Land at Cross Green

Strategic Transport Assessment

DTA

Transport Planning Consultants

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Strategic Transport Assessment

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SJT/TM 23199-02 Strategic Transport Assessment_FINAL

Prepared by:

David Tucker Associates
Forester House, Doctors Lane
Henley–in-Arden
Warwickshire
B95 5AW

Tel: 01564 793598
Fax: 01564 793983
inmail@dtatransportation.co.uk
www.dtatransportation.co.uk

Prepared For:

Taylor Wimpey

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1.0 INTRODUCTION

1.1 DTA Transportation Limited has been commissioned on behalf of Taylor Wimpey to provide transport advice in relation to the proposed allocation of Land at Cross Green for residential development within the emerging South Staffordshire Local Plan. The location of the site is shown on **Figure 1**.

1.2 This Strategic Transport Assessment (TA) has been prepared following discussions with South Staffordshire Council (SSC), Staffordshire County Council (SCC), the City of Wolverhampton Council (CWC) and National Highways (NH). It provides a high level strategic review of the impact of the proposed site allocation within the emerging Local Plan and focusses on deliverability. A more detailed TA would be required at the planning application stage.

1.3 The pertinent paragraphs from the National Planning Policy Framework (NPPF) in relation to the transport evidence base are set out below:

> ***Para 104.*** *Transport issues should be considered from the earliest stages of plan-making and development proposals, 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.*
>
> ***Para 105.*** *The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.*

1.4 In terms of sustainable accessibility, the site is well located to take advantage of existing and proposed foot, cycle and public transport services in the local area. Opportunities for maximising connectivity between the proposed development and the local area are discussed in this report.

1.5 Primary vehicle access to the site is to be taken from the new link road proposed as part of the ROF Featherstone employment scheme which has been granted planning permission. Secondary points of vehicle access are proposed onto Brinsford Lane and New Road. Separate pedestrian/ cycle access points are also proposed and are shown on the illustrative site layout plan at **Appendix A**, which will form part of a pedestrian and cycle priority route through the site.

1.6 As part of STA, an assessment of the impact of the proposals on the operation of the local road network has been undertaken. This has primarily been done to inform the viability assessment of the emerging Local Plan and to derive indicative costs in relation to potential mitigation works. A separate report assessing the impact of the proposed strategic allocations on the strategic road network has also been prepared.

2.0 POLICY CONTEXT

2.1 National Policy

National Planning Policy Framework

2.1.1 In July 2021, the Government published a revised National Planning Policy Framework (NPPF).

2.1.2 Paragraph 111 of the NPPF is clear that: *"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe"*.

2.1.3 Within this context, the NPPF identifies in Paragraph 104 and 105 that:

"Transport issues should be considered from the earliest stages of plan-making and development proposals, 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".

The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making".

2.1.4 Paragraph 113 of the NPPF goes on to state that: *"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed"*.

2.1.5 In reinforcing the principle of supporting sustainable development, paragraph 10 stipulates that at the heart of the Framework is *"...a presumption in favour of sustainable development".*

Planning Practice Guidance (March 2014)

2.1.6 The Department for Communities and Local Government (CLG) first published the Planning Practice Guidance (PPG) in 2014, which reinforces the guidance contained in the NPPF. It is now an online resource which is regularly updated.

2.1.7 The PPG in Paragraph: 002 Reference ID: 42-002-20140306 states that Travel Plans and Transport Assessments are ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development. They are required for all developments which generate significant amounts of movements.

2.1.8 The Guidance goes on to explain what these documents are, why they are important, what information they should contain and how they should relate to one another.

Circular 02/2013 – The Strategic Road Network and the Delivery of Sustainable Development

2.1.9 Circular 02/2013 replaces the policy set out in Circular 02/2007 'Planning and the Strategic Road Network' and DfT Circular 01/2008 Policy on Service Areas and other Roadside Facilities on Motorways and All-purpose Trunk Roads in England. It sets out the way in which HE will engage with communities and developers to deliver sustainable development, whilst safeguarding the primary function and purpose of the SRN.

2.1.10 In terms of assessing development impact, Paragraph 25 of the Circular states that:

"The overall forecast demand should be compared to the ability of the existing network to accommodate traffic over a period up to ten years after the date of registration of a planning application or the end of the relevant Local Plan whichever is the greater. This is known as the review period."

National Model Design Code

2.1.11 The National Model Design Code sets out clear design parameters to help local authorities and communities decide what good quality design looks like in their area. It expands on the ten characteristics of good design set out in the National Design Guide, which reflects the government's priorities and provides a common overarching framework for design.

2.2 Local Policy

South Staffordshire Local Plan and Emerging Local Plan

2.2.2 The South Staffordshire Local plan provides the planning framework for all new development in South Staffordshire and is comprised of two documents; the Core Strategy which was adopted in 2012 and the Site Allocations Document which was adopted in 2018.

2.2.3 The Council is currently undertaking a review of the Local Plan and a consultation on the Preferred Options took place between November and December 2021. The Preferred Options consultation document identified Land at Cross Green as a Strategic Development Location to deliver a minimum of 1,200 homes to 2038, an on-site primary school and a local centre to include retail and community facilities of an appropriate scale, along with land for a rail-based Park & Ride.

Staffordshire Local Transport Plan 3 (2011)

2.2.4 In April 2011, SCC published the Strategy Plan for Staffordshire's third Local Transport Plan. It sets out the County Council's proposals for transport provision within the county, including walking, cycling, public transport, car-based travel and freight, together with the management and maintenance of local roads and footways.

