TECHNICAL NOTE

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Land at Dunton Road, Broughton Astley

Access Appraisal Technical Note

Client:	W E Hewitt & Son Ltd	Job No:	325577
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1. Introduction

1.1 Overview

1.1.1 mode transport planning (mode) has been commissioned by Stantec (on behalf of W E Hewitt & Son Ltd) to provide an Access Appraisal Technical Note (TN) in relation to the ongoing promotion of land at Dunton Road (B581), for a new residential development through Harborough District Council's (HDC's) New Local Plan (NLP).

1.1.2 The site measures approximately 22.3 hectares and is located on the south-eastern extent of Broughton Astley. The site is bound by Dunton Road (B581) and an existing property to the northeast, agricultural land to the east, south and west, and existing residential estates to the northwest. The site has a direct frontage with Dunton Road (B581) of approximately 70m. An overview of the site location is provided in **Figure 1,** attached at **Appendix A.**

1.2 Background

1.2.1 The site is not subject to any designations and/or allocations within the adopted Harborough Local Plan (2019). The site is, however, identified in HDC's Strategic Housing and Economic Land Availability Assessment - 2021 (SHELAA) (Site Reference 21/8233) with an estimated capacity for c.365 dwellings.

1.2.2 HDC is in the process of preparing the NLP, and has recently published The Issues and Options Consultation Document, which seeks views on an array of planning matters and potential future options for development in the District. At the time of writing, HDC is undertaking the first stage of consultation on the NLP, which runs between 16th January and 27th February 2024. In tandem with consultation on the Issues and Options Consultation Document, HDC is also carrying out a Call for Sites, for consideration during the preparation of the NLP.

1.3 Purpose of this Technical Note

1.3.1 This TN has been prepared in order to review the opportunity for the delivery of c.365 dwellings on the site and reviews the principal of vehicular access from the adjacent highway network, and the sustainable access strategy that could be delivered, in order to connect the site with existing local walking and cycling routes, to determine the viability of the site. Consideration has also been made of the likely impacts associated with additional development traffic, at key off-site locations on the local highway network.

2. Policy Review

2.1 Overview

2.1.1 This chapter considers adopted transport and land use policies as they relate to the development proposals. The following documentation has therefore been considered:

- National Planning Policy Framework (NPPF) 2023;
- Planning Practice Guidance (PPG) 2023;
- Harborough Local Plan 2011 - 2031 (HLP) 2019;
- Leicestershire Local Transport Plan Three 2011 – 2026 (LTP) 2014; and,
- Harborough District Council New Local Plan (NLP) Issues and Options Consultation Document (2024).

2.1.2 Further to the above, consideration has also been made of the evidence base outlined in the SHELAA (2021). Whilst this document does not constitute adopted policy, it is a key evidence base that will be utilised to inform the preparation of the NLP.

2.2 National Policy

National Planning Policy Framework (NPPF)

2.2.1 The NPPF (as amended, December 2023) sets out the government's planning policies for England, and how these are expected to be applied, stating that all developments generating significant amounts of movement should be supported by a Transport Assessment (TA) or Transport Statement (TS), alongside a Travel Plan (TP). Within the NPPF, it is suggested that an economic, social and environmental objective should be at the heart of the planning process.

2.2.2 Under the 'Promoting sustainable transport' Chapter 9 of the NPFF, it is stated that transport issues should be considered from the earliest stages of plan-making and development proposals (Para. 108). By doing this the potential impacts of development on transport networks can be addressed and the appropriate transport infrastructure can be implemented. By considering transport at the earliest stages, it allows the opportunity to promote walking, cycling and public transport, and mitigate any problems.

2.2.3 Significant developments should be focused on being sustainable, this can be done through limiting the need to travel and offering a genuine choice of transport modes.

2.2.4 Within the context of assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that (Para. 114):

- "*Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users;*
- *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*"

2.2.5 Within this context, new developments should (Para. 116):

- "*give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas… facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use.*
- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.*"

Planning Practice Guidance (PPG)

2.2.6 PPG was published in 2012 and most recently revised in 2023. The updated guidance aims to facilitate the development of a robust and well thought out site, enabling an assessment of the transport impacts of both existing and proposed developments. The guidance can inform sustainable approaches to transport. A strong assessment will establish evidence that may be useful in:

- "*Improving the sustainability of transport provision;*
- *Enhancing the levels of accessibility;*
- *Creating a choice amongst different modes of transport;*
- *Improving health and well-being;*
- *Supporting economic vitality;*
- *Improving public understanding of the transport implications of development;*
- *Enabling other highway and transport authority's/service providers to support and deliver the transport infrastructure that conforms to the Local Plan; and,*
- *Supporting local businesses and the regional economy*".

2.3 Local Policy

Harborough Local Plan 2011-2031

2.3.1 The adopted HLP sets out how the Harborough District will change and develop over the plan period up to 2031. The vision includes reference to Broughton Astley as a main focus for development:

"These two market towns (Market Harborough and Lutterworth) along with settlements near to the edge of Leicester (scraptoft, Thurnby and Bushby), Broughton Astley and the rural centres, will have been the main focus for development. Residential development will have been delivered to meet strategic and local needs and the necessary infrastructure and community facilities needed to support this growth will have been delivered on time."

2.3.2 Furthermore, as part of SS1, The spatial strategy sets out to maintain and improve the character and environment of the market town of Lutterworth and develop Broughton Astley, both as key centres; providing housing, business, retail, leisure, and community facilities to serve each settlement and its catchment area.

Leicestershire Local Transport Plan Three 2011 – 2026

2.3.3 Leicester's LTP3 was adopted in 2011 and sets out the long-term transport strategy for the County. The primary focus of the LTP3 is on sustainable transport that will help grow the economy, protect and create jobs, whilst also reducing carbon emissions.

2.3.4 An overview of the key goals of the LTP are set out below:

- Goal 1: achieve "*a transport system that supports a prosperous economy and provides successfully for population growth*";
- Goal 2: achieve "*an efficient, resilient and sustainable transport system that is well managed and maintained*";
- Goal 3: achieve "*a transport system that helps to reduce the carbon footprint of Leicestershire*";
- Goal 4: achieve "*an accessible and integrated transport system that helps promote equality of opportunities for all Leicestershire's residents*";
- Goal 5: achieve "*a transport system that improves the safety, health and security of our residents*"; and,
- Goal 6: achieve "*a transport system that helps to improve the quality of life of Leicestershire's residents and makes Leicestershire a more attractive place to live, work and visit*".

2.3.5 The LTP aims to encourage active and sustainable travel. One way of doing so is seeking to ensure that new development proposals put forward are supported, as appropriate, by travel plans. As the emerging proposals come forward, a full Residential Travel Plan (RTP) will be submitted alongside any subsequent planning application to ensure proposals accord with the overarching goals and aims of the LTP.

2.4 Harborough District Council SHELAA 2021

2.4.1 The Strategic Housing and Economic Land Availability Assessment (SHELAA) provides evidence on the potential supply of both housing and economic development land across Harborough District. It forms a key component of the evidence base that will inform the preparation of the New Local Plan.

2.4.2 While the NPPF requires Local Planning Authorities to carry out regular reviews of land availability within their administrative area, it is important to note that the SHELAA is not a decision-making document and does not in itself determine whether or not a site should be allocated for development.

2.4.3 The purpose of the document is to assess the development potential of sites and broad locations. The findings of this assessment provide evidence to inform local plan making process.

2.4.4 As aforementioned, the site falls within the SHELAA, under Reference 21/8223, for development within 15 years for up to c.365 dwellings. Potential achievability of unlocking the site is considered within the SHELAA:

"*The provision of a suitable access onto Dunton Road would need to be demonstrated and mitigation for impacts on the local highway network, particularly on the B581, B4114 and A426, may be required. While the indicative layout provided shows Clump Hill as a Hill Top Park, any wider landscape impacts would need to be considered and may require mitigation. Mitigation for potentially contaminating land uses adjoining the site may also be required. The site is considered potentially achievable*".

2.5 Emerging Local Policy – Harborough District Council New Local Plan (NLP)

2.5.1 HDC is in the process of preparing the NLP, which once adopted will set out a strategy for the District to guide and manage growth in the period up to 2041. At the time of writing, HDC is undertaking the first stage of consultation on the NLP (The Issues and Options Consultation Document), which runs between 16th January and 27th February 2024.

2.5.2 The Issues and Options NLP Consultation Document includes the following draft objectives:

- Delivering the right amount and type of housing to meet need;
- Protecting and delivering enough business and employment land to meet need and support economic aspirations for growth;
- Ensuring a spatial strategy which supports sustainable development;
- Protecting and enhancing our villages and towns as centres of the communities they serve;
- Securing sustainable, high-quality places through design-led development;
- Supporting the Council's climate emergency agenda;
- The continued protection and enhancement of our heritage assets;
- Improving open space and biodiversity;
- Developing options for sustainable infrastructure within the District; and,
- Monitoring delivery and review of the Local Plan.

2.5.3 Specifically, in relation to transport, the document identifies how significant development should be focused within sustainable locations, through offering genuine modal choice and reducing the need to travel. The document also highlights that, whilst growth will be encouraged in locations that have greater access to sustainable forms of transport, the NLP must be realistic and there will inevitably be a need for people to travel to seek employment, and to access amenities and services.

2.5.4 The NLP also outlines several potential options for the development of new policies to delivering necessary growth, whilst also seeking to provide sustainable transport options and mitigating any adverse impacts. These are outlined below for reference:

"*Option A: Continue with the approach in the current Local Plan which recognises the rural nature of the District and encourages more sustainable transport modes whilst acknowledging that private cars have an important role for residents. Where adverse impacts are identified at junctions and links, mitigation solutions are required.*

Option B: Promote policies that actively encourage sustainable transport. To help shift the emphasis towards more sustainable transport modes consideration could be given to policies which require greater financial contributions towards public transport or improving cycling/walking infrastructure in preference to road and junction upgrades.

