building in SUDS. There should be no development on the indicative floodplain.
- Maintain separation between Wymondham and Hethersett and Hethersett and Norwich and develop these non-urban buffer areas as grassland and woodland habitats.
- Expand, strengthen and link areas of woodland, particularly to the southwest of Norwich to provide a substantial landscape buffer to growth of new settlements Prioritise woodland creation to the south and west of Hethersett, where it corresponds to the Econet Woodland Core Area
- Expand existing grasslands where possible, e.g., commons, verges, churchyards, pasture, particularly close to rural communities
- Restore existing ponds to an ecologically favourable state and create new ponds
- Encourage parkland restoration or management on suitable sites
- Strengthen and enhance area of countryside adjacent to Norwich. Ensure no woodland loss to development in this area

- Restore existing hedges to an ecologically favourable state and encourage new planting (where this does not compromise species rich grassland/verge habitats)
- Provide a green corridor, incorporating a dedicated route for pedestrians, cyclists and equestrians from Norwich to Wymondham, linking areas of existing and planned new development
- Create new geological exposures that add to public appreciation of the distinctive local geology and ensure appropriate management, presentation, accessibility and interpretation

Landscape key characteristics

From the South Norfolk Landscape Assessment (2006); Figure 11: Indicative Landscape Character Areas:

A - Cringleford to Hethersett *[Tributary Farmland with Parkland (C1)]*

• gently undulating landform created by small tributary valleys;
• transitional landscape between the upland plateaux and river valley landscapes;
• wooded parkland with areas of pastoral farmland and horse grazing;
• medium to large-scale arable farmland with occasional small fields
• scattered small farm woodlands including ancient woodland;
• sparse hedges and hedgerow trees;
• intricate network of small rural roads often bounded by banks or ditches;

B - Hethersett to Wymondham *[Settled Plateau Farmland (D1)]*

• distinct flat to gently rising elevated landform;
• large fields of arable monoculture
• few hedgerows;
• remnant oak hedgerow tree avenues lining roads are distinctive features;

- wooded horizons created by visual merging of distant woodland blocks and hedgerow trees;

C - The Area around Wymondham *[Tributary Farmland (B2)]*

- shelving and gently undulating landform created by small tributary valleys;
- transitional landscape between the upland plateaux and the river valleys;
- tamed and peaceful medium to large-scale arable farmland;
- scattered small farm woodlands and sparse and/or overgrown hedgerows and hedgerow trees;
- intricate network of narrow, winding rural lanes bounded by banks or ditches;
- presence of occasional remnant parklands;

Refer also to Figure E below.

