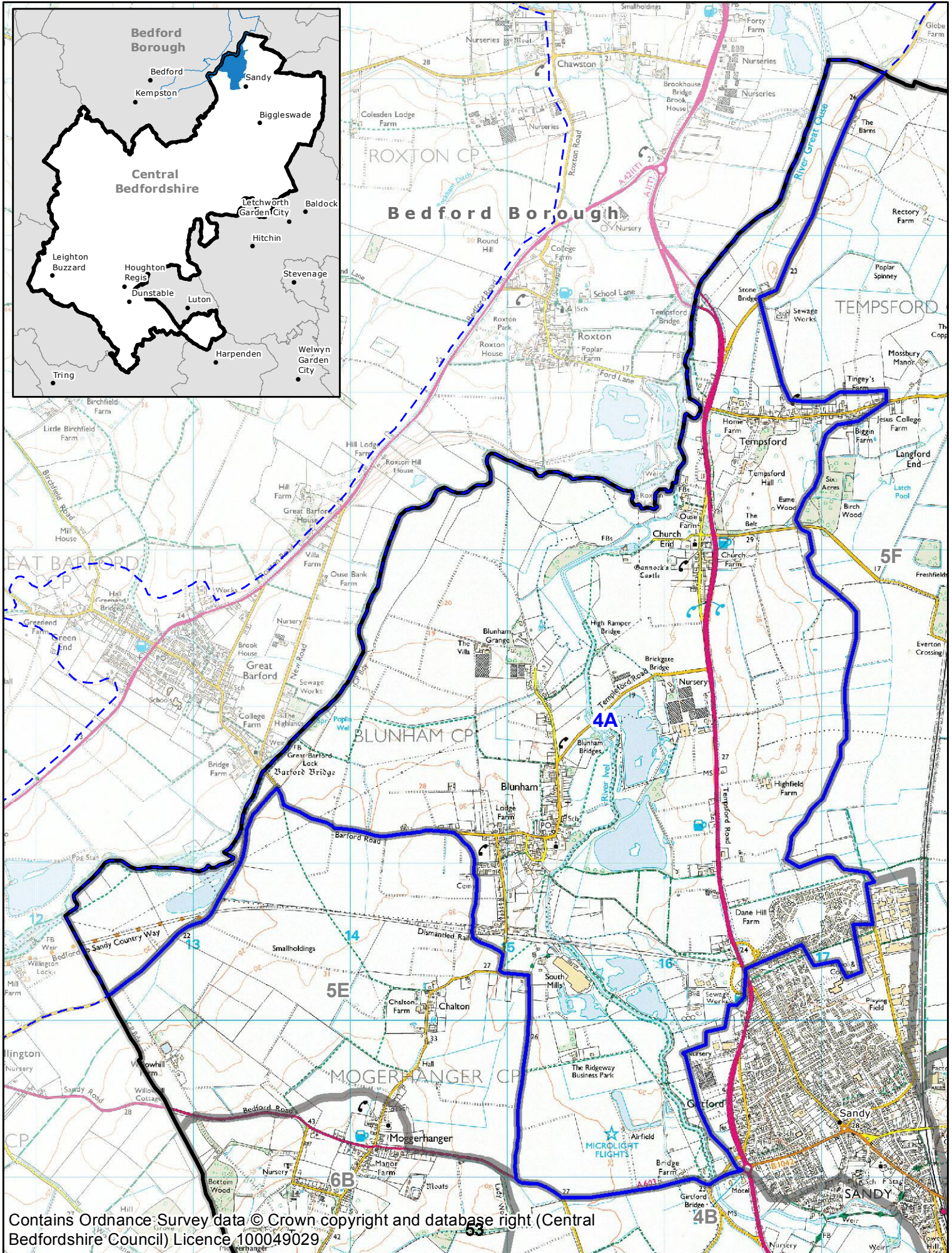# TYPE 4: CLAY VALLEYS

Key Characteristics

- Shallow, fairly wide valleys defined by the Rivers Ouse and Ivel.

- Underlain by solid geological strata of Oxford Clay, Gault Clay, Lower Greensand and Alluvium with drift deposits of Valley and Glacial Gravels.

- Lowland landscape with an elevation generally occurring between 30-40m AOD.

- Strong landscape character and visual connectivity with the adjacent *Clay Vale*s landscape type and the Greensand Ridge (predominantly due to the flat landform and areas of arable land use).

- Mixed land use of arable land and improved pasture contained within medium sized fields.

- Previously a strong presence of market gardening.

- Restored sand and gravel workings create an ecological and recreational resource – Warren Villas Nature Reserve and Henlow Bridge Lakes for example.

- The adjacent towns of Sandy and Biggleswade impart urban fringe characteristics on the landscape.

- Busy transport corridors, including the A421 (to the north in Bedford Borough) and A1M, dominate the landscape both visually and audibly.

- Settlements are typically small to medium scale, dispersed and linear with a mix of building age and style. There is a considerable amount of modern development.

- The Greensand Ridge Walk crosses the Ivel gap close to Sandy connecting the rivers with the adjacent *Wooded Greensand Ridge* landscape type.

Location and Boundaries

4.1   The *Clay Valleys* landscape type is located within the north eastern half of Central Bedfordshire and extends north into Bedford Borough – refer to the companion Landscape Character Assessment for Bedford Borough for these character areas. It follows the course of two rivers. The Great Ouse river valley follows the unitary authority boundary for much of its length, extending from the east of Bedford until the river crosses into the Cambridgeshire town of St Neots. In the east of Central Bedfordshire the linear course of the River Ivel extends northwards to the point where the river converges with the Great Ouse at Tempsford. There is little topographic variation between the *Clay Valleys* and the adjacent *Clay Vales* landscape type. As such, boundaries are predominantly defined by changes in land use and underlying geology (the course of the rivers marked by deposits of glacial and valley gravels).

