

South Warwickshire SETTLEMENT ANALYSIS



JANUARY 2023

Contents

Clickable contents – link directly to sections of interest

1. Introduction	4
2. Scope of Study	6
3. Selecting settlements for assessment	8
4. Methodology	11
• Connectivity evidence and analysis	12
• Settlement Structure	
• Physical constraints mapping	
• Edge connectivity grade analysis	
• Accessibility evidence and analysis	20
• Local services mapping	
• Infrastructure/local services Accessibility	
• Density mapping	24
5. Next steps	26
Appendix 1: Main towns	27
• Leamington, Warwick, Whitnash and Cubbington	
• Stratford-upon-Avon	
• Kenilworth	
Appendix 2: Smaller settlements A-K	27
• Alcester	
• Barford	
• Bearley	
• Bidford-on-Avon	
• Bishop's Tachbrook	
• Claverdon	
• Earlswood	
• Hampton Magna	
• Hatton Park	
• Hatton Station	
• Henley-in-Arden	
• Kineton	

¹As the route structures of these four individual settlements are intrinsically linked through coalescence, for the purpose of considering 'connectivity' and 'accessibility', they have been analysed together. Given the scale of the area studied across these four settlements, this is broken down into the following map areas within Appendix 1: Cubbington and North Leamington, Leamington Central, Leamington South, Warwick North, Warwick South, and Whitnash.

Appendix 3: Smaller settlements L-Z

27

- Long Itchington
- Radford Semele
- Salford Priors
- Shipston-on-Stour
- South of Coventry
- Southam
- Studley
- Wellesbourne
- Wilmcote
- Wood End
- Wootton Wawen

1. Introduction

1.1 The way our settlements are laid out can have dramatic impacts on our travel choices, and is therefore a fundamental element of 'good design'. Prior to private car ownership being commonplace, settlements and neighbourhoods were designed so that people could access things they needed regularly close to where they lived – predominantly on foot. The Covid 19 pandemic has served to refocus significant attention on neighbourhoods people live in, and how we can do better at ensuring they meet day to day needs of residents. This premise aligns with the requirements of the NPPF, Section 12 for functional, sustainable and attractive places, and directly relates to 4 out of the 10 characteristics of 'good design' identified in the National Design Guide (in no particular order):

- Built form – a coherent pattern of development
- Movement – accessible and easy to move around
- Public spaces – safe, social and inclusive
- Uses – Mixed and integrated

1.2 Within settlements, it is considered beneficial to maximise opportunities for people to meet their regular day-to-day needs near to where they live (and/or work), and to do this within a reasonable walking distance of their homes (and/or workplace). This affords the choice of walking (or cycling) wherever possible as a realistic alternative to the private car. Principles associated with this theory are often referred to as 'the 20-minute neighbourhood'. There is no single agreed definition of a 20-minute neighbourhood, and they are sometimes referred to by other titles, including for example, 15-minute cities. This is due to the varying expectations of communities, the physical context of the area, and factors such as population density. Across South Warwickshire therefore there are likely to be variations to how this might be implemented. For example, the expectations in a larger town, will vary compared with smaller rural settlements. However, the core premise is to deliver places which connect people to each other and what they need.

1.3 The 20-minute neighbourhood is being utilised internationally (for example in Melbourne and Paris) based on a core assumption that most day-to-day needs should be met within a reasonable walking distance of home – a 10-minute walk there, and a 10-minute walk back. A 10-minute walk is commonly assumed to equate to approximately 800m distance. Both the Royal Town Planning Institute (RTPI) Scotland and the Town and Country Planning Association (TCPA)¹ have published research and guidance papers on the spatial principles which make up a 20-minute neighbourhood and merits of this approach, citing multiple health and climate change benefits which arise from it. Sustrans is also advocating this approach. This supports the three pillars of sustainable development identified in the NPPF (paragraph 8 – social objective, economic objective, and environment objective), and aligns with the overarching objectives of the SWLP.

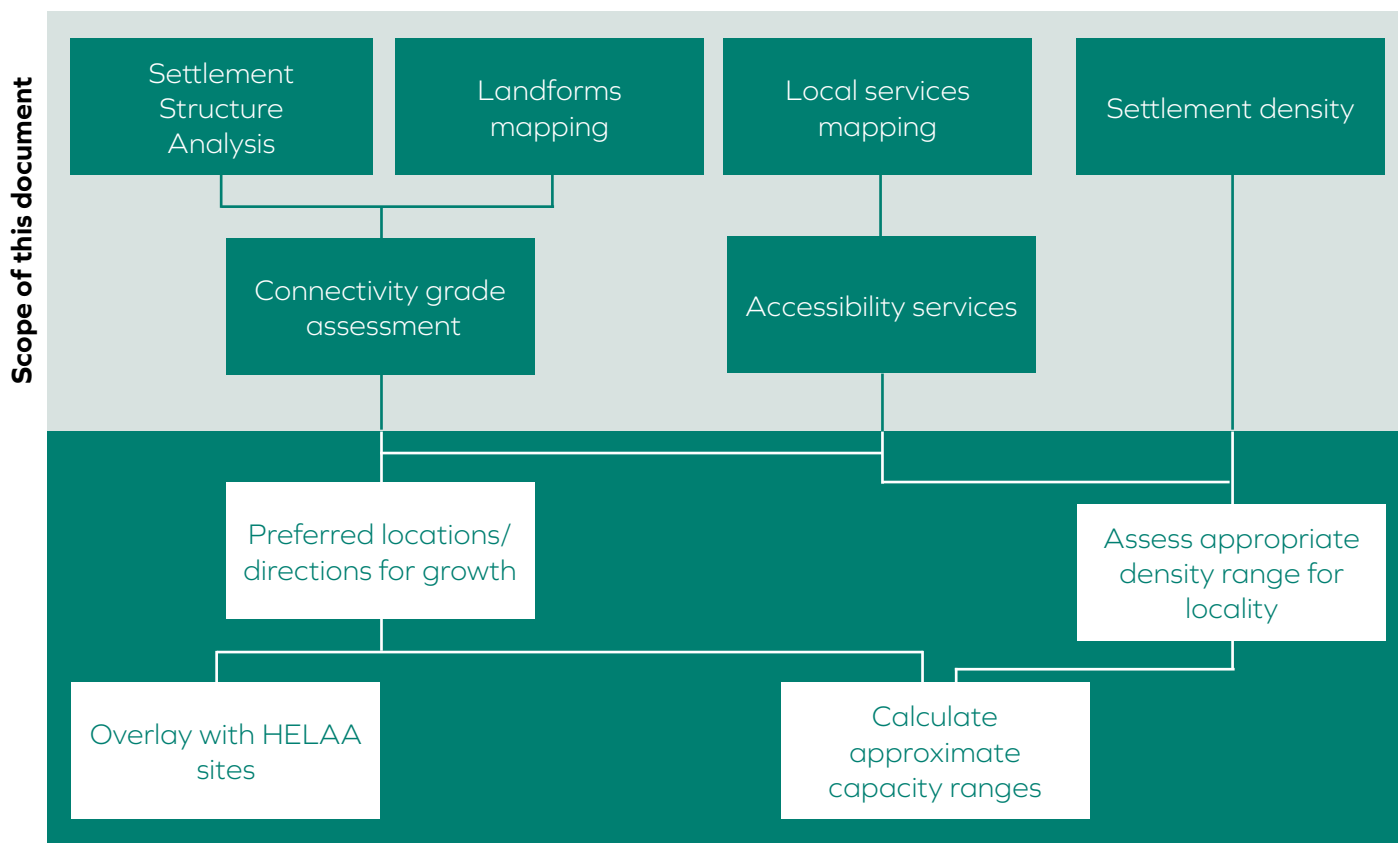
- 1.4** In order to utilise the principles of a 20-minute neighbourhood, first the evidence base of the current situation within existing settlements must be understood. This document will set out what information has been collected to help us understand the potential of the 20-minute neighbourhood in settlements across South Warwickshire, and why. This will include the opportunities and challenges for growth in and around the edges of individual settlements based on the outcomes.
- 1.5** The preparation of this evidence is designed to support the development of the spatial strategy for South Warwickshire, and in recognition of the strategic nature of the Part 1 SWLP, the focus of the evidence is around the edge of the settlements and the potential of different directions for growth in the context of connectivity and accessibility.

