

Milton Keynes Council

Milton Keynes Landscape Character Assessment

Final report

Prepared by LUC

May 2022



Milton Keynes Council

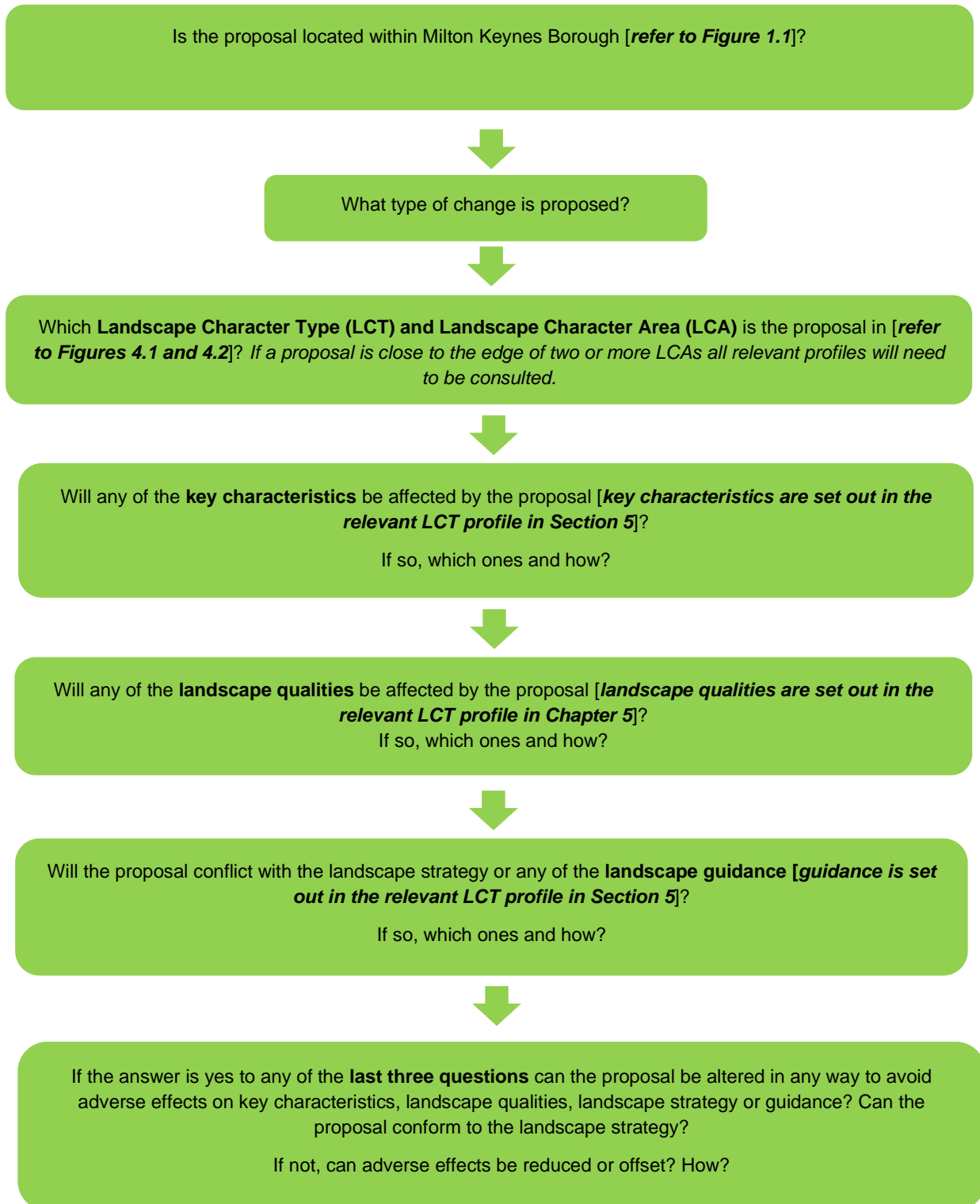
Milton Keynes Landscape Character Assessment

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User Guide



Chapter 1

Introduction and Landscape Context

Background and purpose

1.1 LUC was commissioned in 2021 by Milton Keynes Council (MKC) to prepare a Landscape Character Assessment (LCA) for the rural areas within Milton Keynes Borough (**Figure 1.1**). This study updates the 2016 Milton Keynes Landscape Character Assessment produced by Gillespies.

1.2 This comprehensive and up to date borough scale landscape evidence base will inform the production of the Local Plan and provide a framework for more detailed landscape studies.

1.3 The Milton Keynes Landscape Character Assessment is also intended to inform work on policy development and development management, guiding development and landscape change that is sympathetic to local character and the qualities of the landscape. It can help inform locational policies for strategic development as well as appropriate design and mitigation, providing baseline evidence for more detailed Landscape and Visual Impact Assessment (LVIA).

1.4 Wider application of the LCA includes land management, notably implementation of agri-environment schemes (the new Environmental Land Management Scheme – ELMS), and land use change to achieve net zero.

1.5 In summary, the document can be used to consider landscape character when considering any type of change. This includes opportunities for conserving existing character, strengthening, and enhancing character as well as opportunities to create new character.

1.6 A user guide is provided in at the beginning of the document, and a glossary of terms in **Appendix A**.

The role of Landscape Character Assessment

1.7 Landscape character is defined as:

'...a distinct and recognisable pattern of elements or of characteristics in the landscape that make one landscape different from another, rather than better or worse'¹.

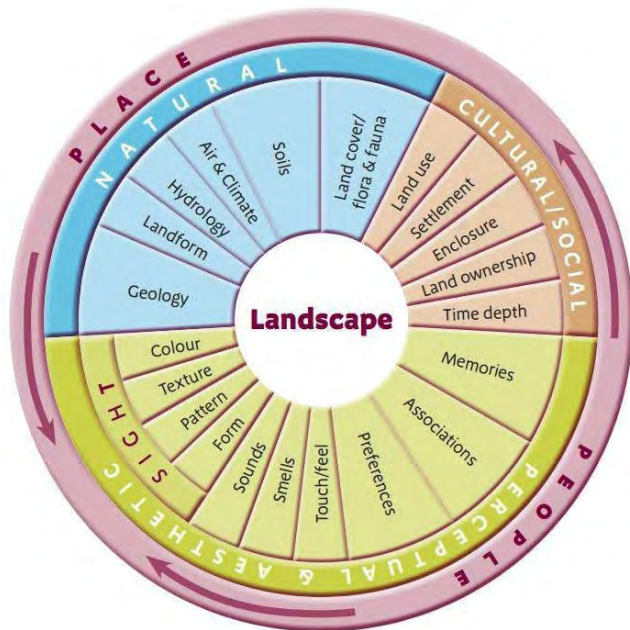
¹ Natural England (2014), An Approach to Landscape Character Assessment
<https://assets.publishing.service.gov.uk/government/uploads/system/u>

[loads/attachment_data/file/691184/landscape-character-assessment.pdf](https://assets.publishing.service.gov.uk/government/uploads/attachment_data/file/691184/landscape-character-assessment.pdf)

1.8 Landscape character assessment is the process of identifying and describing such variations in character across a landscape. It seeks to identify and explain the unique combination of features and attributes (characteristics) that make different landscapes distinctive. The landscape is the result of the interaction between people and place which gives an area a local identity. The ‘landscape wheel’ below illustrates how the different natural, cultural, and perceptual attributes of a landscape combine to produce character.

1.9 The process of Landscape Character Assessment is described in “*An Approach to Landscape Character Assessment*” (Natural England, October 2014).

1.10 Understanding the character of place and evaluating an area’s defining characteristics is a key component in managing growth sustainably and ensuring that the inherent character and qualities of Milton Keynes’ landscape can continue to be appreciated. Understanding of character can be used to ensure that any change or development does not undermine whatever is valued or characteristic in a particular landscape and help guide positive change that conserves, enhances, restores, or creates local character.



The ‘landscape wheel’ (Natural England, 2014)

Relationship to published landscape studies

1.11 Landscape Character Assessment can be undertaken at a variety of scales and levels of detail. The Milton Keynes LCA

is part of a hierarchy of landscape character assessment information cascading from the national to local level.

National level

1.12 At a national level, England is divided into 159 distinct National Character Areas (NCAs). Each is defined by a unique combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity. There are descriptive profiles available for each NCA (published in 2014 by Natural England ²) setting out information on landscape character, changes in the landscape and an assessment of ecosystem services delivered.

1.13 Milton Keynes Borough is part of three NCAs:

- NCA 88 Bedfordshire and Cambridgeshire Claylands: a broad, gently undulating lowland plateau dissected by shallow river valleys.
- NCA 90 Bedfordshire Greensand Ridge: a narrow distinctive ridge rising from the Bedfordshire and Cambridgeshire Claylands, formed by the underlying sandstone geology.
- NCA 91 Yardley-Whittlewood Ridge: a low and gently undulating limestone plateau

1.14 NCAs within and surrounding the borough are illustrated on **Figure 1.2**.

Local level

1.15 Landscape does not stop at administrative boundaries but continues seamlessly into surrounding districts. This assessment therefore sits alongside the Landscape Character Assessments of the adjacent authorities including:

- Aylesbury Vale LCA (now within Buckinghamshire Unitary Authority)
- Bedfordshire LCA (covering the adjacent districts of Bedford and Central Bedfordshire)
- Northamptonshire LCA (covering the adjacent unitary authorities of West and North Northamptonshire).

Policy context

The European Landscape Convention

1.16 The European Landscape Convention (ELC) came into force in the UK in March 2007. It establishes the need to recognise landscape in law; to develop landscape policies dedicated to the protection, management and planning of landscapes; and to establish procedures for the participation

² <https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles>

of the general public and other stakeholders in the creation and implementation of landscape policies. The ELC definition of 'landscape' recognises that all landscapes matter, be they ordinary, degraded, or outstanding:

"Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors"

1.17 The ELC puts emphasis on the whole landscape and all its values and is forward looking in its approach, recognising the dynamic and changing character of landscape. Specific measures promoted by the ELC of direct relevance to this study include:

- The identification and assessment of landscape; and
- Improved consideration of landscape in existing and future sectoral and spatial policy and regulation.

1.18 This updated Landscape Character Assessment will continue to make a key contribution to the implementation of the ELC in Milton Keynes. It helps to reaffirm the importance of landscape, coordinate existing work and guide future work to protect, manage and plan the landscape.

National Planning Policy Framework

1.19 The revised NPPF, published in July 2021, states in paragraph 174 that:

'Planning policies and decisions should contribute to and enhance the natural and local environment by: ...protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality)' (para 174.a)

...recognising the intrinsic character and beauty of the countryside and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland ...' (para 174.b).

1.20 Paragraph 185 states that new development should be appropriate for its location, and should:

'identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; (para 185.b)

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation' (para 185.c).

1.21 The NPPF is supported by Planning Practice Guidance which recognises the role that Landscape Character Assessment plays in helping to understand the character and local distinctiveness of the landscape. This assessment for Milton Keynes Borough provides evidence to help protect

valued landscapes and recognise the intrinsic value and beauty of the countryside.

Local policy context

1.22 Plan:MK 2016-2031 was adopted in March 2019 and sets out the council's strategy for meeting the needs of the borough up to 2031. A number of policies within Plan:MK are relevant to landscape character:

- **Policy DS5 Open Countryside** states that development within the open countryside should be wholly appropriate to the rural area, that the scale and visual impact of extensions or ancillary structures should not have a detrimental impact on the open countryside, and that replacement dwellings should protect the character of the countryside.
- **Policy DS6 Linear Parks** states that the linear parks within the borough should protect and improve the landscape, protect and enhance features of nature conservation value, retain and improve public access to land and water for recreation, consider flood control, minimise adverse impacts on local residents, and protect and interpret areas of archaeological interest.
- **Policy NE4 Green Infrastructure (GI)** states that GI across the borough will be protected, extended and enhanced for its biodiversity, recreational, accessibility, health and landscape value, and the contribution it makes towards combating climate change.
- **Policy NE5 Conserving and enhancing landscape character** states that development in the open countryside will need to respect the character of the surrounding landscape, and that the locally distinctive natural and manmade features that contribute towards landscape character, the historic setting and structure of villages and hamlets, important views and tranquillity and the need to protect against intrusion
- **Policy NE6 Environmental Pollution – Noise and Vibration** states that proposals that would have an adverse effect on the tranquillity and enjoyment of the countryside may be refused if this is very disruptive, and unless other benefits of the development outweigh the harm, and all possible mitigation has been implemented.
- **Policy NE6 Environmental Pollution – Lighting** states that development proposals will be approved if: There would be no unacceptable adverse impact on the character and beauty, openness, tranquillity, dark landscapes or enjoyment of the night sky of the countryside.
- **Policy SC3 Low carbon and renewable energy generation** states that proposals for low carbon and

renewable energy sources will be granted permission unless there would be unacceptable landscape and visual impact on the landscape, including cumulative impacts. Solar farms should avoid unacceptable visual impact from glint and glare on the landscape, and proposals for large-scale renewable energy in the open countryside should be informed by a satisfactory LVIA.

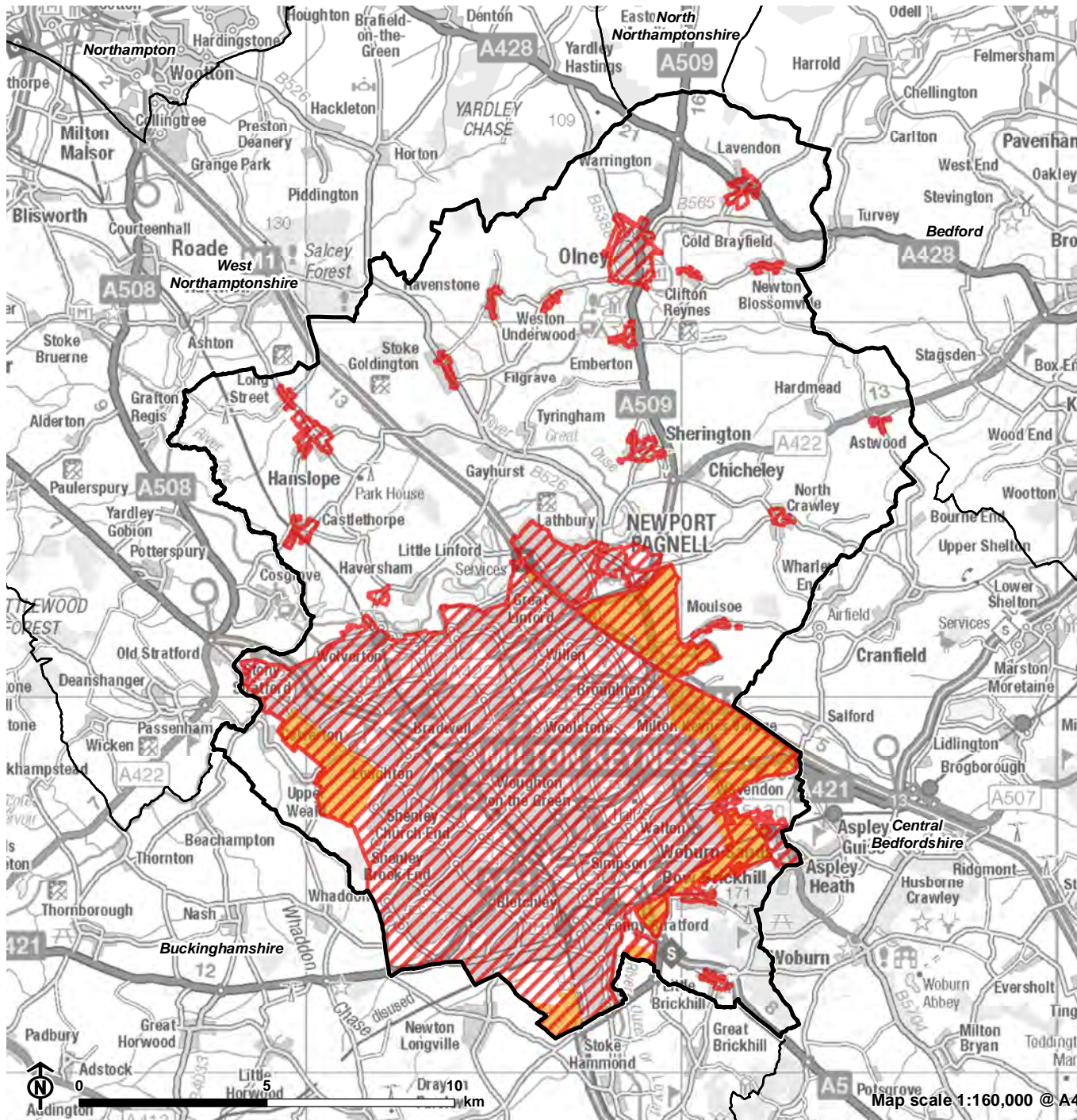






Figure 1.1: Borough location, adjacent districts and settlement boundaries

-  Milton Keynes Borough
-  Neighbouring local authority
-  Settlement boundary
-  Strategic site allocation

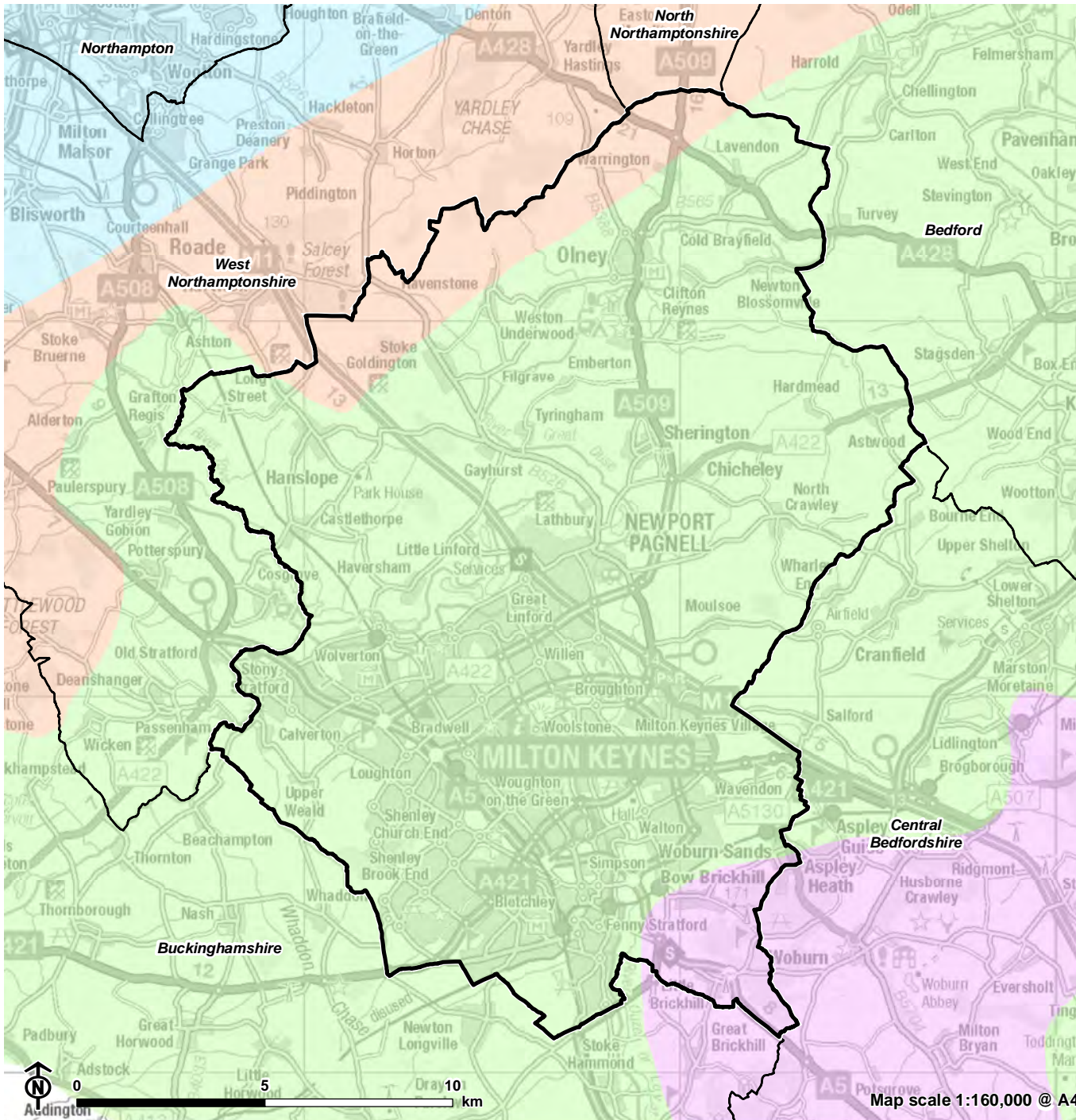








Figure 1.2: National Character Areas

-  Milton Keynes Borough
-  Neighbouring local authority
- National Character Area**
-  Bedfordshire Greensand Ridge
-  Bedfordshire and Cambridgeshire Clayland
-  Northamptonshire Vale
-  Yardley-Whittlewood Ridge

Chapter 2

Methodology

Approach

2.1 The LCA follows the method promoted by Natural England through 'An Approach to Landscape Character Assessment' (2014), which embeds the principles of the European Landscape Convention (ELC) within it.

Process of Assessment

2.2 The process for undertaking the study involved the four main stages described below:

- Review and baseline data collation of a wide range of up-to-date mapped information.
- Desk-based characterisation to 'sense-check' the existing landscape classifications and to update the baseline. Designations relating to cultural heritage, nature conservation and landscape were checked for any changes since the original LCA.
- Field survey to refine boundaries, check/identify characteristics, collect aesthetic/perceptual information, take photographs and observe forces for change
- Submitting a draft for client review followed by a final report

2.3 Data used within the report, including data collated in the GIS database is shown in **Table 2.1**.

Table 2.1: GIS Data

Name	Source
Base OS mapping at 1:25k and 1:50k	Ordnance Survey
Terrain 50 Contour data	Ordnance Survey
Linear features, mass movement, artificial ground, superficial deposits, and bedrock geology at 1:50k	British Geological Survey
Administrative boundaries	MKC
National Character Areas	Natural England

Name	Source
Existing Milton Keynes Landscape Character Assessment (Gillespies, 2016)	MKC
Milton Keynes Green Infrastructure Strategy	MKC
Green Infrastructure Opportunities Mapping	Buckinghamshire and Milton Keynes Local Nature Partnership
Landscape Character Assessments for neighbouring authorities	Aylesbury Vale (now in Buckinghamshire Council), Bedfordshire, Northamptonshire
Public Rights of Way and access land	Natural England
River features and flood zones	Environment Agency
Nature conservation designations	Natural England (national datasets) and MKC (local datasets)
Priority habitats	Natural England and MKC
Biological Opportunity areas	MKC
Forestry	Forestry Commission
Historic Landscape Characterisation dataset	MKC, Historic England
Heritage designations	Historic England and MKC
Dark skies and tranquillity	CPRE
Infrastructure	Ordnance Survey
Local Plan designations and policy areas	MKC

- Physical and natural characteristics - geology, soils, landform, hydrology, semi-natural habitats
- Historic and cultural characteristics - landuse, field pattern, historic landscape character, settlement pattern infrastructure, and recreational landuse
- Visual and perceptual characteristics - visual character, tranquillity, dark night skies, scenic quality, and cultural associations

2.5 Each LCT also contains an evaluative section, which highlights:

- Valued landscape qualities – the most important attributes of the landscape that are fundamental to character (and therefore most sensitive to change).
- Forces for change – a summary of changes impacting the landscape, particularly housing and commercial development, rail and road infrastructure, renewables, land use changes as a result of climate change, and biodiversity loss (impacts as well as responses such as tree planting and habitat creation). These cross reference relevant LCAs to highlight geographically specific issues
- Overall landscape strategy and management guidance – clear landscape and development management guidance setting out how change can be managed to reinforce and strengthen landscape character.

2.6 Maps of each LCA and information specific to each individual area is provided.

Outputs

2.4 The Landscape Character Assessment is presented by Landscape Character Type (LCT). Each LCT profile contains:

- Location and summary – a map of the LCT and component LCAs with a short narrative describing location and defining character
- Illustrative photographs
- Key characteristics - covering relevant natural, cultural and perceptual features

Chapter 3

Formative Influences

This chapter summaries the main physical and cultural influences that have shaped the landscape of Milton Keynes Borough

3.1 The detailed description of different LCTs, that appear later in this report, highlight the key characteristics (both positive and negative) and valued attributes that are of most significance to the particular landscape.

3.2 The landscape of the borough has evolved through the interaction of the natural environment and human activities, through the combination of physical and cultural influences. Physical influences such as geology and landform together with the pattern of settlement and land use are key determinants of landscape character.

Physical influences

3.3 The physical components of the landscape have the most tangible and fundamental influences upon its character, being the most permanent and least changeable aspect of its appearance. The underlying geology creates the 'backbone' of the landscape. The actions of weathering, erosion and deposition alter the landform, consequently influencing hydrological patterns and affecting the nature of soil conditions. This affects how humans have used and continue to exploit the landscape for agriculture, settlement, and industry and, consequently, influences the nature of the vegetation and fauna that the landscape can support.

Geology and Soils

3.4 **Figure 3.1** illustrates the solid, or bedrock, geology that underlies the borough. **Figure 3.2** shows the drift (or superficial) geology formed in the last 2.6 million during the Quaternary period, which overlies the bedrock in places.

3.5 The landscape of the borough is dominated by undulating claylands incised by the shallow river valleys of the Great Ouse and Ouzel. On the fringes of the borough are two contrasting landscape types, a steep greensand ridge to the south east and a wooded limestone plateau to the north.

3.6 Much of the borough is characterised by undulating clay landscapes underlain by the Kellaways formation and Oxford Clay formation. These mudstone, siltstone, and sandstones were formed in the Jurassic Period (156 to 165 million years ago) in shallow seas. These are overlain by superficial deposits of Till diamicton which were deposited by ice sheets, formed up to 2 million years ago when the local environment was dominated by ice age conditions. Soils are recorded as lime-rich loamy and clayey soils with slightly impeded drainage. These fertile soils support arable cropping with some pasture.

3.7 In the north of the borough, the underlying bedrock changes to limestone, including the Great Oolite Group (sandstone, limestone and argillaceous rocks) which were formed in the Jurassic period 165 to 168 million years ago in shallow carbonate seas and the Lias group (mudstone, siltstone, limestone and sandstone) which were laid down 172 to 204 million years ago in the Jurassic and Triassic periods, in shallow seas. The fertile soils are free draining lime-rich loamy soils which support arable cropping.

3.8 Superficial deposits of alluvium and sands and gravels are found along the river corridors of the Ouse and Ouzel, and smaller tributaries which support loamey and clayey floodplain soils with naturally high water levels. The river valleys to the north and east of Milton Keynes city support slightly acid loamy clayey soils with impeded drainage.

3.9 To the south east of the borough, the wooded hills above Bow Brickhill are underlain by the Lower Greensand Group – sandstone and mudstones formed 100 to 125 million years ago in the Cretaceous period in shallow seas, which supports free draining slightly acid sandy soils with low fertility.

Landform and Drainage

3.10 Figure 3.3 illustrates the landform and watercourses of Milton Keynes Borough. The landform is characterised by gently undulating landscapes incised by the shallow river valleys of the Ouse and Ouzel and their tributaries. The Tove River valley runs along the western boundary.

3.11 As greensand begins to dominate the bedrock in the south of the borough, the landform rises sharply to a ridge running in an east-west direction. Along the northern boundary, and to the east the landform rises to plateaux which extend beyond the borough boundary, while the south of the borough around Milton Keynes is generally flatter.

Agricultural Land Use

3.12 Figure 3.4 illustrates the quality of agricultural land, known as agricultural land classification. Land use within the borough reflects the topography and soil types.

3.13 The loamy and clayey soils across much of the borough are dominated by arable cultivation, particularly on the plateaux. Pasture is more common in the river valleys. This agricultural land is generally classified by DEFRA as a mix of Grade 2 and 3.

3.14 The valley floor of the Ouse comprises a number of important flood meadows which still support traditional grazing however in many areas the ground is cultivated up to the river.

Natural Habitats

3.15 Woodland covers 7.5% of the borough, which is low compared to neighbouring authorities, and to the national average of 13%. However, larger woodland blocks are concentrated on the poorer soils of the limestone plateau to the north (LCT 1 Wooded Wolds) and the greensand ridge to the south east (LCT 6 Wooded Greensand Ridge). These areas support both conifer and native broadleaved woodlands (recorded as priority habitats), with a high proportion of ancient woodland, some of which are designated as Local Wildlife Sites. Woodland in the Wooded Wolds (LCT 1) is partially included within the Yardley Chase SSSI, designated for mixed woodlands, pasture and parkland and connects to the Salcey Forest SSSI which lies adjacent to the borough boundary. These woodlands are a distinctive landscape feature on the elevated landscapes on the edge of the borough.

3.16 Hedgerows and hedgerow trees extend across the rural areas of the borough, although the ash that is the dominant species is now susceptible to Ash Dieback.

3.17 The borough is not well served in terms of biodiversity with 0.2% of the land in Milton Keynes Borough designated as SSSI, versus the national average of 7.7%. There are three SSSI in the borough (Yardley Chase, Oxley Mead and Howe Park Wood), although only Yardley Chase is within the rural area of Milton Keynes. Pockets of priority habitats are scattered throughout the borough, including unimproved grassland and semi-natural deciduous woodland.

3.18 The Ouse Valley includes a number of restored and active mineral extraction sites many of which have been restored for wildlife and recreational uses and are designated locally as Local Wildlife Sites as well as having recreational value.

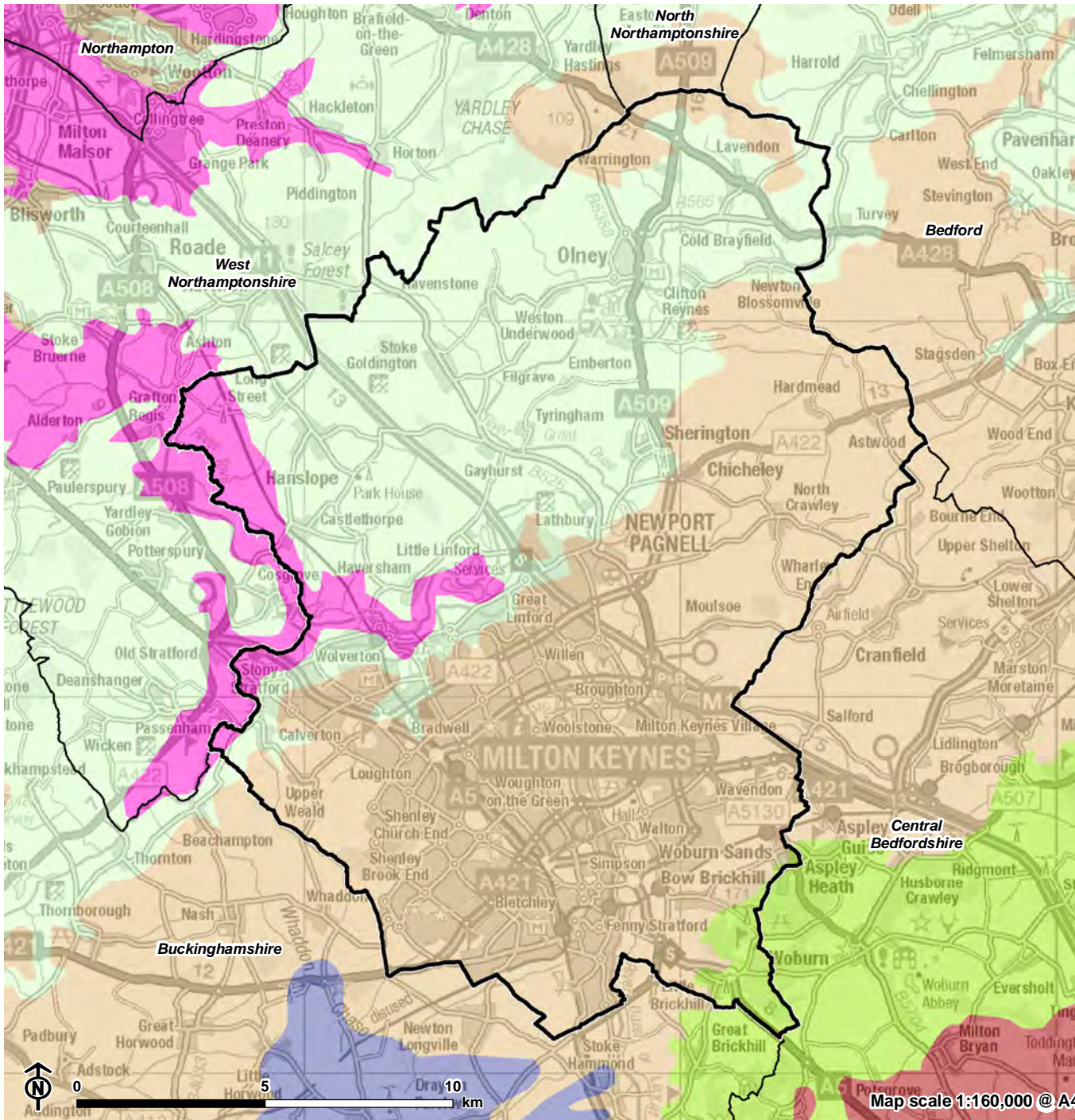
3.19 Priority habitat floodplain grazing marsh is recorded at Goosey Bridge and Lathbury in the floodplain of the River Ouse, and there are areas of good quality semi-improved grassland at Newport Pagnell and Olney both in the floodplain and on the valley sides.

3.20 Biological Opportunity Areas (BOAs) are broad areas that contain the most important areas for biodiversity in the borough, and include the Greensand Ridge, Ouse Valley,

Whaddon Chase, Yardley Chase, and Ouzel Valley. There are a total of 16 Local Wildlife Sites, and a number of Wildlife Corridors are designed to interact and connect to form a network of interconnecting habitats to serve both people and wildlife.

3.21 Figure 3.5 illustrates the nature conservation designations across the borough, and **Figure 3.6** illustrates woodland cover.