4A: Great Ouse Clay Valley

4A Great Ouse Clay Valley

Location and boundaries

4A.1   The *Great Ouse Clay Valley* is located in the northeast of Central Bedfordshire. The northern part of the character area lies in Bedford Borough – refer to the companion Landscape Character Assessment for Bedford Borough. It follows the courses of the Rivers Great Ouse and Ivel including their confluence at Tempsford. The area boundaries are based on changes in geology and land use, with deposits of Glacial and River Gravel along the valley differentiating it from the *Biggin Wood Clay Vale* (5f) to the east and the *Renhold Clay Farmland* (5f) to the west. The boundary to the south marks the change to the *Lower Ivel Clay Valley* (4b), a landscape less dominated by open water bodies. Part of the character area within Bedford Borough between Bedford and Great Barford has been identified as the Bedford River Valley Park, a Regional Green Infrastructure Project.

Summary of landscape character: Key characteristics

4A.1.1   A shallow fairly wide valley of the Rivers Great Ouse and Ivel founded on Oxford Clay and Alluvium with deposits of Valley Gravel and small sections of Glacial Gravel.

4A.1.2   Large scale open water bodies, multiple channels and tributary streams are scattered across the floodplain. The course of the river is marked by riverside vegetation including mature willows. Shelterbelts and distinctive clusters of woodland create a semi-enclosed landscape.

4A.1.3   Mixed land use of arable on the shallow slopes of the valley with pasture, quarrying and recreational uses along the valley floor.

4A.1.4   Large and medium scale geometric fields are bounded by hedgerows in mixed condition with some hedgerow trees.

4A.1.5   Restored sand and gravel workings are a recreational and ecological resource including fishing at Halls Pit.

4A.1.6   The importance of the area in prehistoric times as a focus for ritual sites and funerary monuments is reflected in a number of ancient monuments.

4A.1.7   Historic parks at Tempsford (and Roxton and Little Barford in Bedford Borough) contain parkland trees as well as medieval earthworks and ridge and furrow. Moated sites and remains of castles are present particularly at strategic points commanding the rivers.

4A.1.8   Settlement consists of medium size villages, the market town of Sandy and large industrial complexes including the generating station at Little Barford and the Priory Business Park (both within Bedford Borough).

4A.1.9   Building materials are varied with local stone churches and bridge at Great Barford, red brick dwellings, black painted clapboard barns, clay tile and thatch roofs along with more recent industrial buildings of brick, metal and glass.

4A.1.10   An urban fringe character results from the audible and visual presence of major road corridor of the A1, large scale industrial development and the mix of land uses giving an urban fringe character particularly close to Bedford.

4A.1.11   The Bedford to Sandy Country Way crosses through the landscape along a disused railway line west of Sandy.

Landscape Character Description

Physical and natural landscape

4A.2   The Great Ouse Clay Valley is a level broad valley, low lying at 15m AOD rising to 30m AOD, and following the course of the River Great Ouse from within Bedford Borough as it flows out of Bedford. Within Central Bedfordshire the character area follows the course of the River Ivel as it flows north to its confluence with the Great Ouse at Tempsford and the administrative boundary with Bedford Borough.

4A.3   The Great Ouse Clay Valley is a mixed and semi-enclosed landscape with large areas of open water, the legacy of mineral extraction, now used for leisure including angling at Halls Pit and Bedford River Valley Park within Bedford Borough. The courses of the rivers are also marked by narrow woodland belts and willow trees. In some sections the rivers retain a highly rural character but in other areas the leisure use of the land (for instance the golf course at Wyboston – Bedford Borough) gives a more manicured, urbanised appearance.

4A.4   There are smaller pastoral fields along the valley floor with historic parklands sited on the valley side slopes at Tempsford and Little Barford (in Bedford Borough) with scattered parkland trees and small woods. Hedgerows are often gappy or lost but hedgerow trees are present in some sections along with poplar shelter belts. Nurseries are common particularly around Blunham Grange with many of them now disused. There are frequent settlements of varied character, plus some large scale industrial installations and active quarrying north of Willington (in Bedford Borough). This mixture of land uses plus the presence of the A1 and the eastern edge of Bedford in the northern part of the character area in Bedford Borough, creates a complex and fragmented landscape.

Biodiversity

4A.5   Key habitats in the *Great Ouse Clay Valley* Character Area include the water courses of the Rivers Great Ouse and Ivel and their tributary streams with associated habitats such as mature willow pollards, willow and other scrub, and wetland vegetation such as marsh and swamp. Typical farmland habitats present consist of arable field margins, hedgerows, ponds, ditches and improved grassland and road verges and these support a range of farmland species. The disused sand and gravel pits are of great biodiversity value particularly for wetland birds and invertebrates such as dragonflies. They are also associated with wetland habitats including marshy grassland, willow scrub and wet woodland. Parkland at Tempsford and Little Barford may contain veteran trees. There are no sites with statutory nature conservation designation within the *Great Ouse Clay Valley.*

Tempsford: Growth extending north of Sandy

Glasshouses in the Ivel valley corridor at Blunham

Visual and perceptual character

4A.6   The open, gently rising slopes of the *Great Ouse Clay Valley* have strong visual links with the surrounding higher ground of *Clay Farmland* to the north and within Bedford Borough, and *Clay Vales* character areas particularly the large scale arable fields. Some sections along the rivers are highly rural in character but other areas are more highly managed such as the historic parkland at Tempsford. Urban influences include the A1 which has a visual impact locally, and the exposed northern urban edge of Sandy.

Cultural pattern and historic character

4A.7   The Ouse valley east of Bedford was especially significant in prehistoric times as a focus for ritual sites and funerary monuments. Many of these, though buried beneath ploughsoil, are scheduled as ancient monuments, including a neolithic interrupted ditch enclosure at Cardington. One Bronze Age barrow possibly survives as an upstanding earthwork at Round Hill, Roxton. The fertile and easily-worked soils of the valley gravels also attracted extensive Iron Age and Roman settlement.

4A.8   In medieval times, the land adjacent to the river was exploited as meadow for hay and grazing. Above the flood plain, the landscape of the valley floor was dominated by the common fields of the adjacent villages. Most of these areas were enclosed in the early 19th century, but have been much altered since through agricultural reorganisation and urban and transport development. In particular, the influence of the Land Settlement Association in the first half of the 20th century is visible north of Wyboston. Little of the 19th century enclosure field pattern remains in this part of the Ouse valley. In the last 150 years gravel extraction has become a major influence in the landscape, removing much of the historic meadowland.