²TCPA (2021) [Guide to the 20-Minute Neighbourhood](#)

2. Scope of the study

- 2.1** This study will consider the existing structure of a number of settlements across South Warwickshire (see Section 3.0 ‘selecting settlements for assessment’), with a view to examining opportunities and constraints for growth in the context of the 20-minute neighbourhood principle, and the strategic design principles in the Scoping Consultation document (May 2021) (section 4.3, p25) identified as important to informing locations for growth:
- Connectivity (an overarching principle throughout)
 - Barriers (e.g railway lines or major highways)
 - Character and identity (street pattern can be a key determinant of character)
 - Green and blue infrastructure
- 2.2** The premise of the study is to identify the opportunities and constraints for growth in and around the settlements based on connectivity, and accessibility of services and facilities. For the purposes of this study, the analysis has been undertaken irrespective of whether the settlement is within the green belt – it is simply the physical attributes of the settlements. The green belt is however a strong national policy designation, and any incursion would require thorough examination and robust justification. It remains to be determined whether the SWLP might seek some green belt revisions, and this matter will be explored further in the Issues and Options consultation.
- 2.3** It must be acknowledged, that many of the opportunities and constraints identified in this document are likely to vary in their relevance depending upon the scale of any growth which may be proposed in any particular settlement. It is beyond the scope of this study to anticipate this. Instead, it is intended only to form a summary of the physical opportunities and constraints. This may in turn, inform the spatial strategy where relevant as the process evolves.
- 2.4** The settlement selection and detailed methodologies for each component of the study will be set out in subsequent sections of this document. These sections will explain in detail how the information on subsequent settlement-based chapters has been derived. Analysis however principally centres around 3 key components:
- 1) Connectivity – the physical connectivity of the existing street pattern, and any physical barriers which limit route/connection options. This has implications for the legibility of places, character of the place, the activity and perceived safety along some routes, though these are not explicitly addressed by this study.
 - 2) Accessibility – this element largely focusses on proximity/distance to key facilities and services, as distance is a key factor in modal choice.
 - 3) Density – the density ranges within the settlement, using the categories and ranges set out in the [National Model Design Code](#). This is particularly relevant for the next steps (see page 7).
- 2.5** The stages of information gathering and analysis are summarised by the diagram in Figure 1 below, along with an indication of anticipated next steps for using this information.

Figure 1 – Analysis and next steps



- 2.6** It is recognised that growth opportunities across South Warwickshire are not limited to expansion of existing settlements. Indeed, as the Scoping Consultation document recognised, there are other potential locations which are not currently settlements. These include for example, locations focused on Enterprise, such as around motorway junctions, or potentially completely new settlements away from existing places. These are beyond the scope of this study, but will be considered elsewhere in the evidence base for the emerging SWLP and spatial strategy options.
- 2.7** In addition, sites have been put forward through the ‘Call for sites’ which ran simultaneously to the Scoping Consultation. This analysis does not have regard to any sites submitted as part of that process. As outlined in Figure 1 above, all sites considered through the Housing and Economic Land Availability Assessment (HELAA) (including sites submitted through the ‘Call for Sites’) will need to be considered alongside the evidence in this report in the context of emerging spatial strategy options (Issues and Options), and subsequently the emergence of a preferred option.

3. Selecting settlements for assessment

3.1 The SWLP Scoping Consultation document published in May 2021 included 7 different growth scenario options, labelled A-G:

- A – Rail corridors
- B – Bus Corridors
- C – Road Corridors
- D – Enterprise Hubs
- E – Socio- economic
- F – Urban Areas
- G – Dispersed

3.2 Settlements for initial assessment were identified on the basis that they fall within the first or second tier settlements within either the Stratford on Avon District Core Strategy ('Main Town' and 'Main Rural Centres') or the Warwick District Local Plan ('Urban Areas' or 'Growth Villages') and are relevant to more than one of the above growth scenarios. These are identified in table 1 below. This approach has allowed officers to focus on settlements already considered amongst the most sustainable in existing policy.

Table 1 – settlements and growth scenarios

Settlement	A Rail Corridors	B Bus Corridors	C Road Corridors	D Enterprise Hubs	E Socio-economic	F Urban Areas	G Dispersed
First Tier							
Kenilworth	✓	✓	✓		✓	✓	✓
Leamington	✓	✓	✓	✓	✓	✓	✓
Stratford-upon-Avon	✓	✓	✓	✓	✓	✓	✓
Warwick	✓	✓	✓		✓	✓	✓
Whitnash	✓	✓	✓		✓	✓	✓
Second Tier							
Alcester		✓	✓		✓		✓
Baginton							✓

	A	B	C	D	E	F	G
Settlement	Rail Corridors	Bus Corridors	Road Corridors	Enterprise Hubs	Socio-economic	Urban Areas	Dispersed
Barford		✓	✓				✓
Bidford-on-Avon		✓			✓		✓
Bishop's Tachbrook		✓			✓		✓
Burton Green							✓
Cubbington		✓			✓		✓
Hampton Magna							✓
Hatton Park			✓				✓
Henley-in-Arden	✓	✓			✓		✓
Kineton							✓
Kingswood	✓						✓
Leek Wootton							✓
Radford Semele		✓					✓
Shipston-on-Stour		✓			✓		✓
Southam		✓	✓		✓		✓
Studley		✓	✓				✓
Wellesbourne		✓	✓		✓		✓

3.3 In addition to those settlements falling within the aforementioned criteria, a small number of additional settlements have been further identified and assessed:

