

**Landscape Susceptibility in relation
to Energy Generation, Storage and Transmission**

for

South Norfolk Council

Appendix 3.5

Landscape Susceptibility Analysis
Underground cable routes

LT A: Rural River Valleys

The Rural River Valley Landscape Type is very important in giving spatial definition to and creating variety within the South Norfolk Landscape.

Five rural river valleys have been identified within South Norfolk. These are: the broad valley of the River Waveney in the south of the district, the narrower valleys of the Tud and Wensum, west of Norwich, the meandering upper reaches of the River Yare/Tiffey south west of Norwich, and the distinctive Tas Valley to the south of Norwich.

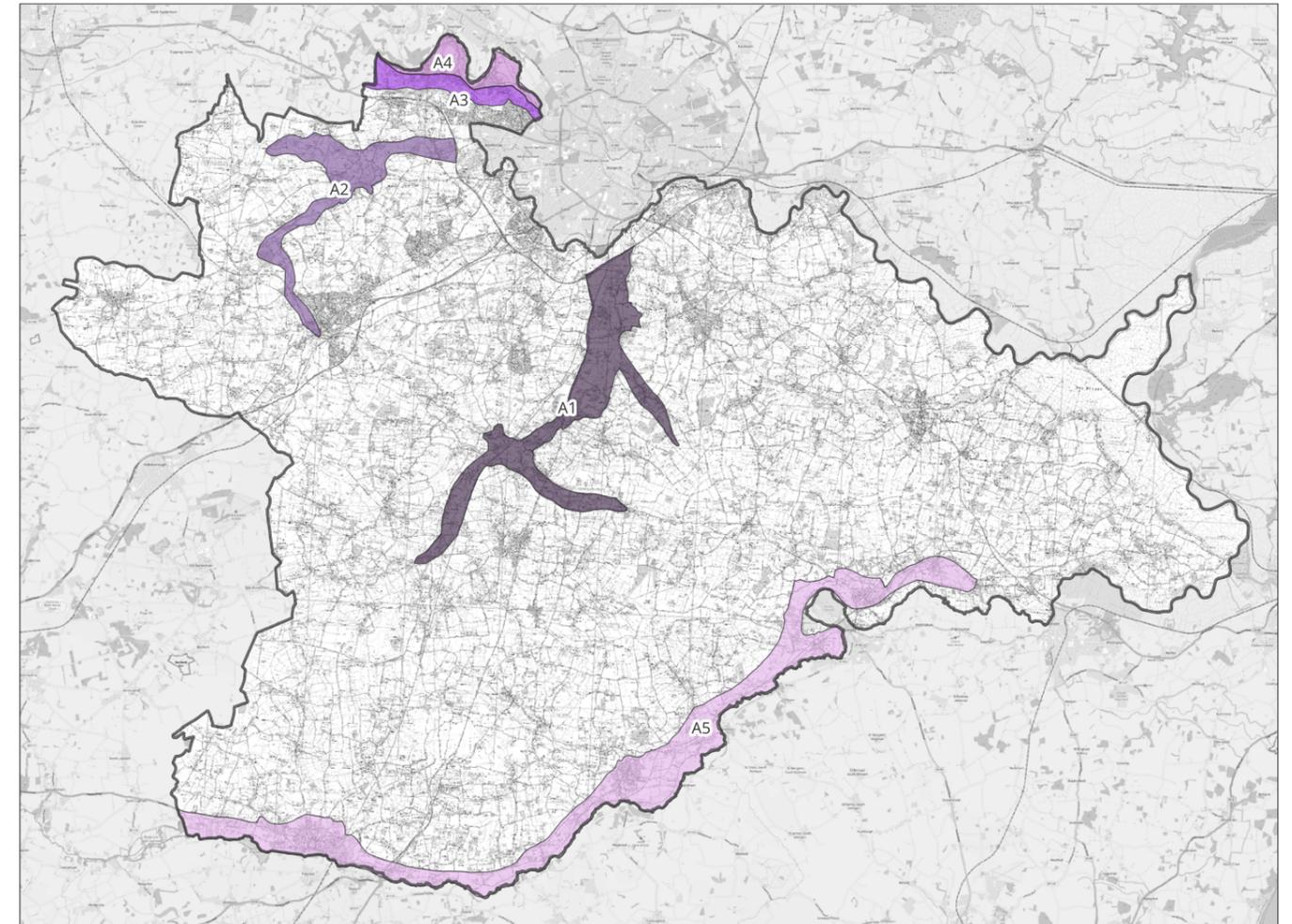
The boundary of this landscape type is defined primarily by topography and corresponds with the upper crest of the valley side, which generally occurs below the 30m AOD contour. Occasionally, the perceived boundary has been affected by cultural features which have transgressed this natural boundary to either extend or reduce the influence of the valley-form character, for example in the valley of the Waveney where the settlements have grown up as an integral part of the valley landscape, although now extend beyond the natural valley line.

Key characteristics

- Distinct valley landform created by glacial and fluvial activity, with wide flat valley floodplains, which create important divisions within the district landscape.
- Semi-enclosed landscape with long views within the valley but restricted views from the valley, creating occasional areas of more intimate character.
- Perceived presence of a river that is often not actually visible within the landscape but which at close-range is seen to be attractive, of significant size and distinct character.
- Willow pollards and lines of poplar flanking ditches and watercourses on the valley floor, plus reeds and marsh in areas.
- Attractive river crossings including fords and old bridges approached by sunken lanes.
- Areas of pastoral floodplain predominantly grazed by cattle, set within the arable landscape that occupies the valley sides.
- Historic quality to areas within the valley landscape due to the presence of visual reminders of the valleys' settled past, particularly the earthworks at Venta Icenorum, watermills, historic river crossings and round-towered churches.
- Settlements predominantly small and nucleated of strong vernacular character with scattered farmsteads on the valley floor or linear settlements at the valley side crest, with a few large towns of 'market town' quality distinct to the Waveney.
- Characteristic vernacular architecture particularly including red brick and Dutch gable ends, windmills, weather-boarded watermills and round towered churches.
- Presence of characteristic ecological assemblages, uncommon or unfound elsewhere in the district, including wetland vegetation, heathland and wet meadows/ pastures.

The individual character areas within this type are listed below:

- A1: Tas Rural River Valley
- A2: Yare/Tiffey Rural River Valley
- A3: Tud Rural River Valley
- A4: Wensum Rural River Valley
- A5: Waveney Rural River Valley



LT A: Rural River Valleys - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Sense of enclosure</p> <ul style="list-style-type: none"> A semi-enclosed landscape with some long views within the valleys but restricted views out. Areas of more intimate character on the valley floor. Some river valleys less enclosed than others, the Waveney for example is a wide valley which has a more open character. 	<p>Medium-Low</p> <ul style="list-style-type: none"> Trees are commonly found on the edge of the floodplain, and there are further trees within the floodplains themselves. Meadows however can be more open as they are enclosed traditionally by ditches rather than hedges.
<p>Landform</p> <ul style="list-style-type: none"> Distinct valley landform created by glacial and fluvial activity with distinct floodplain and shallow valley sides. 	<p>Medium</p> <ul style="list-style-type: none"> The valleys of South Norfolk are typically shallow-sided. Valley sides are considered to be sensitive to the disruption which would be caused by the installation of an underground cable route on account of their complexity and potential visibility. Effects on landform would be temporary, so the susceptibility is assessed as Medium.
<p>Landcover</p> <ul style="list-style-type: none"> Distinctive land cover: small-scale field pattern and prevalence of grazed pastures on the valley floor, with mix of arable and pasture on the valley sides, creating a complex landcover pattern. Characteristic ecological assemblages – reeds and marsh, wet meadows/pastures, woodland plus areas of heathland. High ecological value recognised in designations (SAC/SSSIs). Willow pollards and lines of poplar flank ditches and watercourses. Some areas of active mineral working and open water associated with mineral extraction sites, for example in A3: Tud and A4: Wensum valleys. The Tas Valley features two historic parks, an iron age hillfort at Tasburgh, and a Roman colony at Venta Icenorum. 	<p>Medium-High</p> <ul style="list-style-type: none"> River valleys have greater habitat diversity than the broader arable landscapes that typically surround them, including larger amounts of pasture. Woodlands can be found within the floodplain and on the valleysides. A diversity of natural landcover elements increases susceptibility to development, including underground cable routes. Landcover is particularly sensitive to underground cable routes due the physical disturbance of the trenches. A cable route could be more disruptive ecologically than overhead lines where there are sensitive habitats.

