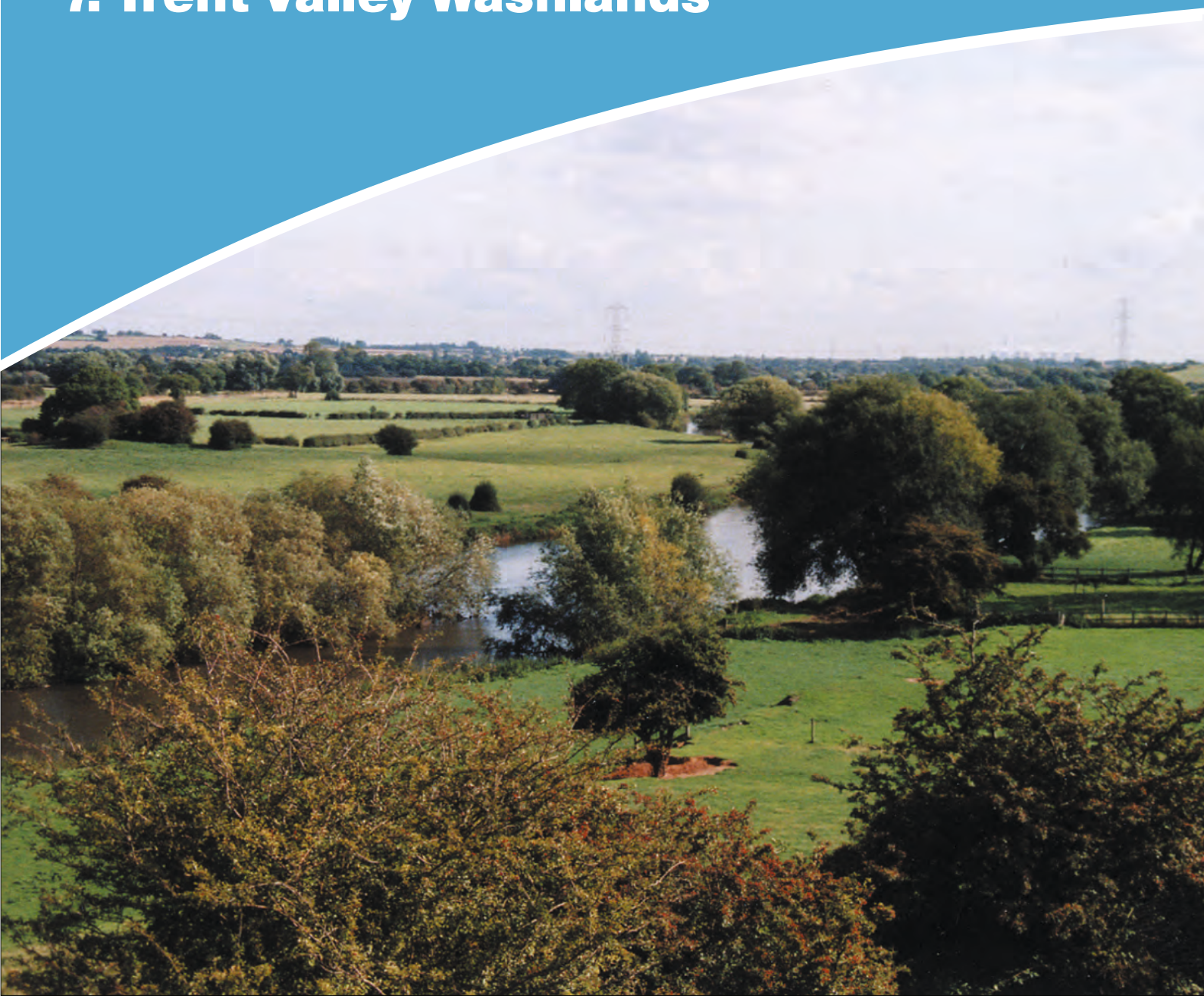
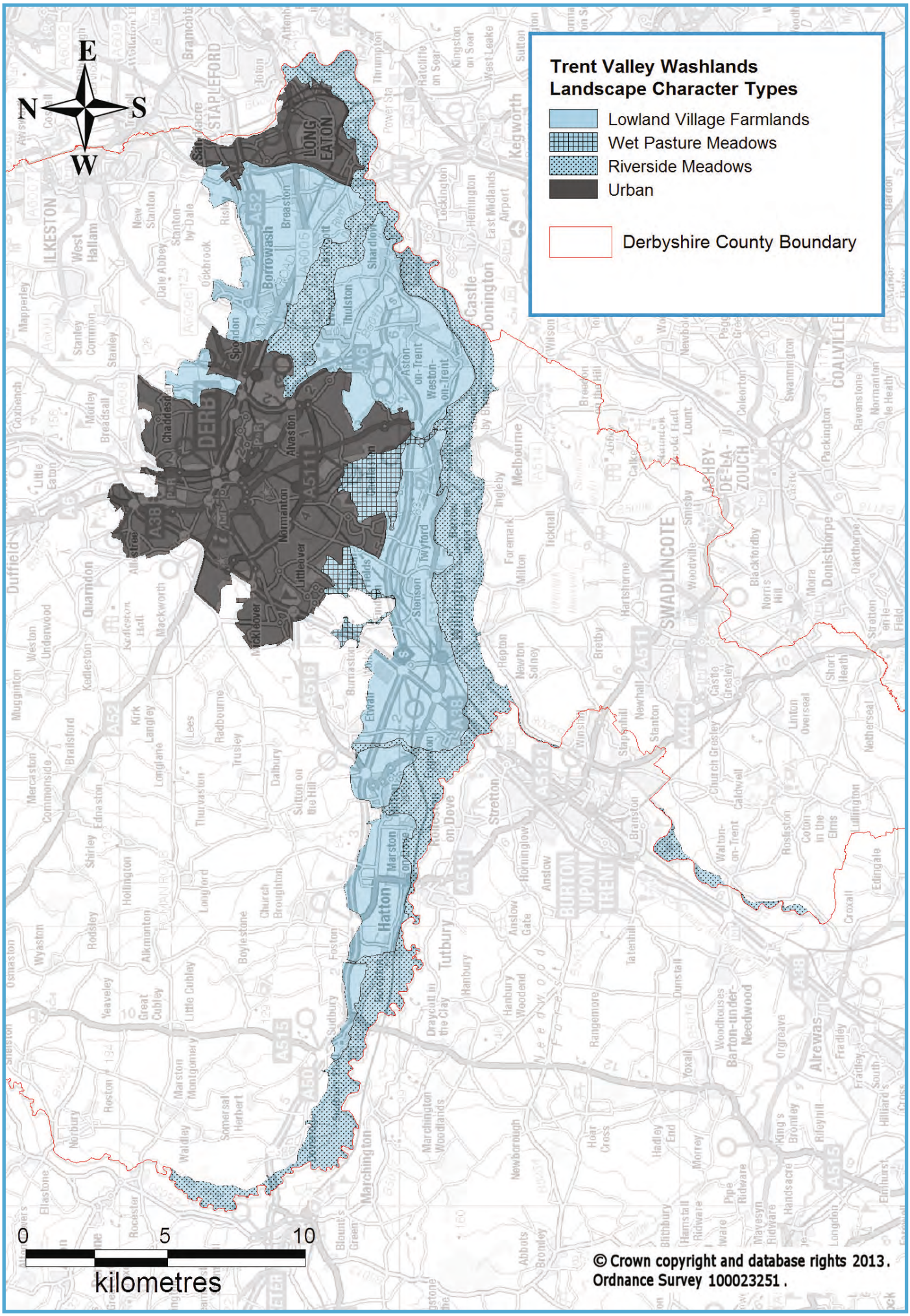
Part One: Landscape Character Descriptions