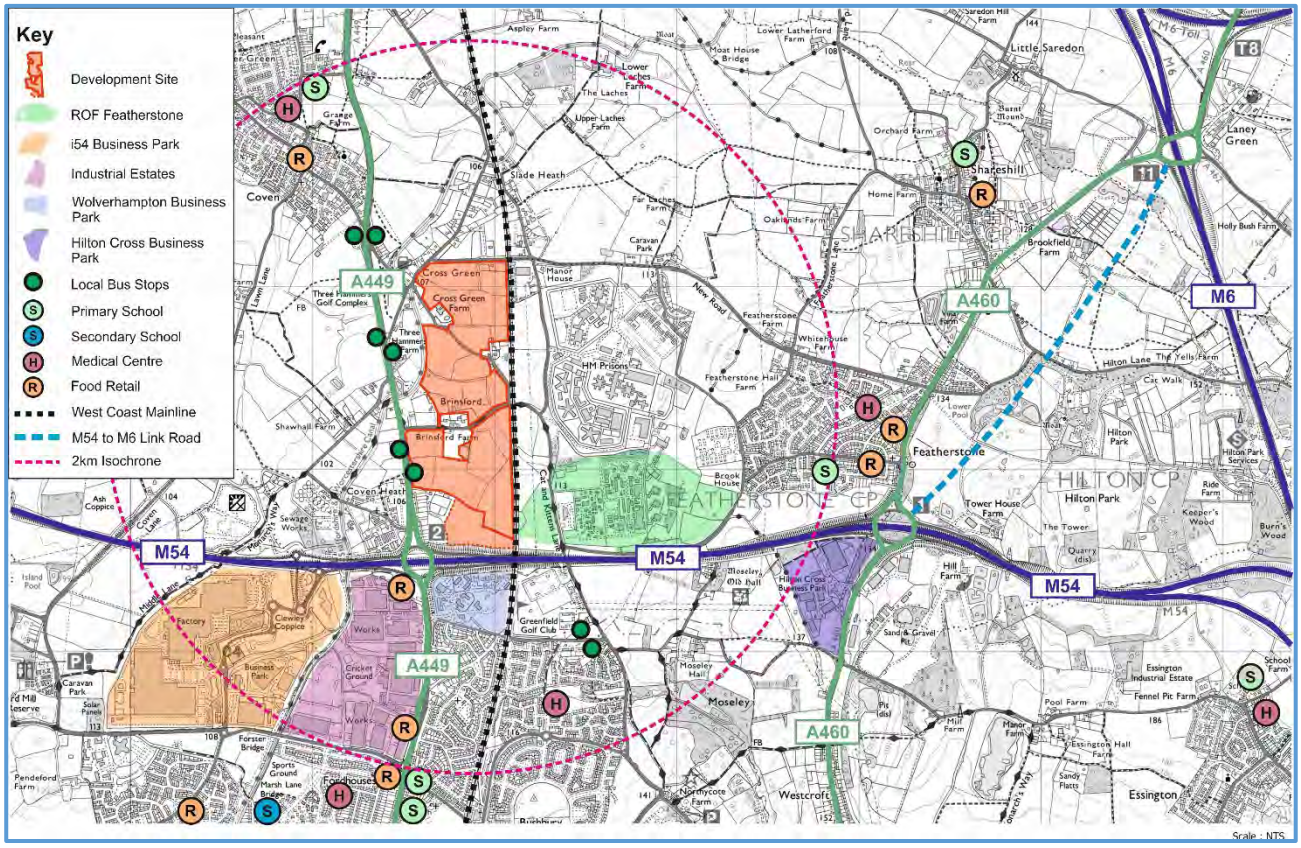
3.0 BACKGROUND CONDITIONS AND ACCESSIBILITY

3.1 Site Location

3.1.1 The development site is situated west of ROF Featherstone and is located between the A449 Stafford Road to the west and the West Coast Mainline (WCML) to the east. The M54 routes to the immediate south of the site and New Road to the north.

3.1.2 Featherstone village is located to the east of the site, Coven Heath to the west, and Cross Green, Slade Heath and Coven to the north. To the south of the site is Wolverhampton, which includes the nearby i54, Boundary Industrial Estate and Wolverhampton Business Park. The location of the site is shown in **Figure 1**.

Figure 1 – Site Context Plan



3.2 Strategic Road Network

A449 Stafford Road

3.2.1 The A449 Stafford Road to the west of the site (shown on **Figure 1**) is a dual carriageway road, with two lanes in each direction, which connects the A5 to the north with the M54 to the south. It provides a strategic north-south corridor linking into Stafford and the West Midlands. It is designated as trunk road between the A5 and M54, and street lighting is provided within the central reserve along the full length of the road between the A5 and M54.

3.2.2 The A449 connects with the M54 at Junction 2 via a large, signalised grade-separated roundabout, before continuing south into Wolverhampton (where it is no longer part of the strategic road network). To the north of M54 Junction 2, the road is subject to a 40mph speed limit before transitioning to a 60mph speed limit at Shaw Hall Lane. To the south, the A449 is dual carriageway road that passes through the centre of Wolverhampton.

3.2.3 Connections onto the A449 to the west within the vicinity of the site are provided via Brinsford Lane and Old Stafford Road, and take the form of left-in/ left-out priority T-junctions. To the north-west of the proposed development, Brewood Road joins with the A449 Stafford Road at two at-grade three-arm roundabouts, before passing Coven. It continues to the A5 which can be accessed via Gailey Island which is an at-grade four-arm roundabout. North of A5, the A449 continues northwards through Penkridge and joins with the M6 at J13.

3.2.4 As part of the employment scheme at ROF Featherstone, which has now been granted planning approval, a new access onto the A449 is proposed. The road, which includes a 7.3m wide carriageway and adjoining pedestrian/ cycle facilities, will connect the A449 Stafford Road with Cat and Kittens Lane. As shown on the drawing attached as **Appendix B**, a new roundabout will be constructed off the A449 and a bridge is to be provided over the WCML. A new four-arm roundabout will then be provided on Cat and Kittens Lane.

M54 Motorway

3.2.5 The M54 motorway, shown on **Figure 1**, runs between the M6 Junction 10A to the east and Telford to the west. In the vicinity of the site, between Junctions 1 and 2, it is a dual three-lane motorway. It has two lanes to the east of Junction 1 and to the west of Junction 2.

3.2.6 Direct connections to/from the M6 Motorway to the north are not available due to the arrangement at M6 Junction 10A. Therefore, a significant volume of traffic currently uses the A460 to the north of M54 Junction 1 when travelling between the two motorways. Traffic travelling north and west also uses the A449 and A5 from M6 Junction 12.

3.2.7 Junction 2 of the M54 is located to the north-west of the development site, where there is a four-arm fully signalised grade-separated roundabout connecting the M54 motorway with the A449 Stafford Road. The westbound on-slip and eastbound off-slip to the motorway are not directly from this roundabout, but from two smaller roundabouts via the A4510 to the west of the junction, which also provide access to the nearby i54 business park.

3.2.8 To the east, M54 Junction 1 is a grade-separated roundabout with slip roads provided to/ from the M54 Motorway with east and west facing slips. To the north of the M54, the A460 continues as a single carriageway road past Featherstone and through Shareshill, providing connection to M6 Junction 11.