Option C: Allow for development and accept that junctions and links will continue to operate above capacity. This may result in 'self-regulating' behaviour where people choose alternatives where routes and junctions become too congested. This approach would place fewer transport constraints on growth but is likely to perpetuate traffic problems on the network".

2.5.5 HDC is currently seeking views on which of the above options should be utilised as part of the NLP.

2.5.6 Taking into account the emerging policy context of the NLP, **Chapter 3** of this TN considers the existing conditions at the site, with respect to the local transport options and access to amenities and services within an accessible distance of the site.

2.5.7 Consideration is also made at a site-specific level of the potential for providing alternative travel options to the private car including public transport and active travel routes. Following the review of the existing conditions at the site, **Chapter 4** outlines a proposed strategy for the delivery of the site in the context of relevant local and national policy.

2.6 Policy Summary

2.6.1 In summary the planning policies cited above collectively seek to ensure future developments are sustainably accessible by situating them in locations that reduce the overall need to travel, reduce average journey lengths and benefit from adequate local infrastructure to enable use of sustainable modes of transport other than the single occupancy private car.

2.6.2 The planning policies considered also seek to ensure that the impacts of the development on the local transport network are appropriately assessed early on in the development process via the preparation of appropriate Transport Assessment reports to accompany the planning application, and where necessary, the provision of mitigation in order to offset any identified adverse impact.

3. Site Context

3.1 Overview

3.1.1 This chapter provides an overview of existing conditions at the site, with respect to the local transport options and access to amenities and services within an accessible distance of the site.

3.2 Local Highway Network

3.2.1 An overview of the local highway network in the vicinity of the site is provided in **Figure 2**, included at **Appendix A**, for reference.

3.2.2 Dunton Road (B581) is a two-way single lane carriageway which routes in a north-south alignment along the eastern boundary of the site. In the vicinity of the site, the road street-lit and subject to a 30mph posted speed limit, with footway provision along both sides of the carriageway. Approximately 50m south of the site frontage onto Dunton Road (B581), the road is subject to the national speed limit.

3.2.3 North of the site, the B581 provides connections north to Broughton Astley, before continuing north-west through Stoney Stanton and towards the A47 in Elmesthorpe. To the south of the site, the B581 provides connections south towards Dunton Bassett.

3.2.4 In terms of access to the Strategic Road Network (SRN), the B581 provides a connection to Junction 20 of the M1 Motorway via the A426, approximately 7.5km south of the site. Access is also provided to Junction 2 of the M69 via the B4669, approximately 8km northwest of the site.

3.3 Highway Safety

3.3.1 PPG states that a TA / TS should consider the most recently available three-year period of collision data, unless a high collision rate has been identified. For completeness, collision data has been obtained (and reviewed) from CrashMap Pro for the most recently available five-year period (2018 – 2023).

3.3.2 **Figure 3**, included at **Appendix A**, provides a visual illustration of the study area, along with an overview of the collision data obtained from CrashMap Pro. The findings indicate that a single slight collision occurred along the section of Dunton Road (B581) within the study area.

3.3.3 Whilst all collisions are regrettable, especially those resulting in injury, no unexpected trends are identified and the number of recorded collisions within the study area is low. The single recorded collision occurred along a major local route, which is likely to be subject to reasonable volumes of traffic movements, and with no recurring 'clusters' of collisions being recorded.

3.3.4 A more detailed assessment of recorded collision data will be undertaken as part of any subsequent TA to accompany a future planning application; however, based upon the initial review of recorded collision data there is not considered to be any current inherent highway safety issues on the local highway network adjacent to the site which would likely be exacerbated by the development.

3.4 Sustainable Accessibility

3.4.1 The NPPF, Chapter 9 'Promoting sustainable transport', sets out the important role that transport issues and policies have in facilitating sustainable development. Paragraph 108 states that:

"*Transport issues should be considered from the earliest stages of plan-making and development proposal, so that:*

a. the potential impacts of development on transport networks can be addressed;

b. opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;

c. opportunities to promote walking, cycling and public transport use are identified and pursued;

d. the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and

e. *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.*"

3.4.2 A desktop review of existing walking and cycling routes in the vicinity of the site has therefore been undertaken. It is envisaged that the primary desire lines from the development parcel will lead northwest towards the existing residential areas and the local services and amenities in the centre of Broughton Astley. An overview of primary walking and cycling routes in the vicinity of the site is provided in **Figure 4,** included at **Appendix A**, for reference.

Existing Pedestrian Accessibility

3.4.3 The 'Planning for Walking' (2015) document produced by the Chartered Institution of Highways and Transportation (CIHT) document suggests that c.80% per cent of journeys shorter than 1 mile (1.6km) are made wholly on foot. It goes on to say that traditional layouts are typically characterised as having a range of facilities within 10 minutes' walking distance (around 800m). However, the propensity to walk or cycle is not only influenced by distance/time but also the quality of the experience; people may be willing to walk or cycle further where their surroundings are more attractive, safe and stimulating.

3.4.4 The site is situated immediately south of Broughton Astley, directly adjacent to a large residential area, which benefits from a comprehensive network of footways, the majority of which are lit and of good quality. Along the site frontage onto Dunton Road (B581) footways are provided along both sides of the carriageway, which provide connections into the village of Broughton Astley and other local amenities situated to the north-west of the site (discussed further in **Section 3.8**).

3.4.5 The site is dissected by several Public Rights of Way (PRoWs), specifically footpaths W55, W56 and W105, which provide access south towards Stemborough Lane and south-east towards Dunton Bassett. The footpaths also provide connections north towards Foxglove Close and Geveze Way within existing residential estates immediately adjacent to the site, which in turn provide connections to the centre of Broughton Astley via the wider network of footpaths and footways.

Existing Cycle Accessibility

3.4.6 The Department for Transport (DfT) – Local Transport Note (LTN) 1/20 'Cycle Infrastructure Design' cites that two out of every three personal trips are less than five miles (c.8km) in length (Transport Statistics Great Britain, DfT, 2016) – an achievable distance to cycle for most people, with many shorter journeys also suitable for walking. Cycling is therefore an important mode of travel that has the potential to perform a more significant role across various journey purposes.

3.4.7 Dunton Road (B581) is identified by Leicestershire County Council (LCC) as an advisory 'quieter route' for cycling, providing connections north towards the centre of Broughton Astley, and south to the nearby village of Dunton Bassett. This route also connects with a network of advisory 'quieter routes' for cycling, providing access south towards Lutterworth, providing access to Route 50 of the National Cycle Network (NCN), which in turn provides connections south towards Swinford, and north towards Ashby Magna and Leicester City Centre.

3.5 Bus Services

3.5.1 The CIHT 'Buses in Urban Developments' Document (2018) summarises the recommended maximum walking distances for core bus corridors, high-frequency bus routes and less frequent routes, with the respective recommended maximum walking distances being, 500m, 400m and 300m.

3.5.2 The closest bus stops to the site are the 'Garden Centre' bus stops which are located along the immediate site frontage on Dunton Road. These comprise of a flagpole (northbound) and a 'hail and ride' (southbound). Further bus stops ('The Orchard Place'), are also situated along Dunton Road (B581) within c.150m (c.2-minute-walk) of the site and can be accessed from the site frontage via the existing footway provision along the Dunton Road (B581). All bus stops are served by the no.84 bus service, providing connections to Leicester, Whetstone, Cosby and Lutterworth.

3.5.3 Journey times and peak hour frequency for the no.84 bus service are displayed in **Table 3.1**, for reference. An overview of the location of the bus stops, along with illustration of the walking route between these stops and the site, is provided in **Figure 5**, included at **Appendix A**, for reference.

Table 3.1 Local Bus Service Provision

Service Number	Route	Weekday Frequency	First Service	Last Service	Weekend Frequency
84	Leicester – Lutterworth	Every Hour	6:56	21:32	Every Hour

3.5.4 An additional two bus stops, called 'The Bull', are located on Station Road and can be accessed within c.1.8km (c.23-minute walk / c.5-minute cycle or a 7 minute journey using the 84 bus service) from the site. The northbound stop incorporates a shelter and timetable information with the southbound stops incorporating a flag-pole design with timetable information. These stops are served by the X84 bus service, providing connections to Rugby and Leicester, as well as to Narborough Railway Station.

3.6 Rail

3.6.1 The closest railway station to the site is Narborough, which is situated c.8km north of the site, and can be accessed via a c.23-minute cycle or a c.53-minute (in-transit) bus journey using the 84 and X84 services. Narborough Station is located on the Birmingham Peterborough Line and is managed by East Midlands Railway but exclusively operated by CrossCountry. The station is served by frequent services to Birmingham New Street and Leicester.

3.6.2 Journey times and peak hour frequency for the rail services operating from Narborough Station are summarised in Table 3.2, for reference.

Table 3.2 Rail Service Provision – Narborough Station

Destination (Direct)	Journey Time (approx.)	Typical Peak Hour Frequency
Birmingham New Street	46 minutes	1 per hour
Leicester	11 minutes	1 per hour

3.6.3 The station benefits from step free access, with level access to the Leicester bound platform and a ramp from road to the Birmingham bound platform for mobility impaired users. 20 secure bicycle storage spaces are available at the station with CCTV. Car parking provision at the station has a capacity for c.45 cars operating 24-hours a day with a daily charge rate for parking of £5.00.

3.7 Local Amenities

3.7.1 On account of the residential element of the development, it is imperative to consider the potential opportunities to access local amenities. In transport planning terms, the most sustainable sites are those generating the lowest number of single occupancy private vehicle trips, which can be achieved by facilitating a greater proportion of walking, cycling and public transport journeys.