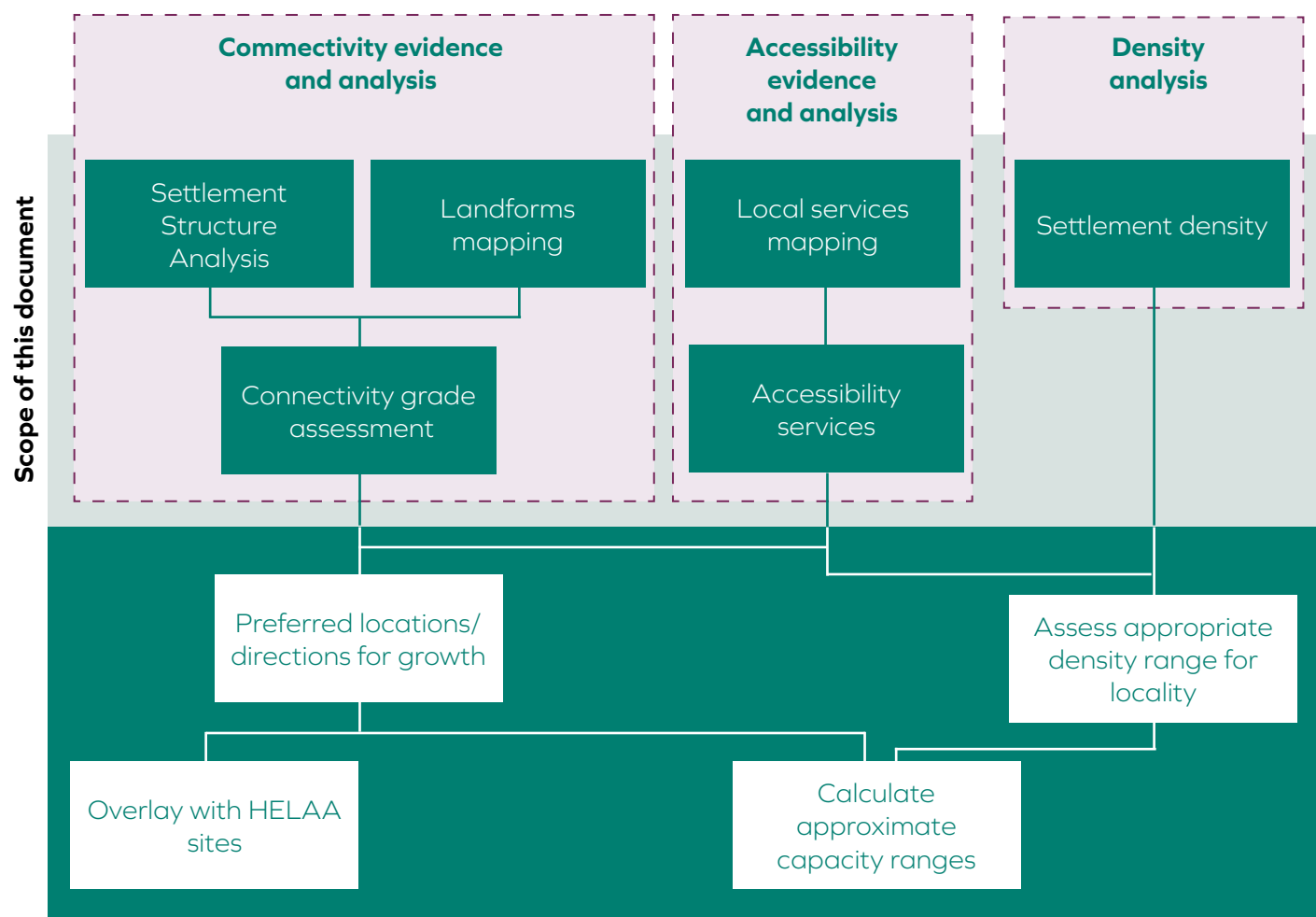
- Bearley
- Claverdon
- Earlswood
- Hatton Station
- Kineton
- Long Itchington
- Salford Priors
- South of Coventry
- Wilmcote
- Wood End
- Wooton Wawen

- 3.4** Each of the settlements in the list above (with the exception of Kineton and 'south of Coventry' – see below) have been assessed on the basis that they are relevant to the 'rail corridor' (A) growth scenario and/or the 'socio-economic' (E) growth option. In analysing feedback from the scoping consultation, the 'rail corridor' option (A) was the option most cited as the preferred scenario (21%), with the fewest citing it as the least preferred (5%), and this contributed to the decision to focus on settlements within rail corridors. Whilst all of the other options (with the exception of 'dispersed' (G), which was stated as the least preferred option by 36% of respondents) had reasonably balanced responses in terms of 'most preferred' and 'least preferred' options, officers identified the socio-economic option (E) for further analysis.
- 3.5** Kineton was selected due to its existing policy status, relative size and infrastructure provision, and South of Coventry because the city edge also forms a potentially sustainable location.
- 3.6** There is potential for additional settlements to be assessed using the methodology set out in this document, if the spatial strategy evolves to necessitate it.

4. Methodology

4.1 This section will set out in detail, the methodology for each element of the study, as identified in Figure 1 (repeated below). For the purposes of easily relating the methodologies to the information presented on each settlement in subsequent sections of the document, the components have been grouped as identified below, and will be considered within different subsections of the methodology. The aim is that all the component parts of the study begin to indicate the opportunities and constraints within each settlement for active travel to meet day-to-day needs, and therefore the principles of a 20-minute neighbourhood.

Figure 1a – analysis and next steps (structure of methodology)



Connectivity evidence and analysis

4.2 The combination of the three elements defined in this sub-section are designed to consider the existing settlement structure, and the opportunities and constraints this may afford to create growth which is well connected to the established town or village.

4.3 The preparation of this evidence is designed to support the development of the spatial strategy for South Warwickshire, and in recognition of the strategic nature of the Part 1 SWLP, the focus of the evidence is around the edge of the settlements and the potential of different directions for growth in the context of connectivity.

A. Settlement Structure Analysis

4.4 The settlement structure analysis (in addition to 'landforms' - see 'part B' below) forms the evidence base which is further analysed in the 'connectivity grade analysis' (see 'part C' below). It considers each settlement as it currently exists (including any ongoing development which is evident on the ground at the time the study was undertaken (early 2022)). The table below sets out each of the individual steps of the methodology applied in undertaking the 'settlement structure analysis'. These steps combine to create a single map output such as the example map of Alcester in Figure 2 below.