4A.9   The settlements are mostly nucleated, and sit on the edge of the valley between the common fields and the more enclosed areas on the higher ground adjacent. Few historic landscape features survive in the areas round the villages, except where protected by localised parkland: parks at Roxton, Tempsford and Little Barford all contain medieval earthworks and ridge and furrow, as well as parkland trees.

Settlement pattern; built character

4A.10   Settlement in the *Great Ouse Clay Valley* is long established with a string of medium scale villages on the slightly higher ground of the valley slopes but often with the older part of the village close to the river typically with a stone church and bridge (such as the medieval bridge at Great Barford – in Bedford Borough) and perhaps a mill forming landmarks in the level landscape. The villages have often spread along roads but remain distinct individual settlements. Tempsford has the typical Bedfordshire village pattern of scattered ends, and is slightly elevated at the east of the character area.

4A.11   In addition to the villages there are scattered farmsteads. Large scale industrial installations such as the power station north of Little Barford and the Priory Business Park and sewage works just east of Bedford are prominent features in the section of the character area within Bedford Borough.

4A.12   The large scale buildings at the western edge of Sandy are generally well-screened although the northern urban edge is exposed and brings an urban fringe influence to the landscape locally. Materials are varied, from churches of limestone or sandstone to houses of red or yellow brick and clay tile roofs to timber frame or roughcast cottages with thatched roofs plus black painted weather boarded barns. Mature trees (for instance horse chestnuts) are associated with the long established settlements which also often have garden boundary walls of brick or stone. Some more recent development on the edges of the villages, for instance at Great Barford and Blunham, creates a more abrupt urban edge.

Views towards Barford Bridge and the church at Great Barford from Barford Road, close to the border with Bedford Borough

Evaluation

Landscape Change

Past change	Potential Future Change
Rise and then decline of market gardening and plant nurseries	Further large scale development at the northern and western edge of Sandy.
Loss of water meadows along the Rivers Great Ouse and Ivel.	Flooding of the River Ivel and its adjacent floodplain.
Loss of hedgerows.	Green infrastructure enhancements at Kingfisher Lakes including access improvements and habitat enhancements as part of the Sandy Green Wheel.
Mineral working leading to creation of large open water bodies.	
Large scale housing at Fallowfield as northern edge of Sandy.	Potential route of East-West Rail,via Sandy.

Key positive landscape features/ strategic sensitivities of the landscape

4A.1.12   The minor roads and bridges over the Great Ouse and the Ivel which reinforce the rural character of the area.

4A.1.13   Open water bodies and associated wetland habitats providing a recreational resource and biodiversity interest.

4A.1.14   Distinctive features such as hedgerows, hedgerow trees and water meadows.

4A.1.15   With few historic features surviving in the predominantly arable landscape, the pockets of parkland and surviving areas of meadow are particularly significant.

4A.1.16   Rivers Great Ouse and Ivel and fringing vegetation including pollarded willows which contribute to sense of place and nature conservation.

4A.1.17   Individual villages with historic cores and strong links to the rivers through bridges, mills, riverside pastures and common land.

Visual Sensitivity

4A.1.18   Tranquil views across open water bodies and along the river corridors enclosed by woodlands.

4A.1.19   Openness and long views across the gently rising slopes linking with the adjacent Clay Farmland and Clay Vales landscape types. The level topography means that tall structures and large scale buildings are highly visible – avoid adverse impacts on the character of the river corridor.

Landscape Strategy

The landscape strategy for the Great Ouse Clay Valley is to **enhance** the landscape through restoring elements that have become degraded or been lost such as the hedgerows, pollarded willows, pastures and water meadows and conserving features such as the historic villages with their strong links to the river landscape character and the tranquil, rural sections of riverside and open water bodies fringed by woodland.

The Forest of Marston Vale Forest Plan should be referred to as the endorsed strategy for environmentally-led regeneration of that part of the area which falls within the Forest.

Guidelines for New Development

4A.1.20   Continue creation and enhancement of new wetlands and enhance existing open water bodies and their margins to increase biodiversity interest and strengthen character.

4A.1.21   Strengthen the connection of the town of Sandy with the river Ivel and its floodplain through for instance tree planting or wetland habitat creation that would enhance access links.

4A.1.22   Enhance and restore the hedgerows by replanting and resist development that will result in further loss/fragmentation of hedgerows and hedgerow trees.

4A.1.23   Take opportunities to restore derelict sites such as disused market gardens.

4A.1.24   Restore pastures on the floodplain of the River Ivel where these have been converted to arable or neglected and take opportunities to restore or create water meadows.

4A.1.25   Conserve the floodplain and ensure flood management work is sensitive to the river valley character.

4A.1.26   Retain the individual villages avoiding merging these through linear development along roads.

4A.1.27   Safeguard the rural character of the river corridor.

4A.1.28   Conserve the rural settings of the towns and villages and enhance the settlement edge for instance by woodland planting to screen large scale development.

4A.1.29   Conserve the character of secondary roads, limiting urbanising influences e.g. kerbing and widening and ensure that traffic management measures are sympathetic to those sections of the area with a rural character.