3.7.2 The Institute of Highways and Transportation's (IHT) 'Guidelines for Providing Journeys on Foot' (2000) provides guidance when considering accessibility of specific locations by foot. In relation to the proposed development, the guidelines suggest:

- Maximum distances of 800m to town centres, 2,000m for work / education / leisure, and 1,200m elsewhere;
- Acceptable distances of 400m to town centres, 1,000m for work / education / leisure, and 800m elsewhere; and,
- Desirable distances of 200m to town centres, 500m for work / education / leisure, and 400m elsewhere.

3.7.3 Appropriate walking distances are dependent upon the location of the specific development; more remote locations will see people being prepared to walk that bit further to their end destination. Similarly, appropriate walking distances are also dependent upon the standard of existing pedestrian infrastructure provision, with further walking distances achievable in locations with extensive and higher-quality pedestrian footways, crossings and pedestrianised areas.

3.7.4 As with pedestrian accessibility, the level of a site's cycle accessibility depends upon a combination of distance from the local amenities and the standard of existing cycle infrastructure/experience. It should, however, be noted that cycle infrastructure can include facilities shared with vehicles and pedestrians, as well as dedicated cycle infrastructure.

3.7.5 As outlined in **Section 3.4**, 'LTN 1/20: Cycle Infrastructure Design' published by the DfT, states that "two out of every three personal trips are less than five miles (c.8km) in length - which is an achievable distance to cycle for most people".

3.7.6 **Table 3.3** provides a summary of the distances and approximate walking / cycling times to local amenities and facilities. The distances have been taken from the centre of the site, via a route through the proposed access junction, on to Dunton Road, and the times are based on the outputs from Google Maps Directions / Journey Planner.

Table 3.3 Accessibility to Local Amenities

Amenity / Facility	Approximate Distance from Centre of Site (m)	Estimated Walking Journey Time (mins)	Estimated Cycling Journey Time (mins)
The Red Admiral Pub	500	7-minute	2-minute
Choices Automatic Driving School	650	8-minutes	2-minute
Queen Tandoori	1100	14-minutes	4-minutes
Broughton Astley Physiotherapy Clinic	1100	14-minutes	4-minutes
SPAR Broughton Astley	1100	14-minutes	4-minutes
Podgy Punjab	1300	18-minutes	5-minutes
Thomas Estley Community College	1300	18-minutes	5-minutes
Old Mill Primary School	1300	19-minutes	6-minutes
Grange Farm Boarding Kennels	1450	19-minutes	4-minutes
Broughton Astley Sea Cadets	1450	19-minutes	6-minutes
The Pre-School Play Station	1450	21-minutes	6-minutes
Pickering Road Recreational Area	1450	21-minutes	6-minutes
Broughton Veterinary Group, Broughton Astley	1450	20-minutes	6-minutes
White Horse Pub	1600	23-minutes	6-minutes
Dunton Basset Arms Pub & Restaurant	1600	21-minutes	4-minutes
Hallbrook Primary School	1750	23-minutes	6-minutes
Dunton Bassett Primary School	1750	23-minutes	6-minutes
ALDI	1750	24-minutes	6-minutes
Broughton Astley St Mary's Church	1750	25-minutes	7-minutes
Screwfix	1750	24-minutes	6-minutes
Broughton Astley Leisure Centre	1750	24-minutes	6-minutes

3.7.7 As demonstrated by **Figure 6**, included at **Appendix A**, and **Table 3.3** above, the development site is located within accessible walking and cycling distances of a range of local facilities and services, including education, local community, leisure and retail facilities.

3.7.8 Further to the above, further education (secondary schools) can also be accessed from the site using the no. 84 bus service, with (in-transit) journey times c.24 minutes. An array of additional facilities and services, along with employment opportunities are also accessible in the centre of Lutterworth, which can be accessed via an approximate 22-minute bus journey from the site, using the no.84 service.

3.8 Summary

3.8.1 The site is situated in an accessible location, with opportunities to promote sustainable travel for future residents. The site is immediately south of Broughton Astley, which benefits from a comprehensive footway network which is lit and of good quality, providing connections to existing local facilities and services, including a primary school, and local community, leisure and retail facilities. Further to the above, Lutterworth High School and Brooke High School can both be accessed from the site using the no. 84 bus service.

3.8.2 Dunton Road (B581) is identified as an advisory 'quieter route' for cycling, providing connections north towards the centre of Broughton Astley, and south to the nearby village of Dunton Bassett. This route also connects with a network of advisory 'quieter routes' for cycling, providing access south towards Lutterworth, providing access to the NCN Route 50, and towards Leicester City Centre.

3.8.3 The closest bus stops to the site are located on Dunton Road (B581) directly adjacent the site boundary and can be accessed via the existing footway provision along the local highway network. The bus stops provide services connecting the site with Leicester, Whetstone, Cosby and Lutterworth.

3.8.4 Analysis of the local highway network in the vicinity of the site has demonstrated that there are currently no inherent highway safety issues on the local highway network surrounding the site which would likely be exacerbated by the development.

4. Vehicular Access Strategy

4.1 Overview

4.1.1 The emerging proposals for the site comprise a residential-led development of c.365 units, along with associated infrastructure and open space.

4.2 Site Audit

4.2.1 A visual inspection of the site and surrounding area was undertaken on the 19th March 2021. In appraising the suitability of access, the following criteria was considered:

- Horizontal and vertical road alignment, including visibility;
- Road type and posted speed limits, including potential pinch points and gradients;
- Local signed vehicular weight, height and width restrictions;
- Potential for highway upgrading works and/or third-party land potentially being required;
- Location of street furniture, such as road signs and street lighting;
- Footpath, footway and cycle provision; and,
- Public transport provision.

4.3 Design Guidance

4.3.1 As outlined in LCC's Leicestershire Highway Design Guide (LHDG) (2022), 'Major Residential Access Roads' are the highest classification of internal residential street and are typically considered suitable for serving up to 1,000 dwellings, with typically no more than 400 to be served from a single point of access. Taking into account the above, it is considered that a site of 365 dwellings could be served via a single point of vehicular access.

4.3.2 LCC's LHDG provides the following guidance with respect to the internal layout of new residential sites:

"*New residential streets should be designed to form part of a well-connected street network. Well-connected street networks have significant advantages:*

- *A shorter route can be used to cover a given area;*
- *reversing may be avoided altogether;*
- *they also minimise land-take by avoiding the need for wasteful turning areas at the ends of cul-de-sacs;*
- *encourage more people to walk and cycle to local destinations, improving their health while reducing motor traffic, energy use and pollution;*
- *more people on the streets leads to improved personal security and road safety – research shows that the presence of pedestrians on streets causes drivers to travel more slowly;*
- *for utility companies – service provision and alternative service routes; and,*
- *for highway and utility maintenance operations as traffic can be routed around a point closure if it is necessary to excavate the carriageway for maintenance.*"

4.3.3 The internal layout of the site will be informed by a central movement strategy, which will take account of the way the site links into the surrounding highway network and to nearby opportunities for sustainable access and connectivity. In accordance with recommendations outlined in the LHDG / Manual for Streets (MfS), internal permeability will be promoted within the site and will be accompanied by appropriate connections with adjacent highway infrastructure for all site users.

4.3.4 The site layout will include permeable footway and cycle connections with the surrounding area, and may require bus access into the site, in order to encourage movement to and from the site by modes other than the private car. The accesses from the site to the wider network will also incorporate suitable crossing facilities and wayfinding for Non-Motorised Users (NMUs) (where applicable).

4.3.5 The internal layout will incorporate a clear street hierarchy; which in combination with linkages to open space and adjoining green infrastructure will provide the framework for the development. This will help facilitate a clear, legible layout, which helps to manage vehicle speeds and promote priority for both pedestrians and cyclists.

4.4 Preliminary Access Design

4.4.1 It is envisaged that vehicular access to the site can be provided from Dunton Road (B581) to the site's eastern boundary and direct frontage with the highway. The access junction could take the form of a priority T-Junction, which can be delivered within the applicant's land / LCC's highway boundary. In accordance with the requirements of the LHDG, the proposed junction includes a 6.75m wide carriageway on the minor arm, along with 6m corner radii.

4.4.2 It is considered that 2m footway provision will be required along each side of the carriageway on the minor arm, accompanied by dropped kerbs and tactile paving. This will connect with the existing, street-lit footway provision which runs along the western side of Dunton Road (B581), along and past the site frontage. It is also considered that the site would benefit from the introduction of dropped kerbs and tactile paving to connect footway provision along opposing sides of Dunton Road (B581) in the vicinity of the site.

4.4.3 Appropriate visibility splays can be achieved in accordance with the posted speed limit of 30mph along Dunton Road (B581), in the vicinity of the site access. In accordance with the requirements set out within LCC's LHDG and MfS, 43m visibility splays at a 2.4m setback from the give-way line have been considered applicable (based on 30mph). The visibility splays have been plotted to a 1m offset from the nearside kerbline in the carriageway as per guidance set out on page 11 of the LHDG which states:

"*A more accurate assessment of visibility splay is made by measuring to the nearside edge of the vehicle track. The measurement is taken from the point where this line intersects the centreline of the minor arm unless there is a splitter island in the minor arm*".

4.4.4 An overview of the access junction with the Dunton Road (B581) is provided in **Drawing J32-5675-PS 001**, attached at **Appendix B**, for reference.

4.4.5 The preliminary design for the proposed site access with Dunton Road (B581) has been based upon OS mapping. In this regard, it is noted that a topographical survey and tree survey will need to be undertaken as part of further detailed work to accompany a future planning application, to ensure the access junction can be accommodated at the proposed location. It is also recommended that an Automated Traffic Count (ATC) is undertaken along Dunton Road (B581) in the vicinity of the proposed site access, to review the 85th percentile speeds and ensure the proposed access can achieve the required visibility splays in accordance with the relevant standards outlined in MfS / LHDG / Design Manual for Roads and Bridges (DMRB).

4.5 Sustainable Access

4.5.1 A significant component of the masterplanning vision is the ability for residents and those working on the site to complete many of their day-to-day journeys, at a local level. The second strand to this approach is providing the appropriate infrastructure and transport services to encourage sustainable travel as the first choice of trips, wherever feasible, as well as reducing trips in private motorised vehicles.