7. Trent Valley Washlands



Landscape Character Types

DERBYSHIRE County Council
Improving life for local people


Trent Valley Washlands
Landscape Character Types
Lowland Village Farmlands
Wet Pasture Meadows
Riverside Meadows
Urban
Derbyshire County Boundary
E
N
S
W
0
5
10
kilometres
© Crown copyright and database rights 2013.
Ordnance Survey 100023251.

Trent Valley Washlands

CHARACTER AREA 69

An agricultural landscape set within broad, open river valleys with many urban features.

Landscape Character Types

- Lowland Village Farmlands
- Wet Pasture Meadows
- Riverside Meadows

"We therefore continue our course along the arched causeway glancing on either side at the fertile meadows which receive old Trent's annual bounty, in the shape of fattening floods, and which amply return the favour by supporting herds of splendid cattle upon his water-worn banks..."

p248 Hicklin; Wallis 'Bemrose's Guide to Derbyshire'

Introduction

The Trent Valley Washlands constitute a distinct, broad, linear band which follows the middle reaches of the slow flowing River Trent, forming a crescent from Burton on Trent in the west to Long Eaton in the east. It also includes the lower reaches of the rivers Dove and Derwent.

To the north the valley rises up to the South Derbyshire Claylands and the Derbyshire Coalfield, whilst the south is bounded by the Melbourne Parklands and Mease/Sence Lowlands.

This is a somewhat fragmented landscape of pastoral and arable land, intermixed with urban development, transport routes and localised mineral extraction. The rivers regularly flood over the adjacent land creating a temporary but very different scene.

The broad, meandering rivers are unobtrusive and often only revealed by lines of willows and poplars. In the *Riverside Meadows*, permanent pasture is occasionally defined by small, hedged fields with scattered hedgerow trees, but more frequently by medium to large hedged fields with sparsely scattered trees. On the raised river terraces of the *Lowland Village Farmlands*, pasture gives way to mixed farming with larger more regular sized fields. Within these arable areas, hedgerows are low and tightly trimmed and hedgerow trees are few. Woodlands are few throughout the area although occasionally the full growth of riparian trees and shrubs give the impression of woodland cover.

Large power stations once dominated the scene with their massive cooling towers. Most of these have become decommissioned and will soon be demolished.

Sand and gravel extraction and subsequent restoration has created localised areas of open water. Major roads like the A50, south of Derby, and the A52, from Derby to Nottingham, further dissect the area.

Physical Influences

The area is defined by an underlying geology of Mercia Mudstones overlain with a variety of fluvioglacial, periglacial and river deposits of mostly sand and gravel, to form terraces flanking the rivers.

