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Transforming the Trent Valley Landscape Partnership

Spatial Framework

Final Report
Prepared by LUC
May 2018



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1 Executive Summary

1 Executive Summary

- 1.1 This report describes the findings of a desk-based review of spatial information available for the 'Transforming the Trent Valley' project area. A large amount of spatial information has been collated from the relevant Councils, different public bodies and other organisations to build the Data Pack and Map Book, which underpin this report.
- 1.2 The dominant forces that formed the current landscape are related to the three rivers forming the axis of the project area, including the River Trent, the River Dove and the River Tame; and the cultural and industrial heritage of these river valleys.
- 1.3 There is a good network of natural heritage throughout the project area, of local and regional importance.
- 1.4 The project area is rich in cultural heritage assets, although their visibility in the landscape varies, having been impacted by development and agricultural practices.
- 1.5 The project area is under pressure from a variety of infrastructure related development, including HS2, proposed garden villages and urban expansion around existing settlements. While these developments will undoubtedly alter the landscape, with timely and appropriate stakeholder engagement it can be ensured they deliver net social, environmental and economic benefit for the local area.
- 1.6 Sand and gravel quarrying has a long tradition in the Trent Valley, with significant areas under ongoing quarrying, and further large sites allocated for the aggregates industry. While this represents significant pressure on the landscape, it also represents an opportunity, with the implementation of appropriate management and regeneration plans, enabling the creation of important wildlife reserves and the integration of old quarries back into the local community.

2 Background

- 2.1 LUC has been commissioned by Staffordshire Wildlife Trust (SWT), representing the 'Transforming the Trent Valley' (TTTV) Landscape Partnership Scheme (LPS), to prepare a desk-based GIS-led Spatial Framework as a supporting document for the preparation of the Partnership's Landscape Conservation Action Plan (LCAP).
- 2.2 The aim of the Spatial Framework is to provide a clear overview of the characteristics of the project area, based on available spatial datasets and information. Its findings could be used as baseline information for developing, monitoring the delivery, and measuring the success of individual LCAP projects. This comprehensive compilation of data for the project area, whilst useful immediately, will form a part of the legacy of the LPS, providing access to decision-makers both now and into the future. Whilst data will inevitably change, the spatial data index developed for this framework will support the ongoing maintenance and monitoring of spatial data for the project area in the future.
- 2.3 The LPS is in a unique position to influence and manage changes in the landscape and a good baseline understanding provides an essential foundation for landscape monitoring and evaluation of change.
- 2.4 This report sets out the approach used for the compilation of the Spatial Framework and its findings. It is supported by a **Map Book**, providing a visual overview of the characteristics of the project area; and a **Data Pack**, including all the GIS datasets that have been collated for the project and which informed the Spatial Framework. The collated data has also been provided as an **interactive map file**, which can be interrogated using ESRI's ArcReader open software.

Structure of this report

- 2.5 The remainder of this report is set out as follows:
 - **Chapter 3** describes the methodology used to undertake this study.
 - **Chapters 4-10** set out the results of the analysis of data collated for this study against the following themes:
 - The physical environment (**Chapter 4**)
 - The built environment (**Chapter 5**)
 - Recreation and visitor facilities (**Chapter 6**)
 - Cultural heritage (**Chapter 7**)
 - Natural heritage (**Chapter 8**)
 - The natural environment (**Chapter 9**)
 - Landscape (**Chapter 10**)
 - **Chapter 11** assesses all of the themes together to consider the key forces for change in the project area, and seeks to identify where these pressures are acting (or are likely to act in the future).

3 Methodology

GIS Data and Information Gathering

GIS Datasets

- 3.1 The Data Pack developed for the Spatial Framework will be shared between a large number of partner organisations, therefore the primary focus of data collection was on data without restrictive licensing and cost.
- 3.2 Data released as open data by different public organisations under the *EU Inspire Directive*¹ and under an *Open Government Licence*² formed the bulk of collated data. These were obtained from data.gov.uk or the open data portals of a wide range of organisations (e.g. Natural England, Historic England, Canal and River Trust, HS2 Limited, Office for National Statistics, Archaeology Data Service). The Data Pack was extended with further data provided by members of the LPS or captured by LUC.
- 3.3 Further consultation was undertaken with the Environment Agency and the British Geological Survey (BGS) to establish which of their data, which is currently not open data, could be used for the project without the requirement for special licensing and prohibitive cost.
- 3.4 A detailed GIS Data Index has been prepared providing metadata for all datasets included in the Data Pack. The Index includes information on data themes, names, sources, provider contact details or internet download link and data licensing information. The GIS Data Index can be found in **Appendix 2**. Data has been collected for the project area and its 10km buffer.
- 3.5 Whilst it is recognised that there might be further data custodians (e.g. local clubs, trusts, charities) with data of potential relevance for the project, it is considered the data included in the Data Pack, of known provenance, established user-base and clear licensing, provides robust baseline information about the character of the project area.
- 3.6 **All data provided as part of the Data Pack is to be used for the 'Transforming the Trent Valley' LPS projects only.** Data should not be shared with any third parties and can only be used by partners with a signed Public Sector Mapping Agreement (PSMA) licence and LPS Partnership Agreement. Any products derived from the data can be shared with third parties only if it is in support of the business purpose of the LPS. Derived data is bound by the same copyright and/or database rights as the Ordnance Survey (OS) data it was derived from and requires the same PSMA licence. Any maps produced with the data must contain the relevant OS disclaimer and license number.
- 3.7 A PSMA licence can be issued by any existing PSMA member of the LPS (e.g. Derbyshire County Council or Staffordshire County Council). The OS disclaimer and license number will be dependent on the organisation issuing the PSMA licence.

Reports

- 3.8 A range of reports published for the project area have been reviewed to identify further spatial data of relevance for the project area. A range of policy documents (e.g. Local and Minerals Plans) published by the different Borough and District Councils have also been consulted.
- 3.9 Further general internet searches were undertaken to identify other research work of potential interest for the project.
- 3.10 A list of reports reviewed for this study is provided in **Appendix 2**.

¹ The INSPIRE Directive 2017. Available at [<https://data.gov.uk/location/inspire/>]

² Open Government Licence for public sector information. Available at [<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>]

Liaison with Other Consultants Undertaking Related Projects

- 3.11 The Spatial Framework was one of a number of projects, running in parallel, that will feed into the Stage 2 Heritage Lottery Fund (HLF) application by the LPS, including:
- 'Community Conversations' (undertaken by *Icarus*);
 - 'Cultural Heritage Audit' (*Arc Heritage*);
 - 'Natural Heritage Audit' (initially undertaken by *Camlad Ecology*, subsequently taken over by *SWT*);
 - 'Visitor Experience and Access Audit' (*The Landscape Partnership*);
 - 'Brook Hollows' (*JBA Consulting*);
 - 'Evaluation and Monitoring' (*Resources for Change*) and
 - 'Landscape Character Assessment' (*Ashmead Price in association with Steven Warnock*).
- 3.12 The project brief encouraged close liaison between the different consultants undertaking these projects, to ensure joined up thinking and compatible outputs.
- 3.13 LUC undertook a few rounds of consultations with the other consultancies to gain a better understanding of:
- The aims and objectives of their project;
 - Which spatial data they will be gathering;
 - Who they will be gathering the spatial data from;
 - What data management and naming standard they had in place; and
 - What their data outputs would comprise.
- 3.14 A number of the projects were initiated before the Spatial Framework was commissioned, and the projects ran largely independently of each other. It therefore proved challenging to retrospectively implement consistent data management and data naming conventions for all the parallel projects. While LUC maintained contact with the other consultancies throughout the development of this study to obtain relevant emerging datasets, we developed the Spatial Framework independently and have introduced consistent data naming conventions across all of the data collated.
- 3.15 We have received the outputs of the 'Cultural Heritage Audit', 'Access and Visitor Audit' and updated 'Landscape Character Assessment' projects and these have been incorporated into the Data Pack and spatial assessment.
- 3.16 This Spatial Framework should be read in conjunction with the reports prepared as part of the above listed parallel projects to ensure full understanding of the complexities of the project area.

Data Gaps

- 3.17 A number of gaps were identified in the collated GIS data. These predominantly relate to data received from the relevant Local Authorities and were the result of availability of different policy documents and related spatial data, as well as different data management practices within the Local Authorities.
- 3.18 The lack of the datasets listed below is considered to be of greatest importance for this study:
- Minerals related data (e.g. minerals safeguarding areas, active quarries and mines, historic mineral sites, minerals plan allocated sites) for Derbyshire;
 - Landfill sites for Derbyshire;
 - Brownfield sites for Staffordshire and Derbyshire;
 - Large-scale superficial geology data for Staffordshire;
 - Historic Landscape Classification for Staffordshire;

- Phase 1 habitat data for Derbyshire;
- Protected/priority species for Derbyshire;
- Habitat distinctiveness for Derbyshire;
- Bus routes for Derbyshire; and
- In depth visitor/tourist infrastructure information for both Staffordshire and Derbyshire.

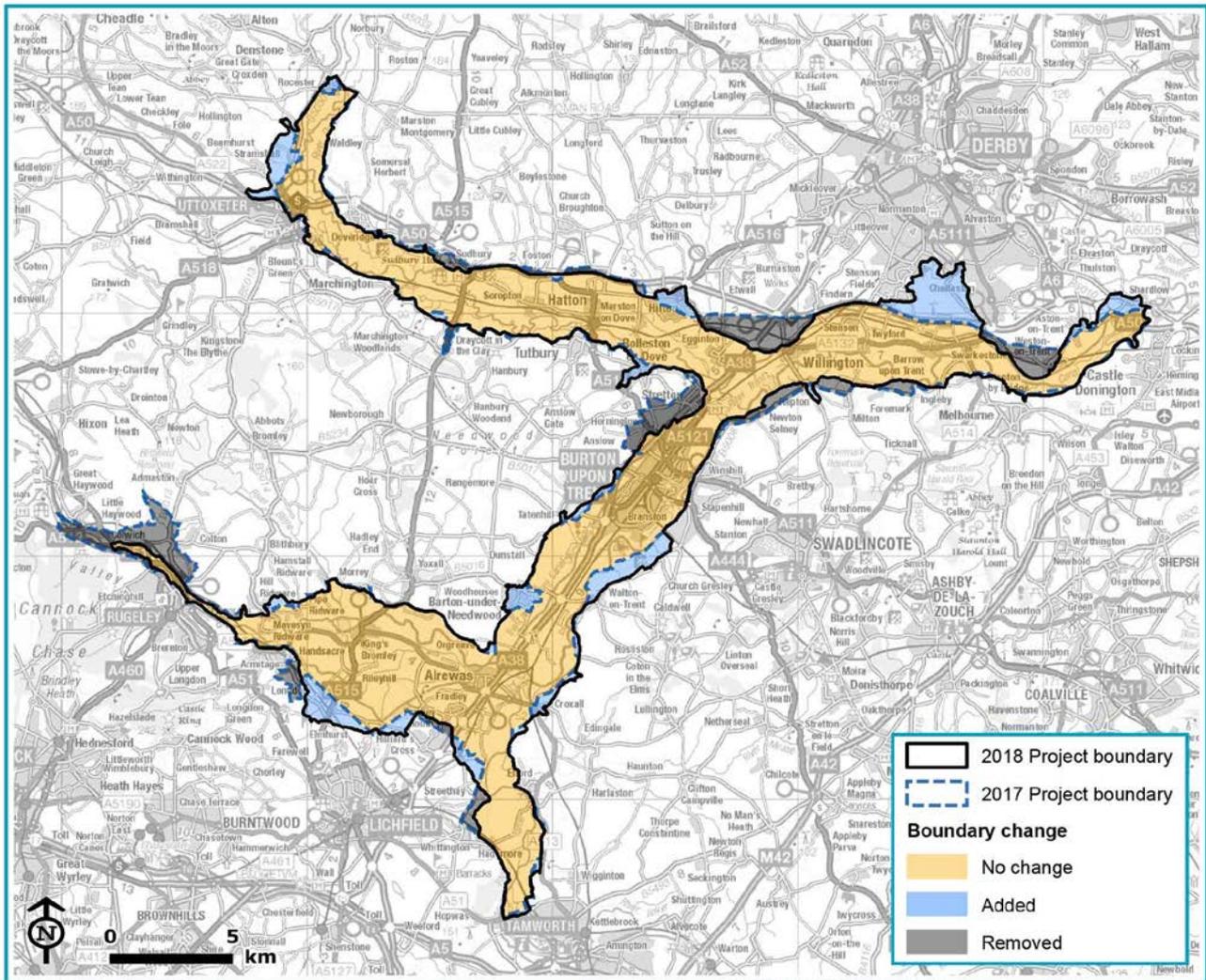
Data Assessment

- 3.19 This report is based on the findings of a desk-based GIS-led assessment of the spatial datasets that have been collated. We have undertaken extensive spatial and statistical assessment of the available data to identify the key characteristics and assets within the project area.
- 3.20 A further assessment of a number of key opportunities and pressures in the landscape has been undertaken to help us identify areas which have a higher concentration of opportunities, as well as those which are subject to a larger number of pressures.

Project Boundary Change

- 3.21 This report is based on the TTTV project boundary provided by the Partnership in October 2017. The TTTV project boundary has subsequently been revised in March 2018 as a result of the review of the Landscape Character Assessment. As much of the analysis and reporting for this study was already complete, this boundary change has not been reflected in the analysis. The difference between the original project boundary (2017) used in this report and the updated boundary (2018) is shown on **Figure 3.1** below. From this point on, references to the project area refer to the 2017 boundary indicated on **Figure 3.1**.

Figure 3.1 Extent of Project Boundary Change



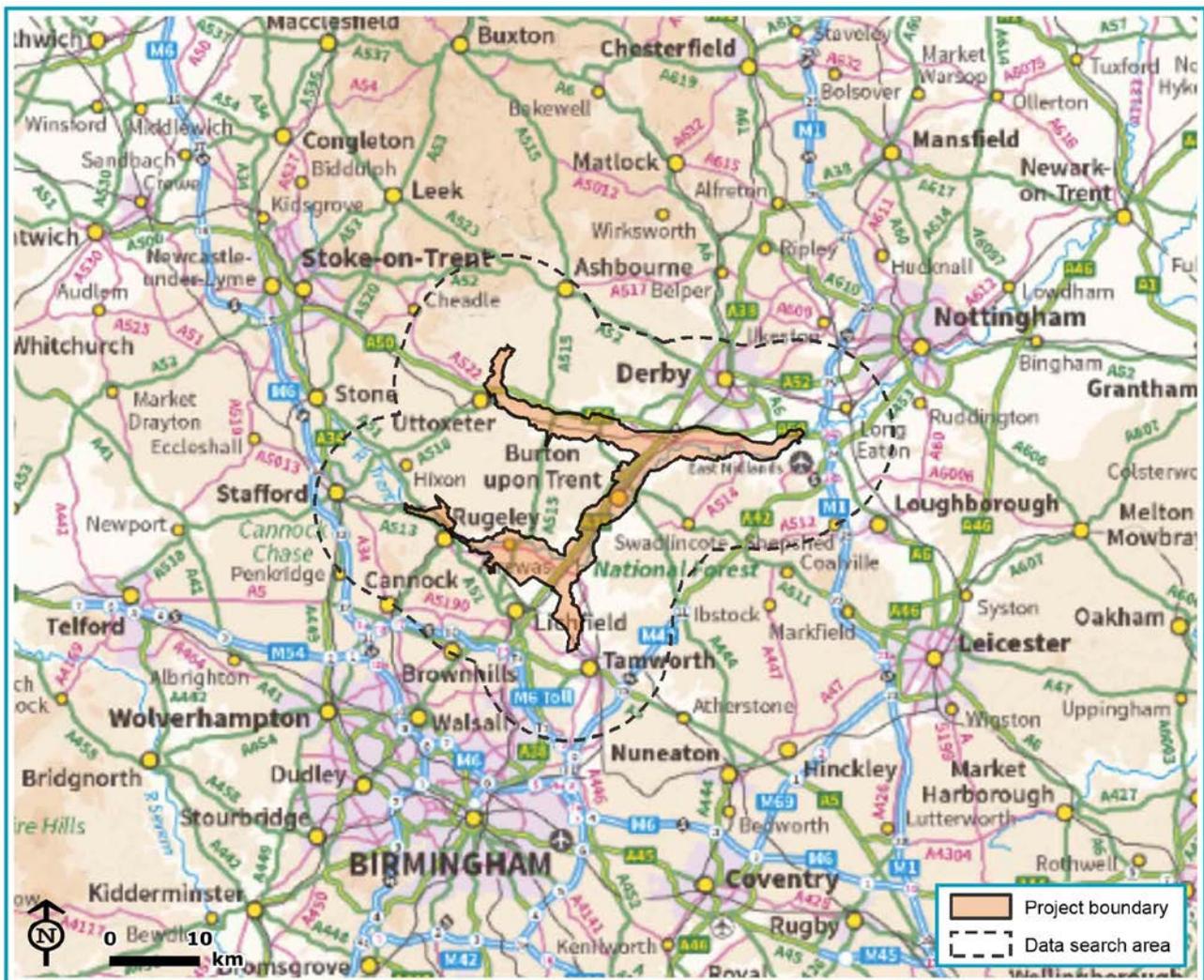
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4 The Physical Environment

Location and Context

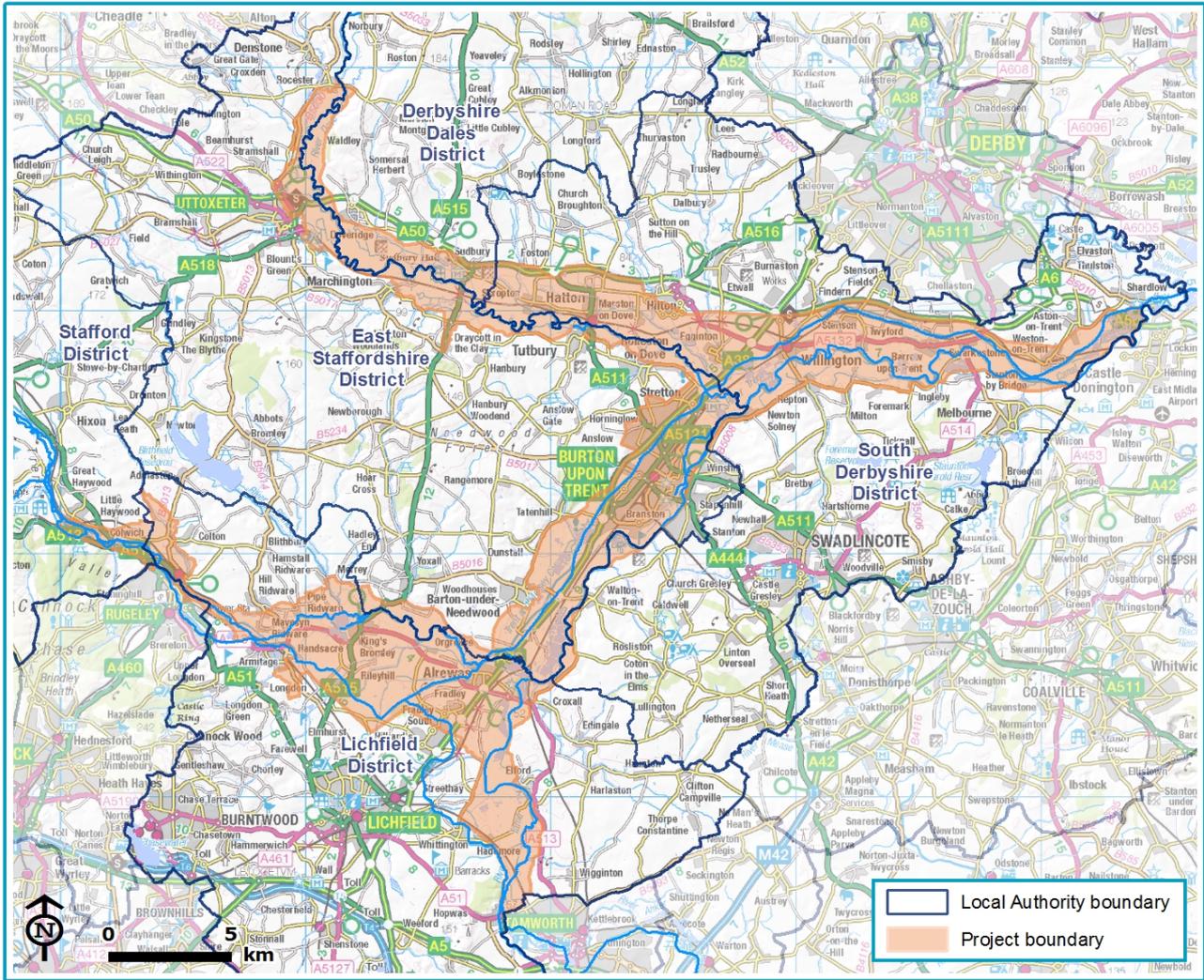
- 4.1 The project area covers the middle reaches of the River Trent from Colwich, Staffordshire in the south-west and Shardlow, Derbyshire in the north-east (**Figure 4.1** and **Figure 4.2**). It also includes its two tributaries, the River Dove from Uttoxeter to its confluence with the River Trent north of Burton upon Trent; and the River Tame north of Tamworth until its confluence with the Trent east of Alrewas.
- 4.2 The project area covers just under **200km²** and is characterised as a fluvial landscape, distinguished for its sand and gravel quarries, former gravel pit lakes and canal network.

Figure 4.1 Project Location



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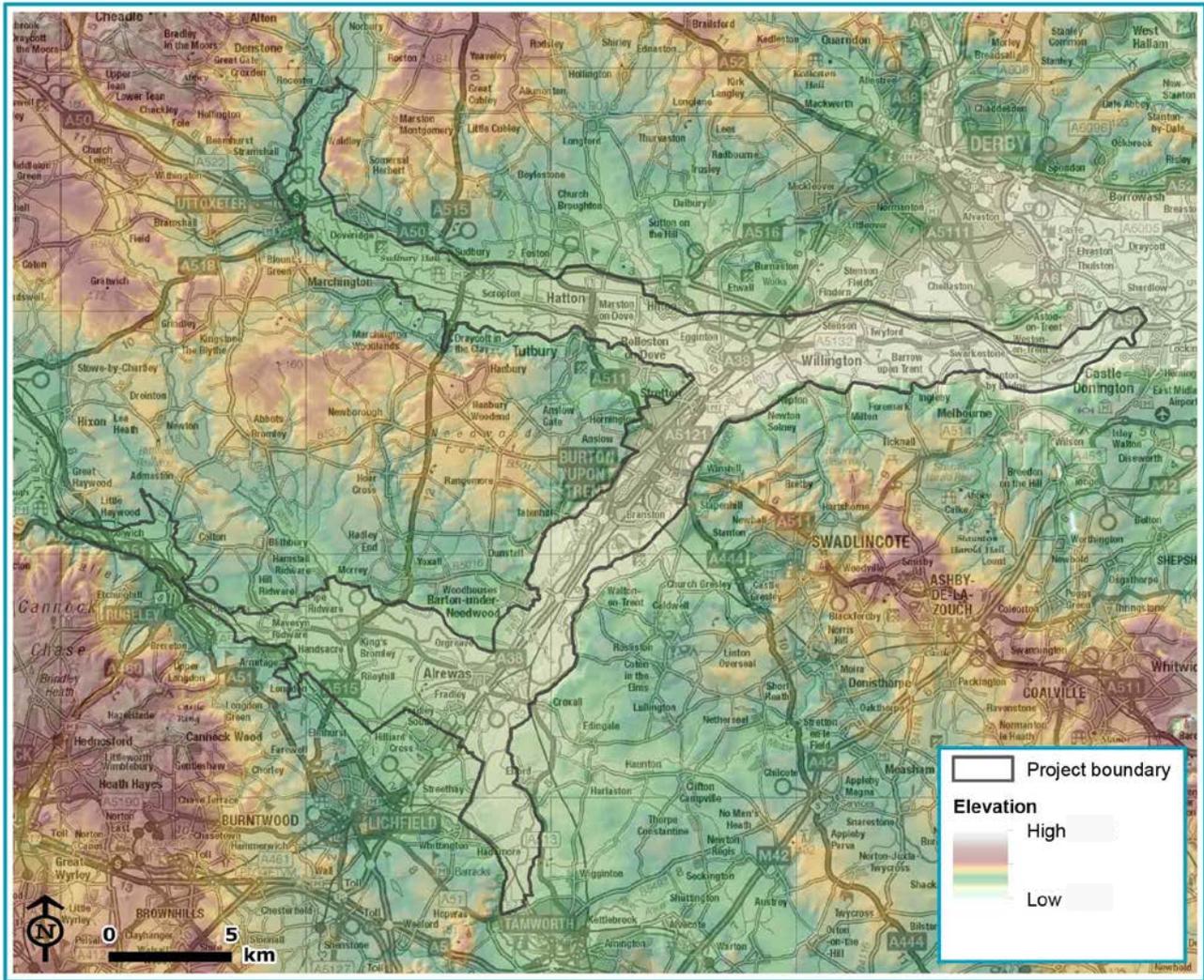
Figure 4.2 Project Boundary



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- 4.3 The project area is shared by five District Councils, including Lichfield (59km²), South Derbyshire (67km²) and East Staffordshire (59km²); with small parts extending into Stafford (3km²) and Derbyshire Dales (11km²). Negligible areas extend into Cannock Chase District (under 0.5km²) and Tamworth District (it can be considered this is due to project boundary digitising discrepancies), however due to their small areas they were not included in the assessment.
- 4.4 A more detailed map of the project area can be found in **Appendix 4, Figure A1**.
- 4.5 The topography within the project area is relatively level, encompassing the river floodplains and river terraces (**Figure 4.3**). The highest ground (90-100m) is along the River Dove in the north-west. The ground is the lowest around the lower reach of the River Trent (30-40m) between Willington and Shardlow.

Figure 4.3 Topography



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Hydrology

- 4.6 The River Trent, along with its tributaries the River Tame and River Dove, forms the main X shaped axis of the project area (**Figure 4.4**).
- 4.7 The **River Trent** is the third longest river in the United Kingdom, with a total length of 274km (185miles). It has its source in Biddulph Moor in Staffordshire and runs in a general north-easterly direction to the Humber Estuary.³ The western section of the River Trent, between Rugeley and Alrewas, is represented by a fragmented landscape of urban development intermixed with pastoral and arable land. The middle section, around Burton upon Trent, flows through the National Forest, a landscape project whose aim is to connect ancient woodland with new planting.
- 4.8 The **River Dove** rises on the slopes of Axe Edge south of Buxton and runs in a south / south-easterly direction for 72km (45miles) to meet the River Trent just north of Burton upon Trent⁴.
- 4.9 The **River Tame** has its source near Oldbury and runs for 95km (59miles) northwards to Alrewas, where it joins the River Trent. Its watercourse has been changed through the centuries and

³ The Rivers Trust. Available at [<http://www.riverstrust.org/what-we-do/data-evidence/>]

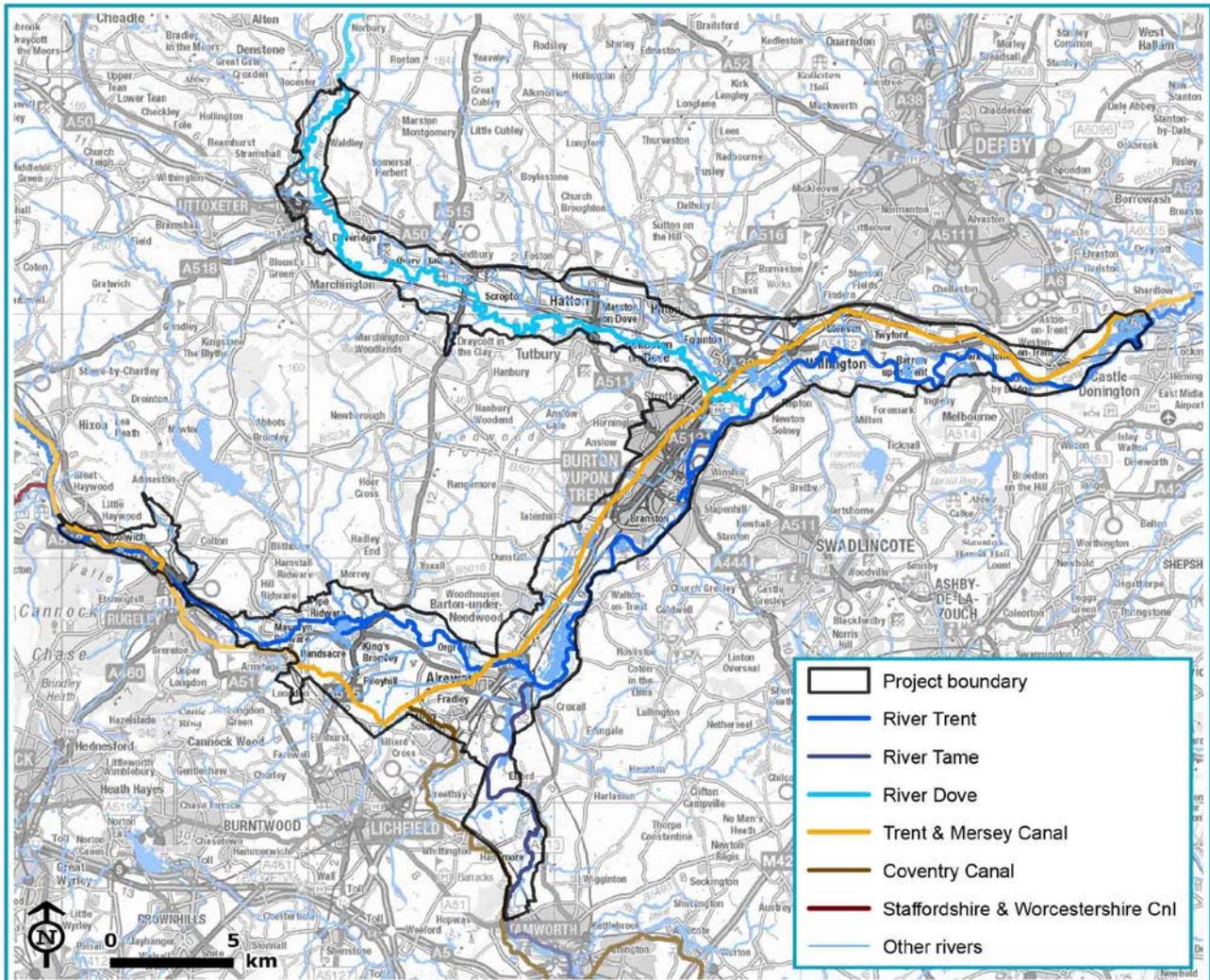
The Rivers Trust: River Trent Catchment Partnerships Explorer. Available at [<http://trentriverstrust.maps.arcgis.com/apps/Cascade/index.html?appid=3087fc544ce243fe8bfd200ad8f914b3>]

⁴ The Rivers Trust. Available at [<http://www.riverstrust.org/what-we-do/data-evidence/>]

through built-up areas, it is controlled with culverts and canals. It is generally considered non-navigable due to its shallowness.⁵

- 4.10 The **Trent and Mersey Canal** follows a similar route to the River Trent. It runs for 149km (93miles) from the Bridgewater Canal at Preston Brook, on the eastern outskirts of Runcorn, to Shardlow where it joins the River Trent⁶.