4A.1.30   Ensure that leisure facilities are designed to retain and enhance the rural character and biodiversity interest of the river and wetlands.
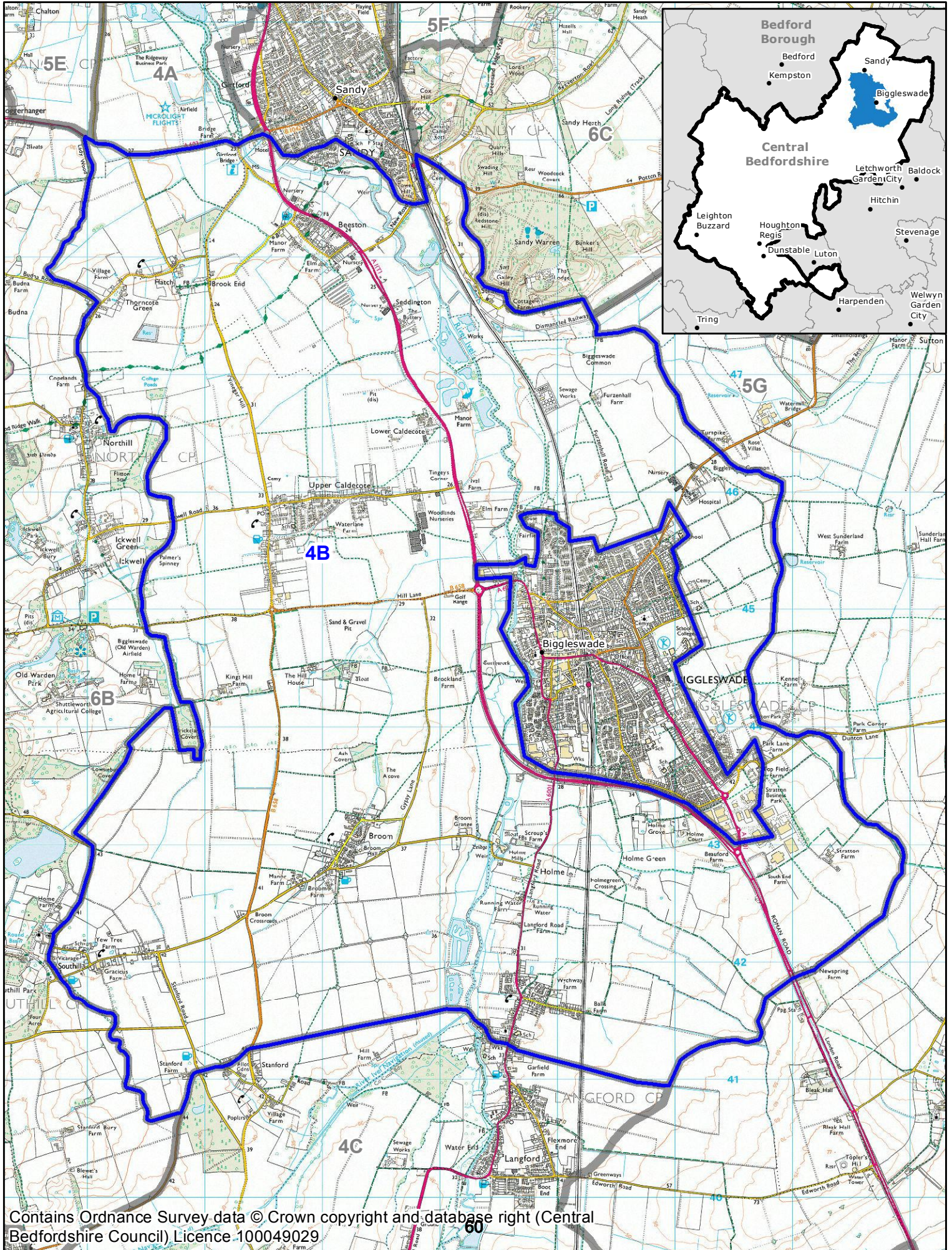
4A.1.31   Enhance recreational links to the river.

Landscape Management Guidelines

4A.1.32   Consistent hedgerow management and active management of pollarded willows. Encourage management of arable field margins for biodiversity interest.

4A.1.33   Ensure management of parkland to retain features of historic significance.

4A.1.34   Restore pastures on the floodplain of the River Ivel where these have been converted to arable or neglected and take opportunities to restore or create water meadows.

4A.1.35   Take opportunities to plant new woodlands (in particular wet woodlands) that will screen new and existing development.

Also refer to the following documents:

- Bedford Borough Landscape Character Assessment: Character Area 4A: Great Ouse Clay Valley for the landscape character description of the area lying within Bedford Borough

- Mid Bedfordshire Green Infrastructure Strategy: Ivel Valley I5b

4B: Lower Ivel Clay Valley

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4B Lower Ivel Clay Valley

Location and boundaries

4B.1   The *Lower Ivel Clay Valley* is located in the northeast of Central Bedfordshire following the course of the River Ivel. The area boundaries are based on changes in geology and land use, with drift deposits of Glacial and River Gravel along the valley differentiating it from the surrounding Claylands and Lower Greensand to the west and east. To the north and south the river valley continues and here the boundaries follow roads or field boundaries broadly indicate changes in land cover to the *Great Ouse Clay Valley* (4a) (an area dominated by open water bodies) to the north and the *Upper Ivel Clay Valley* (4c) (a more settled and wooded area) to the south.

Summary of landscape character: Key characteristics

4B.1.1   A level open river valley founded on Oxford Clay, Lower Greensand and Alluvium with drift deposits of Glacial and Valley Gravel.

4B.1.2   River Ivel runs through the area from south to north with areas of open water, tributary streams and ponds.

4B.1.3   Mixed land use of arable and improved pasture with some withy beds and rough grazing close to the River Ivel.

4B.1.4   Large and medium scale geometric fields are bounded by ditches and hedgerows with the latter often in poor condition or lost.

4B.1.5   Market gardening and nurseries throughout the area, with many fallen into disuse.

4B.1.6   Former gravel workings now form open water bodies close to the Ivel, and are often used for fishing and enclosed by narrow woodland belts. The operational Broom Quarry is located to the north of Broom.

4B.1.7   Shelterbelts of conifers and poplar are visually prominent in the flat landscape, plus occasional mature willows.

4B.1.8   Horse pastures are a frequent feature, with their boundary fences and shelters.

4B.1.9   Settlement of substantial linear villages, often along roads, plus the market town of Biggleswade and, to the north boundary, Sandy.

4B.1.10 Network of minor rural roads with small scale bridges over the Ivel contrast with the busy trunk road of the A1.

4B.1.11 There are open views over the level arable landscape to the west and south of the area and to the east of Biggleswade where there is a strong visual connection to the adjacent Dunton Clay Vale (5g).

4B.1.12 The Everton Heath Greensand Ridge (6b) to the east forms a wooded backdrop to the northern section of the valley.