The gravel terraces of the *Lowland Village Farmlands* form coarse, sandy loam, whilst the *Riverside Meadows* are predominantly a heavy clay loam. Locally distinct to the Midlands and occurring only in a few areas south of Derby, at Stenson Fields and Sinfin Moor, the *Wet Pasture Meadows* are characterised by grey, calcareous clays affected by ground water and occasional flooding.

These variations in soils and levels have determined the nature of agricultural practices and settlement patterns. Mixed farming and the villages of the *Lowland Village Farmlands* are located on the slightly higher levels which are freer draining and less prone to flooding, whilst the unsettled pastoral areas form the *Riverside Meadows* of the flood plain. The open flood plains play a vital role in coping with increased volumes of water in the Trent system during times of flood.

Natural Influences

Agriculture remains the predominant land-use with improved pasture and arable on the slightly higher river terraces of the *Lowland Village Farmlands*. Pasture is the main land-use adjacent to the river on the *Riverside Meadows*.

Areas of traditional semi-natural habitats, such as wet grasslands and marsh, small fields with species-rich grasslands, ponds and ditches, and wet woodlands, have all been marginalised or isolated by modern farming practice and the deepening and canalisation of the River Trent, which has drained adjacent land. In some areas there has been considerable loss of hedgerows through removal to enlarge fields for arable crops or through neglect.

The rivers themselves and their tributaries are recognised as valuable wildlife corridors both for terrestrial animals and migratory birds. Mineral extraction has created additional open water areas, marshes and wet woodland, some of which have become important wildlife habitats.

Human Influences

The Trent Valley has been a focus of human activity since early prehistory. The gravel terraces with their light soils attracted settlement from the Neolithic period onwards and, from as early as the Iron Age, there is evidence for the establishment of boundaries within the landscape.

The evidence for these settlements and field systems is now generally only visible on aerial photographs, although some upstanding monuments do survive, such as the prehistoric barrows at Swarkestone Lowes and Round Hill in Twyford and Stenson Parish.

As is often the case, the pattern of settlement and enclosure visible today was established in the Anglo-Saxon Period, as place names such as Aston and Weston-on-Trent or Swarkestone indicate. Enclosure of the medieval open fields and commons by parliamentary enclosure and private agreement had begun by the 18th century. The enclosures are generally quite large and regular, and many have been enlarged in recent decades. Some areas of ridge and furrow survive but much has been lost due to intensive arable farming.

The villages of the *Lowland Village Farmlands* are compact and nucleated although settlements, such as Hilton, Breaston and Draycott, have expanded rapidly in the 20th century to sprawl across the valley. The traditional building materials of the historic settlements are red brick with Staffordshire blue clay tile roofs. High status buildings are constructed from imported sandstones.

With the developing use of water power, mills were constructed on the more accessible tributaries in the flood plain. However, the risk of flooding restricted settlement on the *Riverside Meadows*. When water power was replaced by coal, the proximity of the Derbyshire Coalfield and an improving transport network in the 18th and 19th centuries, led to the growth of the textile and engineering industries.

In the 20th century, plentiful supplies of nearby coal, as well as easy access by rail, led to the construction of large coal-fired power stations. The Trent Valley continues to accommodate important transport routes with road, rail and canals threading through its length. Modern roads like the A50 and A52 have a major impact on the landscape as they cross the area from east to west, often dissecting historic lanes across the flood plain.

The underlying mineral deposits have resulted in extensive gravel extraction in the lower Dove and Trent flood plains. The restoration of gravel pits is changing from agricultural after-uses to open water, resulting from the lack of suitable fill material. In some sections of the Trent, active gravel extraction and open water strongly influences the landscape character.

Other Considerations

- The Lowland Derbyshire BAP
- On Trent Initiative
- Trent Valley Supplementary Planning Guidance
- Trent Valley Vision

** For more information on the Trent Valley Vision see the Introduction.*

Swarkestone Bridge and Causeway

Trent Valley Washlands

LANDSCAPE TYPE: LOWLAND VILLAGE FARMLANDS

This is a large scale, open, gently rolling lowland landscape associated with the lower slopes and terraces of broad flood plains. A mixed farming landscape defined by medium to large regular fields with thorn hedges, punctuated by villages.

Key Characteristics

- Gently rolling, almost flat, lowland with river terraces
- Low slopes and summits give a sense of elevation over a broad flood plain
- Mixed farming with arable cropping and improved pasture
- Thinly scattered hedgerow trees including some willow pollards
- Scattered, locally dense, watercourse trees
- Medium to large regular fields with thorn hedgerows
- Discrete red brick villages with farms and cottages
- Large red brick outlying farms

Geology and Landform

The underlying geology comprises alternating bands of Permo-Triassic Mudstones and Siltstones. Within the Trent Valley, the bedrock has been overlain with a variety of fluvioglacial drifts, river terrace deposits and alluvium.

Soils and Land-Use

The soils are variable, relating to the underlying geology and drift material. Soils developed from the fluvial drift and river terrace deposits are deep and permeable. They are variably affected by ground water which supports short-term grassland and cereals. Other soil types are slowly permeable and seasonally waterlogged comprising of reddish, fine loamy clays and other clay soils derived from Permo-Triassic Mudstone and alluvium. These support winter cereals, short-term grassland, dairy and stock rearing. Fields respond well to under-drainage but the less permeable soils can suffer from cattle poaching and a limited autumn season for sowing crops.