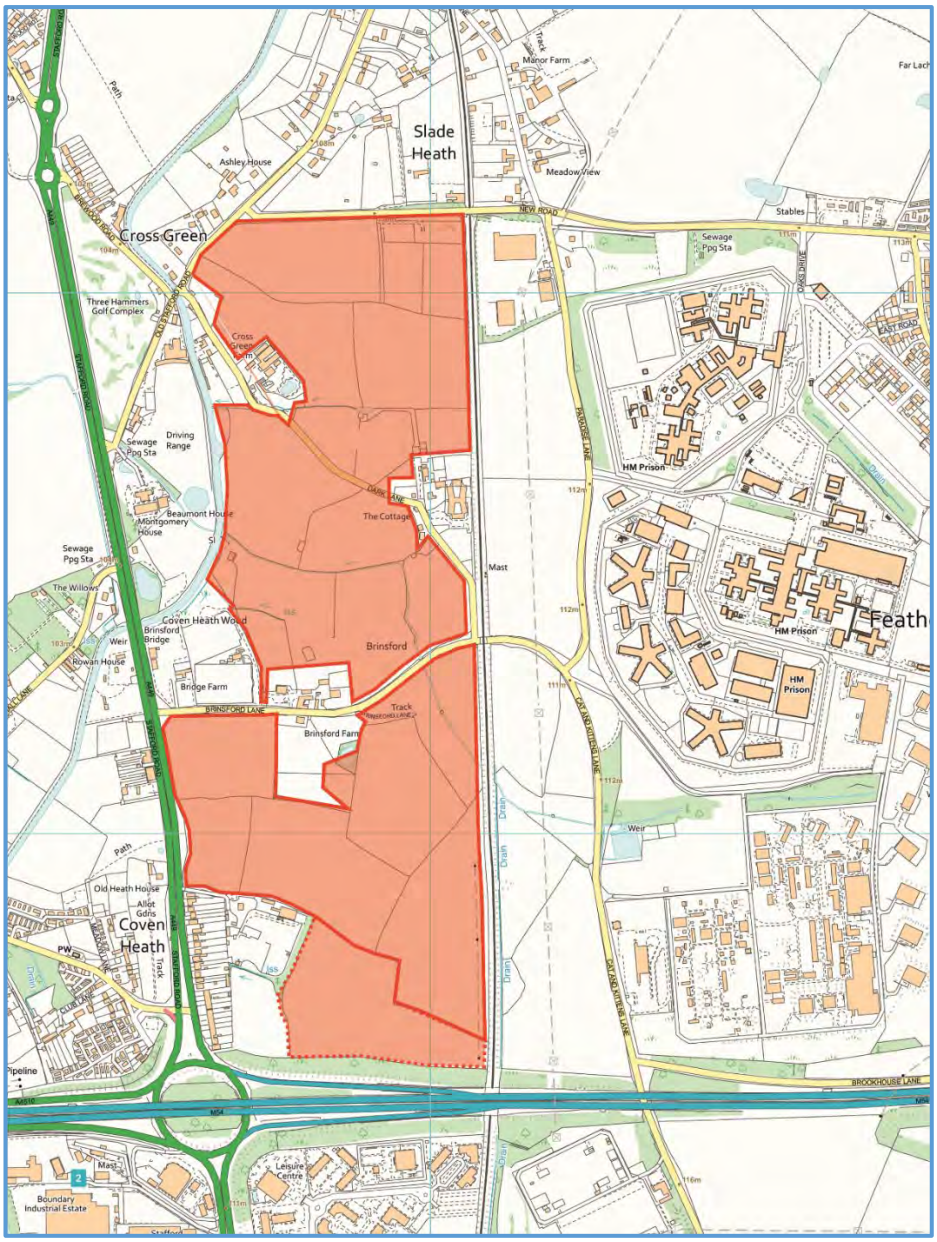
3.2.9 A Development Consent Order (DCO) was submitted to the Planning Inspectorate earlier this year for the creation of a new link road between M54 Junction 1 and M6 Junction 11. This includes significant alterations to M54 Junction 1 as indicated on the plan attached as **Appendix C**. The DCO was accompanied by a Transport Assessment and it was granted consent in April 2022.

3.2.10 The provision of the link road is specifically focussed on reducing traffic flows and associated levels of congestion/ delays on the A460 to the east of the site. Once implemented, the scheme is forecast to reduce traffic flows by approximately 26,000 vehicles per day (two-way) or to 11% of what they would have been without the scheme.

3.3 Local Road Network

3.3.1 The local road network within the vicinity of the site is shown in **Figure 2** and is discussed below.

Figure 2 – Site Location Plan



Brinsford Lane/ Cat and Kittens Lane

3.3.2 Brinsford Lane is circa 6.9m wide single carriageway road passing through the centre of the proposed development site. To the west, it connects with the A449 Stafford Road at a left-in/ left-out priority T-junction. To the east, it passes underneath the WCML where there is localised narrowing and a height restriction. Immediately to the west of the WCML is Dark Lane which joins with Brinsford Lane at a priority T-junction and continues north through the proposed development as a circa 3m wide single track road before connecting with Old Stafford Road to the north.

3.3.3 Brinsford Lane then becomes Cat and Kittens Lane at its junction with Paradise Lane. To the south, Cat and Kittens Lane is a circa 7m wide single carriageway road and provides connection to Brookhouse Lane via a priority T-junction which routes east to Featherstone. It then continues under the M54 Motorway to Greenfield Lane and Moseley Road, after which it becomes Northycote Lane.

3.3.4 Brinsford Lane/ Cat and Kittens Lane is subject to the 60mph national speed limit between the A449 Stafford Road and circa 80m north of Greenfield Lane, where the speed limit reduces to 30mph as it approaches the built up area.

Brookhouse Lane

3.3.5 Brookhouse Lane initially runs parallel to the M54 Motorway from Cat and Kittens Lane before angling to the north and providing access to Featherstone. The road has a 7.3m wide carriageway, with a shared footway/cycleway running along the southern side of the road for much of its length.

3.3.6 Brookhouse Lane is subject to a 60mph national speed to the east of Cat and Kittens Lane, before reducing to 30mph around 200m south of its junction with East Road. It narrows on the approach to Featherstone and continues through the village, changing to The Avenue at Hilton Road and connecting to the A460 Cannock Road at a priority controlled junction.

Paradise Lane

3.3.7 Paradise Lane is a circa 6.5m wide single carriageway road located to the east of the site and is subject to the national speed limit. To the north, it connects with New Road via a crossroads with ghost-island right-turn.