Figure 3.1: Bedrock geology



▭ Milton Keynes Borough

▭ Neighbouring local authority

Bedrock class

█ Gault Formation and Upper Greensand Formation (undifferentiated)

█ Great Oolite Group

█ Inferior Oolite Group

█ Kellaways Formation and Oxford Clay Formation (undifferentiated)

█ Lias Group

█ Lower Greensand Group

█ West Walton Formation, Amphill Clay Formation and Kimmeridge Clay Formation (undifferentiated)

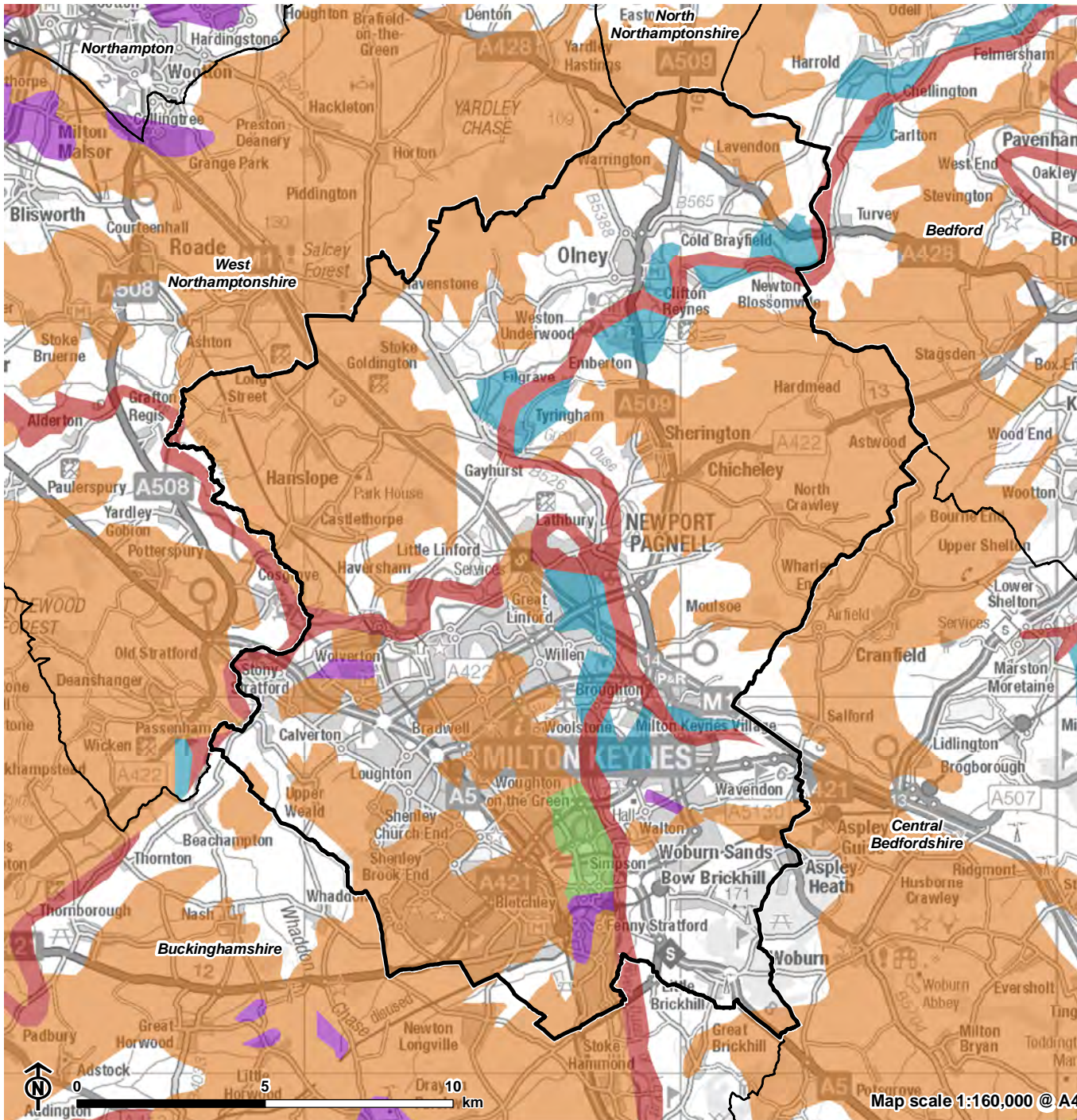
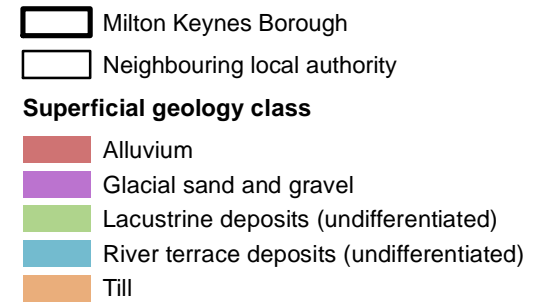


Figure 3.2: Superficial geology



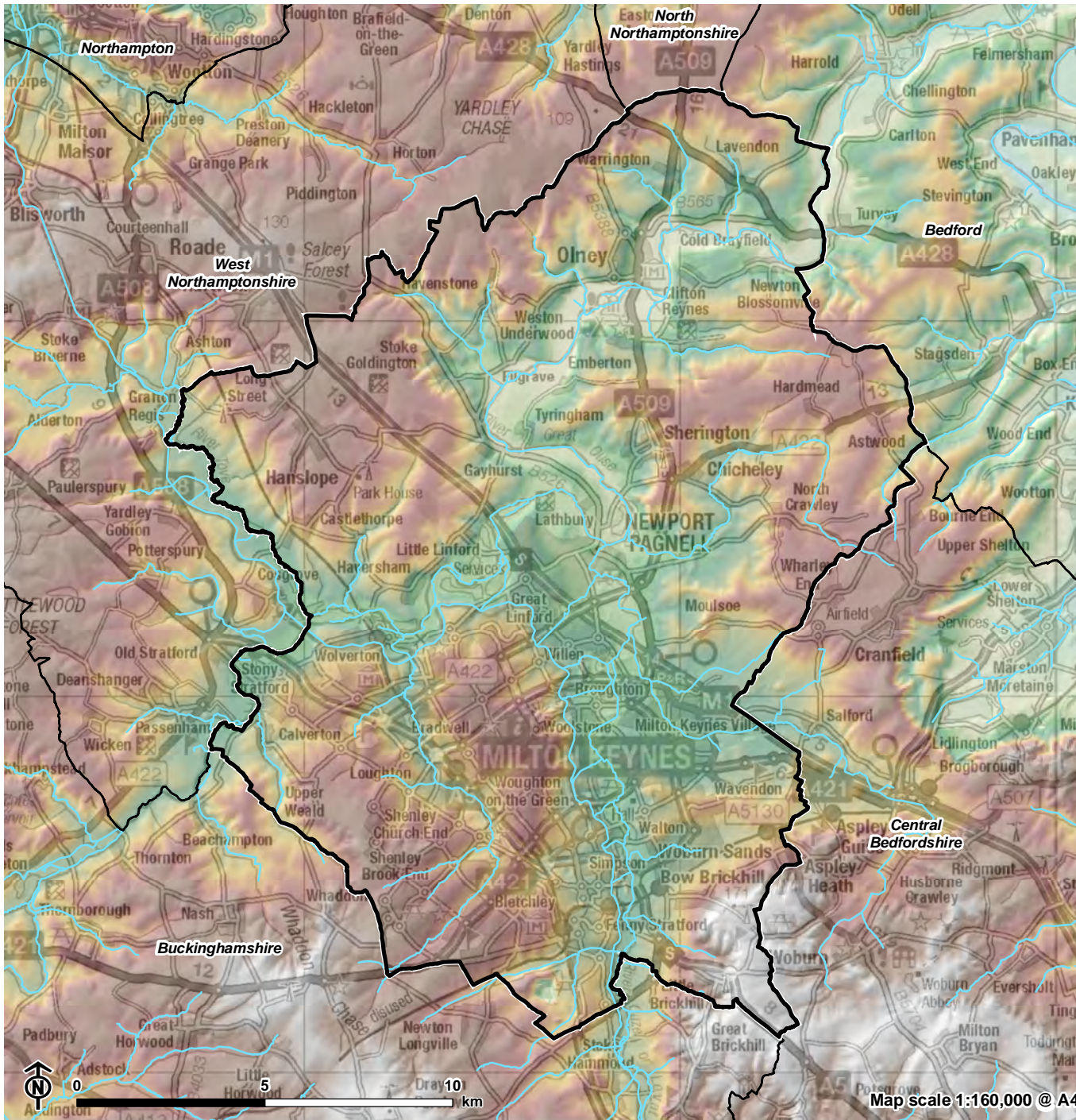



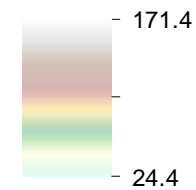


Figure 3.3: Topography and watercourses

-  Milton Keynes Borough
-  Neighbouring local authority
-  Watercourse

Elevation (metres AOD)



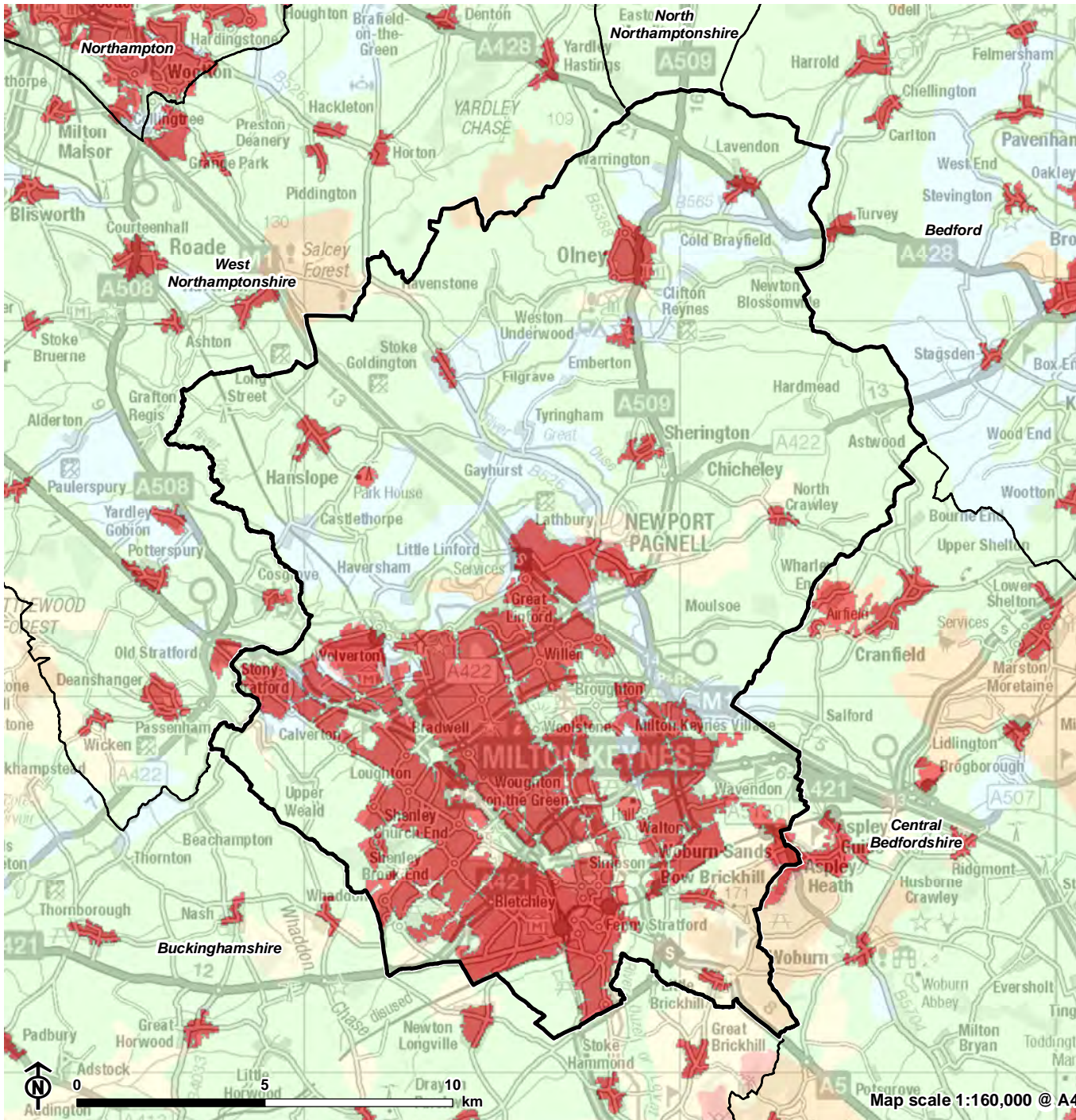
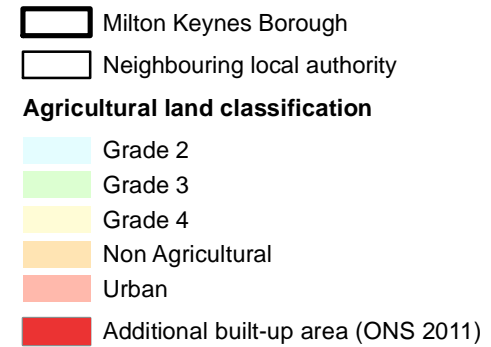


Figure 3.4: Agricultural Land Classification



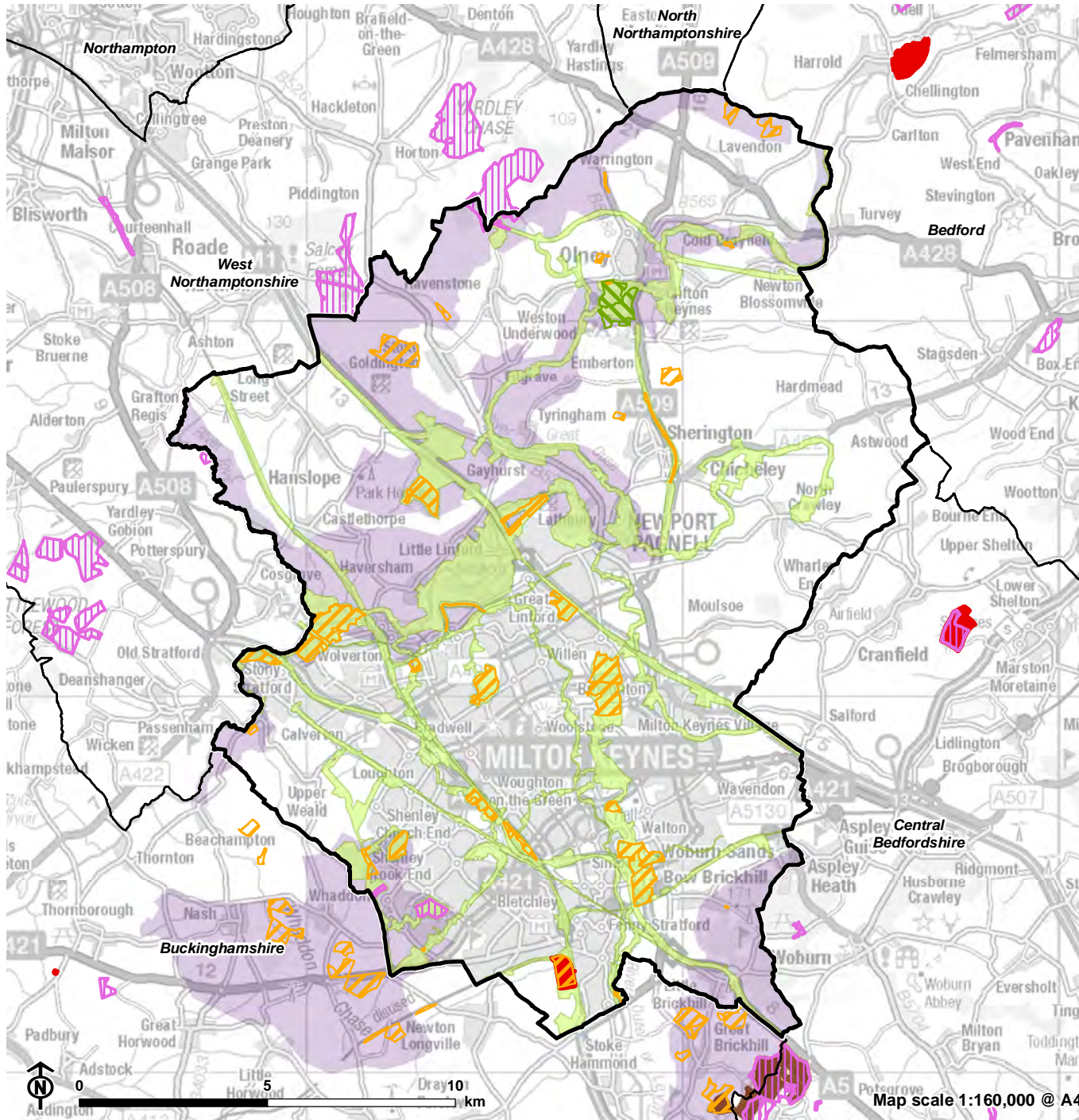


Figure 3.5: Nature conservation designations

-  Milton Keynes Borough
-  Neighbouring local authority
-  Local Wildlife Site
-  Wildlife corridor
-  Country park
-  Site of Special Scientific Interest (SSSI)
-  National Nature Reserve (NNR)
-  Local Nature Reserve (LNR)
-  Biological Opportunity Area (BOA)

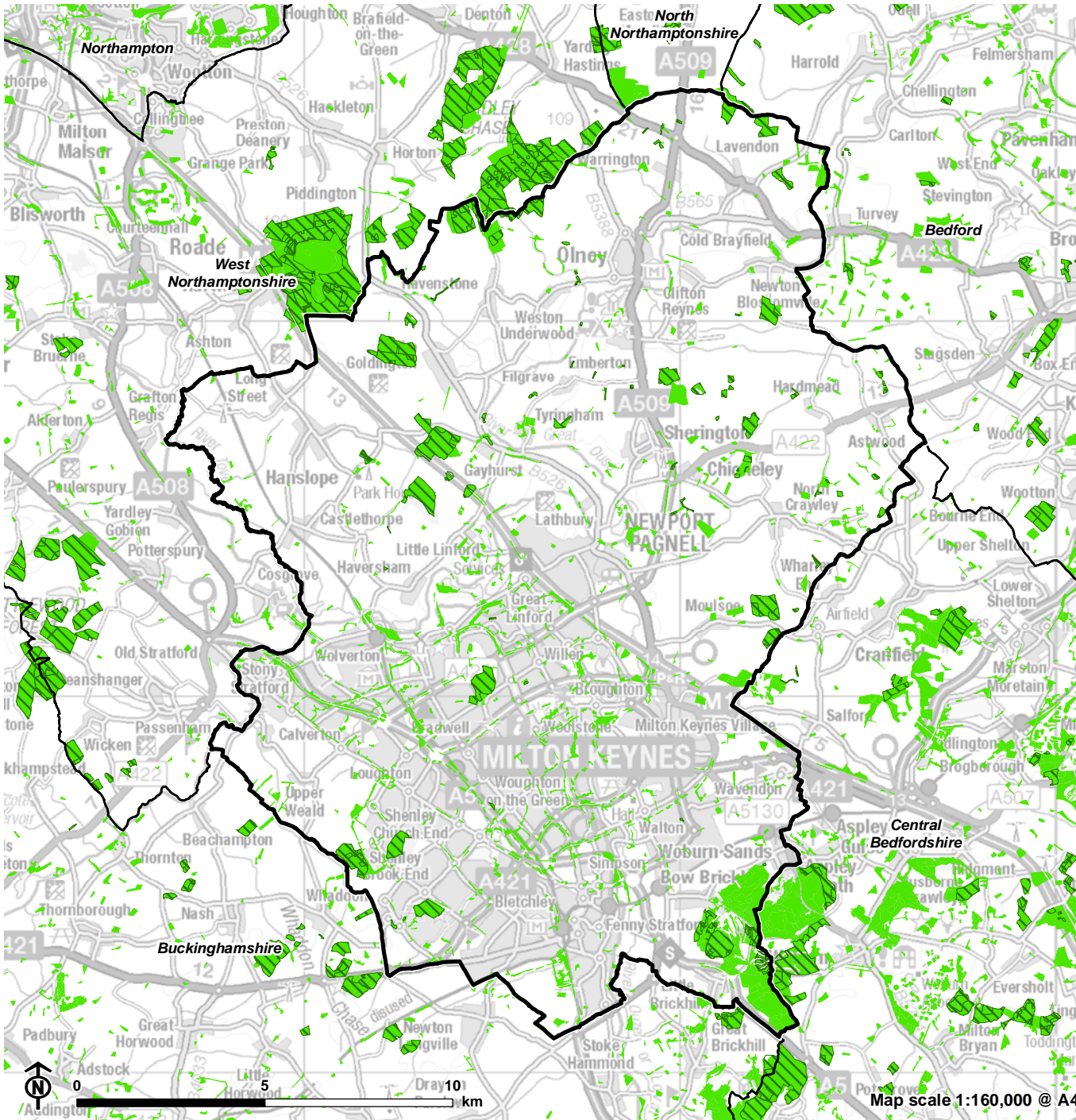






Figure 3.6: Woodland

-  Milton Keynes Borough
-  Neighbouring local authority
-  Ancient woodland
-  National Forest Inventory (NFI)

Cultural influences

3.22 Figure 3.7 illustrates the heritage designations in Milton Keynes Borough. The borough contains a number of archaeological sites, monument and historic assets that reflect a long history of human settlement. These assets, many of which are statutorily designated, play a large part in defining the character of the landscape and the individuality of particular settlements.

3.23 There are over 1100 listed buildings in Milton Keynes Borough ranging from medieval churches to a 20th century red telephone box. The borough has 27 Conservation Areas, most based around historic town and village centres³. There are 49 Scheduled Monuments covering prehistoric to modern periods, and five Historic Parks and Gardens.

3.24 Archaeological excavations have uncovered burial sites dating from 2000-1500 BCE, mainly in the valleys of the Ouse and Ouzel and their tributaries, which are testament to the early human settlement of the area. Bronze Age barrows are recorded at Newport Pagnell, Wolverton and Castlethorpe. The Milton Keynes Hoard, found in 2000, contained one of the biggest concentrations of Bronze Age gold known in Great Britain, dated to 1150-800 BCE.

3.25 Under Roman occupation the area thrived, mainly due to the major Roman road that runs through the area, later known as Watling Street, the main route between London and Chester. The buried archaeological remains of the small Roman town of Magiovinium on the route of Watling Street near Little Brickhill, provides evidence of the Roman occupation of the area. Remains of several Romano-British villas have also been found in the Ouse Valley, and may have been built on the sites of Iron Age occupation. Most Romano-British sites were abandoned at the end of the Roman occupation of Britain by the fifth century and were not cleared again until the Anglo-Saxon settlement in the sixth century. The placenames of Bletchley ('Blaeca's clearing') and the Shenleys ('Bright clearing') date from this period.

3.26 The Domesday Book of 1086 provides evidence of the long history of many of the villages in the borough, and the name of the local Norman lord 'de Cayennes' or Keynes became associated with the area. The woodlands to the north of the borough, that extend across the borough boundary into West Northamptonshire and North Northamptonshire, formed part of the medieval hunting forests or 'chases' and are still recognisable as such today.

3.27 By the middle of the 13th century the area that was later to become the borough of Milton Keynes was amalgamated as an administrative area as part of the 'three hundreds of Newport'. Market towns established at river crossings along

the Ouse and Ouzel, including Olney, Newport Pagnell, Stony Stratford and Fenny Stratford, with the latter two also located along Watling Street. Other villages grew up in more remote locations around religious houses, such as Ravenstone or North Crawley, around defensive structures, such as the impressive earthwork motte and bailey castle at Castlethorpe (designated as a Scheduled Monument) or in association with the medieval hunting forests to the north of the borough, such as Hanslope. The borough contains a number of medieval moated sites, constructed primarily between 1250 and 1350, which provide an understanding of the distribution of wealth and status in the local countryside. These sites consist of wide water-filled ditches, partly or completely enclosing islands of dry ground on which may have stood domestic or religious buildings, and many are designated as Scheduled Monuments. There are also a number of medieval 'deserted' villages, also designated as Scheduled Monuments, such as Old Wolverton and Filgrave.

3.28 Buckinghamshire & Milton Keynes Historic Landscape Characterisation (2006) provides an overview of historic changes in landcover and field pattern. Although there are many areas that are dominated by larger modern field patterns, older field patterns can still be found, particularly in the more rural areas to the north, most of which are irregular pre 18th century fields or more regular Parliamentary enclosure fields. Despite the impact of mineral extraction there is still a ribbon of historic meadowland along the River Ouse.

3.29 The borough contains a number of historic parklands, including those at Tyringham Hall (Grade II* Registered Park and Garden) and Gayhurst Court (Grade II Registered Park and Garden), which lie adjacent to each other in the undulating valley of the River Ouse, and were laid out by Humphry Repton in the 18th century.

3.30 Passing trade on the major roads which crossed the area provided a boost to the economy of the area, with Watling Street becoming the first paved turnpike to be approved by Parliament in 1706. Villages such as Little Brickhill, Loughton and Stoke Goldington grew up as staging posts along Watling Street, and other turnpike roads and many retain their historic coaching inns today. The Grand Union Canal was built between 1793 and 1800 and stimulated trade along the length of the canal, including brickworks at Great Linford and Fenny Stratford. This trend was continued with the introduction of the London and Birmingham railway in the 1838. Small villages on the route of the railway grew rapidly, including Bletchley, while new planned railway towns were built in New Bradwell and Wolverton to serve the large railway works at Wolverton. Other towns grew after the east-west Varsity railway was built in 1846, including Woburn Sands which was promoted as an

³ NB At the time of writing the Conservation Areas are under review.

inland resort, and Bletchley, where large brickworks were established at Newton Longville. The rail links between Bletchley, centres of learning at Cambridge and Oxford and the government in London later led to the establishment of the wartime Government Code and Cypher School at Bletchley Park.

3.31 The range of building materials found within the area reflects the natural geology, making an important contribution to local architectural character and sense of place. Warm coloured limestone buildings characterise the Ouse Valley, while the distinctive local greensand is used in older buildings on the Brickhills. On the upland plateaus east of the River Ouse, local building materials comprise red brick and some timber frame. Many of the more prominent buildings in the borough are built from imported stone, such as the churches at Olney and Gayhurst and fine houses such as Tyringham.

3.32 The modern settlement pattern is dominated by Milton Keynes city. In 1967 the government designated 9,000 hectares for the development of a new town, with the aim of being self-contained from neighbouring towns. Milton Keynes has grown into a regionally important settlement, with projections for its continued expansion. It was awarded city status in 2022, to mark the Queen's Platinum Jubilee. Less than 15% of the population live in the rural areas of the borough, although they are used heavily for recreation. Built industrial development is concentrated around Milton Keynes city, particularly in proximity to the M1 and the West Coast Main Line.

Perceptual landscape

3.33 The urban areas of the borough together with major infrastructure developments including the M1 and other principal roads, have had a major influence on local landscape character.

3.34 Away from the urban settlement edge of Milton Keynes city and main roads, many parts of the borough, particularly along the main river valleys and wooded wolds in the north, have a rural character, and some level of tranquillity. However, noise from road and rail infrastructure is present to some degree throughout the borough. This is illustrated on **Figure 3.8**.

3.35 The levels of light pollution and dark night skies within the borough are illustrated on **Figure 3.9**. Light pollution decreases with distance from Milton Keynes city, however there are pockets of dark night skies free from interference from artificial light, typically in the north of the borough.

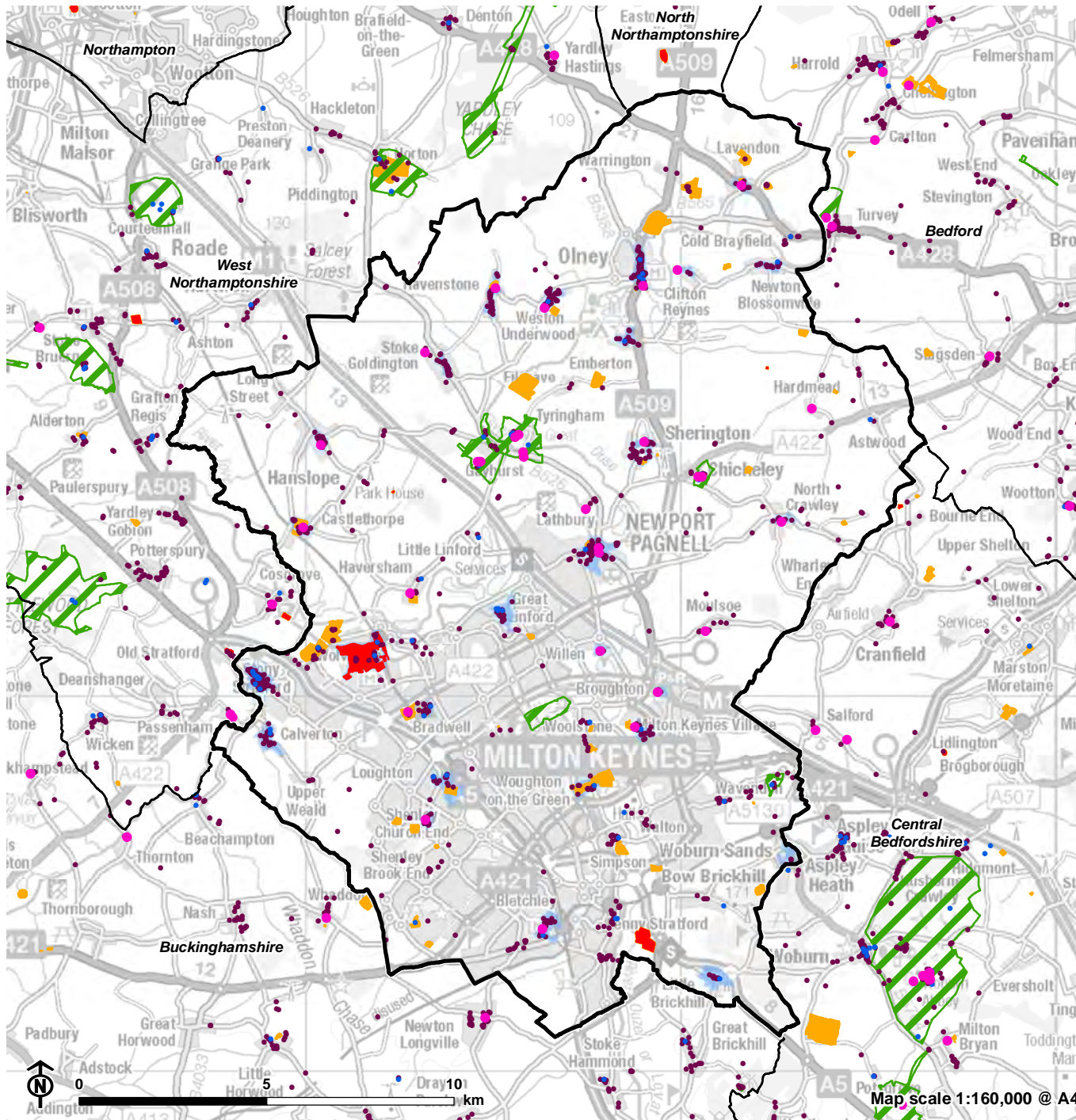


Figure 3.7: Cultural heritage designations

- Milton Keynes Borough
- Neighbouring local authority
- Registered park and gardens
- Heritage at risk
- Scheduled monument
- Conservation area
- Listed building**
 - Grade I
 - Grade II*
 - Grade II

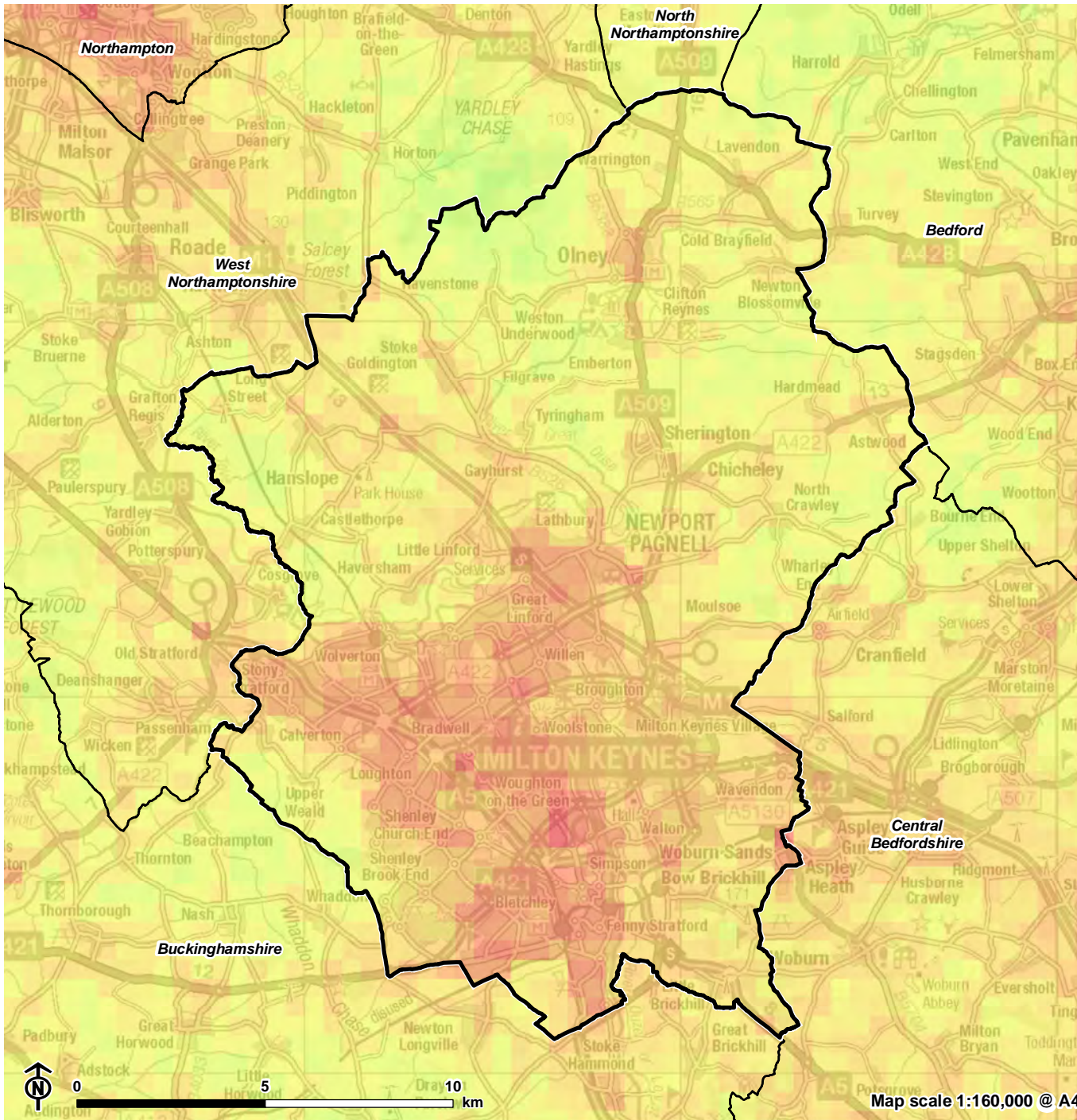


Figure 3.8: Tranquility

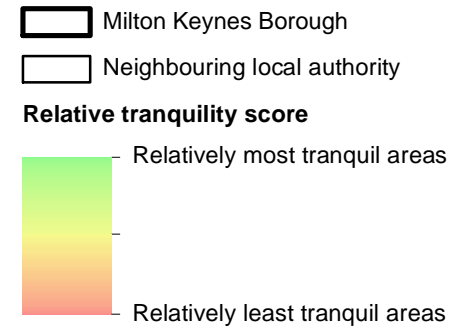
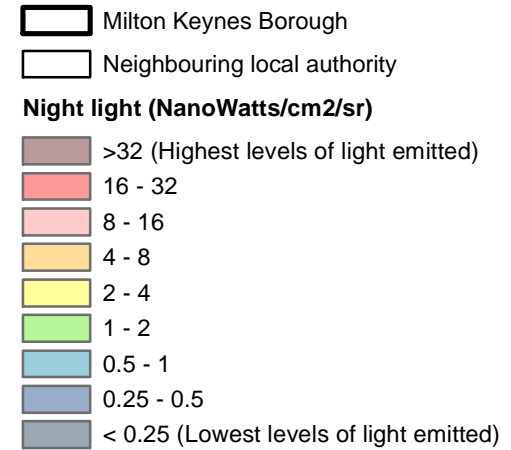
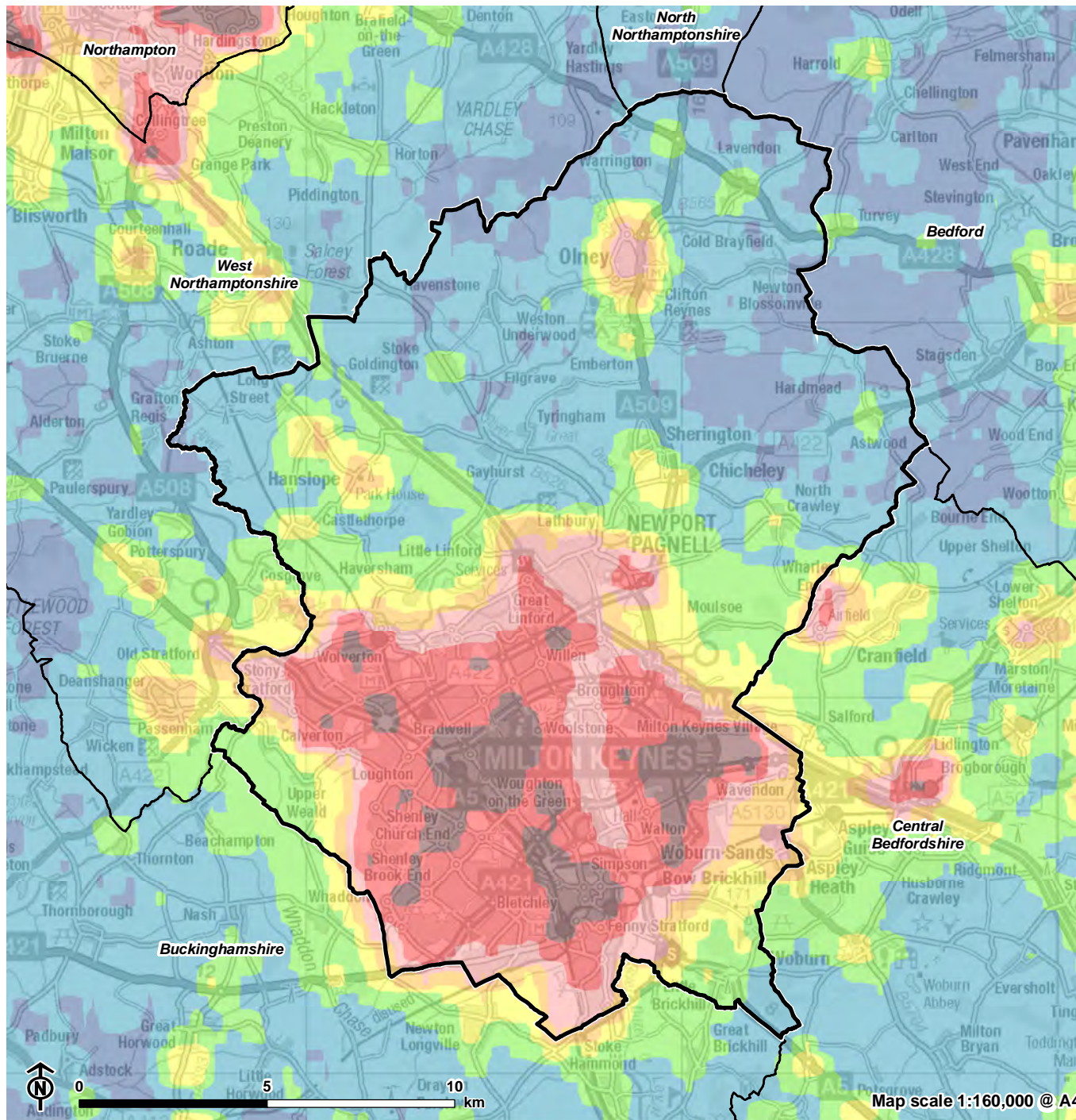


Figure 3.9: Dark skies



Chapter 4

Landscape Character of Milton Keynes

Landscape character types and areas

4.1 The updated landscape classification identifies six generic landscape character types (LCTs), each representing a distinct identity and common geology, topography, land use and cultural pattern. These are shown on **Figure 4.1**.