The traditional land-use is mixed farming with arable crops and improved pasture, reflecting the variation in the underlying soils. Grassland is now restricted to the areas of heaviest soils and smaller field parcels associated with the villages. The presence of fluvioglacial and river gravels has led to localised quarrying.

Ecology

With a long tradition of mixed farming with intensive cropping, this landscape is ecologically poor. Terrestrial corridors, in the form of hedgerows, streams and ditches persist but these are becoming poorer owing to neglect, drainage schemes and further agricultural intensification.

Developing habitat at Willington

Canals and standing open water provide additional habitat opportunities for wetland flora and fauna, such as those found at the Hilton Gravel Pits SSSI. Further gravel extraction is providing opportunities for increasing wetland habitats but there are constraints due to issues such as the proximity to East Midlands Airport, flood flows and availability of suitable fill.

Tree Cover

Tree cover is variable throughout this landscape character type, although it is rarely visually prominent. Sparsely scattered hedgerow trees are locally prominent where the fields are smaller, particularly in association with villages. Hedgerow trees are generally a mix of oak and ash with some willow. Many of the willows have been pollarded and form visually distinctive features. There are scattered, locally dense trees along watercourses; predominantly alder with some willow. There are localised parkland trees and avenues around Elvaston Park, and small amenity tree groups are found adjacent to scattered farmsteads. In areas of former common, tree cover is very sparse.

Woodland is largely absent from this landscape, or occurs as small, sparsely scattered blocks. There are some small estate woodlands in the proximity of Elvaston.

Enclosure

The enclosure pattern is an important characteristic in defining the scale of this landscape type. Hedgerows, predominantly hawthorn, enclose medium to large semi-regular and regular fields. In areas of former common, as at Etwall Common and around Hilton, the regular field pattern is particularly prominent. In areas of earliest enclosure, immediately surrounding settlements, hedgerows tend to be more mixed in composition and fields tend to be smaller and more sub-regular. Some of these smaller fields have patches of ridge and furrow, indicative of earlier medieval field systems. Many hedgerows are now poorly managed being over-flailed and becoming gappy. Some hedgerows have been lost to agricultural intensification.

Transport

Country lanes are few and most are organic in character with irregular width verges. These lanes connect the villages and scattered farmsteads, and connect with crossing points in the Trent Valley. There are also lanes running parallel to the flood plain taking advantage of the slight elevation to avoid the risk of flooding.

The importance of this landscape as a transport corridor is still evident, with the expansion and construction of roads like the A50 and A52, both forming important east-west connections. These are busy routes and form a prominent visual intrusion in the landscape. Modern roads have also impacted on the character of the traditional lanes, many of which have been widened to pass over new roads or been truncated by them

The Trent and Mersey Canal was once a major industrial transport route. It now caters mainly for recreational water traffic crossing the area from south-east of Egginton eastwards to Swarkestone.

Built Environment

Settlements are generally nucleated and some are much extended. Early settlement in the flood plain was constrained by both flooding of the valley bottoms and by heavy clays. As a result, settlements are located on the gentle slopes and gravel river terraces, immediately off the flood plain, where drainage is better. In fact, the gravel terraces were settled and utilised from early prehistoric times, particularly from the Neolithic onwards.

Villages are compact, with cottages and farms built in the vernacular style of red brick with Staffordshire blue clay tile roofs.

Aston-on-Trent

Between the villages there are sparsely scattered farmsteads, again built in red brick. Adjacent to former commons there are small collections of wayside cottages.

A significant feature within this landscape is Elvaston Castle with its formal grounds and estate plantations.

The combination of proximity to Derby and Nottingham, and location on good transport corridors, has led to the rapid expansion of many villages, particularly noticeable at Hatton, Hilton, Borrowash and Breaston. Today the urban fringes are characterised by large modern housing estates.

Other impacts in this landscape relate to power stations like that at Willington with its extensive plant, pylons and overhead power lines. There have also been major changes to landscape character as a result of large scale mineral extraction.

Summary

The soft rocks of Permo-Triassic Mudstones and Siltstones with drift deposits have weathered away to form a very subdued, gently rolling lowland landscape that has strongly influenced the cultural patterns of the landscape. Soils reflect the geological variation, with heavy seasonally waterlogged soils over mudstone, and more permeable soils over localised drift and river terrace deposits. The resultant land-use is typically mixed, with cropping on the flatter, more cultivable, soils and improved pasture in damper areas.

A key feature of this landscape is its nucleated settlement pattern. Villages like Hatton and Weston-on-Trent are located on relatively high spots or better drained land immediately off the flood plain, in order to reduce the risk of flooding. The enclosure pattern reflects a diverse history. Immediately adjacent to the villages, fields are medium size, semi-regular, with areas of ridge and furrow reflecting the enclosure of medieval open fields. The hedges that enclose these fields are species-rich. Beyond the villages there is a more regular pattern of fields suggesting a period of later enclosure and typically, the hedgerows are single species hawthorn. The more regular fields are most obvious in areas of former common like Etwall Common and Egginton Common.