4.5.2 The site is in a good location with opportunities for prospective residents and employees to access the site by sustainable modes. The principal desire line from the site is considered to be to the north, providing access along Dunton Road (B581) towards the existing amenities and services in Broughton Astley. New footway connections at the site access junctions will be provided, in order to provide access to the comprehensive footway network along Dunton Road (B581), which is typically lit and of good quality.

4.5.3 In order to encourage travel to and from the site via sustainable modes, the existing PRoWs within the site will be incorporated into the site layout, supporting secondary desire lines north towards Foxglove Close and Geveze Way, which in turn provide additional connections to the centre of Broughton Astley via the wider network of footpaths and footways.

4.5.4 Footway connections to and from the site will also provide access to the 'The Orchard Place' bus stops, which are situated along the Dunton Road (B581) within c.150m (c.2-minute-walk) of the site. The majority of the site is situated within an approximate 500m distance of the existing bus stops, which may indicate that they could be suitable to serve the proposed development (subject to consultation with LCC, as part of a subsequent planning application). Bus accessibility to and from the site is considered to represent a key element of the overall sustainable access strategy for the site, and it is envisaged that LCC may request that a contribution is provided towards upgrading the bus stops adjacent to the site, potentially accompanied by fair and proportionate contributions towards frequency improvements to the existing no.84 bus service.

Proposed Strategy

4.5.5 In order to capitalise on the opportunities for sustainable access to and from the site, in accordance with the NPPF and the emerging policy requirements of the New Local Plan, development of the site will be guided by a sustainable transport strategy, predicated upon the following items:

- New footway connection at the site frontage, accompanied by dropped kerbs / tactile paving, providing connections to the existing network of footways in the vicinity of the site;
- New dropped kerb / tactile paving crossing facilities on Dunton Road (B581);
- Review potential options for upgrading and utilising the existing PRoWs which dissect the site;
- Potential requirement for contributions towards upgrading bus stops in the vicinity of the site frontage onto Dunton Road (B581) and increasing service frequencies;
- Development of a comprehensive network of footways and footpaths within the site, in order to promote pedestrian permeability within the site;
- Promote a legible block structure on site, with suitable wayfinding facilities, supporting connections through the site and ensuring that the convenience of access for pedestrians, cyclists and public transport users is given priority over the need to accommodate private car trips;
- Development of a comprehensive RTP to promote sustainable modes of travel, from initial occupation.

4.5.6 A 'Movement Strategy' will be developed to inform the development and design of the scheme, going forward. The main aims of the movement strategy are set out below, for reference:

Provide safe and convenient surroundings for the movement of people, including those with restricted mobility and cyclists.
Create safe routes for pedestrian, cycling and vehicular movement.
Keep vehicle flows and traffic speeds low in the vicinity of homes, and minimise the danger and nuisance created by non-local access traffic.
Ensure that reasonable, and where possible, direct vehicular access to dwellings is available, and enable easy access for public transport and emergency service vehicles.

Residential Travel Plan (RTP)

4.5.7 Further to physical sustainable infrastructure improvements the uptake of sustainable transport can be promoted via implementation of a RTP to be prepared as part of a future planning application for the site.

4.5.8 Part of the motivation behind moving home is the pursuit of a lifestyle change and the promotion of sustainable transport opportunities, alongside encouragement of their use, can be an effective tool in the transport planning toolkit through encouraging long-term behavioural change.

4.5.9 The site will be supported by a RTP that will seek to reduce single occupancy private car trips to/from the site in favour of more sustainable modes of travel. The RTP will be delivered by an appointed Travel Plan Co-ordinator who will be responsible for the promotion of the plan, roll-out and administration of measures, engagement with residents, Council and key stakeholders and ongoing monitoring of the plan.

Mobility Credits

4.5.10 Furthermore, there is opportunity to introduce a 'mobility credit' scheme at the site , whereby, the initial occupiers of each household are entitled to a specified value/sum of sustainable travel 'credits', supporting households with their individual sustainable travel patterns / needs.

4.5.11 In this instance, the individual household mobility credit 'pot' could be used towards discounts / subsidies on items such as the following:

- Electric Vehicle (EV) charging points;
- New cycle equipment;
- Public transport discounts / taster tickets / passes;
- Cycle training; and/or,
- Cycle/scooter hire.

4.5.12 Note that the above list is not exclusive and/or exhaustive; this can ultimately be varied by the scheme manager (envisaged to be the Travel Plan Co-ordinator), as this is being developed and comes to fruition as part of the development planning application.

4.5.13 By offering mobility credits, residents will be given an individual choice for a subsidy / discount towards a sustainable travel mode which would benefit them personally, giving them a sense of ownership, which is likely to increase uptake. Uptake is likely to be much greater than a blanket offering of the same individual measures which may not suit an individual resident's travel requirements / patterns at that time. The approach also provides flexibility to offer different measures to different residents of the site and individual households, expanding the reach and supporting the viability of the ongoing overall travel planning process.

5. Traffic Impact

5.1 Overview

5.1.1 An initial forecast of the trip generation of the site has been undertaken, along with a high-level review of the surrounding highway network in terms of potential off-site impacts (i.e. any areas where significant impacts may reasonably be expected).

5.2 Traffic Generation

5.2.1 In order to provide an indication of the potential traffic impact of the proposed scheme, data has been obtained from the TRICS (V7.10.4) database for developments from the 'Residential – Houses Privately Owned' (03/A) land use category. The full TRICS output report is attached at **Appendix C**, for reference.

5.2.2 A summary of the parameters used to formulate the trip rates is set out below, for reference:

- Sites excluding London, Greater London, Ireland, Scotland and Wales;
- Survey site range between: 01/01/15 – 04/07/23;
- Survey site development range: 160 – 716;
- Edge of town areas only;
    - Residential zones; and,
    - Out of town zones;
- Weekday surveys only;
- Sites with similar level of public transport provision;
- Removed sites which were surveyed during Covid-19 restrictions; and,
- Removed sites which were originally surveyed and have been resurveyed since.

5.2.3 An overview of the trip rates and subsequent trip generation associated with the development of 365 dwellings on the site is provided in **Table 5.1**, covering the traditional highway network weekday AM (08:00-09:00) and PM (17:00-18:00) peak hours.

Table 5.1 Two-way Vehicular Trip Generation

	AM Peak Period (08:00 – 09:00)			PM Peak Period (17:00 – 18:00)		
	Arrive	Depart	Two-way	Arrive	Depart	Two-way
Trip Rate (Per Dwelling)	0.144	0.372	0.516	0.349	0.159	0.508
Trip Generation (365 Dwellings)	53	136	188	127	58	185

5.2.4 As outlined above, it is forecast that a development site of up to 365 dwellings could generate in the region of 188 and 185 two-way trips during the AM and PM peak hours, respectively. This equates to approximately three additional two-way trips per minute on the local highway network during the AM and PM peak hours. Impacts on individual highway links and junctions further afield will likely be lower than this as the distribution of traffic dissipates through the surrounding highway network.

5.3 Traffic Distribution

5.3.1 On account of the scale of the development proposals, off-site junction capacity assessments are likely to be required as part of a future Transport Assessment for the site, to identify locations where highways mitigation schemes may be required to offset the traffic impact of the proposed development.

5.3.2 In order to understand the routing of trips associated with the proposed development, traffic has been distributed across the local highway network using the 2011 Census data relating to the locations of workplaces where existing residents in the local Middle Super Output Area (MSOA) E02005370 (Harborough 004) travel to/from by car.

5.3.3 The local highway network has been analysed and the main routes / areas surrounding the site have been assigned to a zone. Traffic has then assigned to the road network based on the shortest journey time to each respective zone (using Google Maps Directions / journey planning tool). This has been used to determine the level of development traffic expected to be generated at key off site junctions. An overview of the zones considered as part of this exercise is provided in **Figure 7**, attached at **Appendix A**.

5.3.4 A summary of the proportion of vehicular trips forecast to route between the site and each of the journey zones, along with the resultant two-way trip generation during the respective AM and PM peak hours, is outlined below in **Table 5.2**.

Table 5.2 Traffic Distribution Summary

Zone	Route Destination	Distribution %	AM Two-way Trips	PM Two-way Trips
A	Whetsome	14%	26	26
B	Countesthorpe	6%	11	11
C	Peatling Parva	3%	6	6
D	Kimcote	0%	0	0
E	Walcote	0%	0	0
F	M1 SB	3%	6	6
G	Lutterworth	7%	13	13
H	Bittesby	9%	17	17
I	Smockington	7%	13	13
J	M69 NB	0%	0	0
K	Hinckley (Lash Hill)	7%	13	13
L	Broughton Astley	10%	19	19
M	Enderby Park & Ride	20%	38	37
N	Ashton Lodge Country House	0%	0	0
O	Stoney Stanton	3%	6	6
P	Croft	2%	4	4
Q	Narborough	4%	8	7
R	Cotesbach	4%	8	7

5.4 Key Junctions

5.4.1 Based on the scale of development proposed and the routes to / from the site along the highway links in the locality, it is envisaged that junction assessments (as part of a future Transport Assessment to accompany a planning application) will be required at the locations summarised below:

1. Proposed Site Access / Dunton Road (B581) – Priority Junction;
2. Broughton Road / Broughton Way (B581) / Cosby Road – Signalised Junction;
3. Coventry Road E / Coventry Road S / Coventry Road N – Signalised Junction;
4. Leicester Road (B4669) / Coventry Road N / Coventry Road S – Ghost-Island Priority Junction;
5. King Edward Avenue (B4114) / Desford Road E / Desford Road W – Roundabout;
6. Station Road / Lutterworth Road (A426) / Coopers Lane (B581) – Signalised Junction; and,
7. St Johns (B4114) / Leicester Road (B4114) / Blaby Road (B582) – Roundabout.