LT A: Rural River Valleys - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Field pattern</p> <p>A1- Tas</p> <ul style="list-style-type: none"> • Meadows and fens, some surviving unenclosed land e.g. at Shotesham and Flordon. • 19th century enclosure at Tasburgh along with earlier enclosures. <p>A2 – Yare Tiffey</p> <ul style="list-style-type: none"> • Narrow floodplain meadows. Some C19 enclosure of meadows. • Meadows defined by dykes. • Small scale field pattern within floodplain. <p>A3 – Tud</p> <ul style="list-style-type: none"> • Narrow floodplain meadows. • Rationalised early enclosures on valley-side. • Large park at Costessey Park. <p>A4 – Wensum</p> <ul style="list-style-type: none"> • Large area of unenclosed land shown on first edition OS Map. • Small organic and regular enclosures bound by dykes in the vicinity of Costessey. • Large, regular enclosures on valley-side. <p>A5 – Waveney</p> <ul style="list-style-type: none"> • 19th century enclosure awards, with some earlier enclosure. • Fields defined by dykes rather than hedges. • Mixture of organic field patterns and regular field patterns reflecting history of enclosure. 	<p>Medium-High</p> <ul style="list-style-type: none"> • Small-scale fields are considered to have higher sensitivity. Enclosure by dikes potentially complicates the installation of an underground cable route. • Important hedgerows (where they are present) would require special construction techniques such as Horizontal Directional Drilling.
<p>Visual characteristics</p> <ul style="list-style-type: none"> • Views within the valleys vary from long range and open to some more enclosed, confined views. • Views frequently include landmark features. • Views into adjacent landscapes are for the most part restricted by the ridges marking the limits of the valleys. There are some views into the valleys from the surrounding higher land. • Key views from Waveney Valley into The Broads 	<p>Medium</p> <ul style="list-style-type: none"> • The contrast between open, large-scale arable farmland and the smaller-scale, more varied and more wooded river valleys has a scenic quality. • Vernacular buildings, woodlands, hedgerows, meadows and parkland trees and lakes also contribute to scenic quality, and the landform creates scenic views. • Although landscape can be reinstated there is still some susceptibility to the disturbance which would be caused during the installation of an underground cable route.

LT A: Rural River Valleys - susceptibility to underground cable routes

Overall susceptibility	Underground cable routes
<p>LCA A1: Tas Rural River Valley</p>	<p>Medium-High</p> <ul style="list-style-type: none"> The key characteristics of the Tas Valley are less sensitive to underground cable routes than to other forms of development. There are however some particular sensitivities which relate to ecological habitats and the flow of water, and the interaction of an underground cable route with existing dikes. Considering the sensitive habitats which are present within the valley the overall susceptibility is assessed as Medium-High.
<p>LCA A2: Yare/Tiffey Rural River Valley</p>	<p>Medium-High</p> <ul style="list-style-type: none"> The key characteristics of the Yare/Tiffey Valley are less sensitive to underground cable routes than to other forms of development. There are however some particular sensitivities which relate to ecological habitats and the flow of water, and the interaction of an underground cable route with existing dikes. Considering the sensitive habitats which are present within the valley the overall susceptibility is assessed as Medium-High.
<p>LCA A3: Tud Rural River Valley</p>	<p>Medium-High</p> <ul style="list-style-type: none"> The key characteristics of the Tud Valley are less sensitive to underground cable routes than to other forms of development. There are however some particular sensitivities which relate to ecological habitats such as grazing marsh and fen. Considering the sensitive habitats which are present within the valley the overall susceptibility is assessed as Medium-High.
<p>LCA A4: Wensum Rural River Valley</p>	<p>Medium-High</p> <ul style="list-style-type: none"> The Wensum Valley features a network of sensitive habitats in the valley-floor and the river itself is an important chalk river which is designated as a SSSI. Considering the sensitive habitats which are present susceptibility is assessed as Medium-High.

LT A: Rural River Valleys - susceptibility to underground cable routes

Overall susceptibility	Underground cable routes
LCA A5: Waveney Rural River Valley	Medium-High <ul style="list-style-type: none">A network of sensitive habitats extends along most of the valley, except for the area around Diss. Considering the sensitive habitats which are present susceptibility is assessed as Medium-High.

LT B: Tributary Farmland

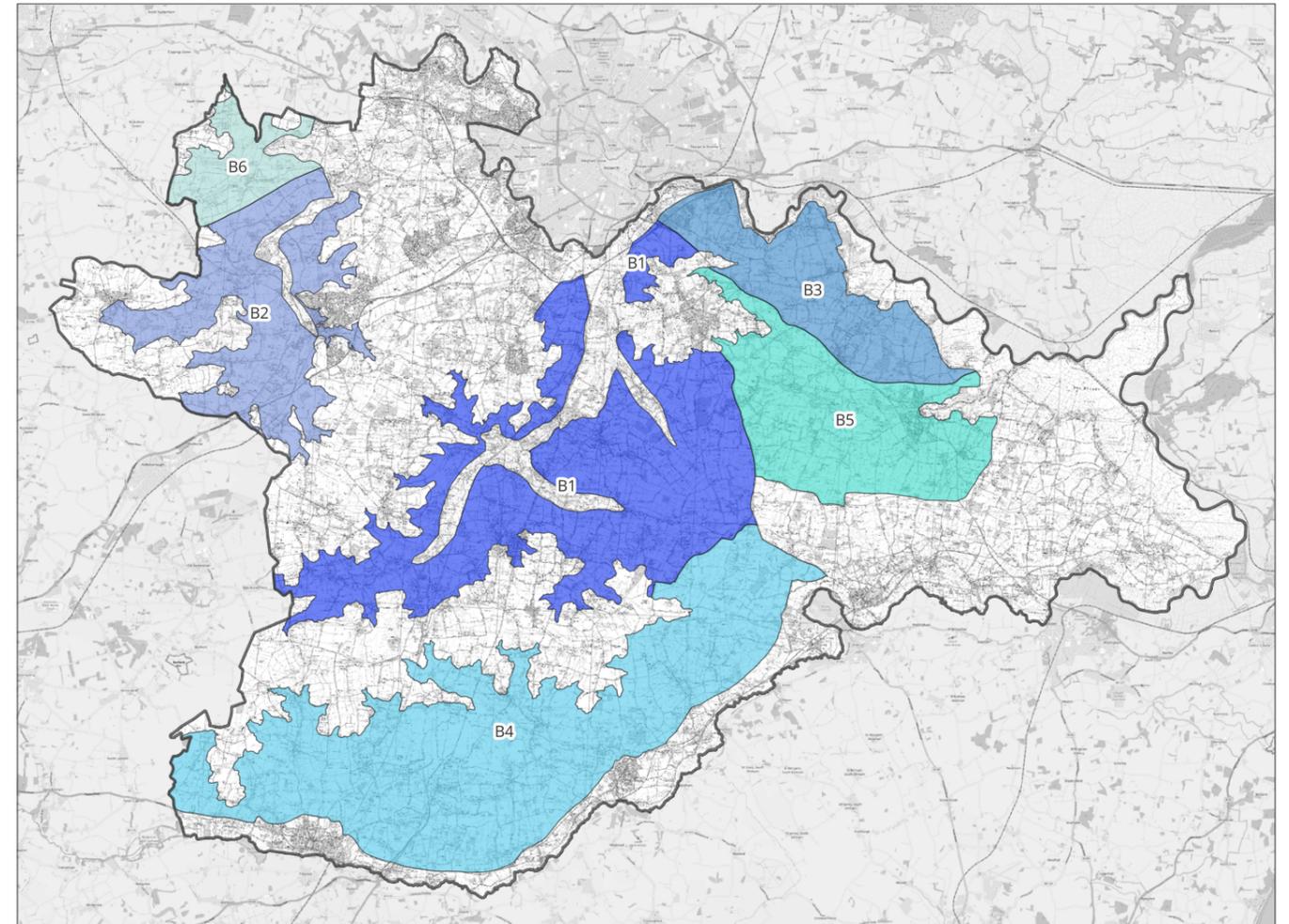
The tributary farmland occupies a large extent of the South Norfolk landscape occurring across the whole of the district. It is a broad transitional landscape type defined by the plateau uplands and river valleys, lying between 20m and 50m AOD.

Key characteristics

- Shelving and gently undulating landform created by small tributary valleys, with tributary rivers cutting through the glacial till to create a landscape of restrained variety.
- Transitional landscape occupying the mid ground between the upland plateaux and the main river valley landscapes providing opportunities for long and framed views.
- Tamed and peaceful farmland with scattered small farm woodlands creating a quiet rural landscape.
- Dispersed but evenly distributed settlement pattern of small, nucleated villages and small farmsteads, occasionally with large agricultural sheds.
- An intricate network of narrow, winding rural lanes often bounded by banks or ditches with a sense of impenetrability.
- Tributaries elusive- evident but usually hidden within the landscape by topography or trees.
- Medium to large-scale arable farmland of cereals and sugarbeet and occasional fields of sunflowers or other crops with sparse and/or overgrown hedgerows and hedgerow trees.
- Remnant parkland, which sometimes relates to former deer parks, plus areas of common land.
- Mixed architectural character comprising modern bungalow development and traditional vernacular architecture with gable ends (predominantly stepped) and other vernacular influences such as brick and flint and isolated churches.
- High proportion of important ecological assemblages protected as SSSIs including woodland, and wetland habitats.