Figure 4.4 Network of Rivers and Canals



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- 4.11 The **Coventry Canal** runs for 38miles (61.3km) from the centre of Coventry north until it joins the Trent & Mersey Canal between Lichfield and Alrewas.⁷ Only a minor section of the canal, east and north-east of Lichfield is within the project area. North of Tamworth it defines the boundary of the project area for around 3km.

⁵ Tame Valley Wetlands. Available at [<http://www.tamevalleywetlands.co.uk/20-things-you-may-not-know-about-the-river-tame/>] Environment Agency. Tame Upper Rivers – Summary. Available at [<http://environment.data.gov.uk/catchment-planning/OperationalCatchment/3438/Summary>]

⁶ Canal & River Trust. Trent & Mersey Canal. Available at [<https://canalrivertrust.org.uk/enjoy-the-waterways/canal-and-river-network/trent-and-mersey-canal>]

⁷ Inland Waterways Association. Coventry Canal. Available at [https://www.waterways.org.uk/waterways/canals_rivers/coventry_canal/coventry_canal]

Table 4.1 Length of Main Rivers and Canals within the Project Area

River/Canal	Total length	Length within project area	% of total length within project area
River Trent	274km	73km	26.6%
River Tame	95km	14km	14.7%
River Dove	72km	44km	61.1%
Trent and Mersey Canal	149km	52km	34.9%
Coventry Canal	61km	2.6km	4.3%

4.12 There is a rich network of other streams and brooks within the project area, including:

- East Staffordshire: Shobnall Brook, Salt Brook, River Swarbourn, River Churnet
- South Derbyshire: Twyford Brook, Old Trent Water, Hilton Brook, Foston Brook, Egginton Brook
- Lichfield: River Blithe, Pyford Brook, Moreton Brook, Bourne Brook, Ashby Sitch

4.13 The project area falls within the **Humber River Basin District**. According to the Environment Agency's 2016 assessment of ecological and chemical health of the river network, the River Trent has an overall health status of 'Poor', while the Trent and Mersey Canal has the best status, ranked as 'Good' (**Table 4.2**). Agriculture, rural land management and the water industry are the main reasons for the River Trent being classified as 'Poor'.⁸

Table 4.2 Ecological and Chemical Health of the Main Rivers and Canals

Section	Ecological health	Chemical health	Overall health
River Trent from River Sow to River Dove	Poor	Good	Poor
River Trent from River Dove to Derwent	Moderate	Good	Moderate
Trent and Mersey Canal from summit to Shardlow	Good	Good	Good
River Dove from River Churnet to River Trent	Moderate	Fail	Moderate
River Tame from River Anker to River Trent	Moderate	Good	Moderate

Palaeochannels

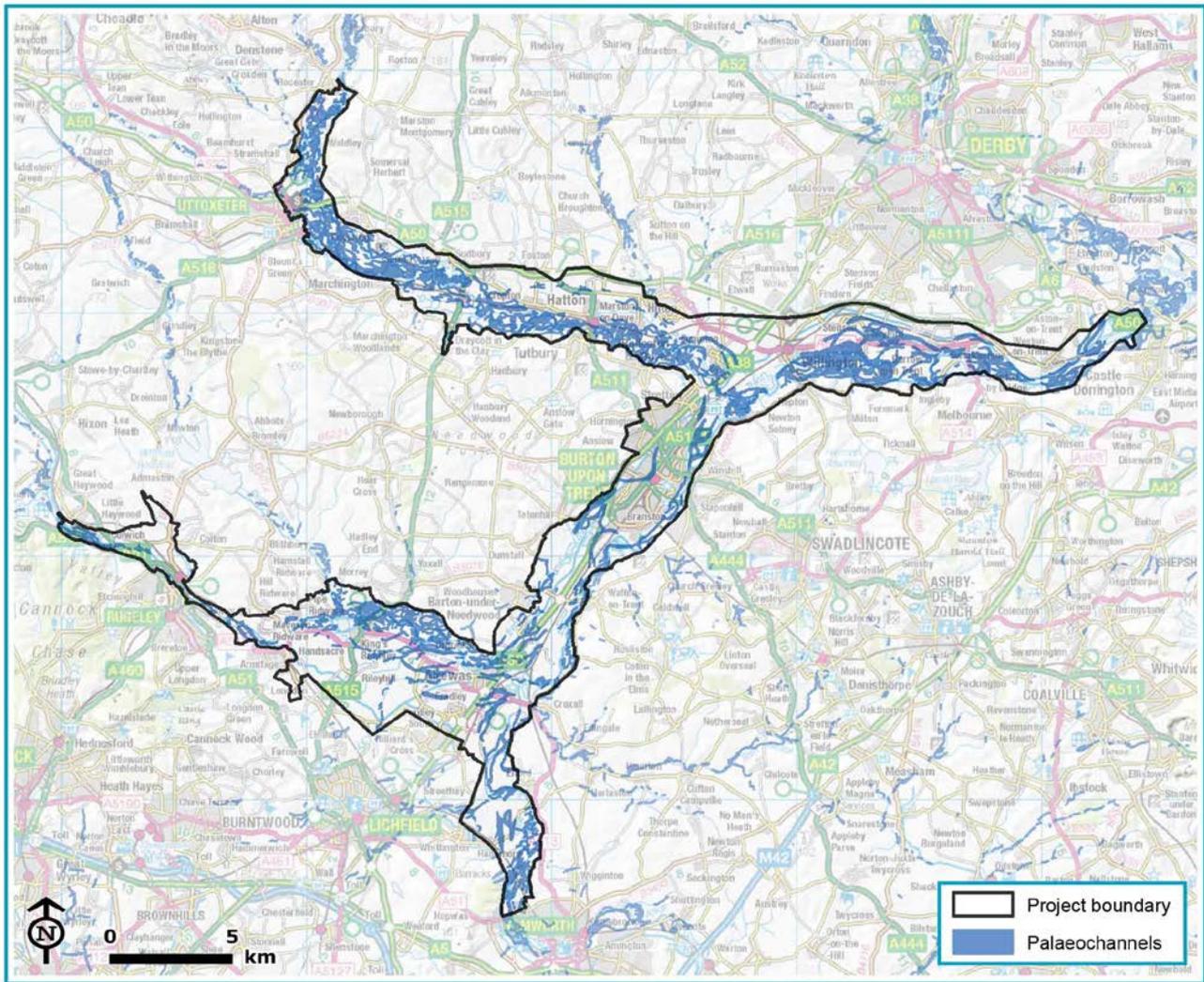
4.14 The valley of the River Trent and its tributaries are rich in palaeochannels; fluvial remains of the Holocene period. Historic England mapped all the palaeochannels within the Trent catchment as part of the '*Mapping the Palaeochannels of the Trent Catchment*' project in 2017, based on Lidar data and aerial imagery.⁹

4.15 The project identified around 13.7km² of palaeochannels throughout the project area (**Figure 4.5**).

⁸ Environment Agency. Catchment Data Explorer. Available at [<http://environment.data.gov.uk/catchment-planning/>]

⁹ Historic England (2017) Mapping the Palaeochannels of the Trent Catchment Stage 2. Available at [http://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-2791-1/dissemination/pdf/PTC2-report_final_pdfa.pdf]

Figure 4.5 Palaeochannels



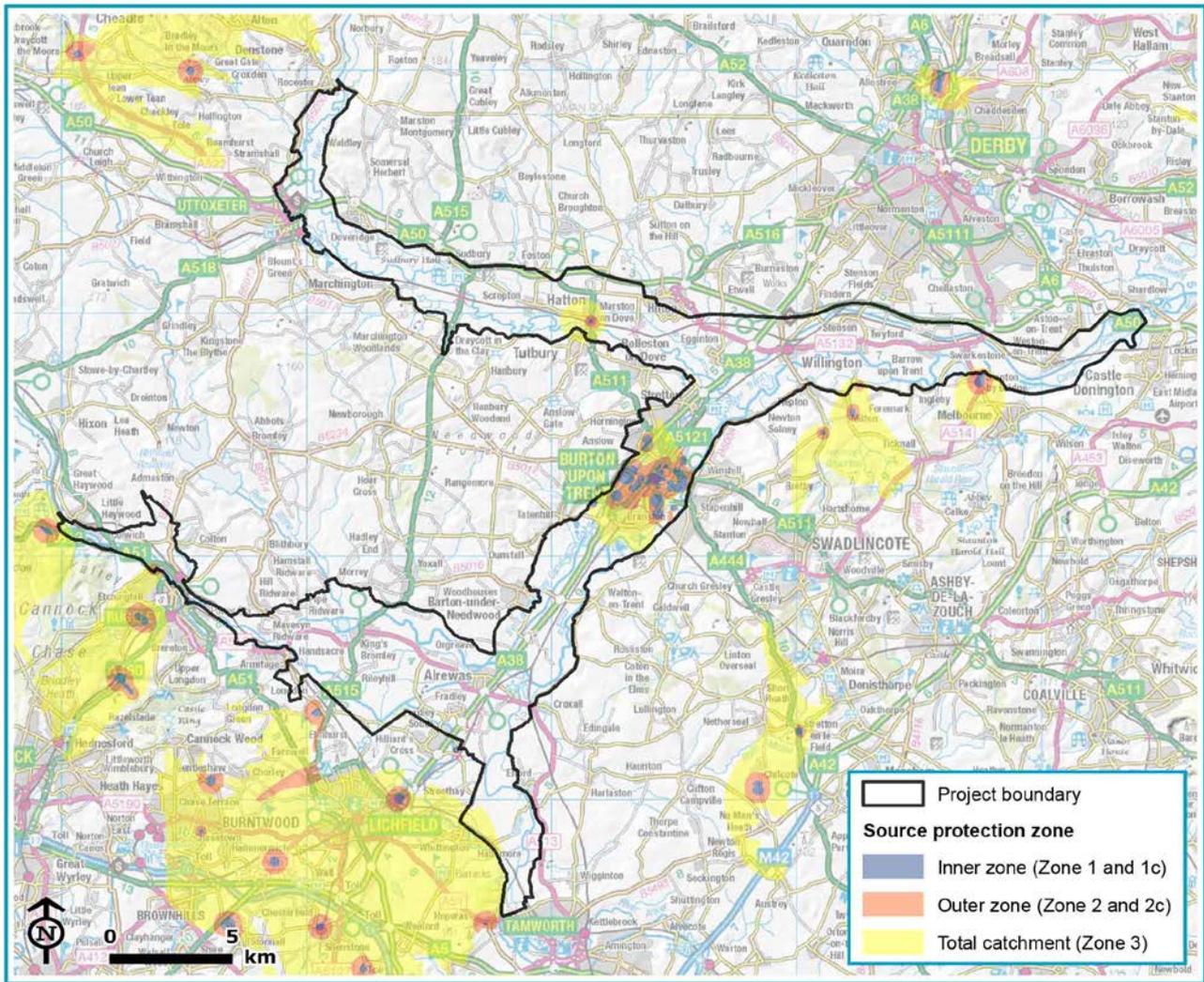
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Source Protection Zones

- 4.16 Groundwater provides one third, in some areas 80%, of drinking water in England and it plays an important part in maintaining the flow of rivers. Source Protection Zones (SPZs) are defined around wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area within the zone.¹⁰
- 4.17 There are only two SPZs within the project area, one stretching under Burton upon Trent and the other under Hatton (**Figure 4.6**).

¹⁰ Environment Agency (2005) Groundwater Source Protection Zones. Available at [<https://www.gov.uk/government/publications/groundwater-source-protection-zones>]

Figure 4.6 Source Protection Zones



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Flooding

Flood Zones

- 4.18 Flood zones refer to the probability of river and coastal flooding, ignoring the presence of defences. Coastal flooding does not apply to the project area. Flood zone 2 refers to a probability of 1:100 to 1:1000 annual chance of river flooding. Flood zone 3 refers to a probability of 1:100 or greater annual chance of river flooding.¹¹
- 4.19 Around **52%** of the project area is within flood zone 3 (104km²) and around **61%** within flood zone 2 (123km²). **Table 4.3** shows how this is distributed between Local Authorities.
- 4.20 A detailed map of flood zones is provided in Appendix 4, **Figure A2**.

Table 4.3 Extent of Project Area at Risk of Flooding by Local Authority

Local Authority	Flood zone 2	Flood zone 3
South Derbyshire	44 km ²	39 km ²
East Staffordshire	40 km ²	33 km ²
Lichfield	28 km ²	22 km ²
Derbyshire Dales	9 km ²	8 km ²

¹¹ Ministry of Housing, Communities and Local Government (2014) Flood Risk and Coastal Change. Available at [https://www.gov.uk/guidance/flood-risk-and-coastal-change#flood-zone-and-flood-risk-tables]

Local Authority	Flood zone 2	Flood zone 3
Stafford	2 km ²	1 km ²
Total within project area	123 km²	103 km²

Risk of Flooding from Surface Water

- 4.21 Flooding from surface water occurs when rainwater fails to drain away through the natural drainage system, nor does it soak into the ground quickly enough and therefore accumulates on the ground. It usually occurs during and after heavy downpours. The annual probability of surface water flooding within the project area by Local Authority is shown in **Table 4.4**.

Table 4.4 Annual Chance of Flooding from Surface Water within the Project Area by Local Authority

Local Authority	Chance of flooding from surface water (extent of affected area)		
	Once in 30 years	Once in 100 years	Once in 1000 years
South Derbyshire	0.8 km ²	1.7 km ²	6.3 km ²
East Staffordshire	1.8 km ²	3.8 km ²	12.3 km ²
Lichfield	0.8 km ²	1.9 km ²	6.7 km ²
Derbyshire Dales	0.3 km ²	0.6 km ²	2 km ²
Stafford	0.1 km ²	0.2 km ²	0.6 km ²
Total within project area	3.8 km²	8.2 km²	27.9 km²

- 4.22 A detailed map of areas susceptible to flooding from surface water is provided in Appendix 4, **Figure A3**.

The River Trent Catchment Flood Management Plan

- 4.23 The project area falls within the 'Burton, Derby and Nottingham' and 'Mid Staffordshire and Lower Tame' sub-areas of the River **Trent Catchment Flood Management Plan** (CFMP).

*Burton, Derby and Nottingham*¹²

- 4.24 This sub-area is characterised by loamy soils and the valley floor has large sand and gravel deposits.
- 4.25 The flood risk in this sub-area is generally high, with higher risk in densely populated urban areas. Some of these urban areas are protected by significant flood defence structures, including large areas around Burton upon Trent (4.7km²) and Hatton (5.7km²), as well as smaller areas around Hilton (0.3km²) and Egginton (0.4km²). In total around 12km² benefit from flood defence structures within the project area (**Figure 4.7**).
- 4.26 Flooding predominantly occurs after heavy rainfall which can overwhelm the capacity of channels, surface water and urban drainage. The aims identified in the CFMP for this sub-area include:
- Reduction of risk where the existing flood risk is too high.
 - Reduction of number of people at risk from deep and fast flowing water.
 - Reduction of disruption caused to transport and infrastructure.
 - Return of watercourses to their more natural state and increasing biodiversity.
 - Maintenance and expansion of BAP habitats within the catchment by creating green space within the built environment.
 - Implement land and drainage management with the aim to improve water quality.

¹² Environment Agency (2010) River Trent Catchment Flood Management Plan. Available at [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/289105/River_Trent_Catchment_Management_Plan.pdf]

4.27 The CFMP identifies a number of actions for achieving the above aims. The ones of relevance for this study include:

- Working with aggregates and extraction companies to improve the restoration of gravel works, especially in respect to flood risk management.
- Increasing green corridors through urban areas.
- Extending the network of relevant BAP habitats within urban areas.

*Mid Staffordshire and Lower Tame*¹³

4.28 This sub-area is predominantly characterised by pastureland and open arable areas. The central and major part of the area is dominated by the lower broad and flat floodplains of the River Trent and River Tame confluence. Loamy soils dominate, with smaller areas of sandy soils.

4.29 Flood risk in this sub-area is low. Although the River Tame channel has been heavily modified over the centuries, the other watercourses can be considered relatively natural, with few flood defences. Flooding can also occur because of overtopping of river banks and embankments.

4.30 The aims identified in the CFMP for this sub-area include:

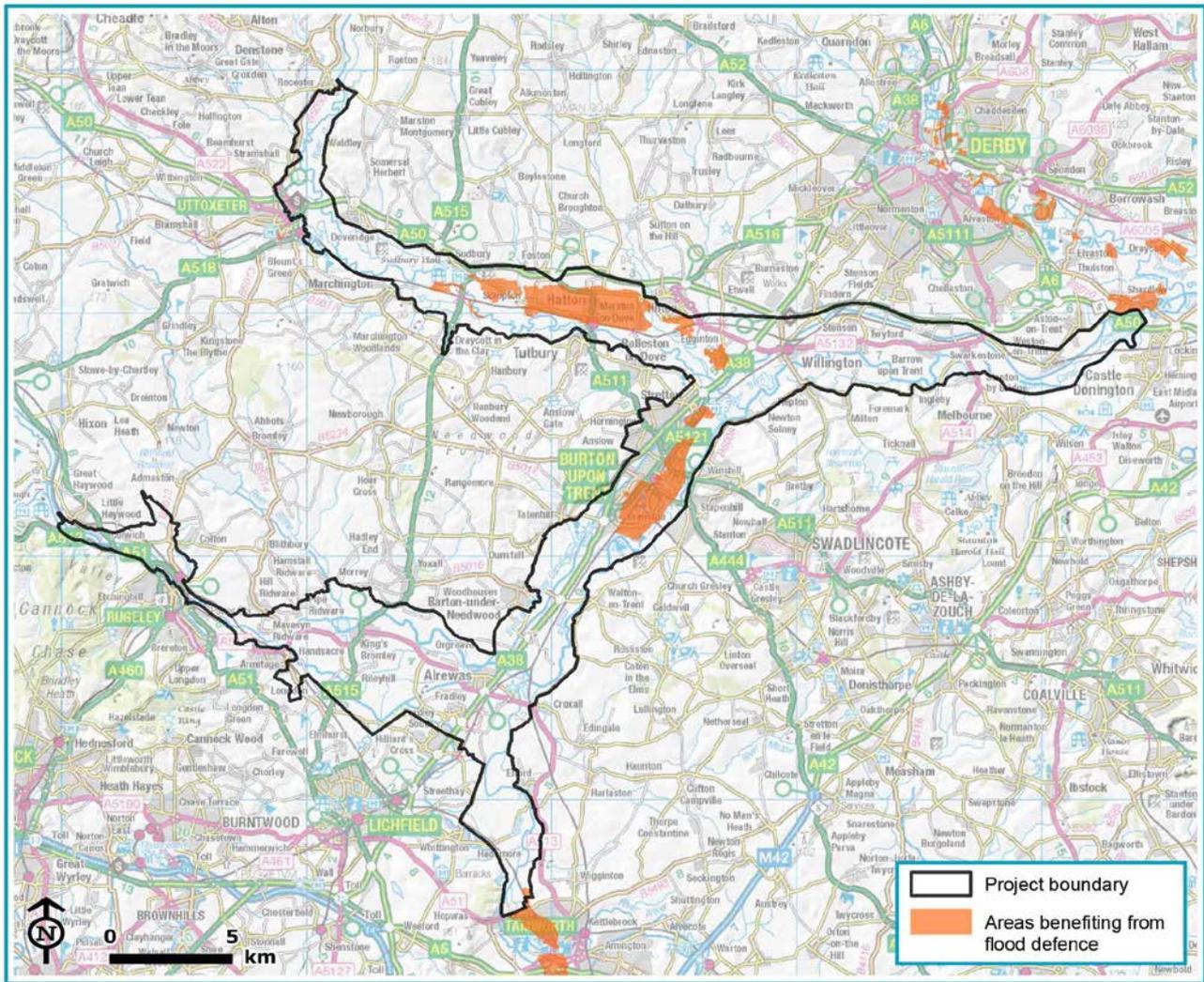
- Utilisation of the natural floodplain to store floodwater.
- Rainwater attenuation to decrease risk of flooding.
- Improvement to the status of environmentally designated areas with appropriate flood management, by managing frequency, extent and duration of flooding.
- Reduction of soil-erosion due to rapid run-off, especially around mining areas with disturbed soil.
- Return of watercourses to their more natural state, increasing biodiversity and establishment of green river corridors through urban areas.
- Maintenance and expansion of BAP habitats within the catchment.
- Implement land and drainage management with the aim to improve water quality.

4.31 The CFMP identifies a number of actions for achieving the above aims. The ones of relevance for this study include:

- Naturalisation of the River Tame in rural areas.
- Identification of locations for flood attenuation ponds and wetlands, coupled with wetland habitat creation and improvement.
- Working with aggregates and extraction companies to identify current and future opportunities for restoration that will benefit both the wildlife and flood risk management.
- Identification of coal mining sites within Staffordshire which contribute to pollution of watercourses and damage to habitats during flood events.

¹³ Environment Agency (2010) River Trent Catchment Flood Management Plan. Available at [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/289105/River_Trent_Catchment_Management_Plan.pdf]

Figure 4.7 Areas Benefiting from Flood Defence



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5 The Built Environment

Existing Infrastructure

Roads and Railways

- 5.1 Located between Derby and Birmingham, the project area has a dense **road network**. It is nestled between the M6 in the west and south, the M42 in the south-east and the M1 to the east. It is less than 10km from each of these motorways, ensuring excellent connectivity.
- 5.2 The A38 corridor forms its south-north axis, the A50 runs along its northern edge, while the A5/A51 is just outside its southern edge. **Table 5.1** shows the total length of roads within the project area by road type.

Table 5.1 Total Length of Roads within the Project Area

Road (by type)	Length
Primary Road	70.5km
A Road	30.1km
B Road	24.2km
Minor Road	124.6km

- 5.3 The area is served by a number of **railway lines**, one running along the north-south axis of the project area from Lichfield to Derby via Burton upon Trent. Another line runs along its northern edge from Stoke-on-Trent to Nottingham, and a selection of routes run around the southern edge of the project area, from Stafford to Tamworth. The project area is served by a number of train stations, including four within the project area itself (Tutbury and Hatton, Burton upon Trent and Willington and Rugeley Trent Valley) and a further two stations less than 1km outside the project area (Rugeley Town and Uttoxeter).
- 5.4 However, the train services on the above routes are focussed on major urban centres outside the project area and do not provide very good local connections within it. The quality of onward travel from the local train stations, towards other parts of the project area using public transport, also varies considerably.¹⁴
- 5.5 While the existing road and rail infrastructure makes the area easily accessible, it also represents a significant intrusion in the landscape (visual and noise), and at places represents a considerable barrier to other means of travelling (e.g. cycling, walking)¹⁵.
- 5.6 For a detailed map of existing road and rail infrastructure refer to **Figure A4**, Appendix 4.

Noise

- 5.7 Daytime noise levels of 57db LAeq (16h) and above are considered to mark the approximate onset of significant community annoyance¹⁶. LAeq (16h) represents the average noise level for the 16-hour period between 0700-2300.
- 5.8 **Figure 5.1** shows the LAeq (16h) noise level within the project area from major roads (over 3 million vehicle passages a year) and major railways (over 30,000 train passages per year).¹⁷ It

¹⁴ The Landscape Partnership (2017) Access and Visitor Audit

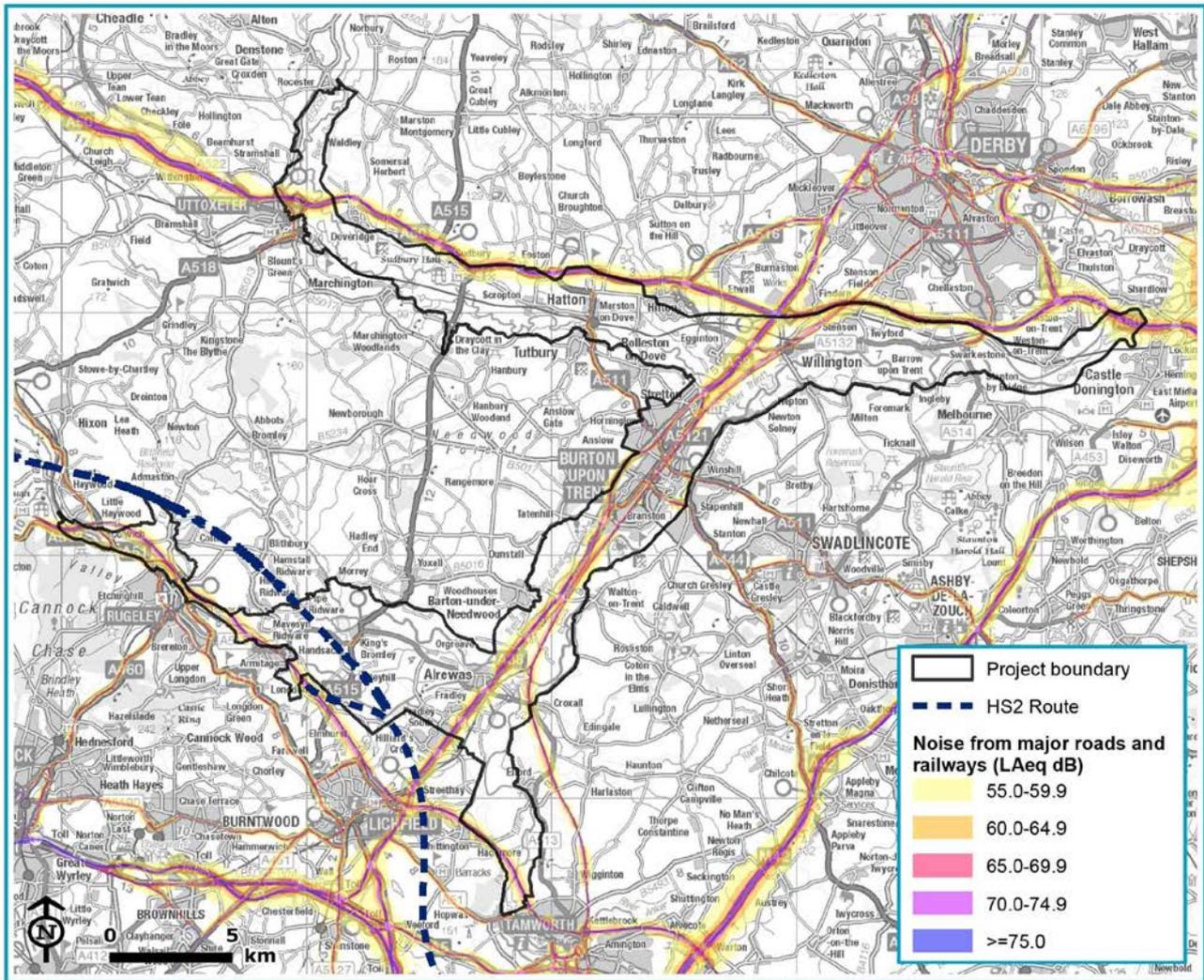
¹⁵ The Landscape Partnership (2017) Access and Visitor Audit

¹⁶ Secretary of State for Transport (2013). Aviation Policy Framework. p.58. Available at [https://www.gov.uk/government/publications/aviation-policy-framework]

¹⁷ Defra (2015) Open data: strategic noise mapping. Available at [https://www.gov.uk/government/publications/open-data-strategic-noise-mapping]

can be assumed that the proposed development of HS2 will result in a further increase in noise disturbance along its route.

Figure 5.1 Average Noise Level (LAeq 16h)

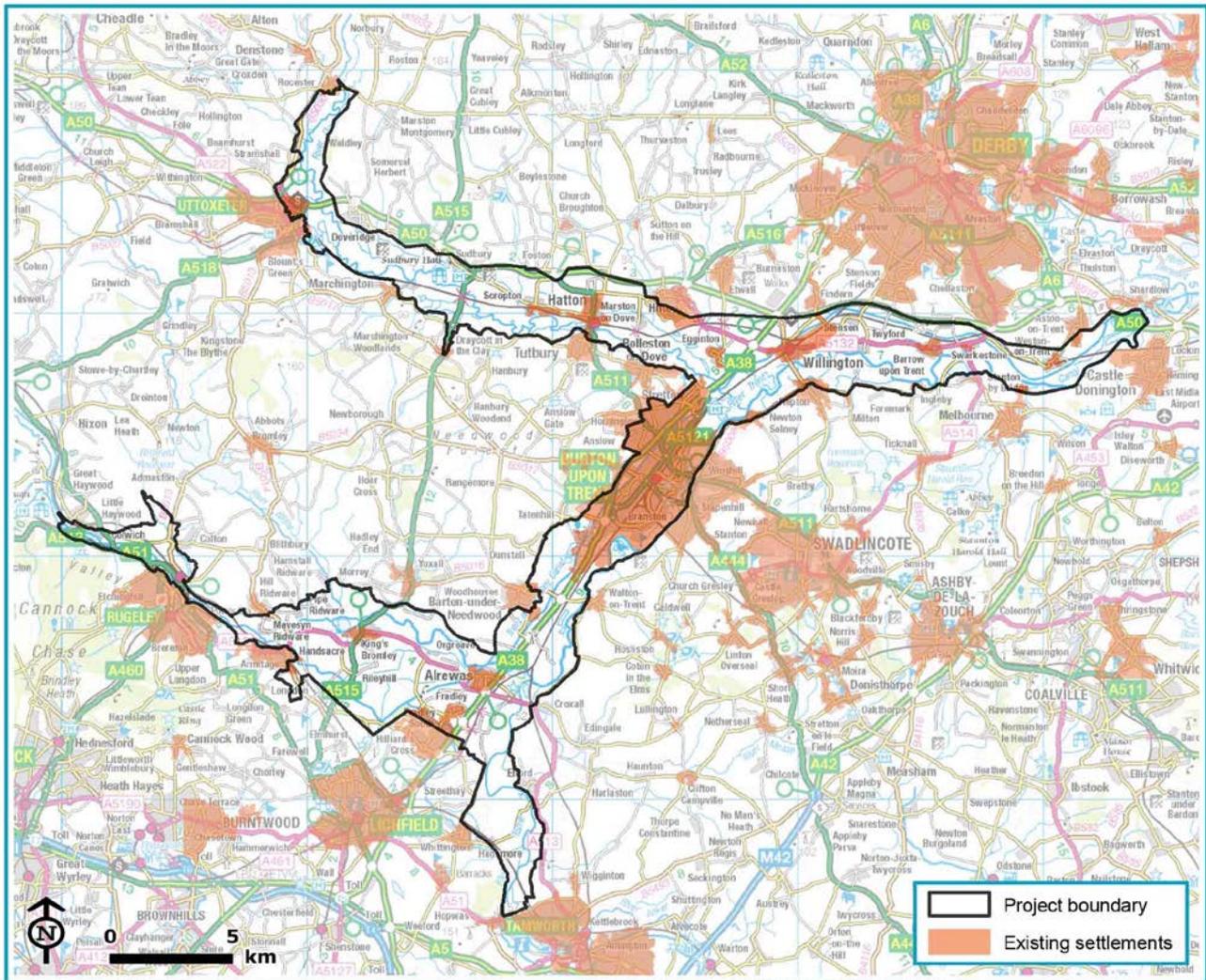


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Settlements

- 5.9 Existing settlement footprints occupy around 29km² of the total project area. Burton upon Trent is the largest urban area accounting for around 20km² of the project area (part of the urban areas extends beyond the project area with a total settlement area of 27km²). Other significant settlements include Alrewas, King's Bromley, Hatton and Willington (Figure 5.2).