6. Summary

6.1 Summary

6.1.1 mode has been commissioned by Stantec (on behalf of W E Hewitt & Son Ltd) to prepare this TN in relation to the ongoing promotion of land at Dunton Road (B581), for a new residential development through HDC's NLP.

6.1.2 This TN has reviewed the principle of vehicular access from the adjacent highway network, and the sustainable access credentials and strategy that could be delivered in order to connect the site with existing walking and cycle routes in the vicinity of the site.

6.1.3 The site is situated in an accessible location, with opportunities to promote further sustainable travel for future residents. The site is immediately south of Broughton Astley, which benefits from a comprehensive footway network which is street-lit and of good quality, providing connections to local facilities and services, including a primary school, and local community, leisure and retail facilities. Further to the above, secondary education can also be accessed from the site using the existing no. 84 bus service.

6.1.4 Dunton Road (B581) is identified as an advisory 'quieter route' for cycling, providing connections north towards the centre of Broughton Astley, and south to the nearby village of Dunton Bassett. This route also connects with a network of advisory 'quieter routes' for cycling, providing access south towards Lutterworth, providing access to the NCN (Route 50), and towards Leicester City Centre.

6.1.5 The closest bus stops to the site are located along the Dunton Road (B581) and can be accessed via the existing footway provision along the local highway network. The stops provide services connecting the site with Leicester, Whetstone, Cosby and Lutterworth.

6.1.6 Analysis of the local highway network in the vicinity of the site has demonstrated that there are currently no inherent highway safety issues on the local highway network surrounding the site which would likely be exacerbated by the development.

6.1.7 Relevant guidance has been reviewed to establish the guidelines for providing access to a new residential development. A visual inspection of the site and surrounding area was undertaken on the 19th March 2021, to evaluate the suitability of vehicular and sustainable access/egress into the site. A preliminary concept junction design has been produced illustrating a residential access road measuring 6.75m. The design of the potential access has been based on guidance set out in LCC's LHDG / MfS.

6.1.8 It is forecast that a development site of up to 365 dwellings could generate in the region of 188 and 185 two-way trips during the AM and PM peak hours, respectively. This equates to approximately three additional two-way trips per minute on the local highway network during the AM and PM peaks.

6.1.9 In order to understand the routing of trips associated with the proposed development, traffic has been distributed across the local highway network using 2011 Census data relating to the locations of workplaces where existing residents in the local MSOA E02005370 (Harborough 004) travel to by car.

6.1.10 A more detailed assessment of the impact on the local highway network will be undertaken as part of a future Transport Assessment (alongside a planning application), however, based on the scale of development proposed and the routes to / from the site along the highway links in the locality, it is envisaged that junction assessments will be required at the locations summarised below:

1. Proposed Site Access / Dunton Road (B581) – Priority Junction;
2. Broughton Road / Broughton Way (B581) / Cosby Road – Signalised Junction;
3. Coventry Road E / Coventry Road S / Coventry Road N – Signalised Junction;
4. Leicester Road (B4669) / Coventry Road N / Coventry Road S – Ghost-Island Priority Junction;
5. King Edward Avenue (B4114) / Desford Road E / Desford Road W – Roundabout;
6. Station Road / Lutterworth Road (A426) / Coopers Lane (B581) – Signalised Junction; and,
7. St Johns (B4114) / Leicester Road (B4114) / Blaby Road (B582) – Roundabout.

6.1.11 Overall, the findings of this TN demonstrate that there are a number of potential opportunities with respect to the transport strategy for the site which can be promoted to ensure future residents and visitors are provided with genuine modal choice.

6.1.12 In order to capitalise on the opportunities for sustainable access to and from the site, in accordance with the NPPF and the emerging policy requirements of the NLP, development of the site will be guided by a sustainable transport strategy, predicated upon the following items:

- New footway connection at the site frontage, accompanied by dropped kerbs / tactile paving, providing connections to the existing network of footways in the vicinity of the site;
- New dropped kerb / tactile paving crossing facilities on Dunton Road (B581);
- Review potential options for upgrading and utilising the existing PRoWs which dissect the site;
- Potential requirement for contributions towards upgrading bus stops in the vicinity of the site frontage onto Dunton Road (B581) and increasing service frequencies;

- Development of a comprehensive network of footways and footpaths within the site, in order to promote pedestrian permeability within the site;
- Promote a legible block structure on site, with suitable wayfinding facilities, supporting connections through the site and ensuring that the convenience of access for pedestrians, cyclists and public transport users is given priority over the need to accommodate private car trips;
- Development of a Residential Travel Plan to promote sustainable modes of travel, from initial occupation.

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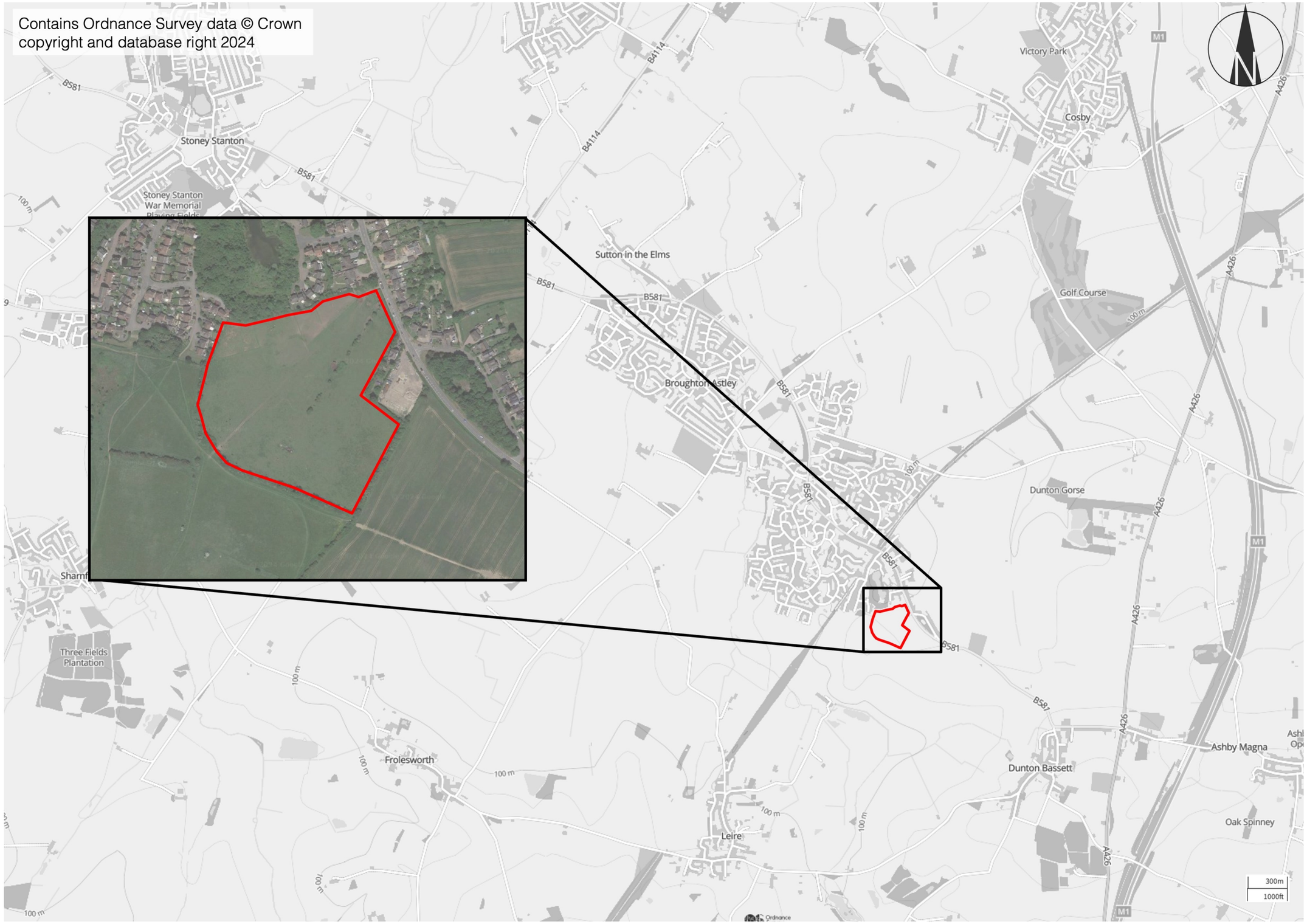
APPENDICES