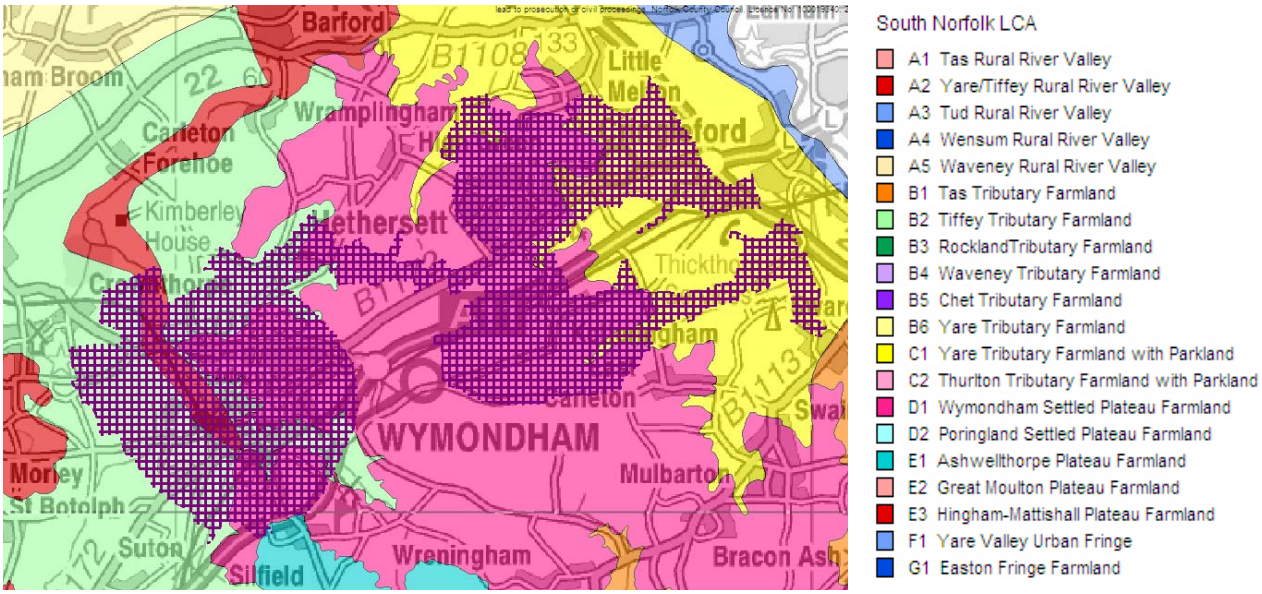


Figure E

Heritage key characteristics

This area represents a much fragmented area of the 'Ancient Countryside' landscape type. Former commons have all been enclosed and turned to arable, and 20th century field amalgamation has eroded earlier field boundaries. Former common-edge settlements are difficult to recognise, particularly where modern in-fill has eroded the relationship of these buildings to each other, as in Little Melton. Several of those historic houses which have survived have been much altered.

Hethersett has a medieval church/hall settlement at its core, but in the post-medieval period developed as a residential suburb to Norwich along the main road. This settlement pattern is largely preserved, though 20th century development has eroded the spaces between historic buildings on the north side of the road. The former common-edge settlement at Hethersett has been almost entirely eroded by extensive 20th century development, and there is virtually no evidence left of the pre-20th century landscape.

See also the GNDP Historic Characterisation and Sensitivity Assessment (2009)

Biodiversity & Geo-diversity key assets

This corridor is dominated by clayland arable farming with its characteristic hedgerows and ponds. There are also some sizeable pockets of woodland, and two large parkland areas. Where the corridor joins Norwich it follows river valleys, and here wet grassland and woodland are the main habitats.

No geodiversity sites.

Analysis and identification of issues

- There is a dearth of identified Green infrastructure projects which correspond to this GIPA.
- There is extensive under provision of Natural/Semi-Natural Greenspace: there is a scarcity of larger (>20ha) areas of accessible open space and only sparse GI in excess of 2ha.
- A large area of land at Hethersett forms part of a Strategic Growth location; substantial tracts of land surrounding Hethersett and extending to the A47 have been identified as having potential for housing
- Large scale housing development within the GIPA may reduce opportunity for creation of areas of BAP habitat and delivery of landscape enhancements: conversely if well planned then they may enable delivery of large scale strategic open space
- Planned new settlements must provide high quality places to live, work and visit, through the development and management of green networks of infrastructure
- There is potential for new development to result in 'aggregation' of settlements
- A lack of brownfield development sites within the Norwich Urban Area will place pressure on greenfield land around the fringes of the City to accommodate the predicted levels of growth.
- Formerly well-hedged landscape is degraded, with sparse and/or overgrown hedgerows
- That part of the GIPA which lies to the south and west of Hethersett, corresponds to the Econet Woodland Core Area

- This corridor is poorly served by rights of way other than roads, although there has been some off-road provision through Countryside Stewardship and Environmental Stewardship. Any increase in access would be of great benefit.
- There is a need to protect and improve the presentation, accessibility, interpretation and management of historic parks and gardens
- There is lack of connectivity of hedgerows, woodland etc
- There is potential for new development to compromise landscape buffering of urban edge of Norwich
- There is minimal Local Nature Reserve Provision
- New developments will put pressure on water resources

Priorities and Actions: Landscape character

- Enhance the management of intensively farmed agricultural land to enhance the landscape setting of settlements within the Area.
- Strengthening and linking areas of woodland, particularly to the southwest of Norwich to provide a substantial landscape buffer to growth of new settlements.
- Strengthen and enhance area of countryside (views, gateways and approaches) adjacent to Norwich to enhance Norwich's image as a visually green city with wooded hinterland
- The scattered network of settlements to the southwest of Norwich is a key asset. Any new development and greenspace networks should seek to protect and enhance the character and unique qualities of existing settlements: ensure new developments utilise the characteristics of the local landscape setting to inform decisions regarding the position and design of proposals and the integration of appropriate mitigation measures, taking into account South Norfolk District Council Design Guides.
- Maintain separation between Wymondham and Hethersett and Hethersett and Norwich and develop these non-urban buffer areas as grassland and woodland habitats.
- Restore field and roadside hedgerows: gap-up and ensure appropriate management and plant new hedges where lost
- Restore remnant oak hedgerow tree avenues lining roads