Figure 5.2 Existing Settlements



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Planning and Development

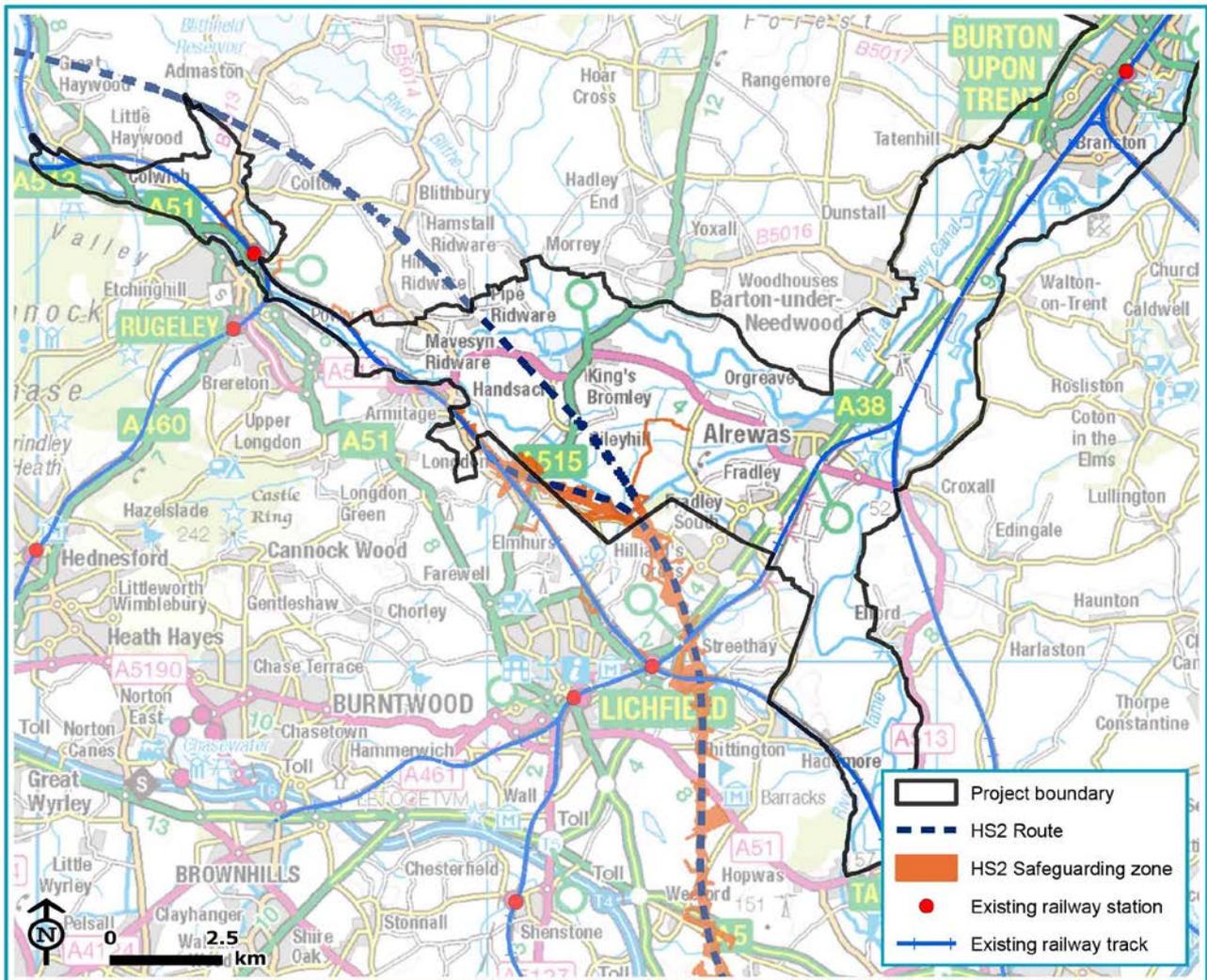
HS2

- 5.10 The current proposed HS2 route cuts through the south-western section of the project area, entering at Hilliard's Cross, running north-west across the project area for around 6.1km and exiting it at Hill Ridware. The proposed link between HS2 and the existing Stafford to Lichfield railway line will run through the project area for a further 2.4km to the west from the main line. It will also intersect the boundary of the project area north-east of Little Haywood (approximately 200m only) (**Figure 5.3**).
- 5.11 The proposed HS2 route will not result in the development of any new train stations within the vicinity of the project area, however it is likely to impact on the landscape and tranquillity of areas through which it runs.
- 5.12 The proposed HS2 route will also have an impact on a number of recreational routes, including the National Cycle Network NCN54 route (West Midlands Cycle Route), the Trent Valley and the Way for the Millennium long distance trails, as well as a number of Public Rights of Ways.
- 5.13 The NCN54 follows an existing minor road, and it is anticipated that the proposed HS2 route will not lead to the closure or considerable diversion of this route. The two long distance trails run off-road along field boundaries in the affected area. At this stage there isn't sufficient information in the public domain to be able to determine how the proposed HS2 route will impact on the route of

these walking trails. However, the character of the topography and lack of natural screening increase the potential for visual impacts.

5.14 For a detailed map of the HS2 route refer to **Figure A5**, Appendix 4.

Figure 5.3 Route of the Proposed HS2 Through the Project Area



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Urban Expansion

5.15 A review of Local Plans has revealed that there are housing developments proposed throughout the project area. The largest urban expansion is planned around Burton upon Trent (**Table 5.2** and **Figure A6**, Appendix 4).

Table 5.2 Housing Proposals within the Project Area¹⁸

Settlement	Local Authority	Site	Dwelling capacity	Area (km ²)
Fradley	Lichfield	-	1,250	0.75
Burton-under-Needwood	East Staffordshire	Effinch Lane	130	0.05
Burton upon Trent	East Staffordshire	Branston Locks	2,580	1.36
Burton upon Trent	East Staffordshire	Beamhill	950	0.66

¹⁸ The table includes housing proposals on the edge of the existing settlements, representing urban expansion or regeneration, and does not list proposals within the existing settlement boundaries. It includes proposals that are either fully or partially within the project area.

Settlement	Local Authority	Site	Dwelling capacity	Area (km ²)
Burton upon Trent	East Staffordshire	Guinevere	100	0.04
Hatton	East Saffordshire	Land NE of Hatton	400	0.17
Rocester	East Staffordshire	Churnet Farm	90	0.05
Burton upon Trent	South Derbyshire	Drakelow Park	2,239	0.92
Aston-on-Trent	South Derbyshire	Former Aston Hall Hospital	74	0.13
Willington	South Derbyshire	Unknown	Unknown	0.02
Repton	South Derbyshire	Unknown	Unknown	0.02
Hilton	South Derbyshire	Land Hilton Depot	485	0.28
Scropton	South Derbyshire	Unknown	Unknown	0.01
Total			8,298	4.46

- 5.16 Whilst the planned urban expansion shown above will add further pressure on the landscape, the *Access and Visitor Audit* highlighted that the additional population could also represent a new audience for the appreciation of the landscape and its sustainable development.¹⁹

Garden Villages

- 5.17 There are two new garden villages proposed within the project area (*Brookhay Garden Village and Brookhay Waterside*). A further garden village (*Infinity Garden Village*) has been approved just outside its northern boundary, south of Derby. The Brookhay mixed-use proposals are for two separate villages and related infrastructure north-east and south-east of Alrewas, for 7,500 homes in total (**Table 5.3** and **Figure 5.4**).²⁰ The Infinity Garden Village is for the development of 2000 homes, with the aim to alleviate the housing demand in Derby City and South Derbyshire.

Table 5.3 Proposed New Garden Villages

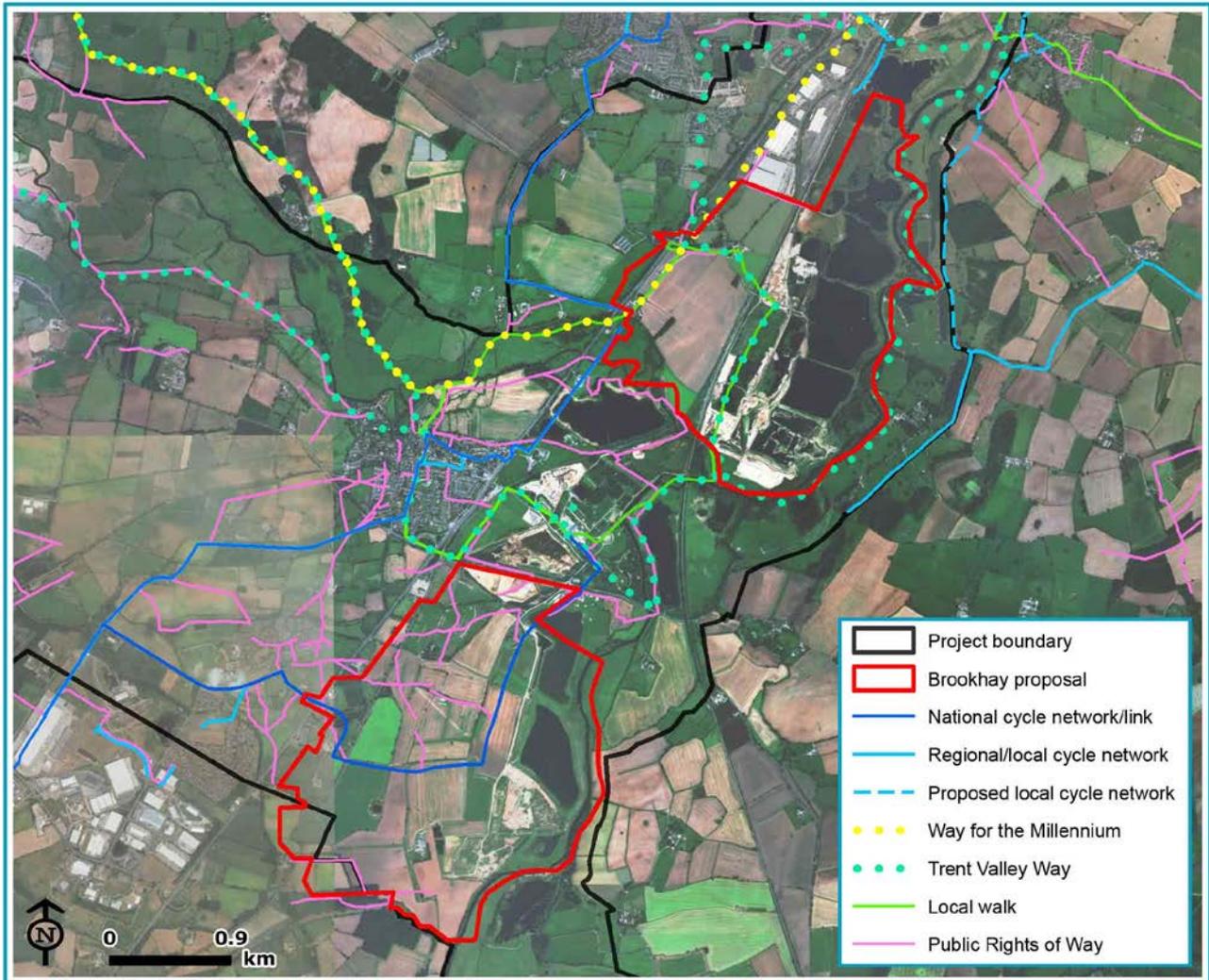
Garden village	Local Authority	Area
Brookhay Garden Village	Lichfield	4.4km ²
Brookhay Waterside	East Staffordshire	3.9km ²
Infinity Garden Village	City of Derby / South Derbyshire	4.5km ²

- 5.18 The development of these garden villages will impact on a number of existing long distance walking trails and cycling routes. However, with the implementation of suitable measures these developments can also contribute to the enhancements of existing, and development of new, access links through the affected area.

¹⁹ The Landscape Partnership (2017) *Access and Visitor Audit*

²⁰ Barratt Development Plc (2015) *Brookhay* (promotional booklet)

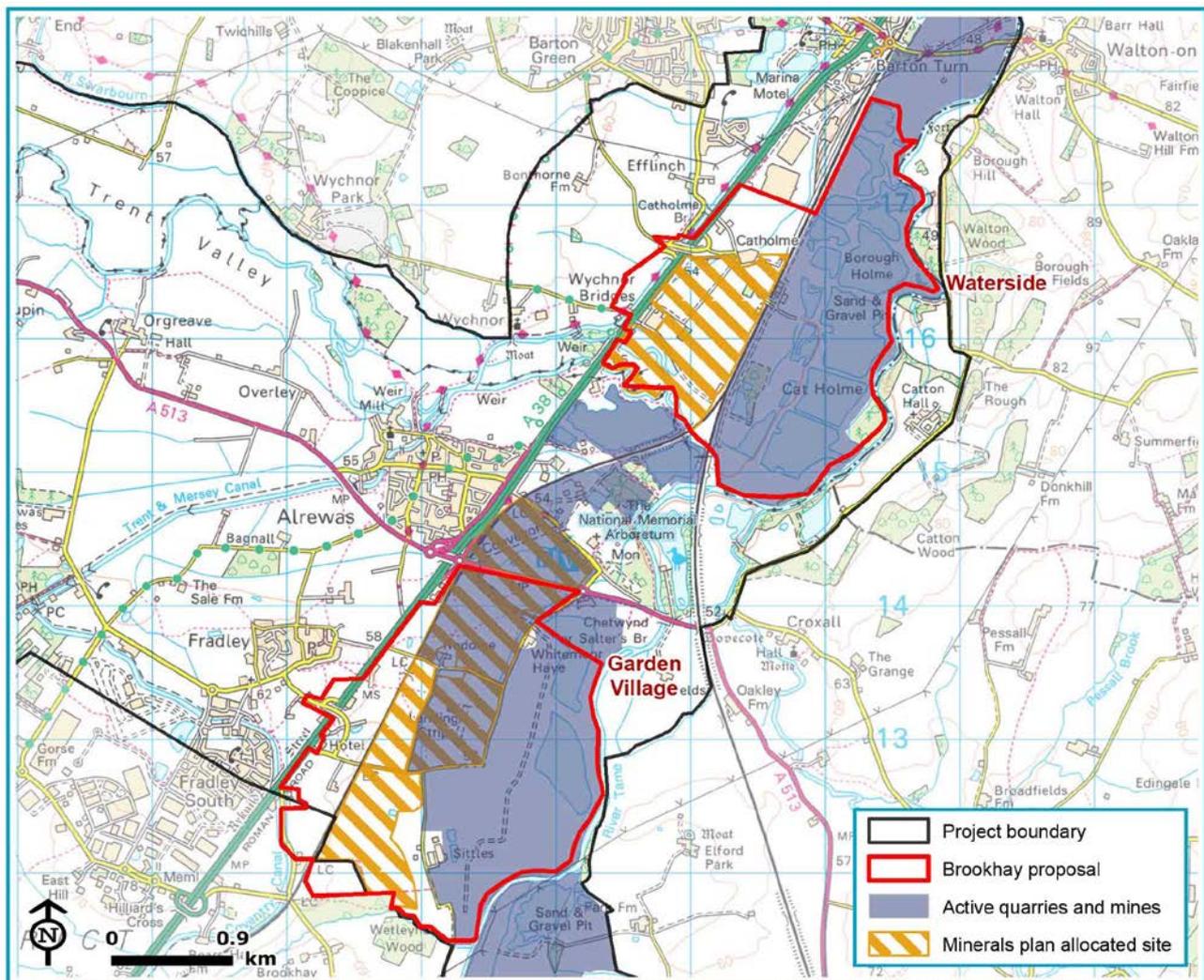
Figure 5.4 Proposed Brookhay Garden Villages



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- 5.19 Around half of the Waterside proposal is within the Barton active sand and gravel quarry run by Hanson Aggregates Ltd, scheduled to cease operation in 2030; and just over half of the Garden Village proposal is within the Whitemoor Haye / Alrewas sand and gravel quarry, operated by Lafarge Aggregates & Concrete Limited, scheduled for closure in 2027.
- 5.20 The remaining parts of the proposed garden villages are allocated as minerals sites in the Staffordshire County Council Minerals plan. This includes the Barton (Wynchnor) sand & gravel quarry encompassing 0.9km² of the Waterside proposal and the Alrewas South sand & gravel quarry encompassing 1.6km² of the Garden Village proposal (**Figure 5.5**).

Figure 5.5 Proposed Brookhay Garden Villages and Existing and Allocated Quarries



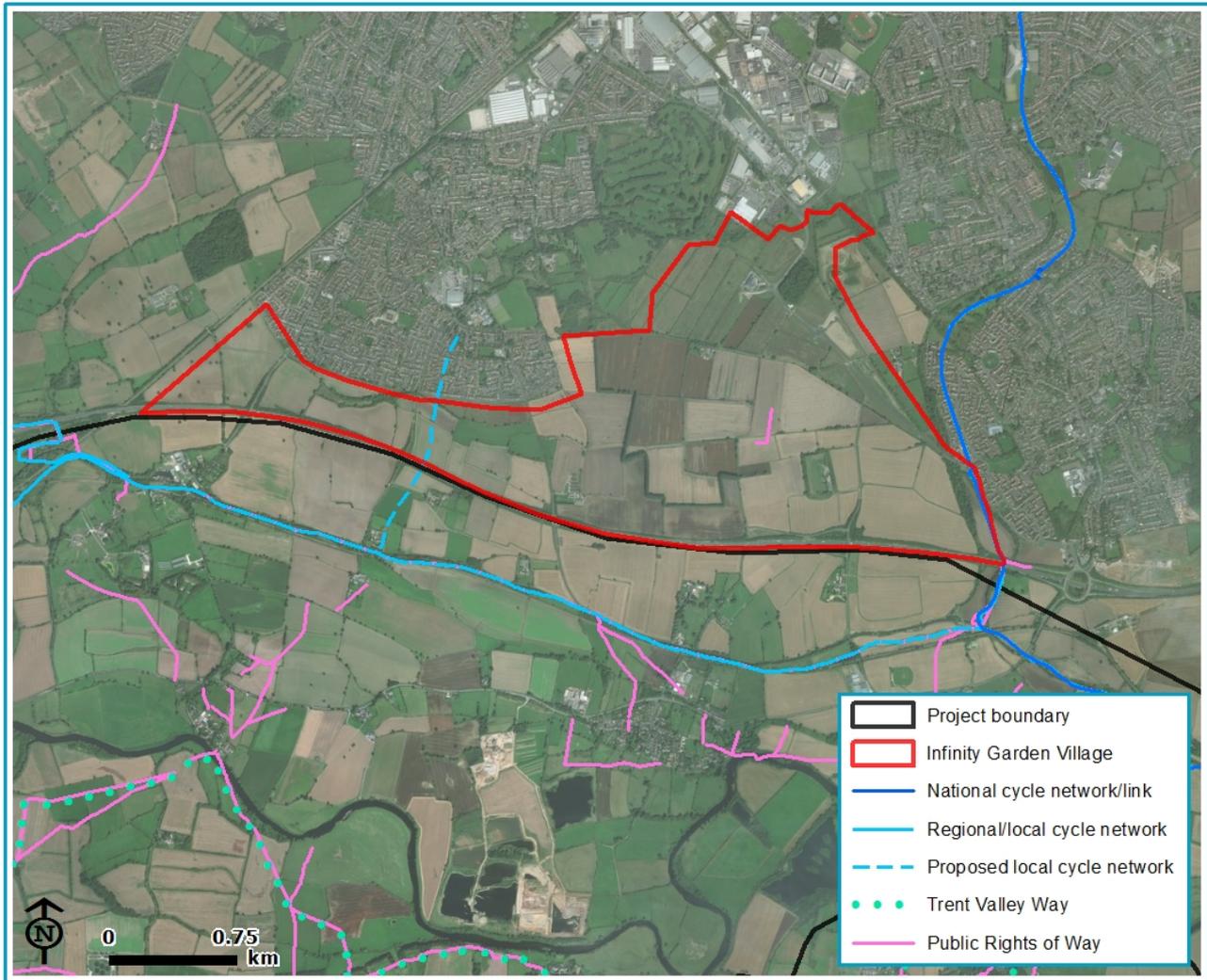
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- 5.21 Considering the current mineral activity in the area it is anticipated that the proposed Brookhay Garden Villages will be developed after the lifetime of the Partnership projects. Due to their extent, quarrying and subsequent regeneration and proposed urban development will undoubtedly lead to a considerable change in the landscape. However, if the development is built with the principles of sustainability in mind, it should be possible to achieve net environmental gain and ensure it contributes to the improvement of local access, the health of the ecosystems and cohesion of the surrounding communities.²¹
- 5.22 The Infinity Garden Village has been named in 2017 as one of 14 schemes approved under the Government's *Garden Villages, Towns and Cities* initiative.²² The development is nestled between the Trent & Mersey Canal, just north of Barrow upon Trent, and Derby in the north. It stretches over grade 3 agricultural land. Its development will not lead to the loss of any existing nature or wildlife reserve, nor will it directly affect any existing recreational routes or cultural heritage of national significance.

²¹ The Landscape Partnership (2017) Access and Visitor Audit

²² Ministry of Housing, Communities & Local Government (2017) First ever garden villages named with government support. Available at [<https://www.gov.uk/government/news/first-ever-garden-villages-named-with-government-support>]

Figure 5.6 Consented Infinity Garden Village and Recreational Routes



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Minerals

5.23 The aggregates industry has a large presence throughout the project area, especially along the River Trent from Kings Bromley all the way to Shardlow in the north-eastern tip of the project area. There are currently 12 active quarries within the project area, all of which are sand and gravel. The total extent of these quarries is 14.55km², which represents around 7.3% of the project area (Table 5.4, Table 5.5 and Figure A7 in Appendix 4).

Table 5.4 Active Quarries in Staffordshire

ID	Site	Operator	Mineral	Area (km ²)	Status
1	Manor Park	Hanson Aggregates Ltd	Sand and gravel	0.66	Ceased operation in 2014. Status: Restoration and aftercare
2	Elford Quarry	JPE Holdings Ltd	Sand and gravel	1.32	Ceased operation in 2010. Status: Restoration
3	Whitemoor Haye/Alrewas	Lafarge Aggregates & Concrete Limited	Sand and gravel	3.96	Forecast to cease operation in 2027. Status: Operational
4	Barton	Hanson Aggregates Ltd	Sand and gravel	2.86	Forecast to cease operation in 2030. Status: Operational
5	Newbold and Tucklesholme Farm	Aggregate Industries UK Limited	Sand and gravel	4.54	Was planned to cease operation in 2015. Restoration to be completed in 2017.

ID	Site	Operator	Mineral	Area (km ²)	Status
6	Leasows Farm / Uttoxeter Quarry	Aggregate Industries UK Limited	Sand and gravel	1.21	Status: Assumed operational
Total				14.55	

Table 5.5 Assumed Active Quarries in Derbyshire²³

ID	Site	Area (km ²)
1	Quarry 1	1.13
2	Quarry 2	0.18
3	Quarry 3	1.6
4	Quarry 4	0.34
5	Quarry 5	2.3
6	Quarry 6	2.31
Total		7.86

- 5.24 The quarries listed in Table 5.4 and Table 5.5 above are shown and labelled (with values from the ID column) on **Figure A7**, Appendix 4.
- 5.25 There are four further sites within the project area identified for mineral extraction in the Staffordshire Minerals Local Plan, with a total area of 3.69km² (**Table 5.6** and **Figure A7** in Appendix 4). A further 15km², between King's Bromley and Alrewas, is identified as a Search Area for sand and gravel in the same Minerals Local Plan. It should be also noted that the full extent of the project area within Staffordshire County Council is identified as a '*Mineral Safeguarding Area (All minerals except coal & fireclays)*' (Policy 3).²⁴

Table 5.6 Minerals Plan Allocations in Staffordshire within Project Area

ID	Site	Operator	Mineral	Area (km ²)
Q1	Uttoxeter Quarry (Dove Extension)	Aggregate Industries Ltd	Sand and gravel	0.64
Q2	Newbold North East	Aggregate Industries Ltd	Sand and gravel	0.28
Q3	Barton (Whychnor)	Hanson Aggregates	Sand and gravel	0.89
Q4	Alrewas South (partially overlaps the existing Whitemoor Haye/Alrewas quarry)	Lafarge Aggregates Ltd	Sand and gravel	1.88
Total				3.69

- 5.26 Surface extraction of sand and gravel inevitably erases the existing, traditional landscape and access routes. However, upon restoration, former quarry sites can become important nature reserves and wildlife sites. If they are redeveloped into new settlements, with appropriate planning and design, and involvement of relevant conservation organisations, they can contribute to overall improvements in the landscape, including improved habitats, quality of water and access to the landscape.

²³ Detailed minerals data was not available from Derbyshire County Council

²⁴ Staffordshire County Council (2017) Minerals Local Plan. Available at [<https://www.staffordshire.gov.uk/environment/planning/policy/thedevelopmentplan/mineralslocalplan/mineralsLocalPlan.aspx>]

6 Recreation and Visitor Facilities

Recreation

- 6.1 Branston Water Park (0.24km²) is the only **Country Park** within the project area, situated just south of Burton upon Trent along the A38.
- 6.2 The Open Greenspace dataset, Britain's most comprehensive open dataset of urban green space published by Ordnance Survey in 2017, identifies just over 3km² as **green space** within the project area. The dominant type is playing fields and play spaces. Playing fields and golf courses cover the largest area, followed by other sport facilities (**Table 6.1**). There are also a considerable number of allotments and religious grounds, however these tend to cover smaller areas.²⁵
- 6.3 For a detailed map of green space refer to **Figure A8**, Appendix 4.

Table 6.1 Provision of Green Space

Greenspace by type	South Derbyshire		East Staffordshire		Lichfield		Derbyshire Dales		Stafford		Total	
	No	m ²	No	m ²	No	m ²	No	m ²	No	m ²	No	m ²
Allotments or community growing spaces	11	35,942	12	112,936	3	12,562	-	-	-	-	26	161,440
Bowling green	4	5,567	10	23,142	2	2,765	1	1,174	-	-	17	32,648
Cemetery	5	11,134	1	4,113	-	-	-	-	-	-	6	15,247
Golf course	-	-	4	683,953	1	113,003	-	-	-	-	5	796,956
Other sports Facility	5	76,301	15	361,162	-	-	1	60,969	-	-	21	498,432
Play space	7	8,879	30	31,339	3	9,020	-	-	-	-	40	49,238
Playing field	17	213,947	36	689,883	5	60,893	-	-	1	26,624	59	991,347
Public park or garden	2	8,537	4	261,741	-	-	-	-	1	28,318	7	298,596
Religious grounds	11	50,805	12	43,339	5	30,777	1	4,789	1	5,193	30	134,903
Tennis court			9	9,412							9	9,412
Total	62	411,112	133	2,221,020	19	229,020	3	66,932	3	60,135	220	2,988,219

- 6.4 There are around 100 different indoor and outdoor sport and recreational facilities within the project area, including cricket clubs, football and golf clubs, gyms, health clubs and leisure centres.²⁶
- 6.5 For a detailed map of sport and recreation facilities refer to **Figure A9**, Appendix 4.

²⁵ Ordnance Survey MasterMap Greenspace Layer. Available at [<https://www.ordnancesurvey.co.uk/business-and-government/products/os-mastermap-greenspace.html>]

²⁶ In the absence of a comprehensive dataset on leisure and sport facilities from the local councils, indicative numbers are based on information available from Active Places. Available at [<https://www.activeplacespower.com/OpenData/download>]

Walking

6.6 Walking is a popular recreational activity in the Trent Valley:

- **The Trent Valley Way** is a long distance walking route which follows the course of the River Trent for around 265.6km (166miles) from near its source at Biddulph Moor to Alkborough near the Humber Estuary.²⁷ The length of the Way within the project area is 72.7km (45.4miles).
- **The Monks and Moorings Walk** is a medium length walk just west from Burton upon Trent (11km /6.5miles). It provides an insight into the town's past, the importance of the Trent and Mersey Canal for its industrial development and the conversion of old gravel workings into nature reserves.²⁸ The length of the walk within the project area is 6.9km.
- **The Way for the Millennium** is a long distance walk (65km) through Staffordshire, established by the County Council to mark the Millennium. The route follows the Stafford-Newport Greenway, public rights of ways, former railways and canal towpaths. Parts of the route are available to horse riders and cyclists as well.²⁹ The length of the Way within the project area is 24.1km.
- **Mythaholme Walk** is a short circular walk (8.85km) around Alrewas that provides an insight into the history and development of the local area. The walk is fully within the project area³⁰.
- **The Staffordshire Way** is a long distance walk (147km/92miles) across Staffordshire running across the County from the north to the south. It follows public rights of ways, paths to which access has been granted and canal towpaths. The route is for walkers only. Small sections of the walk cut through the north-western (6.4km) and western (6km) corners of the project area.³¹
- **The National Forest Way** is a long distance walk (120km/75miles) across The National Forest running from the National Memorial Arboretum east of Alrewas in the west to Beacon Hill Country Park in Leicestershire in the east. It has been designed to showcase the different aspects of The National Forest. Most of the walk is on public rights of ways, though some stretches are on permissive paths. While the walk primarily comprises footpaths, some sections are designated as bridleways and byways, allowing access to cyclists and horse riders as well.³² Two short sections of the Way are within the project area, one running around Alrewas (4.3km) and the other south of Burton upon Trent (6.4km). A 3.9km long link connects the Way running through the Branston Water Park south of Burton with the town centre.
- There is a dense network of **Public Rights of Way** across the project area with a total length of 275km.