APPENDIX A

Figures



Legend

Site Location

Figure Title

Site Location

Figure Number

Figure 1

Project Title

Dunton Road, Broughton Astley

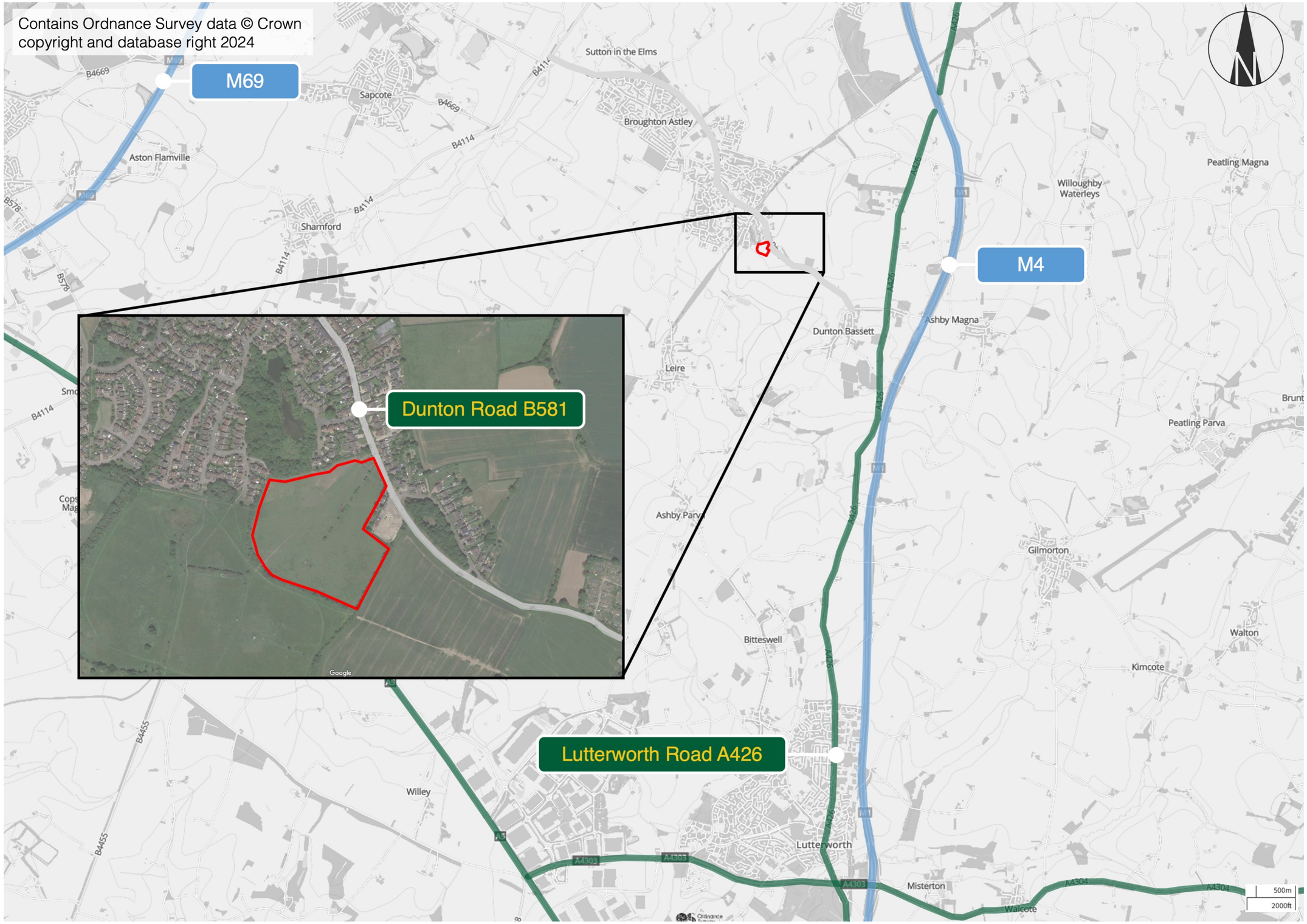
Project Number

J325675

Client

W E Hewitt & Son Ltd

mode transport planning



Legend

- Site Location
- Minor Road
- A-Road
- Motorway

Figure Title
Local Highway Network

Figure Number
Figure 2

Project Title
Dunton Road, Broughton Astley

Project Number
J325675

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Legend

Site Location

Collision Study Area

Collision Severity

Slight

Figure Title

Collisions

Figure Number

Figure 3

Project Title

Dunton Road, Broughton Astley

Project Number

J325675

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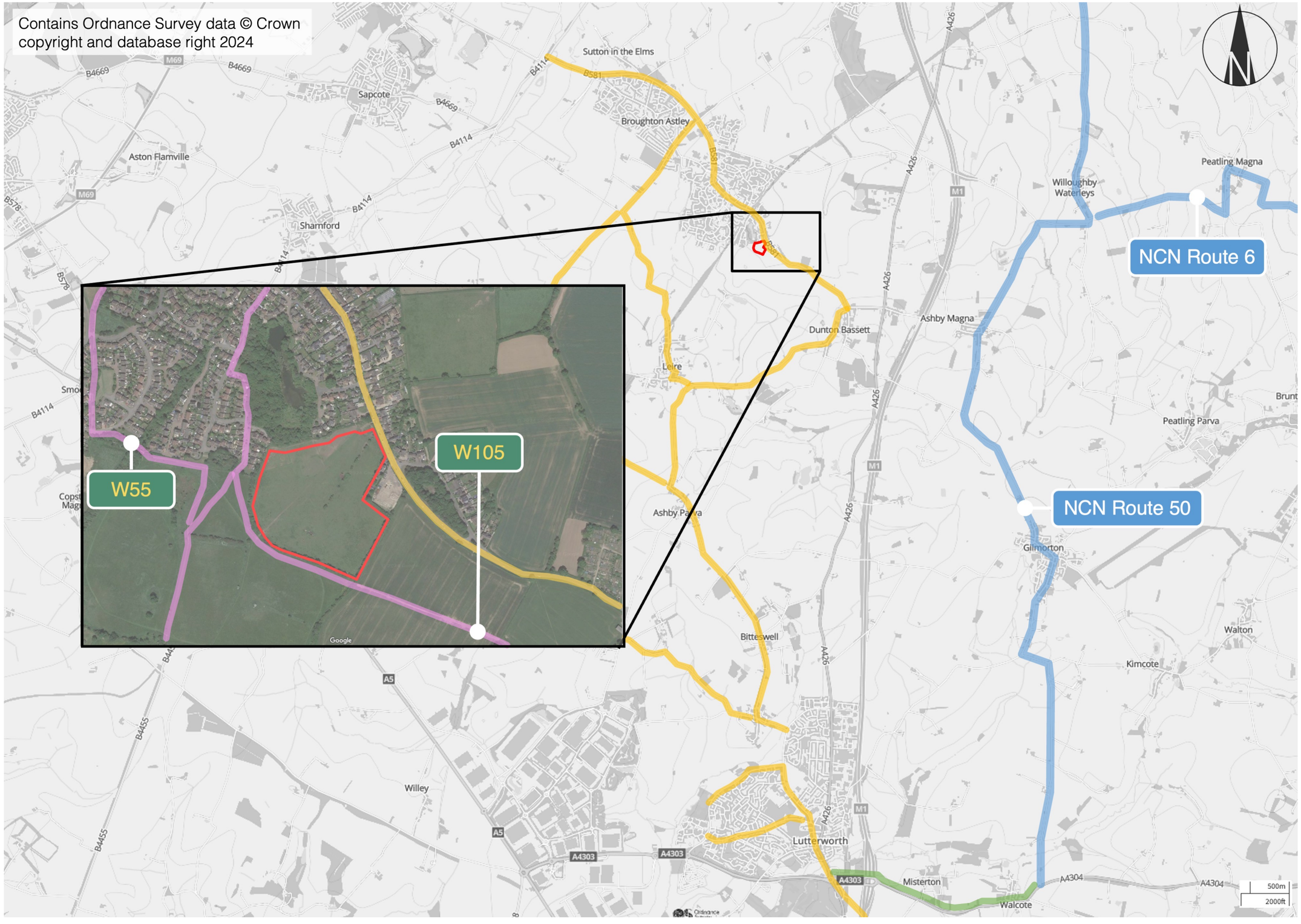

Legend

- Site Location
- Footpath
- Recommended Cycle Route
- National Cycle Network Route

Figure Title

Walking / Cycling Routes

Figure Number

Figure 4

Project Title

Dunton Road, Broughton Astley

Project Number

J325675

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Legend

- Site Location
- Pedestrian Desire Line
- Bus Stops

Figure Title

Bus Stops

Figure Number

Figure 5

Project Title

Dunton Road, Broughton Astley

Project Number

J325675

Client

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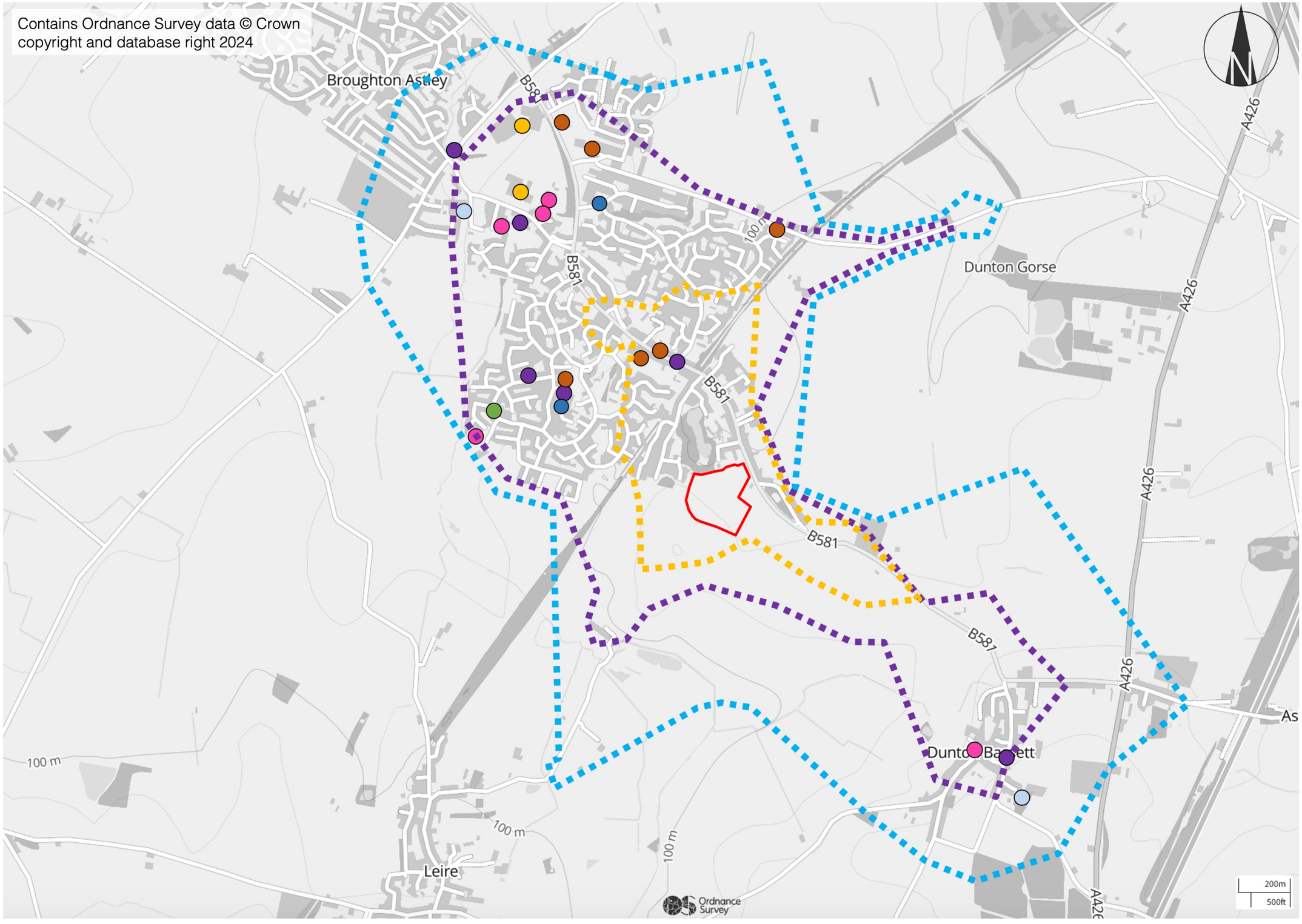