The individual character areas within this type are listed below:

- B1: Tas Tributary Farmland
- B2: Tiffey Tributary Farmland
- B3: Rockland Tributary Farmland
- B4: Waveney Tributary Farmland
- B5: Chet Tributary Farmland
- B6: Yare Tributary Farmland



LT B: Tributary Farmland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Sense of enclosure</p> <ul style="list-style-type: none"> Woodland blocks impart a semi-wooded, semi-enclosed character to much of the area. Valley landforms offers opportunity for longer views. 	<p>Medium</p> <ul style="list-style-type: none"> Semi-enclosed character is moderately sensitive to development.
<p>Landform</p> <ul style="list-style-type: none"> Varied landform from flat to gently undulating, sloping towards tributary valleys. Minor stream valleys cut through the glacial till to create a landscape of restrained variety. 	<p>Medium</p> <ul style="list-style-type: none"> The area generally consists of gently undulating landscape which lies in the middle of the susceptibility spectrum.
<p>Landcover</p> <ul style="list-style-type: none"> Varied pattern from small scale, intricate networks of fields/hedgerows in tributary valleys and around settlements to large, open fields on higher ground. An intricate network of narrow, winding lanes often bounded by ditches. Elusive tributaries, evident but usually hidden within the landscape by topography or trees. Medium to large-scale arable fields enclosed by sparse hedges with hedgerow trees. Permanent pasture and woodland found within valleys. Remnant parkland which sometimes relates to former deer parks, plus areas of common land. High proportion of important assemblages protected as SSSIs including woodland and wetland habitat. 	<p>Medium</p> <ul style="list-style-type: none"> Arable landcover can be reinstated, but there is some susceptibility in terms of disturbance to soils. Pre-C18 enclosures, commons, ancient woodland, parklands and vernacular buildings display a stronger time depth and historical continuity and increase local susceptibility. Areas of naturalistic landcover such as ancient woodland, species-rich grassland or fens are incompatible with development. Most of the land however does not consist of priority habitats so the ecological constraint could be avoided.

LT B: Tributary Farmland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Field pattern</p> <p>B1 - Tas Tributary Farmland</p> <ul style="list-style-type: none"> • Early rectilinear field patterns across much of the area. • Planned enclosures of former greens and heaths prior to the C18 creating semi-regular field pattern. • Common arable fields in Forncett St Mary visible on tithe map. • Late enclosure of fens, for example at Hingham • Some unenclosed meadows/fen. • Widespread hedgerow loss means that most fields are now classified as 20th century enclosures. <p>B2 – Tiffey</p> <ul style="list-style-type: none"> • Mix of field patterns. Some irregular, presumably early enclosures. • Late enclosures at Spooner Row and Barnham Broom. • Medieval deer parks at Kimberley and Oxehaghe. • Small area of unenclosed meadow at Coston. • Widespread hedgerow loss means that most fields are now classified as 20th century enclosures. <p>B3 – Rockland</p> <ul style="list-style-type: none"> • Mix of organic field patterns, suggesting early enclosure, and rectilinear field patterns, suggesting late enclosure. • Late enclosures of marshland and heathland in Kirby Bedon and Surlingham. • Sinuous field boundaries in Ashby St Mary suggest enclosure from common field. <p>B4 – Waveney Tributary Farmland</p> <ul style="list-style-type: none"> • Early rectilinear field patterns e.g. at Alburgh and Denton. • Ancient, irregular enclosures across much of the area. • Sinuous enclosures from open fields in Denton. • Considerable hedgerow loss. <p>B5 – Chet</p> <ul style="list-style-type: none"> • Early rectilinear field systems e.g. at Seething. Medieval open fields possibly based on earlier field system. 	<p>Low</p> <ul style="list-style-type: none"> • The majority of the fields are now classified as 20th century enclosures and are not considered particularly sensitive. • Field patterns can be reinstated. • Important hedgerows (where they are present) would require special construction techniques such as Horizontal Directional Drilling.

LT B: Tributary Farmland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Visual characteristics</p> <ul style="list-style-type: none"> • Transitional landscape occupying the mid ground between the plateaux and the main river valleys, providing opportunities for long and framed views. • Within these landscapes views are across arable fields to sloping valley sides and down to small-scale wooded tributary valleys. • Framed and open, long-ranging views across the countryside. • Large agricultural buildings can be visually prominent. • Pylons and poles interrupt the landscape wherever they are present, notably towards the northern part of the district. • Important views to landmarks such as Wymondham Abbey and Wicklewood Windmill that provide a sense of place. • Elements of vernacular interest that include round-towered churches. • Generally undeveloped skylines. • Strong visual influence of the adjoining Broads in character areas B3 and B5. • Visual influence of Norwich in character areas B1 and B3. 	<p>Medium-Low</p> <ul style="list-style-type: none"> • The combination of historic vernacular buildings, wooded horizons, hedgerows and hedgerow oaks counterbalanced by extensive gently undulating, arable farmland creates a moderate to high scenic quality. • The landscape is less sensitive in visual terms to underground cable routes than to other forms of development as the visual characteristics of the landscape can be largely restored.

LT B: Tributary Farmland - susceptibility to underground cable routes

Overall susceptibility	Underground cable routes
<p>LCA B1: Tas Tributary Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Tas Tributary Farmlands are less sensitive to underground cable routes than to other forms of development. There are however some sensitivities which relate to ecological habitats and temporary disturbance during the installation phase. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.
<p>LCA B2: Tiffey Tributary Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Tiffey Tributary Farmlands are less sensitive to underground cable routes than to other forms of development. There are however some sensitivities which relate to ecological habitats and temporary disturbance during the installation phase. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.
<p>LCA B3: Rockland Tributary Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Rockland Tributary Farmlands are less sensitive to underground cable routes than to other forms of development. There are however some sensitivities which relate to ecological habitats and temporary disturbance during the installation phase. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.

LT B: Tributary Farmland - susceptibility to underground cable routes

Overall susceptibility	Underground cable routes
<p>LCA B4: Waveney Tributary Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Waveney Tributary Farmlands are less sensitive to underground cable routes than to other forms of development. There are however some sensitivities which relate to ecological habitats and temporary disturbance during the installation phase. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.
<p>LCA B5: Chet Tributary Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Chet Tributary Farmlands are less sensitive to underground cable routes than to other forms of development. There are however some sensitivities which relate to ecological habitats and temporary disturbance during the installation phase. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.
<p>LCA B6: Yare Tributary Farmland</p>	<p>Medium-Low</p> <ul style="list-style-type: none"> The key characteristics of the Yare Tributary Farmlands are less sensitive to underground cable routes than to other forms of development. There are however some sensitivities which relate to ecological habitats such as lowland fen, and to temporary disturbance during the installation phase. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Medium-Low.