6.7 A detailed map of walking routes can be found in Appendix 4, **Figure A10**.

Cycling

6.8 The total length of existing and proposed cycle paths within the project area is just under 190km (**Figure A11**, Appendix 4).

6.9 There are four National Cycle Network (NCN) routes and one Regional Cycle Network (RCN) route that run through the project area:

- Route NCN54 follows the A38 from Lichfield via Alrewas and Burton upon Trent to Derby.
- Route NCN549 follows the A50 corridor, along the River Dove from Uttoxeter to Etwall, where it joins the NCN54 route.
- Route NCN6 cuts through the north-eastern arm of the project area near Swarkestone for a short section (approximately 3.5km).

²⁷ Trent Vale. Trent Valley Way. Available at [<http://www.trentvale.co.uk/activities/view/trent-valley-way/>]

²⁸ The National Forest (2009) Monks and Moorings. Available at [https://www.nationalforest.org/document/visitor/monks_moorings.pdf]

²⁹ Staffordshire County Council. The Way for the Millennium. Available at [<https://www.staffordshire.gov.uk/environment/eLand/RightsofWay/PromotedRoutes/distancewalks/Millennium-Way.pdf>]

³⁰ Central Rivers Initiative. Mythaholme & The National Memorial Arboretum. Available at [http://www.centralrivers.org.uk/index.php?option=com_content&view=article&id=62:mythaholme-a-the-national-memorial-arboretum&catid=8:walks-list&Itemid=39]

³¹ Staffordshire County Council. The Staffordshire Way. Available at

[<https://www.staffordshire.gov.uk/environment/eLand/RightsofWay/PromotedRoutes/distancewalks/staffordshire-way-booklet-2.pdf>]

³² National Forest Company. National Forest Way. Available at [<http://www.nationalforestway.co.uk>]

- Route NCN63 joins NCN54 in Burton upon Trent to Swadlincote to the East, following the corridor of A444.
 - Route RCN66 is a ring route around Derby, representing a link between NCN54 and NCN6 just to the north of the project area.
- 6.10 There is a further NCN link within the project area that joins NCN54 in Fradley with the National Memorial Arboretum, following a number of local roads.
- 6.11 The provision of local cycle routes is very modest within the project area, especially in the area west from Alrewas towards Rugeley and along the valley of the River Tame. The only area that has a better provision of local cycle network is Burton upon Trent.

Visitor Facilities

- 6.12 A large number of facilities are associated with the Trent & Mersey Canal, including 15 waterside pubs, 3 customer service facilities and 15 water points for canal users.³³
- 6.13 A range of existing visitor infrastructure can be found within Burton upon Trent, including a few cinemas and bingo halls, a library, the Brewhouse Arts Centre, as well as the National Brewery Centre (**Figure A12**, Appendix 4,).
- 6.14 The main attraction hubs within the project area are listed in **Table 6.2**.

Table 6.2 Main Attraction Hubs³⁴

ID	Visitor facility	Category
1	Wolseley Bridge	Hub
2	Sailing Club	Visitor facilities
3	Fradley Junction	Hub
4	Whitemoor Lakes	Visitor facilities
5	National Memorial Arboretum	Hub
6	Barton Marina	Hub
7	National Brewing Museum	Attraction
8	Burton Washlands	Hub
9	Sudbury Hall	Attraction
10	Willington Nature Reserve	Hub
11	Mercia Marina	Hub
12	Sailing Club	Visitor facilities

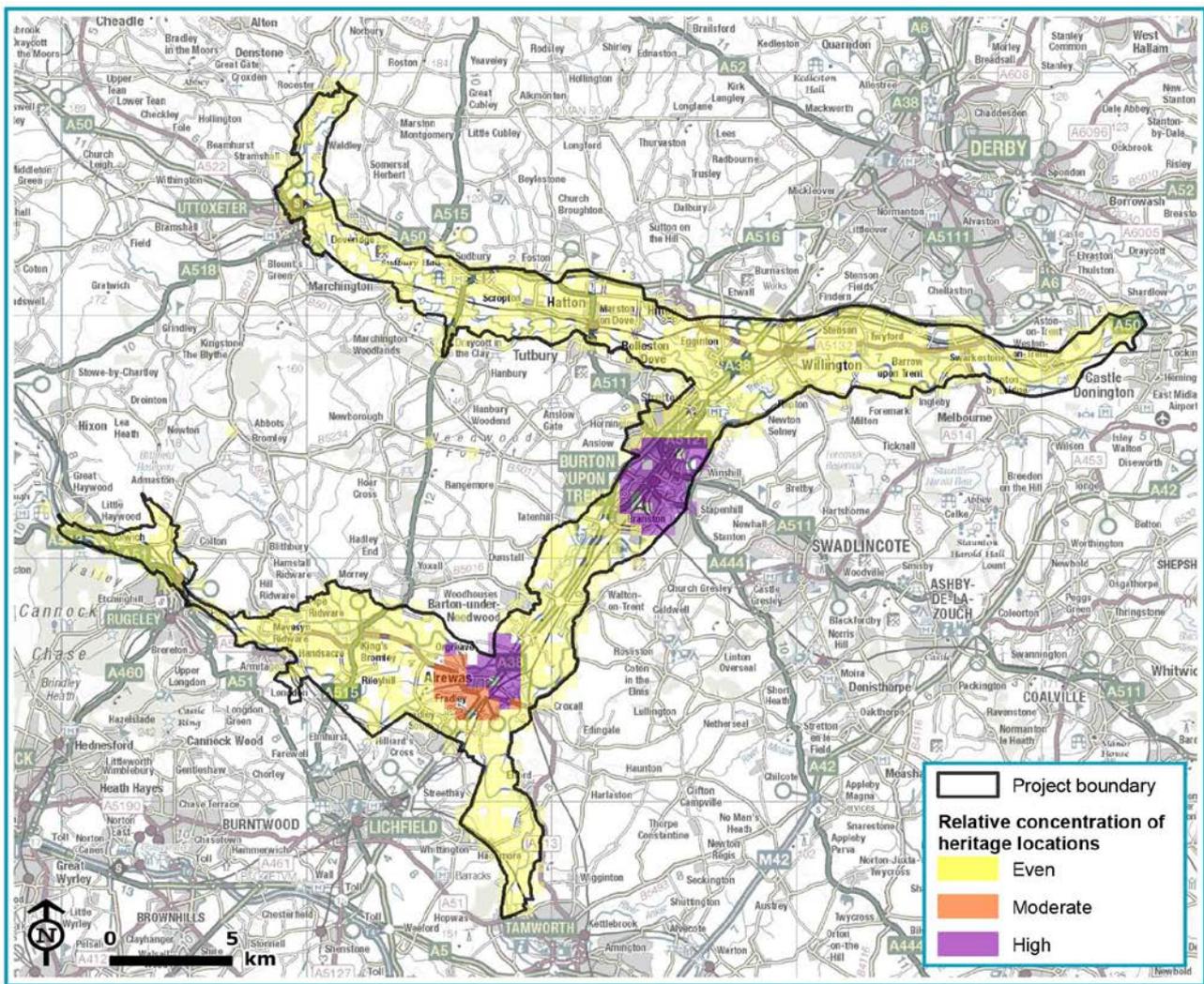
³³ In the absence of comprehensive visitor facility dataset information from different sources have been used, including Derbyshire County Council, Staffordshire County Council and the Canal & Rivers Trust.

³⁴ Based on information received from Derbyshire County Council

7 Cultural Heritage

7.1 The project area has an extensive network of cultural heritage assets, both of national and local significance. **Figure 7.1** shows the concentration of cultural heritage assets throughout the project area. The main factors that influenced the development of the cultural landscape include agriculture, ritual activity and religion, development of transport infrastructure, mineral extraction and 20th century military activity.³⁵

Figure 7.1 Relative Concentration of Cultural Heritage Locations



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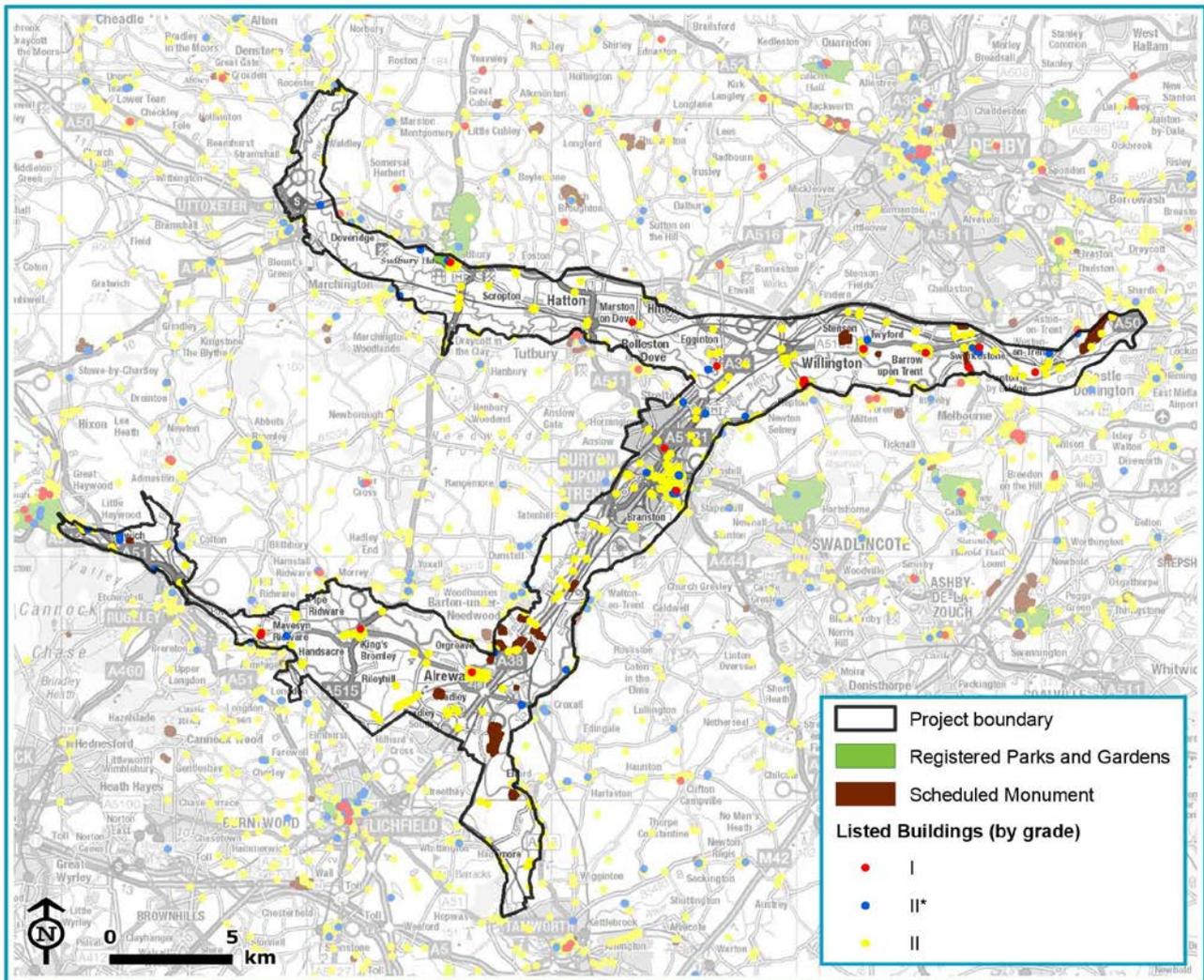
National Designations

7.2 **Figure 7.2** shows the distribution of designated cultural heritage assets. There are 476 **Listed Buildings** scattered around the project area, with larger concentrations within Burton upon Trent (150), Alrewas (47) and King's Bromley (19). Out of the total number, 155 are associated with

³⁵ ArcHeritage (2017) Transforming the Trent Valley: Cultural Heritage Audit. Main Report. Available at <https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/Historic-Environment-Projects.aspx#TransformingtheTrentValleyCulturalHeritageAudit>

the Trent & Mersey Canal, including 85 bridges, 3 aqueducts (on the River Sow, River Dove and the River Tame); as well as a number of junction houses, locks and other canal related infrastructure.

Figure 7.2 Cultural Heritage of National Importance



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- 7.3 The project area includes small parts of two **Registered Parks and Gardens**, namely:
- Southern part of *Sudbury Hall* around Lake Bank west of Sudbury in Derbyshire Dales District; and
 - Small section of *Shugborough* along the Mersey Canal east of Little Haywood, in Stafford District.
- 7.4 There are 26 **Scheduled Monuments** within the project area. Half of them (13) are concentrated around Alrewas, within less than 5km of the village. Another cluster (6) is found along the lower stretch of the River Trent between Willington and Aston-on-Trent. Details of the scheduled monuments can be found in **Table 7.1**.

Table 7.1 Scheduled Monuments³⁶

ID	Type	List entry	Area (ha)
1	Causewayed enclosure	1002964	7.63
2	Iron Age settlement and cursus, with other air photographic marks	1003279	37.08
3	Dove Bridge	1003808	0.05
4	Monks Bridge	1003809	0.06
5	Circular enclosures	1006072	5.53
6	Enclosures and cursus	1006073	3.95
7	Circular earthwork	1006074	1.38
8	Remains of barrow cemetery	1006076	2.21
9	Burton upon Trent Abbey	1006084	1.15
10	Site of round barrow	1006090	0.42
11	Settlement sites and enclosures	1006091	38.24
12	Earthworks	1006093	4.07
13	Circular enclosures	1006094	4.4
14	Pit alignments	1006095	8.32
15	Air photographic site	1006100	5.51
16	Settlement site and enclosures	1007028	12.72
17	Henge complex	1007034	4.29
18	Dove Bridge	1007066	0.05
19	Swarkestone Bridge	1007076	1.8
20	Monks Bridge	1007077	0.06
21	Moated site	1007616	0.76
22	Wychnor deserted medieval village, moated site, moated enclosure and two fishpond	1009032	18.14
23	Twyford henge and Round Hill bowl barrow	1011436	0.78
24	Slight univallate hillfort	1017742	3.35
25	Swarkestone Lows round barrow cemetery and part of an aggregate field system	1019060	6.89
26	Timber circle, hengi-form monument and part of a pit alignment	1019109	0.8

7.5 There are no **World Heritage Sites** or **Registered Battlefields** within the project area and its immediate surroundings. **Table 7.2** summarises the distribution of designated cultural heritage assets of national importance within the project area.

³⁶ Historic England (2018) The List. Available at [<https://historicengland.org.uk/listing/the-list/>]. The IDs in Table 7.1 match the labels on Figure A13, Appendix 4.

Table 7.2 Summary of Cultural Heritage of National Importance

Local Authority	Listed Buildings (by grade) ³⁷				Scheduled Monuments	Registered Parks and Gardens
	I	II*	II	Total		
East Staffordshire	2	11	164	177	9	-
South Derbyshire	12	9	108	129	9	-
Lichfield	4	3	119	126	4	-
Stafford	-	9	3	12	2	1
Derbyshire Dales	1	2	29	32	2	1
Total	19	34	423	476	26	2

7.6 A larger scale map of cultural heritage assets of national importance can be found in Appendix 4, **Figure A13**.

Local Designations

7.7 There are 36 **Conservation Areas** within the project area covering a total area of 5.9km² (**Figure 7.3** and **Table 7.3**).

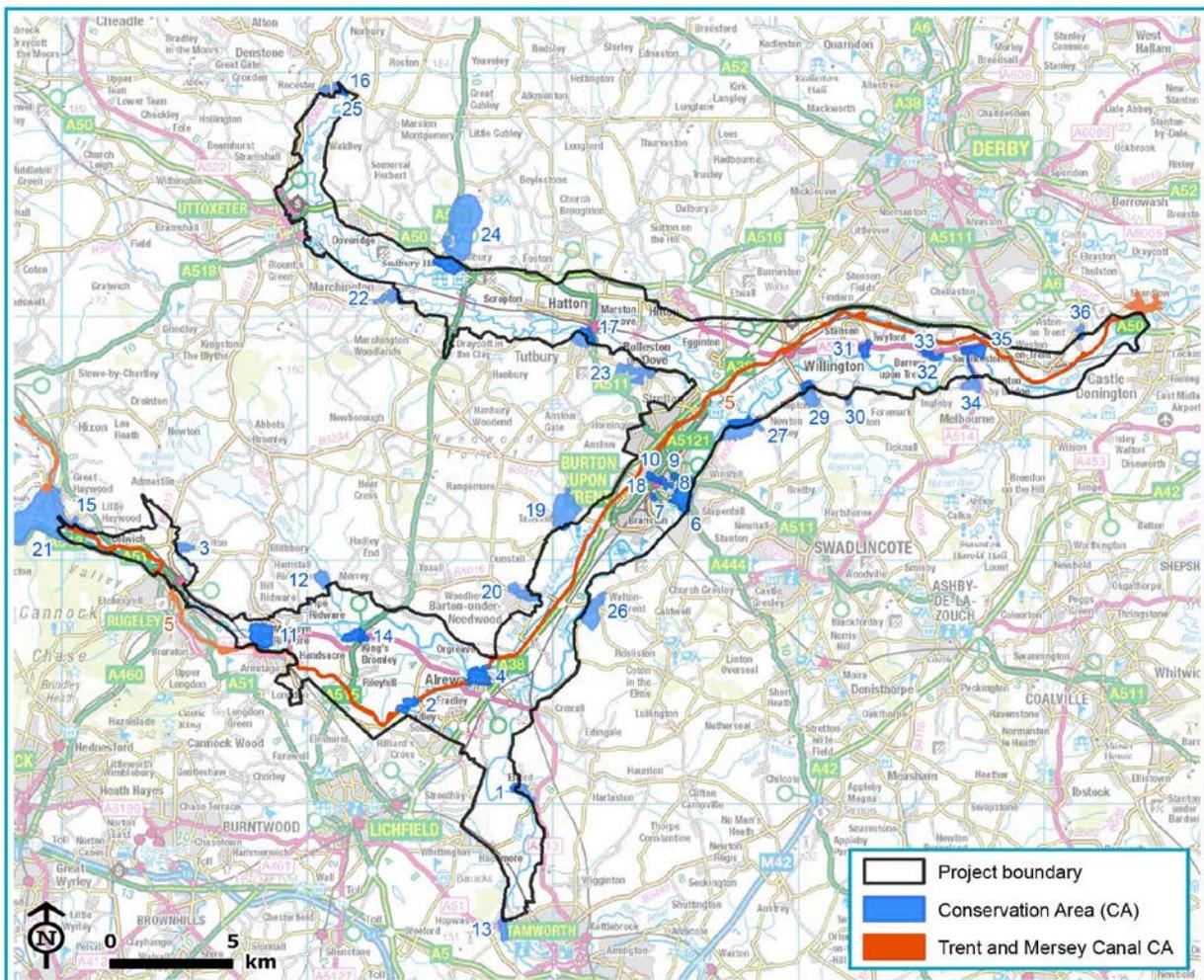
Table 7.3 List of Conservation Areas

ID	Name	Designation date	Local Authority	Reference number
1	Elford	22/11/1969	Lichfield	DST5608
2	Fradley Junction	28/11/1977	Lichfield	DST5613
3	Colton	25/07/1970	Lichfield	DST5619
4	Alrewas	03/03/1970	Lichfield	DST5655
5	Trent and Mersey Canal	06/05/1988	Multi-Council	DST5720
6	Burton upon Trent - Burton Number 2 and Number 3 - Town Centre	14/05/1990	East Staffordshire	DST5670
7	Burton upon Trent - Clarence Street/Anglsey Road	19/06/1989	East Staffordshire	DST5671
8	Burton upon Trent - George Street	12/12/1988	East Staffordshire	DST5672
9	Burton upon Trent - Horninglow Street / Guild Street	14/05/1990	East Staffordshire	DST5673
10	Burton upon Trent - Burton Number 1 (King Edward Place)	24/06/1970	East Staffordshire	DST5669
11	Mavesyn Ridware	03/10/1974	Lichfield	DST5700
12	Hamstall Ridware	28/02/1971	Lichfield	DST5688
13	Hopwas	16/07/1979	Lichfield	DST5691
14	Kings Bromley	25/07/1970	Lichfield	DST5693
15	Colwich and Little Haywood	23/02/1974	Stafford	DST5620
16	Rocester	25/07/1970	East Staffordshire	DST5708
17	Tutbury	22/11/1969	East Staffordshire	DST5710
18	Burton upon Trent - Station Street and Borough Road	13/09/1999	East Staffordshire	DST5724

³⁷ Listed Buildings come in three categories of 'significance': Grade I for buildings of exceptional interest, Grade II* for particularly important buildings of more than special interest and Grade II for buildings of special interest.

ID	Name	Designation date	Local Authority	Reference number
19	Tatenhill	06/02/1978	East Staffordshire	DST5649
20	Barton under Needwood	03/03/1970	East Staffordshire	DST5668
21	Great Haywood and Shugborough	22/11/1969	Stafford	DST5687
22	Marchington	22/11/1970	East Staffordshire	DST5699
23	Rolleston	03/03/1970	East Staffordshire	DST5709
24	Sudbury	10/02/1981	Derbyshire Dales	DDR7009
25	Rocester	13/10/1981	Derbyshire Dales	DDR7011
26	Walton On Trent		South Derbyshire	DDR7242
27	Newton Solney		South Derbyshire	DDR7246
29	Repton		South Derbyshire	DDR7252
30	Milton		South Derbyshire	DDR7253
31	Twyford		South Derbyshire	DDR7254
32	Barrow On Trent		South Derbyshire	DDR7257
33	Hole In Barrow		South Derbyshire	DDR7258
34	Stanton By Bridge, Swarkestone Causeway		South Derbyshire	DDR7260
35	Swarkestone		South Derbyshire	DDR7261
36	Aston On Trent		South Derbyshire	DDR7265

Figure 7.3 Conservation Areas



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7.8 The project area has a large number (1,623) of **sites and finds of local importance**, including archaeological sites and monuments, historic buildings and landscapes (**Table 7.4**, **Table 7.5** and **Table 7.6**).³⁸ Full details can be obtained through the *Heritage Gateway*³⁹ website or requested from Staffordshire and Derbyshire County Councils, who are the responsible authorities for maintaining the *Historic Environment Records* (HER) database for their respective areas.⁴⁰

Table 7.4 Local Cultural Heritage Assets by Type

Local Authority	Monument	Building	Place	Findspot	Total
South Derbyshire	404	53	-	31	488
East Staffordshire	411	113	4	43	571
Lichfield	369	34	8	75	486
Derbyshire Dales	40	1	-	-	41
Stafford	29	-	2	3	34
Cannock Chase	3	-	-	-	3
Total	1,256	201	14	152	1,623

7.9 The largest numbers of artefacts relate to agriculture and subsistence, including ridges and furrows (around 300), water meadows (47), field systems and field boundaries (164), farmsteads (35) and dovecotes (2).

7.10 The vast majority of defence related heritage (104) is from the Second World War (1939-1945), including pillboxes, air raid shelters and aircraft obstruction installations. Most of the pillboxes form part of Stop Line 5, which ran along the Rivers Tame, Trent and Dove. Many of these heritage assets are not clearly visible in the current landscape, though the remains of some building platforms and trackways are identifiable on Lidar surveys.⁴¹

Table 7.5 Number of Local Cultural Heritage Assets by Classification

Local Authority	Agriculture & subsistence	Boundary	Civil	Commemorative	Commercial	Defence	Domestic	Education	Gardens & parks
Cannock Chase	2	-	-	-	-	-	-	-	-
Derbyshire Dales	28	-	-	-	-	3	2	-	2
East Staffordshire	191	4	12	8	24	55	44	12	2
Lichfield	170	8	-	2	18	36	52	1	7
South Derbyshire	247	7	-	2	4	27	70	3	3
Stafford	6	-	-	-	-	-	5	-	3
Total	644	19	12	12	46	121	173	16	17

³⁸ ArcHeritage (2017) Transforming the Trent Valley: Cultural Heritage Audit. Main Report. Available at [<https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/Historic-Environment-Projects.aspx#TransformingtheTrentValleyCulturalHeritageAudit>]

³⁹ Heritage Gateway. Available at [<http://www.heritagegateway.org.uk/gateway/>]

⁴⁰ Derbyshire County Council. Archaeology. Available at [<http://www.derbyshire.gov.uk/environment/conservation/archaeology/>]
Staffordshire County Council. Historic Environment Record. Available at [<https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Historic-Environment-Record/HistoricEnvironmentRecord.aspx>]

⁴¹ ArcHeritage (2017) Transforming the Trent Valley: Cultural Heritage Audit. Main Report. Available at [<https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/Historic-Environment-Projects.aspx#TransformingtheTrentValleyCulturalHeritageAudit>]

Local Authority	Agriculture & subsistence	Boundary	Civil	Commemorative	Commercial	Defence	Domestic	Education	Gardens & parks
Local Authority	Health & welfare	Industrial	Palaeo-environmental	Personal	Recreation	Religious, ritual & funerary	Transport	Water supply & drainage	Unassigned
Cannock Chase	-	-	-	-	-	-	1	-	-
Derbyshire Dales	-	2	-	-	-	1	1	1	1
East Staffordshire	1	66	-	8	2	47	53	5	37
Lichfield	-	9	1	34	1	45	45	1	56
South Derbyshire	-	13	1	6	1	43	25	10	26
Stafford	-	-	-	-	-	2	14	-	4
Total	1	90	2	48	4	138	139	17	124

Table 7.6 Number of Local Cultural Heritage Assets by Period

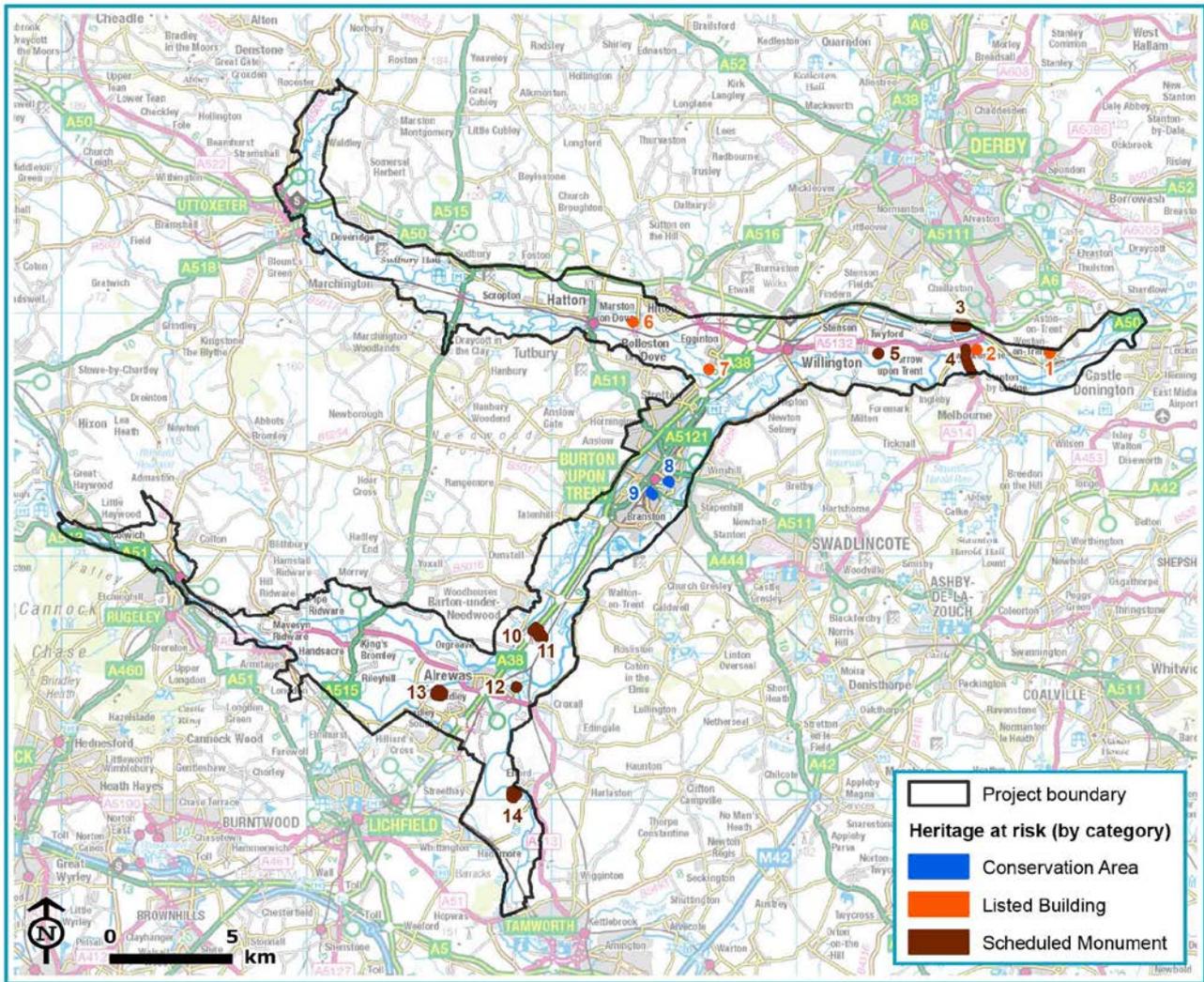
Local Authority	Early prehistoric	Later prehistoric	Roman	Early medieval	Medieval	Post-medieval	Industrial	Modern	Multi-period	Unknown	Total
South Derbyshire	8	77	8	11	143	44	59	31	71	36	488
East Staffordshire	1	54	26	10	96	76	145	70	66	27	571
Lichfield	4	87	25	6	65	89	68	32	59	51	486
Derbyshire Dales	-	-	-	-	18	10	1	3	8	1	41
Stafford	-	1	-	1	2	6	16	4	3	1	34
Cannock Chase	-	-	-	-	-	1	1	-	1	-	3
Total	13	219	59	28	324	226	290	140	208	116	1,623

Cultural Heritage at Risk

- 7.11 The Historic England '*Heritage at Risk Programme*' (HAR) aims to identify those sites of cultural heritage of national significance that are most at risk of being lost due to neglect, decay or inappropriate development.⁴²
- 7.12 The HAR 2017 programme identified 14 sites within the project area which are at risk of being lost (**Table 7.7** and **Figure 7.4**).