Figure Title

Amenities – Walking Catchment

Figure Number

Figure 6

Project Title

Dunton Road, Broughton Astley

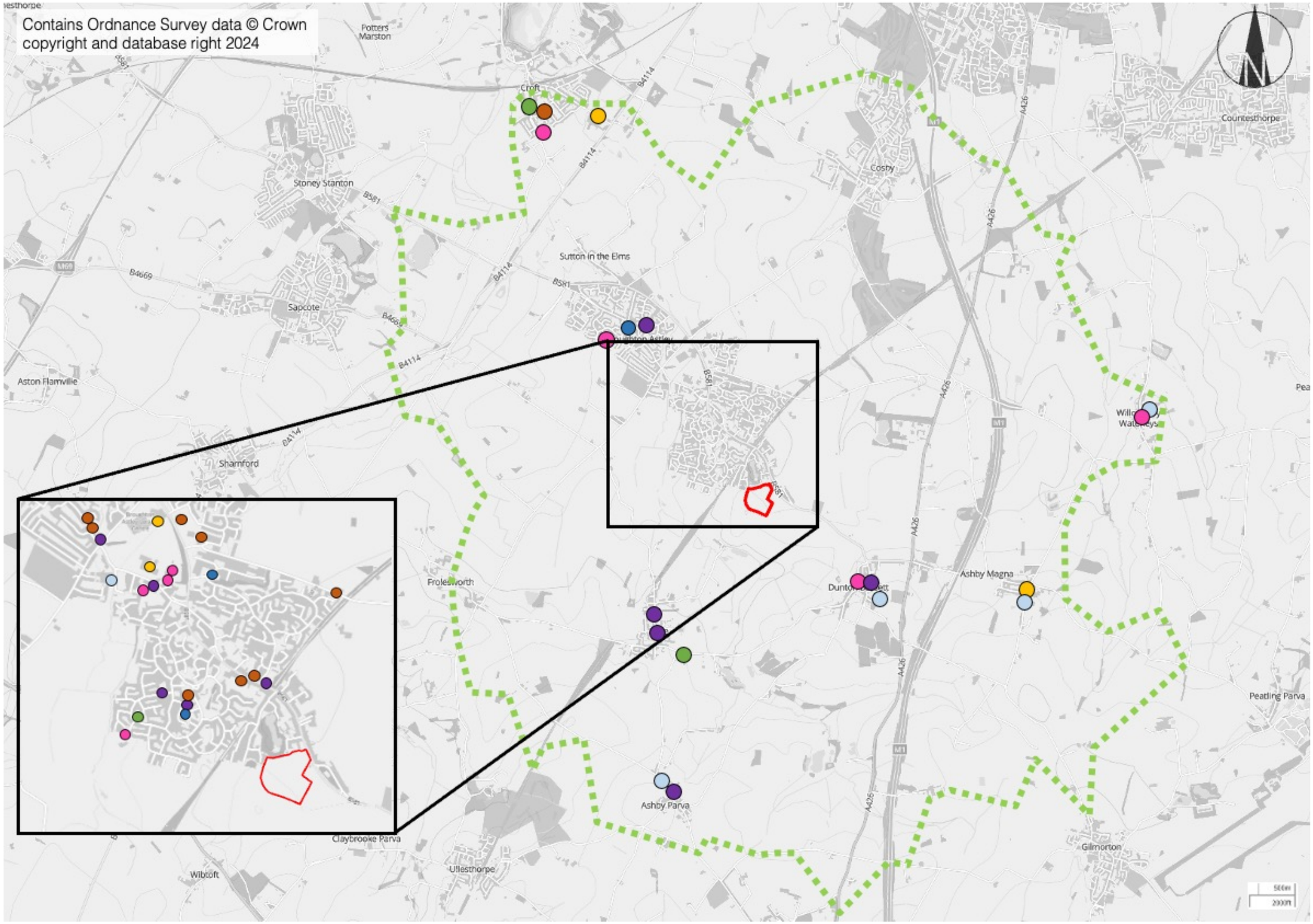
Project Number

J325675

Client

W E Hewitt & Son Ltd

mode transport planning



- Site Location
- 2000 meters isodistance
- Schools
- Leisure
- Place to Eat / Drink
- Places of Worship
- Shop
- Outdoor Space
- Medical

Figure Title

Amenities – Cycling Catchment

Figure Number

Figure 7

Project Title

Dunton Road, Broughton Astley

Project Number

J325675

Client

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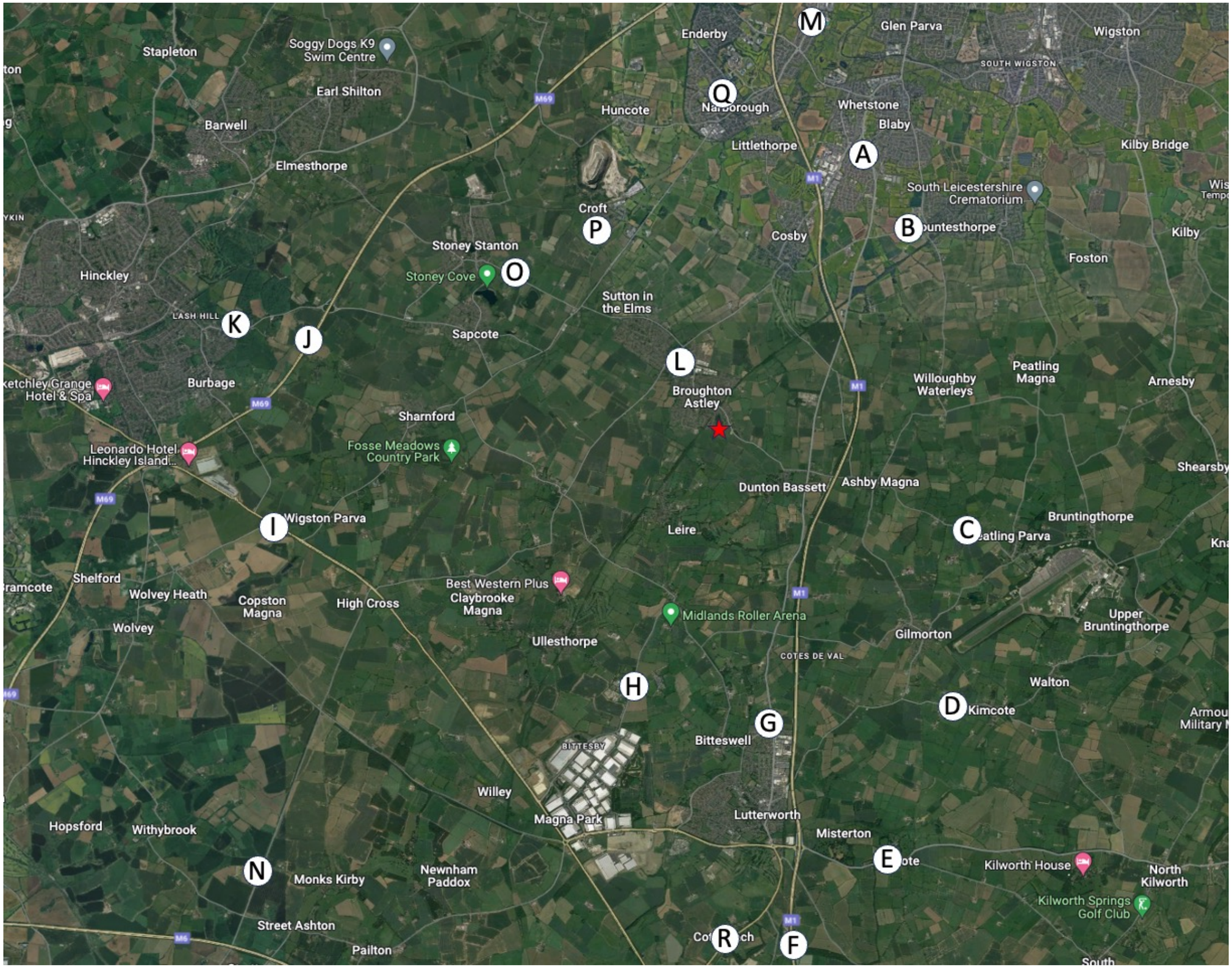

Legend

Site Location

A Distribution Zone

Distribution Proportions

A – 14%
B – 14%
C – 3%
D – 0%
G -7%
H – 9%
I – 7%
J – 0%
K – 7%
L – 10%
M – 20%
O – 3%
P – 2%
Q – 4%

Figure Title
Distribution

Figure Number
Figure 8

Project Title
Dunton Road, Broughton Astley

Project Number
J325675

Client
W E Hewitt & Son Ltd

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APPENDIX B

Access Drawing

NOTE;

1. THIS DRAWING IS BASED UPON THE ORDNANCE SURVEY'S (1:1250) MAP WITH PERMISSION OF THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE, CROWN COPYRIGHT RESERVED.