Priorities and Actions: Culture/Heritage

- Re-creation of historic landscapes e.g. pastoral landscape of small fields with irregular boundaries
- Use of vernacular in new building design in relation to existing tradition of settlements
- Interpretation of special features
- Protect and improve the presentation, accessibility, interpretation and management of parkland asset

Priorities and Actions: Biodiversity/Geodiversity

General

- Identify BAP habitat creation targets
- Protect and enhance existing habitat of local value and above, including BAP habitats, through survey and designation
- Protect and enhance existing habitat of local value and above, including BAP habitats, through implementation of appropriate management regimes
- Identify habitat enhancement and creation areas for reinstating former habitats and buffering existing sites.
- Identify priority links to provide increased connectivity and buffering to link sites and reduce the adverse impacts from adjacent land-uses.
- Wider habitat management: There is a need to enhance the management of intensively farmed agricultural land so that it can act as a 'corridor' for wildlife and buffer existing wildlife habitats.
- Ensure new developments build in SUDS and maximise opportunity for capture and use of water and wetland habitat creation
- Create a green corridor, linking existing habitats where possible, from Norwich to Wymondham

Woodlands

- Assess functional connectivity within woodland core areas.
- Expand existing woods, so that some are >25ha and all are over 3ha.
- Buffer woodland to 30m minimum through restoration or creation of habitats adjacent to sites or encouragement of more sympathetic land uses.
- Significantly increase connectivity through creating new woodland linkages and enhancing the matrix (land uses surrounding a woodland).
- Prioritise woodland creation to the south and west of Hethersett, where it corresponds to the Econet Woodland Core Area

Grasslands

- Identify areas of grassland that can form the nucleus for enhancement and expansion.
- Expand existing grasslands where possible, e.g., commons, verges, churchyards, pasture.
- Create new grasslands and associated habitats such as scrub close to rural communities and in appropriate locations eg along watercourses.
- Buffer grassland through restoration/creation of habitats/encouragement of low input agri systems.
- Enhance connectivity through creating new grassland linkages and enhancing the matrix (land uses surrounding a grassland).

Ponds

- Restore existing ponds to an ecologically favourable state and create new ponds

Hedges

- Restore existing hedges to an ecologically favourable state and encourage new planting (where this does not compromise species rich grassland/verge habitats)