LT C: Tributary Farmland with Parkland

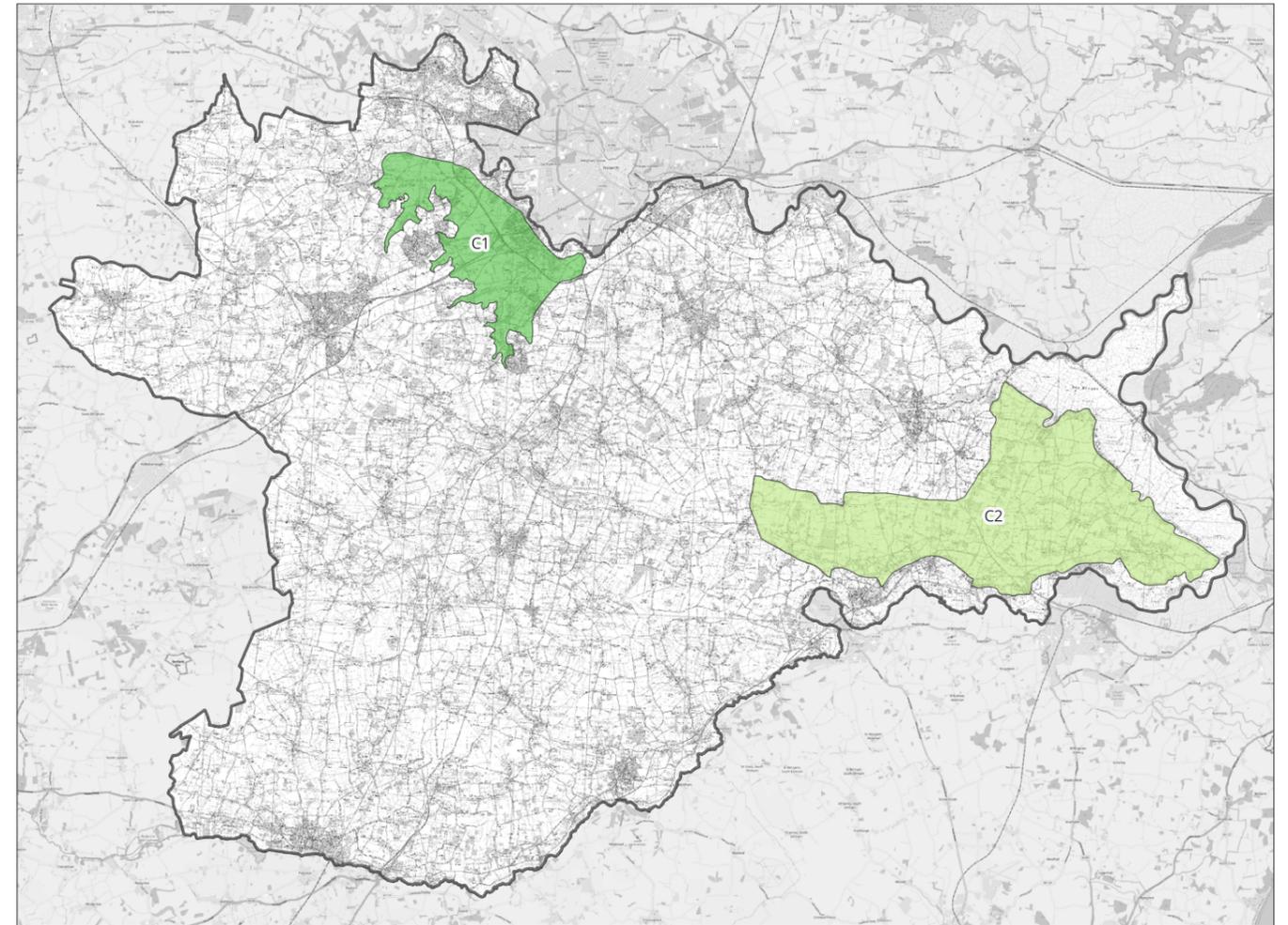
The Tributary Farmland with Parkland Landscape Type occupies two discrete areas of landscape, one in the east and one towards the north of the district. It shares many of the characteristics of the Tributary Farmland Landscape Type. This type differs due to the presence of parklands which create a very distinctive character throughout much of the area.

Key characteristics

- Gently undulating landform created by the presence of small tributary stream valleys which cut through the glacial till landscape providing a sense of restrained variety
- Transitional landscape occupying the mid ground between the upland plateaux and the main river valley landscapes, providing varied opportunities for long and framed views
- Presence of large parkland estates particularly associated directly with the tributary valleys. Estate railings, prominent gatehouses, boundary fences and tree-lined avenues with areas of pastoral farmland and horse grazing reveal the presence of the wooded parkland in the wider arable landscape.
- Context of tamed and peaceful arable farmland with scattered small farm woodlands, including ancient woodland, and medium to large-scale fields of sugarbeet and cereal surrounded by sparse hedges and hedgerow trees.
- Small fields of more unusual crops such as sunflowers and asparagus bounded by banks of coppiced willow.
- Dispersed but evenly distributed settlement pattern of small farmsteads and small, nucleated villages.
- An intricate network of small rural roads often bounded by banks or ditches with a sense of impenetrability.
- Tributaries visually elusive and often physically inaccessible- rarely evident because they are hidden within the landscape by topography or trees, particularly where they are associated with the parkland which prevents public access to them.
- Mixed architectural character comprising modern development and traditional vernacular architecture, including stepped and Dutch gable ends and brick and flint.
- Isolated flint round towered churches particularly evident.
- Characteristic large detached halls and manor houses, usually constructed of brick and of high architectural quality, associated with the parkland estates. These are frequently screened by woodland, except at close range.

The individual character areas within this type are listed below:

- C1: Yare Tributary Farmland with Parkland
- C2: Thurlton Tributary Farmland with Parkland



LT C: Tributary Farmland with Parkland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Sense of enclosure</p> <ul style="list-style-type: none"> Open arable landscape is interrupted by areas of woodland. Areas of woodland associated with estates provide greater enclosure. 	<p>Medium</p> <ul style="list-style-type: none"> Semi-enclosed character is moderately sensitive to development. Although cables would be buried there would be visible effects during the installation phase.
<p>Landform</p> <ul style="list-style-type: none"> Gently undulating landform created by the presence of small tributary stream valleys which cut through the landscape providing a sense of restrained variety. 	<p>Medium</p> <ul style="list-style-type: none"> The area consists of gently undulating landscape which lies in the middle of the susceptibility spectrum. Although cables would be buried there would be visible effects during the installation phase.
<p>Landcover</p> <ul style="list-style-type: none"> Presence of large parkland estates particularly associated with the tributary valleys. Estate railings, prominent gatehouses, parkland belts, tree-lined avenues and areas of pasture reveal the presence of parkland within the wider arable landscape. Peaceful arable farmland with small ancient woodlands and scattered coverts with medium to large-scale fields of wheat, barley, oilseed rape and sugarbeet surrounded by sparse hedges and hedgerow trees. An intricate network of small rural roads. Becks. 	<p>Varying from Medium to High</p> <ul style="list-style-type: none"> Arable landcover can be reinstated, but there is some susceptibility in terms of disturbance to soils. Parkland landscapes have a high susceptibility to underground cable routes, especially where there is unimproved grassland.
<p>Field pattern</p> <p>C1 – Yare</p> <ul style="list-style-type: none"> Irregular enclosures. Late enclosure e.g. at Little Melton. Parks. Unenclosed land at Swardeston Common. <p>C2 - Thurlton</p> <ul style="list-style-type: none"> Ancient irregular enclosures. Considerable field amalgamation. 	<p>Low</p> <ul style="list-style-type: none"> The majority of the fields are now classified as 20th century enclosures and are not considered particularly sensitive. Field patterns can be reinstated. Important hedgerows (where they are present) would require special construction techniques such as Horizontal Directional Drilling.

LT C: Tributary Farmland with Parkland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Visual characteristics</p> <ul style="list-style-type: none"> • Views to wide open horizons and long views across denuded hedgerow boundaries and arable farmland from higher areas. • Prominent views to historic features such as isolated and round-towered churches. • Views framed and broken by woodland blocks and estate parkland with large manor buildings. • Intermittent, long views into The Broads from C2. • Views to Norwich in particular from the southern bypass which bisects C1. • Characteristic large halls though frequently screened by woodland. • Isolated round towered flint churches particularly evident. • Mixed architectural character comprising modern development and vernacular architecture. 	<p>Medium-Low</p> <ul style="list-style-type: none"> • The combination of historic vernacular buildings, wooded horizons, hedgerows and hedgerow oaks counterbalanced by extensive gently undulating, arable farmland creates a moderate to high scenic quality. • The landscape is less sensitive in visual terms to underground cable routes than to other forms of development as the visual characteristics of the landscape can be largely restored.

LT C: Tributary Farmland with Parkland - susceptibility to underground cable routes

Overall susceptibility	Underground cable routes
<p>LCA C1: Yare Tributary Farmland with Parkland</p>	<p>Medium-Low</p> <ul style="list-style-type: none"> The key characteristics of the Yare Tributary Farmland with Parklands are less sensitive to underground cable routes than to other forms of development. There are however some sensitivities which relate to temporary visual disturbance, lowland fens, a Registered Park and Garden at Intwood Hall and common land at Swardeston Common.
<p>LCA C2: Thurlton Tributary Farmland with Parkland</p>	<p>Medium</p> <ul style="list-style-type: none"> The key characteristics of the Thurlton Tributary Farmland with Parklands are less sensitive to underground cable routes than to other forms of development. There are however some sensitivities which relate to historic parklands, ancient woodlands, and temporary visual disturbance. The presence of historic parklands and ancient woodlands increases the sensitivity of this landscape character area, and would necessitate careful design.