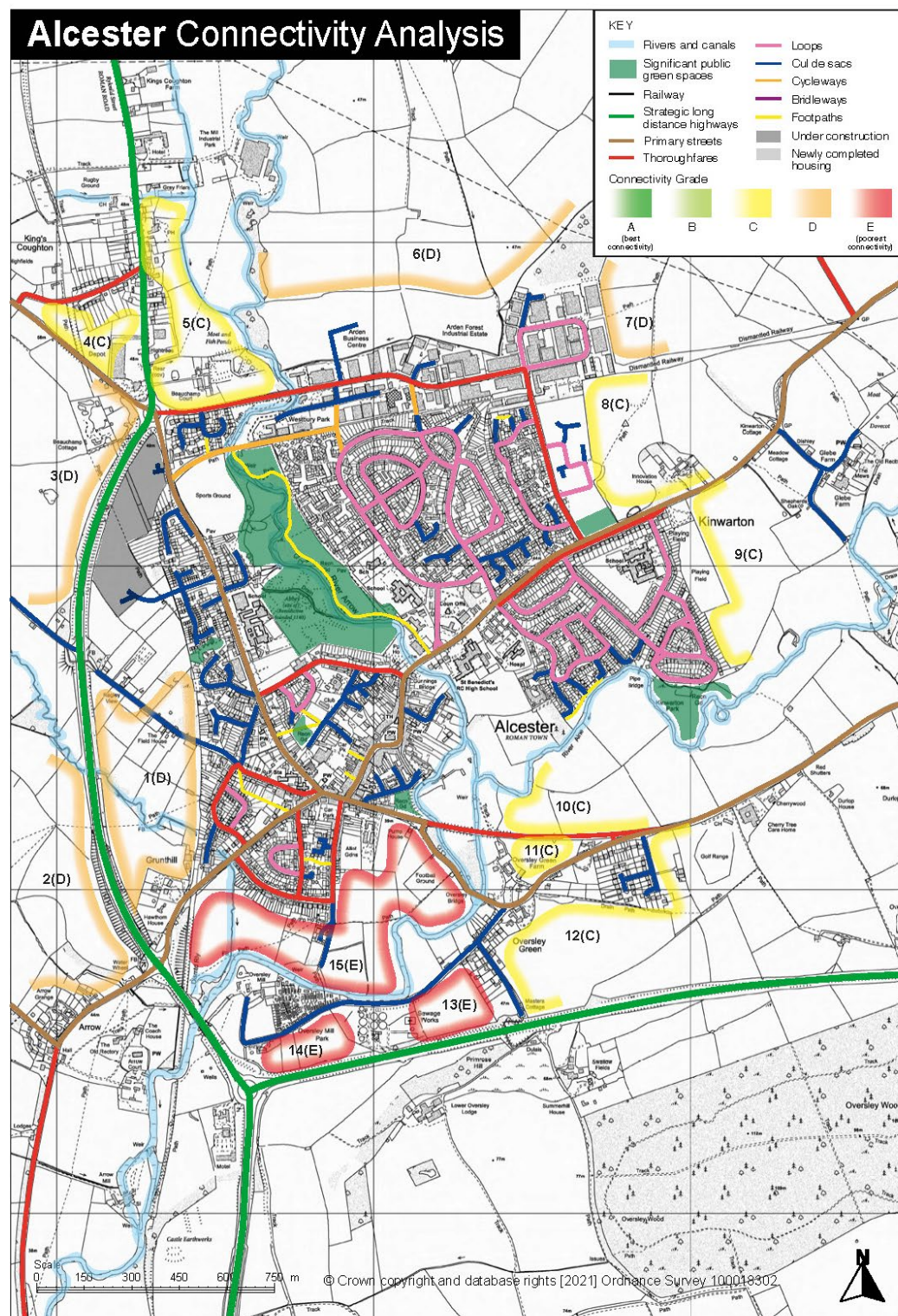
Table 2 – Settlement Structure Analysis methodology

	What?	How?	Why?
1	Review historic maps	Collect any available historic maps – preferably a series of 3. Identify the key routes on the historic maps.	To get an impression of how the settlement has evolved over time. Historic routes (pre- motor vehicle routes) are often direct and very well-connected routes. They often converge on the town/settlement centre and run to the edge of the settlement and beyond. Review of the historic maps will inform 'Route Structure Analysis' in step 4 below.
2	Green and blue corridors	<ul style="list-style-type: none"> Identify rivers, and canals which run through the settlement on a map (colour blue) Identify significant public green spaces on a map (colour green) 	These have potential to act as a connector, as well as playing a role in leisure activities. Water based travel may provide alternative connections, and a number of non-motorised modes of travel can be afforded through/ alongside these corridors. They should therefore be considered as connectors.

3	Railway lines	<ul style="list-style-type: none"> Identify any rail lines running through or immediately adjacent to the settlement. Identify any passenger stations within or immediately adjacent to the settlement 	<p>Railways are key connecting transport infrastructure. The presence of a passenger station indicates connectivity beyond the settlement being studied. However, a railway line can create a severance effect in the wider movement network of the settlement itself.</p>
4	Route structure analysis	<p>On a map of the settlement identify the following using the colour coding below:</p> <p>Multi-modal routes</p> <ul style="list-style-type: none"> Strategic long-distance highways – these routes travel long distances, and typically cater for motor vehicles only. For example, a motorway or a major A road. Primary streets – these are usually identifiable from the historic maps. They are multifunctional streets which radiate from the settlement centre, and often continue to the settlement edge and beyond. Thoroughfares – these are multimodal routes which connect at each end to different routes. They are commonly found in grid street networks, both regular and irregular, but not exclusively. The key point is that they link different routes together to allow movement through the settlement or part thereof. Loop – a multimodal route which is connected at both ends to the same route. Cul de sac – a multimodal street which is connected to another street at only one end. <p>Non-motorised routes</p> <ul style="list-style-type: none"> Cycle only routes Bridleways Footpath connections 	<p>This method is a modified version of the system developed by Karl Kropf at the Urban Morphology Unit, University of Birmingham. It will result in a simple visual map of each settlement, which will make it easy to identify how permeable the settlement is generally (i.e. how 'joined up' or 'connected' its street network is, within the settlement overall, and within different areas thereof). Greater permeability can bring the following benefits:</p> <ul style="list-style-type: none"> Modal choice – joined up routes are generally better for non-motorised travel. Generally, better connected streets are likely to have more people using them, which in turn can present opportunities for greater social and economic interaction.