New Road

3.3.8 New Road is a circa 6.7m wide single carriageway road which routes between Old Stafford Road to the west and the A460 to the east. The road is subject to a 40mph speed limit and passes over the WCML before joining with Old Stafford Road via a priority T-junction. To the east, New Road routes across the northern edge of Brinsford and Featherstone and joins with the A460 at a signalised crossroads.

Old Stafford Road

3.3.9 From its junction with New Road, Old Stafford Road is circa 6.5m wide and passes over a hump-backed bridge crossing the Staffordshire & Worcestershire Canal. Immediately after the bridge it forms a priority T-junction with Brewood Road before continuing to the A460 there is a left-in/ left-out priority T-junction.

Brewood Road

3.3.10 Brewood Road connects Old Stafford Road with the A460 – a distance of around 300m, and is subject to a 30mph speed limit. Access from Brewood Road to the A460 is provided via an at-grade roundabout facilitating connections north and south. Around 90m to the north there is a second roundabout and Brewood Road continues to the north-west through Coven.

3.3.11 Minor alterations to the northern A460/ Brewood Road roundabout are proposed as mitigation works in relation to the ROF Featherstone employment scheme.

A460 Cannock Road

3.3.12 The A460 Cannock Road connects the M6 to the north via Junction 11 with the M54 to the south via Junction 1. The A460 is generally a wide single carriageway, with a width of circa 9m to the south of M6 Junction 11 and is subject to a 50mph speed limit. Approximately 600m to the south of M6 Junction 11, the A460 transitions to a 40mph speed limit. As the road enters Featherstone the speed limit reduces again to 30mph, as the road passes through the built up area.

3.3.13 Beyond M6 Junction 11, the A460 crosses the M6 Toll and there is a four-arm roundabout providing access to the A4601 and M6 Toll eastbound on-slip. The A460 then runs parallel to M6 Toll before turning north to provide access to Cannock.

3.3.14 At the north-eastern end of Featherstone village, A460 connects with New Road and Park Lane at a traffic signal controlled junction.

3.4 Highway Safety

3.4.1 A high level review of highway safety in relation to the local highway network links has been undertaken based on five-year personal injury collision (PIC) data for the latest period of 2016-2020. This information is summarised in **Table 1**.

Table 1 – PIC Link Review

Link	Number of PICs by Link			
	Fatal	Serious	Slight	Total
A449 Stafford Road between Brewood Road and Old Stafford Road	0	0	0	0
A449 Stafford Road between Old Stafford Road and Brinsford Lane	0	0	0	0
A449 Stafford Road between Brinsford Lane and M54 Junction 2	0	0	1	1
Brinsford Lane between A449 Stafford Road and Brookhouse Lane	0	0	1	1
Cat and Kittens Lane between Brookhouse Lane and Greenfield Lane	0	0	0	0
Dark Lane between Brinsford Lane and Old Stafford Road	0	0	0	0
Brookhouse Lane between Cat and Kittens Lane and East Road	0	0	0	0
Paradise Lane between Brinsford Lane and New Road	0	0	0	0
New Road between Old Stafford Road and Paradise Lane	0	0	1	1
New Road between Paradise Lane and Featherstone Lane	0	1	1	2
New Road between Featherstone Lane and A460	0	1	3	4
Old Stafford Road between New Road and A449 Stafford Road	0	0	0	0
Brewood Road between Old Stafford Road and A449 Stafford Road	0	0	0	0
A460 Cannock Road between M54 Junction 1 and The Avenue	0	0	4	4
A460 Cannock Road between The Avenue and New Road	0	0	4	4
A460 Cannock Road between New Road and Hilton Lane	0	0	4	4
A460 Cannock Road North between Church Road and M6 Junction 11	0	1	9	10
Total	0	3	28	31

3.4.2 Overall, it is evident from the available data that the number of PICs occurring on the highway network within the vicinity of the site is low.

3.5 Traffic Surveys

3.5.1 Manual turning count and automated traffic count surveys were undertaken in March 2022 on the local road network. A summary of the traffic movements on the adjacent highway network including the A449, Cat and Kittens Lane, Brinsford Lane and New Road is provided in **Table 2**.

Table 2 – Link Flow Summary

Link	Two-way Vehicle Flows		
	AM Peak	PM Peak	Daily
A449	1,805	1,838	22,797
Cat and Kittens Lane	714	613	6,663
Brinsford Lane	201	108	1,378
New Road	566	506	5,621

3.6 Walking and Cycling

3.6.1 Foot and cycle facilities within the vicinity of the site are currently limited; however there is significant scope to improve connectivity as part of the development proposals and a package of enhancements have been identified as part of the adjacent ROF Featherstone scheme. These are discussed in **Section 4**.

3.6.2 In terms of those roads currently intersecting the development site, there is no footway provision on Brinsford Lane/ Cat and Kittens or Dark Lane. These are however identified as advisory cycle routes on Staffordshire County Council's Cycle Map covering South Staffordshire attached as **Appendix D**, along with Paradise Lane, Dark Lane, New Road, Old Stafford Road and Brewood Road.

3.6.3 There is a circa 2.5m wide shared footway/cycleway that runs along the southern side of Brookhouse Lane for around 1km east of the junction with Cat and Kittens Lane. This footway does not extend as far as the junction with East Road where Brookhouse Lane continues towards Featherstone and where a footway is provided.

3.6.4 There are lit shared foot/ cycleways running along both side of the A449 Stafford Road to the north of M54 Junction 2. These extend northwards past Coven, with the facility on the eastern side of the A449 Stafford Road extending into Penkridge.

3.6.5 Signalised toucan crossings are provided across the northern gyratory of M52 Junction 2, with a shared foot/ cycleway provided around the entire central island. Again, signalised toucan crossing facilities are provided on the southern side across the gyratory, facilitating movements to the significant employment opportunities nearby at i54, Boundary Industrial Estate and Wolverhampton Business Park, and beyond into Wolverhampton.

3.6.6 There are no existing public rights of way through the site, with the closest being located to the west of the site. An extract from the online Public Rights of Way map showing the PROW network in the wider area is attached as **Appendix E**.

3.7 Public Transport

3.7.1 The nearest existing bus services to the site are to the west of the proposed development, accessed from the A449 Stafford Road. These are shown on **Figure 1**.

3.7.2 Northbound and southbound stops are located to the south of Brinsford Road, with the southbound stop including a bus layby. Existing facilities at these stops are limited and there is a substandard pedestrian crossing over the A449 providing access to the northbound stop. These are served by the no.877 and 878 which together have a circa hourly daytime frequency. These provide connections south into the centre of Wolverhampton, past Wolverhampton Business Park, and north into the centre of Stafford.