⁴² Historic England (2017). *Heritage at Risk*. Available at [<https://historicengland.org.uk/advice/heritage-at-risk/types/>]

Figure 7.4 National Cultural Heritage at Risk (HAR 2017)



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Table 7.7 List of National Cultural Heritage Assets at Risk (HAR 2017) ⁴³

ID	Reference number	Designation name	Heritage category	Condition	Vulnerability
1	1088352	Weston Hall, Main Street, Weston upon Trent	Listed Building	Poor	Immediate risk of further rapid deterioration or loss of fabric
2	1280604	Remains of Swarkestone Old Hall, Derby Road	Listed Building	Poor	Slow decay
3	1019060	Swarkestone Lows round barrow cemetery and part of an aggregate field system 300m north west of The Lowes Farm	Scheduled Monument	Extensive significant problems	Declining. Principal vulnerability due to arable ploughing
4	1007076	Swarkestone Bridge, Stanton by Bridge	Scheduled Monument	Fair	Repair scheme in progress
5	1011436	Twyford henge and Round Hill bowl barrow	Scheduled Monument	Extensive significant problems	Declining. Principal vulnerability due to animal borrowing
6	1334544	Church of St Mary, Hatton Lane	Listed Building	Poor	Repair scheme in progress

⁴³ Historic England (2017). Heritage at Risk. Available at [https://historicengland.org.uk/advice/heritage-at-risk/types/]. Table based on information contained in the 'HeritageAtRisk_2017.shp' GIS dataset available from Historic England.

ID	Reference number	Designation name	Heritage category	Condition	Vulnerability
7	1140125	Coalbrookdale footbridge (on former Egginton Estate)	Listed Building	Very bad	Immediate risk of further rapid deterioration or loss of fabric
8	7552	George Street, Burton, Burton upon Trent	Conservation Area	Very bad	High vulnerability. Improving
9	7551	Clarence Street/Anglesey Road, Burton upon Trent	Conservation Area	Very bad	High vulnerability. Deteriorating
10	1006073	Enclosures and cursus 300 yards (270 metres) south east of Efflinch	Scheduled Monument	Unknown	Principal vulnerability due to arable ploughing
11	1019109	Timber circle, hengi-form monument and part of a pit alignment at Catholme	Scheduled Monument	Unknown	Principal vulnerability due to mineral extraction/related subsidence
12	1006090	Site of round barrow near River Tame, Alrewas	Scheduled Monument	Generally satisfactory but with significant localised problems	Declining. Principal vulnerability due to gardening
13	1002964	Causewayed enclosure	Scheduled Monument	Unknown	Unknown
14	1006100	Air photographic site south west of Elford	Scheduled Monument	Unknown	Principal vulnerability due to arable ploughing

7.13 A total of **389** cultural heritage sites of local importance have been identified as being at some level of risk. A considerable number of these (113) are considered to be of national or regional/national significance.⁴⁴

7.14 The primary source of risk for these heritage assets relates to human activity, or lack of appropriate management. The most common risk factors include:

- Agricultural activity (e.g. ploughing, grazing);
- Minerals extraction (within quarries and impact on water level of surrounding areas);
- Settlement expansion and urban development; and
- Poor land management and neglect.⁴⁵

7.15 A total of **16** sites of local importance have been identified as a priority for conservation, the majority of which are concentrated around King's Bromley (**Figure 7.5** and **Table 7.8** below and **Figure A14**, Appendix 4).

Table 7.8 List of Local Sites for Priority Conservation

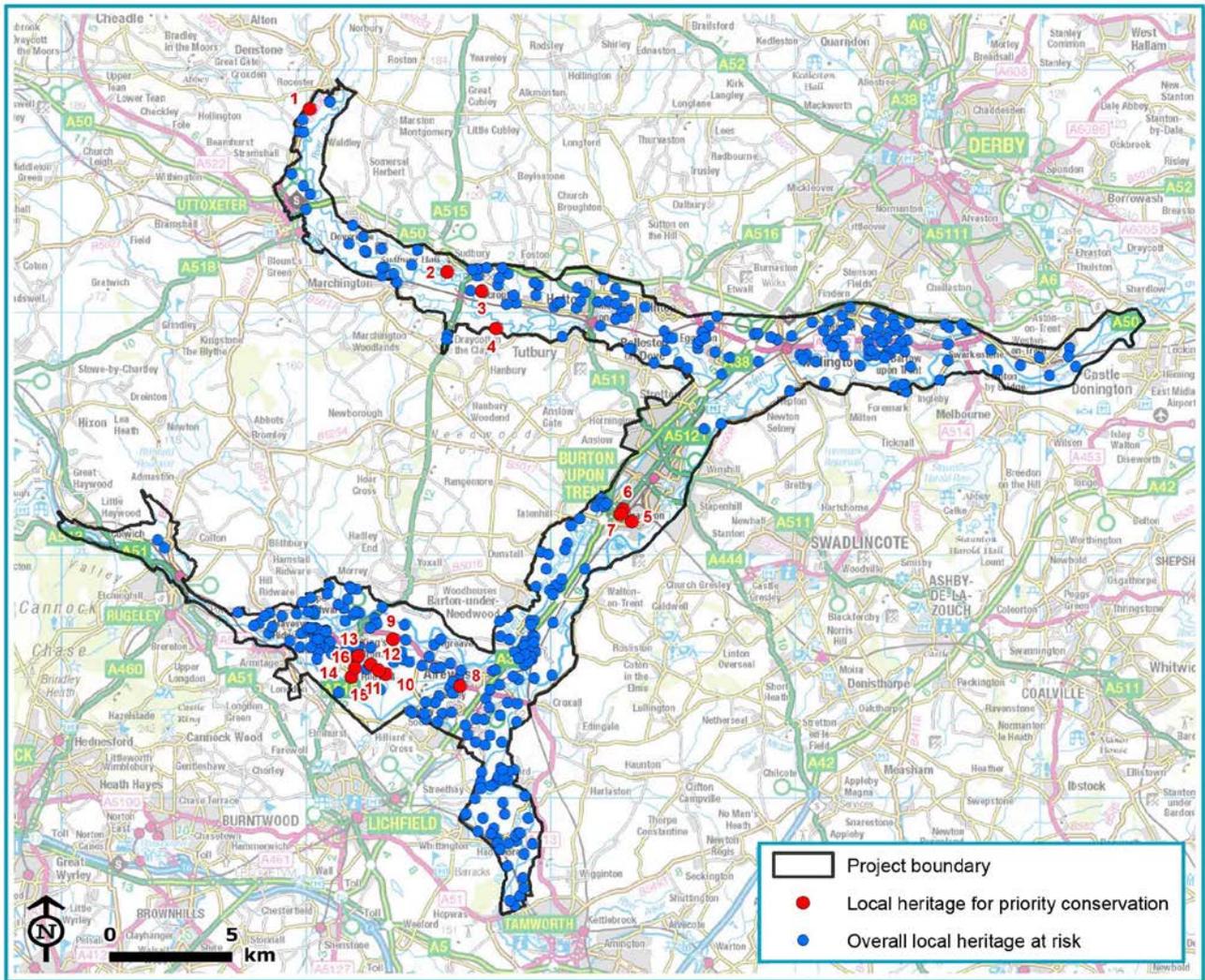
ID	Name	Period	Class	Condition	Land use
1	Water Meadow, Rocester	Multi-period	Agriculture & subsistence	Fair	Mixed arable & pasture regime; public footpaths run through
2	Ridge and furrow between Sudbury and the Dove, Sudbury	Medieval	Agriculture & subsistence	Declining	Mixed arable & pasture regime
3	Ridge and furrow, south of Leathersley Lane, Sudbury	Medieval	Agriculture & subsistence	Declining	Mixed arable & pasture regime

⁴⁴ ArcHeritage (2017) Transforming the Trent Valley: Cultural Heritage Audit. Main Report. Available at [https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/Historic-Environment-Projects.aspx#TransformingtheTrentValleyCulturalHeritageAudit]

⁴⁵ ArcHeritage (2017) Transforming the Trent Valley: Cultural Heritage Audit. Main Report. Available at [https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/Historic-Environment-Projects.aspx#TransformingtheTrentValleyCulturalHeritageAudit]

ID	Name	Period	Class	Condition	Land use
4	Field System, North-East of Row Hill, Hanbury	Multi-period	Agriculture & subsistence	Poor	Mixed arable & pasture regime
5	Branston Machine Gun Factory / Branston Pickle Factory	Modern	Defence	Declining	Historic buildings not in use
6	Roman Road Agger, Bean's Covert, Branston	Roman	Transport	Fair	In plantation, potential tree root damage
7	Roman Road Agger and Ditch, South of Bean's Covert, Branston	Roman	Transport	Unknown	Partly built over
8	Cropmark Complex, East of Bagnall Farm, Alrewas	Multi-period	Agriculture & subsistence	Unknown	Under arable
9	Cropmark Complex, Eastfields, Kings Bromley	Multi-period	Religious, ritual & funerary	Unknown	Under arable
10	Multiperiod Cropmarks Complex, North-West of Alrewas Hayes, Alrewas	Multi-period	Agriculture & subsistence	Unknown	Under arable
11	Enclosure, South of Ashby Sitch, King's Bromley	Roman	Unassigned	Unknown	Under arable
12	Cropmark Complex, West of Common Lane Farm, King's Bromley	Multi-period	Agriculture & subsistence	Unknown	Under arable
13	Cropmark Complex, South of Crawley, King's Bromley	Multi-period	Agriculture & subsistence	Unknown	Under arable
14	Cropmark Complex, East of Shaw Lane, King's Bromley	Multi-period	Agriculture & subsistence	Unknown	Under arable
15	Barrows, Ring Ditch and Linear Features, King's Bromley	Later prehistoric	Religious, ritual & funerary	Unknown	Under arable
16	Cropmark Complex, South of Bourne Brook, King's Bromley	Multi-period	Agriculture & subsistence	Unknown	Under arable

Figure 7.5 Local Heritage at Risk



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8 Natural Heritage

- 8.1 The '*Natural Heritage Audit*' project has been developed in parallel with the Spatial Framework therefore it was not possible to incorporate the emerging outputs into this report. The section below provides an overview of data available from the Partnership and Natural England. For further in-depth information on the natural heritage of the project area please refer to the '*Natural Heritage Audit*' report.

International and National Designations

- 8.2 The only biodiversity designation of international significance within the project area is a small section (under 2km long) of the River Mease Special Area of Conservation (SAC), east of Alrewas.
- 8.3 There are two Sites of Special Scientific Interest (SSSI), including the *Old River Dove, Marston on Dove* SSSI (0.02km²) south of Rolleston on Dove and the River Mease SAC noted above, which is also designated as a SSSI.
- 8.4 There are a few small patches of ancient woodland to the south of King's Bromley Wharf and along the River Tame near Elford (**Figure A15**, Appendix 4).

Local Designations

- 8.5 The natural heritage of the project area is protected through a number of Local Nature Reserves and Local Wildlife Sites.
- 8.6 There are two Local Nature Reserves around Burton upon Trent, including *Branston Water Park* (0.24km²) in the town centre and the *Kingfisher Trail* (0.02km²) just south of the town.
- 8.7 There is an extensive network of smaller Local Wildlife Sites (40) and Biodiversity Alert Sites (26) throughout the project area in Staffordshire. There are fewer local designations of this type within Derbyshire (**Table 8.1** and **Figure A15**, Appendix 4).

Table 8.1 Local Nature Designations

Designation	BNG Grid	Area (km ²)	Location in TTTV
Local Wildlife Sites in Staffordshire			
A513	SK173143	0.026	Fully within
Bailey Bridge Wetland and Sitch Covert	SK090169	0.135	Fully within
Branston Gravel Pits	SK213209	0.419	Fully within
Brereton Works (south of)	SK050186	0.058	Fully within
Catholme Sand and Gravel Pits	SK195160	0.056	Fully within
Claymills Junction (near)	SK261258	0.035	Fully within
Dovegate Prison (grounds at)	SK148304	0.385	Fully within
Fisherwick Dairy Farm (south of), Fisherwick Brook	SK169090	0.02	Fully within
Fisherwick Wood, Stream and adjacent quarry workings	SK170098	0.604	Fully within
King's Bromley Wharf to Fradley Jn, Coventry Canal	SK128134	0.111	Fully within
Kings Bromley Pit (north-west of) (Manor Park)	SK109169	0.058	Fully within
Meadows Farm (south of)	SK258238	0.252	Fully within

Designation	BNG Grid	Area (km2)	Location in TTTV
Orgreave Mews	SK148158	0.058	Fully within
Pool Wood and Fradley Reservoir	SK141141	0.163	Fully within
Ravenshaw Wood, Black Slough and Slaish	SK124137	0.286	Fully within
River Blithe	SK111184	0.024	Fully within
Rugeley Fen	SK037196	0.053	Fully within
Trent and Mersey Canal: Monk's Bridge	SK269269	0.024	Fully within
Trentside Meadows	SK101172	0.277	Fully within
Uttoxeter Quarry	SK095357	0.108	Fully within
Wharf Houses Orchard	SK201183	0.002	Fully within
Woodend Lock (near)	SK131132	0.011	Fully within
Wychnor (south-west of) SBI	SK171161	0.169	Fully within
Big Lyntus	SK131129	0.067	Partially within
Brookhay Wood	SK164117	0.106	Partially within
Croxall Wood (west of)	SK200144	0.059	Partially within
Dansley Moor	SK129181	0.039	Partially within
Dunstall Farm (north of)	SK181062	0.022	Partially within
Hopwas Hayes Wood	SK175053	1.592	Partially within
Lawnmeadow Covert & Ridware Hall	SK075176	0.121	Partially within
Lount Farm	SK035220	0.142	Partially within
Marchington MOD	SK146303	0.602	Partially within
Shugborough Hall	SJ992225	3.161	Partially within
The Cliffe, Elford	SK193094	0.026	Partially within
Trent and Mersey Canal: Armitage Church to Tuppenhurst Road	SK086163	0.037	Partially within
Trent Valley Washlands	SK251225	0.679	Partially within
Tuppenhurst Lane (west of)	SK097152	0.032	Partially within
Wetleyhay Wood	SK169115	0.111	Partially within
Whittington Hurst (east of)	SK173106	0.089	Partially within
Wychnor Park	SK160166	0.078	Partially within
Biodiversity Alert Sites in Staffordshire			
A38 dual carriageway	SK172144	0.021	Fully within
Alrewas (west of River Trent)	SK164157	0.096	Fully within
Alrewas, River Trent and Mill Stream	SK171155	0.029	Fully within
Barton Turn	SK206183	0.043	Fully within
Bean's Covert	SK229218	0.038	Fully within
Bitham Clay Pit	SK246259	0.021	Fully within
Branston Lock	SK220218	0.195	Fully within
Crawley Lane (hedge 4)	SK124161	0.003	Fully within
Dove Cliff	SK256276	0.016	Fully within
Hay End Lane (hedge 1)	SK150136	0.009	Fully within
Manor Farm Pond	SK189072	0.006	Fully within
Princess Way	SK250255	0.014	Fully within
Riley Hill	SK114153	0.06	Fully within

Designation	BNG Grid	Area (km2)	Location in TTTV
Riverside Hotel Grounds, Branston	SK226210	0.005	Fully within
The Rookery	SK236208	0.032	Fully within
Wolseley Bridge	SK018204	0.037	Fully within
Branston Road	SK207215	0.013	Partially within
Burton Old Railway	SK246284	0.053	Partially within
Curborough Hall Farm hedgerows	SK125125	0.017	Partially within
Dogshead Lane	SK186169	0.017	Partially within
Fradley Wood	SK139136	0.292	Partially within
Mill Fleam	SK213293	0.033	Partially within
Trent and Mersey Canal, Rugeley	SK043192	0.025	Partially within
Woodend Lane (hedge 1)	SK121133	0.007	Partially within
Wychnor (south-west of) BAS	SK171161	0.09	Partially within
Wychnor Park	SK160169	0.032	Partially within
Derbyshire Wildlife Trust Reserves			
Drakelow	SK22782059	0.229	Fully within
Hilton Annex	SK24213007	0.016	Fully within
Willington Gravel Pits	SK28652749	0.44	Fully within
Witches Oak Water	SK43542934	0.904	Partially within

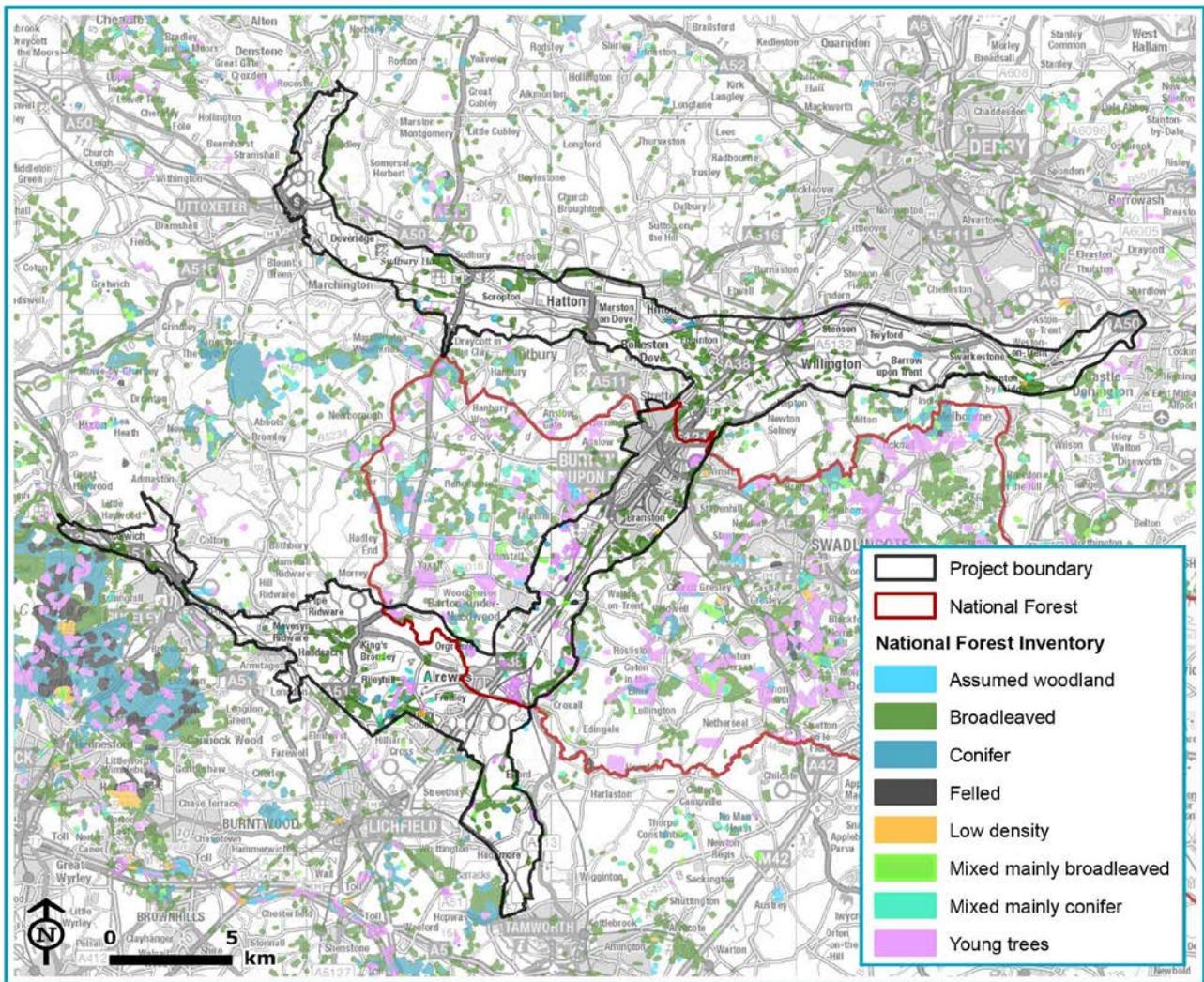
9 The Natural Environment

9.1 The 'Natural Heritage Audit' project has been developed in parallel with the Spatial Framework therefore it was not possible to incorporate its outputs into this report. The section below provides an overview of data available from the Partnership and Natural England. For further in-depth information on the natural environment of the project area please refer to the 'Natural Heritage Audit' report.

Forests and Woodlands

9.2 Using the Forestry Commission's National Forestry Inventory dataset it is clear that the extent of woodland and forests within the project area is limited, with small pockets distributed throughout the project area (Table 9.1 and Figure 9.1).

Figure 9.1 National Forest Inventory (Woodland Category)



Priority Habitats

- 9.5 Priority habitats are recognised as being of primary importance for the conservation of biological diversity in England, defined under section 41 of the Natural Environment and Rural Communities Act 2006.⁴⁷
- 9.6 Seven types of priority habitats are found within the project area, covering a total of 28.7km². The most widespread habitat is floodplain grazing marsh, while the other habitats appear only as dispersed small pockets (**Table 9.2** and **Figure A16**, Appendix 4).

Table 9.2 Extent of Priority Habitats

Habitat type	Area (km ²)
Coastal and floodplain grazing marsh	22.53
Deciduous woodland	5.18
Good quality semi-improved grassland	0.58
Lowland dry acid grassland	0.01
Lowland fens	0.21
Lowland meadows	0.14
Reedbeds	0.02
Traditional orchard	0.03
Total	28.7

Habitat Distinctiveness

- 9.7 A habitat distinctiveness mapping exercise has been undertaken by Staffordshire Wildlife Trust covering the project area within Staffordshire. It classified relevant habitats into distinctiveness bands. The assessment is based on existing international, national and local nature designations (e.g. Ramsar, SAC, SSSI), as well as existing habitat surveys.
- 9.8 The suggested purpose of this data is to be used as:
- a tool to identify areas of higher biodiversity value when developing Neighbourhood Plans.
 - a flag to identify areas of medium value, where biodiversity offsetting/compensation may be required.
 - a tool to identify possible wildlife corridors for inclusion into Neighbourhood Plans.⁴⁸
- 9.9 Within the project area 0.73km² is identified as habitat of very high distinctiveness and 13.14km² as a habitat of high distinctiveness (**Figure A17**, Appendix 4).

⁴⁷ Natural England (2017) Status of threatened habitats. Available at [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/635187/2a_Priority_habitats_2017.pdf]

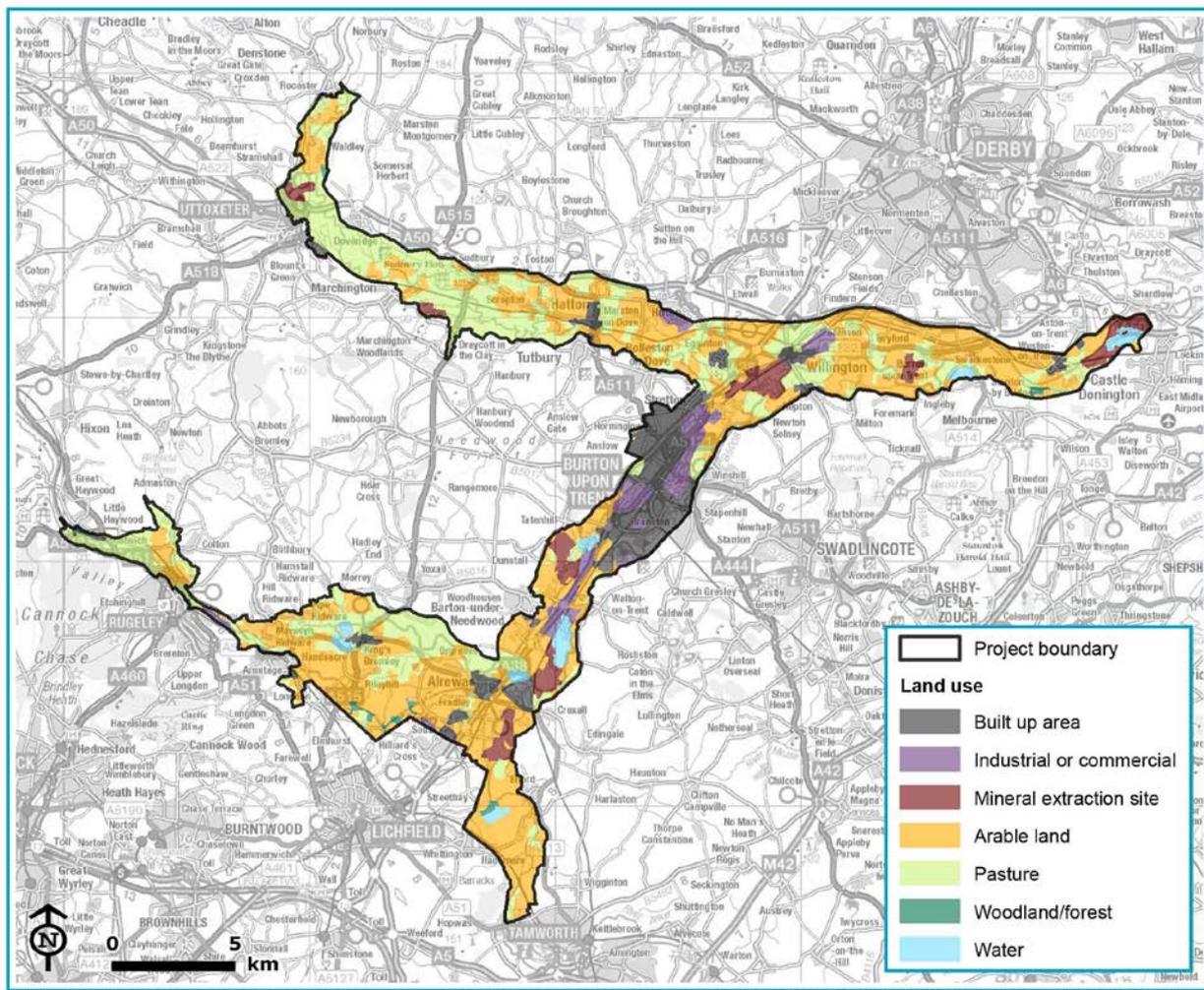
⁴⁸ SWT (2018) Habitat value mapping – Draft SWT methods.

10 Landscape

Land Use

- 10.1 In the absence of more current and detailed land-use information the CORINE Land Cover (CLC) 2012 dataset⁴⁹, available from the European Environment Agency, has been analysed to determine the dominant types of land use within the project area. The summary is shown in **Table 10.1** and **Figure 10.1** below.
- 10.2 Agriculture is the dominant land use type within the project area, encompassing almost 80% of the project area when pastures are included. Arable crops are found mainly on the well-drained river terraces, while pastures are more dominant in the flood plains, which frequently flood and provide a naturally wet ecosystem.
- 10.3 Agriculture has the potential to negatively impact on the cultural heritage of the area, both as the result of ploughing which levels archaeology and historical land forms, but also in the form of run-off which can have significant impact on water quality and biodiversity.

Figure 10.1 Land Use



© Staffordshire Wildlife Trust. Contains Ordnance Survey data © Crown copyright and database right 2018 100018777/SWT28504. Source: EEA Corine 2012

⁴⁹ Corine Land Cover (CLC) is a standardized dataset covering 33 members of the European Environment Agency (EEA) and is created with the purpose to support environmental policy development. Further information available at [<https://land.copernicus.eu/pan-europe/corine-land-cover/clc-2012?tab=metadata>]

Table 10.1 CORINE Land Use⁵⁰

Land use code	Land use description	Area (km ²)	%
112, 122, 141, 142	Built up area	19.2	9.60
121	Industrial or commercial unit	8.6	4.30
131	Mineral extraction site	9.3	4.65
211, 243	Arable land	90.2	45.1
231	Pasture	67.3	33.65
311,313	Woodland/Forest	1.7	0.85
512	Water	3.7	1.85

- 10.4 A large number of farms participate in the *Environmental Stewardship Agreement* (ESA) scheme run by Natural England. This agri-environment land management scheme provides funding for farmers and land managers to deliver effective environmental management on their land. This scheme was superseded by the Countryside Stewardship Scheme, however existing agreements will run until they reach their end date.
- 10.5 The ESA scheme provided funding within three levels:
- *Entry Level Stewardship (ELS)* – provides straightforward approach to supporting good stewardship of the countryside,
 - *Organic Entry Level Stewardship (OELS)* – provides support for organic and organic/conventional mixed farming and
 - *Higher Level Stewardship (HLS)* – provides support for more complex types of land management and is usually tailored for local conditions.⁵¹
- 10.6 In total 72 farms and estates received ESA funding since 2009 within the project area (only 11 are completely within the project area), predominantly under an Entry Level Scheme (**Table 10.2** and **Figure 10.2**). There are 48 schemes still active within the project area.