4B.1.13 A disturbed and fragmented area with the presence of the major road corridor of the A1, large settlements and the mix of land uses giving an urban fringe character.

Landscape Character Description

Physical and natural landscape

4B.2   The *Lower Ivel Clay Valley* is an open, shallow valley, founded on Oxford Clay to the north, Lower Greensand to the south and Alluvium along the river flood plain, with drift deposits of Glacial and River Gravel over the Clay and Greensand. The area is low lying at 25m AOD to 50m AOD with views to the wooded slope of the Greensand Ridge forming a rural backdrop to the north of the area. Large and medium size fields of arable and pasture are bounded by ditches and hedgerows in mixed condition. Horse pastures with their shelters and fences feature along with market gardening, garden centres and greenhouses. These are sometimes disused with derelict greenhouses giving an air of neglect. Near to the River Ivel itself there are open water bodies, the result of mineral extraction as well as the existing Broom Quarry, plus rough pasture and withy beds. There are occasional hedgerow and boundary trees including a few mature willows, but shelterbelts of conifers and poplar are more frequent crossing the valley floor and giving enclosure in this open landscape. Settlement takes the form of a few substantial villages, plus the market town of Biggleswade which is located on the eastern bank of the Ivel.

Biodiversity

4B.3   Key habitats in the *Lower Ivel Clay River Valley* Character Area include the water course of the River Ivel, with its associated habitats such as mature willow pollards, willow and other scrub, and wetland vegetation such as marsh and swamp. As well as the river itself, the ditches on Biggleswade Common are of ecological interest. Typical farmland habitats are widespread in the area consisting of arable field margins, hedgerows, ponds, ditches and improved grassland and road verges and these support a range of farmland species. Unimproved neutral floodplain grassland would have been a feature of the area in the past but the surviving areas of floodplain grassland (for instance at Biggleswade Common) have been affected by land drainage and agricultural improvement, affecting biodiversity. Disused sand and gravel pits are of great biodiversity value particularly for wetland birds and invertebrates such as dragonflies. They are also associated with wetland habitats including marshy grassland, willow scrub and wet woodland. There are no sites with statutory nature conservation designation within the *Lower Ivel Clay River Valley*.

The River Ivel from Southill Road to the west of Holme

Restored quarry lakes near Broom

Visual and perceptual character

4B.4   Disused nurseries and greenhouses give an air of neglect. The A1 runs north south through the area and is locally dominant through views of moving traffic and noise. Views to the wooded slopes of the Greensand Ridge to the north provide containment and a rural backdrop.

Extensive views across the Ivel gap between the Greensand landform

Cultural pattern and historic character

4B.5   The historic landscape of the Ivel valley has been dominated by its fertile soils, and by its function as a transport corridor. It was occupied in prehistoric and Roman times; a minor Roman road took advantage of the break in the Greensand ridge and stimulated the development of a small Roman town at Sandy. In the immediate post-Roman period, climatic deterioration led to the development of an area of waterlogged fen (which was to become Biggleswade Common); as a consequence, the later Great North Road crossed the River Ivel north of Biggleswade and continued north on the west side of the river.

4B.6   The land-use in medieval times was similar to that in the Ouse valley to the north: meadow for hay and grazing immediately adjacent to the river, with open common fields in the rest of the valley. These were enclosed by the early 19th century, either privately or by Act of Parliament. The layout of the enclosure landscape was influenced by the presence of large estates to the west of the valley, particularly in the triangular game coverts that were incorporated in the corners of fields in Southill parish.

4B.7   The historic villages of Northill and Southill lie on the western edge of the valley, with a number of scattered hamlets on the valley floor. Some of the latter (Ickwell, Beeston and Upper Caldecote) developed round large greens. Sandy and Biggleswade, located at key crossing points of the river, developed as market towns.

4B.8   Transport improvements of the 18th and 19th centuries (the Great North Road turnpike, the Ivel Navigation, and the railway), and the improved access to markets, stimulated the development of market gardening in the area. This has led to significant loss of historic boundaries around Biggleswade, but less so to the west of the Ivel. Gravel extraction has become a major influence, resulting in the loss of meadowland and historic field patterns.

4B.9   The scheduled moat and medieval settlement at Hill, in Old Warden parish, occupies a significant position in the historic landscape. It lies at the heart of a probable Saxon estate known as Hill, derived from the Anglo-Saxon 'Gifle', the people who gave their name to the River Ivel. This estate was later separated into the parishes of Northill, Old Warden and Southill. To the east of Biggleswade, the moat and medieval earthworks at Stratton represent the surviving remnants of a sequence of settlements dating back to Saxon times. The ringwork west of Biggleswade

occupied a strategic position adjacent to the river, but has been damaged by ploughing and divorced from its landscape context by the A1 bypass.

Settlement pattern; built character

4B.10 The *Lower Ivel Clay River Valley* contains dispersed settlement of a few medium scale villages set along roads on the slightly higher ground to the west of the river plus the market towns of Biggleswade and Sandy on the east bank of the Ivel. The towns contain historic centres, while the villages are dominated by Victorian and 20th century red brick and render buildings with tile roofs. The eastern boundaries of the market towns are shielded by the A1 (T) but to the west the industrial estate at the southern edge of Biggleswade is an abrupt interface with the flat open landscape beyond.

The restored mill at the River Ivel in Biggleswade – milling was once a major industry in Bedfordshire

Contrast in landform and landuse between the Ivel valley and Greensand Ridge

Evaluation

Landscape Change

Past Change	Potential Future Change
Rise and then decline of market gardening and plant nurseries, with a number of glasshouses out of use and repair.	Construction of committed, large scale residential and employment developments to the east and south of Biggleswade.
Loss of water meadows along the River Ivel.	Biggleswade Eastern Relief Road.
Loss of hedgerows and the increase in horse pastures.	Extensions to existing quarries.
Mineral working leading to creation of large open water bodies and the loss of historic landscape features, particularly at Broom.	Recreational use of former gravel or sand workings leading to loss of biodiversity value.
Expansion of traditional market town of Biggleswade with large scale industrial estates.	Further agricultural improvement affecting surviving neutral floodplain grassland sites such as Biggleswade Common.
	Renewable energy developments.