3.7.3 Bus stops are also located at the A449/ Old Stafford Road junction to the north-east of the site, which also provide access to the no. 877 and 878. Both stops have bus bays, and the southbound stop also has a bus shelter. There is an uncontrolled staggered dropped kerb crossing between the guard railing separating the north and southbound dual carriageways.

3.7.4 To the south, the nearest bus stops to the site are located on Greenfield Lane (see **Figure 1**) and include flagpoles with timetable information and waiting areas. These are served by the no.65 which has an hourly day-time frequency.

3.7.5 The nearest rail station to the site is Wolverhampton Station located around 7km to the south. The station provides frequent train services to numerous destinations including Stafford, Birmingham, Manchester and London. West Midlands Metro services are also available in Wolverhampton, providing access to/ from the West Midlands conurbation.

3.8 Local Facilities

3.8.1 This section of the report considers access to the following services:

- Education;
- Retail;
- Leisure;
- Healthcare; and
- Employment.

3.8.2 The majority of trips that will be made by foot or cycle from the proposed development will be for the purpose of short shopping trips, access to leisure facilities, school journeys, and trips to bus stops as part of linked trips to other destinations.

3.8.3 It is generally considered that for distances under 2km, walking offers the greatest potential to replace short car trips. For distances under 5km, cycling also has the potential to substitute for short car trips. **Figure 1** shows some of the local amenities near the site and includes a 2km isochrone.

Education

3.8.4 As part of the development scheme, circa 2ha of land for educational purposes has been identified. Whilst the end use is still to be confirmed, it is likely to be a two form primary school which will serve future occupants of the site as well as potentially existing residents from the local area. Other primary schools located within the vicinity of the site are shown on **Figure 1**.

3.8.5 With regard to secondary education, it is not known at this stage which secondary school the children from this development would attend. However, if the distance to the secondary schools is greater than three miles then pupils would be entitled to free school travel. SCC would require this to be provided by the developer.

Retail

3.8.6 As shown on the indicative site layout at **Appendix A**, a District Centre is proposed as part of the scheme, which would provide a range of facilities including local retail shops.

3.8.7 In terms of wider shopping facilities, the closest food superstore is Morrisons which is located off Blaydon Road approximately 4.6km to the south-west of the site via the most direct route. Significant shopping facilities are located within the centre of Wolverhampton (located around 6.9km from the centre of the site) and Bentley Bridge Retail Park (circa 8km travel distance).

Leisure

3.8.8 There are various leisure opportunities located within Wolverhampton, including Wolverhampton Swimming and Fitness Centre, WV Active Aldersley, Bentley Bridge Leisure Park and numerous facilities within the town centre which is located around 6.9km from the centre of the site.

Healthcare

3.8.9 There is scope for a new GP surgery to be provided within the District Centre as part of the development proposals, which would serve residents of the proposed development whilst also accommodating any surplus demand from the local area.

3.8.10 In terms of existing healthcare provision, the closest GP surgery is Mayfield Medical Practice which is located circa 3km from the centre of the site to the south of the M54 Motorway.

3.8.11 The closest hospital to the site offering A&E services is the New Cross Hospital in Wolverhampton, located approximately 6.5km away from the site.

Employment

3.8.12 There are several significant employment generators in the vicinity of the site, including the i54 and Wolverhampton Business Parks which are shown on **Figure 1**. These are located around 2.7km and 1.7km respectively from the centre of the site. As discussed in this report, there are also significant employment opportunities associated with the strategic employment allocation at ROF Featherstone which has now been granted planning consent.

Summary

3.8.13 Overall, it is concluded that the site is well located in terms of access to local facilities and the scale of potential development of the site also lends itself to the provision of additional amenities. Opportunities for enhancing accessibility between the development site and these local facilities are considered in **Chapter 4**.

4.0 ACCESS ARRANGEMENTS

4.1 Vehicle Access

4.1.1 There are a number of opportunities to access the site by vehicle which are discussed below and these have been subject to junction capacity assessments in **Chapter 5**. The final design and layout of any accesses would be the subject of a future detailed TA accompanying a planning application for the site.

4.1.2 It is proposed that primary vehicle access to the site be taken from a new road to be constructed between the A449 Stafford Road and Cat and Kittens Lane, over the WCML, as part of the adjacent ROF Featherstone employment application. The link road will comprise a 7.3m wide single carriageway with a 2m wide footway along the northern side of the carriageway, and a shared 3m wide foot/ cycleway to the south. The majority of the road will be at-grade, rising on a series of embankments as it crosses over the railway to link with Cat and Kittens Lane.

4.1.3 At this stage, two single points of vehicle access to the new link road are proposed – one serving the northern plot and another the southern plot. For the purposes of this STA, it has been assumed that priority T-junctions with ghost-island right-turn facilities would be required to serve the development site and these are shown indicatively on **Drawing 23199-01a**. However, the exact form and location of any accesses would be determined at the planning application stage.

4.1.4 In addition to providing primary points of access to the new link road, vehicle accesses are also proposed onto Brinsford Lane which as mentioned above is a circa 6.9m wide single carriageway road passing through the centre of the proposed development site. At this stage, given the low level of background traffic flows, it is proposed that two simple priority T-junctions would be provided and these are shown on **Drawing 23199-01-2**. As above, the exact form and location of any accesses would be determined at the planning application stage.

4.1.5 To the east of the site access there is a pinch point where Brinsford Lane passes under the railway line and the introduction of signalised shuttle workings or potentially a bus-gate at this location would be beneficial.

4.1.6 It is envisaged that vehicle access would also be provided onto New Road to the north. For the purposes of this STA, it has been assumed that a priority T-junction with ghost-island right-turn facility would be required and this is shown indicatively on **Drawings 23199-01-3**. As above, the exact form and location of any accesses would be determined at the planning application stage.

4.1.7 Finally, Dark Lane routes through the northern site, currently connecting Brinsford Lane to the south with Old Stafford Road to the north. The proposed spine road through the site will cross this lane. It is not intended that Dark Lane would be used by development vehicle traffic and would instead become a 'Quiet Lane', providing an attractive route for active travel users both within the site and beyond.