Villages are traditionally compact with cottages and farmsteads built in the local material of red brick with Staffordshire blue clay tile roofs. Some of these settlements like Hatton, Hilton, Breaston and Borrowash have undergone rapid expansion with the construction of new housing estates to serve the city of Derby.

Much of the original character of this landscape has been seriously impacted upon by modern large scale development. Large power stations dominate views across the landscape as do the many pylons carrying the resultant electricity. The gentle topography above the flood plain has always been attractive for road construction and modern roads, like the A50 and A52, pass through this landscape. The underlying mineral deposits have resulted in sand and gravel extraction, and the restoration of these sites has created areas of immature agricultural land and large water bodies.

LANDSCAPE TYPE: LOWLAND VILLAGE FARMLANDS

Planting and Management Guidelines

Open, mixed farming landscape with thinly scattered plantations and hedgerow trees.

Primary woodland character:	Thinly scattered small plantations
Primary tree character:	Thinly scattered hedgerow trees
Woodland vision:	Widespread interconnecting woodland
Tree vision:	Thinly scattered hedgerow trees

Typical woodland size range:	0.5 - 10ha	small
Woodland pattern:	Regular plantations	

- Ensure the use of indigenous tree and shrub species, including a proportion of large, long-lived species.
- Conserve and enhance the tree groups that occur within and around rural settlements and isolated farmsteads.
- Encourage the continuing practice of pollarding to maintain the traditional riparian character of the landscape.
- Ensure new woodland does not conflict with features (e.g. ridge and furrow) that help to define landscape character.

Note
This guidance may be subject to variation following the emergence of the Trent Valley Vision and Strategy.

LANDSCAPE TYPE: LOWLAND VILLAGE FARMLANDS

Woodland Species Mix

Neutral/ Base-Rich Soils

Primary Tree Species 50%

Fraxinus excelsior	Ash
Quercus robur	Pedunculate Oak

Secondary Tree Species 20%

Major

Acer campestre	Field Maple
Ilex aquifolium	Holly

Minor

Malus sylvestris	Crab Apple
Populus tremula	Aspen
Sorbus aucuparia	Rowan
Tilia cordata	Small Leaved Lime

Shrubs 10-30%

Major

Corylus avellana	Hazel
Crataegus monogyna	Hawthorn

Minor

Prunus spinosa	Blackthorn
Rhamnus cathartica	Purging Buckthorn
Salix cinerea	Grey Willow

Open space 0-20%

Waterlogged Conditions on all soil types

Primary Tree Species 50%

† *Alnus glutinosa*	Alder
† *Salix fragilis*	Crack Willow

Secondary Tree Species 20%

Major

Betula pubescens	Downy Birch
Fraxinus excelsior	Ash

Minor

* *Populus nigra ssp. betulifolia*	Black Poplar
Quercus robur	Pedunculate Oak
Salix caprea	Goat Willow

Shrubs 10-30%

Major

Salix cinerea	Grey Willow
Sambucus nigra	Elder
Salix aurita	Eared Willow

Minor

Crataegus monogyna	Hawthorn
Frangula alnus	Alder Buckthorn
Rhamnus cathartica	Purging Buckthorn
Salix viminalis	Osier
Viburnum opulus	Guelder Rose

Open space 0-20%

† **Watercourse Trees** - tree species most appropriate for planting as watercourse trees.

* Plant only **native** Black Poplar (sub species betulifolia). Contact Derbyshire Wildlife Trust for more information.

Hedgerow Species Mix

Suitable hedgerow plants

Primary 70-75%

Crataegus monogyna	Hawthorn

Secondary 25-30%

Acer campestre	Field Maple
Corylus avellana	Hazel
Ilex aquifolium	Holly
Prunus spinosa	Blackthorn

Occasional 0-5%

Rhamnus cathartica	Purging Buckthorn

Suitable hedgerow trees

Primary 95-100%

Fraxinus excelsior	Ash
Quercus robur	Pedunculate Oak

Secondary 25-30%

Acer campestre	Field Maple
Tilia cordata	Small Leaved Lime

Occasional 0-5%*

Malus sylvestris	Crab Apple
Populus tremula	Aspen
Sorbus aucuparia	Rowan

* only to be used if occurring locally within the landscape character type

Trent Valley Washlands

LANDSCAPE TYPE: WET PASTURE MEADOWS

A flat, low-lying mixed farming landscape, with regular and geometric field patterns. Hawthorn hedgerows enclose fields and there are scattered trees, including willow pollards along hedges and ditches.

Key Characteristics

- Flat low-lying irregular shaped basins
- Waterlogged soils
- Mixed farming with patches of unimproved grassland
- Scattered trees along hedgerows and ditches
- Visually prominent willow pollards
- Medium to large regular or geometric shaped fields with hawthorn hedgerows
- Largely uninhabited with very occasional, large, red brick farmsteads

Geology and Landform

This is a flat, low-lying landscape, defined by irregular shaped basins, fringed by low hills and slopes. The underlying geology is that of river and lacustrine (lake) alluvium. Around the edges these deposits overlay Triassic Mudstone.