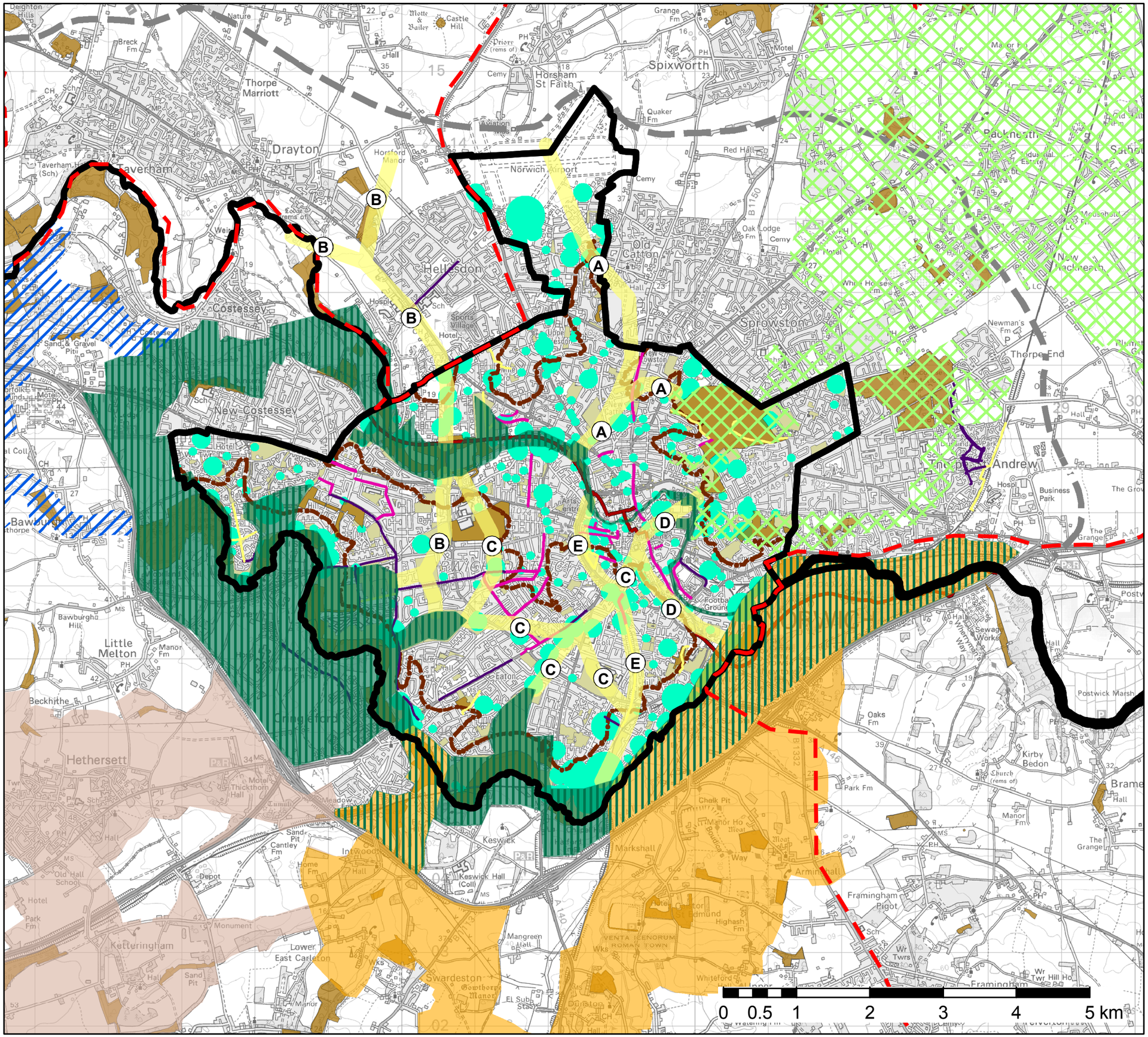
Geodiversity

- Identify important sites and ensure appropriate management, presentation, accessibility and interpretation
- Create new geological exposures that add to public appreciation of the distinctive local geology

Priorities and Actions: Access and Open Space

- Manage and enhance existing open spaces
- Create more accessible greenspace including amenity open space, in urban areas and urban fringe.
- Identify sites for new allotments close to settlements
- Encourage walking as a way to better health through advertisement of safe, easily negotiable and enjoyable footpath routes
- Improve footpath linkages, especially of circular walks accessible from settlements, and where providing access to publically accessible open space by creation of new rights of way
- Create new footpaths where they are sparse or absent
- Promote continued expansion of off-road permissive access through Stewardship schemes. This should be targeted to areas where there is opportunity to link existing PROW or where there is a general lack of footpaths
- There is a general lack of small (2ha-20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 9kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland or grassland creation.
- There is a scarcity of larger (>20ha) areas of accessible open space: the density should be increased to a minimum of 1 site for every 12kmsq. Where possible these sites should deliver biodiversity or landscape function, for example woodland creation.
- There is an absence of larger (>60ha) areas of accessible open space: a new county park is therefore proposed for the Hethersett area: this might incorporate areas of grassland and woodland as described in the biodiversity section
- Provide a dedicated route for pedestrians, cyclists and equestrians from Norwich to Wymondham, as part of a green corridor linking areas of existing and planned new development

Appendix 6



Key

- Study Area Boundary
- District Boundary
- 25m Contour - Approximate line of wooded ridge
- Urban Greenspace of Little Biodiversity Interest
- Urban Green Space of Biodiversity Interest

Green Infrastructre Priority Area

- Five Rivers
- Long Stratton to Norwich
- Wymondham to Norwich
- Norwich to the Broads
- Water City - Rivers Yare and Wensum
- Norwich City Urban Green Grid - Green Infrastructure Priority Areas (see text for names)
- National Cycle Network Route Number 1
- Off-road cyclepath next to road
- On-road - some cycle facilities - traffic-calming
- Route free from motor traffic
- Proposed Northern Distributor Road