4.2 Sustainable Access

Walking and Cycling

4.2.1 Key to promoting walking and cycling is the design of the development – specifically that the environment addresses actual and perceived safety issues. Underlying this is an emphasis on placemaking with a user hierarchy which places pedestrians at the top reflecting the ethos extolled by Manual for Streets (MfS). The National Model Design Code suggests that to ensure walking and cycling are the first choice for short local journeys, the routes should be *"continuous, clear, relatively direct and attractive [...] both within a large site and into the surroundings."*

4.2.2 It is important that the site is integrated into the existing area both to ensure that there are a coherent network of routes, and to ensure that there are not external issues that would undermine the efforts to encourage walking and cycling within and to/from the site. This is achieved by identifying gaps in the provision for pedestrians and cyclists on the local road network.

4.2.3 As set out above, access to the nearby village of Featherstone and the local facilities available there are currently provided along Brookhouse Lane, which is accessible to the site via Cats and Kittens Lane. Brookhouse Lane already benefits from a shared use cycleway/footway along much of its length, which joins the carriageway at the 30mph speed limit sign in Featherstone.

4.2.4 Improvements to connectivity between the proposed development and Featherstone are to be provided as part of the ROF Featherstone scheme to the east. This includes the provision of a 2m wide footway and 3m wide shared foot/ cycleway along Brinsford Road, continuing through the ROF Featherstone site to the east before connecting onto Brookhouse Lane immediately to the south-west of Featherstone.

4.2.5 To the west, the foot/ cycle infrastructure on the new link road will provide connection to the existing facilities running along the A449. A pedestrian and cycle priority route is proposed through the site as shown on the illustrative site layout plan at **Appendix A**. This crosses the new link road and it is proposed that a signalised toucan crossing would be provided to facilitate these movements.

4.2.6 The proposed access onto the A449 from the link road provides connection to the existing foot/ cycle facilities running along both sides of the carriageway. A signalised staggered crossing is shown on the link road plan at **Appendix B**, immediately to the south of the new roundabout thus providing improved connectivity.

4.2.7 A 'recreational route' runs along the length of Brinsford Lane and there is evidence of a surfaced footway on the southern verge which is currently overgrown. As part of the residential development scheme, there is the potential to provide foot/ cycle links along Brinsford Road between the site accesses and the A449 to the west. Brinsford Lane is currently constrained where it passes under the railway line and there is scope to create a priority arrangement or to implement a bus gate in this location which could create space to provide improved pedestrian and cyclists connectivity. Where the pedestrian and cycle priority route crosses Brinsford Lane, it is proposed that crossing facilities will be provided and this is likely to take the form of a signalised toucan crossing.

4.2.8 As set out above, it is proposed Dark Lane, which connects with Brinsford Lane immediately to the west of the bridge, would become a 'Quiet Lane', providing an attractive route for active travel users both within the site and beyond. This exits onto Old Stafford Road adjacent to the bridge crossing over the Staffordshire & Worcestershire Canal.

4.2.9 To the north, there is an existing footway running along the northern side of New Road. The footway extends to Rabbit Lane to the east before continuing along the southern side of the carriageway into Featherstone, at which point it is lit. To the west, the footway connects to Old Stafford Road where it continues north into Slade Heath along the eastern side of the carriageway as a narrow path. There is also evidence of a surfaced footway on the eastern side of Old Stafford Road to the south of New Road which terminates before the bridge crossing over the Staffordshire & Worcestershire Canal.

4.2.10 Another footway commences approximately 60m to the south-west of the bridge along the eastern side of Old Stafford Road and this terminates circa 20m from the foot/cycleway running along the A449. There are no footways on Brewood Road for the first 115m from Old Stafford Road, after which there is a footway along the eastern side of Brewood Road providing connection north towards the A449 and beyond to Coven.

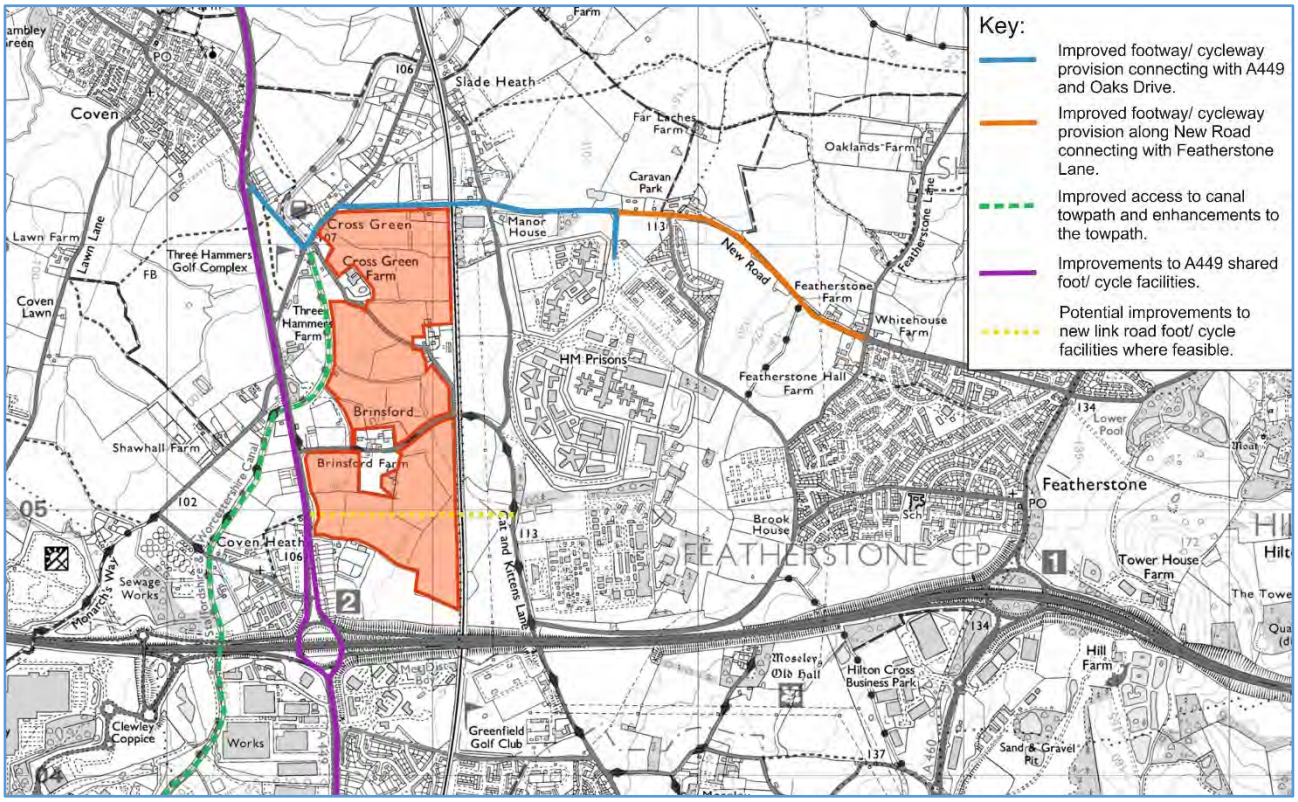
4.2.11 Foot/ cycle connections onto New Road and Old Stafford Road to the north will be provided via the: proposed vehicle access; the pedestrian and cycle priority route; and also via Dark Lane which is proposed would become a Quiet Lane.