Figure 2 - example connectivity analysis map of Alcester

N.b the edges and connectivity grades form part of the methodology in part C



B. Landforms mapping

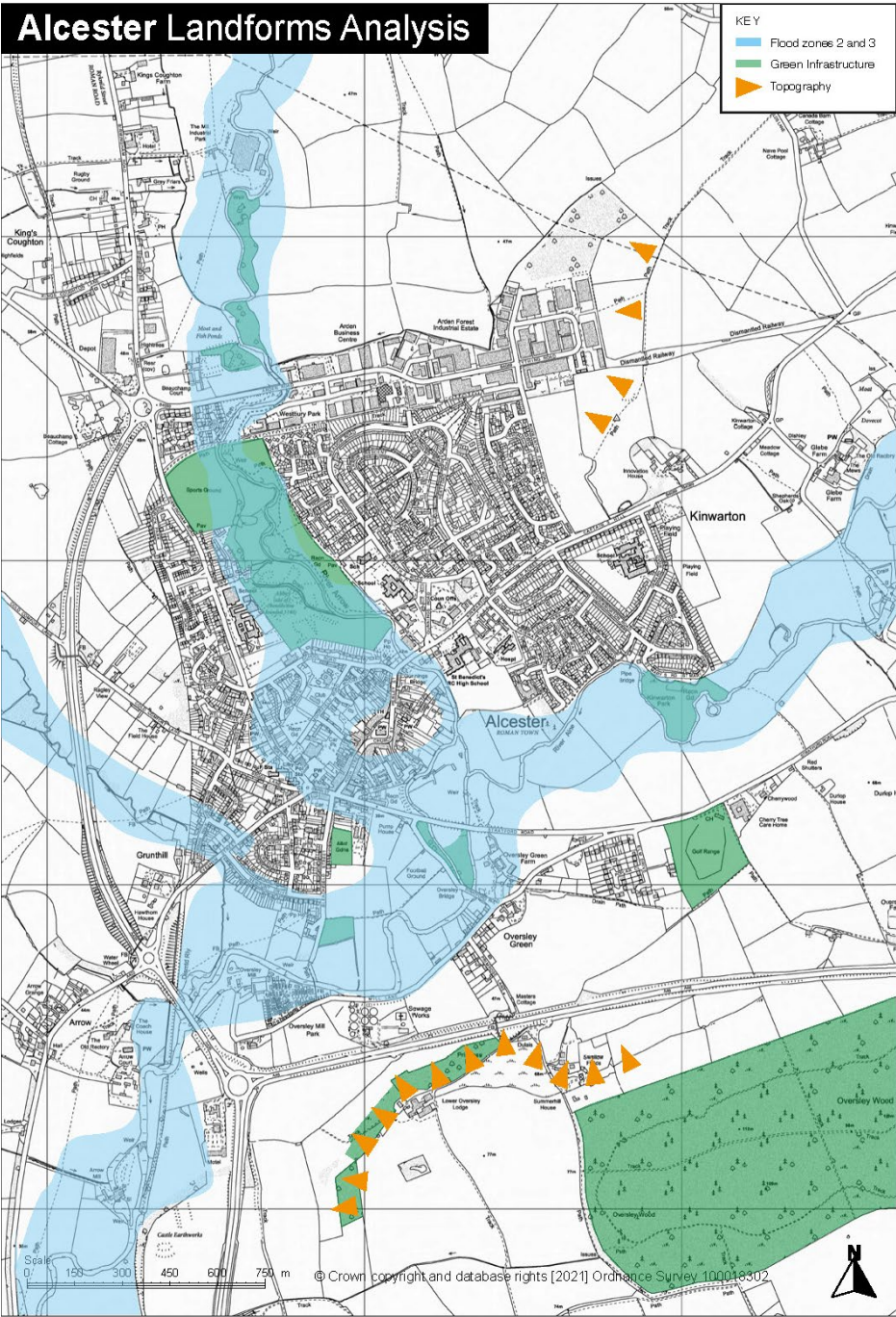
4.5 This mapped information has been gathered through a combination of desk-based (GIS) analysis and visits to the settlements. Key elements recorded for all settlements:

Table 3 - landforms

What?	How?	Why?
Notable gradients in and around the settlements.	Predominantly observed on site visits.	Significant gradients have potential to impact ability and/or likelihood of using active modes of travel for some trips.
Areas at risk of flooding	Utilise 'flood zone data' within GIS	Areas at risk of flood have the potential to impact movement and route options.
Green infrastructure	Identify large areas of green infrastructure	Identify potential expansion/ connection of green infrastructure

4.6 In addition to the above, any other obvious physical constraints observed by officers on their visits may be recorded where they are relevant/potentially relevant to movement within the settlements and immediately around the edge thereof.

Figure 3 - Alcester landforms



4.7 The above landforms are plotted on a single map. An example is given in Figure 3 left of Alcester.

C. Edge Connectivity Grade Analysis

- 4.8** Based on the maps produced in parts A and B above (settlement structure analysis and landforms), further analysis of the relative connectivity of the 'edges' of each settlement is analysed and graded, using the methodology set out below.

Table 4 – Edge connectivity grade analysis

1	Divide settlement into 'edge segments' for further detailed consideration. Each 'edge' should be assigned a reference.	Upon a copy of the 'settlement structure' map produced in 'part A', identify segments (with edges adjacent to the settlement) between routes radiating out from the settlement. In some instances, the definition of the segments will be subject to officer judgement. The number of edge segments will vary depending upon the scale and complexity of the settlement.	Dividing the settlement in this way enables the identification of the opportunities and constraints to potential integration of any strategic (or non-strategic) growth in any direction from the edge of the settlement.
2	Assess each edge against the agreed matrix (see below), to conclude a 'connectivity grade'	See matrix below, to be applied to each 'edge'. This is recorded with the table, with each 'grade' corresponding to a colour, loosely on a traffic light basis.	The assessment is based on how easily new development could connect into the local street network and green infrastructure network, plus what barriers there might be and how easily they might be overcome.
3	Record the 'connectivity grade' using the appropriate corresponding colour for each edge on a map.	Mark on the map in the corresponding colour.	To provide a visual summary of the findings – green edges being those with the best connectivity potential, and red being those with the least connectivity potential.

- 4.9** Each 'edge' defined on the map produced from the above, is then assessed against the criteria in table 5 below. This is designed to compare the relative opportunities and constraints for connectivity on each edge, whilst acknowledging the limitations identified below. A separate table for each settlement will identify the conclusions of the assessments around each edge.

Table 5 – criteria for assessing ‘edges’ to create a connectivity grade

Area / segment reference	Numeric reference. Can add brief description / direction if desired.
No. brown routes	Numeric. Any nuance or context into "barriers" or "comments" as appropriate.
No. red routes	Numeric. Any nuance or context into "barriers" or "comments" as appropriate.
Active links	Free text - give brief details including whether these are existing or potential. This refers to active travel links along or through pieces of green / blue infrastructure, and / or other active links such as urban non-traffic paths.
Barriers	Free text - give brief details
Comments	Free text
Connectivity Grade	<p>Drop down list. Where an area has aspects of multiple grades, a judgement call will be needed on the best fit.</p> <p>Graded for connectivity only. Any other pertinent issues (e.g. landscape character) can be noted in “comments”, but will be considered as a separate exercise.</p> <p>The following connectivity grade criteria are assessed in the order presented, with greater weight given to earlier points within each description</p>
A (best potential for connectivity)	<ul style="list-style-type: none"> • no significant barriers <p>Connects to:</p> <ul style="list-style-type: none"> • at least one brown route, and at least one red route (needs one of each colour) • existing active link e.g. via green / blue infrastructure or other active links • no significant barriers
B	<ul style="list-style-type: none"> • any barriers are negligible or easily overcome <p>Connects to:</p> <ul style="list-style-type: none"> • at least one brown route or at least one red route (ideally two in total); if there is only one, the other aspects in this category have to be strong • existing or potential active link e.g. via green / blue infrastructure or other active links
C	<ul style="list-style-type: none"> • barriers may be overcome, but not easily <p>Connects to:</p> <ul style="list-style-type: none"> • one brown or red route • potential for connecting existing cul-de-sacs or loops into new red route • active links (e.g. via green / blue infrastructure or other active links) are possible but not easy