4.2 The LCTs are subdivided into local landscape character areas (LCAs), which are discrete geographic areas that possess the characteristics described for the landscape type but have a recognisable local identity. The revised classification identifies 14 LCAs. These are listed in **Table 4.1** below and shown on **Figure 4.2**.

4.3 It is important to note that boundaries between one LCT or LCA and the next are transitional and there is rarely a clear-cut change 'on the ground'.

4.4 This assessment has been mapped at a scale of 1:25,000 which provides an appropriate level of detail for the landscape character assessment at the strategic borough scale. In considering any change in one character area the impact on views to/ from and the character of neighbouring areas should also be considered.

Table 4.1: Landscape Character Types and Areas

LCT 1: Wooded Wolds	
1a	Yardley Chase Wooded Wolds
1b	Gayhurst and Stokepark Wooded Wolds
LCT 2: Undulating Valley Slopes	
2a	Ouse Northern Undulating Valley Slopes
2b	Ouse Southern Undulating Valley Slopes
2c	Tove Undulating Valley Slopes
LCT 3: River Floodplains	
3a	Tove Floodplains
3b	Ouse Floodplains
3c	Ouse Lakes and Parkland Floodplains
3d	Ouzel Parkland Floodplains

LCT 4: Undulating Clay Plateaux	
4a	North Crawley Undulating Clay Plateau
4b	Weald Undulating Clay Plateau
LCT 5: Clay Vales	
5a	Lower Ouzel Clay Vale
5b	Upper Ouzel Clay Vale
LCT 6: Wooded Greensand Ridge	
6a	Brickhill Wooded Greensand Ridge

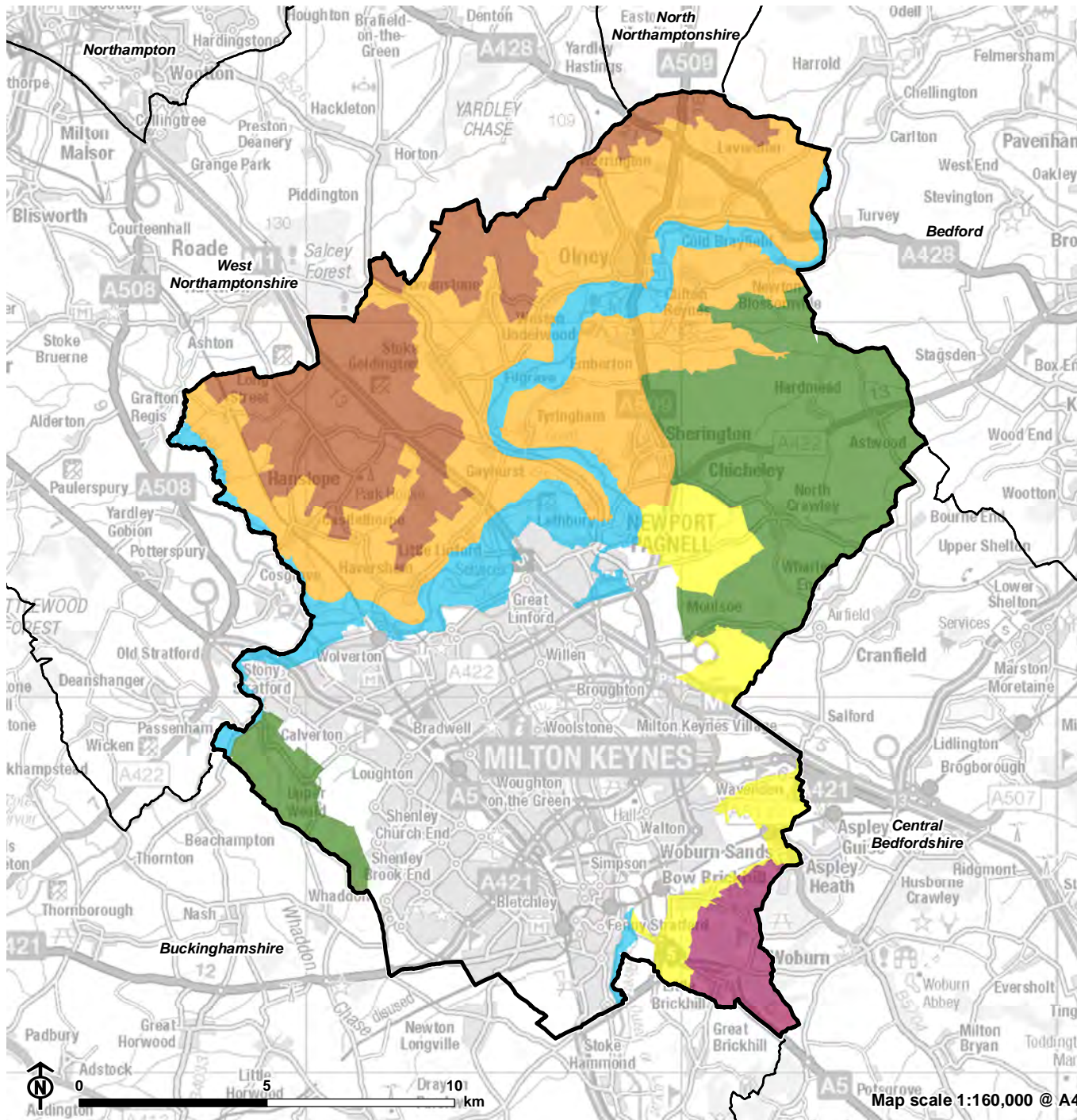










Figure 4.1: Landscape Character Types

-  Milton Keynes Borough
 -  Neighbouring local authority
- Landscape Character Type**
-  1. Wooded Wolds
 -  2. Undulating Valley Slopes
 -  3. River Floodplains
 -  4. Undulating Clay Plateaux
 -  5. Clay Vales
 -  6. Wooded Greensand Ridge

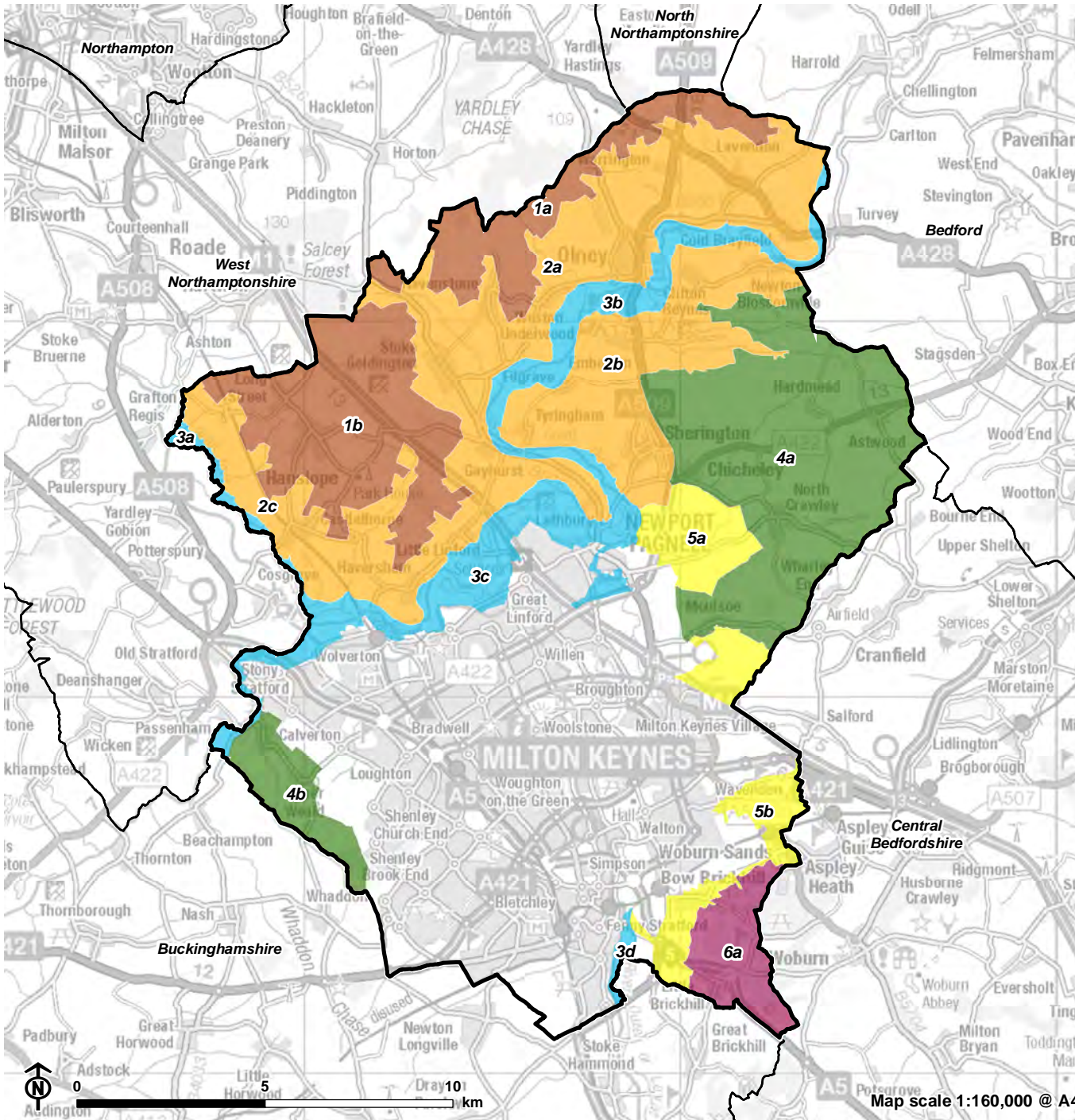


Figure 4.2: Landscape Character Areas

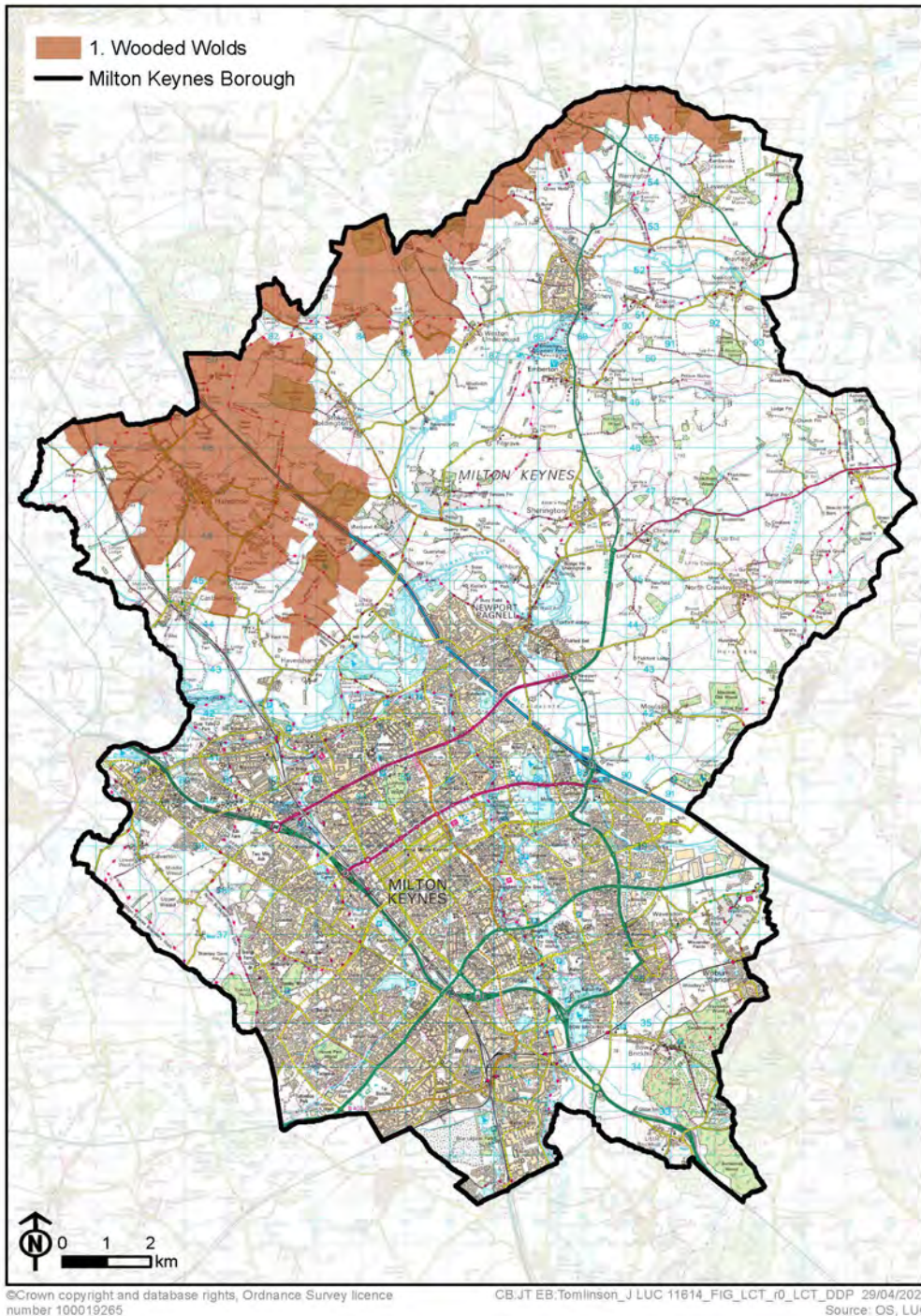
-  Milton Keynes Borough
-  Neighbouring local authority
- Landscape Character Area (by type)**
-  1. Wooded Wolds
 - 1a. Yardley Chase Wooded Wolds
 - 1b. Gayhurst and Stokepark Wooded Wolds
-  2. Undulating Valley Slopes
 - 2a. Ouse Northern Undulating Valley Slopes
 - 2b. Ouse Southern Undulating Valley Slopes
 - 2c. Tove Undulating Valley Slopes
-  3. River Floodplains
 - 3a. Tove Floodplains
 - 3b. Ouse Floodplains
 - 3c. Ouse Lakes and Parkland Floodplains
 - 3d. Ouzel Parkland Floodplains
-  4. Undulating Clay Plateaux
 - 4a. North Crawley Undulating Clay Plateau
 - 4b. Weald Undulating Clay Plateau
-  5. Clay Vales
 - 5a. Lower Ouzel Clay Vale
 - 5b. Upper Ouzel Clay Vale
-  6. Wooded Greensand Ridge
 - 6a. Brickhill Wooded Greensand Ridge

A photograph of a long, straight path lined with tall, thin trees, likely poplars, stretching into the distance. The trees are bare, suggesting a late autumn or winter setting. The path is paved and has a person walking away from the camera in the distance, wearing a bright green jacket. The sky is clear and blue. The overall scene is a classic example of a tree-lined avenue.

Milton Keynes Landscape Character Profiles

Chapter 5
Milton Keynes Landscape
Character Profiles

LCT 1: Wooded Wolds



Landscape Character Areas

The Wooded Wolds LCT is subdivided into two LCAs:

- 1a Yardley Chase Wooded Wolds
- 1b Gayhurst and Stokepark Wooded Wolds

Location and summary

The Wooded Wolds LCT comprises an open plateau located in the north and north west of the borough. The northern boundaries are defined by the borough boundaries with West Northamptonshire, North Northamptonshire and Bedford. The southern and western boundaries are defined by the 90m contour line as the landscape falls to the valley sides of the Ouse and Tove (LCT 2 Undulating Valley Slopes).

The gently undulating plateau landscape is predominantly in arable use, with large woodland blocks which are linked to more extensive woodlands in West Northamptonshire. It retains its rural character and has limited settlement, although is crossed by large road corridors. The elevated landscape provides open views to the south, while woodland in West Northamptonshire provides a strong wooded backdrop to the north.



A gently undulating plateau landscape of ancient woodland and arable fields, interrupted by the M1 major transport corridor.

Key Characteristics

- Gently undulating plateau landscape, between 90m and 120m AOD forming part of a wider plateau to the north. A limestone bedrock with considerable till deposits, gives rise to soils with a high clay content.
- Small streams and springs, which drain into the Ouse and Tove, create topographic interest.
- Large to medium scale broadleaved or mixed woodland blocks, including many ancient or ancient replanted woodlands, The Yardley Chase SSSI extends into this LCA, and contains broadleaved, mixed and yew woodland.
- Medium to large arable fields bound by clipped hedges and occasional mature trees with smaller-scale fields and areas of pasture located closer to the settlements.
- A sparsely settled rural landscape crossed by minor roads, although the M1 is locally dominant and audible across the LCT.
- Public Rights of Way cross the landscape, connecting to settlements in the Undulating Valley Slopes (LCT 2) and the wider countryside.
- An open expansive landscape with long panoramic views over valleys to the south, east and west.
- The scenic and distinctive woodland backdrop that the LCT provides to adjacent landscape.
- A rural landscape, with limited modern influences, and some areas of inaccessible land.

Physical and natural characteristics

5.1 A simple, gently undulating plateau on the edge of a much larger and more prominent plateau running south-east to north-east, that continues over the borough boundary into West and North Northamptonshire. The plateau lies between 90m and 120m AOD, with localised steeper slopes around streams and springs. The streams and springs have their source close to the edge of the LCT, and flow into the River Great Ouse to the south and east and the River Tove to the west. Ponds and small agricultural reservoirs are common throughout.

5.2 The geology is dominated by Jurassic Oolitic limestone, with the east of LCA 1a Yardley Chase Wooded Wolds underlain by Kellaways Formation and Oxford Clay Formation mudstones and sandstones. The underlying geology has formed the distinctive plateau present today. Limestone is more porous than some of the surrounding geology, resulting in aquifers under parts of the ridgeline. Glacial activity subsequently eroded and smoothed out the original limestone and left behind substantial, irregular deposits of boulder clay (till). This results in variable soils, mostly with a high clay content, which are slowly permeable and subject to seasonal waterlogging, with a higher calcareous content on some of the slopes. These soils have resulted in land graded in the ALC as 3 (moderate-good) with areas of 4 (poor).

5.3 As a result of the relatively poor soils and plateau topography there has been less woodland clearance in the Wooded Wolds LCT than elsewhere in the borough and woodland cover is an important characteristic of the landscape. The woods are mainly priority habitat deciduous woodlands of ancient origin, for example Great Wood, Little

Linford Wood, Gayhurst Wood and Stokepark Wood. There are a number of replanted ancient woodlands, such as The Grove, Longland's Wood and Great Wood, which contain mixed broadleaved and conifer trees. The woodlands link with the more extensive woods of Yardley Chase and Salcey Forest in West Northamptonshire, which are designated as a Site of Special Scientific Interest (SSSI) for their woodland habitats. The Yardley Chase Biological Opportunity Area extends across much of the LCT.



Woodland blocks at Hanslope Park with Gayhurst Wood and Little Linford Wood in the distance.

Historic and cultural characteristics

5.4 The LCT was part of the extensive Yardley Chase and Salcey Forest medieval hunting forests or 'chases', a series of lands across England designated by the Normans. Strict forest

laws were imposed to protect the land for royal hunting. Royal forests were never fully wooded, but contained woodland, pasture and parkland. This landscape pattern is retained within Yardley Chase (predominately in West Northamptonshire). Hanslope Park (LCA 1b) was originally a deer park within the Royal Forest of Salcey, with formal parkland and grounds laid out in the 18th century. The parkland character has been retained.



Hedgerow-lined arable fields with the landmark spire of St James the Great, Hanslope.

5.5 The landscape pattern of remnant woodlands and irregular field boundaries is a result of assarting, the conversion of areas of woodland to agricultural fields that took place before the 18th century. Pre-18th century enclosure fields are common across the landscape, and include both irregular and co-axial forms. There are also areas of regular Parliamentary enclosures north of Hanslope, and the LCT has a higher incidence of 19th century enclosure than the rest of the borough. There has also been considerable 20th century field amalgamation, as a result of modern farming techniques, creating large scale fields.

5.6 Land is predominately under arable cultivation. There are smaller areas of pasture near settlements or on the edges of woodland. Field boundaries are generally low, clipped hedgerows with occasional mature hedgerow trees. Hedgerows along the minor roads are in better condition than field hedgerows.

5.7 Settlement is concentrated in LCA 1b, in the historic villages of Long Street and Hanslope, along with dispersed satellite settlements. Isolated farmsteads, which are often Grade II listed buildings, are found across the LCT. Although major roads pass through the landscape, large areas remain inaccessible. LCA 1a has few roads, except for the busy A428 and A509, while LCA 1b is crossed by minor lanes generally lined by low hedgerows. The M1 passes through LCA 1b.

5.8 There is good footpath access through the LCT, including the Milton Keynes Boundary Walk, although there are more connections within LCA 1b between settlements.

Visual and perceptual characteristics

5.9 A rural landscape, accessible only by minor roads, lanes and PRoW. There is a good experience of dark night skies in the north, particularly around Yardley Chase. LCA 1a has a more remote character, due to the more restricted public access and dense wooded horizon to the north.

5.10 Road noise is prevalent throughout the LCT, but concentrated around the M1 which cuts through LCA 1b, resulting in visual intrusion, noise and light pollution. Electricity pylons run through the east of LCA 1a.

5.11 From the elevated plateau there are long panoramic views to the south over the Ouse valley, over Milton Keynes city and to the Greensand Ridge (LCA 6a) to the south. There are also long views across the Tove valley to the west, and north to the wooded clay ridge in West and North Northamptonshire.



Panoramic views across the Ouse valley to the Greensand Ridge from Weston Road.

Landscape evaluation

Landscape qualities

- The ecologically important semi-natural woodlands including extensive areas of ancient woodland and hedgerows that support biodiversity, and provide carbon capture.
- Small streams and springs that support biodiversity and provide nutrient and sediment filtration enhancing water quality.
- The heritage features of the landscape particularly the connection to the Royal hunting forests and historic field patterns that provide a connection to history, cultural identity, and aesthetic value.
- The historic settlement pattern, including the linear village of Hanslope and its satellite 'End' villages, with their high concentration of historic buildings built from local limestone as well as historic farmsteads that provide a connection to history and cultural identity.
- The elevated rural and sometimes remote character of the landscape, with a strong sense of openness that contributes to mental well-being and health.
- The pattern of hedged fields, woodland areas and panoramic long views across the neighbouring valley landscapes that contribute to a distinctive sense of place.
- The scenic and distinctive wooded backdrop that the LCT provides to adjacent landscapes.
- The network of PRoW, including the Milton Keynes Boundary Walk, that connect to the wider countryside and settlements, provide recreational value and contribute to well-being and health.

Landscape condition

5.12 The Wooded Wolds LCT is generally in good condition, with intact hedgerow field boundaries and a strong historic field pattern. There has been some modern amalgamation of fields, and some use of post and wire fencing for horse grazing, particularly on the edge of Hanslope. Semi-natural habitats are in good condition, with a mixed age structure, although woodlands are scattered.

Forces for change

5.13 Key forces for change include:

- Potential changes in woodland and tree species composition as a result of climate change. Wind damage due to increases in severe gales could result in damage to woodland edges, and ancient woodlands may be particularly susceptible to damage from storms and drought.
- Previous replacement of broadleaved woodland with conifer and mixed plantations, and use of coniferous species in hedgerows, which are out of keeping with the character of the local landscape.
- The ongoing decline in woodland management including a loss or reduction of traditional coppicing techniques and increasing fragmentation of woodlands.
- Changes in agricultural practices to large-scale arable cropping, with consequent field boundary loss, which has fragmented the landscape pattern.
- Increasing fragmentation of the traditional landscape pattern due to the loss of unimproved grassland and natural field ponds.
- Potential changes in flora and increase in pests and diseases as a result of climate change, with ash die back becoming increasingly apparent in the local landscape.
- Impact of the M1 corridor through LCA 1b, and increasing noise from traffic on major roads surrounding the LCT.
- Increasing pressure for expansion of residential development at Hanslope, and increasing development at Hanslope Park, affecting the rural character of the landscape, increasing traffic and resulting in changes to roads and land uses in the area, as well as levels of tranquillity.
- Recreational pressure on the landscape, including erosion of unsurfaced routes due to increasing use by walkers, horses, bicycles and 4-wheel drive vehicles.
- Potential pressure for further renewable energy infrastructure including wind turbines and solar farms, both within the LCT and seen in views from the LCT e.g. Petsoe Manor wind farm.

Landscape strategy

5.14 The landscape strategy for the Wooded Wolds LCT is to conserve and enhance the rural qualities of the landscape, and enhance the habitat potential and connectivity as part of the wider wooded wolds which extend into West and North Northamptonshire and Bedford.

Guidance

Landscape Management

- Manage and increase the biodiversity of agricultural fields by creating uncultivated margins to arable fields, or converting some arable land to permanent pasture where suitable.
- Monitor water quality in streams, and minimise water pollution from agriculture through sensitive land management practices, including the restoration of buffer strips along watercourses to minimise run off.
- Retain and enhance existing small field ponds for wildlife, and encourage creation of new ponds.
- Manage and protect existing woodlands, using traditional techniques including coppice with standards and wood pasture. Promote extensions and connectivity between woodlands, as set out in the Green Infrastructure Strategy⁴.
- Encourage progressive conversion of conifer plantations within existing woodlands to indigenous native broadleaved tree and shrub species using local provenance stock, particularly in semi natural ancient woodland of Great Wood, Little Linford Wood, Gayhurst Wood and Stokepark Wood.
- Protect and restore boundary hedges by coppicing, laying and gapping up to improve the network of linkages between habitats. Promote the introduction of new hedges following roads, PRoW and historic boundaries. Plant individual hedgerow trees to provide replacement for mature and over mature stock.
- Protect the valued recreational use of the rural landscape through PRoW, exploring opportunities for informal access and enjoyment. Enhance recreational routes through the woodlands, providing connections to neighbouring Yardley Chase and Salcey Forest, as set out in the Green Infrastructure Opportunity Mapping⁵.
- Extend interpretation of the historic heritage of the area including medieval hunting forests.
- Protect and enhance heritage assets within the LCT, including the historic parkland at Hanslope Park.

Development Management

- Conserve the open landscape and avoid the introduction of large-scale elements which would have a visual impact over a wide distance.
- Retain views from the elevated plateau across the wider landscape of the borough, and consider the impact on views from the surrounding landscape in relation to any proposed change.
- Retain views of local landmarks, including Hanslope church spire.
- Conserve the distinctive vernacular of historic buildings and their rural setting, including within Hanslope Conservation Area. Reference the pattern of local building materials and local identity in any new development or boundary treatments.
- Integrate new development at Hanslope and Hanslope Park into the landscape through the use of native hedgerows and woodlands.
- Where built development is considered appropriate, consider the visual relationship with the wooded skyline in West Northamptonshire.
- Ensure any renewable energy generation is compatible with the guidance above, and as set out in the Renewable Energy Landscape Sensitivity Assessment⁶. Renewable energy should be in scale with the landscape where possible, acknowledging that wind turbines may transcend the scale of existing features in the landscape. Electricity infrastructure associated with renewable energy generation should be efficiently planned to minimise the number of lines required, routing in accordance with the Holford Rules⁷.

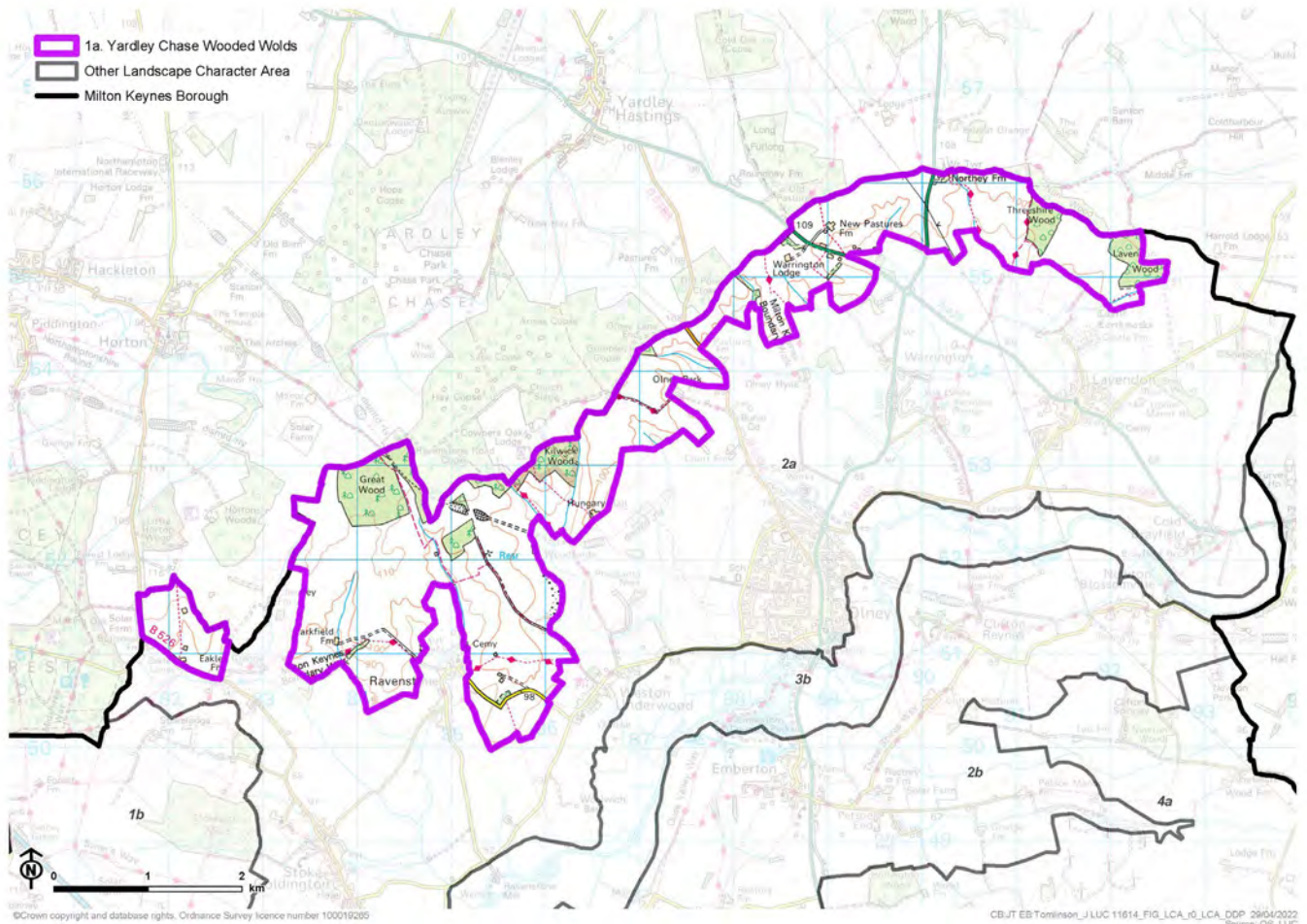
⁴ AECOM, Milton Keynes Green Infrastructure Strategy (2018)

⁵ <https://bucks.mknep.co.uk/wp-content/uploads/2018/10/Green-Infrastructure-Opportunity-Zone-07.pdf>

⁶ Gillespies, Landscape Sensitivity to Wind Turbine and Solar PV Development (2016)

⁷ <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf>

1a Yardley Chase Wooded Wolds



Location and unique characteristics

5.15 Yardley Chase Wooded Wolds is a narrow strip of land on the northern edge of the borough. It forms the foreground to the wooded Yardley Chase and Salcey Forest to the north (within Northamptonshire), and is part of the wooded plateau, with topography ranging from 85m to 110m AOD.

5.16 Woodlands within the LCA link to the extensive woodlands to the north, including Threshire Wood, Kilwick Wood and Great Wood. Barrstaple Wood is part of the extensive Yardley Chase SSSI, which mainly lies in Northamptonshire. Yardley Chase was originally a Norman hunting chase, and is now woodland, pasture and parkland, valued for these habitats which support uncommon invertebrates. The broadleaved, mixed and yew woodland within the SSSI is in recovering condition, and has benefitted from the re-introduction of coppicing.