4.2.12 SCC has identified a number of foot/ cycle improvements that they would like to see come forward as part of the proposals, including:

- Footway / cycleway provision along Brewood Road, connecting into the existing facilities on the A449 with an improved LTN 1/20 standard junction;
- Footway / cycleway provision along New Road, connecting into the existing employment destinations at and near to the prisons at Oaks Drive;
- Continue footway and cycle provision along New Road, between Oaks Drive and Featherstone Lane (approximately 1km) to provide linkages to various leisure routes which can be accessed to the north of New Road in the vicinity of Featherstone Lane. Providing access to leisure routes will help with placemaking and provide a quality living environment for new residents;
- Improved access to the Canal towpath at the Dark Lane / Old Stafford Road / Brewood Road junction combined with enhancements to the canal towpath (where required) between The Anchor Inn and I54 employment area; and
- The proposed new road linking the A449 to ROF Featherstone and providing the main access to the Cross Green site, is currently designed with a 3.0m shared footway cycleway facility. To comply with LTN 1/20 this should be redesigned and delivered with a segregated facility.

4.2.13 These potential walking and cycling improvements are shown indicatively in **Figure 3** and the details of these would be further reviewed/ developed at the planning application stage in conjunction with the local highway authority.

Figure 3 – Indicative Foot/ Cycle Improvement Plan



4.2.14 In terms of the development site, it would be designed to facilitate foot and cycle movements along desire lines, linking to the external access points. This will include the provision of the following where appropriate in line with MfS and MfS2:

- A good level of street and path lighting;
- Warning signs prior to junctions;
- On-site roads will be designed to 20mph;
- Tactile and coloured surfacing;
- Safety kerbing;

- Reduced junction mouth widths to promote slower vehicle speed where appropriate; and

- Signage to direct pedestrians and cyclists to key facilities and places of interest, including distances.

4.2.15 The illustrative site layout plan at **Appendix A** is designed to provide attractive active travel corridors to allow maximum permeability of the site by these modes of travel and excellent provision will be provided through the creation of a pedestrian and cycle priority route.

4.2.16 A mix of cycle parking facilities will be provided at the development to comply with local standards and will be designed and tailored to the likely needs of future occupants.

Public Transport

4.2.17 The existing public transport facilities in relation to the proposed development site are discussed in **Section 3.7**. No specific improvements to bus services are identified in the TA prepared for the ROF Featherstone application, which instead makes reference to providing connections to existing bus stops.

4.2.18 Given the location of the site and the proposed scale of development, it is acknowledged that measures to enhance bus provision to/ from the proposed development will be required.

4.2.19 The primary vehicle route through the site is designed to accommodate bus penetration through the development. This could include improvements to existing services and their diversion through the site, or the creation of a new bus service to serve the development. The layout of the site would be designed to ensure that all dwellings are located within 400m of a bus stop. The above is in line with the National Model Design Code which states that a *"site or location has good public transport accessibility when dwellings have a public transport stop within walking distance"*.

4.2.20 There is also the potential to provide a new Rail Halt station Park & Ride on the adjacent railway line which bounds the site to its east, for which the site would facilitate delivery. This is shown indicatively on the illustrative layout at **Appendix A**. This would provide access to the WCML connecting Wolverhampton to Stafford, Manchester, Liverpool, Glasgow, Birmingham and London Euston. Providing a halt station in this location would benefit the site and the ROF Featherstone employment site by providing a direct rail link for longer journeys.

4.2.21 It is understood from discussions with SCC that the Strategic Outline Case for the station is well underway and detailed studies are ongoing. The deliverability of providing such a facility would be explored should the site be taken forward for future development; however, it is evident that there is scope to deliver a sustainable development without the potential rail halt station.

5.0 REVIEW OF TRAFFIC IMPACT

5.1 Introduction

5.1.1 The Preferred Options consultation document identified Land at Cross Green as a Strategic Development Location to deliver a minimum of 1,200 homes to 2038, an on-site primary school and a local centre to include retail and community facilities of an appropriate scale, along with land for a rail-based Park & Ride. A review of the likely traffic generation, distribution/ assignment of traffic and consideration of off-site highway capacity has been undertaken.

5.2 Trip Generation

5.2.1 The vehicle trip rates used in this STA have been provided by SCC and have been derived from recent extensive surveys and Transport Assessments in various areas of South Staffordshire, namely Perton (2 no.), Penkridge and Cheslyn Hay. The vehicle trip rates and associated trip generation for the site are set out in **Table 3**. Measures for further reducing traffic generation would be set out in a comprehensive Travel Plan at the planning application stage.

Table 3 – Vehicle Trip Rates & Trip Generation

	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Vehicle Trip Rates (per dwelling)	0.108	0.339	0.447	0.328	0.158	0.486
Vehicle Trip Generation (1200 Units)	130	407	537	394	190	584

5.2.2 In addition to the residential trip generation, it has been agreed that consideration needs to be given to the proposed Brinsford Park and Ride site. In line with SCC's assumptions which were informed by the Outline Business Case, the following peak hour trip generation in **Table 4** has been assumed for this use.

Table 4 – Park & Ride Vehicle Trip Generation

	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Vehicle Trip Generation	138	21	159	21	138	159

5.2.3 The total vehicle trip generation for the site comprising both the residential scheme and Park & Ride is set out in **Table 5**. Whilst this is considered to provide a reasonable basis for undertaking the strategic assessment of highways impact to inform the emerging Local Plan evidence base, this would need to be revisited as appropriate at the planning application stage when a more detailed Transport Assessment would be required.