Key positive landscape features/ strategic sensitivities of the landscape

4B.1.14 The minor roads and bridges over the Ivel which reinforce the rural character of the area.

4B.1.15 Open water bodies and associated wetland habitats providing a recreational resource and biodiversity interest.

4B.1.16 Areas of meadows and neutral floodplain grassland (particularly Biggleswade Common).

4B.1.17 Historic value of Biggleswade Common provides evidence of past environmental and climate change.

4B.1.18 River Ivel and fringing vegetation including pollarded willows which contribute to sense of place and nature conservation – key features sensitive to loss due to development.

Visual Sensitivity

4B.1.19 The views to the Greensand Ridge to the east which provides a rural backdrop to the northern section of the area – avoid introducing tall structures on the ridge.

4B.1.20 Views of/ towards the river corridor across the flat topography – tall structures and large scale buildings are likely to be highly visible.

Landscape Strategy

The condition of the *Lower Ivel Clay Valley* has declined and the overall strength of character of the area is judged as weak therefore the landscape strategy for the *Lower Ivel Clay Valley* is to **renew** elements that have become degraded or been lost such as the hedgerows, pollarded willows, pastures and water meadows and to **create** new features to enhance and strengthen landscape character such as new wetlands, wet woodlands and tree planting to screen harsh urban boundaries and roads and increase biodiversity interest.

Guidelines for New Development

4B.1.21 Enhance the hedgerows by replanting and resist development that will result in further loss/fragmentation of hedgerows and hedgerow trees.

4B.1.22 Ensure that new hedgerows and tree-planting respect the historic grain of the landscape, particularly along the A1 and safeguard surviving enclosure landscapes, particularly west of the Ivel.

4B.1.23 Seek landscape enhancement along the A1 corridor.

4B.1.24 Create new wetlands and enhance existing open water bodies and their margins to increase biodiversity interest and strengthen character.

4B.1.25 Restore derelict sites such as disused market gardens.

4B.1.26 Plant new woodlands (in particular wet woodlands) that will screen major road corridors or large scale development on the edges of the market towns.

4B.1.27 Conserve the floodplain and ensure flood management work is sensitive to the river valley character.

4B.1.28 Restore or create water meadows.

4B.1.29 Safeguard the rural character and qualities of the Ivel corridor, ensuring the development of facilities such as visitor centres and car parking does not detract from the tranquil character of the immediate river corridor.

4B.1.30 Retain the individual villages avoiding merging these through linear development along roads.

4B.1.31 Conserve the rural settings of the market towns of Biggleswade and Sandy and enhance the settlement edge for instance by woodland, hedgerow and hedgerow tree planting to screen large scale development at Biggleswade in over the open farmland to the east.

4B.1.32 Conserve the character of secondary roads, limiting urbanising influences e.g. kerbing and widening and ensure that traffic management measures are sympathetic to those sections of the area with a rural character.

4B.1.33 Enhance setting of historic settlements by retention or enhancement of historic boundaries.

4B.1.34 Strengthen the connections of the towns of Sandy and Biggleswade with the river Ivel and its floodplain through for instance tree planting or wetland habitat creation that would enhance access links.

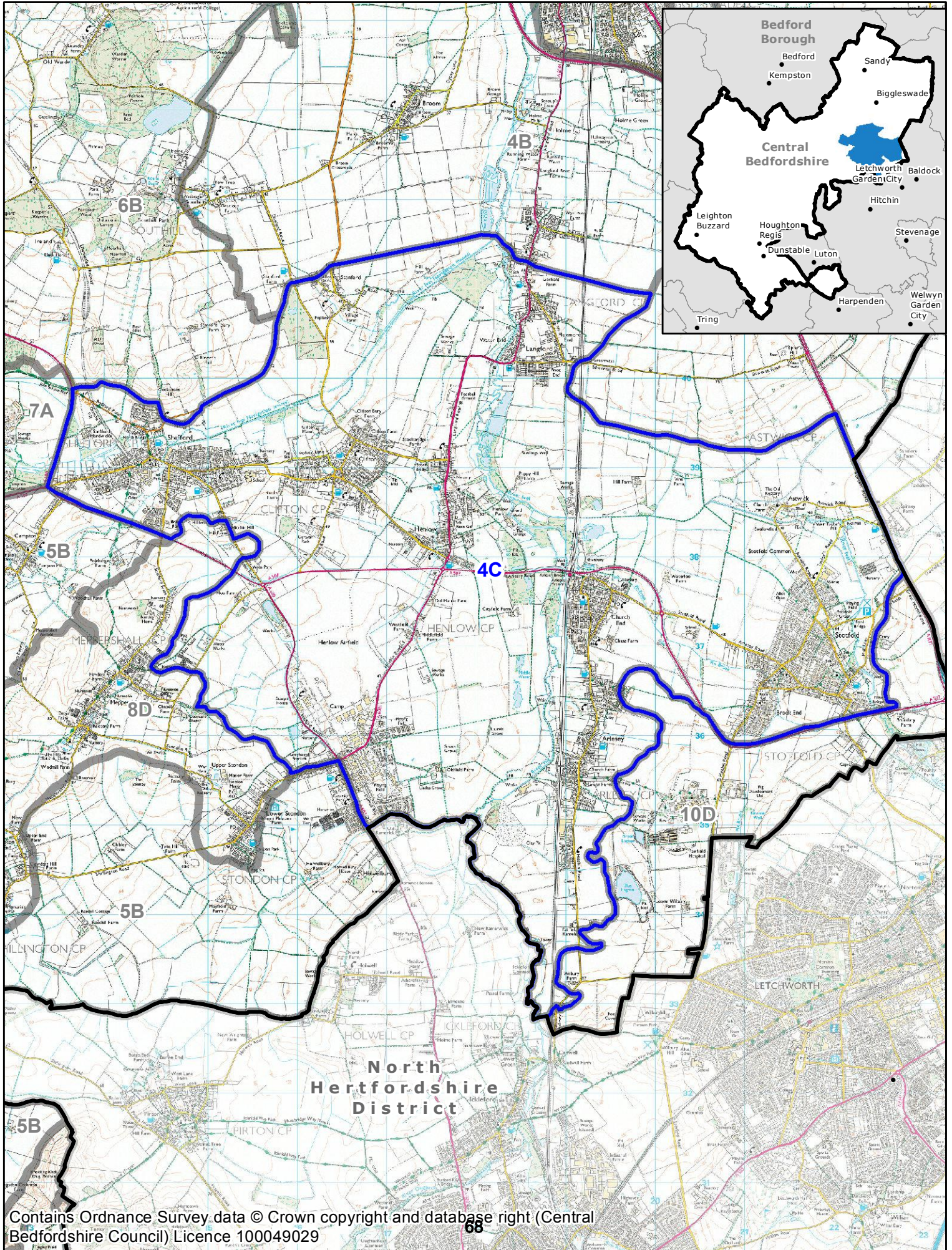4B.1.35 Retain the open, level qualities of the landscape, avoiding incongruous bunding.