5.17 The Yardley Chase Biological Opportunity Area covers the majority of the LCA. A disused railway line between Bedford and Northampton runs through the landscape, and is designated as a Wildlife Corridor.

5.18 The majority of the land use is arable with smaller areas of pasture near farmsteads. Hedgerows are in generally good condition, and are often species-rich, with a high proportion of *Viburnum lantana*.

5.19 A varied historic field pattern, areas of assarts, (indicating the previously greater extent of woodland) with pre-18th and 18th century irregular enclosure, and some 20th century prairie fields. Long thin enclosures at New Pastures Farm are enclosed furlongs and strips, an indicator of former open field farming which are very rare in Buckinghamshire.

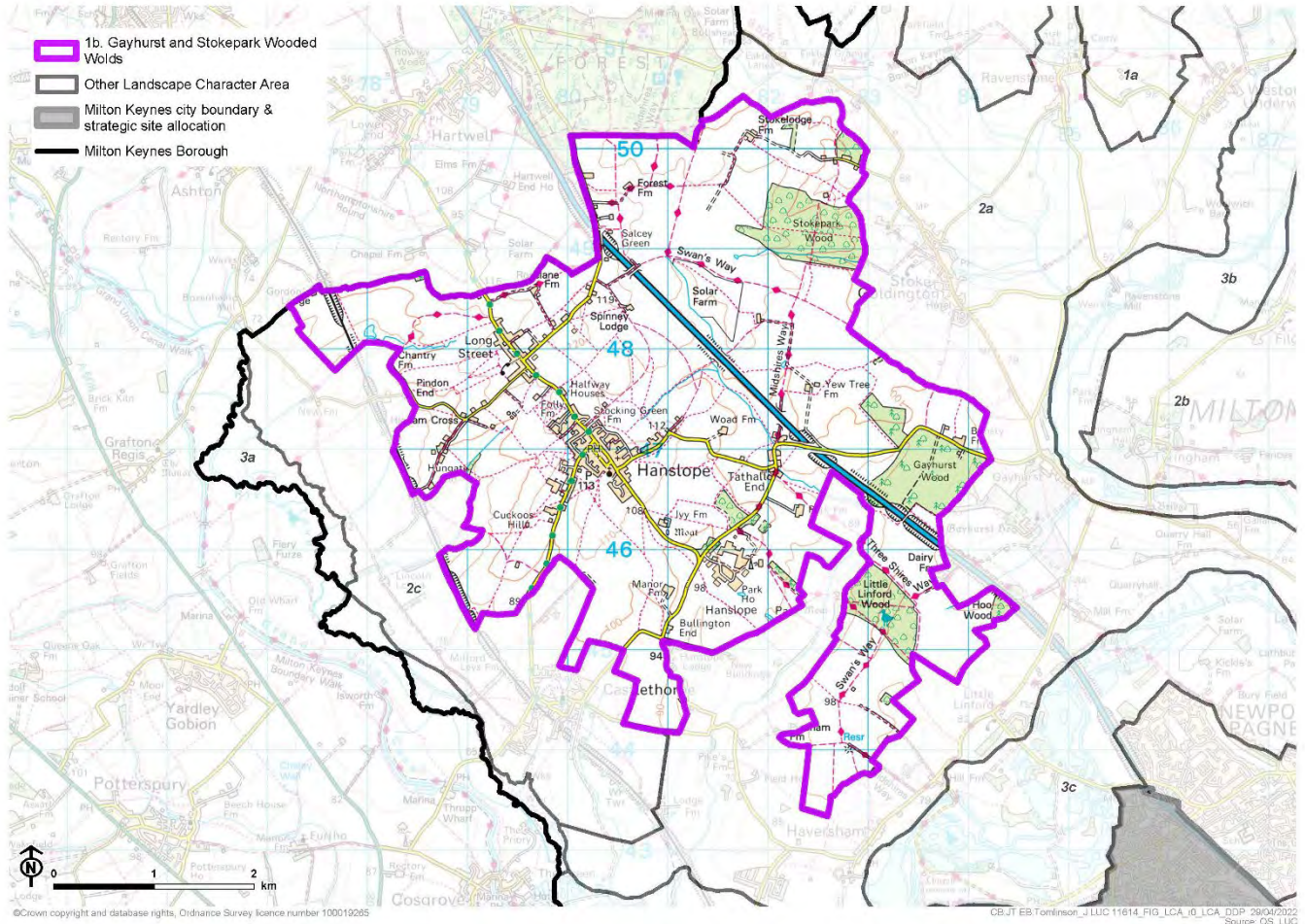
5.20 Settlement is limited to isolated farmsteads, with only Eakley Manor Farm and associated barn designated as listed buildings. There is very limited access by road to the LCA, although the busy A509 and A428 cross through the east of the landscape.

5.21 This is a rural, and at times remote landscape, with dark night skies in the north, especially within the woodlands. There are good PRow links across the landscape, although conversely there are also large areas which have no public access, for example south of Great Wood.

5.22 Modern influences include an electricity pylon route in the east, modern garage at Warrington House, which is out of place in the rural landscape and views to Milton Keynes city to the south. Road noise from the M1 and other major roads reduce the levels of tranquillity throughout the area, despite its rural character.

5.23 Woodlands within the LCA combine with the extensive woodlands in Northamptonshire to form a seemingly continuous wooded horizon when viewed from the surrounding low-lying landscape. The hedgerows also contribute to the wooded character of the landscape. There are extensive panoramic views to the south, east and west from the elevated plateau, over much of the borough. Church spires and towers in adjacent LCTs are visible, including at Weston Underwood, Olney and Lavendon. The Petsoe Manor wind farm is an incongruous modern element in views south-east.

1b Gayhurst and Stokepark Wooded Wolds



Location and unique characteristics

5.24 The Gayhurst and Stokepark Wooded Wolds is a wider and more open undulating landscape than LCA 1a, ranging from 85m above the slopes of the Tove valley to 122m AOD near the border with Northamptonshire.

5.25 Woodlands are larger, but less connected than LCA 1a. Stokepark Wood and Little Linford Wood are designated as LWS for their species-rich ancient woodland. The M1 and mainline railway line Wildlife Corridors extend through the LCA, and the land east of the M1 and at Hanslope Park is part of the Yardley Chase Biological Opportunity Area.

5.26 The majority of the land is in use for arable cropping, with smaller areas of pasture. Hedgerows are variable, with some gapping and reinforcement with post and wire.

5.27 The LCA has a more varied historic field pattern than LCA 1a, with assarts indicating previously more extensive woodland cover, and pre-18th century co-axial enclosure around Long Street and Hanslope. A parkland character

remains at Hanslope Park, which was originally a deer park within the Royal Forest of Salcey. The existing house (Grade II listed) was built in the later 17th century, and the grounds and park laid out in the 18th century, partially advised by Humphrey Repton. The house and park were requisitioned by the government during World War II, and has continued in government ownership, currently occupied by the Foreign and Commonwealth Office.

5.28 Settlement is concentrated at Hanslope and the linked linear settlement of Long Street. Hanslope is a large village with a historic core set around the Grade I listed 12th century church of St James the Great, which has the tallest spire in Buckinghamshire at 57m. This perpendicular 15th century tower is an iconic landmark and visible from great distances across the landscape. Hanslope has many listed buildings, mostly from the 17th and 18th centuries, often built from the local limestone, with tiled or thatched roofs. The historic character of the village is recognised through its designation as a Conservation Area. Residential development on the

western edge of Hanslope at the time of writing is increasing the village size considerably.

5.29 Away from Hanslope the settlement pattern consists of small farmsteads, and hamlets which developed as satellite settlements to Hanslope. These 'End' villages include Bullingdon End, Pindon End and Tathall End with its thatched cottages, many of which include listed buildings.

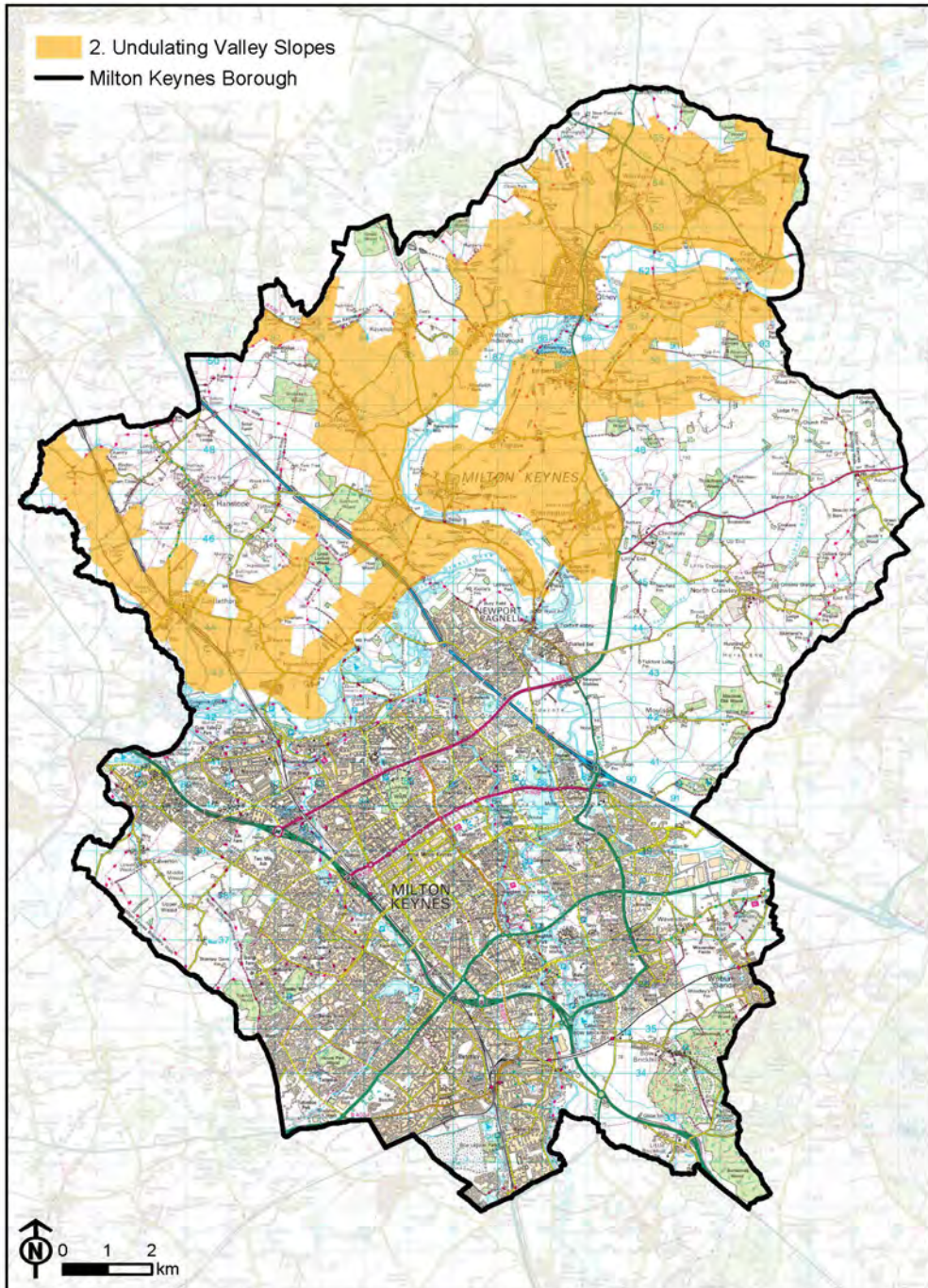
5.30 Minor roads connect Hanslope to other settlements both within the borough and north into Northamptonshire. The lanes are generally lined by intact hedgerows, although there has been some replacement with post and rail fencing. The landscape is very well connected by PRow, with a number of long-distance routes including the Milton Keynes Boundary Walk, Three Shires Way, Midshires Way and Hanslope Circular Ride.

5.31 There are panoramic views from the PRow across the Ouse valley to the south and the Tove valley to the west. The built edge of Milton Keynes city is also visible to the south, although views to the south-east are partly screened by Little Linford Wood and Gayhurst Wood. Yardley Chase and Salcey Forest woodlands within Northamptonshire form a wooded backdrop to the north.

5.32 Modern influences on the landscape include new development in Hanslope, office buildings, radio masts, security fencing and floodlighting at Hanslope Park, and a solar farm at Salcey Green. The M1 and west coast mainline railway are intrusive influences on the LCA, reducing tranquillity.

5.33 Despite these, the landscape retains a highly rural character, and dark skies are experienced in the north of the LCA and within the larger woodlands.

LCT 2: Undulating Valley Slopes



Landscape Character Areas

The Undulating Valley Slopes LCT is subdivided into three LCAs:

- 2a Ouse Northern Undulating Valley Slopes
- 2b Ouse Southern Undulating Valley Slopes
- 2c Tove Undulating Valley Slopes

Location and summary

The Undulating Valley Slopes LCT is located across the north of the borough. It comprises the valley landscapes along the course of the River Ouse and the River Tove. The boundary with LCT 3 River Floodplains is marked by the rise in topography of the valley slopes above the floodplain, either to the boundary of flood zone 2 or the 50-55m contour line. The boundary with LCT 1 Wooded Wolds marks the change to the elevated and more wooded plateau and is defined along the 90m contour line.

This is an open and gently sloping landscape, predominantly in arable use. It is generally a quiet and picturesque rural landscape with limited impact from modern development, except in proximity to the urban edge of Milton Keynes city.



A gently undulating landscape rising from the River Ouse with large-scale arable fields and limited modern intrusions.

Key Characteristics

- Undulating valley slopes, rising from the Ouse and Tove rivers, from 50m to 105m AOD.
- A varied bedrock of sandstones, limestones and mudstone result in diverse soils, with well-drained calcareous clays at the top of slopes and seasonally waterlogged loamy soils at the base of slopes.
- Secondary valleys of small streams and springs where the landform provides a localised sense of enclosure.
- Woodland cover is limited to small copses, some recorded as ancient woodlands and mature parkland trees associated with historic estates.
- A mixed field pattern dominated by large-scale arable fields with unclipped hedges. Smaller pasture fields are common on lower slopes with those near settlements often used for horse grazing. There are some surviving areas of ridge and furrow earthworks.
- Historic settlement pattern of nucleated villages, with numerous listed buildings and often designated as Conservation Areas. Traditional buildings materials include local limestone and roofs in thatch, slates or red tiles. Isolated farmsteads are located on the narrow rural lanes.
- A network of PRow allows recreational access to the landscape, including the promoted routes Three Shires Way, Ouse Valley Way and Milton Keynes Boundary Walk.
- Panoramic views over the meandering valley floodplain, with a wooded backdrop provided by the Wooded Wolds (LCT 1) to the north. Village church towers provide local landmarks.
- A rural and peaceful landscape with an experience of dark skies away from larger settlements. However, electricity pylons, wind turbines and busy trunk roads in the east (LCA 2a and 2b) and the west coast mainline in the west (LCA 2c) reduces the sense of remoteness.

Physical and natural characteristics

5.34 A gently undulating landscape, rising from the floodplains of the slow flowing and meandering River Ouse and the Tove, with slopes ranging from 50m to 105m AOD. There are localised steeper escarpments or 'bluffs' close to the valley floor of the Ouse, and valleys associated with tributary streams which flow into the main rivers. Many of the farms on the valley slopes have ponds associated with them.

5.35 Much of the LCT is underlain by sandstone, limestone and argillaceous rocks of the Great Oolite Group, with areas in the north-east underlain by Kellaways Formation and Oxford Clay Formation. The Tove Undulating Valley Slopes (LCA 2c) are underlain by Lias Group mudstone, siltstone, limestone and sandstones. Glacial till drift deposits lie in the west and north of the LCT, while river terrace deposits and some alluvium are found adjacent to the Ouse river floodplain.

5.36 This variety in geology is reflected in the soils. The majority consist of calcareous clayey or loamy soils that are well drained but can be shallow or fragmented. Soils tend to be calcareous clayey soils over chalky till towards the tops of the slopes. Soils towards the base of the slopes tend to be slowly permeable and seasonally waterlogged loamy soils.

5.37 Woodland is limited to small isolated woods and copses, many recorded as priority habitat deciduous woodland and with some of ancient origin. The woods are often associated with parklands and settlements, especially at Tyringham Hall and Gayhurst Court, either side of the River Ouse, which also contain a number of mature parkland trees. A number of

Wildlife Corridors and Wildlife Sites are found across the LCT. The Ouse Valley and Yardley Chase Biological Opportunity Areas extend into this LCT.

5.38 Land use is predominantly arable and generally occurs in large open fields, with smaller pasture fields on the lower slopes. Pasture and horse keeping is also apparent in proximity to settlements. Hedgerow cover is variable, with few hedgerow trees and some reinforcement by post and wire fencing, although shelterbelts are more intact along the minor lanes. Conifer shelterbelts and hedgerows are out of character in the landscape.



Open arable farmland at Pindon End looking west towards the Tove Floodplains (LCA 3a) and beyond.

Historic and cultural characteristics

5.39 Large 20th century amalgamated fields, the result of modern farming techniques, are common. Historic field patterns shown in the Buckinghamshire HLC include pre-18th century enclosures, both planned and irregular, with some areas of straight-edged 18th and 19th century Parliamentary enclosure. Areas of assarted enclosure are found on higher ground, indicating a more wooded landscape in the past.

5.40 Pockets of ridge and furrow are found within the LCT. The straight furrows suggest some of these features may have been created by steam plough rather than traditional ox-drawn plough.

5.41 Roman sites at Olney and a villa near Clifton Reynes provide evidence of the Roman occupation. Motte and bailey castles at Lavendon and Castlethorpe and a number of moated sites on the slopes of the rivers Tove and Ouse reflect the increasing settlement of the area in the Middle Ages.

5.42 A large number of historic villages, many originating from this period, are located on the valley slopes. Local warm limestone, often used as rubblestone, is the most prominent building material, with roofs of thatch, slate or red tiles. The villages, including Castlethorpe, Clifton Reynes, Emberton, Lavendon, Newton Blossomville, Ravenstone, Sherrington, Stoke Goldington and Weston Underwood, contain a high number of listed buildings often dating from the late 17th and 18th centuries. The historic cores are designated as Conservation Areas, often centred around the church. Clock towers at Emberton and Filgrave provide local landmarks. Many of the villages have expanded in the 20th and 21st centuries, although new developments are generally sympathetic, using local materials and styling. Haversham is the only example of a new settlement within the LCT, built between the original village and Wolverton in the 1930s.



St Peter's church in Stoke Goldington.

5.43 The small market town of Olney is the largest settlement in the LCT, with a wide High Street lined by fine stone town

houses dating from the 18th century (most listed Grade II) when the town expanded as a staging post for travellers on the Newport Pagnell Turnpike and as centre for lace making. The historic interest of the high street is reflected in its designation as a Conservation Area. The parish church of St Peter and St Paul's marks the end of the settlement and is a notable landmark within the Ouse valley. Olney expanded considerably in the late 20th century, which has had an adverse visual impact on the adjacent rural areas, and there is considerable on-going development.

5.44 Away from the villages, settlement is generally limited to occasional isolated farmhouses or mills, accessed off tracks or narrow twisting lanes.

5.45 Parkland landscapes are found across the LCT, including Tyringham Hall with its Grade I stately home designed by Sir John Soane and Grade II* Registered Park and Garden, and Gayhurst Court, also a Grade II Registered Park and Garden. Both landscape parks were designated by Lancelot Brown, with later alterations by Humphrey Repton and reflect the increasing wealth of local landowners in the 18th century. There are also undesignated landscape parks at Weston Underwood and Hanslope Park. Mature parkland trees in singles and clumps are characteristic of all these parklands, with some exotic trees noted at Tyringham.

5.46 The LCT is crossed by narrow, hedged and winding country roads lined by mature hedgerows. A number of the minor roads follow the valleys slopes. Major transport links include the West Coast Main Line, a strong linear element in the Tove valley, and a short section of the M1. Busier A roads cross the landscape to the east of Milton Keynes, including the A509 and A428. A disused railway between Northampton and Bedford crosses the valley north of Olney.

5.47 A strong network of PRoW crosses the LCT, including promoted routes Ouse Valley Way, Hanslope Circular Route, Three Shires Way and Milton Keynes Boundary Walk. National Cycling Route 6 connects Hanslope, Castlethorpe and Milton Keynes.

Visual and perceptual characteristics

5.48 The Undulating Valley Slopes LCT has a remote character with few modern detractors. Historic villages with landmark churches, winding country lanes and historic parklands at Tyringham and Gayhurst combine to make this an attractive, rural landscape.

5.49 There are panoramic views of the meandering rivers, and across and along the river valleys, both from PRoW and roads. Views to the adjacent wooded ridge of the Wooded Wolds to the north are also common. Elevated views from local escarpments over the floodplain, from example from Clifton Reynes, are also possible.

5.50 Modern influences within the landscape are mostly located close to urban areas, including industrial units on the north-east of Olney. Proximity to the major transport corridors of the M1, West Coast Mainline and to the urban edge of Milton Keynes reduces tranquillity and remoteness locally. A number of solar farms are located in the LCT, and there are views to the wind farm at Petsoe Manor (within LCA 4a). Electricity pylons run north-south direction across the Ouse valley, which also impact the rural character of the landscape.



Deer grazing on the Grade II* registered parkland surrounding 18th century Tyringham Hall.

Landscape evaluation

Landscape qualities

- The tributary streams and small ponds which feed into the Ouse and Tove, that provide freshwater habitats, regulate water quality and water flow.
- The semi-natural habitats including woodland copses, mature trees and hedgerows that support biodiversity and provide carbon capture.
- The historic field patterns of pre-18th century enclosure and assarts, and surviving ridge and furrow earthworks, which provide time depth to the landscape.
- The settlement pattern of historic villages, with numerous listed buildings from the 17th and 18th century constructed from local limestone that provide cultural identity and aesthetic value.
- The 18th century landscape parks laid out around country houses, most notably at Gayhurst and Tyringham, that provide a connection to history, cultural identity and aesthetic value.
- Panoramic views of the meandering rivers and across the undulating landscape of the valleys, with tall church towers and spires, and clock towers as local landmarks, that contribute to a strong sense of place.
- The network of PRoW, including the Three Shires Way, Ouse Valley Way and Milton Keynes Boundary Walk, that connect the settlements and wider countryside, and provide recreational value, and contribute to well-being and health.
- The pleasing combination of landscape elements, strong sense of tranquillity and experience of dark skies in this rural landscape which contribute to the sense of place.

Landscape condition

5.51 Generally a landscape in good condition, with a strong rural character. Fragmentation of historic field patterns, and lack of connectivity between woodlands and hedgerow field boundaries reduces the condition in some areas. Modern influences on the landscape include electricity pylons in the east, Petsoe Manor wind farm, and some unsympathetic modern extensions to settlements, including residential and commercial development to the north of Olney.

Forces for change

5.52 Key forces for change include:

- Increasing periods of drought and increased temperatures as a result of climate change may result in a change in water levels and tributary stream flows.
- Increase in frequency and severity of seasonal flooding in the tributary stream valleys as a result of climate change.
- Potential changes in woodland and tree species composition as a result of climate change, including wind damage due to increases in severe gales (with ancient woodland being particularly susceptible to storm damage), drought, and an increase in pests and diseases, such as ash dieback.
- Maturing parkland trees on estates, which are vulnerable to pathogens and limit the ability of woodland to regenerate.
- Introduction of out of character conifer shelter belts and hedgerows.
- Changes in agricultural practices resulting in the loss of pasture and associated hedgerows, and increase in arable cropping.
- Increasing traffic on rural roads, leading to demands for road 'improvements' introducing urban clutter on rural roads.
- Potential for upgrades to major road corridors including the A509, and corresponding reduction in rurality and tranquillity locally.
- The church of St Peter, Gayhurst is on the Heritage at Risk register due to timber decay of the cupola and tower.
- Pressure for housing and commercial development in the villages, and associated upgrades to infrastructure.
- Pressure for further renewable infrastructure (e.g. wind turbines on elevated ridges and solar farms on south-facing slopes or in open areas, and associated grid connections). Several solar farms have already been developed in the LCT.

Landscape strategy

5.53 The landscape strategy for the Undulating Valley Slopes LCT is to conserve and enhance the rural character and the exiting pattern of rolling arable landscape interspersed with contrasting woodland copses, parkland and small historic villages, retaining a separate character to urban areas of Milton Keynes.

Guidance

Landscape Management

- Minimise water pollution from agriculture through sensitive land management practices, including restoration of buffer strips along watercourses to minimise run off, which will also improve biodiversity and connectivity.
- Conserve and enhance the existing farm ponds for wildlife, and promote the creation of new ponds where appropriate.
- Conserve and enhance the ancient woodland and deciduous woodland through appropriate woodland management.
- Increase the extent of native deciduous woodland, using locally occurring species to link the existing small woodland blocks, copses and hedgerows, as set out in the Milton Keynes Green Infrastructure Strategy⁸. Encourage progressive removal of conifer hedgerows and shelter belts where appropriate.
- Manage and increase the biodiversity of agricultural fields by creating uncultivated margins to arable fields, including along PRoW, or converting some arable land to permanent pasture.
- Conserve and strengthen the traditional landscape pattern and structure, as well as increasing biodiversity interest through the maintenance or restoration of hedgerows with native species. Consider the addition of hedgerow trees to provide additional structure in the landscape.
- Manage and monitor invasive native or harmful species in woodlands and the impact of pathogens, pests and diseases as a result of climate change.
- Conserve and reinforce the parkland /estate character of Tyringham, Gayhurst, Weston Underwood and Hanslope Park, particularly planning the succession of veteran trees which form an integral part of the historic landscape.

⁸ AECOM, Milton Keynes Green Infrastructure Strategy (2018)

- Protect the valued recreational use of the landscape (PRoW), further enhancing opportunities for informal access and enjoyment through well maintained linked routes through farmland, providing connections between the settlements, wooded wolds and river floodplains, and identifying opportunities for green infrastructure enhancements.

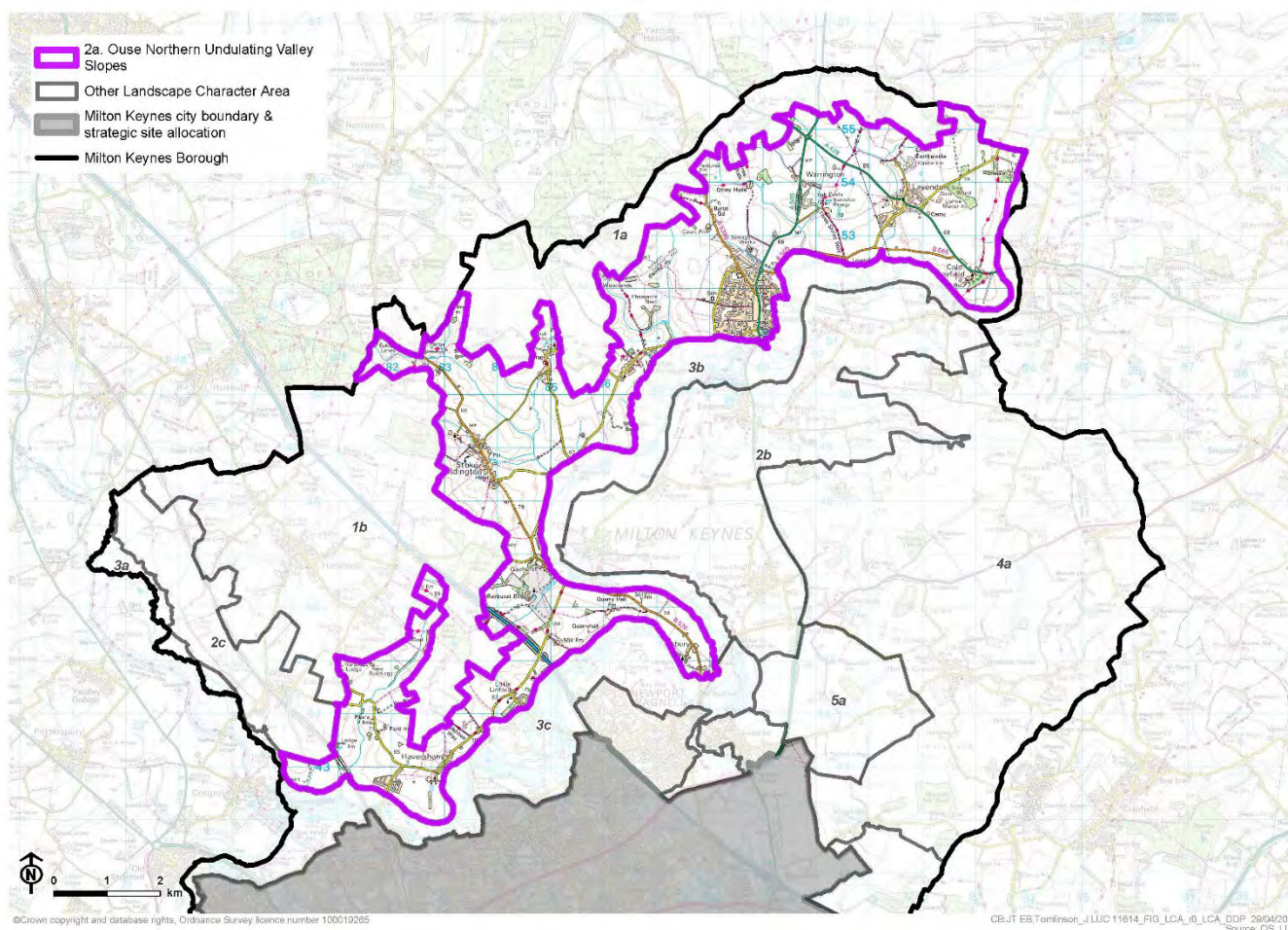
Development Management

- Conserve the nucleated village settlement pattern and restrict built development away from the villages to retain the agricultural and recreational landscape.
- Integrate new development and improve the suburban edges of settlements such as Olney through the use of native hedgerows and woodlands.
- Conserve the distinctive vernacular of historic buildings and their rural setting, particularly within the numerous Conservation Areas within the LCT and ensure that landscape continues to provide a rural setting to these areas.
- Where new development is planned encourage the use of limestone with thatch, slate or red brick roofs, to maintain a strong local identity.
- Resist proposals for highway upgrading to retain the rural character of the narrow rural lanes and conserve the grass verges which provide an important biodiversity resource.
- Identify, retain and manage key viewpoints to appreciate the undulating valley slopes. Consider the landmark churches and clocktowers and panoramic views across the river floodplains in development both within the LCT and in adjacent LCTs.
- Ensure any renewable energy generation is compatible with the guidance above, and with guidance set out in the MK Renewable Energy Landscape Sensitivity Assessment⁹. Renewable energy should be in scale with the landscape where possible, acknowledging that wind turbines may transcend the scale of existing features in the landscape. Electricity infrastructure associated with renewable energy generation should be efficiently planned to minimise the number of lines required, routeing in accordance with the Holford Rules¹⁰.
- Protect the valued recreational use of the landscape, seeking opportunities to further enhance opportunities for access and enjoyment.

⁹ Gillespies, Landscape Sensitivity to Wind Turbine and Solar PV Development (2016)

¹⁰ <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf>

2a Ouse Northern Undulating Valley Slopes



Location and unique characteristics

5.54 Ouse Northern Undulating Valley Slopes LCA is located to the north of the River Ouse, and stretches from the east to the west of the borough, ranging from 50m AOD where it meets the Ouse floodplain to the south and rising to 105m AOD on the boundary with the plateau of the Wooded Wolds to the north and west.

5.55 The LCA is underlain by Great Oolite Group sandstone, limestone and argillaceous rocks, with small areas of Kellaways Formation and Oxford Clay Formation in the north-east. Glacial till is found in the north, with river terrace deposits in the east marking former courses of the River Ouse, which has resulted in clay-loam soils, which provide Grade 3 (moderate-good) agricultural land in use primarily for arable cultivation.

5.56 Areas of woodland are often recorded as priority habitat deciduous woodland, and some of ancient origin including Snip Wood and Overbrook Spinney.

5.57 Pockets of semi-improved grassland is found on the lower edges of the valley slopes, and also around Court Farm.

Meadow habitat has survived west of Olney and is designated as the Barn Field Long Lane LWS, while a small area of priority habitat lowland fens along a tributary spring is designated as the Valley Fen, Ravenstone LWS. A disused railway line west of Olney is designated as a Wildlife Corridor. The Ouse Valley and Yardley Chase Biological Opportunity Areas extend into this LCA.

5.58 There is a mixed field pattern with pre-18th century regular enclosure, regular Parliamentary enclosure fields and larger 20th century fields, enclosed with hedgerows or local limestone walls. Fields are large and in arable cropping use, with areas of sheep grazing on the edges of settlements, for example at Haversham. Hedgerows are in variable condition, with mature hedgerow trees.

5.59 Historic villages, with listed buildings mostly constructed from the local limestone and landmark church spires and towers, are designated with Conservation Areas at Lavendon, Olney, Weston Underwood, Ravenstone and Stoke Goldington. A number of Scheduled Monuments lie around Lavendon including 12th century earthworks relating to the motte and bailey castle.

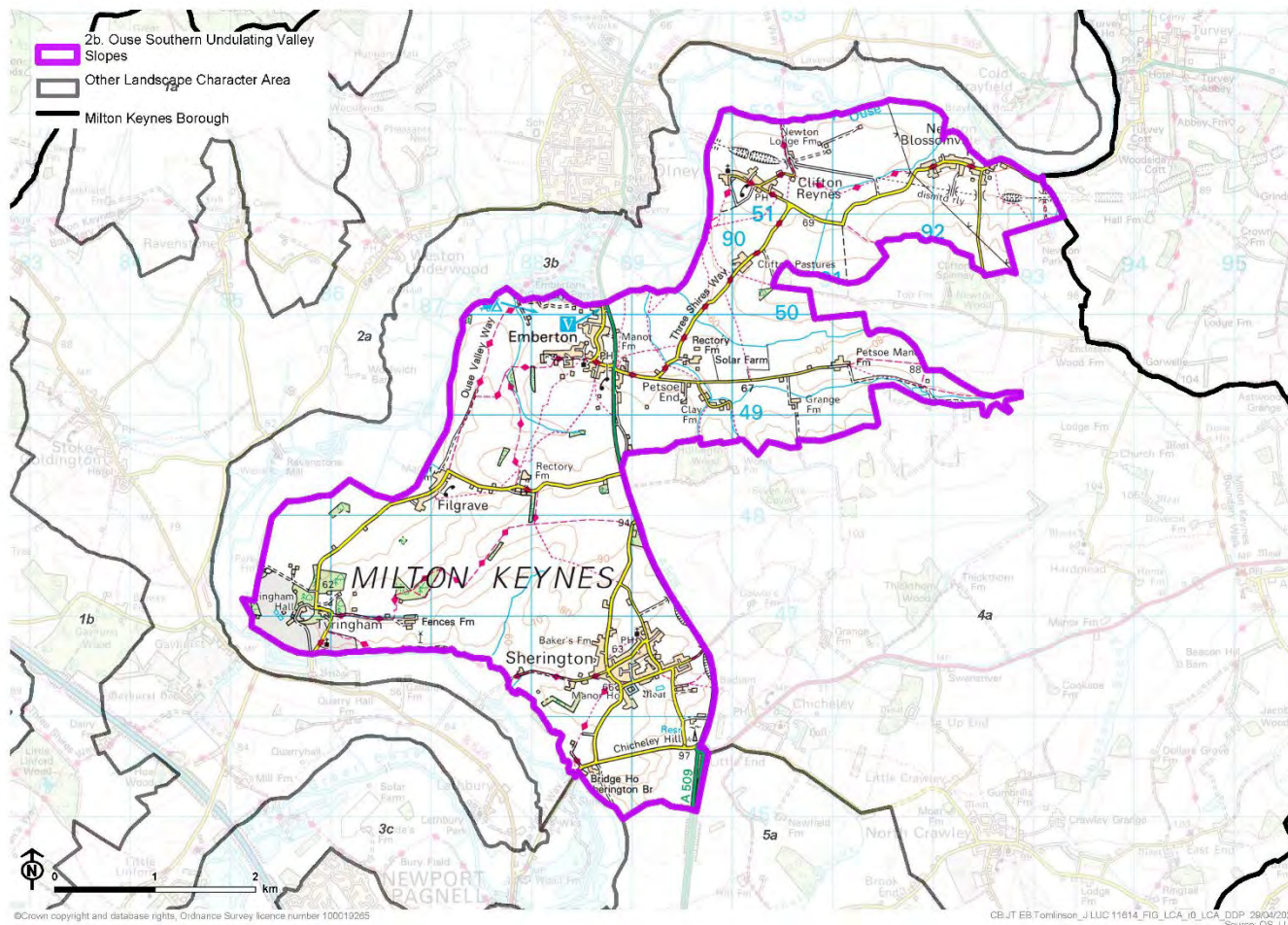
5.60 Olney is situated at an important crossing point of the River Ouse. There is evidence for a substantial Roman settlement to the north at Ashfurlong (now a Scheduled Monument), and a smaller settlement to the south in the area now covered by Emberton Park. Olney is one of the earliest documented settlements in the borough, first named in a charter of 979 CE as 'Ollanege', as well as in the later Domesday Book. The spire of the 14th century church of St Peter and St Paul, now Grade I listed, stands on the banks of the Ouse and dominates the southern approach to Olney. Olney was home to radical Christians in the 18th century, including the poet William Cowper and his friend and curate of Olney, John Newton, who wrote the words to 'Amazing Grace'.