LT D: Settled Plateau Farmland

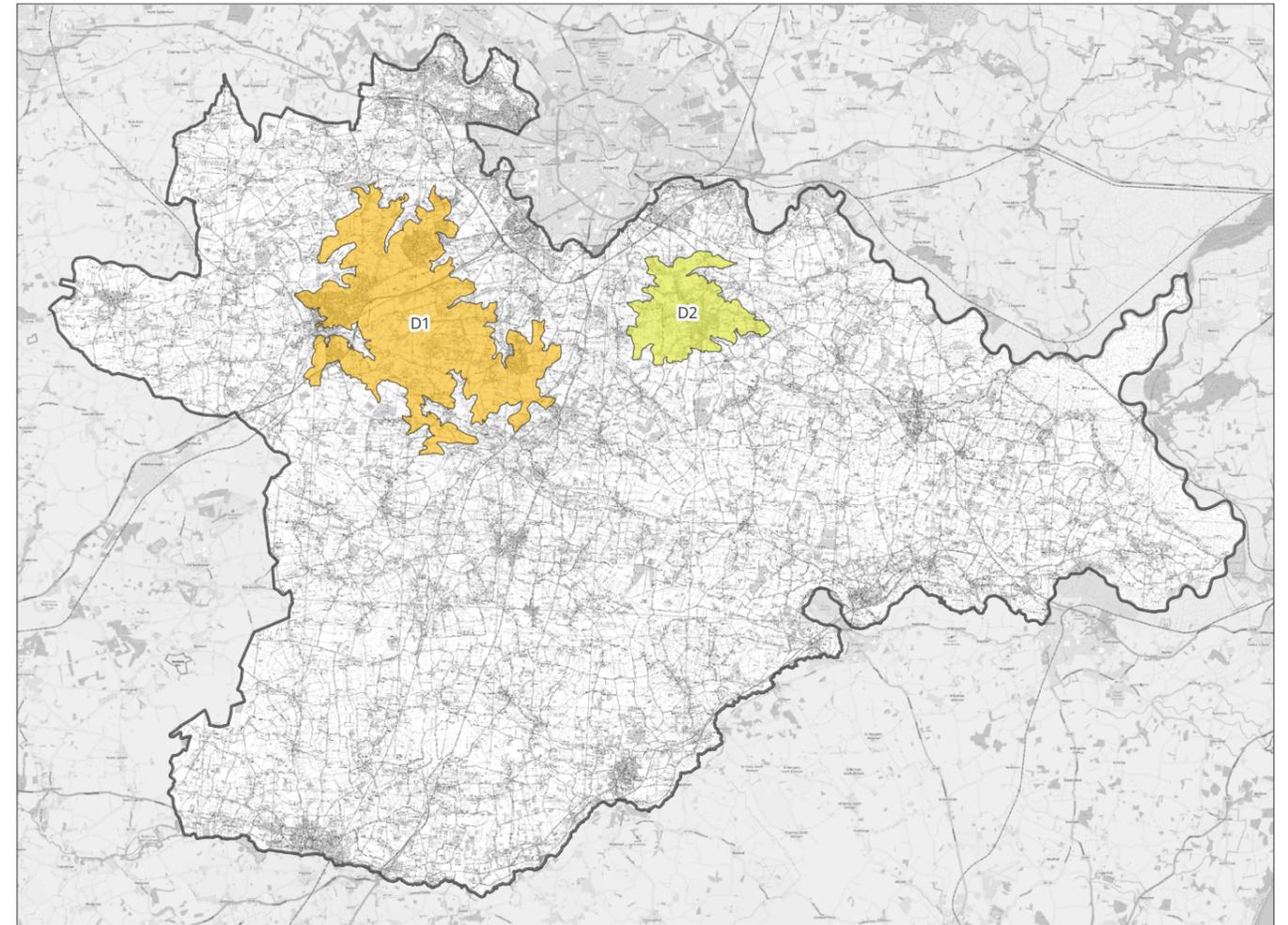
There are two areas of the Settled Plateau Farmland Landscape Type, one to the east and one to the west of the Tas Valley around the settlements of Wymondham and Poringland respectively. The Settled Plateau Farmlands have been defined by virtue of their elevation, topography and settlement pattern. The boundaries of these areas are largely represented by the 40 and 50m AOD contours. However, small and fragmented areas above the 40m contour have not been classified as Settled Plateau Farmland.

Key characteristics

- Distinct flat to gently rising elevated landform as a result of the simplistic underlying Glacial Till geology.
- Large fields of arable monoculture principally characteristic swathes of cereal, oilseed rape and sugarbeet.
- Variety of spatial experiences due to the elevation and contrast between the openness of the arable fields and intimacy of the settlements.
- Long views of the district from the plateau edges, including views to Norwich, and internalised plateau views. Elements of plateau interior not visible except from other plateau areas or where tall intrusive elements are present.
- Mature remnant oak hedgerow trees are features in the agricultural landscape however hedgerows have been severely degraded or lost leading to fragmentation within the landscape.
- Illusion of wooded horizons due to the presence of significant areas of mixed woodland blocks, some intact hedgerows and the visual merging of hedgerow trees and woodlands in the landscape.
- Presence of large communications masts which interrupt of the sense of openness yet provide distinct landmarks.
- Settled landscape mostly comprising large edge-of-plateau towns and large villages with other smaller nucleated settlements dispersed across the plateau.
- Some evidence of historical features within the landscape including isolated churches (some of which are round-towered), moats, historic parkland and some farm ponds.
- Some vernacular buildings particularly in historic market towns, particularly including use of bricks, timber framing and stepped gable ends, but contrasted with settlements of modern bungalow development.

The individual character areas within this type are listed below:

- D1: Wymondham Settled Plateau Farmland
- D2: Poringland Settled Plateau Farmland



LT D: Settled Plateau Farmland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Sense of enclosure</p> <ul style="list-style-type: none"> • Generally open landscape. Poor hedgerows accentuate the openness of the landscape. • Variety of spatial experiences due to the elevation and contrast between the openness of the arable fields and intimacy of the settlements. • Wooded character in parts provides enclosure, particularly around settlements. 	<p>Medium-High</p> <ul style="list-style-type: none"> • Poor hedges provide weak enclosure which increases the susceptibility to development, including underground cable routes.
<p>Landform</p> <ul style="list-style-type: none"> • Distinct flat to gently rolling, elevated landform as a result of the simple underlying geology. • The area centred on Poringland has the greatest variation, rising up to a gentle 'dome' at 75m AOD which is one of the most elevated areas in the district. • The boundaries of these areas are largely represented by the 40 and 50m AOD contours – the plateau edges are highly visible from adjacent landscapes. 	<p>Medium-Low</p> <ul style="list-style-type: none"> • The simple flat landform is less sensitive to development. • The plateau edges however are more sensitive to development, including underground cable routes.
<p>Landcover</p> <ul style="list-style-type: none"> • Large arable fields characterised by swathes of cereals, oilseed rape and sugarbeet. • Some evidence of historic landscape features including moats, historic parkland and farm ponds. • Woodland blocks tend to be associated with halls/remnant parkland 	<p>Medium</p> <ul style="list-style-type: none"> • Arable landcover can be reinstated, but there is some susceptibility in terms of disturbance to soils. • Other elements showing greater time-depth increase susceptibility. • It is assumed that effects on sensitive landcovers such as priority habitats could be avoided through careful design.
<p>Field pattern</p> <p>D1 - Wymondham</p> <ul style="list-style-type: none"> • Early irregular enclosures at Bracon Ash and Mulbarton. • Irregular field pattern in Ketteringham. • Late enclosure of greens e.g. High Green, Melton and High Green, Wreningham. • Park at Ketteringham. • Field pattern obliterated by airfield at Hethel. <p>D2 - Poringland</p> <ul style="list-style-type: none"> • Late enclosure of former heath (shared between settlements) • Former park at Bixley Hall 	<p>Low</p> <ul style="list-style-type: none"> • Widespread hedgerow loss has reduced the susceptibility of the field pattern. • Field patterns can be reinstated. • Important hedgerows (where they are present) would require special construction techniques such as Horizontal Directional Drilling.

LT D: Settled Plateau Farmland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Visual characteristics</p> <ul style="list-style-type: none"> • Strong open horizons – the archetypal ‘Norfolk’ Landscape. • Illusions of wooded horizons due to the presence of significant areas of mixed woodland blocks, some intact hedgerows and the visual merging of hedgerow trees and woodlands in the landscape. • Views to large communication masts, settlement on the plateau edge and areas of parkland and woodland blocks. • Long views of the district from the plateau edges, including views to Norwich, and internalised plateau views. • D2 plateau is very prominent in views from the surrounding landscape. • Mast at Poringland has high visibility but also serves as a landmark. • A number of large-scale farm buildings including grain towers and silos that punctuated the horizon (particularly near Silfield). 	<p>Medium-Low</p> <ul style="list-style-type: none"> • The landscape is less sensitive in visual terms to underground cable routes than to other forms of development as the visual properties of the landscape can be largely restored. • Plateau edges are more sensitive, though effects would be temporary.

LT D: Settled Plateau Farmland - susceptibility to underground cable routes

Overall susceptibility	Underground cable routes
<p>LCA D1: Wymondham Settled Plateau Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Wymondham Settled Plateau Farmlands are less sensitive to underground cable routes than to other forms of development. The openness of the landscape would increase visibility during the installation phase, however this would be a temporary effect. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.
<p>LCA D2: Poringland Settled Plateau Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Poringland Settled Plateau Farmlands are less sensitive to underground cable routes than to other forms of development. The openness of the landscape would increase visibility during the installation phase, however this would be a temporary effect. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.