Green Grid: Newly identified non-designated sites with potential for linking &/or "stepping stones"; some also have potential for improving biodiversity interest; size approximate & not to scale; based on linear measurements

- 15 - 165m
- 166 - 456m
- 457 - 1000m
- 1001 - 2520m

Greater Norwich Green Infrastructure Delivery Plan

Appendix 6 - Figure 1

Norwich City GI Opportunity Areas

July 2009

thelandscapepartnership

Norwich City Green Infrastructure Priority Area (GIPA)

Summary

Summary description

The Norwich City GIPAs link to three others: west and south, to the Water City GIPA; north and east, to the Norwich to Broads GIPA and south to the Long Stratton to Norwich GIPA. Norwich lies at the head of the navigable waters of the River Yare and the confluence of its major tributary the Wensum. Although 29 miles (47 km) from the sea at Great Yarmouth, the tides still reach the heart of the city. Norwich owes its existence and past prosperity to its function as an inland port. The Rivers Yare and Wensum created the city's landscape characteristics by cutting the valleys through. There are two areas of relatively high ground; Mousehold Heath to the north and east and the Ber Street escarpment to the south and west which forms a prominent and quite steeply wooded ridge.

Norwich has attractive riverside walks; panoramic views across the flood plain and many mature trees; within the city centre the existing biodiversity interest is largely linked to small sections of the river, small areas of municipal park alongside it, churchyards and some private gardens. School recreation grounds contribute green and open space of low biodiversity, and are generally not accessible.

Most of the city is tightly packed between streets that radiate from the centre. Inner and outer ring roads, which carry increasingly heavy loads of fast moving traffic, cut across these roads, creating sections of the city, as do the rivers themselves. Outside the city centre, to the south, the remnants of wide avenues and more substantial gardens provide potential for greater biodiversity interest. To the north, some early 20th century housing estates were set in generous street layouts, with wide road verges. The wider urban area has generally lost connection to any historic pattern until reaching areas with separate village characteristics such as Costessey, Drayton or Hellesdon.

Key issues

- Continued direct public access to the rivers and ridges is particularly important in retaining the character, identity and setting of Norwich;
- Connectivity in access across the city can be lost in having to walk/cycle to bridges, across roads and rivers;
- Where there is potential for new development, any existing wildlife corridors can be compromised so removing possibility of future habitat enhancements;
- Many open space areas have low biodiversity;
- A large proportion of the GIPA corresponds to areas of the City which have a high Index of Deprivation;
- Highway verges are now under severe pressure from cars being parked on them;
- Some streets still retain substantial lines of trees, which are also under pressure from increased traffic and public transport proposals (e.g. Dereham Road) designed to relieve that pressure;

- There is a need to protect and improve the presentation, accessibility, interpretation and management of buildings, sites and landscape features of historic value – such as those connected to the City's maritime history, historic parks and gardens;
- Norwich is the main employment centre for the Study Area and sustains a day-time population far in excess of its residential population.

Key recommendations

- Encourage the use of the rivers for active and passive recreation, consistent with the protection of environmental resources and character;
- Enable more innovative river crossings to retain connectivity across the city and create better access to the river corridors;
- Prioritise and facilitate connected, direct walking and cycling routes through the city;
- Mark & enable creation of circular walks and cycling routes (signposted + info) for open space and cultural links throughout the area;
- New developments in the City should provide opportunities for riverside walks and green links to achieve a co-ordinated network that maximises access, for people and wildlife. Potential links between existing areas mapped on a 'Green Grid' to extend green space and enhance biodiversity;
- Ensure new developments, and any refurbishment of existing, build in SUDS, green roofs etc. and maximise opportunity for capture and use of water and habitat creation;
- Many open space areas could be managed to higher biodiversity standards and existing maintenance regimes changed to encourage biodiversity and 'stepping stones';
- Promotion of the Norwich Urban Fringe Project and associated enhancements to the landscape, wildlife habitats and countryside amenities (i.e. to steer recreational pressures away from sensitive sites to robust habitats on the urban fringe which are designed and managed to accommodate recreational activity);
- Promote a future country park at Harford Bridges (Lakenham Way), with potential for educational facilities dealing with climate change/waste/recycling/water issues;
- Improve the local environment and contribute to sustainable development through increasing trees in and around urban areas to link existing woodland habitats, improve air quality, reduce noise pollution, improve visual amenity and to act as long-term carbon sinks to offset carbon emissions;
- Protect and enhance the woodland setting of Norwich, particularly the wooded valley sides and ridgelines. Ensure functional connectivity of city 'woodlands' through creation of orchards, tree planting and woodland creation;
- Retain, reinforce and extend existing hedgerows, particularly towards the outskirts of the city;
- Ensure that no development is permitted within the remaining undeveloped river corridor sections and seek to 'reclaim' corridor sections from brownfield sites as these become available
- Ensure retention or restoration of key heritage buildings, spaces and structures which have contributed to the rivers' role in the history of the area;