D	<ul style="list-style-type: none"> significant barriers which would be difficult to overcome <p>Connects to:</p> <ul style="list-style-type: none"> green route, loops or cul-de-sacs only, with limited or no potential to connect these into new red route limited or no potential active links e.g. via green / blue infrastructure or other active links
E (least potential for connectivity)	<ul style="list-style-type: none"> significant barriers which would be difficult or impossible to overcome <p>Connects to:</p> <ul style="list-style-type: none"> green route or cul-de-sacs only, with no potential to extend these into new red route no potential active links e.g. via green / blue infrastructure or other active links

4.10 Each 'edge' is marked with the appropriate colour for its grade, on the 'connectivity analysis map' (as in the example in Figure 2 above).

Limitations of the analysis

- Different individual officers have undertaken the assessment of different settlements. Some degree of officer judgement has had to be employed on some aspects of this work. For example, some 'edges' do not neatly fit within one or other grade as defined for the connectivity grades. It may instead straddle criteria for two different grades. Where this is the case, the officer will make a judgement about which grade they consider the 'best fit'. The outcomes of this analysis have been moderated by the SWLP team to ensure as much consistency as possible.
- The analysis is based upon the evidence gathered and outlined in this study only. It is acknowledged that other constraints beyond the scope of this study may also impact on whether growth may or may not be appropriate in different directions from existing settlements (e.g. ecological or heritage designations, or infrastructure capacity).
- Scale of any growth (particularly that of a strategic nature) may impact on the extent of the opportunities and constraints. For example, strategic scale/large development may make some barriers easier to overcome. It might also enable connections across more than one of the segments identified in this study, which in turn might affect how the connectivity grading might be concluded.

Conclusions that may be drawn

4.11 The evidence gathered and analysed in this section of the document enables comparison of different directions for potential growth around settlements, in terms of their ability to connect into the established 'structure' of the settlement, and the opportunities and constraints in this respect.

4.12 Figure 1 and Section 5.0 highlight the next steps for developing this analysis further.

Accessibility evidence and analysis

A. Local services mapping

4.13 A list of infrastructure (services and facilities) necessary to meet the day-to-day needs of residents has been devised. These have been grouped by 'type', as set out below, albeit it is recognised that some facilities could fall within a number of the typologies identified. The typologies are relevant to subsequent 'accessibility analysis' set out 'part B' below.

1) Retail, jobs and economy

- Business park
- Industrial Estate
- Town centres
- Local centres
- Supermarkets and retail

2) Places to meet

- Village and community halls
- Pubs, nightclubs, restaurants and bars (n.b. this is how data is grouped in GIS. Nightclubs are not considered necessary to meet daily needs of most residents, though they could not be easily separated within the data set)
- Libraries
- Places of worship

3) Open space, leisure and recreation

- Parks and gardens
- Play area
- Outdoor sports facilities
- Allotments
- Leisure centres

4) Healthcare

- Hospitals
- GP surgeries
- Dentists
- Pharmacies

5) Education

- Nurseries
- Primary schools
- Secondary schools

4.14 These facilities and services have therefore been plotted/mapped for each assessed settlement, using either existing Council held data, or data provided by partners and stakeholders, such as Warwickshire County Council.

4.15 The data used for the purpose of this study is locational only, and it is beyond the scope of this study to consider the quality and/or capacity of the infrastructure indicated. Matters of infrastructure capacity will however be considered through the wider evidence base in the evolution of the plan making process.

4.16 Whilst every endeavour has been made to get the most accurate and up to date data, it is recognised that it represents a snapshot in time, and may therefore be subject to change.

B. Infrastructure Accessibility

4.17 Having identified the location of existing infrastructure in the above 'soft infrastructure mapping exercise, further analysis will explore the extent of the area (in broad terms) which is likely to fall within a 10-minute walk (800m).

4.18 The table below sets out the step-by-step methodology for how this is undertaken:

Table 6 – infrastructure accessibility methodology

1	Using the maps created in the 'soft infrastructure mapping' outlined above, a colour has been assigned to each of the typologies.	<ul style="list-style-type: none"> • Retail, jobs and economy (orange) • Places to meet (purple) • Open space, leisure and recreation – wellbeing (green) • Healthcare (blue) • Education (pink) 	In order that the typologies of each infrastructure might be easily identified.
2	Identify an 800m radius isochrone from each facility/ infrastructure identified on the 'local services' maps.	Each map has been produced at a 1:10,000 scale. Using a compass or other device, plot an 800m circle, with the centre point located in the centre of the infrastructure. The colour of the circle (isochrone) should correspond to the typology colour defined in step 1.	800m is a widely (internationally) accepted average walking distance capable of being achieved within 10 minutes. This aligns with the 20-minute neighbourhood concept – i.e. the radius is indicative of the area from within which someone could travel to and from each facility in 20-minutes on foot; a 10-minute walk there, and a 10-minute walk back.
3	Identify overlapping isochrones	Where infrastructure within the same typology is clustered close together, plot a circle only from the one nearest the settlement edge. Only the outermost edge of the isochrone need be recorded where circles overlap.	To avoid cluttering the map with information that may not be useful, and make the maps less legible. This exercise is principally concerned with accessibility from different settlement edges.

4	For each potential 'direction of growth' or 'edge' identified in the 'Connectivity analysis', identify which category or categories of infrastructure are located within a 10-minute walk (800m).	Overlay the edge references with the isochrone maps. For each 'edge segment', observe how many isochrones extend beyond the 'edge', and note the colour of the isochrones (which correspond to typologies set out in the 'local services mapping'). Record how many of the different infrastructure typologies extend into each 'edge segment'.	At its core, a 20-minute neighbourhood should meet the majority of the day-to-day needs of residents within an approximate radius of 800m from where they live. The infrastructure typologies have been defined to broadly group infrastructure for different purposes considered necessary for our day-to-day needs (albeit this will vary from person to person). The more typologies of infrastructure accessible within 800m of a potential extension, the more day-to-day needs may potentially be met within that area.
---	---	---	---

4.19 Figure 5 below is an example of the resulting table, showing the range of local services/ facilities within 800m of each 'edge' (see previous section) around Alcester.