LT E: Plateau Farmland

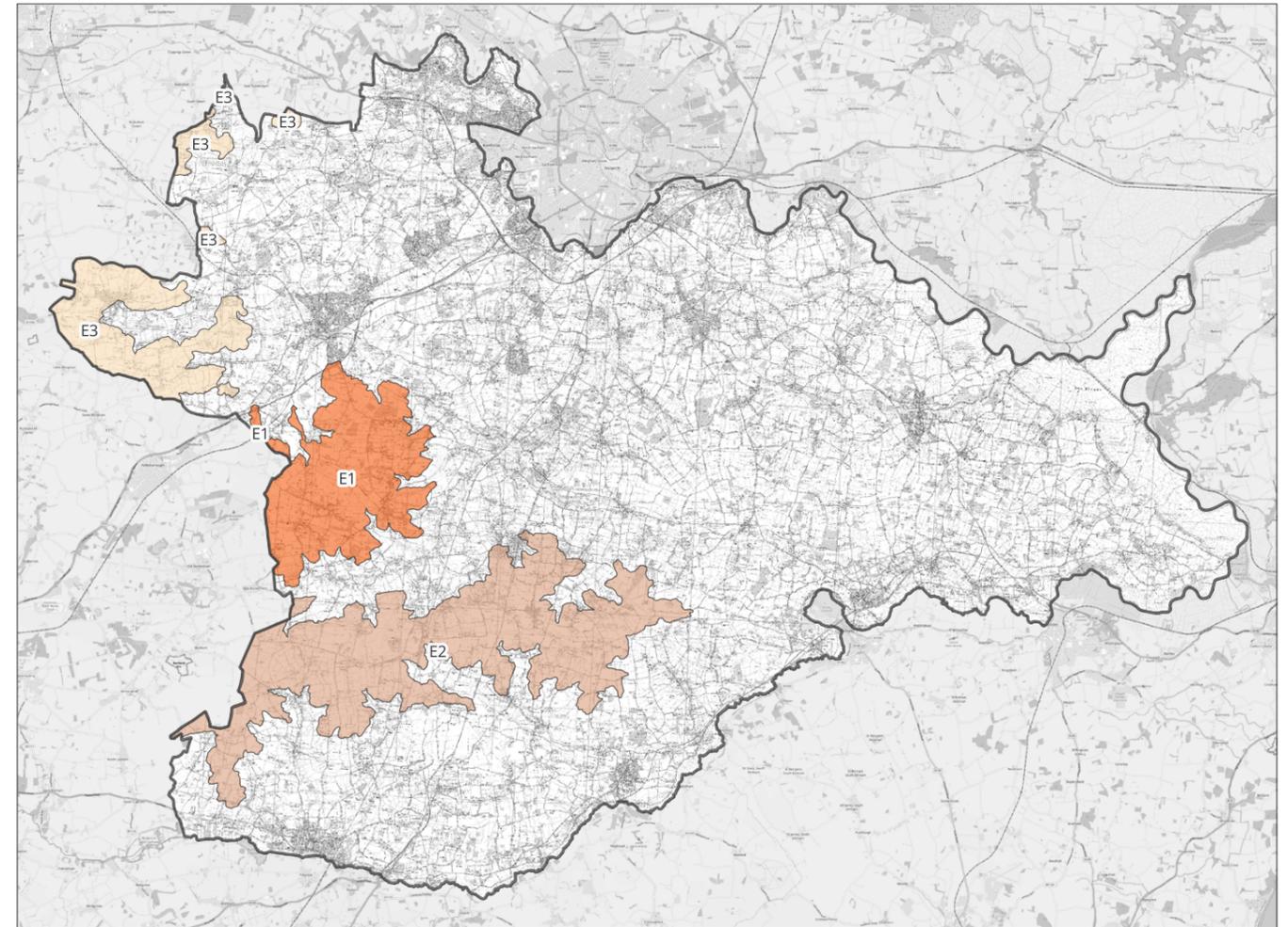
The Plateau Farmland Landscape Type occurs in the western part of the district in three principal areas, all of which continue beyond the South Norfolk boundary into the adjoining Breckland District. The Plateau Farmlands are defined by their elevation and all are primarily delineated by the 50m contour. However, it should be noted that not all areas above the 50m contour line have been classified as Plateau Farmland due to differing land use patterns.

Key characteristics

- Distinct flat and elevated landform as a result of the simplistic underlying Glacial Till geology.
- Large fields of arable monoculture with characteristic swathes of cereal, oilseed rape and sugarbeet monoculture.
- Sense of openness and exposure due to the elevation and scarcity of enclosing elements.
- Long views of the district from the plateau edges and shorter internalised plateau views. Inner plateau largely invisible from other areas.
- Mature remnant oak hedgerow trees are features in the agricultural landscape. However, hedgerows have been severely degraded or lost leading to fragmentation within the landscape.
- Straight plateau-top roads characteristically lined with attractive wide grass verges and ditches.
- Wooded horizons as a result of visual merging of hedgerow trees and woodlands in the landscape, which integrate settlements into the landscape.
- Presence of tall structures including masts and poles which disturb the rural scene interrupting the sense of openness.
- Sparsely settled landscape mostly comprising larger edge-of-plateau settlements, small nucleated and long linear settlements.
- Presence of historic features within the landscape including isolated church, moats, and farm ponds.
- Some vernacular buildings particularly including the use of brick and Dutch gable ends, but intermixed with more modern bungalow development.
- Disused air fields

The individual character areas within this type are listed below:

- E1: Ashwellthorpe Plateau Farmland
- E2: Great Moulton Plateau Farmland
- E3: Hingham-Mattishall Plateau Farmland



LT E: Plateau Farmland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Sense of enclosure</p> <ul style="list-style-type: none"> • Sense of openness and exposure due to the elevation and scarcity of enclosing elements. • The flatness of the plateau creates a strong sense of openness with large skies and distant horizons. 	<p>Medium-Low</p> <ul style="list-style-type: none"> • Poor hedges provide weak enclosure which increases the susceptibility to development. • The visual effects of cable routes are temporary, so susceptibility is lower than for other forms of development.
<p>Landform</p> <ul style="list-style-type: none"> • Distinct flat and elevated plateau landform. • Defined by the elevation and primarily delineated by the 50m contour. 	<p>Medium-Low</p> <ul style="list-style-type: none"> • The simple flat landform is less sensitive to development. • The plateau edges however are more sensitive to development, including underground cable routes.
<p>Landcover</p> <ul style="list-style-type: none"> • Large fields of arable monoculture with characteristic swathes of wheat, barley, oilseed rape and sugar beet. • Mature hedgerow oaks are features in the agricultural landscape. However hedgerows have been severely degraded or lost, leading to a much simplified landscape. • Generally an early enclosed landscape, but with significant areas of common/heath, many of which were enclosed in the C19. Some remaining commons. • Mixed field patterns relating to the history of enclosure. 	<p>Medium-Low</p> <ul style="list-style-type: none"> • Arable landcover can be reinstated, but there is some susceptibility in terms of disturbance to soils. • Other elements showing greater time-depth increase susceptibility. • It is assumed that effects on sensitive landcovers e.g. remaining commons could be avoided through careful design.

LT E: Plateau Farmland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Field pattern</p> <p>E1 – Ashwellthorpe Plateau Farmland</p> <ul style="list-style-type: none"> • Ancient rectilinear enclosures in Bunwell • Ancient irregular enclosures at Fundenhall • Late enclosure of large commons (shared between settlements). • Fields on poor drained plateau bound by ditches. <p>E2 – Great Moulton</p> <ul style="list-style-type: none"> • Ancient rectilinear field patterns in Burston, Tibenham, Great Moulton and Hardwick. • Irregular field patterns, presumably early enclosures. • Large heath at western edge of area enclosed in C18. • Some remaining unenclosed land e.g. Wacton Common. • Field pattern eroded by airfields and hedgerow loss. <p>E3 – Hingham - Mattishall</p> <ul style="list-style-type: none"> • Later enclosure of commons and warren signified by rectilinear field pattern e.g at Deopham Green. • Irregular field patterns at Hingham an Wicklewood. • Late enclosure of Welborne Common (C18) 	<p>Low</p> <ul style="list-style-type: none"> • Widespread hedgerow loss has reduced the susceptibility of the field pattern. • Field patterns can be reinstated. • Important hedgerows (where they are present) would require special construction techniques such as Horizontal Directional Drilling.
<p>Visual characteristics</p> <ul style="list-style-type: none"> • Long views of the district from the plateau edges take in a wide panorama of South Norfolk and these are some of the best in the district. • Shorter internalised plateau views are to farm buildings and isolated churches. • From higher areas of plateau and from the plateau edge there are views to adjacent landscapes including to churches in adjoining areas 	<p>Medium-Low</p> <ul style="list-style-type: none"> • The landscape is less sensitive in visual terms to underground cable routes than to other forms of development as the visual characteristics of the landscape can be largely restored. • Plateau edges are more sensitive, though it is acknowledged that effects would be temporary.