Soils and Land-Use

The soils are locally distinctive in the Midlands, occurring only in these few areas to the south of Derby at Stenson Fields and Sinfin Moor. They are typically grey calcareous clays, affected by groundwater and occasional flooding.

The land-use is mixed farming with an increasing move towards arable. Winter waterlogging is common and grazing is restricted during wet periods to prevent poaching. The water level is increasingly being controlled by ditches and field drainage, allowing for more extensive cropping. Opportunities for spring cultivation are limited, so winter cereals form the main crop.

Ecology

Intensification of farming and an increasing move towards cropping means that the ecological value of this landscape is diminishing. Many of the inherent habitat types would be associated with wetland habitats. Today there are still patches of unimproved grassland and rush pasture.

Terrestrial corridors are widespread with an extensive network of tall hedgerows, for the most part hawthorn with some elm.

Tree Cover

Tree cover is not a prominent feature of this landscape, although trees are well represented throughout and, coupled with tall hedgerows, provide filtered views. There are scattered trees along most hedgerows, ditches and minor streams, which tend to be a mix of oak, ash and willow. The willows form distinctive features, especially where they have been pollarded.

Enclosure

The enclosure pattern is of particularly distinctive form, created by Parliamentary Award and Agreement. The fields are medium to large in size and have regular or geometric outlines. They are enclosed by hawthorn hedges with

some elm, typical of late enclosed landscapes, and place names like Sinfin Moor are indicative of areas of former waste. It is often the size of the fields that help to define the scale of this landscape.

Large, regular fields indicate enclosure of former common

Transport

Few roads cross this landscape, due to its generally uninhabited nature. Where roads occur they are straight and direct, with uniform width verges, as a result of the pattern set out by parliamentary enclosure.

To the north of Findern, the A38 crosses the landscape on an embankment, creating a major visual intrusion.

Built Environment

This is traditionally an uninhabited landscape due to the risk of flooding, although there are occasional scattered farmsteads. These farmsteads are generally large in size, were probably established at the time of enclosure, and typically are constructed of red brick with Staffordshire blue clay tile roofs.

This landscape immediately abuts the urban fringes of Derby and urban expansion, especially residential, is having a major impact on this landscape type.

Summary

This is a flat, low-lying landscape associated with irregularly shaped alluvial and lacustrine basins, fringed by low hills and slopes. The soils are poorly draining and prone to flooding. As a result, the landscape has remained largely uninhabited, other than a few sparsely scattered red brick farmsteads.

The heavy soils and risk of flooding has led to the development of a mixed farming system. With improvements to drainage, there is a growing emphasis on arable cropping, although because of the difficulty of spring cultivation, these remain restricted to winter cereals.

A key characteristic of this landscape is its enclosure pattern. Much of the agricultural land, having originated from former wasteland, was enclosed as part of the Parliamentary Enclosure Acts. The resultant fields are typically regular to geometric in shape and medium to large in size, usually enclosed by tall hawthorn hedgerows with some elm. Trees are apparent throughout, usually scattered along hedgerows, ditches and minor streams. Pollarded willows are a particularly distinctive feature.

LANDSCAPE TYPE: WET PASTURE MEADOWS

Planting and Management Guidelines

Low-lying, almost flat, mixed farming landscape with thinly scattered hedgerow and watercourse trees but no woodland.

Primary woodland character:	Unwooded
Primary tree character:	Thinly scattered hedgerow trees and scattered watercourse trees
Woodland vision:	Occasional small wet woodlands
Tree vision:	Thinly scattered hedgerow trees and scattered watercourse trees

Typical woodland size range:	0.5 - 15ha	small
Woodland pattern:	Regular	

- Ensure the use of indigenous tree and shrub species, including a proportion of large, long-lived species.
- Ensure a balance is maintained between new woodland planting and areas of nature conservation value.
- Enhance the visual and ecological continuity of river corridors by management, natural regeneration and planting of riparian trees.
- Encourage the continuing practice of pollarding to maintain the traditional riparian character of the landscape.

Note
This guidance may be subject to variation following the emergence of the Trent Valley Vision and Strategy.

LANDSCAPE TYPE: WET PASTURE MEADOWS

Woodland Species Mix

Neutral/ Base-Rich Soils

Primary Tree Species 50%

Fraxinus excelsior	Ash
Quercus robur	Pedunculate Oak

Secondary Tree Species 20%

Major

Acer campestre	Field Maple
Ilex aquifolium	Holly

Minor

Malus sylvestris	Crab Apple
Populus tremula	Aspen
Sorbus aucuparia	Rowan
Tilia cordata	Small Leaved Lime

Shrubs 10-30%

Major

Corylus avellana	Hazel
Crataegus monogyna	Hawthorn

Minor

Prunus spinosa	Blackthorn
Rhamnus cathartica	Purging Buckthorn
Salix cinerea	Grey Willow

Open space 0-20%

Waterlogged Conditions on all soil types

Primary Tree Species 50%

Alnus glutinosa	Alder
† *Salix fragilis*	Crack Willow

Secondary Tree Species 20%

Major

Betula pubescens	Downy Birch
Fraxinus excelsior	Ash

Minor

* *Populus nigra ssp. betulifolia*	Black Poplar
Quercus robur	Pedunculate Oak
Salix caprea	Goat Willow

Shrubs 10-30%

Major

Salix cinerea	Grey Willow
Sambucus nigra	Elder

Minor

Crataegus monogyna	Hawthorn
Frangula alnus	Alder Buckthorn
Rhamnus cathartica	Purging Buckthorn
Salix viminalis	Osier
Viburnum opulus	Guelder Rose

Open space 0-20%

† Watercourse Trees - tree species most appropriate for planting as watercourse trees.