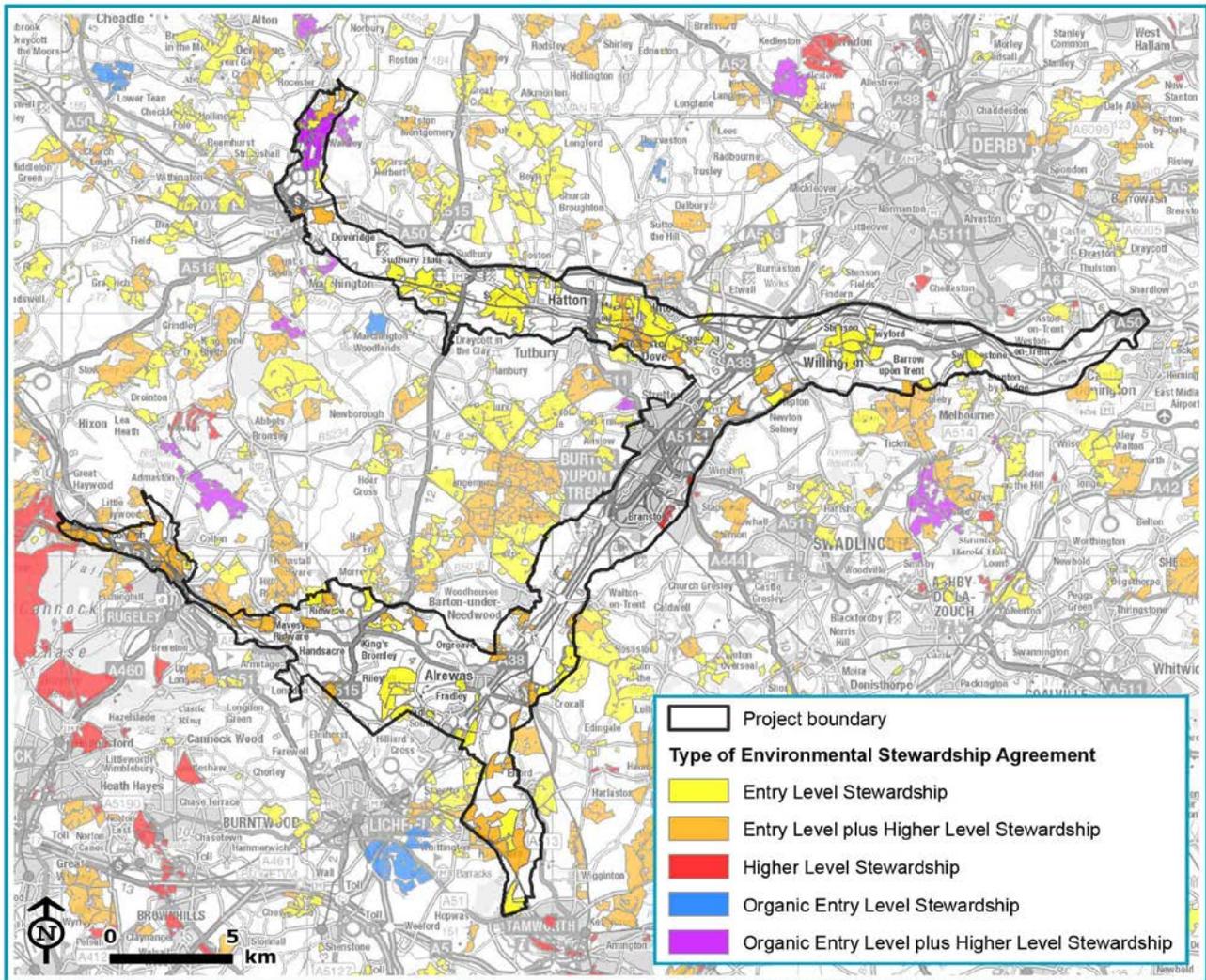
Table 10.2 Number of Farms with an Environmental Stewardship Agreement

Type of scheme	Number of agreements
Entry Level plus Higher Level Stewardship	31
Entry Level Stewardship	37
Higher Level Stewardship	3
Organic Entry Level plus Higher Level Stewardship	1
Total number	72

⁵⁰ Extent of areas should be treated as indicative only due to the age and resolution of the data used

⁵¹ Natural England (2017) Agreement holders' information: Environmental Stewardship. Available at [<https://www.gov.uk/guidance/environmental-stewardship>]

Figure 10.2 Extent of Environmental Stewardship Agreements



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10.7 The *Countryside Stewardship Scheme (CSS)* replaced the ESA scheme in 2014 and is jointly administered by Natural England and the Forestry Commission. It provides financial incentive to land managers to contribute to the:

- conservation and restoration of wildlife habitats;
- flood risk management;
- woodland creation;
- reduction of water pollution from agriculture;
- maintaining the character of the countryside;
- preserving the historical character of the landscape; and
- supporting educational access to the landscape.⁵²

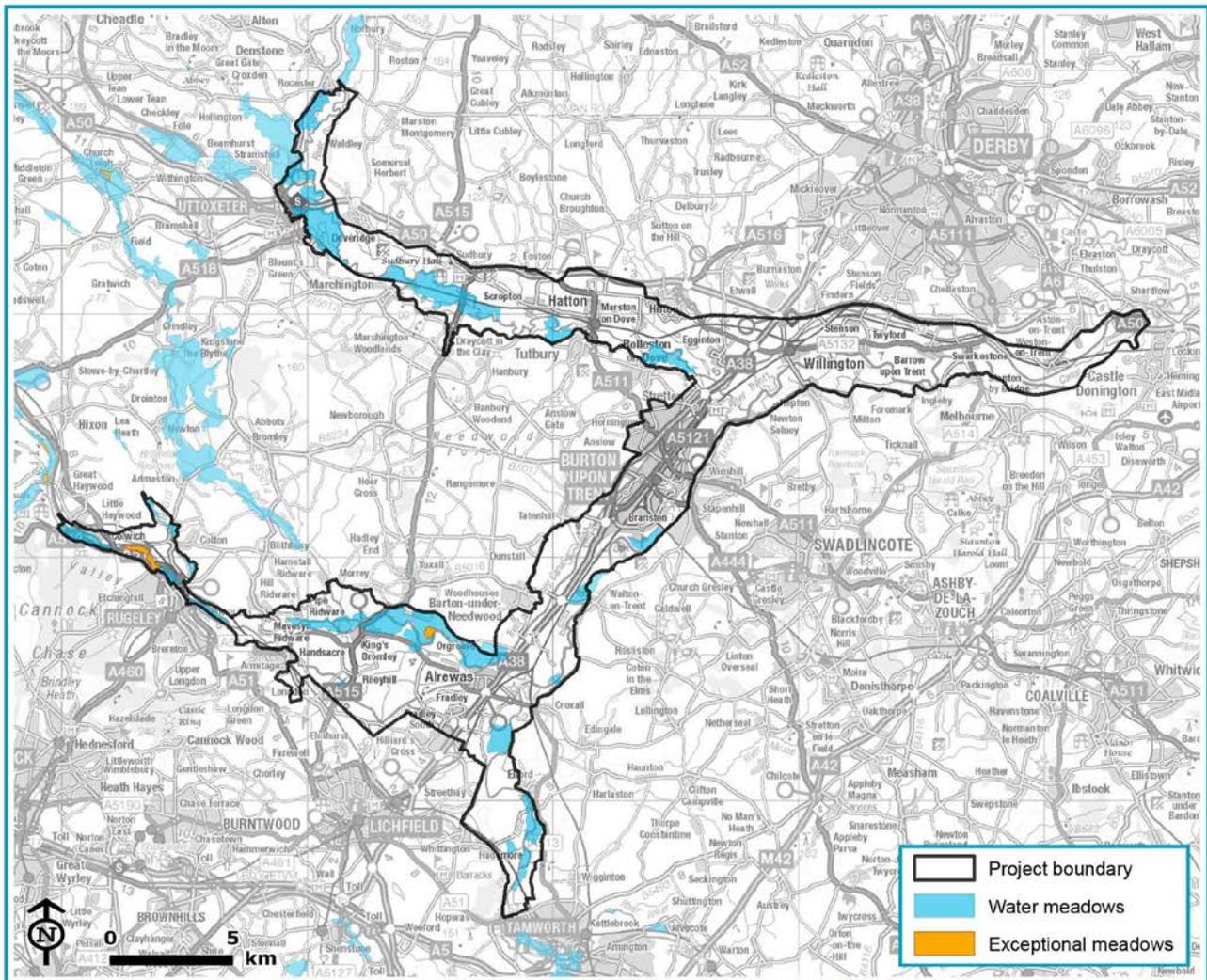
10.8 Based on data available from Natural England there were only four farms within the project area who participated in the CSS in 2014, however no information is available about potential subsequent or current participants.

10.9 Traces of post-medieval agricultural can also be found in the landscape in the form of water meadows. Water meadows were created as a network of drains, carriers and sluices which were used to flood fields in the winter period ensuring the ground was kept warmer and therefore

⁵² Forestry Commission, Natural England et al (2018) Country Stewardship. Available at <https://www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management>

allowing a rich growth of grass and hay for fodder in the spring. This system of agriculture lasted well into the 19th century and its footprint in the landscape is still evident at places (**Figure 10.3**).⁵³

Figure 10.3 Water Meadows⁵⁴



© Staffordshire Wildlife Trust. Contains Ordnance Survey data © Crown copyright and database right 2018 100018777/SWT28504. Source: SCC

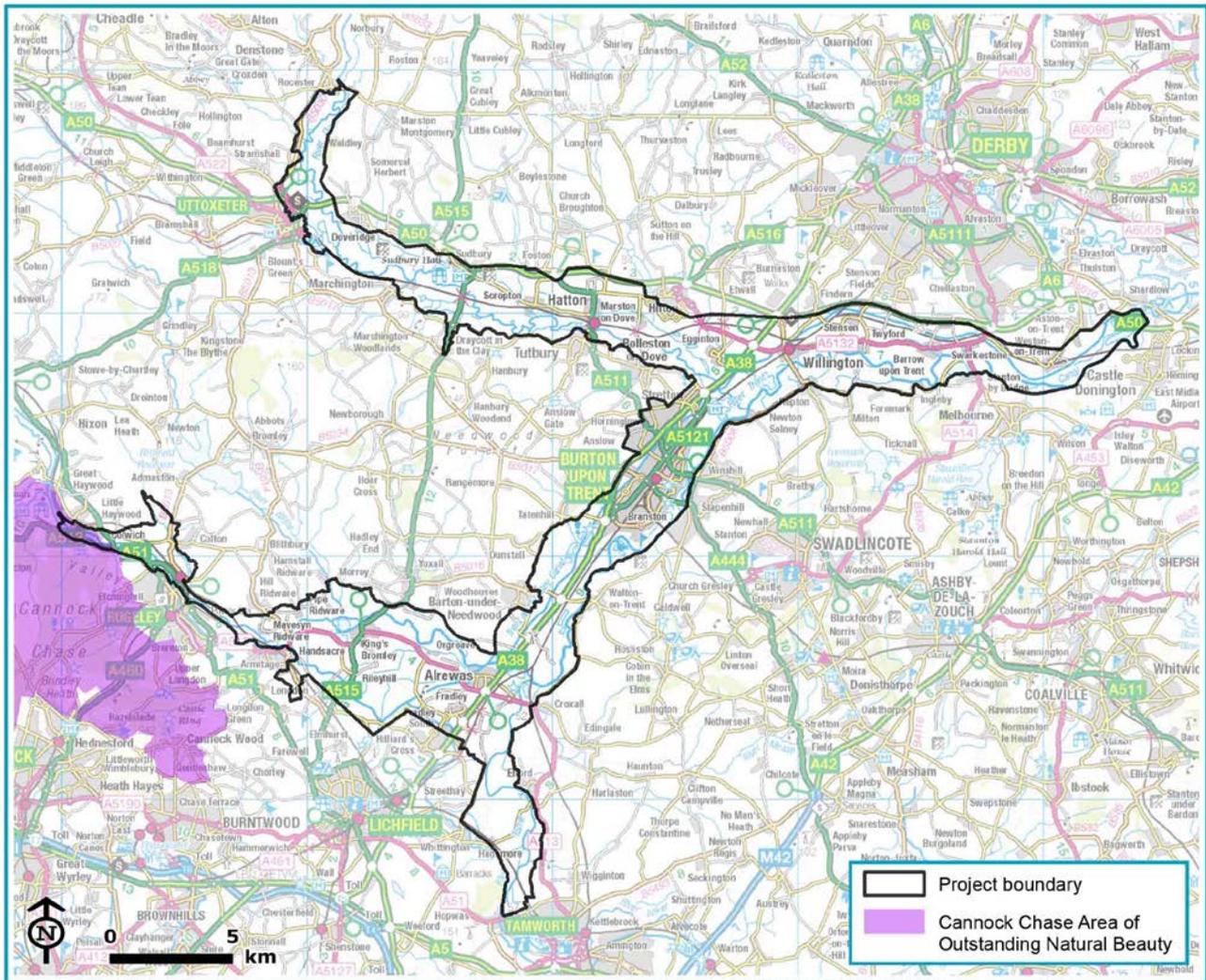
Landscape Designations

- 10.10 The closest landscape designation of national importance is the Cannock Chase Area of Outstanding Natural Beauty along the south-western edge of the project area (**Figure 10.4**).
- 10.11 There are no landscape designations of local significance within the project area.

⁵³ ArcHeritage (2017) Transforming the Trent Valley: Cultural Heritage Audit. Main Report. Available at [<https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/Historic-Environment-Projects.aspx#TransformingtheTrentValleyCulturalHeritageAudit>]

⁵⁴ Data available for Staffordshire only. For further information refer to the 'Staffordshire Water Meadows Survey' report available at [<https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/StaffordshireWaterMeadowsReport.pdf>]

Figure 10.4 Landscape Designations



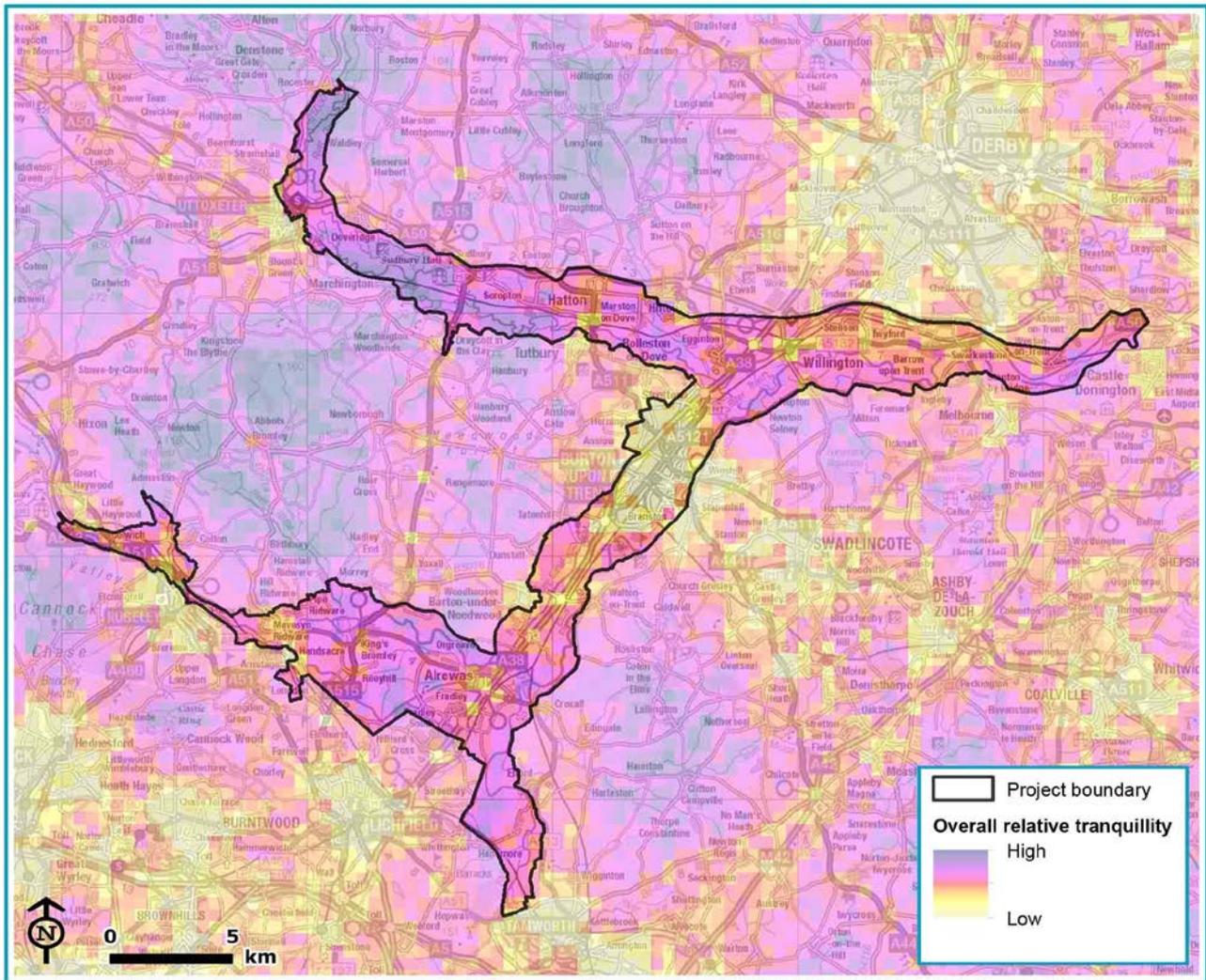
© Staffordshire Wildlife Trust. Contains Ordnance Survey data © Crown copyright and database right 2018 100018777/SWT28504. Source: NE

Tranquillity

- 10.12 The approach to mapping relative tranquillity and intrusion in England and Wales has been led by the Campaign to Protect Rural England (CPRE). CPRE defines tranquillity as “...the quality of calm experienced in places with mainly natural features and activities, free from disturbance from manmade ones”.⁵⁵
- 10.13 The most recent CPRE tranquillity data available for England (2006) is shown on **Figure 10.5** below. The area around Burton upon Trent, and partly Alrewas, is the least tranquil. Pockets of high tranquillity can be found to the west from Alrewas, while the most tranquil area is the valley of the River Dove west from Hatton.

⁵⁵ Campaign to Protect Rural England (2006) Saving Tranquil Places: How to protect and promote a vital asset

Figure 10.5 Overall Relative Tranquillity



© Staffordshire Wildlife Trust. Contains Ordnance Survey data © Crown copyright and database right 2018 100018777/SWT28504. Source: CPRE

Landscape Character Assessment

10.14 A Landscape Character Assessment (LCA) is an established way of describing and classifying the landscape in order to gain an understanding of what gives a locality its 'sense of place'. It is often used as a planning tool to ensure new development does not adversely affect the key characteristics of the local landscape.

National Character Assessment

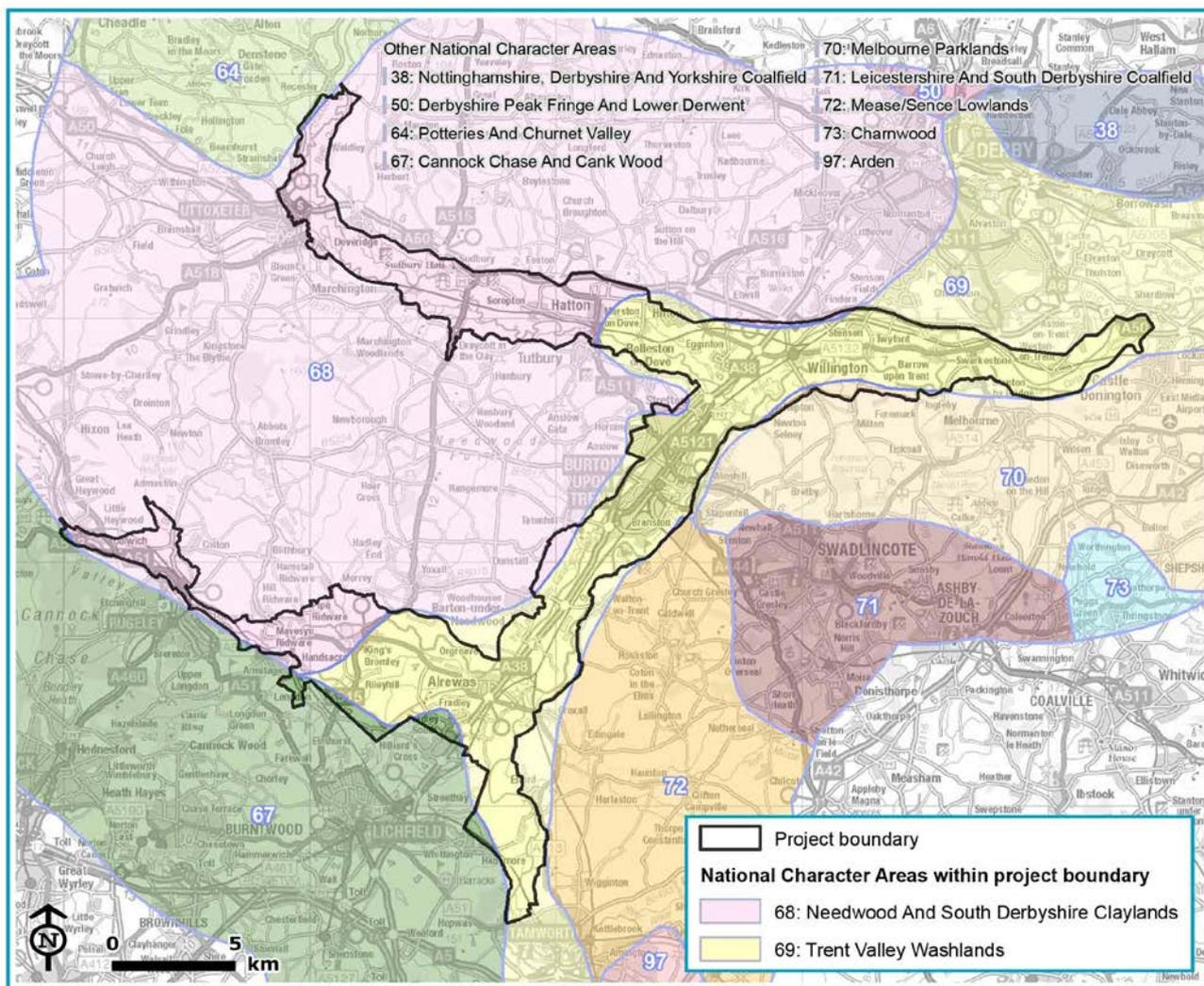
10.15 National Character Areas are defined across the whole of England. They are areas that share similar landscape characteristics, and which follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment. Each National Character Area has a published profile, a guidance document that can inform decision-making about land management and landscape change. The project area falls within two National Character Areas:

- *NCA69: Trent Valley Washlands* – encompasses the flood plains of the middle reach of the River Trent. It is a narrow, linear and low-lying landscape, defined by the flat floodplain and the gravel

river terraces above it. Its key ecological role is related to water, managing its availability and regulating its flow.⁵⁶

- **NCA68: Needwood and South Derbyshire Claylands** – is a rolling plateau stretching from the north-east towards the south-west, encompassing the western arms of the project area. It is characterised by mixed farming and dispersed villages and settlements. It has a good network of Public Rights of Ways and other trails and paths, which highlights its importance for recreation.⁵⁷

Figure 10.6 National Character Areas



Local Landscape Character Assessment

10.16 The project area is covered by two existing local LCA studies:

- Staffordshire County Council (2000) *Planning for Landscape Change*⁵⁸
- Derbyshire County Council (2013) *The Landscape Character of Derbyshire*⁵⁹

10.17 As part of the TTTV project the two LCAs have been consolidated by Ashmead Price (in association with Steven Warnock) into a single LCA covering the full project area⁶⁰. The project area is

⁵⁶ Natural England (2013) NCA Profile: 69. Trent Valley Washlands (NE475). Available at <http://publications.naturalengland.org.uk/publication/5447860266991616>

⁵⁷ Natural England (2013) NCA Profile: 68. Needwood & South Derbyshire Claylands (NE390). Available at <http://publications.naturalengland.org.uk/publication/4492587>

⁵⁸ Available online [<https://www.staffordshire.gov.uk/environment/eLand/planners-developers/landscape/NaturalEnvironmentLandscapeCharacterTypes.aspx>]

⁵⁹ Available online [<http://www.derbyshire.gov.uk/environment/conservation/landscapecharacter/>]

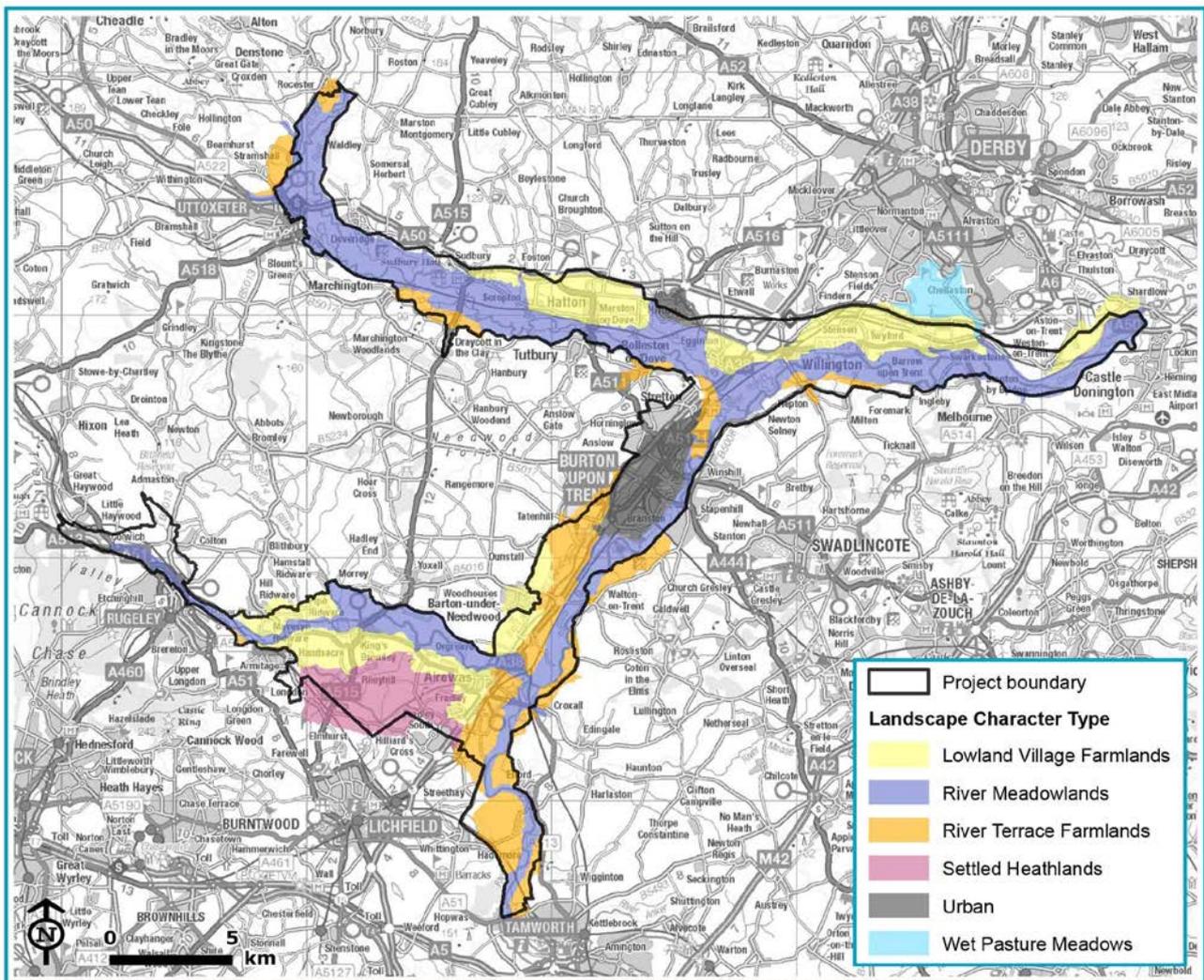
⁶⁰ Ashmead Price (2018) Transforming the Trent Valley Landscape Partnership – Review of Landscape Character Assessment

divided into 6 Landscape Character Types (LCTs) which are listed in **Table 10.3** and illustrated on **Figure 10.7** below. LCTs are distinct types of landscape that are generic in nature, in that the same type may occur in different areas. The LCTs have been developed for the revised TTTV boundary, made available in March 2018. This Spatial Framework report was prepared using the initial TTTV boundary dated October 2017, which is why the LCTs do not fully align with the project boundary used in this study.

Table 10.3 Landscape Character Types

Landscape Character Type	Area (km2)
Lowland Village Farmlands	47.00
River Meadowlands	84.20
River Terrace Farmlands	35.10
Settled Heathlands	16.10
Urban	12.50
Wet Pasture Meadows	4.90

Figure 10.7 Landscape Character Types



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10.18 The landscape is further divided into 35 Landscape Character Areas (**Figure A18**, Appendix A4). Landscape character areas are single unique areas which are the discrete geographical examples of a particular LCT.

11 Forces for Change

Introduction

- 11.1 Change in the landscape is ongoing and continuous, as a result of both natural and human processes. Historical changes have shaped the Trent Valley landscape we see today, and a range of pressures continue to act on the project area. The forces for change acting on the project area occur at a variety of scales, from the global pressures associated with climate change, to very local issues such as preservation of individual buildings or trees.
- 11.2 Change may be positive or negative in terms of its effects on the landscape, and these pressures may therefore manifest either as potential threats, or opportunities for enhancement, or a combination of the two.
- 11.3 This Chapter reviews the key forces for change in the project area, and seeks to identify where these pressures are acting (or are likely to act in future). A further exercise to identify specific pressures and opportunities has also been undertaken, again seeking to understand their spatial distribution.

Forces for Change

- 11.4 A number of forces for change have the potential to affect the landscape within the project area in the coming decades. These forces for change can be usefully grouped into ‘themes’, and these are discussed below. Many of these themes overlap, or are closely interlinked. Climate change is an overarching theme that is likely to affect all parts of the project area in different ways, as discussed below. Other themes are summarised in **Table 11.1**, and the spatial distribution of these forces for change is analysed.

Climate Change

- 11.5 Climate change is generally regarded as a major threat to existing land uses and ways of life. Potential consequences of climate change within the project area include:
 - Due to the fluvial character of the area climate change is likely to lead to more extreme rainfall and changed precipitation patterns in the catchment of the three main rivers that form its backbone.
 - Potentially higher temperatures would allow longer growing seasons and the introduction of new crops or intensification of cultivation, all of which would lead to a change in the current pattern of farming and horticulture.
 - It can be expected that change in temperature and precipitation will lead to changes in habitat suitability and distribution of key priority species, leading to further habitat fragmentation.

Table 11.1 Forces for Change: Key Themes

Key theme	Description
Hydrology	The area is defined by rivers and canals, with traditional water meadows a distinctive feature. Seasonal flooding affects some locations, which may be exacerbated by climate change. Responses to flooding, such as flood defences, wetland creation, or woodland planting, may also affect the landscape.
Infrastructure	The Trent and Dove valleys have long been important transport corridors. Projects such as road upgrades could intensify this use, while incremental changes to minor roads could alter the character of more rural roads. The proposed HS2 will pass through the area, bringing more infrastructure, but also associated landscape mitigation.