Figure 4 – example accessibility table for Alcester

Local facilities within 800m: Alcester						
Area number	Retail, Jobs and Economy	Places to meet	Open space, leisure, recreation - wellbeing	Healthcare	Education	Total number of categories
1	1	1	1	1	1	5
2	1	1	1	1	0	4
3	1	1	1	0	1	4
4	1	1	1	0	0	3
5	1	1	1	0	0	3
6	1	1	1	0	0	3
7	1	0	1	0	1	3
8	1	1	1	1	1	5
9	1	1	1	1	1	5
10	1	1	1	1	1	5
11	1	1	1	1	1	5
12	1	1	1	1	0	4
13	1	1	1	1	0	4
14	1	1	1	1	0	4
15	1	1	1	1	0	4

- Area number corresponds to the 'edge' reference identified in 'connectivity analysis' in the previous section

Limitations of the analysis

- 4.20** Whilst officers consider this analysis to be useful in our high-level consideration of potential growth directions around the edge of assessed settlements, it is also acknowledged that there are limitations within this methodology:
- 800m is a widely accepted average walking distance possible within 10 minutes. However, it is acknowledged that as an average, some people will walk further in 10 minutes and some people a shorter distance.
 - The 800m radius of the circle does not take account of the existing street pattern, nor any potential street pattern if any growth direction were to be subsequently taken forward. It does not therefore consider the actual route/distance to any identified infrastructure, which may be greater than 800m in practice. This analysis cannot therefore be considered an actual reflection of walking distance, but rather a general indicator.
 - The analysis does not take account of other factors which may impact walkability, such as gradient. Again, the analysis offers a general indicator.
 - The analysis is focussed on what infrastructure currently exists (based on the data sets we have available). This does not take account of the quality or capacity of that infrastructure – that is beyond the scope of this study, but will be considered in the wider plan-making process.
 - Some of the potential growth locations around the edge may only be partially within 800m of any individual piece of infrastructure. Where this was the case, officer judgement was employed to determine whether to include it. This was based upon the extent of the area within the 800m isochrone. The SWLP team has moderated these outcomes to ensure as much consistency as possible.

Conclusions the analysis might infer

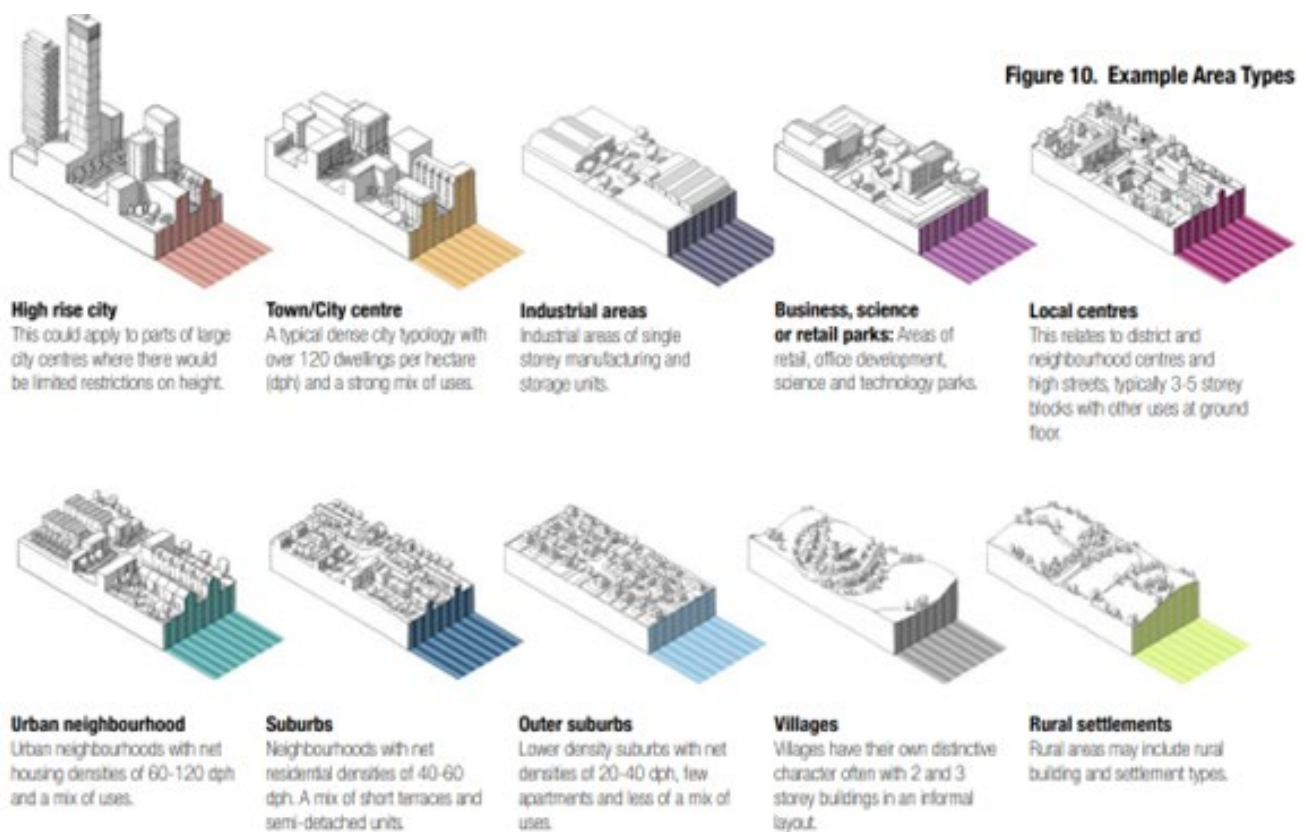
- 4.21** As outlined above, the analysis focusses at a broad level on relative accessibility on foot, of existing facilities and services in the context of potential growth areas. There are acknowledged limitations to this assessment, and therefore the conclusions which can be drawn from it. Outcomes should be considered a general indicator.
- 4.22** As a rule of thumb, potential growth directions within reasonable walking distance of a range of infrastructure types would be preferable, especially if the scale of any potential growth might be limited. However, the scale of growth in any potential direction/location will become pertinent to the accessibility debate. For example, the larger the scale of development, the more infrastructure is likely to be delivered within (and the further away existing infrastructure may become from new homes). Where substantial growth may be an option, any lack of existing facilities within convenient walking distance may be less of an issue, as the plan may seek to ensure that these would be included in any development. In summary therefore, the role of this information is not to categorically positively or negatively impact selection of growth locations in isolation, but rather to add to the overall impression of sustainability and inform choices.

4.23 Figure 1 and Section 5.0 highlight the next steps for developing this analysis further.

Density mapping

4.24 The National Model Design Code (p13-14) sets out a suggested approach to ‘coding’ areas of existing places. Density is an important element of this, and something considered to be beneficial in consideration of potential growth of any existing settlement. Using the maps referred to in the other elements of analysis above, map-based and site visit information is compiled to identify areas of settlements within different density ranges. The defined density ranges and colour coding set out in the National Model Design Code, has been adopted and applied to each settlement (see Figure 5 below copied from the National Model Design Code).