* Plant only **native** Black Poplar (sub species betulifolia). Contact Derbyshire Wildlife Trust for more information.

Hedgerow Species Mix

Suitable hedgerow plants

Primary 70-75%

Crataegus monogyna	Hawthorn

Occasional 0-5%

Acer campestre	Field Maple
Prunus spinosa	Blackthorn

Suitable hedgerow trees

Primary 95-100%

Fraxinus excelsior	Ash
Quercus robur	Pedunculate Oak

Secondary 25-30%

Acer campestre	Field Maple
Tilia cordata	Small Leaved Lime

Occasional 0-5%*

Malus sylvestris	Crab Apple
Populus tremula	Aspen
Sorbus aucuparia	Rowan

* only to be used if occurring locally within the landscape character type

Trent Valley Washlands

LANDSCAPE TYPE: RIVERSIDE MEADOWS

Broad, flat flood plains, containing meandering rivers and streams with scattered trees along riverbanks. A pastoral landscape of large, hedged fields with trees scattered along boundaries.

Key Characteristics

- Flat flood plains containing meandering rivers and streams
- Seasonally waterlogged soils over alluvium
- Intensive permanent pasture
- Localised patches of rushes in damp hollows
- Dense watercourse trees, mainly alder with some localised willow
- Scattered trees along hedgerows and ditches
- Regular shaped fields bounded by hawthorn hedges
- Lanes alongside or crossing the flood plain
- Generally uninhabited with sparsely scattered, isolated farmsteads

Geology and Landform

The underlying geology of these flat flood plains consists of alluvial mud lying over gravels, deposited by the rivers in times of flood. The gravel acts as an aquifer carrying water from the adjoining land into the rivers and so is permanently waterlogged. In places there are natural raised banks to the rivers known as levees. These are formed as a result of the deposition of sediment by waning floodwaters.

The flood plain broadens out in these lower reaches of the Rivers Dove, Derwent and Trent.

Soils and Land-Use

The soils are seasonally waterlogged, clayey loams. Some areas are more permanently waterlogged and some hollows retain floodwater long after the majority of floods have subsided. The predominant land-use is pasture.

The flood plain makes good quality, fattening pastures. The wet, fine textured soils and risk of flooding make the land difficult to work for arable cropping, although some arable fields can be found in the valley as a result of recent drainage improvements and flood protection measures.

Ecology

The lower River Dove, Derwent and Trent are important fresh water habitats. The open water provides important wildlife habitats, as do their banks and margins. Important ecological sites include the Old River Dove SSSI at Marston-on-Dove and Lockington Marshes SSSI.

Localised patches of unimproved pasture occur along the Dove, Derwent and Trent. Pastures with a high water table, where the soil is permanently wet, are important ecologically for their species-rich flora, ground beetles and birds, such as curlew and snipe. However, these habitats are becoming increasingly rare, as former pastures have often been converted to arable following drainage improvements.

Gravel extraction is providing opportunities for increasing wetland habitats but there are constraints due to the proximity to East Midlands Airport, flood flows

and availability of suitable fill. Gravel extraction, combined with improved drainage and conversion to arable, is leading to a significant loss of meadowlands.

Tree Cover

There are scattered lines of trees along riverbanks, mainly alder with occasional willows. Many trees have been removed from the riverbanks as part of flood protection works and there is die-back in other places. There are also mature trees, chiefly oak, ash and willow, scattered along fields boundaries. Pollarded willows form distinct localised features in the landscape. Scattered trees in association with the flat topography filter views through the landscape.

Enclosure

The enclosure pattern is a key feature defining the scale of this landscape type. Fields are medium to large in size, being sub-regular or regular in shape. They are enclosed by hedgerows, predominantly hawthorn, which tend to be tall, limiting or filtering views through the landscape. Many of these hedges are becoming gappy due to poor management. Some fields have patches of ridge and furrow indicative of earlier medieval field systems.

Pastoral fields with areas of ridge and furrow

Transport

By virtue of its generally uninhabited nature, there are few lanes crossing this landscape. Where lanes occur, they are narrow with irregular verges, often direct, tending to cross the flood plain or run along its edge where the risk of flooding is lessened.

The A514 crosses the broad valley of the Trent on the medieval sandstone Swarkestone Causeway, a scheduled ancient monument and one of the largest such structures in the country.

The Trent and Mersey Canal crosses the Dove on a viaduct north of Burton-on-Trent, leaving the Riverside Meadows for the Lowland Village Farmland. It follows the edge of the flood plain along the northern side of the Trent, from Swarkestone to Trent Lock. Once an important transport route for early industry, its use dramatically declined with the advent of the railways. It now carries predominantly leisure craft.

Trent and Mersey Canal at Great Wilne

Built Environment

Historically, there was little built development on the flood plain, except for the occasional water mill for grinding corn. There are occasional red brick farmsteads on the higher, better drained parts of the flood plain.