Key theme	Description
Recreation	Development and expansion of tourist and visitor attractions may increase pressure on the landscape. Increasing population may bring added intensification of usage of walking and cycling routes, but also the opportunity to expand existing networks and improve access to the countryside.
Natural environment	Climate change will affect the natural environment, potentially altering the balance of species present in the landscape. Resulting land management changes may further alter the landscape, potentially including new crop types, or changes to hedges. Plant diseases such as Ash dieback are likely to alter wooded areas.
Cultural heritage	The historic environment is a finite resource, but one that contributes strongly to landscape character. Historic features, whether designated or otherwise, are often vulnerable to a range of pressures including built development and land use changes.
Planning	Development Plans identify new allocations for built and mineral development, including potential new settlements in the Trent Valley. New development will impact on the landscape, but could also present opportunities to mitigate the effects of existing development, or to better integrate with the landscape. Planning policy at a national and local level will direct this change to different parts of the landscape.

Relationship to landscape character areas

- 11.6 Different parts of the landscape will be affected by change in different ways. In order to explore this spatially, the above changes have been related to the landscape character areas identified in the TTTV Review of Landscape Character (see **Section 10**). The aim is to provide an overview of the likely change in each landscape character area, and can help to highlight those areas that are under the highest pressure, as well as identify priority areas for the conservation and management of the landscape.
- 11.7 **Table 11.3** in **Appendix 3** provides an overview of selected indicators for each key theme, which are considered to have the highest potential to positively or adversely affect the changing landscape. For example the loss of water meadows or palaeochannels would negatively affect the landscape character areas within which they are found, while improvements to existing cycling and walking routes would bring further benefit to the affected landscape character areas. The table also highlights which landscape character areas are currently under which pressures (e.g. proposed quarry, proposed HS2) or benefit from which existing values (e.g. listed building, water meadows).
- 11.8 For a detailed map of Landscape Character Areas and Types refer to **Figure A18**, Appendix 4.

Opportunities and Pressures in the Landscape

- 11.9 In order to further establish the interaction of different processes within the project area, and establish the extent and distribution of their impact on the landscape, a high level assessment of key opportunities and pressures has been undertaken. The key opportunities and pressures are listed in **Table 11.2** below.
- 11.10 Some of the indicators are identified as both an opportunity and as pressure. For example the proposed garden villages will inevitably change the character of the local landscape, however, in the case of the potential Brookhay developments they also represent an opportunity for high quality regeneration of the landscape already affected by mineral extraction. Similarly, while new proposed mines would have adverse effect on the landscape, historic mines and existing mines due for closure represent an opportunity for their successful regeneration, including the development of good recreational routes, improvements to biodiversity and priority habitats and integration of the affected areas with the needs of the local community.

Table 11.2 Key Opportunities and Pressures in the Landscape⁶¹

Indicator	Opp	Prs	Buffer	Note
Hydrology				
Canals	Yes		100m	
Rivers and lakes	Yes		100m	
Floodzone 2 and 3		Yes		
Land at risk from surface water flooding (1:30)		Yes		
Infrastructure				
Bus stop	Yes		400m	
Bus routes	Yes		150m	No data for Derbyshire
Train station	Yes		2000m	
Educational establishment	Yes		1000m	Including primary, secondary and further education
HS2 route		Yes	250m	
Recreation				
Local Walks and Public Rights of Way	Yes		100m	
National and Local Cycle Routes	Yes		250m	
Country Park	Yes			
Sport and recreation facility	Yes		400m	
Open space	Yes			OS Greenspace
Visitor infrastructure	Yes		250m	Including visitor infrastructure (Staffordshire/ non sport), attraction hubs (Derbyshire), places to visit and waterside pubs
Tranquil areas	Yes			Areas of overall positive score (Score >0)
Natural Environment				
UK Priority habitats	Yes			
Local Nature Reserve	Yes			
Local Wildlife Site and reserves	Yes			
Water meadows	Yes			
Hedge	Yes			No data for Derbyshire
Areas of very high and high habitat distinctiveness	Yes			No data for Derbyshire
Area of Outstanding Natural Beauty	Yes			
Cultural Heritage				
Conservation Area	Yes			
Listed Building	Yes		50m	
Registered Parks & Gardens	Yes			
Scheduled Monuments	Yes		250m	
Planning				
Active quarries/mines and historic minerals sites	Yes		100m	Data for Derbyshire unclear
Landfill site		Yes	250m	No data for Derbyshire

⁶¹ Opps = Opportunity in the landscape, Prs = Pressure on the landscape

Minerals plan allocated sites		Yes	250m	No data for Derbyshire
Local Plan allocations	Yes	Yes		
Proposed new settlements	Yes	Yes		

- 11.11 In order to establish the areas which have the most opportunities or are affected by the highest number of pressures, the indicators used for each have been spatially combined and the number of overlaps counted throughout the project area. This allowed us to categorise the project area into discrete areas which are affected by the same number of opportunities and pressures (**Figure A19** and **Figure A20**, Appendix 4).
- 11.12 There is a good spread of opportunities for improvement throughout the project area. The areas with the least opportunities are found between Alrewas and Armitage, along the River Tame north of Tamworth and the lower reaches of the River Trent past Willington (this could be partly due to the limited amount of data available for Derbyshire).
- 11.13 As can be expected, higher concentration of opportunities can be found in urban areas, including Burton upon Trent, Alrewas and Willington. However, there are areas with a higher number of opportunities outside existing settlements as well, for example south of Hatton, due to the proximity of the River Dove, presence of a number of cultural heritage assets (Scheduled Monument and Conservation Area), walking routes and highly distinctive habitats, as well as a number of facilities such as sport centres, bus stops and a train station. The central section of the Trent & Mersey Canal, between Alrewas and Willington is another area with a higher number of opportunities, due to the canal itself and the recreational opportunities (e.g. walking, cycling) along it (**Figure A19**, Appendix 4).
- 11.14 Seven key pressures on the landscape have been identified, related to large scale development (e.g. new garden villages, urban expansion and HS2) and mineral extraction (proposed quarries), as well as flooding.

Managing Change in the Landscape

- 11.15 Though it is recognised that the identified large scale developments will change the current character of the landscape, if they are planned and developed in close cooperation with all stakeholders, local groups and environmental organisations, it can be ensured that in the long term they provide an overall environmental gain, in line with the Government's 25 year Environment Plan. Some of the visions of this Plan are directly relevant for this project, including *'Recovering nature and enhancing the beauty of landscape'* and *'Connecting people with the environment to improve health and wellbeing'*. The Plan puts a strong emphasis on the requirement to consider a wide range of environmental, societal and economic indicators when choosing land for development. Its aim is to ensure new development delivers economic benefit while also taking into account the need to avoid environmental damage.⁶²
- 11.16 The areas under the highest pressure are north and south of Alrewas, which are under pressure from the proposed garden villages, proposed quarries and existing landfill sites, and are also within a flood zone. Another area of higher pressure is south of Derby, the site of the proposed Infinity garden village, which is also within a flood zone. A small pocket of high pressure can be found south-west from Burton upon Trent, which is influenced by existing mineral extraction, an existing landfill site, as well as flooding both from rivers and in parts from surface water.
- 11.17 However, the area through which the proposed HS2 will be running is currently under pressure from flooding only, therefore this large scale development will introduce further pressure in the landscape (**Figure A20**, Appendix 4).

⁶² HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment. Available at [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf]

Appendix 1 Abbreviations

BAP	Biodiversity Action Plan
BGS	British Geological Survey
CFMP	Catchment Flood Management Plan
CLC	Corine Land Use Category
CPRE	Campaign to Protect Rural England
CSS	Countryside Stewardship Scheme
ESA	Environment Stewardship Agreement
GIS	Geographic Information System
HAR	Heritage at Risk
HER	Historic Environment Records
HLF	Heritage Lottery Fund
LCA	Landscape Character Assessment
LCAP	Landscape Conservation Action Plan
LPS	Landscape Partnership Scheme
NCA	National Character Area
OS	Ordnance Survey
PSMA	Public Sector Mapping Agreement
SAC	Special Area of Conservation
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SWT	Staffordshire Wildlife Trust
TTTV	Transforming the Trent Valley

Appendix 2 GIS Data and Reports Index

GIS Data Index

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
OS Base Maps 1:10k, 1:25k, 1:50k			28/11/2017	Derbyshire County Council	OS mapping provided to LUC for the assessment and to prepare the report Map book. They will not be provided as part of the atlas. TTTV partners should use their existing OS mapping or OS OpenData.	PSMA licence required	DCC - Darren White, GIS Officer, darren.white@derbyshire.gov.uk		OS: https://www.ordnancesurvey.co.uk/opendata/download/products.html
Trent Valley Framework site boundary	TTTV_full_boundaryStaffs_De rbs_22_1_16_region.shp	SWT_TTTV_full_boundary.shp	12/10/2017	Staffordshire Wildlife Trust	Original boundary at the start of the Spatial Framework project in October 2017. Most parallel projects used this boundary for their reporting (e.g. Cultural Audit, Visitor Audit, Spatial Framework)	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		
Trent Valley Framework site boundary - Updated / Final boundary from March 2018	newttt_boundary_1_mar18.shp	SWT_TTTV_boundary_2018Mar _New.shp	16/03/2018	Staffordshire Wildlife Trust	Final boundary agreed in March 2018. See above comment.	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		
Local Authority boundaries		OSBL_LAboundary_20170101.shp		Ordnance Survey	OS Boundary Line dataset	Contains OS data © Crown copyright and database right (year)			https://www.ordnancesurvey.co.uk/opendata/download/products.html#BDLINE

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Lidar DSM / DTM	SKnn mosaic.tif SKnn mosaic_MULTI-HS_D16_H35_RGB.tif SKnn mosaic_OPEN-POS_R10_D16_8bit.tif SKnn mosaic_SVF_R10_D16_8bit.tif	same as received	06/11/2017	Environment Agency via ArcHeritage	EA Lidar data received via ArcHeritage (tiles SJ92SW, SK03E, SK02SW, SK01, SK13, SK12, SK11, SK10, SK23, SK22, SK21, SK33, SK32, SK42) Some parts missing north of Lichfield and north of Rugeley	© Environment Agency copyright and database rights (year). © Ordnance Survey Crown copyright	rmay@yorkat.co.uk		http://environment.data.gov.uk/ds/survey/index.jsp#/survey
Rivers and lakes		OS_OML_SurfaceWater_2017.shp OS_OML_SurfaceWaterLinear_2017.shp OS_Open_Rivers_2016.shp		Ordnance Survey	OS Open Map – Local dataset.	Contains OS data © Crown copyright and database right (year)			https://www.ordnancesurvey.co.uk/opendata/download/products.html
Canals	Canals.shp	CRI_Canals_201712_20kmbuffer.shp	12/02/2018	Canal & River Trust		© The Canal & River Trust copyright and database rights reserved 2017. Full licence: https://canalrivertrust.org.uk/refresh/media/thumbnail/26503-CRT-Data-Licence.pdf			https://data-canalrivertrust.opendata.arcgis.com/datasets/canals
Flood Zone 2 and 3		EA_nat_floodzone3_v201702_10kmbuffer.shp EA_nat_floodzone2_v201702_10kmbuffer.shp		Environment Agency		© Environment Agency copyright and database rights (year). © Ordnance Survey Crown copyright			http://environment.data.gov.uk/ds/catalogue/index.jsp#/catalogue
Land at risk from surface water flooding (1:30 and/or 1:100 years)		EA_RoFSW_Extent_1in30.shp EA_RoFSW_Extent_1in100.shp EA_RoFSW_Extent_1in1000.shp	22/11/2017	Environment Agency	RoFSW (Dataset previously part of the uFMFSW EA data pack).	© Environment Agency copyright and/or database right 2015. All rights reserved. Some features of this map are based on digital spatial data from the Centre for Ecology & Hydrology, © NERC (CEH). Soils Data © Cranfield University (NSRI) and for the Controller of HMSO 2013.			http://environment.data.gov.uk/ds/rofsw/index.jsp#/rofsw

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Humber River Basin District Water Classification and Reasons for Not Achieving Good RBD Classification	classifications_RBD_4.csv reasons_for_not_achieving_good_4.csv	EA_RiverBasinDistrict_HumberRBD_Classific.shp EA_ReasonsForNotGood_RBD_4.shp	13/02/2018	Environment Agency					http://environment.data.gov.uk/catchment-planning/RiverBasinDistrict/4
Land at risk from groundwater flooding				Environment Agency	EA confirmed that this data has not been updated since 2010 and should not be used. Creating such data is the responsibility of the Local Flood Authority. Data not considered essential for the project.	n/a			
Flood Storage Areas		EA_nat_fsa_v201611_10kmbuffer.shp		Environment Agency	None within project area, but some records within 10km	n/a			http://environment.data.gov.uk/ds/catalogue/index.jsp#/catalogue
Source Protection Zones		EA_SPZ_50k_10kmbuffer.shp		Environment Agency		© Environment Agency copyright and database rights (year). © Ordnance Survey Crown copyright			http://environment.data.gov.uk/ds/catalogue/index.jsp#/catalogue
Areas benefiting from flood defences		EA_nat_areasbenefit_v201611_10kmbuffer.shp		Environment Agency		© Environment Agency copyright and database rights (year). © Ordnance Survey Crown copyright			http://environment.data.gov.uk/ds/catalogue/index.jsp#/catalogue
Bus stops		Naptan_BusStops_20170927.shp		Naptan	Data to be used as indicative only. Data with status = act to be used only.	Contains public sector information licensed under the Open Government Licence v3.0. © Department for Transport (year)			https://data.gov.uk/dataset/naptan
Bus routes	TTTV Bus Routes.shp	SCC_TTTV_BusRoutes.shp	29/11/2017	Staffordshire County Council		PSMA licence required	SCC - Shona Frost shona.frost@staffordshire.gov.uk		

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Education (primary/secondary/higher)	DCC_Schools_TV_Area_TAB EduBase_Schools_July_2017.xlsx	OS_OML_Education.shp DCC_Schools_TVarea.shp DFE_EduBase_EnglandSchools201707.xlsx	21/11/2017 28/11/2017	OS OpenMap Local Derbyshire County Council Department for Education (DFE)	Since we received data only for DCC area, the OS OML data was used for reporting. The DFE data has been downloaded for further info on the type of educational establishment (not used for reporting)	Contains OS data © Crown copyright and database right (year)	DCC - Darren White, GIS Officer, darren.white@derbyshire.gov.uk		OS: https://www.ordnancesurvey.co.uk/opendata/download/products.html DFE: https://www.gov.uk/government/publications/schools-in-england
Road network		OS_OML_Roads.shp		Ordnance Survey	OS Open Map – Local dataset	Contains OS data © Crown copyright and database right (year)			https://www.ordnancesurvey.co.uk/opendata/download/products.html
Train station		OS_OML_Railway_Stations.shp		Ordnance Survey	OS Open Map – Local dataset	Contains OS data © Crown copyright and database right (year)			https://www.ordnancesurvey.co.uk/opendata/download/products.html
Railway lines		OS_OML_Railway_Tunnel.shp OS_OML_Railway_Track.shp		Ordnance Survey	OS Open Map – Local dataset	Contains OS data © Crown copyright and database right (year)			https://www.ordnancesurvey.co.uk/opendata/download/products.html
HS2 route	Lichfield_District_Council_HS2_Route.shp Lichfield_District_Council_HS2_Safeguarding_Zone.shp HS2_RE_HighSpeedRailwaysAlignmentNoiseModel_Formation_Ln.shp cdc_hs2_sz (wms)	HS2_Lichfield_District_Council_HS2_Route.shp HS2_Lichfield_District_Council_Safeguarding_Zone.shp HS2_HighSpeedRailwaysAlignmentNoiseModel_Formation.shp cdc_hs2_sz (wms)	19/10/2017 20/12/2017	Lichfield District Council High Speed Two Limited (HS2 Ltd)	Lichfield DC specific data extract and wider extent data from HS2 Limited online.	Contains public sector information licensed under the Open Government Licence v3.0. © High Speed 2 Limited (year)	chris.wood@tlp.uk.com	Lichfield DC HS2 Limited	https://data.gov.uk/dataset/phase-2a-west-midlands-to-crewe https://data.gov.uk/dataset/lichfield-district-council-hs2-safeguarding-zones https://data.gov.uk/dataset/hs2-safeguarding-zones WMS: http://inspire.misoportal.com/geoserver/chiltern_district_council_cdc_hs2_sz/wms?request=getCapabilities&
Local walk - NFC walks (Monks & Moorings, Mythaholm, National Forest Way)	Monks and Moorings_polyline Mythaholm_polyline National Forest Way - Links_polyline.shp National Forest Way (Drawn to 1-25k)_polyline.shp	NFC_Monks_and_moorings_walk.shp NFC_Mythaholm_walk.shp NFC_National_Forest_Way_Links.shp NFC_National_Forest_Way.shp	12/10/2017 10/10/2017	The National Forest Company	Drawn to 1:25000	PSMA licence required	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Local walk - Trent Valley Way	TVW Jan 2013.shp	SWT_TVW.shp	12/10/2017	Staffordshire Wildlife Trust		PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		
Local walk - Staffordshire Walks (Staffordshire Way, Way for the Millennium)	TTTV Promoted Routes.shp	SCC_TTTV_PromotedRoutes.shp	29/11/2017	Staffordshire County Council		PSMA licence required	SCC - Shona Frost shona.frost@staffordshire.gov.uk		
Local walk - Derbyshire	<i>Derbyshire_Trails_and_Ways.TAB</i>	<i>DCC_Trails_and_Ways.shp</i>	19/10/2017	Derbyshire County Council	<i>Trails & Ways outside project extent</i> Darren W confirmed on 16/11/17 that there are no other local walks in DCC	PSMA licence required	DCC - Darren White, GIS Officer, darren.white@derbyshire.gov.uk		
Public Rights of Way	SCC Public Rights of Way.shp Derbyshire_Rights_Of_Way_OpenData.tab	SCC_PRoW.shp DCC_PRoW.shp	19/10/2017	Staffordshire County Council Derbyshire County Council		PSMA licence required	DCC - Darren White, GIS Officer, darren.white@derbyshire.gov.uk SCC - Shona Frost shona.frost@staffordshire.gov.uk		
<i>National Trails</i>				<i>Natural England</i>	<i>None within project area 10km buffer</i>	<i>n/a</i>			<i>http://www.gis.naturalengland.org.uk</i>
Local cycle routes	SCC Cycle network.shp Cycle_Network_Completed.DAT Cycle_Network_Proposed.DAT KCN_Complete.DAT KCN_Proposed.DAT	SCC_Cycle_Network.shp DCC_Cycle_NetworkCompleted.shp DCC_Cycle_NetworkProposed.shp DCC_KCN_Complete.shp DCC_KCN_Proposed.shp	17/10/2017	Staffordshire County Council Derbyshire County Council		PSMA licence required	DCC - Darren White, GIS Officer, darren.white@derbyshire.gov.uk SCC - Shona Frost shona.frost@staffordshire.gov.uk		

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
National Cycle Network		Sustrans_NationalRoute_polyline_10kmbuffer_20170117.shp Sustrans_NCNlink_polyline_10kmbuffer_20170117.shp Sustrans_RegionalRoute_polyline_10kmbuffer_20170117.shp		Sustrans	NCN, RCN	National Cycle Route data supplied by Sustrans and contains Ordnance Survey data © Crown copyright and database right (2015).	robert.weetman@sustrans.org.uk		
Green Belt	Local_Authority_Greenbelt_boundaries_2016-17	DCLG_GreenBelt_2016_17_10kmExtract.shp		DCLG	DCLG data used for the project.	Contains public sector information licensed under the Open Government Licence v3.0. © Department for Communities and Local Government (year)			https://data.gov.uk/dataset/english-local-authority-green-belt-dataset4
Open Country and Registered Common Land		NE_CROW_RCL_10kmbuffer_20170117.shp		Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			https://data.gov.uk/dataset/crow-act-2000-section-4-conclusive-registered-common-land1
Country Parks		NE_Country_Parks_10kmbuffer_20170117.shp		Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
Sports and recreation facilities		ActivePlaces_SportsSites_20171120_10kmbuffer.shp	19/11/2017	Active Places (Sport England and Open Data Institute initiative)	Darren W from DCC confirmed on 16/11/17 they don't have such data, suggested the use of the new OS Greenspace data Active Places open data used as indicative data	Contains Data © Sport England			https://www.activeplacespower.com/OpenData/download
Open space	GB_GreenspaceSite	OS_GreenspaceSite_10kmExtract.shp	11/07/2017	Ordnance Survey	Darren W from DCC confirmed on 16/11/17 they don't have such data, suggested the use of the new OS Greenspace data	Contains OS data © Crown copyright and database right (year)			https://www.ordnancesurvey.co.uk/opendata/download/products.html
Visitor infrastructure (tourist info, parking spaces, museums, galleries, etc)	TTTV Visitor Infrastructure.shp	SCC_TTTV_VisitorInfrastructure_OSAB.shp	29/11/2017	Staffordshire County Council	Darren W from DCC confirmed on 16/11/17 they don't have such data. SCC data based on OS AddressBase data	PSMA licence required	SCC - Shona Frost shona.frost@staffordshire.gov.uk		

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Audience segments raster				RSPB	Colin Wilkinson from RSPB confirmed on 21/12/2017 that they cannot provide this data due to legal/copyright and GDPR issues.				
Angling lengths Towpath access point Navigations Ownership Places to visit Customer services facilities Indicative restoration Mooring Waterside pubs	Angling_Lengths_polyline.tab access_points.tab CRT_Navigations_polyline.tab CRT_Ownership_Dissolved_region.tab places_to_visit.tab CustomerServiceFacilities_point.tab Indicative_Restoration_Routes_polyline.tab Mooring_Sites_point.tab Wateride_Pubs_point.tab Attractions_Hubs.tab	CRT_AnglingLengths_201705.shp CRT_TowpathAccessPoints_201705.shp CRT_Navigations_201705.shp CRT_Ownership_201705.shp CRT_PlacesToVisit_201705.shp CRT_CustomerServiceFacilities_201705.shp CRT_IndicativeRestorationRoutes_201705.shp CRT_MooringSites_201705.shp CRT_WatersidePubs_201705.shp DCC_AttractionsHbs_201705.shp	12-19/10/2017	Staffordshire Wildlife Trust		Acknowledgement: © The Canal & River Trust copyright and database rights reserved [insert year]	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk	Canal & River Trust	
Aqueducts Locks Weirs Locks Dry docks Bridges	Aqueducts_point.tab Locks_point.tab Weirs_Public.shp Locks_Public.shp Dry_Docks_Public.shp Bridges_Public.shp	CRT_Aqueducts_201705.shp CRT_Locks_201705.shp CRT_Weirs_201705.shp CRT_Locks_201705.shp CRT_DryDocks_201705.shp CRT_Bridges_201705.shp	12/10/2017 01/05/2017	Canal & River Trust		CRT open licence: https://canalrivertrust.org.uk/refresh/media/thumbnail/26503-CRT-Data-Licence.pdf Acknowledgement: © The Canal & River Trust copyright and database rights reserved [insert year]			https://hub.arcgis.com/datasets?q=Canals%20and%20Rivers%20Trust or http://data-canalrivertrust.opendata.arcgis.com/
Protected / priority species	TTTVProtectedSpecies.tab TTTVBAPSpecies.tab	SWT_TTTV_Protected_Species_Pg.shp SWT_TTTV_Protected_Species_Pt.shp SWT_TTTV_BAP_Species_Pt.shp SWT_TTTV_BAP_Species_Pg.shp	20/12/2017	Staffordshire Wildlife Trust Derbyshire County Council		PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk	SWT	

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Biodiversity opportunity mapping	Access Opportunity Mapping.shp Reedbed.shp Open water polys.shp Weirs.shp Farmland Birds.shp Water.shp Woodland.shp Wet Grassland.shp Opportunity_mapping.shp	SWT_BioOpps_AccessOpportunityMapping.shp SWT_BioOpps_Reedbed.shp SWT_BioOpps_OpenWater.shp SWT_BioOpps_Weirs.shp SWT_BioOpps_FarmlandBirds.shp SWT_BioOpps_Water.shp SWT_BioOpps_Woodland.shp SWT_BioOpps_WetGrassland.shp SWT_BioOpps_OpportunityMapping.shp	20/12/2017	Staffordshire Wildlife Trust		PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk	SWT	
Wetland creation/restoration/enhancement					Expected project output from Natural Heritage Audit				
Priority Habitat Inventory		NE_Priority_habitat_10kmbuffer_20170802.shp		Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
National Forest Inventory		FC_NFI_10kmbuffer_20170117.shp		Forestry Commission		Contains Forestry Commission information licensed under the Open Government License v3.0.			http://www.forestry.gov.uk/forestry/infd-8g5bya
National Forest boundary	National Forest boundary_region.shp	NFC_National_Forest_boundary.shp	10/10/2017	The National Forest Company		PSMA licence required	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		
National Forest Schemes	<i>National Forest schemes (31 Mar 2017)_ellipse.shp</i> National Forest schemes (31 Mar 2017)_region.shp	<i>NFC_National_Forest_schemes_ellipse.shp</i> NFC_National_Forest_schemes_region.shp	10/10/2017	The National Forest Company	Schemes as of 31/03/2017	PSMA licence required	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		
Phase 1 habitats	TTTV Phase 1 habitats_region.shp Staffs_Habitats_Linear.TAB Staffs_Habitats_Point.TAB Staffs_Habitats_Region.TAB Staffs_Habitats_Text.TAB	TFC_Pha1Habitats_201710.shp (covers only central NFC area) SWT_Pha1Habitats_201708_Linear.shp SWT_Pha1Habitats_201708_Point.shp SWT_Pha1Habitats_201708_Region.shp SWT_Pha1Habitats_201708_Text.shp	10/10/2017 15/11/2017	The National Forest Company Staffordshire Wildlife Trust Derbyshire County Council	The SWT Phase 1 habitats contain habitat codes, including J2x for hedges.	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Habitat distinctiveness	TTTV_HighDistinctiveness.TAB TTTV_LowDistinctiveness.TAB TTTV_MediumDistinctiveness.TAB TTTV_MediumHLSDistinctiveness.TAB TTTV_NegligibleDistinctiveness.TAB TTTV_VeryHighDistinctiveness.TAB	SWT_TTTV_HabitatDistinctHigh.shp SWT_TTTV_HabitatDistinctLow.shp SWT_TTTV_HabitatDistinctMedium.shp SWT_TTTV_HabitatDistinctMediumHLS.shp SWT_TTTV_HabitatDistinctNegligible.shp SWT_TTTV_HabitatDistinctVeryHigh.shp	05/02/2018	Staffordshire Wildlife Trust	IMPORTANT: These datasets overlap due to the way they were created. When using these layers ensure to add them all to the map and overlay them so that the layer of the highest habitat distinctiveness overlaps the lower level layers.	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504			
Hedgerows					See above Phase 1 habitats data comment.	n/a			
Staffordshire water meadows	Exceptional_meadow.shp Fieldwork_verified.shp watermeadowsFINAL.shp	SCC_Exceptional_meadow.shp SCC_Fieldwork_verified.shp SCC_WatermeadowsFINAL.shp	24/10/2017	ArcHeritage	Survey by University of Birmingham 2008 (data received from Staffordshire HER via ArcHeritage)	PSMA licence required.	rmay@yorkat.co.uk	Staffordshire CC HER	
Environmental Stewardship Schemes - Live Agreements	Environmental_Stewardship_Scheme_Live_Agreements_External.shp	NE_EnviroStewardshipScheme_LiveAgreements_10kmbuffer_20171113.shp	13/11/2017	Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			https://naturalengland-defra.opendata.arcgis.com/datasets/environmental-stewardship-scheme-agreements-england?geometry=-31.319%2C48.018%2C26.996%2C57.302
Environmental Stewardship Schemes - Live Options (points)	Environmental_Stewardship_Scheme_Live_Option_Points_External.shp	NE_EnviroStewardshipScheme_LiveOptions_10kmbuffer_20171113.shp	13/11/2017	Natural England	Replaced by below Countryside SA in 2014. Existing agreements remain active until their expiry date.	© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			https://data.gov.uk/dataset/environmental-stewardship-scheme-options-points1
Countryside Stewardship Scheme	Countryside_Stewardship_Scheme_Agreements.shp	NE_CountrysideStewardshipScheme_10kmBuffer_201803.shp	01/03/2018	Natural England	It replaced above Environmental Stewardship Scheme in 2014	© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			-
Woodpasture and Parkland	Woodpasture_and_Parkland_England_v2_1.shp	NE_WoodpastureAndParkland_v2_1_10kmbuffer.shp	13/11/2017	Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://environment.data.gov.uk/ds/catalogue/index.jsp#/catalogue
Traditional Orchards	Traditional_Orchards_England.shp	NE_TraditionalOrchards_10kmbuffer_20171113.shp	13/11/2017	Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://environment.data.gov.uk/ds/catalogue/index.jsp#/catalogue