LT E: Plateau Farmland - susceptibility to underground cable routes

Overall susceptibility	Underground cable routes
<p>LCA E1: Ashwellthorpe Plateau Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Ashwellthorpe Plateau Farmlands are less sensitive to underground cable routes than to other forms of development. The openness of the landscape would increase visibility during the installation phase, however this would be a temporary effect. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.
<p>LCA E2: Great Moulton Plateau Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Great Moulton Plateau Farmlands are less sensitive to underground cable routes than to other forms of development. The openness of the landscape would increase visibility during the installation phase, however this would be a temporary effect. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.
<p>LCA E3: Hingham-Mattishall Plateau Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Hingham-Mattishall Plateau Farmlands are less sensitive to underground cable routes than to other forms of development. The openness of the landscape would increase visibility during the installation phase, however this would be a temporary effect. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.

LT F: Valley Urban Fringe

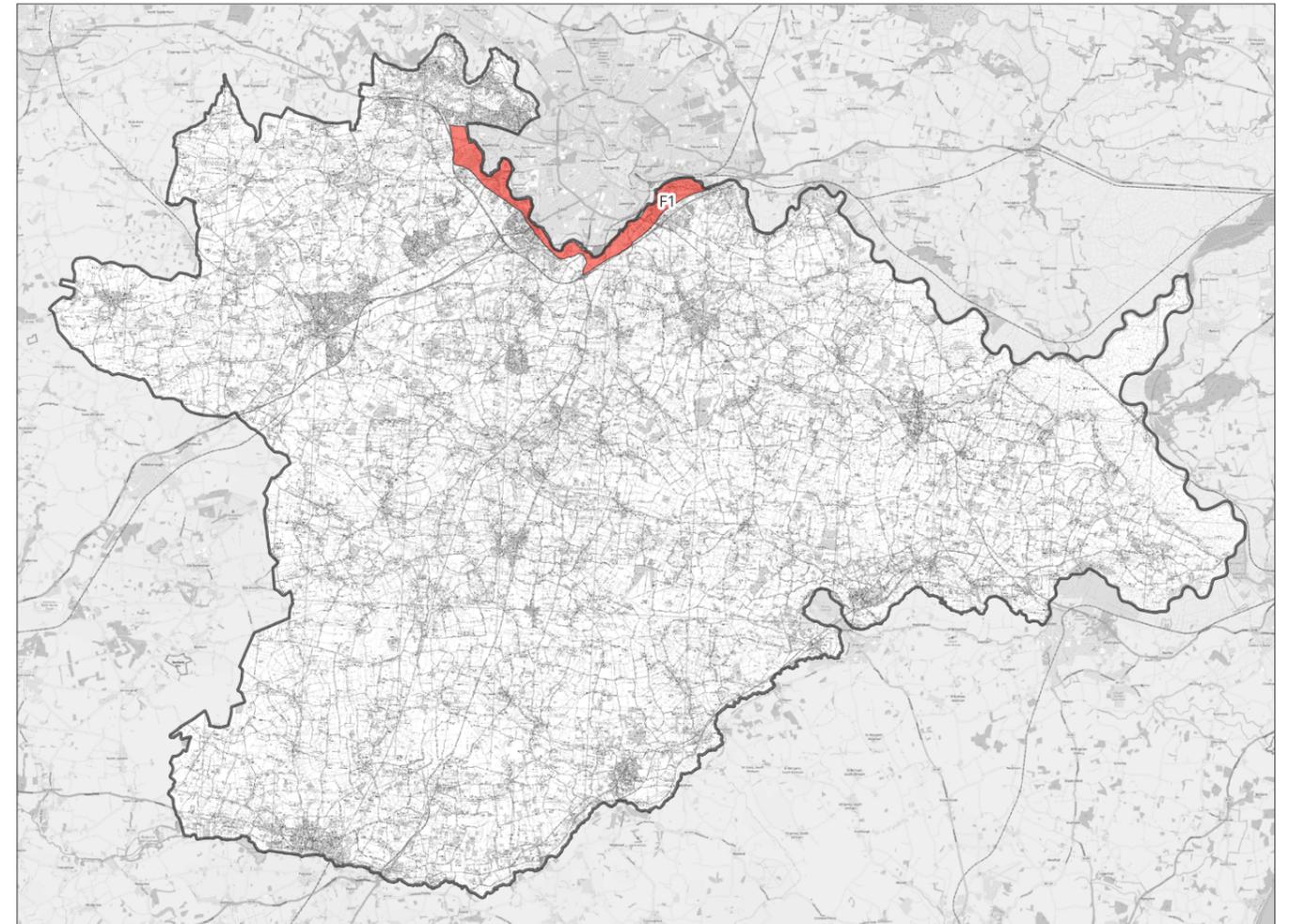
The Valley Urban Fringe Landscape Type is found in only one area: the Yare Valley which is found near the perimeter of the City of Norwich. In South Norfolk District, it is represented by a narrow band, with a large proportion of the landscape type extending beyond the district boundary into the area within the jurisdiction of Norwich City Council. The crest of the slope at about 30m AOD represents the boundary of this landscape type; as it is at this point that the character changes to a valley landform, focused on the River Yare.

Key characteristics

- Distinctive broad meandering valley form with wide flat flood plain and enclosing valley sides, occasionally opening up where tributary valleys such as the Tas valley link to the Yare valley.
- Glacial gravel deposits, which have been exploited resulting in remnant flooded gravel workings along the valley floor.
- Large river flanked by characteristic wetland vegetation, including reeds and fringing alder/willow woodland creating a well wooded appearance.
- Inaccessible valley floor with relatively few river crossings.
- Evidence of early human activity, for example the henge at Arminghall and presence of numerous Scheduled Ancient Monuments.
- Few distinctive vernacular buildings mainly due to the relative lack of prewar settlement within the valley.
- Distinct absence of settlement within the valley, apart from discrete areas nestled around river crossings, although influenced by Norwich urban fringe along parts of the upper valley sides.
- Impenetrability resulting in a sense of remoteness and solitude- remarkable given the closeness of a major city.
- Large institutional buildings occasionally visible from the valley.

There is one Landscape Character Area within this type:

- F1: Yare Valley Urban Fringe



LT F: Valley Urban Fringe - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Sense of enclosure</p> <ul style="list-style-type: none"> • A sense of containment. • Wide, fairly flat floodplain with enclosing valley sides. • Trees and woodland also contribute to enclosure in places. 	<p>Medium</p> <ul style="list-style-type: none"> • Semi-enclosed landscape with medium susceptibility.
<p>Landform</p> <ul style="list-style-type: none"> • Wide, fairly flat floodplain with enclosing valley sides. • The sides of the valley are fairly steep in places. 	<p>Medium</p> <ul style="list-style-type: none"> • Valley sides are considered to be sensitive to the disruption which would be caused by the installation of an underground cable route on account of their complexity and potential visibility. Effects on landform would be temporary, so the susceptibility is assessed as Medium.
<p>Landcover</p> <ul style="list-style-type: none"> • Large river flanked by characteristic wetland vegetation, including reeds and fringing alder/willow woodland. Mixed woodlands and shelterbelts occur on the valley sides creating a well-wooded appearance. • Glacial gravel deposits, which have been and continue to be exploited resulting in remnant flooded gravel workings along the valley floor. • Natural character. Nature reserves such as Whitlingham Marsh. The river itself is a chalk river. • Presence of recreational landscapes including the country park at Whitlingham and playing fields at UEA. • Inaccessible valley floor with relatively few river crossings. 	<p>Medium-High</p> <ul style="list-style-type: none"> • The valley features an assemblage of meadows, open water, marsh and riparian woodland. A diversity of natural landcover elements increases susceptibility to development, including underground cable routes. • Landcover is particularly sensitive to underground cable routes due to the physical disturbance of the trenches. A cable route could be more disruptive ecologically than overhead lines where there are sensitive habitats.