The underlying mineral deposits have resulted in extensive gravel extraction in the lower Dove and Trent flood plains. The restoration of gravel pits is changing from agricultural after-uses, to open water, resulting from the lack of suitable fill material. In some sections of the Trent active gravel extraction and open water strongly influences the landscape character.

Large power stations dominate some views and the A52, A50, A38 and M1 also visually intrude into this landscape.

Summary

This is a distinct landscape associated with the lower reaches of the rivers Dove, Derwent and Trent. Broad, flat flood plains, with underlying alluvial deposits, have strongly influenced the cultural patterns that are evident today. A flood plain is often clearly defined by rising land on either side but, in the Trent Valley, the landscape appears much broader because of gently rising valley sides.

The alluvium gives rise to clayey, seasonally waterlogged soils. This is a landscape traditionally associated with pasture. Historically, much of it would have remained unenclosed, as extensive fattening pastures for summer grazing. Pockets of free-draining soil over areas of gravel or on slightly higher land would historically have been cultivated for crops and this is evidenced by the presence of localised ridge and furrow.

Pasture is still the prevailing land-use although, with improvements to drainage, there is an increasing move towards arable farming. Fields are medium to large in size and assist in defining the scale of the landscape. In areas of earlier piecemeal enclosure fields are sub-regular in shape. However, the majority of fields display a regular outline, typical of fields enclosed as part of the Parliamentary Enclosure Acts. The majority of these fields have single species hawthorn hedgerows.

Tree cover is not a prominent feature although, there are areas where trees are locally frequent and views through the landscape become filtered. Scattered trees, predominantly alder, fringe many of the rivers together with some willow. There are sparsely scattered hedgerow trees which tend to be oak and ash with some willow. Where willows are still pollarded, they are a distinctive local feature. Long distance views tend to be restricted by the surrounding landform.

Historically, this is an uninhabited landscape, due to the risk of flooding, and there are very few traditional buildings other than water mills. Roads and lanes are generally few in number and, where they occur, they tend to be straight and direct, either crossing the flood plain or running along the edge. The historic sandstone bridge and causeway at Swarkestone is a prominent local feature.

Recent impacts mostly relate to the extraction of sand and gravel, which often leaves large holes filled with water. There are impacts beyond this landscape type, mostly associated with modern roads, power stations and urban expansion.

LANDSCAPE TYPE: RIVERSIDE MEADOWS

Planting and Management Guidelines

A broad, open flood plain with scattered hedgerow and dense watercourse trees.

Primary woodland character:	Unwooded
Primary tree character:	Thinly scattered hedgerow trees and dense watercourse trees
Woodland vision:	Occasional wet woodlands
Tree vision:	Thinly scattered hedgerow trees and dense watercourse trees

Typical woodland size range:	0.5 - 15ha	small
Woodland pattern:	Organic/ linear	

- Ensure the use of indigenous tree and shrub species, including a proportion of large, long-lived species.
- Ensure a balance is maintained between new woodland planting and areas of nature conservation value.
- Enhance the visual and ecological continuity of river corridors by management, natural regeneration and planting of riparian trees.
- Encourage the continuing practice of pollarding to maintain the traditional riparian character of the landscape.

Note
This guidance may be subject to variation following the emergence of the Trent Valley Vision and Strategy.

LANDSCAPE TYPE: RIVERSIDE MEADOWS

Woodland Species Mix

Waterlogged Conditions on all soil types

Primary Tree Species 50%

† *Alnus glutinosa*	Alder
† *Salix fragilis*	Crack Willow

Secondary Tree Species 20%

Major

Betula pubescens	Downy Birch
Fraxinus excelsior	Ash

Minor

* *Populus nigra ssp. betulifolia*	Black Poplar
Quercus robur	Pedunculate Oak
Salix caprea	Goat Willow

Shrubs 10-30%

Major

Salix cinerea	Grey Willow
Sambucus nigra	Elder

Minor

Crataegus monogyna	Hawthorn
Frangula alnus	Alder Buckthorn
Rhamnus cathartica	Purging Buckthorn
Salix viminalis	Osier
Viburnum opulus	Guelder Rose

Open space 0-20%

† **Watercourse Trees** - tree species most appropriate for planting as watercourse trees.

* Plant only **native** Black Poplar (sub species betulifolia). Contact Derbyshire Wildlife Trust for more information.

Hedgerow Species Mix

Suitable hedgerow plants

Primary 85-90%

Crataegus monogyna	Hawthorn

Secondary 10-15%

Acer campestre	Field Maple
Corylus avellana	Hazel
Prunus spinosa	Blackthorn

Occasional 0-5%

Rhamnus cathartica	Purging Buckthorn

Suitable hedgerow trees

Primary 95-100%

Fraxinus excelsior	Ash
Quercus robur	Pedunculate Oak
Salix fragilis	Crack Willow

Secondary 25-30%

Acer campestre	Field Maple
Tilia cordata	Small Leaved Lime

Occasional 0-5%*

Malus sylvestris	Crab Apple
Populus tremula	Aspen
Sorbus aucuparia	Rowan

* only to be used if occurring locally within the landscape character type