- Identify, protect and enhance views to local landmarks within and around the City - e.g. the Castle, the Cathedral and the wooded ridges;
- Protect and enhance existing wildlife habitat through survey, designation and implementation of appropriate management regimes;
- Connect spaces for wildlife habitat by continued monitoring of what is there and providing suitable 'stepping stones';
- Raise public awareness of existing Geo-diversity sites such as Catton Chalk pit – possibility of ensuring appropriate management, presentation, accessibility and interpretation;
- Rationalise street planting within verges to retain width where possible;
- Traffic calming, linked to cycle routes, to allow residents to park on the roadside where appropriate, to retain tree-lined verges.

A - North City

B – Wensum Ridges

C - Earlham to Eaton

D - City Ridges

E - Lakenham Way

Landscape key characteristics

A - North City
Wensum to the airport and Mousehold Heath

- generally character of urban sprawl
- many amenity/low biodiversity green spaces
- some private gardens links
- open space includes allotments and school grounds and large informal open spaces such as Mousehold Heath and Catton Park
- incidental and under-used space, particularly grass verges, housing and industrial estate land
- The North City Centre Action Plan has a priority action to continue key routes from the city centre.

B – Wensum Ridges
Yare to Wensum and Drayton

- rural Yare starts and finishes this corridor
- striking contrast for example between heavily trafficked urban ring road running through unspoilt rural areas and SSSI
- section of industrial estates with many individual units
- out-of-town scale shopping sheds and large scale entrances
- need to retain as much of the rural character within a city setting.

C - Earlham and Eaton

Loosely parallel to the ring road from the west to the south of the city

- starting at the Wensum river with high biodiversity links
- playing fields and school grounds provide much of the open space of low biodiversity, inaccessible to the public
- allotments and private gardens – variable biodiversity but also generally not accessible
- potential for community participation in improving biodiversity aims.

D - City Ridges

Following the river Wensum and Ber Street Ridge

- connecting two areas of relatively high ground, starting south of Mousehold Heath
- *From the Norwich City Centre Conservation Area Appraisal (2007) - (Character areas adjacent to the River Wensum)* - Northern Riverside (3) - The riverside area has been the focus of activity for most of Norwich's history and contains remnants of its former importance. Today, the focus of this activity has shifted from industrial concerns to leisure pursuits and the area is rapidly becoming a popular residential location
- Cathedral Close (5) - containing a wealth of historic buildings spanning the last 900 years, it also contains attractive riverside walks, panoramic views across the flood plain and a wealth of mature trees. Much of the Close forms part of the floodplain of the River Wensum and is therefore low-lying land. To the east, across the river, the wooded valley sides are clearly visible.
- connecting historic churches with churchyards and church grounds – generally higher biodiversity
- skirting along the River Wensum, but mostly with artificial banks
- rising to the Ber Street escarpment, to the south forming a prominent and quite steeply wooded ridge between Rouen Road and King Street
- dropping down to the Wensum again at Trowse marshes.

E - Lakenham Way

Connecting the Wensum to the Yare

- starting at the Wensum
- rising up the valley sides
- heavily trafficked inner ring road
- opportunities to reinforce, highlight and signpost links for biodiversity, walking and cycling across busy traffic routes
- wide verges provide scope for creating a linear park into the heart of the city via Lakenham Way.

Heritage key characteristics

The Norman castle and cathedral, the old city wall, and the undisturbed medieval centre of winding streets and alleys, fall within a broad meander of the River Wensum. It is the city's oldest, and once most important highway. It greatly influenced the early settlement of Norwich, determining much of the form and location of development. The city's distinctive road network developed with reference to the river, its tributaries, fording points and bridges. Some areas of the City, such as Cathedral Close have retained a strong historic character; and the line of the city walls was aligned to the river meander at Cow Tower for example and formed a vital part of Norwich's defences. The Cathedral grounds still form part of the Wensum flood plain. Other areas incorporate a mixture of older buildings interspersed between many more recent industrial buildings which used the river as transport or as a source of water. The riverside area has been the focus of activity for most of Norwich's history and remnants of its former importance were generally neglected as industry declined through the early 20th century when many turned their backs to the river.