Landscape Management Guidelines

4B.1.36   Sensitive management of flooding and safeguarding of the floodplain.

4B.1.37   Consistent management of hedgerows and ensure active management of the pollarded willows.

4B.1.38   Encourage management of arable field margins for biodiversity interest.

4B.1.39   Manage and perpetuate locally distinctive landscape features such as game coverts near Southill.

4B.1.40   Enhance existing open water bodies and their margins to increase biodiversity interest and strengthen character.

4B.1.41   Conserve and restore pastures on the floodplain of the River Ivel where these have been converted to arable or neglected.

4B.1.42   Ensure appropriate management for floodplain grassland such as that at Biggleswade Common and for ditches.

4B.1.43   Conserve the rural character of the footpaths and bridleways that run through the valley.

Also refer to the following documents:

- Mid Bedfordshire Green Infrastructure Strategy: Ivel Valley I5b

- Broom Quarry restoration plans for the area around the Broom Quarry extension.

4C: Upper Ivel Clay Valley

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4C Upper Ivel Clay Valley

Location and boundaries

4C.1   The *Upper Ivel Clay Valley* character area is located in the south east of Central Bedfordshire following the courses of the River Ivel, the River Hiz (to its confluence with the Ivel at Henlow) and, to the west, the disused River Ivel Navigation. The area boundaries are based on changes in geology, topography and land use, with the level valley with drift deposits of Glacial and River Gravel differentiated from the surrounding higher ground of the Claylands to the east, Lower Greensand to the west and Chalk to the south. To the north the Ivel valley continues and here the boundaries follow field boundaries which broadly indicate the change in land cover to the *Lower Ivel Clay Valley* (4b), a less settled and wooded character area.

Summary of landscape character: Key characteristics

4C.1.1   A level wide river valley founded on Gault Clay, Chalk and Alluvium with deposits of Glacial Gravel and Valley Gravel.

4C.1.2   The River Ivel, the River Hiz and the disused Ivel Navigation run through the area with tributary streams and open water bodies deriving from mineral workings, the latter concentrated between Henlow and Langford.

4C.1.3   Mixed land use predominantly of arable farmland with some pasture along the river courses plus substantial areas of settlement.

4C.1.4   Large and medium scale geometric arable fields are bounded by hedgerows in mixed condition with some hedgerow trees, with more intimate scale pastoral fields along the River Ivel.

4C.1.5   Scattered woodland blocks and belts create a semi-enclosed landscape along the River Ivel and River Hiz.

4C.1.6   Dense settlement of medium and large scale villages often expanded along roads, plus a few scattered farmsteads.

4C.1.7   Historic centres of villages (such as Langford, Clifton and Henlow) feature stone churches, red and yellow brick and render buildings with clay tile and slate roofs, while on the outskirts of settlements and spreading along roads there is more modern development in mixed materials.

4C.1.8   Open views over level arable farmland contrast with more intimate, enclosed pastures along the immediate river corridors.

Landscape Character Description

Physical and natural landscape

4C.2   The *Upper Ivel Clay Valley* character area is a level lowland with the River Ivel flowing from south to north and the River Hiz from east to west to join at Henlow. The Ivel Navigation (built to create a navigable link between the Rivers Flit and Ivel but now disused) runs from the west of the area to join the Ivel north of Langford. The area is founded on Gault Clay with Chalk to the south east. Alluvium marks the course of the three water bodies and there are deposits of Glacial Gravel to the north and River Gravel to the south east. The area is flat (ranging from 35m AOD to 51m AOD) and there are some long views over large scale open arable fields which contrast with more intimate, small scale pastures along the courses of the Ivel and Hiz. Large and

medium size fields of arable are bounded by ditches and hedgerows in mixed condition with some hedgerow trees. Near to the River Ivel there are some open water bodies, the result of mineral extraction. Some of these are enclosed by woodland for instance north of Henlow or fringing the clay pit south of Arlesey. Lakes east of Henlow are a recreational destination for activities including angling and adjacent camping facilities. Woodland blocks and belts occasionally line the rivers along with mature willows. The parkland at Henlow Park contains scattered trees and woodlands. The *Upper Ivel Clay Valley* has a high density of settlement with a number of substantial villages.

Arable farmland divided into large fields near Arlesey Road to the west of Stotfold

Biodiversity

4C.3   Key habitats in the *Upper Ivel Clay Valley* include the water courses of the River Ivel, River Hiz and Ivel Navigation with their associated habitats such as mature willow pollards, willow and other scrub, and wetland vegetation such as marsh and swamp. Typical farmland habitats are found through much of the area consisting of arable field margins, hedgerows, ponds, ditches and improved grassland and road verges and these support a range of farmland species. Disused sand and gravel pits are of considerable biodiversity value particularly for wetland birds and invertebrates such as dragonflies. They are also associated with wetland habitats including marshy grassland, willow scrub and wet woodland. There are no sites with statutory nature conservation designation within the *Upper Ivel Clay Valley.*

Visual and perceptual character

4C.4   The flat landscape results in some long views over large scale open arable fields, contrasting with more intimate, small scale pastures along the courses of the Ivel and Hiz. Overall it is a fragmented landscape with the immediate river corridors hidden by buildings and woodland and the wide views over the level arable fields sometimes interrupted by abrupt settlement edges.