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Crome - Crop Map of England (Midlands)	midlands_20170411.shp	NE_Crome_CropMap_10kmBuff_20171114	14/11/2017	Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://environment.data.gov.uk/ds/catalogue/index.jsp#/catalogue
Local Nature Partnership Boundary	Local_Nature_Partnership_Boundaries.shp	NE_LocalNaturePartnerships_20171113.shp	13/11/2017	Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://environment.data.gov.uk/ds/catalogue/index.jsp#/catalogue
<i>Conservation and Enhancement Scheme Agreements, Energy Crops Scheme Agreement (ECS 1&2)</i>				<i>Natural England</i>	<i>None within project area</i>				
Local Wildlife Site (LWS) Biodiversity Alert Sites	TTTV SBI Boundaries August 2017.TAB TTTV BAS Boundaries August 2017.TAB local_wildlife_sites WFS	SWT_LWS_2017.shp SWT_BAS_BiodiversityAlertArea_2017.shp SDDC_LWS_10kmBuffer_2013.shp	19/10/2017 25/01/2018	Staffordshire Wildlife Trust SDDC	SBI top tier, sites of county importance, BAS is the lower tier, sites of local importance SDDC LWS as of 21/11/2013	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		SDDC LWS2013 https://data.gov.uk/dataset/south-derbyshire-district-council-local-wildlife-sites-2013/resource/2718c9c4-d706-43b1-930f-3f66ba801449
DWT reserves	DWT_Reserve_boundaries.tab	<i>DWT_Reserve_boundaries_point.shp</i> <i>DWT_Reserve_boundaries_polyline.shp</i> DWT_Reserve_boundaries_region.shp	12/10/2017	Derbyshire Wildlife Trust	Point and polyline data outside project extent	PSMA licence required	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		
Ancient Woodland Inventory		NE_AWI_10kmbuffer_20170117.shp		Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
Local Nature Reserves (LNR)		NE_Inr_10kmbuffer_20170207.shp		Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
National Nature Reserves (NNR)		NE_nnr_10kmbuffer_20170207.shp		Natural England	Near, but outside the TTTV project boundary	© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
Special Area of Conservation (SAC)		NE_sac_10kmbuffer_20170207.shp		Natural England	Near, but outside the TTTV project boundary	© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Special Protection Area (SPA)				Natural England	None within project area 10km buffer	n/a			http://naturalengland-defra.opendata.arcgis.com/
Ramsar		NE_ramsar_10kmbuffer_20170207.shp		Natural England	Near, but outside the TTTV project boundary	© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
Sites of Special Scientific Interest (SSSI)		NE_sssi_10kmbuffer_20170224.shp		Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
SSSI Impact Risk Zones		NE_SSSI_IRZs_201709_10kmbuffer.shp		Natural England	Data not used for the project, but included in the Data Pack.	© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
Environmentally Sensitive Areas		NE_magesa_10kmbuffer_20160707.shp		Natural England	None within project area, but some records within 10km	n/a			http://naturalengland-defra.opendata.arcgis.com/
Nature Improvement Areas		NE_Nature_Improvement_Areas_10kmbuffer_20170202.shp		Natural England	None within project area, but some records within 10km	n/a			http://naturalengland-defra.opendata.arcgis.com/
RSPB Reserves		RSPB_RSPBreserves_UK_10kmbuffer_20170117.shp		RSPB	Near, but outside the TTTV project boundary	Data reproduced with the permission of RSPB. © Crown Copyright. Ordnance Survey licence number 100021787 ([Year])			https://ww2.rspb.org.uk/our-work/conservation/conservation-and-sustainability/mapping-and-gis
IBA Reserves				RSPB	None within project area 10km buffer	n/a			
Conservation Areas	Derbyshire_CAs_region.shp Staffs_HER_Conservation_Areas.shp	DCC_CA.shp SCC_CA.shp	24/10/2017	ArcHeritage		PSMA licence required	rmay@yorkat.co.uk		
Sites of Archaeological Significance				TVLP	All available cultural heritage data has been collated by ArcHeritage for the Cultural Heritage Audit and this dataset was not separately included	n/a			

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Historic Environment Record	DERBS_HER_Mon_line.shp DERBS_HER_Mon_point.shp DERBS_HER_Mon_polygon.shp DERBS_HER_Mon_polygon_centroid.shp Staffs_HER_Monument_Lines.shp Staffs_HER_Monuments_Points.shp Staffs_HER_Monument_Polygons.shp	DCC_HER_Mon_line.shp DCC_HER_Mon_point.shp DCC_HER_Mon_polygon.shp DCC_HER_Mon_polygon_centroid.shp SCC_HER_Monument_Lines.shp SCC_HER_Monuments_Points.shp SCC_HER_Monument_Polygons.shp	24/10/2017	ArcHeritage	HER Records for Derbyshire County Council and Staffordshire County Council	PSMA licence required	rmay@yorkat.co.uk	Derbyshire County Council Staffordshire County Council (suzy.blake@staffordshire.gov.uk)	
Palaeochannels of the Trent catchment	PTC-palaeochannels.shp	ADS_PTC_Palaeochannels.shp	19/01/2018	ADS - Archaeology Data Service	Data is based on Lidar (1-2m), aerial and historic mapping.	Data copyright © York Archaeological Trust	rmay@yorkat.co.uk	Archaeology Data Service	https://doi.org/10.5284/1043773
The Defence of Britain project (see comment)	<i>see comment</i>	<i>see comment</i>		ArcHeritage	It is a record of wartime and defence related sites (i.e. pillboxes). Only partially included in the Cultural Heritage Audit since it is in many separate layers and much of the information already included in the HERs and some location data is vague.	Data copyright © Council for British Archaeology	-	Archaeology Data Service	http://archaeologydataservice.ac.uk/archives/view/dob/
Register of war memorials (see comment)	<i>see comment</i>	<i>see comment</i>	18/10/2017	ArcHeritage	Online register. The information was included in the final gazetteer created by ArcHeritage (since there was no available GIS download for this category on the website)	n/a	rmay@yorkat.co.uk		
Gazetteer of cultural heritage	TTTV_CHA final project gazetteer.shp	SWT_TTTV_CHA_FinalProjectGazetteer.shp	07/12/2017	Staffordshire Wildlife Trust	Created by ArcHeritage as a project output of the Cultural Heritage Audit (based on HER, LB, SM, RPG, war memorials, Defence of Britain archive, site visit,	PSMA licence required	suzy.blake@staffordshire.gov.uk	SWT/SCC/DC	

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
					Lidar/Google Earth etc data) Contains all the records compiled for the Audit. Point data.				
Priority conservation	TTTV CHA priority conservation.shp	SWT_TTTV_CHA_PriorityConservation.shp	07/12/2017	Staffordshire Wildlife Trust	Created by ArcHeritage as a project output of the Cultural Heritage Audit (based on HER, LB, SM, RPG, war memorials, Defence of Britain archive, site visit, Lidar/Google Earth etc data) Contains records of priority conservation interest. Point data. Subset of the above 'Gazetteer of cultural heritage' dataset.	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	suzy.blake@staffordshire.gov.uk	SWT/SCC/DC C	
Overall heritage at risk	TTTV CHA overall heritage at risk.shp	SWT_TTTV_CHA_OverallHeritageAtRisk.shp	07/12/2017	Staffordshire Wildlife Trust	Created by ArcHeritage as a project output of the Cultural Heritage Audit (based on HER, LB, SM, RPG, war memorials, Defence of Britain archive, site visit, Lidar/Google Earth etc data) Contains an overall overview of heritage at risk. Point data. Based on the above 'Gazetteer of cultural heritage' dataset.	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	suzy.blake@staffordshire.gov.uk	SWT/SCC/DC C	
Heritage assets by period (point / polygon)	TTTV CHA early medieval PT.shp TTTV CHA early prehistoric PT.shp TTTV CHA industrial period	SWT_TTTV_CHA_EarlyMedievalPt.shp SWT_TTTV_CHA_EarlyPrehistoricPt.shp SWT_TTTV_CHA_IndustrialPt.	07/12/2017	Staffordshire Wildlife Trust	Created by ArcHeritage as a project output of the Cultural Heritage Audit	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife	suzy.blake@staffordshire.gov.uk	SWT/SCC/DC C	

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
	PT.shp TTTV CHA later prehistoric PG.shp TTTV CHA later prehistoric PT.shp TTTV CHA medieval parks PG.shp TTTV CHA medieval PT.shp TTTV CHA post-medieval parks PG.shp TTTV CHA post-medieval PT.shp TTTV CHA roman PG.shp TTTV CHA roman PT.shp	shp SWT_TTTV_CHA_LaterPrehistoric_Pg.shp SWT_TTTV_CHA_later_prehistoric_Pt.shp SWT_TTTV_CHA_MedievalParks_Pg.shp SWT_TTTV_CHA_Medieval_Pt.shp SWT_TTTV_CHA_PostMedievalParks_Pg.shp SWT_TTTV_CHA_PostMedieval_Pt.shp SWT_TTTV_CHA_Roman_Pg.shp SWT_TTTV_CHA_Roman_Pt.shp			<p>(based on HER, LB, SM, RPG, war memorials, Defence of Britain archive, site visit, Lidar/Google Earth etc data).</p> <p>It was created by splitting out the relevant records by period from the above Gazetteer of Cultural Heritage (dataset containing all records).</p> <p>The layers include: Early prehistoric period (point) Later prehistoric period (point & polygon) Roman period (point & polygon) Early medieval period (point) Medieval period (point) Medieval deer parks (polygon) Post-medieval period (point) Post-medieval landscape parks (polygon) Industrial period (point)</p>	Trust has been produced under OS license 100018777/SWT28504			

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Heritage assets by theme	TTTV CHA 20th century defence PG.shp TTTV CHA 20th century defence PT.shp TTTV CHA agriculture PT.shp TTTV CHA elite landscape PG.shp TTTV CHA industry theme PT.shp TTTV CHA ritual & religion PT.shp TTTV CHA settlement PT.shp TTTV CHA transport PG.shp TTTV CHA transport PT.shp	SWT_TTTV_CHA_20th_century_defence_Pg.shp SWT_TTTV_CHA_20th_century_defence_Pt.shp SWT_TTTV_CHA_agriculture_Pt.shp SWT_TTTV_CHA_elite_landscape_Pg.shp SWT_TTTV_CHA_industry_theme_Pg.shp SWT_TTTV_CHA_ritual_and_religion_Pt.shp SWT_TTTV_CHA_settlement_Pt.shp SWT_TTTV_CHA_transport_Pg.shp SWT_TTTV_CHA_transport_Pt.shp	07/12/2017	Staffordshire Wildlife Trust	Created by ArcHeritage as a project output of the Cultural Heritage Audit (based on HER, LB, SM, RPG, war memorials, Defence of Britain archive, site visit, Lidar/Google Earth etc data). It was created by splitting out the relevant records by theme from the above Gazetteer of Cultural Heritage (dataset containing all records) The layers include: Agriculture (point) Elite landscape (point & polygon) Industry theme (point) Ritual & religion (point) Settlement (point) Transport (point) Post-medieval to modern transport network (polygon) 20th-century defence (point & polygon) War memorials (point)	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	suzy.blake@staffordshire.gov.uk	SWT/SCC/DC C	SWT dropbox
Listed Buildings		HE_LB_10kmbuffer_20171012.shp		Historic England		© Historic England [year]. Contains Ordnance Survey data © Crown copyright and database right [year] The Historic England GIS Data contained in this material was obtained on [date]			https://services.historicengland.org.uk/NMR/DataDownload/default.asp
Registered Battlefields		HE_battlefield_10kmbuffer_20171012.shp		Historic England	None within project area, but some records within 10km	n/a			https://services.historicengland.org.uk/NMR/DataDownload/default.asp

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Registered Parks & Gardens		HE_RPG_10kmbuffer_20171012.shp		Historic England		© Historic England [year]. Contains Ordnance Survey data © Crown copyright and database right [year] The Historic England GIS Data contained in this material was obtained on [date]			https://services.historicengland.org.uk/NMR/DataDownload/default.asp
Scheduled Monuments		HE_SchedMonument_10kmbuffer_20171012.shp		Historic England		© Historic England [year]. Contains Ordnance Survey data © Crown copyright and database right [year] The Historic England GIS Data contained in this material was obtained on [date]			https://services.historicengland.org.uk/NMR/DataDownload/default.asp
Heritage at Risk		HE_HeritageAtRisk_5kmbuffer_20171106.shp		Historic England		© Historic England [year]. Contains Ordnance Survey data © Crown copyright and database right [year] The Historic England GIS Data contained in this material was obtained on [date]			https://services.historicengland.org.uk/NMR/DataDownload/default.asp
World Heritage Sites		HE_WHS_10kmbuffer_20171012.shp		Historic England	None within project area, but some records within 10km	n/a			https://services.historicengland.org.uk/NMR/DataDownload/default.asp
The National Memorial Arboretum		LUC_NationalMemorialArboretum_OSM10K_201803.shp		LUC	Data captured against OpenStreetMap	© OpenStreetMap		Staffordshire Wildlife Trust	
Landscape Character Areas	Derbyshire_Landscape_Character_Types_region.shp Landscape Character Draft Master jan18.zip newtttv_lcts_mar18.shp	DCC_LandscapeCharacterTypes_201707.shp SCC_LandscapeCharacterDraft_2018.shp SWT_TTTV_LCT_2018Mar_New.shp	19/10/2017 29/01/2018 16/03/2018	Derbyshire County Council Staffordshire Wildlife Trust Staffordshire Wildlife Trust	The 'SWT_TTTV_LCT_2018Mar-New.shp' dataset was created for the project and represents an update/consolidation of the existing SCC and DCC LCAs	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	DCC - Darren White, GIS Officer, darren.white@derbyshire.gov.uk Louise Morris, SWT, l.morris@staffs-wildlife.org.uk	For the SCC LCA: suzy.blake@staffordshire.gov.uk	
Forces for Change per Landscape Character Areas		LUC_LCAForcesForChange_201803.shp	29/03/2018	LUC	Includes assessment of key forces for change on the level of updated landscape character areas	PSMA licence required. Acknowledgement: All data supplied by Staffordshire Wildlife Trust has been produced under OS license 100018777/SWT28504	GIS @ LUC gis@landuse.co.uk	Staffordshire Wildlife Trust	
Land Cover Map 2015					It was not possible to obtain data for the project. Corine Land Use data				

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
					(see below) was used instead.				
Historic Landscape Classification	HLC_Derbyshire_region.TAB HLC.TAB	ADS_DerbyshireHLC_10kmBuff_2016	08/07/2016 28/11/2017	ADS - Archaeology Data Service Derbyshire County Council	The data received from DCC is the same as from ADS. Since the ADS is available online, that version was used.	Data copyright © Derbyshire County Council Data copyright © Archaeological Research Services Ltd	DCC - Darren White, GIS Officer, darren.white@derbyshire.gov.uk	ADS	http://archaeologydataservice.ac.uk/archives/view/derbyshire_hlc_2016/downloads.cfm
Derbyshire and Peak District Archaeology and Aggregates Resource	All_landform_elements.shp	ADS_DerbyshirePeakDistrict_ArchaeologyAggregates_2011.shp	13/11/2017	ADS - Archaeology Data Service	Geology data about soil type/age	Data copyright © Archaeological Research Services Ltd			http://archaeologydataservice.ac.uk/archives/view/derbyaggs_eh_2011/downloads.cfm
Corine Land Use	clc12_Version_18_5a.gdb	EEA_CorineLC12_18_5a.shp		EEEnvironment Agency/EuropEnvironment Agencyn Commission	Login required for the download from the EEA website	© European Environment Agency (2017)		European Comission	https://www.eea.europa.eu/data-and-maps/data/clc-2012-vector#tab-metadata
Agricultural Land Classification		NE_ALC_10kmbuffer_20161130.shp		Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
Geology (drift/superficial)				British Geological Survey	Darren W from DCC confirmed they have only 1 guest licence. Since it would be complex and costly to arrange a BGS licence for all partnership members it was decided to provide only the BGS WMS link for use in GIS software			BGS	WMS: https://map.bgs.ac.uk/arcgis/services/BGS_Detailed_Geology/MapServer/WMServer?
Local Geological Site				Staffordshire County Council/Derbyshire County Council	Data not received/not available				
National Parks		NE_magnatpk_20170207.shp		Natural England	None within project area, but some records within 10km	n/a			http://naturalengland-defra.opendata.arcgis.com/

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Areas of Outstanding Natural Beauty		NE_magaonb_10kmbuffer_20170207.shp		Natural England	Cannock Chase AONB	© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
National Character Areas		NE_magcchar_10kmbuffer_20170117.shp		Natural England		© Natural England copyright (year). Contains Ordnance Survey data © Crown copyright and database right (year).			http://naturalengland-defra.opendata.arcgis.com/
HM Land Registry	Land_Registry_Cadastral_Parcels.gml (x9)	HMLandReg_LandOwnership_10kmbuffer.shp	03/01/2018	HM Land Registry		This information is subject to Crown copyright and is reproduced with permission of HM Land Registry. © Crown copyright and database rights [year] Ordnance Survey 100026316			https://www.gov.uk/government/collections/download-inspire-index-polygons
Tranquillity		Tranquillity.gdb: CPRE_Tranquillity_Composite CPRE_Tranquillity_Negative CPRE_Tranquillity_Positive CPRE_DarkSkies	01/01/2006	LUC on behalf of CPRE		Reproduced courtesy of the Campaign to Protect Rural England (Revised 2007)			
Settlement boundaries	draft settlement boundaries_region.tab Urban_Extents_VML_10K.tab BUA_2011_EW_BGG See 'Data Download Link' column for ESBC	SDDC_SettlementBoundaries_draft.shp DCC_UrbanExtents_10K.shp ONS_BUA2011_10km.shp ESBC_ALP2016_SettlementBoundary	04/11/2017 28/11/2017 28/11/2017 25/01/2018	SDDC via Staffordshire Wildlife Trust Dropbox Derbyshire County Council via Louise ONS ESBC	DCC Urban extent data is a VML 10K extract, tiled polygons, no settlement name. Not defined for SCC. Advised to use ONS Geography instead. Found ESBC settlement boundary on data.gov.uk	ONS licence: http://www.nationalarchives.gov.uk/doc/open-government-licence/ ONS copyright: <i>Contains National Statistics and OS data © Crown copyright and database right [yyyy]</i> PSMA licence required	Darren White, GIS Officer, DCC darren.white@derbyshire.gov.uk SCC - Shona Frost shona.frost@staffordshire.gov.uk	SDDC DCC ONS ESBC	ONS geography: http://geoportal.statistics.gov.uk/datasets/built-up-areas-december-2011-boundaries-v2 ESBC: https://data.gov.uk/dataset/settlement-boundary1
Brownfield sites Lichfield	LDC_Brownfield_Register.shp	LDC_Brownfield_Register.shp	30/01/2018	Lichfield District Council					http://lichfielddc.maps.arcgis.com/home/item.html?id=f95b5e5ecb4d4a938a89f64a5344eaeaf
Brownfield sites				DCLG	Data didn't become available for full project area https://www.gov.uk/guidance/brownfield-land-registers				

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
SCC Minerals Minerals safeguarding areas Active quarries and mines Historic mineral site Landfill site Mineral safeguarding areas for coal and fireclay Minerals plan allocated sites Minerals plan area of search Safeguarded mineral infrastructure sites	Mineral_Safeguarding_Areas.shp Active_Quarries_and_Mines.shp Historic_Mineral_Sites.shp Landfill_Sites.shp Mineral_Safeguarding_Areas_for_Coal_&_Fireclay.shp Minerals_Plan_Allocated_Sites.shp Minerals_Plan_Area_of_Search.shp Safeguarded_Mineral_Infrastructure_Sites.shp	SCC_Mineral_Safeguarding_Areas.shp SCC_Active_Quarries_and_Mines.shp SCC_Historic_Mineral_Sites.shp SCC_Landfill_Sites.shp SCC_Mineral_Safeguarding_Areas_for_Coal_and_Fireclay.shp SCC_Minerals_Plan_Allocated_Sites.shp SCC_Minerals_Plan_Area_of_Search.shp SCC_Safeguarded_Mineral_Infrastructure_Sites.shp	12/10/2017			PSMA licence required	SCC - Shona Frost shona.frost@staffordshire.gov.uk		
DCC Minerals				Derbyshire County Council	No data comparable to SCC available for DCC				
Mine restoration plans	Digitised from: Hanson uk - Willington Nature Reserve Hanson Restoration Masterplan.pdf Hanson UK - Middleton Hall Restoration Masterplan.pdf Hanson UK - Barton (Wychnor) Restoration Masterplan.pdf	LUC_HansonUK_RestorationPlanBoundary10K.shp	Digitised 03/01/2018	Hanson UK		PSMA licence required			PSMA licence required
Noise		DEFRA_NoiseEND_Agglomerations_May15.shp DEFRA_NoiseActionPlanningImportantAreasMay15.shp DEFRA_NoiseRailway_LDEN.shp DEFRA_NoiseRailway_LNGT.shp DEFRA_NoiseRailway_LQ16.shp DEFRA_NoiseRoad_LDEN.shp DEFRA_NoiseRoad_LNGT.shp DEFRA_NoiseRoad_LQ16.shp	23/08/2017	Defra		Contains public sector information licensed under the Open Government Licence v3.0. © DEFRA			https://www.gov.uk/government/publications/open-data-strategic-noise-mapping
Population statistics (IMD)		ONS_LSO_IMD_2015.shp		Office of National Statistics		Contains National Statistics data © Crown copyright and database right [year]			http://geoportal.statistics.gov.uk/

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
Population statistics (age, education level, health, employment)		ONS_LSOA_2011_EW_BFE.shp QS601UK.csv KS101EW.csv KS102EW.csv		Office of National Statistics	2011 Census tables: QS601UK - economic activity KS101EW - population KS102EW - age structure	Office for National Statistics © Crown copyright and database right [year]			https://www.nomisweb.co.uk/
Aggregates	Trent Valley Aggregates sites.tab	SWT_TrentValley_AggregatesSites_201710.shp	12/10/2017		No attribution, not obvious who the data is from and what it represents. It seems it shows active quarries within DCC.	PSMA licence required	Louise Morris, SWT, l.morris@staffs-wildlife.org.uk		
SCC Local Plan / Core Strategy Allocations (housing, transport, employment, etc)				Staffordshire County Council		PSMA licence required			https://data.gov.uk/dataset/housing-allocation https://data.gov.uk/dataset/strategic-industrial-locations7
ESBC Adopted LP 2012-2013 (housing allocations, strategic industrial locations)	See WFS links in the <i>Data Download Link</i> column to the right	ESBC_ALP2012_HousingAllocation.shp ESBC_ALP2012_StrategicIndustrialLoc.shp	25/01/2018	ESBC		PSMA licence required			https://data.gov.uk/dataset/housing-allocation https://data.gov.uk/dataset/strategic-industrial-locations7
SDDC Local Plan / Core Strategy Allocations	Part 2 allocations_region.tab Policy E1 - Strategic Employment Land Allocations_region.tab Policy E4 - Strategic Location for Sinfin Moor Employment Site Extension_region.tab Policy E5 - Safeguarded Employment Sites Dove Valley Park_region.tab Policy E6 - Woodville Regeneration Area_region.tab Policy INF8 - The National Forest.tab Housing Policy_region.tab Infinity village_region.tab Policy INF4Ai_polyline.tab Policy INF4Aii - South Derby Integrated Transport Link_polyline.tab	SDDC_Part2_Allocations.shp SDDC_PE1_StrategicEmploymentLandAllocations.shp SDDC_PE4_StrategicLocationSinfinMoorEmpSiteExt.shp SDDC_PE5_SafeguardedEmploymentSitesDoveValleyPark.shp SDDC_PE6_WoodvilleRegenerationArea.shp SDDC_PINF8_NationalForest.shp SDDC_HousingPolicy.shp SDDC_InfinityGardenVillage.shp SDDC_PINF4Ai_IntegratedTransportLink.shp SDDC_PINF4Aii_SouthDerby_IntegratedTransportLink.shp	19/10/2017 (allocation sites) 4/11/2017 (rest)	Louise Morris, Staffordshire Wildlife Trust, l.morris@staffs-wildlife.org.uk	The 'ITL - Integrated Transport Link' datasets are indicative only as confirmed by Beth Holmes from SDCC on 19/10/2017	PSMA licence required			

GIS Dataset	Dataset name (as received)	Dataset name (TTTV name)	Date data received / downloaded	Data provider	Comment	Data copyright	Provider contact	Data custodian (if different then provider)	Weblink (if available)
LDC Local Plan / Core Strategy Allocations	SDA.shp Allocation_sites.shp	LDC_StrategicDevelopmentAlloc.shp TLP_AllocationSites_draft.shp	19/10/ 2017			PSMA licence required	chris.wood@tlp.uk.com	LDC	
Brookhay Graden Village and Waterside proposed new towns		LUC_BarrattsBrookhayProposal_OSM.shp	12/03/ 2018	LUC	Captured based on the 'Brookhay' booklet prepared by Barratt Developments PLC in April 2015 (2nd Ed), captured against OpenStreetMap (OSM)				

Reports Index

Source	Report	Date	Weblink	Comment
Central Rivers Initiative	A Biodiversity Audit of the Tame and Trent River Valleys in Staffordshire (part 1 & 2)	2006 - 2007	http://www.centralrivers.org.uk/index.php?option=com_phocadownload&view=sections&Itemid=5	-
Staffordshire County Council	Staffordshire Water Meadows Survey	2008	https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/StaffordshireWaterMeadowsReport.pdf	-
Staffordshire County Council	Planning for Landscape Change' Supplementary Planning Guidance	2010	https://www.staffordshire.gov.uk/environment/eLand/planners-developers/landscape/NaturalEnvironmentLandscapeCharacterTypes.aspx	-
Derbyshire County Council	Local Nature Partnership: Environmental Baseline Audit			Relevance for the project was identified, however it was not possible to obtain the report
Derbyshire County Council	Spatial Biodiversity Action Plan			Relevance for the project was identified, however it was not possible to obtain the report
Derbyshire County Council	Ecosystem Assessment based on priority habitats			Relevance for the project was identified, however it was not possible to obtain the report
Derbyshire County Council	The Landscape Character of Derbyshire	2000	http://www.derbyshire.gov.uk/environment/conservation/landscapecharacter/	-

Source	Report	Date	Weblink	Comment
Derbyshire County Council	Key Infrastructure & Regeneration Projects (map)	2016	Not available online	
Derbyshire County Council	Local Aggregate Assessment	2017	http://www.derbyshire.gov.uk/images/LAA%202017_tcm44-289583.pdf	
Hanson UK	Quarry Restoration Master Plans, including for: Barton (Wychnor) (2014) Middleton Hall (2015) Willington Nature Reserve (2008)	2008 - 2015	Not available online	
Barratt Developments / Urbed	Brookhay Garden Village and Waterside (Twin Rivers) Vision Document (April 2015 v2)	2015	Not available online	
Derby City	Derby Urban Area Strategic Growth (map)	2016	Not available online	
Lichfield District Council	Local Plan Allocations Local Plan Strategy Minerals & Waste Local Plan Interactive Local Plan Map		https://www.lichfielddc.gov.uk/Council/Planning/The-local-plan-and-planning-policy/Local-plan/Local-plan.aspx	
British Geological Survey	Industrial Mineral Assessment Unit (IMAU) reports and maps	1990s?	http://www.bgs.ac.uk/mineralsUK/mines/IMAU.html	
ArchHeritage	TTV Cultural Heritage Audit (Report and Summary Report)	2017	https://www.staffordshire.gov.uk/environment/eLand/planners-developers/HistoricEnvironment/Projects/Historic-Environment-Projects.aspx#TransformingtheTrentValleyCulturalHeritageAudit	
Environment Agency	River Trent Catchment Flood Management Plan	2010	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/289105/River_Trent_Catchment_Management_Plan.pdf	
The Landscape Partnership	Access and Visitor Audit for The Transforming the Trent Valley Landscape Partnership	2017	Not available online	
Ashmed Price	Review of Landscape Character Assessment	2018	Not available online	

Appendix 3 Forces for Change

Table 11.3 Forces for Change within Landscape Character Areas

LCA code	Landscape character area (LCA)	County	Infrastructure				Planning				Recreation		Natural environment				Hydrology		Cultural heritage		
			Existing A or Primary Road through it?	Existing railway line through it?	Is there an existing quarry within it?	Is there an existing landfill within it?	Will the proposed HS2 cut through it?	Is there a quarry proposed within it?	Is there a housing or employment development proposed within it?	Is there a new garden village proposed within it?	Are there cycle routes through it?	Are there walking routes and Public Rights of Ways through it?	Is it within The National Forest?	Does it include priority habitats?	Are there water meadows within it?	Area there palaeochannels within it?	Is it within flood zone 2 or 3?	Is it affected by flooding from surface water (1:30 years)?	Does it contain any Listed Building?	Does it contain any Scheduled Monument?	Does it contain any Conservation Area?
H1	Fradley	Staffordshire	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
M1	Dove Valley	Derbyshire	Yes	Yes	Yes			Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
M2	Dove Valley	Staffordshire	Yes	Yes	Yes			Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
M3	Lower Trent	Derbyshire	Yes	Yes	Yes						Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes
M4	Middle Trent	Staffordshire	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
M5	Middle Trent	Derbyshire			Yes	Yes					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
M6	River Tame	Staffordshire	Yes	Yes	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
M7	Upper Trent Valley	Staffordshire	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
P1	Sinfin Moor	Derbyshire	Yes	Yes					Yes	Yes	Yes	Yes					Yes	Yes	Yes		
T1	Armitage	Staffordshire				Yes						Yes		Yes			Yes	Yes			Yes
T10	Wetmore	Staffordshire	Yes	Yes	Yes						Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
T11	Repton	Derbyshire										Yes		Yes		Yes	Yes	Yes			
T12	Moreton	Staffordshire	Yes								Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes		Yes
T13	Crakemarsh	Staffordshire	Yes		Yes			Yes				Yes			Yes		Yes	Yes	Yes		
T14	Aston	Derbyshire	Yes								Yes	Yes		Yes			Yes	Yes	Yes		
T2	Fisherwick	Staffordshire		Yes	Yes							Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	
T2	Streethay	Staffordshire	Yes	Yes	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
T3	Comberford	Staffordshire		Yes								Yes		Yes	Yes	Yes	Yes	Yes	Yes		
T4	Elford	Staffordshire			Yes	Yes								Yes		Yes	Yes	Yes	Yes	Yes	Yes
T5	Croxall	Staffordshire	Yes	Yes	Yes									Yes		Yes	Yes	Yes			
T6	Catton Hall	Staffordshire			Yes								Yes	Yes		Yes	Yes	Yes	Yes	Yes	
T7	Catton Hall	Derbyshire			Yes					Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
T8	Branston	Staffordshire	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
T9	Walton on Trent	Derbyshire		Yes	Yes	Yes			Yes		Yes	Yes	Yes	Yes			Yes	Yes	Yes		Yes
U1	Burton	Staffordshire	Yes	Yes	Yes				Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
U2	Hilton	Derbyshire	Yes	Yes	Yes				Yes		Yes	Yes		Yes			Yes	Yes	Yes		
V1	Rocester	Staffordshire							Yes			Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
V2	Rolleston	Staffordshire										Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
V3	Dove Valley north	Derbyshire	Yes	Yes					Yes		Yes	Yes		Yes		Yes	Yes	Yes	Yes		
V4	Willington/Egginton	Derbyshire	Yes	Yes	Yes				Yes	Yes	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes

LC	Landscape character	County	Infrastructure				Planning				Recreation		Natural environment			Hydrology		Cultural heritage			
V5	Aston/Shardlow	Derbyshire	Yes	Yes	Yes				Yes		Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes
V6	Repton	Derbyshire			Yes						Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes
V7	Barton	Staffordshire			Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
V8	Kings Bromley/Alrewa	Staffordshire	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
V9	Hill Ridware	Staffordshire					Yes				Yes			Yes	Yes	Yes	Yes	Yes	Yes		Yes

Appendix 4 Map Book

Please refer to the '**Trent Valley LPS – Spatial Framework: Appendix 4 Map Book.PDF**', provided as a separate document.