LT F: Valley Urban Fringe - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
	<p>Medium-High</p> <ul style="list-style-type: none"> • Small-scale fields are considered to have higher sensitivity. Enclosure by dikes potentially complicates the installation of an underground cable route. • Important hedgerows (where they are present) would require special construction techniques such as Horizontal Directional Drilling.
<p>Visual characteristics</p> <ul style="list-style-type: none"> • Views are variable with open and enclosed views within the valley with large institutional buildings occasionally visible. • Views across the valley towards the City of Norwich. Valley performs an important visual function in creating a setting to the city. • Some enclosure from valley sides and vegetation. 	<p>Medium-Low</p> <ul style="list-style-type: none"> • Although landscape can be reinstated there is still some susceptibility to the disturbance which would be caused during the installation of an underground cable route.

LT F: Valley Urban Fringe - susceptibility to underground cable routes

Overall susceptibility	Underground cable routes
<p>LCA F1: Yare Valley Urban Fringe</p>	<p>Medium-High</p> <ul style="list-style-type: none"> • The existing human influence tends to suggest lower susceptibility, however there are likely to be important riparian habitats which are sensitive to this form of development. • Trees within the cable route are likely to be lost and this potentially leaves a long-term effect on the landscape. • A linked series of priority habitats extends along the valley and the susceptibility to this form of development is therefore assessed as Medium-High.

LT G: Fringe Farmland

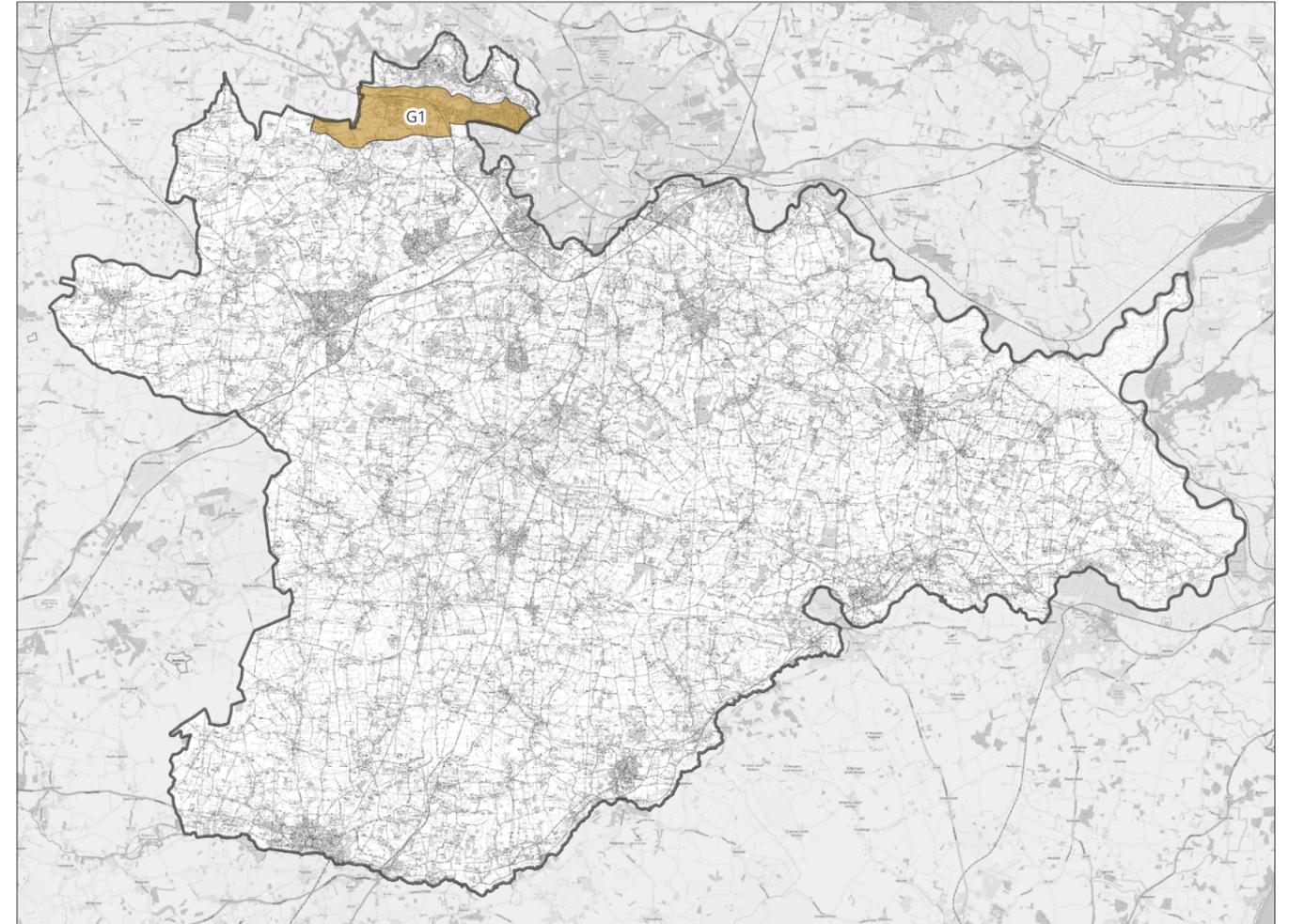
Fringe Farmland is located in one area, found to the west of Norwich, occupying a broad linear strip adjacent to the Norwich Southern Bypass. The boundary of this area is distinguished by the woodlands at the periphery of the Tud valley to the north of the area and the rural river valley of the Yare Rural River Valley to the south. It is defined as a distinctive landscape as a result of its relatively developed character and eroded farmland context.

Key characteristics

- Gentle ridge of land marking the dividing line between two valley landscapes and creating an impression of exposure along the ridgeline;
- History of mineral extraction, particularly sand and gravel workings, resulting in scarred and reclaimed areas.
- Use of the area for urban fringe uses including a park and ride scheme (under construction), retail warehouses, a golf course and the Royal Norfolk Showground.
- Significant level of settlement including the Norwich suburb of New Costessey and the smaller linear settlement of Easton.
- Rural farmland origins and context including both arable and pastoral farmland and retaining a peaceful rural quality.
- Absence of large wooded areas.
- Norwich Southern Bypass is a major feature of the area.

There is one Landscape Character Area within this type:

- G1: Easton Fringe Farmland



LT G: Fringe Farmland - susceptibility to underground cable routes

Landscape attribute	Underground cable routes
<p>Sense of enclosure</p> <ul style="list-style-type: none"> This landscape can feel exposed in places as a consequence of the elevated ridge topography and relatively low-level of woodland. 	<p>Medium</p> <ul style="list-style-type: none"> The degree of openness and enclosure varies. A cable route could cause considerable temporary disturbance on the exposed ridge.
<p>Landform</p> <ul style="list-style-type: none"> Gentle ridge of land marking the dividing line between two valley landscapes and creating an impression of exposure along the ridgeline. Undulating landscape with a distinct ridge top. 	<p>Medium</p> <ul style="list-style-type: none"> The ridge is considered to be sensitive to the disruption which would be caused by the installation of an underground cable route. Effects on landform would be temporary, so the susceptibility is assessed as Medium.
<p>Landcover</p> <ul style="list-style-type: none"> Defined predominantly by farmland with urban and urban fringe development. A degraded farmland context. History of mineral extraction, particularly sand and gravel workings, resulting in scarred and reclaimed areas. Urban fringe uses including a park and ride scheme, retail warehouses, a golf course and the Royal Norfolk Showground. Rural farmland origins and context including both arable and pastoral farmland and retaining a peaceful rural quality. 	<p>Varies</p> <ul style="list-style-type: none"> More developed areas including the urban fringe have a lower sensitivity. The more rural parts of the area have moderate sensitivity.

LT G: Fringe Farmland - susceptibility to Underground cable routes

Landscape attribute	Underground cable routes
<p>Field pattern</p> <ul style="list-style-type: none"> Field pattern is obscured by land use change across part of the area. More rural parts of the area show a mix of regular and irregular field patterns which relates to the history of enclosure. 	<p>Medium</p> <ul style="list-style-type: none"> Mix of irregular and regular enclosures. Medium to small-scale fields.
<p>Visual characteristics</p> <ul style="list-style-type: none"> There are views from the ridge into the adjacent valley landscapes of the Tud and the valley of the rural Yare with its flooded gravel workings. The ridge is a locally prominent feature of the landscape and is visible from the valleys of the Yare and Tud and the surrounding tributary valley landscape. 	<p>Medium-Low</p> <ul style="list-style-type: none"> Although the landscape can be reinstated there is some sensitivity to the disturbance which would be caused during installation.

LT G: Fringe Farmland - susceptibility to Underground cable routes

Overall susceptibility	Underground cable routes
<p>LCA G1: Easton Fringe Farmland</p>	<p>Low</p> <ul style="list-style-type: none"> The key characteristics of the Easton Fringe Farmland are less sensitive to underground cable routes than to other forms of development. The ridge topography would increase visibility during the installation phase, however this would be a temporary effect. It is assumed that effects on important hedgerows or habitats could be avoided through careful design. Susceptibility is therefore assessed as Low.