5.61 Historic houses and parklands are distinctive features of this LCA. Gayhurst Court is a late 16th century house (listed at Grade I) set within an 18th century landscape park laid out by Lancelot (Capability) Brown, with alterations by Humphry Repton. The parkland and 19th century formal gardens are a Grade II Registered Park and Garden. Repton also worked on the park and pleasure grounds for Hanslope Park, which partially lie in this LCA (the remainder in LCA 1a). Weston Park is an unregistered garden and park associated with a demolished manor house, which retains its parkland character, and contributes to the rural setting of Weston Underwood. Weston Underwood is also associated with the poet William Cowper.

5.62 This is an open landscape, with fine panoramic views, including to the heavily wooded skyline of Yardley Chase to the north, south-east to the wooded Greensand Ridge (LCA 6a), and over the historic parklands at Gayhurst and Tyringham which lies on the opposite bank of the River Ouse (within LCA 2b).

5.63 Modern influences on the landscape include a solar farm, new residential and commercial development at Olney and an aggregates quarry north of Lathbury. Traffic noise from the M1 and West Coast Mainline railway reduce tranquillity, and there are views across the river valley to the Petsoe Manor wind farm.

2b Ouse Southern Undulating Valley Slopes



Location and unique characteristics

5.64 Ouse Southern Undulating Valley Slopes LCA is located to the south of the meandering River Ouse, and stretches to the borough boundary near Newton Blossomville. The LCA rises from the Ouse floodplain (LCAs 3b and 3c) to the elevated plateau of LCT 4 Undulating Clay Plateaux to the east.

5.65 The underlying geology of Great Oolite Group in the west and Kellaways Formation and Oxford Clay Formation in the east is overlain by river terrace deposits in the west, evidence of the former course of the River Ouse with glacial till deposits in the east. These result in variable clay, loam and silt soils, and grade 3 (moderate-good) agricultural land.

5.66 The landform rises from 50m adjacent to the river floodplain to 85m AOD at the transition to the Undulating Clay Plateaux (LCT 4). Tributaries of the River Ouse run north and south of Petsoe End, and provide localised shallow valleys.

5.67 Small blocks of woodland, many recorded as priority habitat deciduous woodland and often of ancient origin

including Hollington Wood (also an LWS) are scattered across the LCA. A number of LWS are recorded, including at Costerpits for its semi-improved calcareous grassland and Petsoe Manor for field ponds and scrub. The Ouse Valley Biological Opportunity Area extends into the LCA.

5.68 There is a mixed field pattern with considerable areas of pre-18th century irregular enclosure fields close to the small settlements including Clifton Reynes and Newton Blossomville, with some areas of more regular 18th century enclosure. Large prairie fields, the result of 20th century amalgamation dominate the LCA around Sherington and Filgrave.

5.69 The large fields are generally in arable use, with some horse grazing on the edge of settlements. Hedgerows are in variable condition, with some replacement by post and rail, although there is evidence of new hedgerow planting.

5.70 Small historic villages are found at Newton Blossomville, Clifton Reynes, Emberton and Sherington, which contain a large number of historic buildings and are covered by

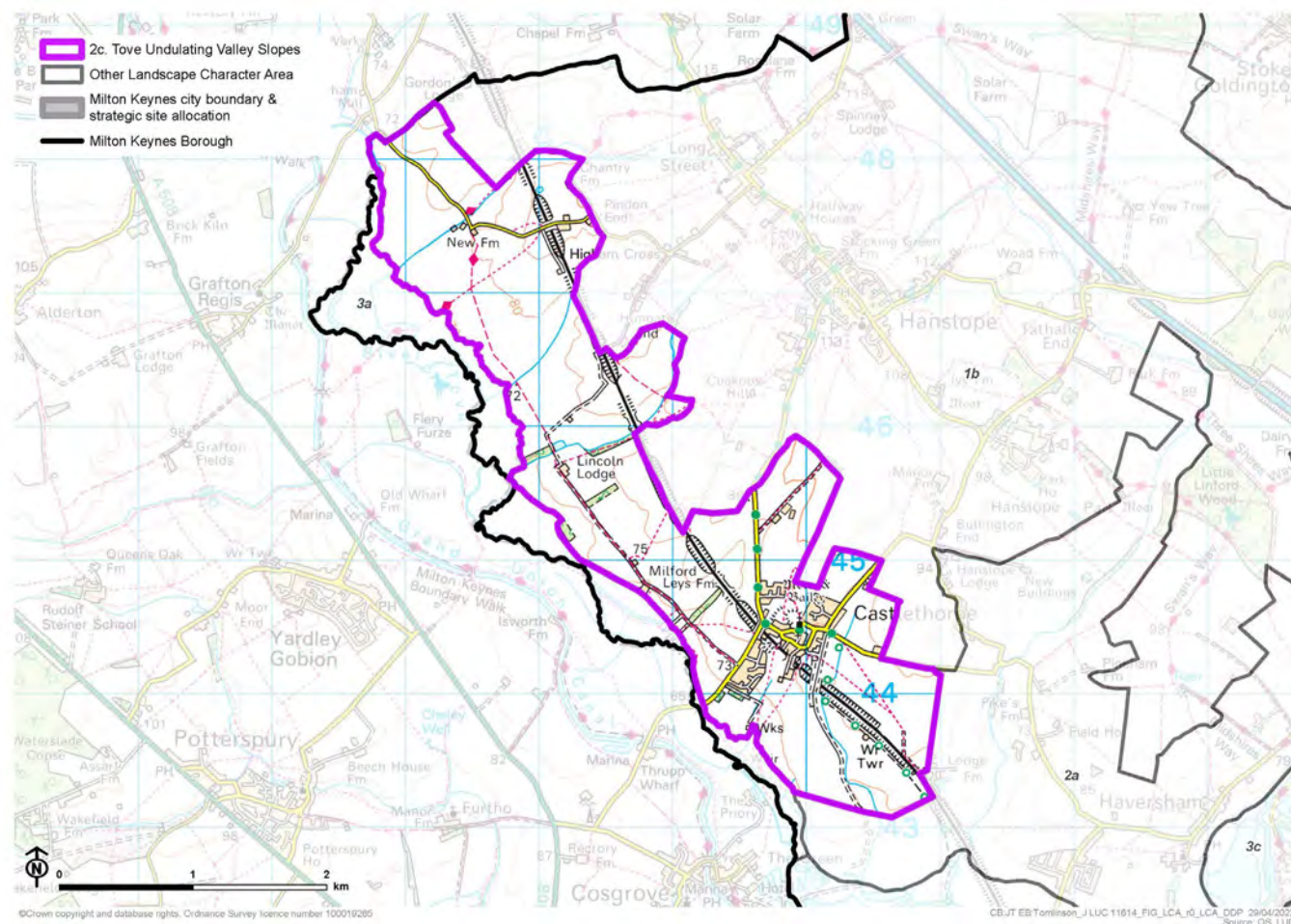
Conservation Areas. Brick, limestone and thatch are common vernacular materials.

5.71 Tyringham Hall was designed by Sir John Soane in the 18th century and is Grade I listed. It sits within the Grade II* Registered Park and Garden, laid out by Humphry Repton, with early 20th century formal gardens by Rees and Edwin Lutyens. There are views from the parkland over the River Ouse to the parkland at Gayhurst Court (within LCA 2a). Estate fencing marks the extent of the Tyringham estate, and deer and sheep graze in front of the hall.

5.72 This is a largely open rural landscape, with views across the undulating landscape, across the River Ouse, including to the landmark church at Olney. A wooded backdrop is provided to the north by the Wooded Wolds.

5.73 Modern influences on the landscape include the A509, A422, electricity pylons west of Newton Blossomville, the solar farm at Petsoe Manor (LCA 4a) and views to tall buildings including warehouses within Milton Keynes city.

2c Tove Undulating Valley Slopes



Location and unique characteristics

5.74 The Tove Undulating Valley Slopes is a small linear LCA in the west of the borough, rising from the narrow River Tove which runs along the borough boundary with Northamptonshire. The slopes rise from 75m to 90m AOD, where they meet the Wooded Wolds LCT (LCA 1b). The LCA is underlain by the Lias Group mudstones, siltstones, limestones and sandstones in the west, and the Great Oolite Group in the east around Castlethorpe. The whole LCA is underlain by glacial till, evidence of widespread glaciation in the area.

5.75 Woodland cover is more limited, with only a few mature copses, shelterbelts and tree rows which follow streams and ditches that flow into the Tove. Many of these are recorded as priority habitat deciduous woodland.

5.76 The field pattern contains large areas of pre-18th century irregular enclosure, with Parliamentary enclosure which has subsequently been divided around Castlethorpe. There are some areas of prairie fields to the south of Castlethorpe.

5.77 Land use is generally arable, with large fields with robust hedgerows. There has been some replacement with post and rail fencing, and reinforcement with post and wire.

5.78 The only settlement in the LCA is Castlethorpe, which contains a motte and bailey castle dating back to the mid-12th century, now a Scheduled Monument. The historic core of Castlethorpe is still recognisable, contains a number of listed buildings, and is designated as a Conservation Area. The village has expanded to the south of the railway line at Shepperton Place and Prospect Place.

5.79 There are fewer public rights of way than in the rest of the LCT, although the Hanslope Circular Ride, Milton Keynes Boundary Walk and National Cycle Route 6 pass through the LCA.

5.80 From the southern edge of the LCA, there are views to Wolverton and Milton Keynes city. Views west across the Tove valley floodplain are to the Grand Union Canal with its narrow boats, and further to the wooded plateau in Northamptonshire County.

5.81 Modern influences on the landscape include the west coast mainline railway which has extensive gantries, and a solar farm at Lodge Farm. Noise from the A508 and railway line reduce tranquillity. The landscape retains a rural character, and outside of Castlethorpe has a good experience of dark skies.

LCT 3: River Floodplains



Landscape Character Areas

The River Floodplains LCT is subdivided into four LCAs:

- 3a Tove Floodplains
- 3b Ouse Floodplains
- 3c Ouse Lakes and Parkland Floodplains
- 3d Ouzel Parkland Floodplains

Location and summary

The River Floodplains LCT comprises the river valley floodplains of the River Ouse, and its main tributaries the Ouzel and the Tove. The boundaries of the LCT are defined by the extent of Flood Zones 2 and 3, and the 50-55m contour line, where the valley slopes begin to rise.

This is a flat, open landscape with meandering river channels. The rivers tend to be slow flowing, with a variable depth and height of surrounding banks. The LCAs within the LCT are divided into rural and largely recreational floodplains.



The wide River Ouse running under the Grade I listed bridge at Tyringham, with parkland landscape on the river floodplain.

Key Characteristics

- A flat landscape with slow flowing rivers on sinuous valley floors, underlain by a varied bedrock with alluvium deposits.
- Riparian woodland lines the meandering river channels, some recorded as priority habitat deciduous woodland and wetland habitats lie on the floodplains, many of which are designated as LWS.
- Open pasture fields lie adjacent to the river channel, bound by ditches and post and wire fencing.
- Historic and current mineral extraction have impacted the landscape, including the creation of extensive large lakes and ponds.
- Heritage assets are limited to historic mills, bridges and occasional isolated farmsteads. Archaeological evidence of Neolithic, Bronze Age, Iron Age, Roman and medieval communities is often designated as Scheduled Monuments.
- An open undeveloped floodplain, with restricted settlement, although there are views to villages and towns on adjacent higher ground.
- Recreationally important landscape with good access on PRoW, parks on former mineral extraction sites, cycling routes and fishing (particularly within LCAs 3c and 3d).
- Rural character, away from the urban settlement edges and major transport corridors.

Physical and natural characteristics

5.82 A flat floodplain landscape, between 45m and 75m AOD. The landscape is dominated the river channels and floodplains of the Ouse, Ouzel and Tove, and associated tributaries. Streams and springs which drain the adjacent valley slopes (LCT 2) cross the floodplain to join the main river channels. The width of the floodplains varies; the Ouse is generally wider, while the Tove and Ouzel are narrower and less defined.

5.83 The geology is dominated by the superficial alluvium deposits formed by the meandering river corridors, while the bedrock geology is varied. This gives rise to stoneless clay soils, with some sandier loams away from the river channels. Seasonal flooding is common within the landscape in winter and spring.

5.84 Riparian vegetation along the river corridor includes willows and black poplars which mark the course of the river and plantations of cricket bat willow such as at Newton Blossomville. Many of the woodland areas are recorded as priority habitat deciduous woodland. Wetland habitats associated with the floodplain include priority habitat floodplain grazing marsh and good quality semi-improved grassland. Many of these woodland and wetland habitats are designated as LWS, and the River Ouse and Ouzel are designated as Wildlife Corridors.



The narrow channel of the River Tove with flat pastoral fields.

Historic and cultural characteristics

5.85 The field size and historic pattern varies between the urban and rural areas of the floodplain. Rural areas have small to medium fields of pre-18th century regular enclosure and later Parliamentary enclosure. There are a number of historic enclosed meadows along the Ouse, such as Bury Field at Newport Pagnell which has been common land since the Middle Ages. Historic field patterns in the more urban areas, around Milton Keynes city, have largely been lost due to mineral extraction.

5.86 Land use is still predominantly pasture, with open irregular fields bound by drainage ditches, post and wire fencing and occasional over-mature hedgerows. Closer to the urban edges of Milton Keynes city and Newport Pagnell, fields which historically would have been used as riverside pasture still retain much of their original landscape structure.

5.87 Historic assets are limited to historic bridges and mills at crossing points, although historic parkland extends into the Ouse floodplain at Gayhurst and Tyringham (LCA 3b). Archaeological evidence of Neolithic ritual or ceremonial landscapes in the valley floor, Bronze Age and Iron Age ring ditches and pit alignments, Roman sites and medieval villages and associated fish ponds is found on the river floodplains, including at Old Wolverton and Tyringham. Many of these sites are now Scheduled Monuments.

5.88 The LCT is largely uninhabited, with the majority of villages located in the adjacent LCT on higher land beyond the floodplain. Settlement within the floodplain is limited to bridging points along the course of the rivers and occasional isolated historic farmhouses and mills, many of which are listed buildings.

5.89 Gravel extraction, particularly north of Milton Keynes city, has resulted in large lakes and ponds, which are now managed for nature conservation and/or recreation. Gravel extraction is still taking place, particularly along the lower reaches of the River Ouse (LCA 3b and 3c).

5.90 The LCT is crossed by a number of major roads, including the M1 and A5 which cross both the Ouse and the Ouzel. In contrast, there is limited access to the Tove floodplain, which is crossed by only small country roads.

5.91 Despite limited access to the floodplain in some locations, particularly along the Tove (LCA 3a) and the north of the River Ouse (LCA 3b), the River Floodplains LCT provide considerable opportunities for recreation. These include PRow such as the Ouse Valley Way, National Cycling Route 6, and leisure parks with fishing and water sports at Emberton and Cosgrove. The Grand Union Canal and its towpath also cross the floodplain.



A variety of recreational opportunities on the Ouse, Stony Stratford.

Visual and perceptual characteristics

5.92 Views within the LCT are relatively open, across the river floodplain to the surrounding higher ground. In areas of former

gravel extraction, along the Ouse north of Milton Keynes city and Newport Pagnell, the river channel is a less visually unifying feature.

5.93 Modern influences on the floodplain landscape include the major road corridors of the M1 and A5, and the west coast mainline railway. Noise from these transport corridors disrupts tranquillity across the LCT. Some buildings associated with recreational facilities, particularly the holiday park at Cosgrove Leisure Park, are out of keeping with the generally unsettled landscape, although generally hidden from view by vegetation. The built edges of Milton Keynes city and Newport Pagnell are also apparent in some views, with a number of large commercial and residential developments dominant in some views.

5.94 Away from the urban edges the river floodplains are rural with some areas of dark skies on the eastern and western borough edges.



New development at Eaton Leys features prominently in the foreground of views from the River Ouzel at Waterhall Park.

Landscape evaluation

Landscape qualities

- The semi-natural habitats including floodplain grazing marsh, lowland meadows and deciduous riparian woodland that support biodiversity, and provide carbon capture.
- The river channels which provide water, and the underlying aquifers which maintain springs and base flows into rivers. The floodplains also regulate water flows, and provide flood protection.
- The riverside meadows which provide a connection to the historic land uses and provide a highly scenic quality to the landscape.
- The heritage features of the landscape particularly the historic mills and bridges, farmhouses and parklands, and archaeological earthwork features that provide a connection to history, cultural identity and aesthetic value.
- The largely undeveloped rural character of the flat low-lying floodplain, with a strong sense of openness, which provides a sense of place.
- The expansive, uninterrupted long-distance views across the floodplain which provide a sense of place.
- The recreational opportunities provided by PRoW including the Ouse Valley Way, cycle routes, country parks, fishing and water sports which connect the settlements and wider countryside, provide recreational value and contribute to well-being and health.

Landscape condition

5.95 The landscape is variable across the River Floodplain LCT, influenced by proximity to Milton Keynes city, and other recent development. The landscape is still largely in agricultural land use, and has a good cover of semi-natural habitats. There has been some fragmentation of hedgerow boundaries, and tranquillity and rural character are influenced by land uses in adjacent LCTs, such as wind turbines at Petsoe Manor, electricity pylons and noise from major road and rail routes.

Forces for change

5.96 Key forces for change include:

- Changes in agricultural practices to reduce grazing and increase arable cropping.
- The spread of invasive, non-native species including Himalayan Balsam and signal crayfish along river valleys, displacing native plants and habitats.
- Increasing periods of drought resulting in the drying of grazing floodplain as a result of climate change and demand for water extraction.
- Changes to flood management as a result of climate change, including increased pressure for tree planting to attenuate flash flooding, which could impact on the open character of the floodplain.
- Agricultural run-off and discharge of sewage into the waterways, causing pollution and impacting on wildlife.
- Continuing and future gravel extraction, and the management of the restoration of former extraction sites.
- Expansion of Milton Keynes city and Newport Pagnell affecting the rural character of the landscape adjacent to these settlements.
- Increased traffic on major transport corridors including the M1 and West Coast Mainline disrupting tranquillity.
- Pressure for additional renewable energy infrastructure e.g. solar farms.
- Recreational pressure, including demand for additional facilities, could alter the sense of rurality.

Landscape strategy

5.97 The landscape strategy for the River Floodplains LCT is to conserve the rural undeveloped character of the floodplains and support opportunities to increase and connect semi-natural floodplain habitats, while increasing informal recreational access.

Guidance

Landscape Management

- Encourage sustainable management of traditional meadows by introducing sensitive grassland management such as late hay cutting or low-density livestock grazing.
- Manage and enhance floodplain meadows. Protect existing meadows from ploughing, grassland improvement or further mineral extraction. Draw on the advice of the Upper and Bedford Ouse Catchment Partnership on the management of floodplain meadows and implementation of natural flood management schemes. Identify opportunities for green infrastructure enhancements, as set out in the Milton Keynes Green Infrastructure Strategy¹¹ and Green Infrastructure Opportunity Mapping¹².
- Monitor water quality in the rivers, and seek to reduce surface water flow off agricultural land. Support the production of nutrient, manure and crop protection management plans where appropriate.
- Conserve and enhance the biodiversity interest of wetland habitats and watercourses. Ensure a whole valley approach is taken, identifying opportunities for green infrastructure enhancement.
- Promote the management of existing floodplain pollards and plant new specimens such as Black Poplar. Where appropriate extend areas of wet woodland.
- Promote improvements to the river and lake habitats to encourage increased biodiversity value through marginal planting and localised bank profiling and sympathetic maintenance of drainage ditches.
- Encourage reversion of arable fields to pasture where possible, and increase the biodiversity of arable fields by creating uncultivated margins.
- Promote the use of ditches and hedges in place of post and wire as a means of stock enclosure on pasture fields.
- Promote increased recreational opportunities which respect the landscape character. Improve PRoW connections and signage on well-maintained linked riverside routes, particularly adjacent to urban areas, and encourage use of the river for appropriate recreation, identifying opportunities for green infrastructure enhancement.
- Maximise opportunities from the restoration of mineral extraction sites for recreation and biodiversity. Develop diverse mixed age woodland communities to retain a balance between screening recreation, wildlife and public safety.

Development Management

- Conserve the undeveloped nature of the landscape, to provide a rural floodplain setting to Milton Keynes city.
- Consider views from the floodplains landscape when planning development in adjacent landscapes, enhancing the integration of development through native wooded boundaries and mature trees to provide visual screening and to reduce the impact of built development on the floodplain.
- Conserve and enhance the historic bridges and mills, and archaeological evidence of earthworks.
- Ensure a comprehensive restoration plan is in place for any future mineral extraction, to restore habitats and land cover pattern. This should include wet woodland as part of a mosaic of habitats.
- Ensure any renewable energy generation is compatible with the guidance above, and with guidance set out in the MK Renewable Energy Landscape Sensitivity Assessment¹³. Renewable energy should be in scale with the landscape where possible, acknowledging that wind turbines may transcend the scale of existing features in the landscape.

¹¹ AECOM, Milton Keynes Green Infrastructure Strategy (2018)

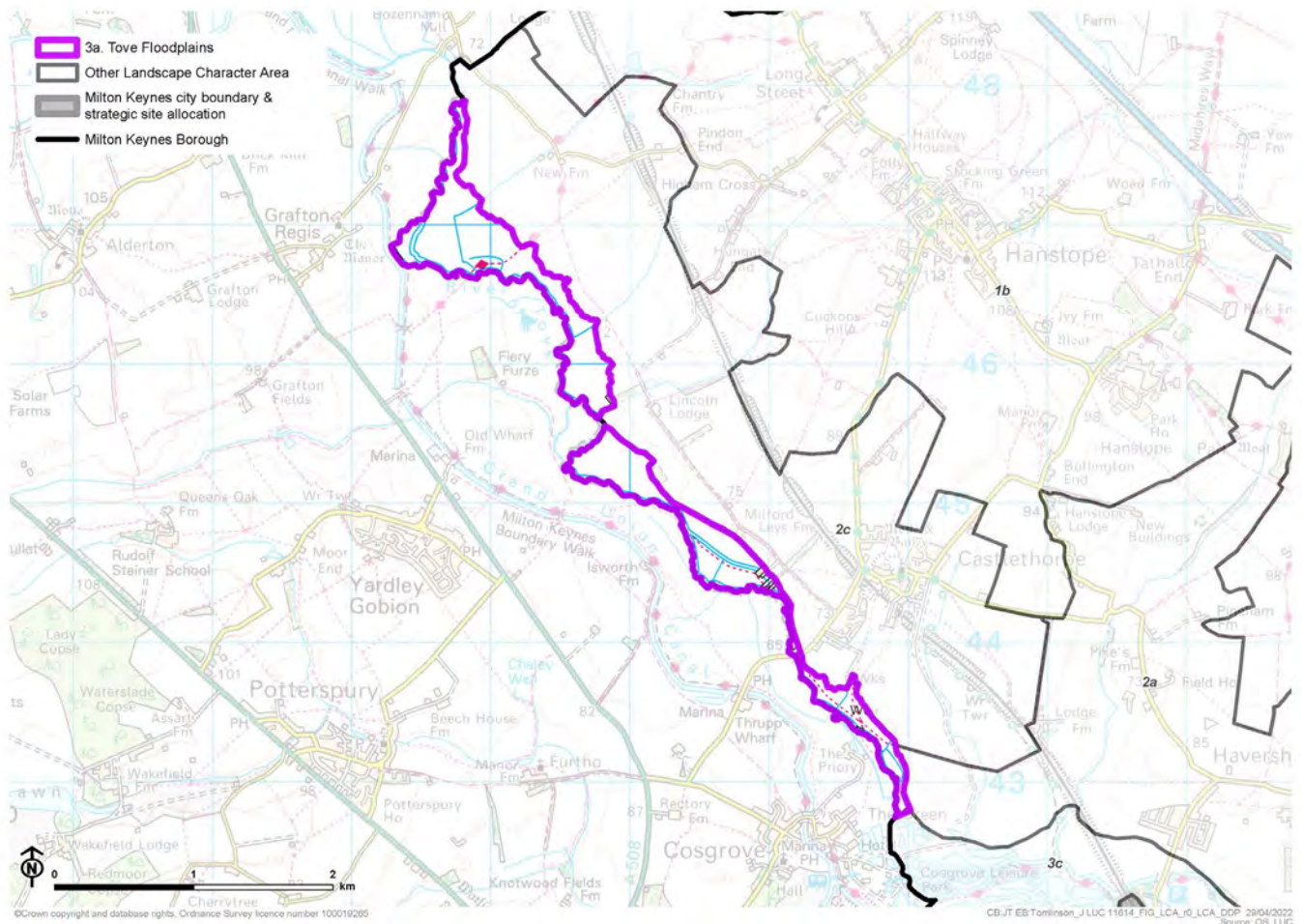
¹² <https://bucks.mknep.co.uk/wp-content/uploads/2018/10/Green-Infrastructure-Opportunity-Zone-08.pdf>

¹³ Gillespies, Landscape Sensitivity to Wind Turbine and Solar PV Development (2016)

Electricity infrastructure associated with renewable energy generation should be efficiently planned to minimise the number of lines required, routeing in accordance with the Holford Rules¹⁴.

¹⁴ <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf>

3a Tove Floodplains



Location and unique characteristics

5.98 The Tove Floodplains LCA is located in the north-west of the borough. It is a narrow area, bound by the borough boundary to the west (which is defined by the river corridor) and the Tove Valley Slopes LCA (2c) to the east.

5.99 The floodplain is shallow and poorly defined, at 65-70m AOD. The river is underlain by the Lias Group of mudstone, siltstone, limestone, sandstones. The course of the river is narrow and meandering, and lined by scattered trees, some of which are priority habitat deciduous woodland. The Ouse Valley Biological Opportunity Area extends across the whole LCA.

5.100 Floodplain fields are generally large and in use as pasture, although there are arable fields in the north. Hedgerows are in variable condition, with some replacement and reinforcement by post and wire fencing.

5.101 Areas of ridge and furrow on the meadows leading to Castlethorpe Mill provide time-depth. Castlethorpe Mill is the

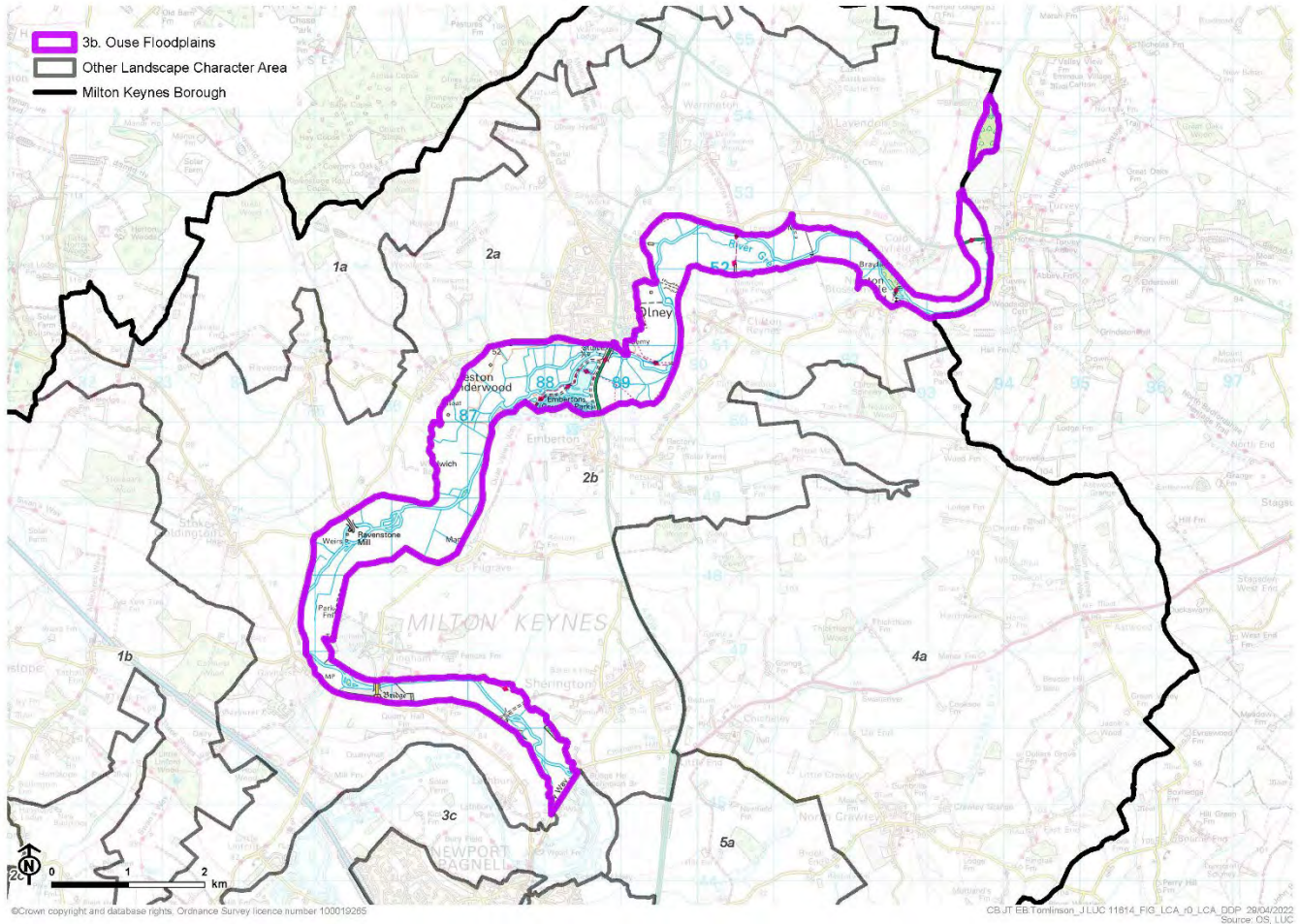
only building on the floodplain, an 18th century Grade II listed corn mill and mill house, although the water wheel is missing.

5.102 Access by road is limited to the north and south where rural roads cross the floodplain. Public rights of way are more common in the south around Castlethorpe, although the Milton Keynes Boundary Walk crosses the floodplain in the north.

5.103 The Tove Floodplain LCA is relatively remote with a rural character due to its distance from large settlements. However, road noise from the A508 in Northamptonshire and the West Coast mainline railway limit tranquillity.

5.104 The river channel itself is generally inconspicuous in the landscape, marked by scattered trees. There are views across the floodplain to the Grand Union Canal in Northamptonshire County, and to the rising valley slopes beyond. Church spires in villages in Northamptonshire are visible across the floodplain to the west, with wooded horizons beyond. To the east there are views up the rising valley slopes, and the church tower at Hanslope is a landmark feature.

3b Ouse Floodplains



Location and unique characteristics

5.105 The Ouse Floodplains runs from Newport Pagnell in the south to the north-east of the borough, close to Turvey (in Bedford borough). Its boundaries are marked by the rise in topography to the valley sides in the Northern and Southern Ouse Undulating Valley Slopes (LCA 2a and 2b). The boundary with the Ouse Lakes and Parkland Floodplains (LCA 3c) marks where the urban influences of Newport Pagnell and Milton Keynes city become more apparent, and is defined by Sherington Road.

5.106 The floodplain lies around 45-55m AOD and is underlain by the Great Oolite Group sandstones and limestones. The meandering river channel is lined by mature riparian vegetation, much of which is priority habitat deciduous woodland. Areas of priority habitat floodplain grazing marsh and chalk grassland are found at Olney. The whole river channel is designated as the River Ouse Wildlife Corridor, and part of the Ouse Valley Biological Opportunity Area.

5.107 Land use is predominantly pasture, with sheep grazing in irregular small to medium sized open fields divided by drainage ditches, post and wire fences and occasional over-mature and unmanaged hedges. Some arable fields reach the river channel.

5.108 Remnant ridge and furrow is found on some pasture fields which provides time-depth to the landscape. Parkland landscapes extend into the river valley floodplain at Tyringham Hall (Grade II* Registered Park and Garden) and Gayhurst Court (Grade II Registered Park and Garden). These parklands are situated on either side of the Ouse, and both designed in part by Humphry Repton. Historic stone bridges at Olney, Tyringham and Sherington are listed buildings, with Olney and Tyringham bridges also designated as Scheduled Monuments.

5.109 Settlement is limited, although a Roman site at Olney and ring ditches and enclosures at Tyringham indicate previous occupation on the floodplain. Rural roads crossing the floodplain are restricted to Tyringham, Olney and Turvey.