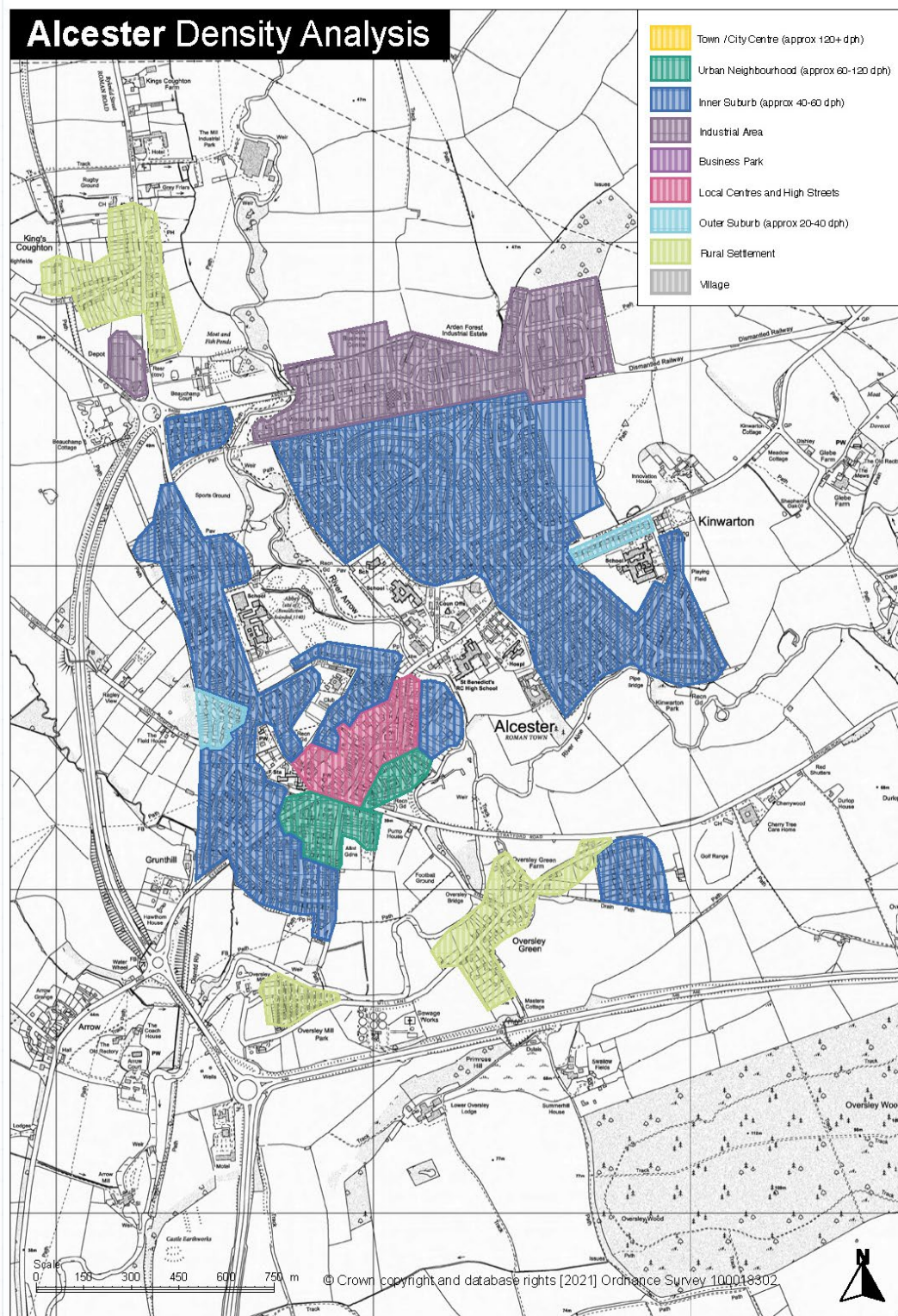
Figure 5 – National Model Design Code density ranges



4.25 A density map has been produced for each settlement assessed, such as the example of Alcester in Figure 6. This is based on the observed prevailing character of different areas of the settlements within ranges outlined in the National Model Design Code. The precise densities have not been calculated.

4.26 The density maps give an indication of the prevailing densities across the settlement. These may inform assumptions about typical density ranges that may be appropriately be applied to any growth in the locality if relevant to spatial options, and therefore the approximate capacity of different areas of land.

Figure 6 - Alcester density example



As set out in Figure 1, this information may guide assumptions in respect of appropriate densities for growth in different settlements and locations.

5. Next steps:

- 5.1** As identified in Figure 1, the evidence and analysis produced in respect of the settlements within this document will inform potential directions for growth where relevant to emerging spatial strategy options. Figure 1 also outlines how this work may be compared with available sites identified through the Housing and Economic Land Availability Assessment (HELAA) to explore potential deliverability of any emerging options. This involves comparing the directions/locations with land assessed as potentially available for development via the assessment of sites submitted through the 'Call for Sites' and other known sites.
- 5.2** This evidence will assist in:
- Identifying the best-connected locations for potential growth (subject to requirements of the spatial strategy – not all settlements assessed may form part of the spatial strategy for strategic growth). The best-connected locations take account of landform constraints as well as the existing street patterns.
 - Identify locations with good accessibility to existing services and facilities, and conversely identify where there is poor accessibility to infrastructure to meet day-to-day needs of residents. In this scenario, the evidence might point to gaps that would need to be addressed if further growth were envisaged by any emerging spatial strategy.
 - Identify existing density ranges, with a view to informing potential densities which may be appropriate to the locality. It should be noted that existing density ranges may not be the only influence on appropriateness however. For example, density and accessibility are interlinked, and accessibility to key infrastructure may therefore direct consideration of higher densities in some localities.
- 5.3** The settlement level evidence in this document will be considered and layered with other evidence pertaining to the settlements and locations, including for example, heritage or ecological constraints information. This 'layering' of different evidence, and continued interpretation of this information will follow in a separate 'topic paper' to be published alongside the 'Issues and Options' consultation. In summary however analysis in this document, alongside other evidence will seek to identify:
- Locations/directions around settlements which should be discounted as they are deemed not to satisfy the overarching objectives of the SWLP.
 - Locations/directions around settlements which may satisfy the objectives of the SWLP should that settlement fall within the scope of any emerging spatial strategy options.
 - Opportunities and constraints to potential growth locations/directions which would need to be considered in further detail through the plan making process if relevant to the emerging spatial strategy.

Appendix 1: [Main towns](#)

- Leamington, Warwick, Whitnash and Cubbington
- Stratford-upon-Avon
- Kenilworth

Appendix 2: [Smaller settlements A-K](#)

- Alcester
- Barford
- Bearley
- Bidford-on-Avon
- Bishop's Tachbrook
- Claverdon
- Earlswood
- Hampton Magna
- Hatton Park
- Hatton Station
- Henley-in-Arden
- Kineton

Appendix 3: [Smaller settlements L-Z](#)

- Long Itchington
- Radford Semele
- Salford Priors
- Shipston-on-Stour
- South of Coventry
- Southam
- Studley
- Wellesbourne
- Wilmcote
- Wood End
- Wootton Wawen