Biodiversity & Geo-diversity key assets

The underlying geology of Norwich is chalk (with flint and occasionally sandstone deposits) though glacial sand and gravel up to 7m thick form terraces in the river valley bottom. Outside of the city centre this corridor is predominantly wet grassland and woodland much of which is designated in some way. Within the city centre the biodiversity of the corridor is largely limited to the river itself with some small areas of municipal park alongside. Catton Chalk pit, a geo-SSSI - 'a hardened sea bed (a rarity in the Chalk) best seen at Catton'.

Analysis and identification of issues

- potential housing or employment land will be dotted through the city;
- if well planned then new development may enable enhancement of connected open space;
- The riverscapes are of particular importance of to the character, identity and setting of Norwich;
- There is a need to protect and improve the presentation, accessibility, interpretation and management of buildings, sites and landscape features of historic value – such as those connected to the City's maritime history, historic parks and gardens and Roman archaeology
- Norwich is the main employment centre for the Study Area;
- There is under provision of Amenity Open Space;
- Parts of Norwich are classified as being deprived (Norwich City District is divided into 79 Super Output Areas (SOA's) when assessing deprivation at small area level. In terms of the Index of Multiple Deprivation 29 (37%) are amongst the 20% most deprived SOA's in England and 38 (11%) are in the 10% most deprived SOA's in the East of England (2001 Census data ONS);

- A large proportion of the GIPA corresponds to areas of the City which have a high Index of Deprivation;
- 19.4% of the population have a limiting long-term illness. Almost 22% of the population have mental Health problems;
- A Green Grid for Norwich has been set up to identify underused spaces both in public and private ownership. The aim is to provide a network of accessible linked routes which maximise potential for using sustainable transport, encourage non-car use, and provide routes for walkers / cyclists to move through the spaces.

Priorities and Actions: Landscape character

- Within and around Norwich, 'green wedges' of countryside that stretch into the city, especially along the river corridors, have the potential to be strengthened and enhanced (i.e. enhance Norwich's image as a visually green city);
- Increase the number of trees in general within Norwich, strengthening its identity as a 'city of trees';
- Improve the local environment and contribute to sustainable development through increasing trees in and around urban areas to link existing woodland habitats, improve air quality, reduce noise pollution, improve visual amenity and to act as long-term carbon sinks to offset carbon emissions;
- Protect and enhance the woodland setting of Norwich, particularly the wooded valley sides and ridgelines (generally at about 25m contour line) that define a striking and attractive backdrop to the built form of Norwich;
- Restoration of the rivers and waterfront, congenial to the local character and wildlife habitats along the river;
- Opportunities should be taken to ensure new developments are sympathetic to their urban setting. For example: the positioning of new buildings is important and important views/vistas to local and district scale landmarks and important natural features must be maintained; the scale of development proposals should respect the local topography and context; use of locally distinctive building materials and techniques, paving materials and street furniture; historic street patterns are retained; important visual and historical links are enhanced where appropriate; promotion of the sustainable nature of new developments through design and accessibility;
- Retention of those relatively unmodified areas of the river valleys that have not been developed for urban purposes;
- Reconcile the needs to improve the experience of accessing Norwich by river and enhancing navigational activities with protecting the 'natural' river character, particularly riverbanks;
- Retention or restoration of key heritage buildings, spaces and structures which have contributed to the rivers' role in the history of the area;
- Restoration of areas of derelict industrial land adjacent to the rivers, particularly for residential purposes and for enhanced access;
- Ensure new development/redevelopment utilises 'visibly green' technology such as green roofs and green walls;
- Identify, protect and enhance views to local landmarks within and around the City - e.g. the Castle, the Cathedral and the wooded ridges. Care should be taken to

ensure that any new developments within and around Norwich do not detract or obscure views of citywide landmarks.