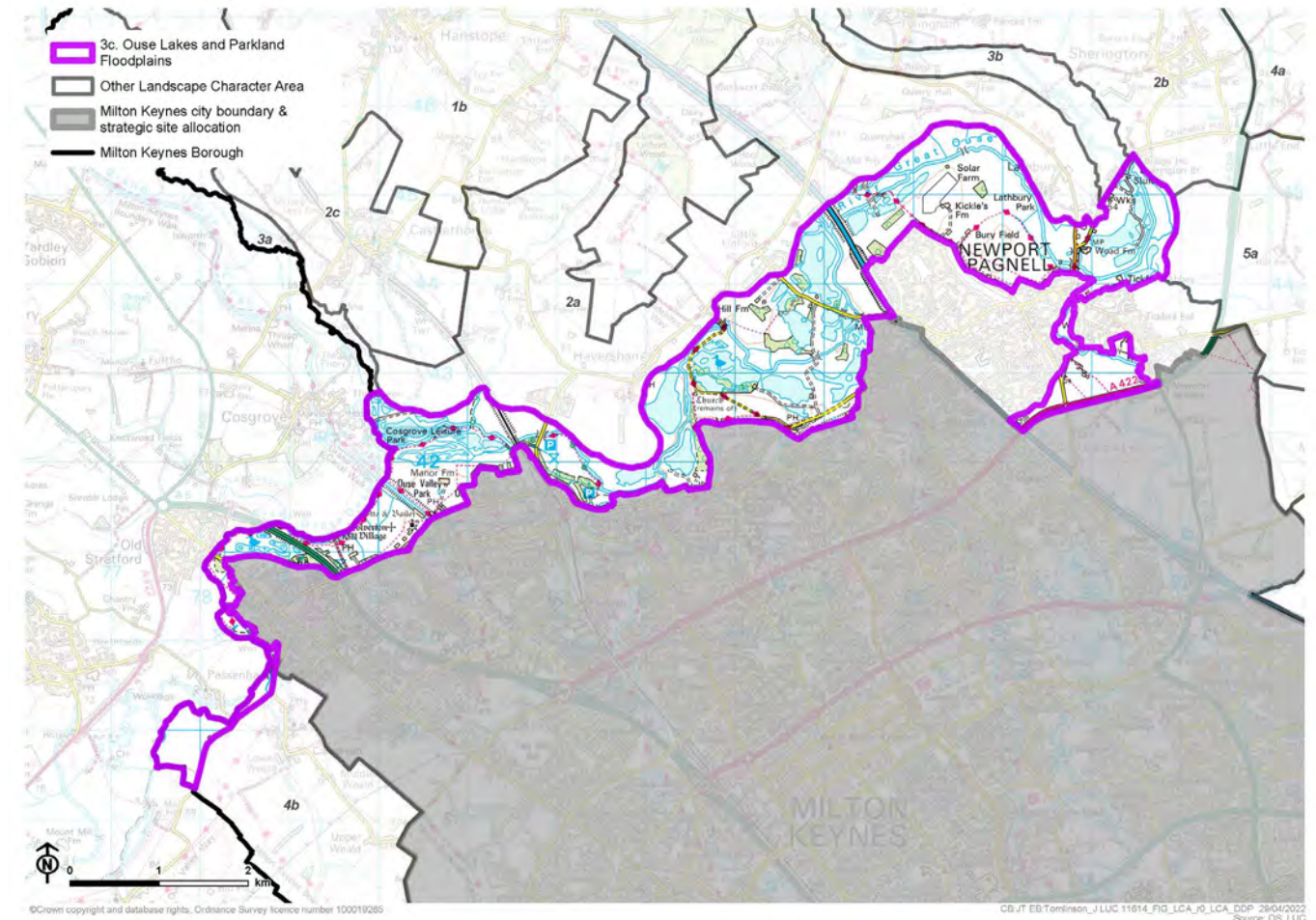
5.110 The promoted route of the Ouse Valley Way crosses the floodplain at various points, and connects settlements adjacent to the floodplain. Emberton Country Park was the first country park in England, created from a former gravel works and provides recreational opportunities.

5.111 There are views across the floodplain to the rising valley slopes, with the villages and towns within the adjacent LCAs (LCA 2b and 2c) visible, especially the church spire of St Peter and St Paul and Olney. This is a peaceful and rural landscape, with few modern intrusions, although there are views to the wind farm at Petsoe Manor and electricity turbines in adjacent LCTs.

5.112 The 18th century poet William Cowper lived at Olney and Weston. His poems included frequent references to the local landscape, and highlight the importance of the river as a place for people to enjoy as far back as the 18th century. He wrote in *The Poplar Field*; *'The poplars are felled, farewell to the shade And the whispering sound of the cool colonnade: The winds play no longer and sing in the leaves, Nor Ouse on his bosom their image receives'*.

5.113 Cowper also wrote about Digby's Walk in Gayhurst; *'Sweet Digby's Walk, cool shade in summer-time. Leads through an archway to the peaceful Ouse, Where boat and fishing rod supply the taste Of those who seek the meditative charms To memory dear of sylvan river scene.'*

3c Ouse Lakes and Parkland Floodplains



Location and unique characteristics

5.114 The Ouse Lakes and Parkland Floodplains LCA extends from Passenham in the west and skirts the northern edge of Milton Keynes city towards Newport Pagnell and Tickford, where it runs south, to the confluence of the Ouse and the Lovat.

5.115 The river floodplain is underlain by a variety of bedrock geology consisting of mudstones, siltstones, sandstones and some limestones— Kellaways Formation and Oxford Clay Formation in the east, Great Oolite Group in the south and Lias Group in the west. Two Local Geological Sites are present at Stony Stratford Nature Reserve and Haversham Mill River Bank.

5.116 The floodplain contains significant areas of ecologically important good quality semi-improved grassland and floodplain grazing marsh. The floodplain is well-treed, and much of the woodland is recorded as priority habitat deciduous woodland. Cricket bat willows, with a mixed age

structure, form a strong element of the riverside landscape, and are still harvested for cricket bat production.

5.117 Restored mineral workings contain lakes, scrapes, wetlands, scrub and plantations, and are home to many bird species. Kickle's Pits and Gayhurst Quarry is designated as LWS for its standing water habitats, and Manor Farm and Stony Stratford Nature Reserve LWS for its lowland meadow and extensive wetland habitats, while much of the River Ouse is a Wildlife Corridor and covered by the Ouse Valley Biological Opportunity Area. Some pasture fields used for sheep and horse grazing remain.

5.118 The riverside approaches to Newport Pagnell provide important open spaces, and separate the town from Tickford End, built around a now demolished 12th century priory. The Newport Pagnell Conservation Area extends into the LCA and marks the importance of these open spaces and the confluences of the Ouse and Lovat to the town's development. Bury Field is an open area of common land north of Newport Pagnell, first recorded as a common in 1276, and contains earthworks relating to Civil War defences built by

Parliamentarians in 1643. Historic crossing points including the 'Iron Trunk' canal aqueduct north of Old Wolverton and Tickford Bridge in Newport Pagnell over the River Ouzel, which was built in 1810 and is the only iron bridge in Britain that still carries main road traffic.

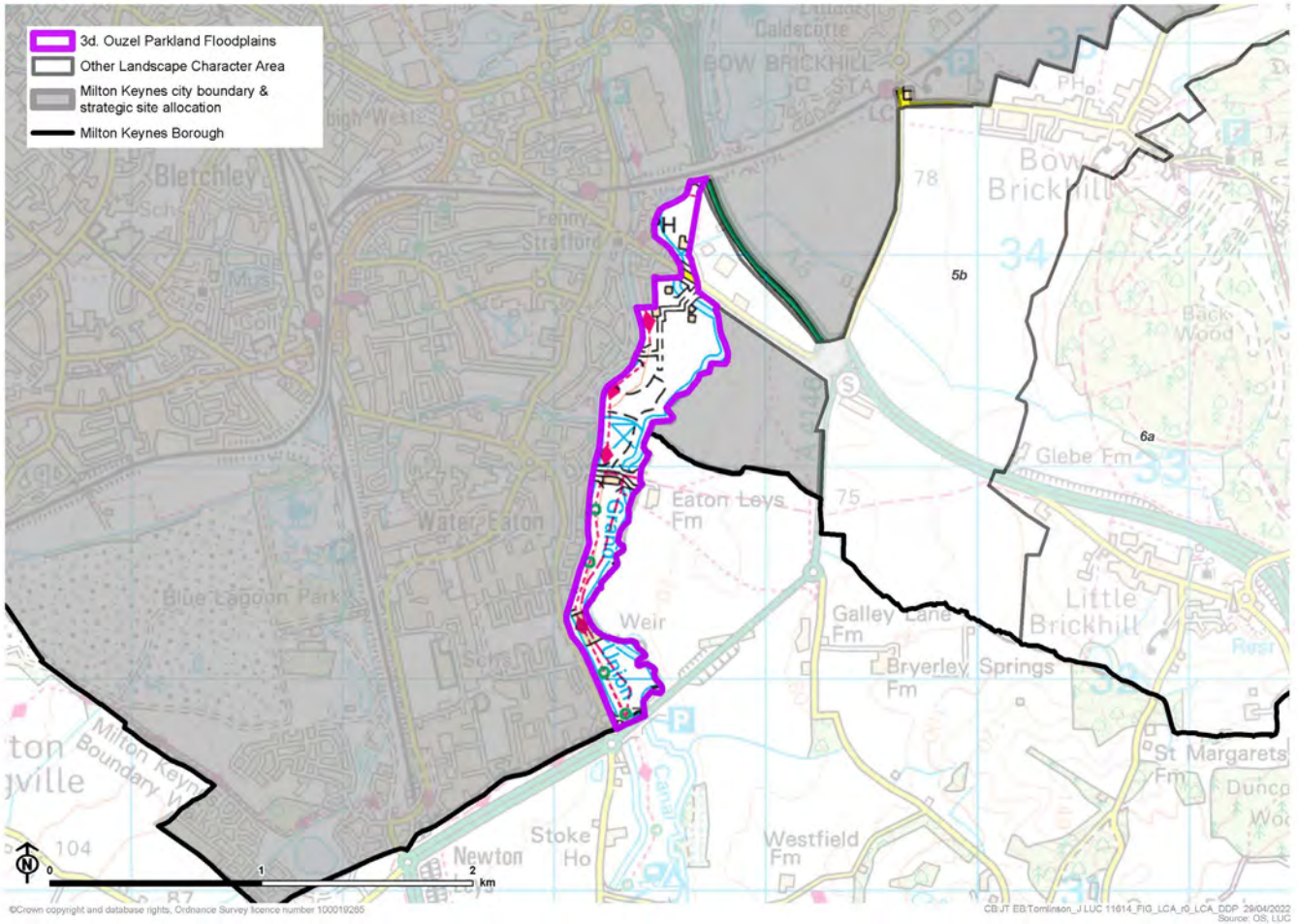
5.119 Old Wolverton was an important parish in the Norman and medieval eras. The motte and bailey castle, deserted medieval village, and monastic grange are now a Scheduled Monument, and there are a number of listed buildings including the Grade II* listed Church of the Holy Trinity. Settlement within the LCA is now limited to a few farmsteads.

5.120 This LCA has been impacted by mineral extraction, which has removed the traces of historic field patterns. Great Linford gravel and sand pits were opened in the 1940s, and used for the construction of the M1 motorway followed by construction of Milton Keynes city. The former gravel workings

have been restored into established recreational areas for walking, riding, cycling and swimming, although most are privately owned with restricted public access. The landscape is crossed by a number of public rights of way, including promoted routes Grafton Way, Ouse Valley Way, and Milton Keynes Boundary Walk and National Cycle Route 6. The Grand Union Canal also crosses the river floodplain. There is greater access to the river in this LCA than the rest of the LCT.

5.121 Modern influences on the landscape include recreational facilities including static caravans at Cosgrove Leisure Park, the major transport corridors of the M1, A6 and west coast mainline railway and solar farm north of Newport Pagnell. The road corridors and proximity to Milton Keynes city and Newport Pagnell reduce tranquillity and dark skies.

3d Ouzel Parkland Floodplains



Location and unique characteristics

5.122 The Ouzel Parkland Floodplains is a narrow river corridor that runs parallel to the Grand Union Canal and adjacent to the edge of Bletchley on the south east of Milton Keynes city.

5.123 Underlain by Kellaways Formation and Oxford Clay, the landscape lies around 75m AOD. The south of the LCA contains good quality semi-improved grassland and priority habitat lowland meadows, as well as areas of priority habitat deciduous woodland. Waterhall Park is designated as a LWS for its neutral grassland, pond and fen, and the Ouzel is designated as a Wildlife Corridor. Cricket bat willows are grown in the south and regularly harvested.

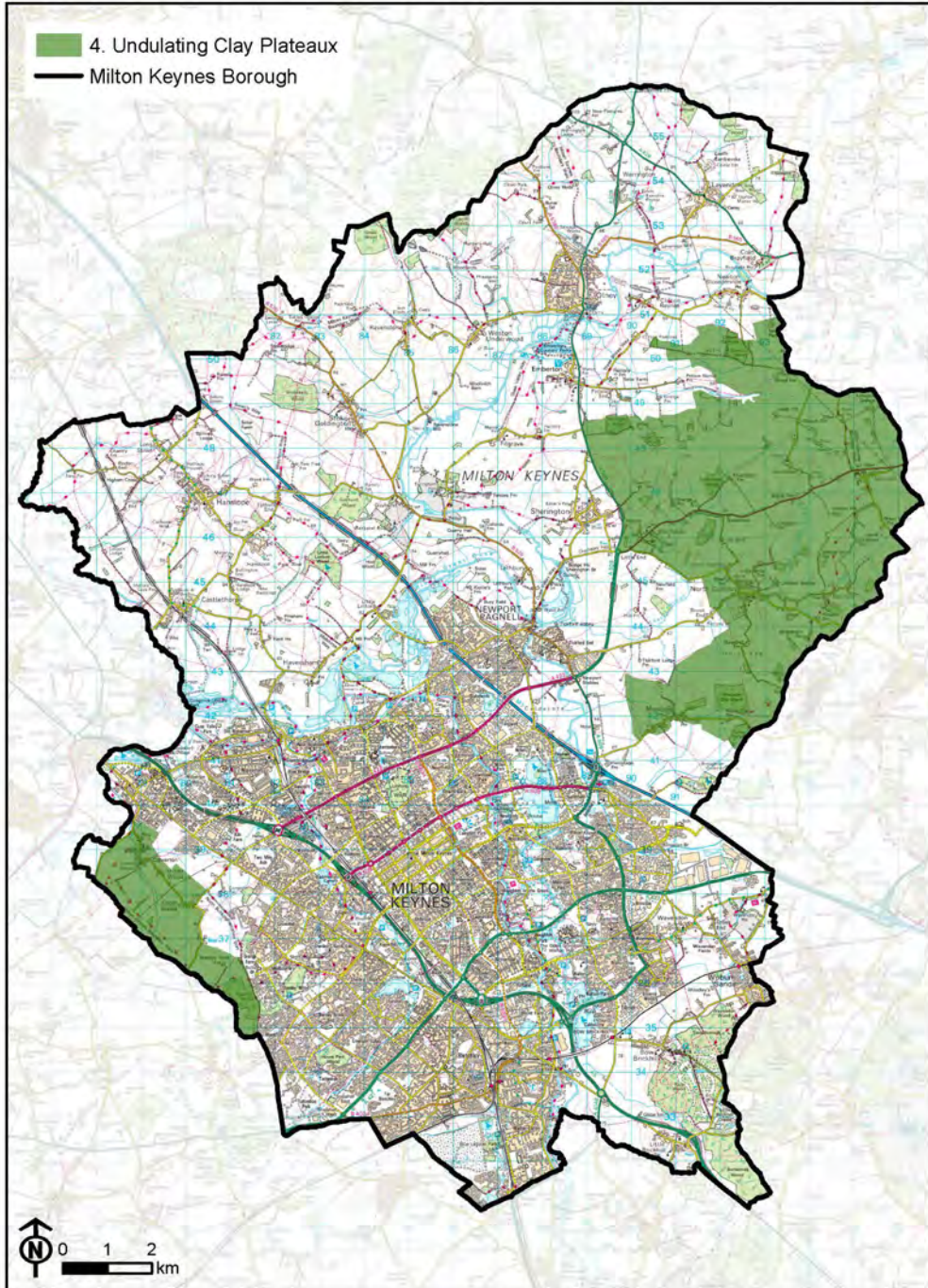
5.124 The landscape is now exclusively in recreational use, with Waterhall linear park in the south and extensive playing

fields of Bletchley rugby and cricket clubs, MK Irish FC and allotments in the north. Mill Farm and house are the only listed heritage assets in the landscape, although the Grand Union Canal is also a distinctive feature with brick humpbacked bridges.

5.125 The Grand Union Canal towpath is a long-distance route, and other public rights of way and open access through the park allow access to the LCA, and connect to the adjacent settlements, including new development at Eaton Leys.

5.126 The settlement edge of Fenny Stratford is partially visible through trees to the west, while the new development at Eaton Leys is the foreground to long distance views to the Wooded Greensand Ridge (LCA 6a). The Grand Union Canal is enclosed by distinctive Lombardy poplar trees. Noise from the A4146 and A5 is apparent, however the landscape has a largely tranquil character.

LCT 4: Undulating Clay Plateaux



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Landscape Character Areas

The Undulating Clay Plateaux LCT is subdivided into two LCAs:

- 4a: North Crawley Undulating Clay Plateau
- 4b: Weald Undulating Clay Plateau

Location and summary

The Undulating Clay Plateaux LCT comprises a low plateau located to the west and east of the urban edge of Milton Keynes city. The eastern and western boundaries follow the borough boundary. LCA 4a comprises the plateau between the Ouse valley to the north and west, the M1 to the south, and the Bedford and Central Bedfordshire borders to the east and south-east. LCA 4b abuts the Western Expansion Area of Milton Keynes.

This is a sparsely settled distinctly rural agricultural landscape, even in areas in close proximity to Milton Keynes city. It comprises a broad, gently undulating plateau, dissected by shallow river valleys, that stretches across the borough, from Buckinghamshire County in the west to Bedford and Central Bedfordshire in the east.



An elevated agricultural landscape with sparse settlement and extensive views across the borough and beyond. Ridge and furrow earthworks can be seen in the foreground.

Key Characteristics

- A gently undulating clay plateau, rising above the Ouse valley, ranging from 80m to 105m AOD. Underlain by mudstone, siltstone, sandstone, with some areas of argillaceous rocks. Glacial till deposits result in mixed clay, silt, sand and gravel soils.
- Small tributaries of the Ouse cross the landscape, including the Calverton and Chicheley Brooks, creating a rolling landform.
- Small, isolated blocks of broadleaved woodlands are scattered across the landscape, many recorded as priority habitat deciduous woodland and as ancient woodland, or plantations on ancient woodland.
- Large-scale arable fields dominate in LCA 4a, while there is a higher proportion of smaller pasture fields in LCA 4b. Fields are bound by hedgerows, with mature hedgerow trees.
- Limited settlement is concentrated in historic villages, often formed around manorial estates including Calverton and Astwood, with many listed buildings. Isolated historic farmsteads are also found across the landscape.
- A few minor roads cross the landscape, lined by hedgerows. The landscape is crossed by a number of PRoW, including the Milton Keynes Boundary Walk.
- The elevated plateaux allow expansive open views across the LCT and surrounding countryside. The plateaux provide a rural backdrop to urban areas of Milton Keynes city.
- A rural landscape, with limited development and dark skies in the east away from Milton Keynes city. The Petsoe Manor Farm wind turbines and electricity pylons are visually intrusive in this open landscape.

Physical and natural characteristics

5.127 A gently undulating plateau, which rises from the Ouse valley. It is elevated above much of the surrounding landscape and generally sits above 80m AOD. The plateau is bisected by a number of small tributaries of the River Ouse, including the Calverton Brook and Chicheley Brook. These watercourses have created shallow ridges and valleys, which make the undulation in the landscape more pronounced.

5.128 This LCT is predominantly underlain by clay, with the Kellaways Formation and Oxford Clay Formation predominant, although there are pockets of land underlain by the Great Oolite Group sandstones, limestones and argillaceous rocks. Glacial till drift deposits cover most of the LCT, leading to calcareous clayey soils that are slowly permeable and seasonally waterlogged, although there is also some loam or silt content. The soils provide land that is generally graded 3 (moderate-good), with some small areas of grade 4 (poor).

5.129 Small woodlands and copses are scattered across the LCT with little connectivity. Much of the woodland is recorded as priority habitat deciduous woodland, and of ancient origin, including Brandon's Wood and Dollars Grove. Many of the larger woodlands are recorded as PAWS, including Moulsoe Old Wood and Oakhill Wood, which contain conifer and beech, which are not in keeping with the landscape character. Woodland cover in LCA 4b once formed part of the wider medieval royal hunting ground of Whaddon Chase. Wildlife Corridors follow the Chicheley Brook and Oakhill Wood.

5.130 Land use is mixed, with the majority of the landscape in the east under arable cropping (LCA 4a), and sheep and cattle grazing more common in the west (LCA 4b). Hedgerow boundaries are generally intact, although there is some reinforcement with post and wire fencing.



Hedgerow-lined arable field with isolated woodland near Chicheley.

Historic and cultural characteristics

5.131 Field sizes and patterns vary across the landscape, but mostly commonly includes regular Parliamentary enclosures (that was further sub-divided soon after legal enclosure in the 18th and 19th centuries) and large-scale prairie fields in LCA 4a, particularly around Hardmead and Hurst End.

5.132 There are also earlier enclosures, including pre-18th century irregular enclosures (found around Shenley Dens Farm in LCA 4b, and around Chicheley in LCA 4a) as well as medieval assarts (where fields were created from woodland) around Shortwoods, Parrages Wood and Seven Acre Covert. Ridge and furrow earthworks are present in pasture fields, particularly around Calverton.

5.133 The earlier enclosures have created a hedgerow structure with taller hedges and large hedgerow trees including hawthorn and elm, with some mature tree rows including oak and ash.

5.134 The settlement pattern comprises small historic villages, many of which are associated with historic estates and manors, such as at Calverton and North Crawley, both of which are designated with Conservation Areas. The towered village churches are locally distinctive landmarks, including at Moulsoe and Calverton.

5.135 The local vernacular comprises brick and timber frame reflecting the availability of these materials on the clay plateau, rather than the limestone more common in the Ouse valley. However, Lower Weald, the largest hamlet in LCA 4b, contains a number of traditional limestone buildings with thatch and tile roofing.



The distinctive church tower at the historic village of Calverton.

5.136 Outside of the villages there is very limited 20th century development, with settlement confined to individual farms and isolated properties.

5.137 The LCT is accessed by a number of minor lanes which are lined by good quality hedgerows. There is a good network of PRoW connecting the settlements and providing access into the wider countryside, including the Milton Keynes Boundary Walk.

Visual and perceptual characteristics

5.138 The undulating plateaux rise gently to ridges that offer panoramic views across the landscape, such as Shenley Ridge in LCA 4b and at Wharley End along the boundary with Central Bedfordshire in LCA 4a. The plateaux, elevated above the surrounding landscape, provide a rural backdrop to Milton Keynes city.

5.139 Despite proximity to Milton Keynes city this is a tranquil rural landscape, with some areas of dark night skies. There are limited visual detractors, although pylon routes cross the edges of the LCT, and wind turbines at Petsoe Manor are visible across much of the LCT and surrounding landscape.



Electricity pylons and the Petsoe Manor wind farm are prominent visual detractors in LCA 4a.

Landscape evaluation

Landscape qualities

- The open elevated plateaux, with an intact agricultural character that provides an intact rural setting to Milton Keynes city.
- The deciduous woodland copses, some of ancient origin, trees and hedgerows that support biodiversity and provide carbon capture.
- The small streams that cross the LCA and help control flooding downstream.
- The varied field patterns of irregular pre-18th century enclosure and regular Parliamentary enclosure bound by hedgerows that provide interest and time depth.
- The general absence of development, with an intact settlement pattern of historic estates and villages with buildings constructed from local materials that provide a connection to history, cultural identity and aesthetic value.
- The open character of the landscape allowing uninterrupted views from ridges on the plateaux across the surrounding landscapes that provide visual interest and a sense of place.
- The network of PRoW, including the Milton Keynes Boundary Walk, that connect the settlements and wider countryside, and provide recreational value and contribute to well-being and health.

Landscape condition

5.140 The Undulating Clay Plateaux LCT is a largely rural landscape, which has retained its agricultural character despite proximity to Milton Keynes city. Fragmentation of historic field patterns and hedgerow field boundaries reduces the condition in some areas. There is limited connectivity between semi-natural habitats, and woodland management is not obvious. Tranquillity is disrupted by the urban edge of Milton Keynes city, and modern influences on the landscape are the major road corridors of the A509 and A442, electricity pylon routes, and the wind farm near Petsoe Manor Farm.

Forces for change

5.141 Key forces for change include:

- Changes in agricultural practices to large scale arable cropping with consequent field boundary loss which has fragmented the landscape pattern.
- The increasingly limited connections between semi-natural habitats, with scattered woodlands and fragmented hedgerows.
- Potential changes in flora and increase in pests and diseases as a result of climate change, with ash die back becoming increasingly apparent in the local landscape.
- Changes in water quality entering the streams and watercourses and loss of riparian vegetation due to harsh maintenance regimes, agricultural intensification and drainage works.
- Expansion of built development on the urban edge of Milton Keynes city at Western Expansion Area and Milton Keynes East affecting the rural character of the landscape, increasing traffic and resulting in changes to roads and land uses in the area, as well as levels of tranquillity.
- The uncluttered rural skylines are vulnerable to large scale or intrusive development, such as the wind turbines near Petsoe Manor Farm, and there may be pressure for future infrastructure development.
- Proposed Air Park development at Cranfield Airport (within Central Bedfordshire) may impact on views from the LCT and levels of tranquillity and dark night skies.
- Noise from roads which cross the landscape, particularly the A509 and A442, and the nearby M1, locally impacting landscape tranquillity.

Landscape strategy

5.142 The landscape strategy for the Undulating Clay Plateaux LCT is to retain the rural character of the farmland landscape, created by a combination of rolling arable landscape with small historic villages linked by rural lanes, with long views across surrounding countryside. The rural backdrop provided to Milton Keynes city should be retained, while ensuring a sense of separation between Milton Keynes city and the agricultural landscape.

Guidance

Landscape Management

- Manage and increase the biodiversity of agricultural fields by creating uncultivated margins to arable fields or converting some arable land to permanent pasture.
- Conserve and strengthen the traditional landscape pattern and structure, as well as increasing biodiversity interest through the maintenance or restoration of hedgerows with native species.
- Retain and enhance the biodiversity of watercourses and their associated habitats, by minimising water pollution from agriculture through sensitive land management practices, including restoration of buffer strips along watercourses.
- Increase the extent of native deciduous woodland/tree cover, particularly to link existing small deciduous woodlands, copses and hedgerows, using locally occurring, climate resilient, species.
- Consider opportunities for green infrastructure enhancement linking into adjacent boroughs, particularly in relation to Whaddon Chase which extends into Buckinghamshire County, as set out in the Milton Keynes Green Infrastructure Strategy¹⁵.
- Encourage progressive conversion of conifer or beech plantations within existing woodlands to indigenous broadleaved tree and shrub species.
- Manage and monitor invasive native or harmful species in woodlands and the impact of pathogens, pests and diseases as a result of climate change.
- Protect the valued recreational use of the landscape (PRoW), further enhancing opportunities for informal access and enjoyment through well maintained linked routes through farmland, as identified in the Green Infrastructure Opportunities Mapping¹⁶.
- Protect and enhance heritage assets within the LCT, including listed buildings and historic parklands e.g. at Chicheley. Retain ridge and furrow earthworks under existing pasture.

Development Management

- Conserve the rural character of the landscape, ensuring it continues to play a role in providing a rural setting for Milton Keynes city.
- Retain framed views to local landmark buildings, including the church towers at Moulsoe and Calverton.
- Conserve the distinctive vernacular of historic buildings and their rural settings, including within the Calverton and North Crawley Conservation Areas. Ensure key views within and from the villages referenced in the Conservation Area Appraisals are retained.
- Retain the characteristic settlement pattern of historic villages, avoiding out of scale residential developments. Reference the pattern of local buildings materials and local identity in any new development or boundary treatments.
- Encourage sensitive management of new development, ensuring the existing villages retain a sense of separation from new development on the edge of Milton Keynes city.
- Ensure any renewable energy generation is compatible with the guidance above, and with guidance set out in the MK Renewable Energy Landscape Sensitivity Assessment¹⁷. Renewable energy should be in scale with the landscape where possible, acknowledging that wind turbines may transcend the scale of existing features in the landscape.

¹⁵ AECOM, Milton Keynes Green Infrastructure Strategy (2018)

¹⁶ <https://bucks.mknep.co.uk/wp-content/uploads/2018/10/Green-Infrastructure-Opportunity-Zone-09.pdf>

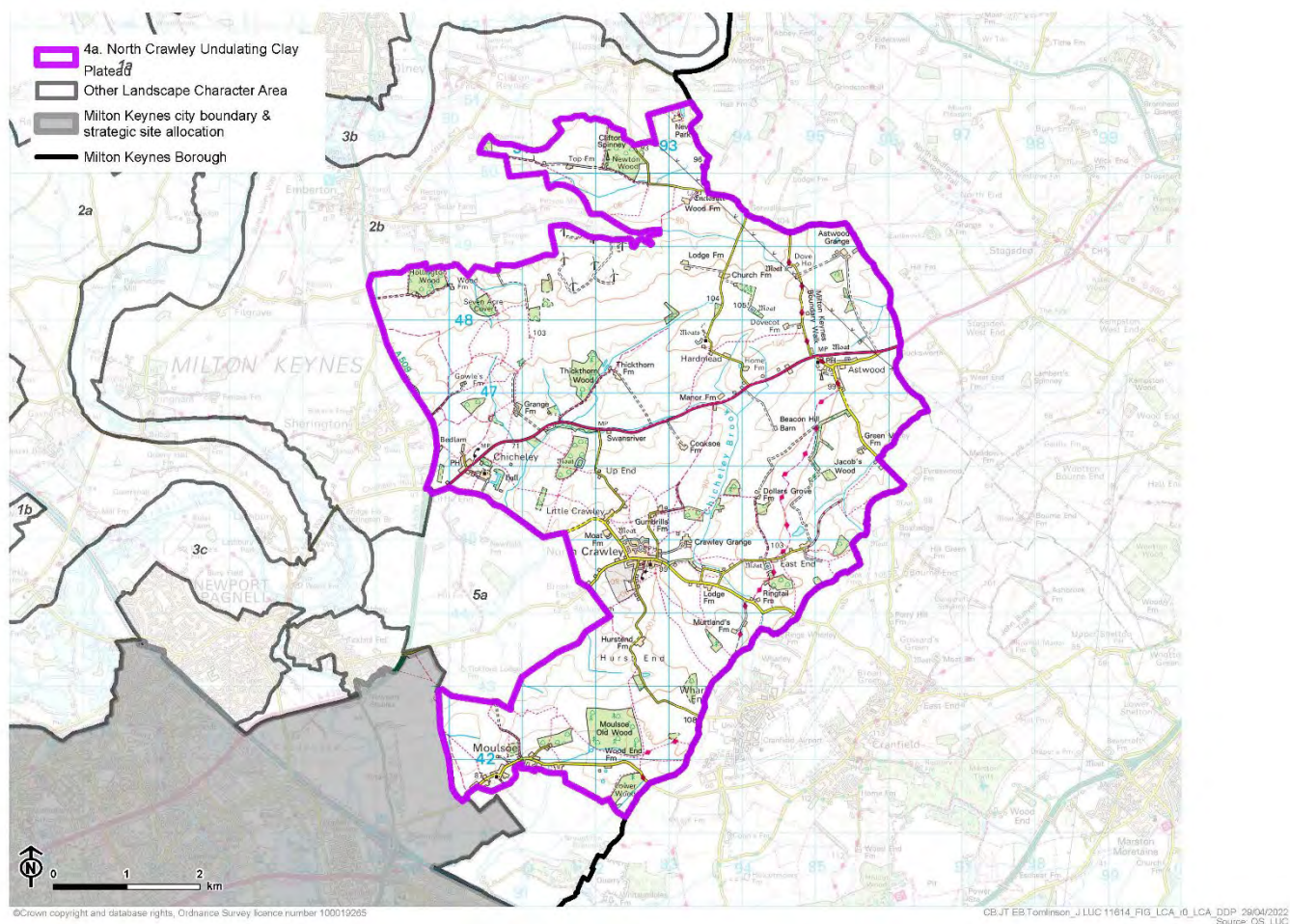
¹⁷ Gillespies, Landscape Sensitivity to Wind Turbine and Solar PV Development (2016)

Electricity infrastructure associated with renewable energy generation should be efficiently planned to minimise the number of lines required, routing in accordance with the Holford Rules¹⁸.

- Manage the existing PRow network, and consider opportunities for extending it, particularly where this can tie-in with wider initiatives to promote and enable sustainable transport in association with the extensions to Milton Keynes city.
- Ensure a strong landscape structure to the adjacent parkland areas within the Western Expansion Area and Milton Keynes East, providing a landscape buffer to soften the impact of residential areas on adjacent landscapes.

¹⁸ <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf>

4a North Crawley Undulating Clay Plateau



Location and unique characteristics

5.143 North Crawley Undulating Clay Plateau LCA 4a lies to the east of the borough, above the valleys of the Ouse and Ouzel. It is a large undulating plateau bisected by small watercourses, including the Chicheley Brook, a tributary of the River Ouse, which flows from Cranfield towards North Crawley.

5.144 Numerous small and some larger deciduous woodland blocks are scattered throughout the LCA. Many woods are of ancient origin, including Hollington Wood, a broadleaved, mixed and yew woodland designated as an LWS. Riparian woodland lines the Chicheley Brook, which is designated as Wildlife Corridor.

5.145 Hedgerows are in generally good condition, with mature hedgerow trees. Replanting has been on a modest scale, and includes plantations of poplars seen from the A422 and cricket bat willow on the Chicheley estate.

5.146 Land use is predominantly arable, in large-scale fields. Areas of sheep and horse grazing are found adjacent to the small settlements.

5.147 The historic field pattern is varied, which reflect the differing dates of enclosure of the three major estates, Chicheley, North Crawley and Moulsoe. 17th century enclosure patterns around Chicheley have resulted in more organic and species rich hedgerows than subsequent enclosure around North Crawley. There are some remnant areas of ridge and furrow for example at Newfield Spinney.

5.148 Four moated sites, now designated as Scheduled Monuments, are the remains of historic manors, and indicate a high level of wealth and status in the area during the medieval period. Chicheley is the largest and most intact estate – Chicheley Hall is an 18th century red brick house (Grade I listed), surrounded by formal gardens and a small park, including a three-sided canal. The gardens and park are designated as a Grade II* Registered Park and Garden, and there has been little alteration to the house or gardens.