2. THIS DRAWING IS INDICATIVE AND SUBJECT TO DISCUSSIONS WITH LOCAL & NATIONAL HIGHWAY AUTHORITIES. THIS DESIGN IS ALSO SUBJECT TO CONFIRMATION OF LAND OWNERSHIP,TOPOGRAPHY, LOCATION OF STATUTORY SERVICES, DETAILED DESIGN AND TRAFFIC MODELLING.

3. ROAD MARKINGS & TRAFFIC SIGNS ARE TO BE IN ACCORDANCE WITH 'THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS 2016'

5. HIGHWAY BOUNDARY INFORMATION HAS BEEN PROVIDED BY LEICESTERSHIRE COUNTY COUNCIL (LCC 2021) AND HAS BEEN TRANSCRIBED BY MODE ONTO AN ORDNANCE SURVEY. MODE ACCEPTS NO LIABILITY FOR THE ACCURACY OF THE DATA PROVIDED AND THE HIGHWAY BOUNDARY INFORMATION SHOWN IS SUBJECT TO CHECKS BY A LICENSED CONVEYANCER.

5. DO NOT SCALE FROM THIS DRAWING WORK FROM FIGURED DIMENSIONS ONLY.

6. ALL DIMENSIONS ARE SHOWN IN METRES UNLESS NOTED OTHERWISE.

KEY:

SITE BOUNDARY

HIGHWAY BOUNDARY
(TRANSCRIBED HIGHWAY BOUNDARY BASED ON LCC)

VISIBILITY SPLAY 2.4m x 43m (30mph) - 1m OFFSET OF CARRIAGEWAY
(VISIBILITY SPLAYS ARE BASED UPON MfS STANDARDS)

REV	DATE	REMARKS
A	21.02.2024	AMENDED TITLEBLOCK
-	25.03.2021	INITIAL ISSUE

CLIENT

W E HEWITT & SONS LTD

JOB TITLE

BROUGHTON ASTLEY
RESIDENTIAL PROMOTION

DRAWING TITLE

VISIBILITY SPLAY

DRAWING NO.

J32-5675-PS-001

DRAWN	CHECKED
ESP	JFN
CREATED	SCALE
FEB '24	1:500 @A3

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GRIFFIN HOUSE
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E INFO@MODETRANSPORT.CO.UK
W WWW.MODETRANSPORT.CO.UK

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APPENDIX C

TRICS Search Outputs

mode transport limited Lombard House, 145 Great Charles Street Birmimgham, B3 3LP Licence No: 754101

Calculation Reference: AUDIT-754101-240219-0255

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
	HC	HAMPSHIRE	2 days
	HF	HERTFORDSHIRE	1 days
	KC	KENT	2 days
	SC	SURREY	1 days
	SP	SOUTHAMPTON	1 days
	WS	WEST SUSSEX	1 days
04	EAST ANGLIA		
	NF	NORFOLK	7 days
05	EAST MIDLANDS		
	DY	DERBY	1 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 160 to 716 (units:)
Range Selected by User: 150 to 750 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 04/07/23

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	4 days
Tuesday	6 days
Wednesday	6 days
Thursday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	14 days
Directional ATC Count	4 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town	18

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	15
Out of Town	2
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	8 days - Selected
Servicing vehicles Excluded	37 days - Selected

Secondary Filtering selection:

Use Class:

C3	18 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	6 days
10,001 to 15,000	6 days
15,001 to 20,000	2 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	5 days
25,001 to 50,000	1 days
50,001 to 75,000	2 days
75,001 to 100,000	2 days
125,001 to 250,000	5 days
250,001 to 500,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	11 days
1.6 to 2.0	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	14 days
No	4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	18 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 DY-03-A-01 MIXED HOUSES DERBY
RADBOURNE LANE
DERBY

Edge of Town
Residential Zone
Total No of Dwellings: 371
Survey date: TUESDAY *10/07/18* *Survey Type: MANUAL*

2 ES-03-A-03 MIXED HOUSES & FLATS EAST SUSSEX
SHEPHAM LANE
POLEGATE

Edge of Town
Residential Zone
Total No of Dwellings: 212
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

3 HC-03-A-24 MIXED HOUSES & FLATS HAMPSHIRE
STONEHAM LANE
EASTLEIGH

Edge of Town
Residential Zone
Total No of Dwellings: 243
Survey date: WEDNESDAY *10/11/21* *Survey Type: MANUAL*

4 HC-03-A-33 MIXED HOUSES & FLATS HAMPSHIRE
CROW LANE
RINGWOOD
CROW
Edge of Town
Residential Zone
Total No of Dwellings: 195
Survey date: TUESDAY *04/07/23* *Survey Type: MANUAL*

5 HF-03-A-03 MIXED HOUSES HERTFORDSHIRE
HARE STREET ROAD
BUNTINGFORD

Edge of Town
Residential Zone
Total No of Dwellings: 160
Survey date: MONDAY *08/07/19* *Survey Type: MANUAL*

6 KC-03-A-07 MIXED HOUSES KENT
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total No of Dwellings: 288
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

7 KC-03-A-11 MIXED HOUSES & FLATS KENT
COLDHARBOUR ROAD
GRAVESEND

Edge of Town
No Sub Category
Total No of Dwellings: 375
Survey date: MONDAY *20/03/23* *Survey Type: MANUAL*

8 NF-03-A-17 MIXED HOUSES & FLATS NORFOLK
ROUND HOUSE WAY
NORWICH
CRINGLEFORD
Edge of Town
Residential Zone
Total No of Dwellings: 716
Survey date: TUESDAY *20/10/15* *Survey Type: DIRECTIONAL ATC COUNT*

LIST OF SITES relevant to selection parameters (Cont.)

9 NF-03-A-23 MIXED HOUSES & FLATS NORFOLK
SILFIELD ROAD
WYMONDHAM

Edge of Town
Out of Town
Total No of Dwellings: 514
Survey date: WEDNESDAY *22/09/21* *Survey Type: MANUAL*

10 NF-03-A-31 MIXED HOUSES NORFOLK
BRANDON ROAD
SWAFFHAM

Edge of Town
Residential Zone
Total No of Dwellings: 321
Survey date: THURSDAY *22/09/22* *Survey Type: DIRECTIONAL ATC COUNT*

11 NF-03-A-32 MIXED HOUSES & FLATS NORFOLK
HUNSTANTON ROAD
HUNSTANTON

Edge of Town
Residential Zone
Total No of Dwellings: 164
Survey date: WEDNESDAY *21/09/22* *Survey Type: DIRECTIONAL ATC COUNT*

12 NF-03-A-38 MIXED HOUSES NORFOLK
BEAUFORT WAY
GREAT YARMOUTH
BRADWELL
Edge of Town
Residential Zone
Total No of Dwellings: 537
Survey date: TUESDAY *20/09/22* *Survey Type: MANUAL*

13 NF-03-A-39 MIXED HOUSES NORFOLK
HEATH DRIVE
HOLT

Edge of Town
Residential Zone
Total No of Dwellings: 212
Survey date: TUESDAY *27/09/22* *Survey Type: MANUAL*

14 NF-03-A-47 MIXED HOUSES & FLATS NORFOLK
BURGH ROAD
AYLSHAM

Edge of Town
Residential Zone
Total No of Dwellings: 300
Survey date: WEDNESDAY *21/09/22* *Survey Type: DIRECTIONAL ATC COUNT*

15 SC-03-A-05 MIXED HOUSES SURREY
REIGATE ROAD
HORLEY

Edge of Town
Residential Zone
Total No of Dwellings: 207
Survey date: MONDAY *01/04/19* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

16 SP-03-A-02 MIXED HOUSES & FLATS SOUTHAMPTON
BARNFIELD WAY
NEAR SOUTHAMPTON
HEDGE END
Edge of Town
Out of Town
Total No of Dwellings: 250
Survey date: TUESDAY *12/10/21* *Survey Type: MANUAL*

17 ST-03-A-07 DETACHED & SEMI-DETACHED STAFFORDSHIRE
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total No of Dwellings: 248
Survey date: WEDNESDAY *22/11/17* *Survey Type: MANUAL*

18 WS-03-A-08 MIXED HOUSES WEST SUSSEX
ROUNDSTONE LANE
ANGMERING

Edge of Town
Residential Zone
Total No of Dwellings: 180
Survey date: THURSDAY *19/04/18* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
HC-03-A-26	COVID 19
WS-03-A-12	COVID 19
WS-03-A-13	COVID 19

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	18	305	0.078	18	305	0.304	18	305	0.382
08:00 - 09:00	18	305	0.144	18	305	0.372	18	305	0.516
09:00 - 10:00	18	305	0.133	18	305	0.177	18	305	0.310
10:00 - 11:00	18	305	0.125	18	305	0.147	18	305	0.272
11:00 - 12:00	18	305	0.132	18	305	0.144	18	305	0.276
12:00 - 13:00	18	305	0.144	18	305	0.144	18	305	0.288
13:00 - 14:00	18	305	0.149	18	305	0.137	18	305	0.286
14:00 - 15:00	18	305	0.158	18	305	0.169	18	305	0.327
15:00 - 16:00	18	305	0.252	18	305	0.160	18	305	0.412
16:00 - 17:00	18	305	0.263	18	305	0.174	18	305	0.437
17:00 - 18:00	18	305	0.349	18	305	0.159	18	305	0.508
18:00 - 19:00	18	305	0.281	18	305	0.149	18	305	0.430
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.208			2.236			4.444

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	160 - 716 (units:)
Survey date date range:	01/01/15 - 04/07/23
Number of weekdays (Monday-Friday):	18
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	24
Surveys manually removed from selection:	3

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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