Priorities and Actions: Culture/Heritage

- Protection of archaeological and cultural resource;
- Interpretation of special features;
- Retention or restoration of key heritage buildings, spaces and structures that contribute to the character of the city landscapes;
- Protection of key views and viewpoints of cultural importance: the view of the City and the cathedral from St James Hill on the edge of Mousehold Heath is of particular note. This view was immortalised by the paintings of the 'Norwich School' painters – including Cotman, Crome and Ninham;
- Provide for the restoration and management of historic parks and gardens that contribute to the character of the Norwich urban area;
- Access via narrow lanes to the riverfront must be retained and where opportunities occur always consider access to the rivers;
- Encourage management of churchyards as nature reserves/ areas of tranquillity;
- Co-ordinated interpretation strategy to link together cultural and physical history and wildlife associated with the city's heritage.

Priorities and Actions: Biodiversity/Geodiversity

General

- Identify BAP habitat creation targets;
- Protect and enhance existing habitat of local value and above, including BAP habitats, through survey and designation;
- Protect and enhance existing habitat of local value and above, including BAP habitats, through implementation of appropriate management regimes;
- Identify habitat enhancement and creation areas for reinstating former habitats and buffering existing sites where possible;
- Identify priority links to provide increased connectivity and buffering to link sites and reduce the adverse impacts from adjacent land-uses;
- Ensure new developments, and any refurbishment of existing, build in SUDS and maximise opportunity for capture and use of water and wetland habitat creation;
- Encourage management techniques in order to declare more Local Nature Reserves.

River Corridors

- Retain maximum extent of river corridor as undeveloped land. Enhance management of river frontages;
- Ensure that no development is permitted within the remaining undeveloped river corridor sections
- Seek to 'reclaim' corridor sections from brownfield sites as these become available;

- Maintain and enhance lateral connectivity between river corridors and other urban habitats
- Seek to reduce current level of lighting intrusion into river corridors and prohibit new lighting schemes which are likely to result in intrusion;
- Removal of contaminants from river sediments and prevention of further contaminants entering the river systems;
- Habitat creation should concentrate on wetland habitats such as wet grassland, wet woodland, marginal fen, marsh & encourage management e.g. harvesting & grazing etc.
- Create opportunities to actively enable movement of mammals and aquatic life, both along the river channel and the riverbanks. This is especially important through the city;
- Ensure water flows are not impeded or diminished and reduce nutrient enrichment to rivers.

Woodlands/Trees

- Assess functional connectivity of city 'woodlands' and areas with dense tree cover;
- Ensure appropriate management of the wet woodland areas;
- Create more orchards – and plant more fruit trees – e.g. edges of settlement; churchyards (cf Norwich Cathedral Priory);
- Retain existing hedgerows, however sparse and reinforce these; create more hedgerows;
- Reinforce and fill gaps to create a continuous wooded ridge;
- Encourage reinforcement of tree planting along all existing roads with verges.

Geo-diversity

- Raise public awareness of existing sites e.g. Mousehold Heath;
- Ensure appropriate management, presentation, accessibility and interpretation.

Priorities and Actions: Access and Open Space

- Encouraging the use of the rivers for active and passive recreation, consistent with the protection of environmental resources and character;
- Manage and enhance existing open spaces;
- Create more accessible green space including amenity open space, in urban areas and urban fringe;
- Encourage walking as a way to better health through advertisement of safe, easily negotiable, signposted and enjoyable routes;
- Promotion of the Norwich Urban Fringe Project and associated enhancements to the landscape, wildlife habitats and countryside amenities (i.e. to steer recreational pressures away from sensitive sites to robust habitats on the urban fringe which are designed and managed to accommodate recreational activity);
- Create better access to the river corridors (access outside the city centre is poor);
- Mark & create circular church walks (signposted + info) for open space and cultural links within the city;
- Mark & enable creation of wider circular walks (signposted + info) and cycling routes to surrounding areas;
- New developments in the City should provide opportunities for riverside walks and green links to achieve a co-ordinated network that maximises access, for people and wildlife: to and along the valleys of the Rivers Yare and Wensum; between the river valleys and the City's other areas of green open space and to the City's areas of green open space from the developed parts of the City; in particular, residential areas and schools; from the City, out to the urban fringe and surrounding countryside. Potential links between existing areas are mapped on a Green Grid;
- Promote a future country park at Harford Bridges (Lakenham Way), with potential for educational facilities dealing with climate change/waste/recycling/water issues.