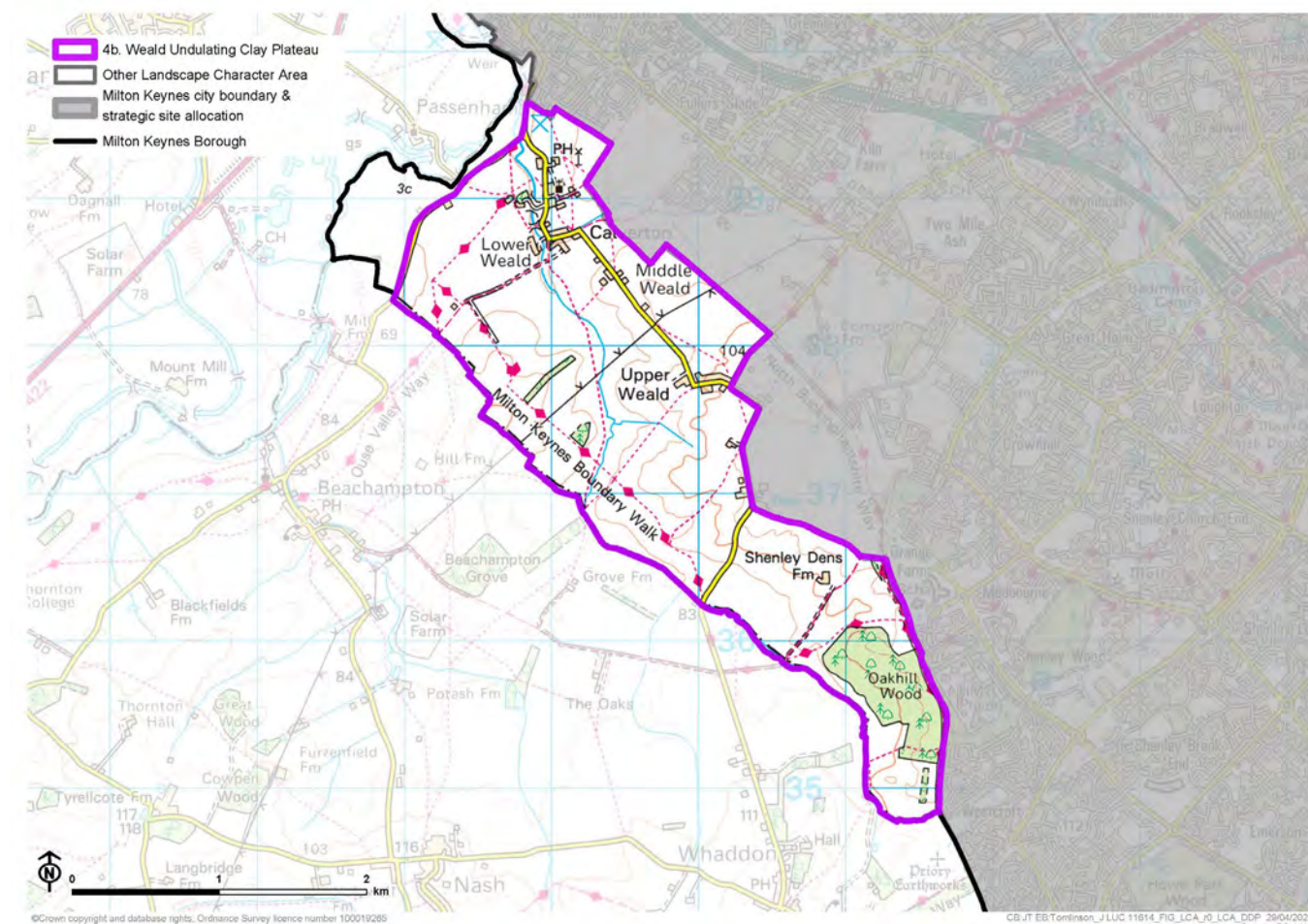
5.149 Settlement within the LCA is concentrated south of the A422 Newport Road, with isolated farmhouses, often listed buildings, in the north.

5.150 North Crawley is the largest village in the LCA, and has a Conservation Area centred around the 12th century Church of St Firmin. Brick forms the characteristic local vernacular, with some thatch. A parkland character is retained outside of North Crawley.

5.151 The large-scale arable fields and limited settlement creates a remote, empty character in places, particularly north of the A422, and there are dark skies to the east. Despite the rural character, road noise from the busy A422 and A509 within the LCA and the M1 to the west, is intrusive, reducing tranquillity. Cranfield Airport to the south-east (within Central Bedfordshire) is also a modern influence on the landscape. The seven-turbine wind farm near Petsoe Manor Farm and electricity pylons in the east are a dominant feature, detracting from the rural character of the landscape, and are highly visible both within the LCA and from the surrounding landscape.

5.152 There are long panoramic views south to the Brickhill Wooded Greensand Ridge (LCA 6a), across Milton Keynes city to the west, and across the Ouse valley to the Wooded Wolds (LCA 1a and 1b). The church spire of St Peter, Olney is a landmark feature in views to the north.

4b: Weald Clay Plateau



Location and unique characteristics

5.153 Weald Undulating Clay Plateau LCA lies on the western edge of the borough, adjacent to the Western Expansion Area of Milton Keynes city. The plateau is incised by the Calverton Brook, a small tributary of the Ouse, which has created a steep sided valley in the centre of the LCA.

5.154 Woodland cover is mainly concentrated at Oakhill Wood, which once formed part of the wider medieval royal hunting ground of Whaddon Chase. It is now a mixed coniferous plantation, with a central block of oak and hazel coppice, and is forms part of the North Bucks Way Wildlife Corridor. There are smaller linear woods along the Milton Keynes Boundary Walk, recorded as priority habitat deciduous woodland and riparian woodland follows the course of the Calverton Brook.

5.155 Small areas of priority habitat traditional orchard are recorded at Calverton Place and Lower Weald. Unimproved species-rich calcareous grassland is found at a disused quarry on the northern boundary and is designated as the Old

Limestone Quarry LWS. The Ouse Valley and Whaddon Chase Biological Opportunity Areas extend into the north and south of this LCA.

5.156 Land use is predominantly pastoral, most commonly for sheep grazing. Hedgerows are generally in good condition, although there is some reinforcement with post and wire fencing. Horse grazing in some parts of the landscape contributes a slightly unmanaged character.

5.157 The LCA has a uniform field pattern of Parliamentary enclosure that was further sub-divided soon after legal enclosure in the 18th and 19th centuries. Shenley Dens Farm in the south has a field pattern of pre-18th century irregular enclosure, and examples of ridge and furrow are evident on the valley slopes of Calverton Brook.

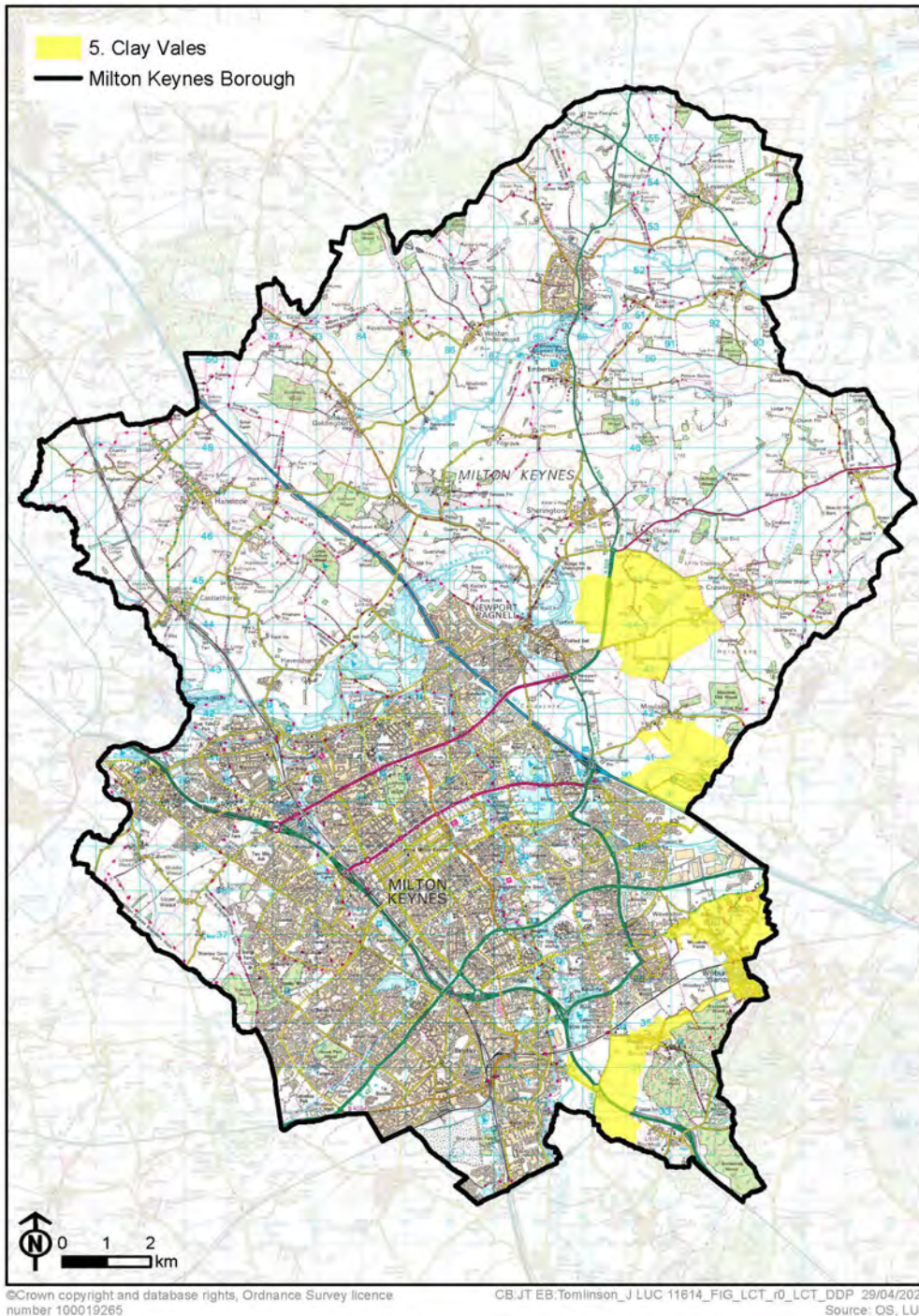
5.158 Settlement is confined to the hamlets of Lower, Middle and Upper Weald (collectively known as Calverton) – Lower and Middle Weald are designated as the Calverton Conservation Area. There are a number of listed buildings, including Calverton House, a Grade II listed Georgian country

house set within a distinctive parkland landscape, and the late 15th or early 16th century stone Calverton Manor House (Grade II*).

5.159 The Grade II listed Shenley Dens Farm, on the ridge north of Oakhill Wood, is now derelict. It is part of the historic landscape associated with the Whaddon Estate, within Buckinghamshire County.

5.160 The LCA still retains a strong sense of separation from Milton Keynes city, despite the recent development of the Western Expansion Area. The valley landform along the Calverton Brook creates an enclosed character, while there are extensive views across the Aylesbury Vale to the west and to wooded horizons to the north from higher ground. Electricity pylons and noise from the A5 to the north are intrusive modern elements which detract from the rural character.

LCT 5: Clay Vales



Landscape Character Areas

The Clay Vales LCT is subdivided into two LCAs:

- 5a: Lower Ouzel Clay Vale
- 5b: Upper Ouzel Clay Vale

Location and summary

The Clay Vales LCT comprises a sweep of relatively low-lying farmland that wraps around the eastern and south eastern edge of Milton Keynes city. Parts of the eastern and southern boundary of the LCT follow the borough boundary with Central Bedfordshire and Buckinghamshire authorities respectively. The boundary with LCT 6 marks the transition to the greensand geology and higher slopes of the wooded ridge above Bow Brickhill. The northern boundary with LCT 4 marks the transition to the higher undulating clay plateau around North Crawley.

This is a relatively flat, open landscape predominantly in arable use. It retains its rural character but is visually influenced by the urban edge of Milton Keynes city.



Flat arable fields visually influenced by the urban edge of Milton Keynes city, with a wooded horizon provided by the Wooded Wolds.

Key Characteristics

- A relatively flat landscape which falls gently towards the Ouse and Ouzel rivers. Underlain by clay with till deposits in the east and north-east, giving rise to slightly acid loamy and clayey soils.
- Large scale arable landscape intensively farmed for mixed crops. Smaller areas of pasture in LCA 5b, often for horse grazing close to settlements. Hedgerows are often fragmented or overgrown.
- Limited woodland cover, except for priority habitat deciduous woodland around Wavendon House and along the Chicheley Brook, and some conifer shelterbelts.
- Field pattern formed by straight edged Parliamentary enclosure, with some pre-18th century irregular enclosure. Some ridge and furrow earthworks survive at Bow Brickhill and Dropshort Farm.
- Historic parkland at Wavendon House, with ornamental lakes and mature trees, designated as a Grade II listed Registered Park and Garden.
- Settlement concentrated at Woburn Sands and Bow Brickhill (in LCA 5b), which retain a rural character despite their proximity to Milton Keynes city. Scattered farms and farmsteads are often historic.
- The landscape is influenced by busy roads and railway links, as well as residential and commercial development expanding from Milton Keynes city.
- Public rights of way provide connections between Milton Keynes city and the wider countryside.
- Extensive open views to the higher landscapes of the North Crawley Undulating Clay Plateau (LCA 4a) and the Greensand Ridge (LCA 6a), due to the flat topography and limited woodland coverage. The built form of Milton Keynes city is evident in views. Small areas of visual enclosure are found along the wooded course of the Chicheley Brook.

Physical and natural characteristics

5.161 A relatively flat landscape that gently slopes towards the River Great Ouse and Ouzel, with slopes ranging from 90m to 60m AOD. A network of field ditches and a small number of streams drain the LCT, including the Chicheley Brook, a tributary of the River Ouse (LCA 5a), and tributaries of the River Ouzel (LCA 5b) which drain the Brickhill Greensand Ridge (LCA 6a).

5.162 The geology is dominated by Kellaways Formation and Oxford Clay Formation (mudstones, siltstone and sandstone) dating from the Jurassic period, laid down in shallow seas. This is overlain by a band of glacial till deposits in the east.

5.163 The geology gives rise to medium to heavy, clayey loam to silty loam, soils which support arable farming in large open fields. Some pockets of pasture populate smaller, more enclosed fields around settlements, mostly in use as horse paddocks.

5.164 The intensively managed agricultural land has limited biodiversity. Priority habitats are limited to deciduous woodlands along the Chicheley Brook (locally notified as a Wildlife Corridor) and around Wavendon House. Tree cover elsewhere is limited to small scattered deciduous woodlands. Deciduous woodland blocks and conifer shelterbelts are located on the edge of the settlements and along roads. A small part of the Ouse Valley Biological Opportunity Area extends into LCA 5a.

5.165 Hedgerows are often gappy and unmanaged, or reinforced with wire fencing. Roadside hedgerows are more intact, with mature hedgerow trees.



Riparian woodland along Chicheley Brook.

Historic and cultural characteristics

5.166 The field scale is mostly medium to large, with most fields originating from straight edge late 18th century Parliamentary enclosure, and smaller areas of irregular pre-18th century enclosure. There has been localised boundary loss in the 20th century, creating large fields. Some areas of ridge and furrow earthwork survive under pasture e.g. in Bow Brickhill and at Dropshort Farm, Watling Street (5b).

5.167 Land use is predominately arable, although there are areas of pasture for sheep and horse around the settlements in LCA 5b.

5.168 Historic assets are concentrated in LCA 5b, around Cross End and Wavendon House which is characterised by historic parkland, mature tree-lined hedges and sinuous narrow lanes. The parkland at Wavendon House, with linked ornamental lakes surrounded by mature trees, is designated as a Grade II listed Registered Park and Garden.

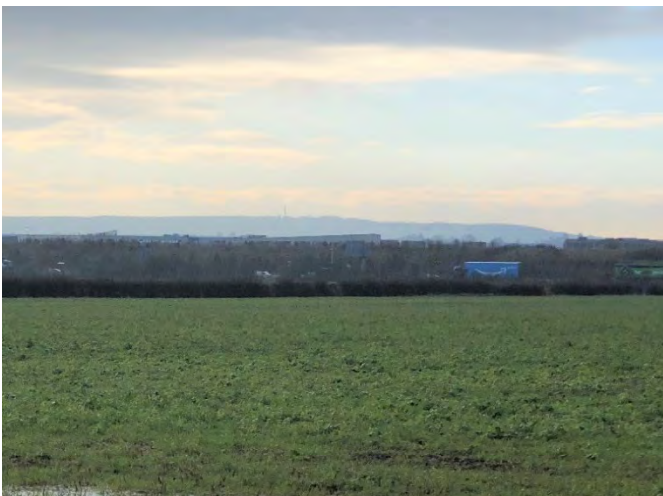
5.169 Settlement is concentrated in LCA 5b, at Woburn Sands, Wavendon and Bow Brickhill. Outside of these settlements, there are small farmsteads and hamlets, some of which are listed buildings. Vernacular materials in the LCT are typically red brick, with clay or grey slate tiles.

5.170 This is an accessible landscape with a number of PROW connecting settlements and providing access to the countryside within the borough and into Central Bedfordshire to the east. The Milton Keynes Boundary Walk promoted route runs from Wavendon Park to Woburn Sands.

5.171 Roads within the LCT are generally rural, although the A5 and A509 cross the landscape, and the M1 borders LCA 5a. The Bedford to Bletchley railway (formerly the Oxford to Cambridge route) passes through Woburn Sands.

Visual and perceptual characteristics

5.172 Views within the LCT are relatively open, due to the flat landform of the agricultural landscape and limited woodland, with long distance views east to the elevated clay plateau around Moulsoe (LCA 4a) and the Greensand Ridge at Brickhill (LCA 6a). The LCT provides a rural foreground to views from Milton Keynes city towards the elevated landscapes to the east and south.



The M1 seen in views south from LCA 5b to the Greensand Ridge.

5.173 The built edge of Milton Keynes city is apparent in views from the LCT, particularly new development north of Lower

End Road. Large-scale commercial developments including warehouses and distribution centres along the M1 at Magna Park are a strong visual feature, which detract from the rural character.

5.174 The proximity of Milton Keynes city and presence of busy trunk roads introduce light pollution and reduce tranquillity across the LCT.



Open flat arable fields with intermittent hedgerows, with views to villages and woodlands on the horizon from LCT 4a.

Landscape evaluation

Landscape qualities

- The remaining semi-natural habitats including woodland copses, trees and hedgerows that support biodiversity, and provide carbon capture.
- The heritage features important to landscape character (particularly the surviving ridge and furrow earthworks, field patterns of irregular pre-18th century enclosure bound by hedgerows, the parkland at Wavendon Park, the historic spa town of Woburn Sands and historic buildings constructed from local materials) that provide a connection to history, cultural identity and aesthetic value.
- The rural character of the area, with open views across the flat farmland to higher wooded landscapes to the east, which provide a sense of separation between Milton Keynes city and the wider countryside and contributes to mental well-being and health – especially important in contrast to the adjacent urban area of Milton Keynes city.
- The network of PRoW, including the Milton Keynes Boundary Walk, that connect the settlements and wider countryside and provide recreational value and contribute to well-being and health.
- The rural foreground the LCT provides to the Greensand Ridge and Clay Plateau that forms a sense of place and a setting to Milton Keynes city.

Landscape condition

5.175 The Clay Vales LCT is influenced by proximity to large-scale residential and commercial development expanding from Milton Keynes city. There are limited semi-natural habitats within the LCT, and fragmentation of historic field patterns and hedgerow field boundaries reduces condition in some areas. Modern influences on the landscape include the major road corridors of the M1, A5, A414 and A509, and visual influence of Milton Keynes city.

Forces for change

5.176 Key forces for change include:

- Changes in agricultural practices to large scale arable cropping with consequent field boundary loss which has fragmented the traditional landscape pattern.
- The loss or decline of boundary hedgerows and their replacement with post and wire fencing.
- Increased horse grazing close to settlements, leading to subdivision of fields into paddocks, horse tape and fencing, stabling and shelters resulting in increased suburbanisation of the rural landscape.
- The increasingly limited connections between pockets of semi-natural habitats, with scattered woodland copses and fragmented hedgerows.
- The use of non-native species in hedgerows or shelterbelts (including conifer species) that are prominent features of the landscape and out of keeping with the character of the landscape.
- Potential changes in flora and increase in pests and diseases as a result of climate change, with ash die back becoming increasingly apparent in the local landscape.
- Changes in water quality entering the streams and ditches or loss of riparian vegetation due to harsh maintenance regimes, agricultural intensification and drainage works.
- The dilution of rural character due to the prevalence of urban fringe features (including garden centres and allotments) and the consequent lack of visual cohesiveness due to the variety in built form.
- Current and future expansion of built development on the urban edge of Milton Keynes city, especially South East Milton Keynes and Milton Keynes East, affecting the rural character of the landscape as well as levels of tranquillity.
- Increasing road traffic, particularly on the A5 and M1, but also on rural roads impacting landscape tranquillity. Road widening or new roads could also erode rural character.
- Potential pressure for renewable infrastructure (e.g. wind turbines and solar farms).

Landscape strategy

5.177 The landscape strategy for the Clay Vales LCT is to retain a rural farmland landscape with a separate character to the urban areas of Milton Keynes city, with strong recreational links.

Guidance

Landscape Management

- Manage and increase the biodiversity of agricultural fields by creating uncultivated margins to arable fields or converting some arable land to permanent pasture.
- Conserve and strengthen the traditional landscape pattern and structure, as well as increasing biodiversity interest through the maintenance or restoration of hedgerows with native species.
- Increase the extent of native deciduous woodland/tree cover, particularly around settlements, using locally occurring species, to link with existing small deciduous woodlands, copses, and hedgerows, as set out in the Milton Keynes Green Infrastructure Strategy¹⁹.
- Encourage progressive removal of conifer hedgerows and shelter belts where appropriate and replacement with native species.
- Manage and monitor invasive native or harmful species in woodlands and the impact of pathogens, pests and diseases as a result of climate change.
- Encourage appropriate management of streams and drainage ditches to improve biodiversity and connectivity of these habitats and establish buffer strips to minimise run-off. Identify opportunities for green infrastructure enhancement.
- Protect the valued recreational use of the landscape (PRoW), further enhancing opportunities for informal access and enjoyment through well maintained linked routes through farmland, particularly adjacent to urban areas.
- Protect and enhance heritage assets within the LCT, including ridge and furrow earthworks and the historic parkland and Scheduled Monument at Wavendon Park.

Development Management

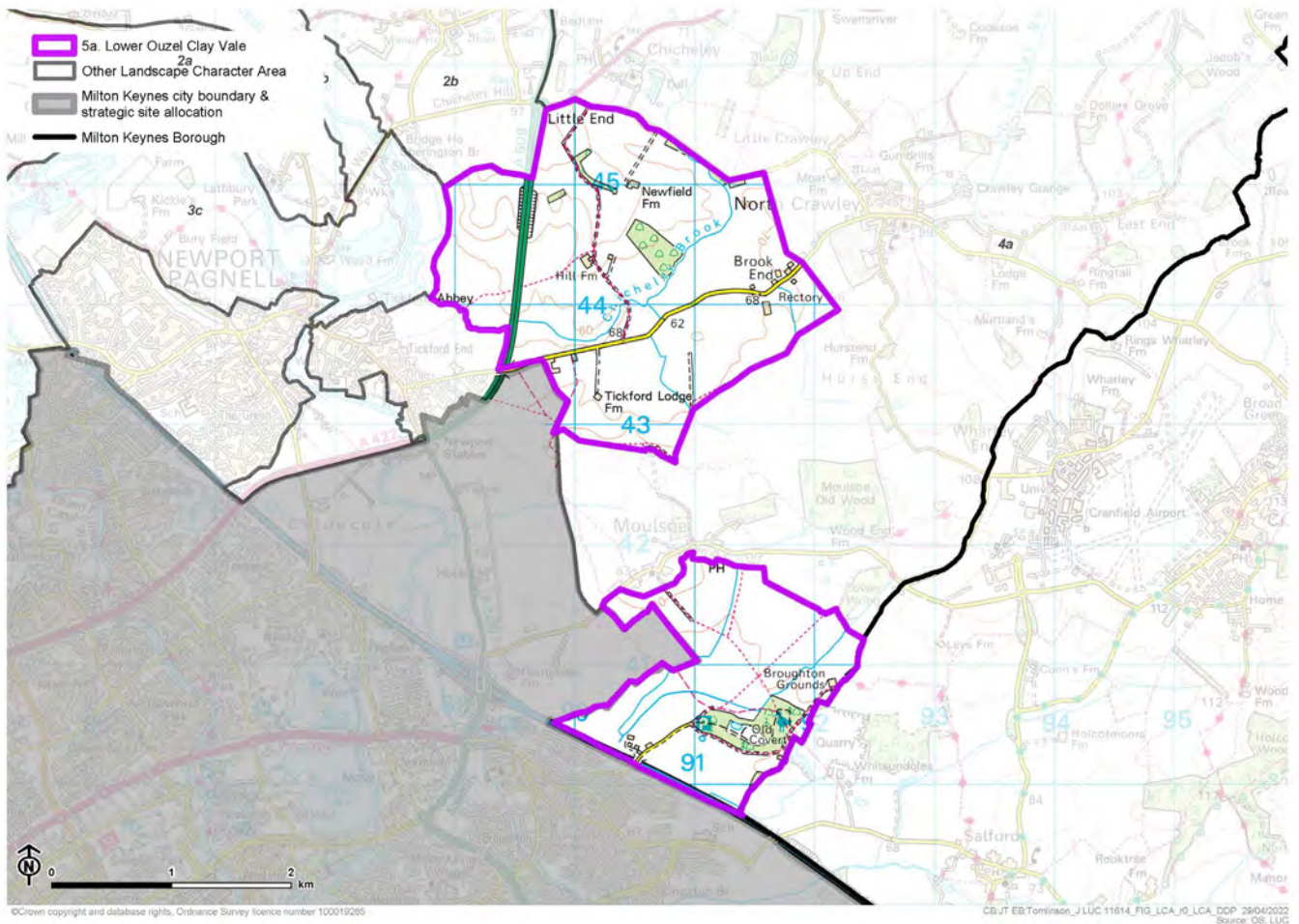
- Retain framed views across farmed landscape to the Brickhill Greensand Ridge and consider the impact on views from the surrounding higher land in relation to any proposed change.
- Integrate new development and improve the urban edge of Milton Keynes city through the use of native hedgerows and woodlands.
- Encourage sympathetic integration of horse paddocks and associated stables through maintenance and improvement of existing field boundaries.
- Conserve the distinctive vernacular of historic buildings and their rural setting, including within Woburn Sands Conservation Area. Reference the pattern of local buildings materials and local identity in any new development or boundary treatments.
- Ensure any renewable energy generation is compatible with the guidance above, and with guidance set out in the MK Renewable Energy Landscape Sensitivity Assessment²⁰. Renewable energy should be in scale with the landscape where possible, acknowledging that wind turbines may transcend the scale of existing features in the landscape. Electricity infrastructure associated with renewable energy generation should be efficiently planned to minimise the number of lines required, routing in accordance with the Holford Rules²¹. Manage the existing PRoW network, and consider opportunities for extending it, particularly where this can tie-in with wider initiatives to promote and enable sustainable transport in association with proposed development.
- Conserve a rural separation between Milton Keynes city and outlying villages such as Bow Brickhill.

¹⁹ AECOM, Milton Keynes Green Infrastructure Strategy (2018)

²⁰ Gillespies, Landscape Sensitivity to Wind Turbine and Solar PV Development (2016)

²¹ <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf>

5a Lower Ouzel Clay Vale



Location and unique characteristics

5.178 The Lower Ouzel Clay Vale is a small LCA that lies to the east of Newport Pagnell, north of the M1 and forms part of the lower slopes of the Undulating Clay Plateaux (LCT 4) to the east. The LCA is in two parts, separated by land allocated for development as part of Milton Keynes East.

5.179 Glacial till drift geology is found in the north, evidence of a glacial past. The Chicheley Brook, a tributary of the River Ouse runs in the north of the LCA, and provides localised enclosure. Riparian vegetation, some recorded as priority habitat deciduous woodland, lines the Chicheley Brook, which is designated locally as a Wildlife Corridor.

5.180 Small areas of priority habitat deciduous woodland are found across the area, including ancient woodland at Mouthslade Spinney and Newfield Spinney. The A509 is also designated as a Wildlife Corridor, and part of the Ouse Valley Biological Opportunity Area extends into the area.

5.181 The LCA has a varied historic enclosure field pattern with pre-18th century irregular enclosure, Parliamentary enclosure that has subsequently been subdivided and a few

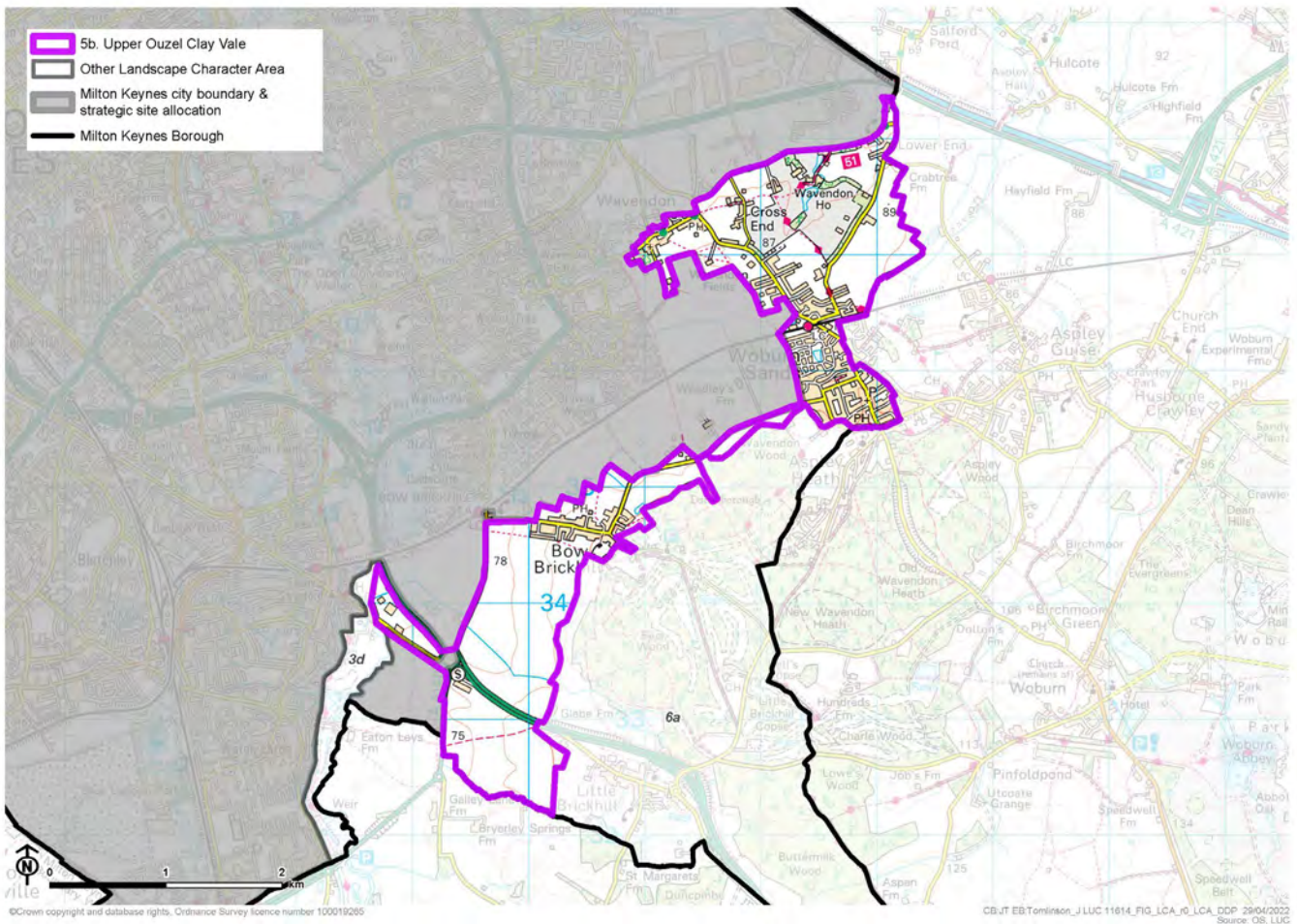
areas of larger prairie fields, amalgamated as a result of 20th century intensive agriculture. The land is in use for arable cropping, with large fields bound by gappy hedgerows with post and wire reinforcement.

5.182 Settlement is limited to isolated farms, two of which – Hill Farm and Newfield Farm – are Grade II listed. A sewage works and farm with large glasshouses on Chicheley Road are incongruous modern elements in the landscape.

5.183 This LCA is partially inaccessible, which provides a remote character in places. Public rights of way provide connections to the neighbouring settlements of Moulsoe, Chicheley and Newport Pagnell.

5.184 This rural and occasionally isolated landscape is altered by its proximity to Milton Keynes East and the presence of the A509 and the M1, which reduce tranquillity. Views to the north and north east are terminated by woodland on the Clay Plateaux, while there are long views south over Milton Keynes city to the Greensand Ridge (LCA 6a).

5b Upper Ouzel Clay Vale



Location and unique characteristics

5.185 Upper Ouzel Clay Vale LCA is located to the south of borough adjacent to the urban edge of Milton Keynes city, which lies to the north and west. This narrow area wraps around the Brickhill Greensand Ridge (LCA 6a) which rises to the south-east. The eastern and south-western boundaries are formed by the borough boundaries with Bedfordshire and Buckinghamshire respectively.

5.186 The landform gently slopes down from LCA 6a Brickhill Greensand Ridge at approximately 90m AOD westwards towards the edge of Milton Keynes city, at approximately 75m AOD. The slope is more pronounced south of Bow Brickhill where it falls towards the River Ouzel.

5.187 Land use is generally pasture, often sheep with some horse grazing. Arable fields are found south of Bow Brickhill. The former golf course at Wavendon has an unmanaged character and does not appear to be in use.

5.188 The Buckinghamshire HLC indicates historic field patterns around Bow Brickhill which are Parliamentary

enclosures which have subsequently been divided. There are remnant areas of pre-18th century irregular and regular enclosures around Wavendon, and pockets of ridge and furrow earthwork.

5.189 Buried archaeological remains of the Roman city of Magiovinium are evidence of Roman occupation in the area. The remains are designated as a Scheduled Monument, and although currently on the Heritage at Risk Register due to vulnerability to arable ploughing and new development at Eaton Leys, its status is improving and will be reverted to a lowland meadow park with interpretation.

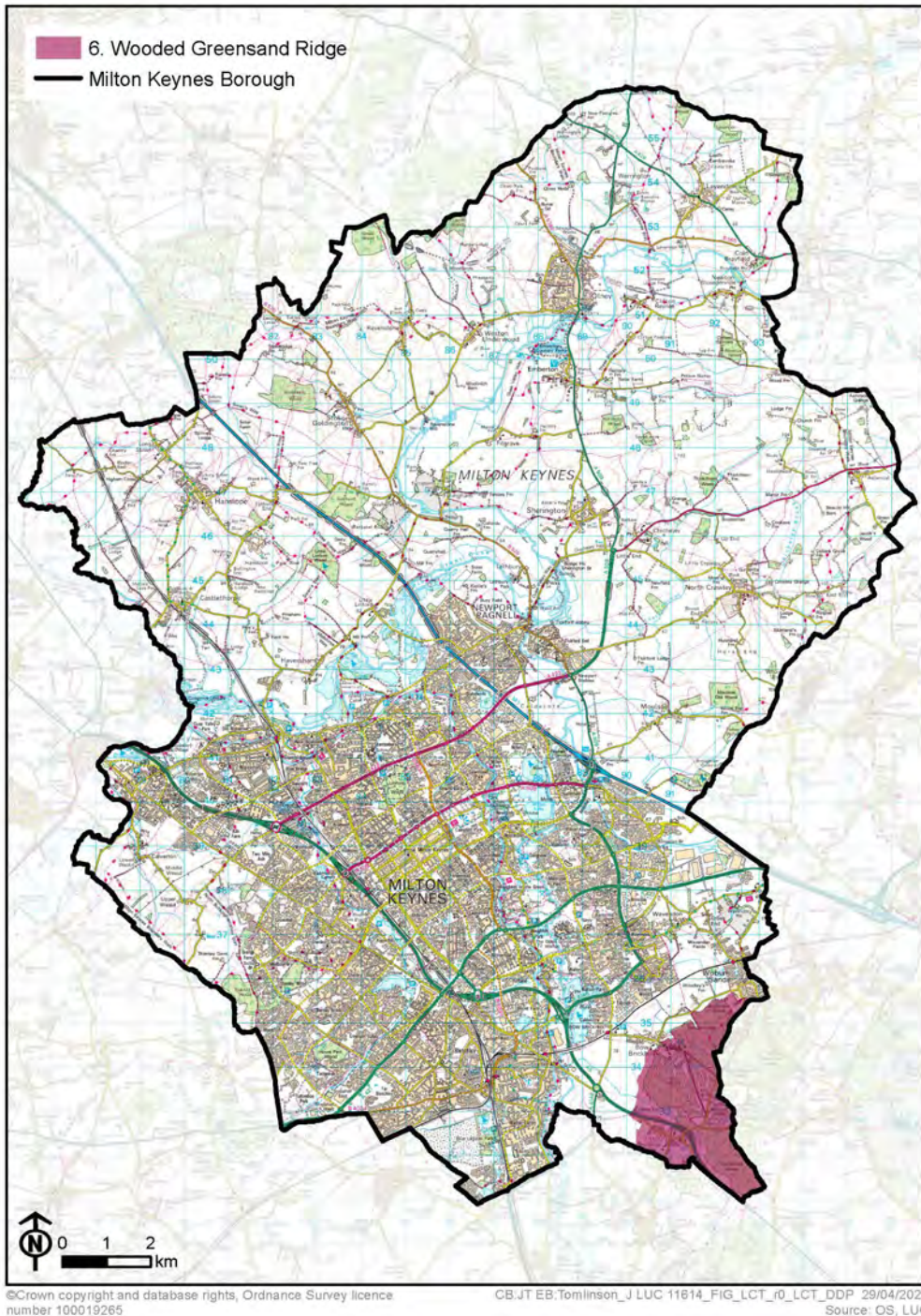
5.190 Wavendon is a small village with a Grade II* church originally dating from the 13th and 14th century. The historic hamlet of Cross End, with a number of thatched cottages, lies between the village and Wavendon House. The parkland with large lakes at Wavendon House was laid out in the late 18th century by Richard Woods. The parkland is Grade II listed and forms a historic grouping with the Grade II* listed country house, Grade II listed former stables, coach house and lodge and adjacent Scheduled Monument.