Cultural pattern and historic character

4C.5   The historic landscape character of this area has largely been determined by the presence of nucleated villages surrounded by common open fields, with meadow along the Flit, Ivel and Hiz rivers. Most of the agricultural land has therefore been subject to enclosure in the early 19th century, giving rise to regular geometric field patterns. Many of the enclosure boundaries have been lost through later reorganisation and field enlargement. The small irregular closes which once existed around the historic village cores have been removed through modern housing development, with the exception of Astwick, where the pattern of old enclosures still remains.

4C.6   As with the Ivel valley further north, this area has been an important transport corridor. The Roman road between Baldock and Sandy marks the county boundary to the east, and the LNER

railway runs north-south to the west of Arlesey village. The Ivel Navigation was developed as an artificial canal between Langford and Shefford in the early 19th century. Henlow airfield led to the removal of the enclosure fields to the south-west, and gravel quarrying has affected some areas of meadow.

4C.7   As much of the land was formerly common field, there are few medieval earthwork sites. Etonbury and Arlesey Bury, both on the edge of Arlesey village, retain the fragmentary remains of manorial earthworks; the moat at Astwick Bury is a scheduled monument.

Settlement pattern; built character

4C.8   The *Upper Ivel Clay Valley* contains fairly dense settlement of large villages and market towns (Langford, Shefford, Stotfold, Henlow and Arlesey) spreading along the roads and in some cases almost joining to form continual settlements (for instance at Shefford, Clifton and Henlow in the east of the area). The centres of villages are generally older and retain something of their distinctive character for example around the village pond at Clifton and the mill at Stotfold, and close links to the river particularly at Langford. Historic bridges across the rivers are also landmarks as at Arlesey. There are scattered farmsteads in the open areas between the villages and, to the south, the Royal Air Force Henlow Camp, with large scale utilitarian buildings visible in wide views over the open ground of the Henlow Airfield. Buildings range from older redbrick or timber frame structures to the majority of modern brick or render dwellings. The traditional form of a number of Ends is present at Langford and Arlesey but these have been joined together by buildings strung along roads. Astwick remains a small scale rural village.

Historic houses on Grange Street, Clifton

The Rotunda in Henlow Village High Street

Evaluation

Landscape Change

Past Change	Potential Future Change
Loss of water meadows along the Rivers Ivel and Hiz.	Major extension to the east of Arlesey,including a new relief road.
Loss of hedgerows and hedgerow trees.	Potential growth along A1 corridor.
River Ivel Navigation fallen out of use.	Coalescence of villages and towns.
Mineral working leading to creation of open water bodies.	Recreational use of former gravel or sand workings leading to loss of biodiversity value.
Expansion of towns and villages including Shefford and Stotfold.	Renewable energy developments.

Key positive landscape features/ strategic sensitivities of the landscape

4C.1.9   The minor roads and bridges over the Ivel and the Hiz which reinforce the rural character of the area.

4C.1.10   Open water bodies and associated wetland habitats providing a recreational resource and biodiversity interest.

4C.1.11   River Ivel and River Hiz and fringing vegetation including pollarded willows which contribute to sense of place and nature conservation.

4C.1.12   Historic meadow which survives along the watercourses.

4C.1.13   Historic centres of villages with features such as ponds, links to riverside pastures and historic bridges.

4C.1.14   Astwick village with its surrounding pattern of small fields forms a distinctive pocket of older landscape.

Visual sensitivities

4C.1.15   The open views over level arable farmland to adjoining rural areas on higher ground.

4C.1.16   The corridor and enclosed rural views along the river corridors and across small scale pastures adjacent to rivers.

Landscape Strategy

The landscape strategy for the *Upper Ivel Clay Valley* is to **enhance** elements that have become degraded or been lost such as the hedgerows, pollarded willows, pastures and water meadows and to **create** new features to enhance and strengthen the river valley character such as new wetlands, wet woodlands and tree planting to screen harsh urban boundaries and roads and increase biodiversity interest.

Guidelines for New Development

4C.1.17   Resist development that will result in further loss/fragmentation of hedgerows and hedgerow trees. Enhance hedgerows by replanting.

4C.1.18   Create new wetlands and enhance existing open water bodies and their margins to increase biodiversity interest and strengthen character.

4C.1.19   Safeguard the rural character and qualities of the Ivel corridor. Plant further woodlands (in particular wet woodlands) that will create a more rural edge to development on the margins of villages.

4C.1.20   Create further connections between the villages and the rivers and floodplain through for instance tree planting or wetland habitat creation that would enhance access links.

4C.1.21   Avoid the coalescence of towns and villages (e.g. the linear merging of Shefford and Clifton along the road).

4C.1.22   Enhance landscape boundaries at exposed urban edges.

4C.1.23   Conserve the historic cores of the villages and distinctive features such as footpath links to riverside pasture, village ponds and historic bridges.

4C.1.24   Conserve the character of secondary roads, limiting urbanising influences e.g. kerbing and widening and ensure that traffic management measures are sympathetic to those sections of the area with a rural character.

4C.1.25   Safeguard the distinctive character of Astwick, with its historic pattern of small fields.

4C.1.26   Explore options for improving low key recreational opportunities and informal access to the river. Monitor the associated development of facilities e.g. visitor centres and car parking that might impact upon the surviving sections of rural, tranquil character in the immediate river corridor.

Landscape Management Guidelines

4C.1.27   Consistent management of hedgerows to retain the parliamentary enclosure landscape character.

4C.1.28   Ensure active management of the pollarded willows.

4C.1.29   Enhance existing open water bodies and their margins to increase biodiversity interest and strengthen character.

4C.1.30   Conserve and restore pastures on the floodplain of the River Ivel and River Hiz where these have been converted to arable or neglected and take opportunities to restore or create water meadows.

4C.1.31   Manage arable field margins for biodiversity interest.

Also refer to the following documents:

- Mid Bedfordshire Green Infrastructure Strategy: Ivel Valley