5.191 Woburn Sands is the largest settlement in the LCT and developed as a health resort and spa in the 19th century, assisted by the opening of the railway, which became a popular stop for visitors to the Duke of Bedford's Woburn estate. The town is recognised as a Conservation Area for its special architectural and historic interest and has a number of fine Victorian and Edwardian villas although few of these are listed.

5.192 New residential expansion of Milton Keynes city north of Lower End Road has impacted on the views of open fields from Wavendon and Cross End. However, the new development provides some screening for views to the warehouses at Kingston. The Greensand Ridge (LCA 6a) provides a wooded, steeply rising, backdrop to views to the south and south-east.

5.193 The Bedford to Bletchley railway crosses the LCA and along with the A5, disrupt the rural tranquillity of the area.

LCT 6: Wooded Greensand Ridge



Landscape Character Areas

The Wooded Greensand Ridge LCT occurs in one location within the borough:

- 6a Brickhill Wooded Greensand Ridge

Location and summary

The Wooded Greensand Ridge LCT is a distinctive escarpment located in the south-east of the borough. The eastern and southern boundaries are formed by the borough boundaries with Central Bedfordshire and Buckinghamshire County. The western boundary marks the change in elevation where the ridge rises sharply from the Clay Vales (LCT 5) and follows field boundaries around the 100m contour line. The northern boundary is formed by the settlement edge of Woburn Sands.

This is a distinctive elevated landscape which forms part a wider greensand ridge which extends into Central Bedfordshire and Buckinghamshire County. It is characterised by considerable woodland cover, including coniferous plantations, on the light sandy soils. The majority of the landscape is owned by the Woburn Estate, and is used for recreation, including the Woburn Golf Club.



A distinctive elevated landscape dominated by woodland and the Woburn Golf Club.

Key Characteristics

- A prominent escarpment, rising steeply from 90m to a plateau at 171m AOD, predominantly underlain by Lower Greensand sandstones and mudstones.
- A wooded landscape, including both broadleaved woodlands, mixed and conifer plantations, with some ancient and replanted ancient woodland.
- Pasture fields on the lower slopes are bound by hedgerows with mature hedgerow trees, which contribute to the wooded character. Arable fields are found around Little Brickhill.
- Settlement is concentrated at Little Brickhill, a small village, with traditional building materials including brick and the local Greensand stone. Development on the plateau is limited to Grade II* listed Church of All Saints, and buildings relating to the golf course.
- Narrow rural roads cross the landscape, with wide road verges.
- Good access by PRoW, including the Milton Keynes Boundary Walk. Formal recreational uses at Woburn Golf Club.
- Panoramic views over the surrounding landscape and north to Milton Keynes city from the steep open slopes contrast with an enclosed character within the woodland.
- Peaceful character away from the A5 and Bow Brickhill Road, with some darker skies in the south-east.

Physical and natural characteristics

5.194 The LCT comprises a prominent escarpment with a plateau along its crest. The topography is a defining characteristic of the area, which forms the western slope of the plateau which continues over the borough boundary into Central Bedfordshire and Buckinghamshire County. The landscape rises from 90m AOD in the west (at the boundary with LCA 5b) to a maximum height of 171m AOD at Bow Brickhill Park, on the plateau.

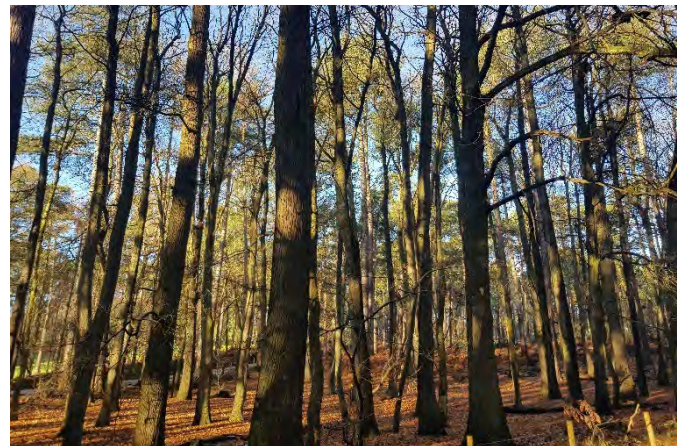
5.195 The underlying geology of the LCT differentiates it from the landscape within the rest of the borough. Kellaways Formation and Oxford Clay Formation (mudstones, siltstone and sandstone), laid down in shallow seas in the Jurassic period, transition into the Lower Greensand Group of sandstones and mudstones, laid down in the Cretaceous Period. There is a small band of glacial till drift deposits in the south-east. Soils vary across the LCT generally in line with the topography and underlying geology: well drained and sandy soils with high iron content on the slopes (classified as poor grade 4), whilst the soils become poorer and loamier but still well drained on the plateau. The local greensand was quarried and some of the disused pits remain, including off Church Road.

5.196 The underlying greensand is naturally porous and is an important aquifer. Water stored in this aquifer is used as a water source for the surrounding area. A natural spring line occurs where the greensand meets the clay, and this creates some localised waterlogging.

5.197 The steeper slopes and plateau are heavily wooded, with a mix of priority habitat deciduous woodland and mixed or coniferous plantations. There are small pockets of ancient woodland, with larger replanted ancient woodlands, including

at Back Wood and Bell's Copse. Conifers on the sandy soils on the ridge provide a heathland character, and small areas of priority habitat lowland fen and purple moor grass and rush pastures are found on the ridgeline, which are important habitats scarce in south-east England. The Greensand Ridge Biological Opportunity Area covers the whole of the LCT.

5.198 Medium-scale fields are found on the lower slopes to the west and south, and retain their hedgerow boundaries. Land use is generally pastoral, including some land converted to horse grazing, with associated horse tape fencing. Arable fields are located around Little Brickhill along the A5.



Mixed broadleaved and conifer woodland at Aspley Woods.

Historic and cultural characteristics

5.199 Historically, the landscape was open heath on the light unproductive soils, and in use as common land. Smaller strips of organic pre-18th century enclosure relate to the pasture on the lower slopes of the ridge. Ancient woodlands were

extended by planting in the 18th and 19th centuries, with more extensive conifer plantations in the 20th century.

5.200 Danesborough Camp is an Iron Age hill fort, dated between the first century BCE and first century CE. It may have been an important regional centre in the pre-Roman era. It is now a Scheduled Monument, although the afforestation period has disturbed the interior. Further earthworks in the LCT may relate to the medieval deer park pale at Bow Brickhill Park and medieval and post-medieval woodland management, e.g. wood banks and saw pits.

5.201 Settlement within the area is concentrated at Little Brickhill, which developed along the Roman road of Watling Street, and became a stopping point on the way to and from London. Traffic reached its height in the late 18th century, and the wealth generated by passing trade is reflected in a number of Georgian houses, all Grade II listed buildings. The construction of the railway at Bletchley reduced the coach traffic and the village's importance. The village became part of the Woburn Estate, owned by the Duke of Bedford, in the 1840s. It has largely retained its historic linear form, and is now designated as a Conservation Area. The A5 bypass, built in 1992, cuts off the village from its wider setting on the wooded slopes to the north.

5.202 The Grade II* listed All Saints Church, Bow Brickhill, lies on the steep hillside isolated above rest of the village (within LCA 5b). The church is built of the local greensand and is the only historic building on the plateau.



Grade II* listed All Saints Church sits on the steep hillside of the greensand ridge.

5.203 The LCT is crossed by the A5, but otherwise the road network consists of narrow, rural lanes which have wide grassed verges between the road and the woodland. Roads within the Woburn Estate are demarcated by picket fencing.

5.204 The Wooded Greensand Ridge is crossed by many PRoW, providing connections from the nearby settlements. Recreational opportunities including walking, horse riding and

mountain biking. Woburn Golf Course was laid out in the 1970s and dominates the plateau, although the manicured fairways and greens, car parking and club house are largely enclosed from view and sit relatively well within the landscape. Much of the golf course woodland replaced the naturally occurring heathland vegetation in this area.

5.205 Local paintings of the area include Thomas Webster's painting 'A village choir' 1847, and Stanley Roy Badmin's 1940 painting of Bow Brickhill which formed part of the "Recording Britain" project. Both paintings are held by the Victoria & Albert Museum.

Visual and perceptual characteristics

5.206 Views within the LCT are generally enclosed due to the high woodland cover, which provides a sense of enclosure and tranquillity. In contrast, there are panoramic views from the edge of the woodland across the surrounding valleys and towards Milton Keynes city, which can be seen in the context of its planned landscaping. The Wooded Greensand Ridge is highly visible from Milton Keynes city, and is a distinctive element in the landscape of the borough, providing a wooded backdrop to the city.

5.207 Dark skies are limited to the south-east of the LCT, where there are fewer roads and no settlement. The A5 is a busy dual carriageway, which severs the ridgeline and cuts off Little Brickhill from its wooded setting. Road noise is heard across the LCT which reduces the sense of rural tranquillity.

5.208 Post and wire fencing reinforces hedgerows on the lower slope pasture fields. Other intrusive modern elements in the landscape include fencing around a former quarry on Church Road now in use as a reservoir, and communications towers on Church Road and in Little Brickhill. However, the wooded nature of the landscape means they are only locally visually intrusive.



Tree-lined rural roads with picket fencing typical of the Woburn Estate.

Landscape evaluation

Landscape qualities

- The distinctive geology and topography of the steep escarpment which rises to a wooded plateau and provides a unique landscape setting to Milton Keynes city.
- The extensive areas of woodland, which is usual in the borough, including semi-natural deciduous woodland, some of which is of ancient origin and support biodiversity, stabilise soil quality and play an important role in regulating local air quality.
- The remnant heathland on the ridge that supports biodiversity, and have a unique landscape character within the borough.
- The geology which is an aquifer, and maintains springs and base flows into rivers and streams (outside of the LCT).
- The general absence of development over much of the area, with the historic settlement pattern and buildings constructed from local materials associated with Little Brickhill that provide cultural identity and aesthetic value.
- The archaeological importance of the ridge, with its connections to pre-Roman and Roman occupation of area (including sites associated with Watling Street and Danesborough hill fort) that provide a connection to history.
- The network of PRow, including the Milton Keynes Boundary Walk, that connect the settlements and wider countryside, and provide recreational value and contribute to well-being and health.
- The contrasting sense of elevation and openness with uninterrupted views across the landscape from the slopes and enclosed intimate character of the dense woodland which provides a strong sense of place.
- The distinctive topography, strong woodland cover, heathy character and patchwork of pastoral and arable fields which create a strong sense of place

Landscape condition

5.209 The Wooded Greensand Ridge LCT has a generally good condition due to the extensive woodland cover, management of semi-natural habitats, and limited development. Although it is often screened from view, the Woburn Golf Course is not in keeping with the wooded character. It does, however, provide recreational value. Modern influences on the landscape are limited to reinforcement of hedgerows by post and wire fencing, fencing around a former quarry on Church Road now in use as a reservoir, and communications towers on Church Road and in Little Brickhill. The A5 locally reduces tranquillity.

Forces for change

5.210 Key forces for change include:

- Changes in forestry management, including the decline in traditional management techniques such as coppicing.
- Encroachment of scrub onto remaining areas of lowland fen and purple moor grass and rush pasture, partly due to under grazing.
- Recreational pressures from walkers, horse riders, mountain bikers and golfers, including for facilities such as car parks and toilets, and pressures on the narrow rural lanes.
- Increased temperatures from climate change may impact species composition, particularly the ancient woodlands. Increases in severe gales may cause significant damage on the edges of woodlands.
- Development pressures in Little Brickhill and encroachment of development into views across the surrounding valleys, particularly to the north towards Milton Keynes city.
- Increasing traffic noise from the A5 which significantly reduces tranquillity across the LCT.

Landscape strategy

5.211 The landscape strategy for the Wooded Greensand Ridge LCT is to protect and enhance the sense of place created by the combination of the scarp landform and extensive tracts of woodland, including its role as a backdrop to the surrounding landscape.

Guidance

Landscape Management

- Protect the distinctive wooded escarpment which provide a visually important setting to Milton Keynes city.
- Conserve and enhance and explore opportunities to extend the existing woodland, promoting a balanced woodland community of native deciduous trees with indigenous conifers. Strengthen the woodland connecting into Central Bedfordshire, identifying opportunities for green infrastructure enhancements as set out in the Milton Keynes Green Infrastructure Strategy²².
- Plan for climate change, researching appropriate species mixes and designing woodland to minimise damage as a result of increased storms.
- Where appropriate, promote localised reversion from woodland to traditional heathland habitat. Seek to restore, extend and connect these sandy heathland habitats, including through appropriate grazing regimes.
- Manage and enhance hedgerows on lower slopes, including laying and gapping up of hedgerows to strengthen the small pasture fields.
- Promote responsible recreation, particularly during heat waves where there is increased risk to health as well as fires.
- Manage recreational access and infrastructure to minimise the erosion of the heathland habitats, and negative impacts on the tranquillity and remoteness of the landscape. Create new habitats to dissipate visitor pressure, as set out in the Green Infrastructure Opportunities mapping²³.

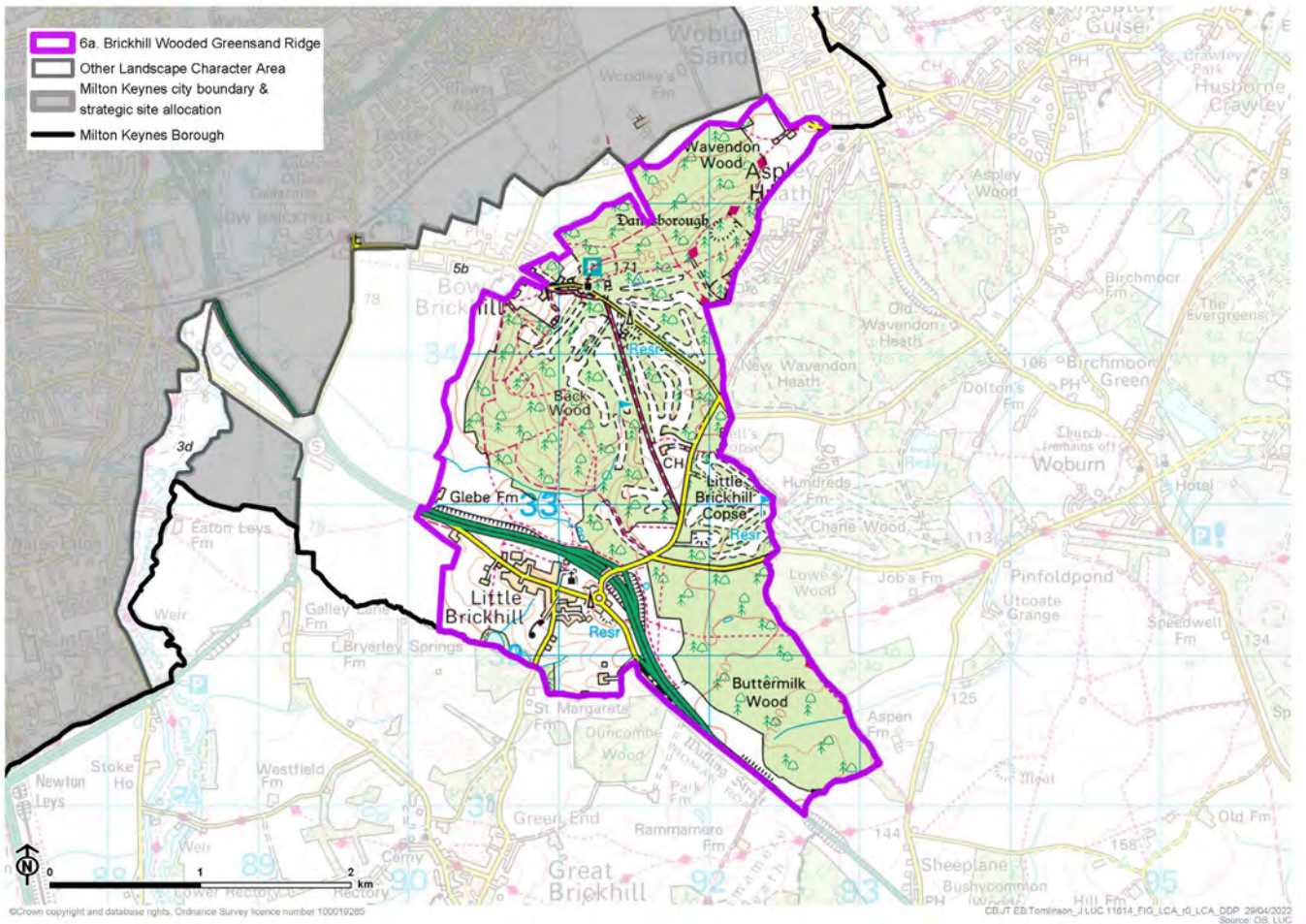
Development Management

- Ensure recreational facilities such as toilet blocks and car parks are integrated in the wooded setting, and do not erode rural character.
- Avoid pressures to 'suburbanise' rural lanes with excessive lighting or signage.
- Protect the historic village of Little Brickhill conserving the strong vernacular of historic buildings in the Conservation Area.
- Maintain the general absence of development over much of the area, retaining the primary use for forestry, agriculture and informal recreational.
- Ensure long panoramic views across the surrounding valleys are retained and promoted. Consider views from the escarpment, particularly when planning tall buildings within Milton Keynes city.
- Avoid tall development that would break the existing wooded skyline as seen from within the LCT or from the wider landscape. Restrict further communications masts or aerials, and where possible remove the existing masts.

²² AECOM, Milton Keynes Green Infrastructure Strategy (2018)

²³ <https://bucks.mknep.co.uk/wp-content/uploads/2018/10/Green-Infrastructure-Opportunity-Zone-10.pdf>

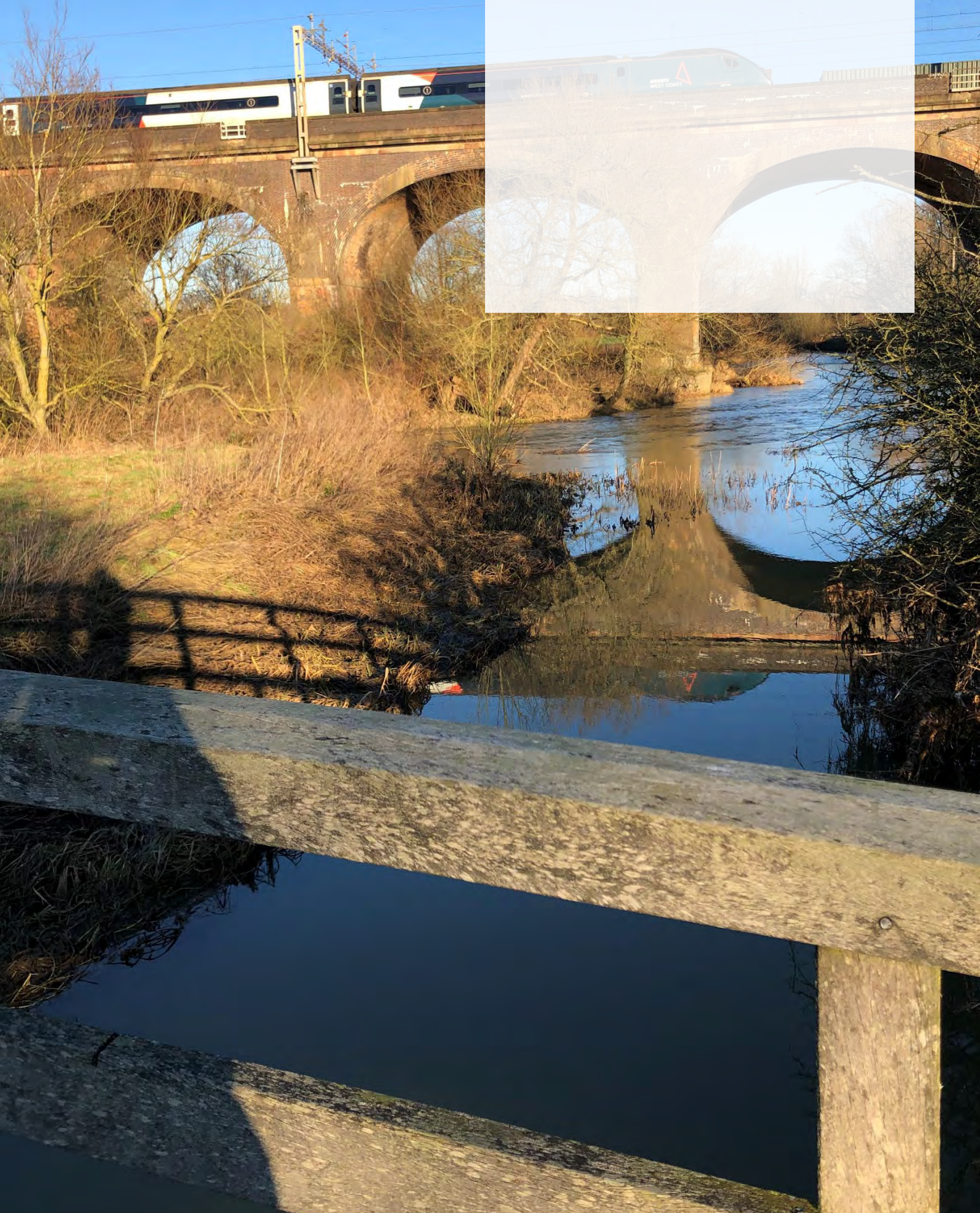
6a Brickhill Wooded Greensand Ridge



Location and unique characteristics

5.212 The Brickhill Greensand Ridge LCA is the only area associated with the Greensand Ridge LCT within the borough. The descriptions above therefore apply to this single LCA.

Appendices



Appendix A

Glossary of Terms

Term	Definition
AOD	Above Ordnance Datum (sea level).
Agricultural Land Classification	The classification of agricultural land in England in Wales
Analysis	The process of breaking the landscape down, usually in descriptive terms, into its component parts in order to understand how it is made up.
Ancient trees and veteran trees	<p>Individual trees or groups of trees with wood pastures, historic parkland, hedgerows, orchards, park, and other areas. They are often found outside ancient woodlands. irreplaceable habitats with some or all of the following characteristics:</p> <p><i>Ancient trees</i></p> <p>An ancient tree is exceptionally valuable. Attributes can include its great age, size, condition, biodiversity value (as a result of significant wood decay and the habitat created from the ageing process), cultural and heritage value.</p> <p><i>Veteran trees</i></p> <p>A veteran tree may or may not be very old, but it has decay features, such as branch death and hollowing. These features contribute to its biodiversity, cultural and heritage value.</p>
Ancient Woodland	Woodland which the evidence shows has had had continuous woodland cover since at least 1600 CE and has only been cleared for underwood or timber production. It is an extremely valuable ecological resource, with an exceptionally high diversity of flora and fauna.
Approach	The stepwise process by which a landscape assessment is undertaken.
Arable	Land used for growing crops.
Assart	The informal enclosure of private farmland by encroachment into woodland or heath.
Assessment	An umbrella term used to encompass all the many different ways of looking at, describing, analysing, and evaluating landscape.
BAP	UK Biodiversity Action Plan priority species and habitats were identified as being the most threatened and requiring conservation action under the UK BAP. The original lists of UK BAP priority habitats were created between 1995 and 1999 and were subsequently updated in 2007. See http://jncc.defra.gov.uk/page-5155 for further information.
Biodiversity	The measure of the variety of organisms present in different ecosystems.
Brownfield site	A development site which is re-using previously developed land.

Term	Definition
Built form	The characteristic nature of built development.
Carr woodland	Marsh or fen woodland in waterlogged terrain. Characteristic trees include alders and willows.
Characteristic	An element that contributes to local distinctiveness (e.g. narrow winding lanes, vernacular building style).
Classification	A process of sorting the landscape into different types, each with a distinct, consistent, and recognisable character.
Combe	A small dry valley, without a permanent watercourse.
Condition	A judgement on the intactness and condition of the elements of the landscape.
Coppicing	The traditional method of woodland management in which trees are cut down to near the ground to encourage the production of long, straight shoots, which can subsequently be harvested.
Description	Verbal description of what a landscape looks like. This is usually carried out in a systematic manner, but it may also include personal reactions to the landscape.
Drift	The name for all material of glacial origin found anywhere on land or at sea, including sediment and large rocks.
EIA	Environmental Impact Assessment
Element	A component part of the landscape (e.g. hedges, roads, woods).
Enclosure	The placing in private hands of land to which there were previously common rights; the merging of commonly held strip fields to form a block surrounded by hedges.
Equine development	A term used to describe areas on the fringes of settlements which are dominated by horse paddocks, stable buildings, and associated paraphernalia.
Feature	A prominent, eye-catching element (e.g. wooded hilltop, church spire).
Floodplain	The area that would naturally be affected by flooding if a river rises above its banks, or if high tides and stormy seas cause flooding in coastal areas.
GIS	Geographic Information System
GPS	Global Positioning System
Grassland	Land used for grazing. Grassland can be improved (by management practices) semi-improved (modified by management practices and have a range of species less diverse than unimproved grasslands), or unimproved (not treated with fertiliser, herbicide or intensively grazed and consequently species diversity is high).
Greenfield site	A development site, usually on the fringes of a settlement, which has not previously been used for built development.
Habitat	The natural home or environment of an animal, plant, or other organism.

Term	Definition
HLC	Historic Landscape Characterisation
Hydrology	The science dealing with the occurrence, circulation, distribution, and properties of the waters of the earth and its atmosphere.
Intact	Not changed or diminished.
Land cover	Combinations of land use and vegetation that cover the land surface.
Landmark	An object or feature of a landscape, city or town that is easily seen and recognized from a distance, especially one that enables someone to establish their location.
Landscape	The term refers primarily to the visual appearance of the land, including its shape, form, and colours. However, the landscape is not a purely visual phenomenon; its character relies on a whole range of other dimensions, including geology, topography, soils, ecology, archaeology, landscape history, land use, architecture, and cultural associations.
Landscape character	A distinct pattern or combination of elements that occurs consistently in a particular landscape.
Landscape character area (LCA)	A unique geographic area with a consistent character and identity, which forms part of a landscape character type.
Landscape character type (LCT)	A generic term for landscape with a consistent, homogeneous character. Landscape character types may occur in different parts of the county, but wherever they occur, they will share common combinations of geology, topography, vegetation, or human influences.
Landscape condition	Based on judgements about the physical state of the landscape, and about its intactness, from visual, functional, and ecological perspectives. It reflects the state of repair or intactness of individual features or elements (relating to that feature's primary condition or ultimate <i>desire</i>).
Landscape strategy	Principles to manage and direct landscape change for a particular landscape type or character area including identification of any particular management needs for specific elements.
Landscape value	The relative value that is attached to different landscapes. In a policy context the usual basis for recognising certain highly valued landscapes is through the application of a local or national landscape designation. Yet a landscape may be valued by different communities of interest for many different reasons without any formal designation, recognising, for example, perceptual aspects such as scenic beauty, tranquillity or wildness; special cultural associations; the influence and presence of other conservation interests; or the existence of a consensus about importance, either nationally or locally.
Linear settlement	A settlement that is built along a road, in comparison to a nuclear or dispersed settlement.
Listed Building	A building, object or structure that has been judged to be of national importance in terms of architectural or historic interest.
Local Plan	A development plan prepared by local planning authorities.
LWS	Local Wildlife Site

Term	Definition
Natural character	Character as a result of natural or semi-natural features such as woodland, grassland, hedgerows etc.
National Character Areas (NCAs)	National Character Areas are defined within the <i>National Character Area Study, Natural England (2013)</i> . NCAs divide England into 159 distinct natural areas. Each is defined by a unique combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity.
NGO	Non-Governmental Organisation
NNR	National Nature Reserve
Nucleated settlement	A settlement that is clustered around a centre, in comparison to a linear or dispersed settlement.
Open-field system	An area of arable land with common rights after harvest or while fallow. The fields date from the medieval period and are usually without internal divisions (hedges, walls, or fences).
OS	Ordnance Survey
Parliamentary fields / enclosure	Fields formed by a legal process of enclosure (or inclosure), typically during the 18 th and 19 th centuries – by passing laws causing or forcing enclosure to produce fields for use by the owner (in place of common land for communal use).
Pastoral	Land used for keeping or grazing sheep or cattle.
Pollarding	A traditional woodland management practice in which the branches of a tree are cut back every few years to encourage new long, straight shoots for harvesting. Differs from <i>coppicing</i> because the cuts are made at sufficient distance from the ground to prevent them from being eaten by animals.
PRoW	Public Right of Way
Ramsar	Wetlands of international importance especially as Waterfowl Habitat
Remediation	Process by which a contaminated or damaged site is repaired and brought back into more general use, or for a specific purpose (e.g. wildlife conservation).
Remnant	A part or quantity left after the greater part has been used, removed, or destroyed.
Riparian habitat	Riverbank habitat.
SAC	Special Area of Conservation (EC Directive 92/43/EEC Habitats Directive)
SANGS	Suitable Alternative Green Space
Scheduled Monument	Nationally important archaeological sites or historic buildings, given protection against unauthorised change.
Semi-natural vegetation	Any type of natural vegetation which has been influenced by human activities, either directly or indirectly.

Term	Definition
Sense of place	A person's perception of a location's indigenous characteristics, based on the mix of uses, appearance and context that makes a place memorable.
Sensitive	The response to change or influence.
Skyline	The outline of a range of hills, ridge or group of buildings seen against the sky.
SPA	Special Protection Area (EC Directive 2009/147/EC on the Conservation of Wild Birds)
SSSI	Site of Special Scientific Interest
Time depth	The time period expressed in the landscape, or the extent to which the landscape reflects a certain time period (a landscape with greater time depth will comprise older elements than a landscape with lesser time depth).
Topography	Combinations of slope and elevation that produce the shape and form of the land surface.
Valued landscape attributes	Positive features and characteristics that are important to landscape character and that, if lost, would result in adverse change to the landscape.
Vernacular	Buildings constructed in the local style, from local materials. Concerned with ordinary rather than monumental buildings.

Appendix B

Landscape classification changes 2016 to 2022 LCA

2016 LCT / LCA	Notes	2022 New LCT / LCA names
LCT 1 Wooded Wolds		
LCT 1 Clay Plateau Farmland	Name changed to reflect the mixed bedrock geology, and to fit with the classification of the adjacent Northamptonshire and Bedfordshire Landscape Character Assessment. Boundaries defined along 90m contour	LCT 1 Wooded Wolds
1a Yardley Chase Clay Plateau Farmland		1a Yardley Chase Wooded Wolds
1b Hanslope Clay Plateau Farmland	Name changed to 'Wooded Wolds' as this is a key landscape feature. Gayhurst and Stokepark are large woodlands.	1b Gayhurst and Stokepark Wooded Wolds
LCT 2 Undulating Valley Slopes		
LCT 5 Undulating Clay Farmland	Name changed to reflect the gentle slopes of the valley sides of the Great Ouse and Tove rivers. Boundaries defined by rise of valley slope above the floodplain, and the change to more level plateau to the Clay Plateau or Wooded Wolds	LCT 2 Undulating Valley Slopes
5a Ouse North Undulating Clay Farmland		2a Ouse Northern Undulating Valley Slopes
5b Ouse South Undulating Clay Farmland		2b Ouse Southern Undulating Valley Slopes
5c Tove Undulating Clay Farmland		2c Tove Undulating Valley Slopes
LCT 3 River Floodplains		
LCT River Valley	Name changed to 'floodplain' as the type does not include the valley sides, with 'floodplain' or 'lakes and parkland floodplain', to distinguish between rural and more urban-influenced areas.	LCT 3 River Floodplains
2a Tove Rural River Valley		3a Tove Floodplains
2b Ouse Rural River Valley		3b Ouse Floodplains
2c Ouse Urban River Valley		3c Ouse Lakes and Parkland Floodplains

2016 LCT / LCA	Notes	2022 New LCT / LCA names
2d Ouzel North Urban River Valley	Land south of A422 now within Milton Keynes East strategic allocation. Remaining area is included in LCA 3c Ouse Lakes and Parkland Floodplains.	
2e Ouzel South Urban River Valley		3d Ouzel Parkland Floodplains
LCT 4 Undulating Clay Plateaux		
LCT 3 Clay Plateau Farmland with Tributaries	Name changed to describe the topography of gently undulating bedrock incised by tributaries. Boundaries defined by 80-85m contour	LCT 4 Undulating Clay Plateaux
3a North Crawley Clay Plateau Farmland with Tributaries	Boundary extended north to include areas of clay bedrock around Top Farm and Petsoe Manor wind farm.	4a North Crawley Undulating Clay Plateau
3b Weald Clay Plateau Farmland with Tributaries	Boundary extended in north-west to the edge of the Ouse floodplain.	4b Weald Undulating Clay Plateau
LCT 5 Clay Vales		
LCT 4 Clay Lowland Farmland	Name changed to align with the Bedfordshire LCA	LCT 5 Clay Vales
4a Broughton to Tickford Clay Lowland Farmland	Name changed to reflect key landscape character features rather than settlements. Boundary modified to Tickford Abbey and confluence of the Ouse and Ouzel to reflect change in bedrock geology from limestone to clay, and the updated development boundary at Newport Pagnell. The Milton Keynes East strategic allocation has separated the LCA into two sections.	5a Lower Ouzel Clay Vale
4b Wavendon Clay Lowland Farmland	Name changed to reflect key landscape character features rather than settlements. The South East Milton Keynes and Eaton Leys strategic sites have decreased the extent of this LCA.	5b Upper Ouzel Clay Vale
LCT 6 Wooded Greensand Ridge		
LCT 6 Greensand Ridge	Name changed to includes 'wooded' as this is a key landscape feature.	LCT 6 Wooded Greensand Ridge
6a Brickhill Wooded Greensand Ridge	Boundary refined along the 100m contour line.	6a Brickhill Wooded Greensand Ridge