Table 5 – Total Vehicle Trip Generation

	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Vehicle Trip Generation	268	428	696	415	328	743

5.3 Trip Distribution and Assignment

5.3.1 To understand the potential future distribution of traffic generated by the proposed development, 2011 Census journey to work data has been interrogated for the Middle Super Output Area (MSOA) of Staffordshire 006 in line with the feedback received during scoping. This data is attached as **Appendix F**.

5.3.2 A summary of main journey to work destinations for residents living within the MSOA is provided in **Table 6**.

Table 6 – Journey to Work Destinations

Destination	Percentage
Birmingham	5.4%
Cannock Chase	5.5%
Dudley	2.6%
Lichfield	1.8%
Sandwell	3.6%
South Staffordshire	21.6%
Stafford	2.6%
Telford & Wrekin	2.7%
Walsall	9.3%
Wolverhampton	35.7%
Other*	9.3%
Total	100%

** Includes all areas with less than 1% draw*

5.3.3 Vehicle traffic has been assigned between the site and workplace MSOAs using the origin-destination tool within ArcGIS based on journey time. This exercise has been undertaken for the morning peak and evening peak in order to take into account potential congestion and delay on the network. Diagrams showing the resulting assignment of traffic through the local road network are attached as **Appendix G**.

5.4 Background Growth

5.4.1 A 2038 future year baseline has been derived using 2022 traffic survey data and TEMPRO growth factors. The analysis also takes into account a number of committed developments which are discussed below.

TEMPRO

5.4.2 To account of background housing and employment growth, the observed traffic flows were factored using the DfT's TEMPRO 7.2c computer programme using the National Trip End Model (NTEM) dataset 72 and the 'Road Traffic Forecast 2018 Scenario 1 – Reference'.

5.4.3 For the interrogation of the TEMPRO database, the MSOA of South Staffordshire 006 within which the site is located was chosen. The growth rates for 'car drivers only' were then selected with the trip end type being defined as 'origin/destination'. These were obtained for the weekday AM and PM peaks (07:00 – 09:59 & 16:00 – 18:59). The resulting growth factors are shown in **Table 7** for the assessed scenarios.

Table 7 – TEMPRO Growth Factors

Years	Road Type	AM Growth Figure	PM Growth Figure
2022-2038	Principal	1.0826	1.0804
	Trunk	1.0908	1.0886
	Motorway	1.1391	1.1369

Committed Development

5.4.4 The traffic flows from the following committed developments have been taken into account where appropriate in the traffic modelling:

- Logic 54 Featherstone (20/01131/OUT);

- Wolverhampton Business Park (11/00100/OUT);
- Four Ashes (16/00498/FUL);
- i54 unoccupied and i54 Western Extension (18/00637/OUT);
- Pendeford Mill Lane Bilbrook (18/00710/FUL);
- Hobnock Road (18/00450/REM);
- Unit 1 Innovation Drive, Pendeford (16/001057/REM); and
- West Midland Interchange (WMI) (DCO Ref TR050005).

Infrastructure

5.4.5 Given the recent consent for the M54/M6 Link Road, the scheme will be treated as committed infrastructure within the assessment, and the impact of the scheme on the strategic road network accounted for where appropriate.

5.4.6 Alongside the M54/M6 Link Road impact, the reassignment of traffic associated with the committed Logic 54 Featherstone Link Road has been taken into account.

5.5 Cumulative Impact

5.5.1 For the strategic road network, the cumulative impact of all of the proposed strategic site allocations has been assessed in accordance with the methodology set out in PJA Technical Note dated 11th May 2022. This is set out in a separate report assessing the impact of the proposed strategic allocations on the strategic road network.

5.6 Site Access Assessments

1. New Link Road – Southern Access

5.6.1 The operation of the southern access onto the new A449 link road was assessed using the PICADY module within Junctions 10. The results of the assessment are copied below in **Table 8**.

Table 8 – New Link Road (Southern Access)

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2038 + DEV													
Stream B-C	D3	0.3	7.21	0.26	A	1.64	65 % [Stream B-A]	D4	0.3	7.31	0.21	A	2.21	60 % [Stream B-A]
Stream B-A		0.1	12.34	0.06	B				0.1	12.84	0.05	B		
Stream C-AB		0.2	6.43	0.20	A				0.5	8.29	0.33	A		

5.6.2 The analysis demonstrates that the site access would operate within capacity in the future with the proposed development.

2. New Link Road – Northern Access

5.6.3 The operation of the northern access onto the A449 new link road was assessed using the PICADY module within Junctions 10. The results of the assessment are copied below in **Table 9**.

Table 9 – New Link Road (Northern Access)

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2038 + DEV													
Stream B-C	D3	0.0	8.72	0.04	A	0.78	31 % [Stream B-A]	D4	0.0	7.40	0.03	A	0.57	52 % [Stream B-A]
Stream B-A		0.3	16.32	0.21	C				0.2	13.09	0.14	B		
Stream C-AB		0.0	7.40	0.02	A				0.0	6.62	0.03	A		

5.6.4 The analysis demonstrates that the site access would operate within capacity in the future with the proposed development.

3. Brinsford Lane – Southern Access

5.6.5 The operation of the southern access onto Brinsford Lane was assessed using the PICADY module within Junctions 10. The results of the assessment are copied below in **Table 10**.

Table 10 – Brinsford Lane (Southern Access)

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2038 + DEV													
Stream B-AC	D3	0.0	0.00	0.00	A	0.09	634 %	D4	0.0	0.00	0.00	A	0.27	900 %
Stream C-B		0.0	6.16	0.01	A		[Stream C-B]		0.0	5.84	0.01	A		[]

5.6.6 The analysis demonstrates that the site access would operate within capacity in the future with the proposed development.

4. Brinsford Lane – Northern Access

5.6.7 The operation of the northern access onto Brinsford Lane was assessed using the PICADY module within Junctions 10. The results of the assessment are copied below in **Table 11**.

Table 11 – Brinsford Lane (Northern Access)

	AM							PM						
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
	2038 + DEV													
Stream B-AC	D3	0.2	8.10	0.20	A	2.78	196 %	D4	0.2	7.20	0.14	A	3.29	333 %
Stream C-B		0.0	6.37	0.04	A		[Stream B-AC]		0.1	6.15	0.06	A		[Stream B-AC]

5.6.8 The analysis demonstrates that the site access would operate within capacity in the future with the proposed development.

5. New Road Access

5.6.9 The operation of the New Road access was assessed using the PICADY module within Junctions 10. The results of the assessment are copied below in **Table 12**.

Table 12 – New Road Access

	AM							PM						
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
	2038 + DEV													
Stream B-AC	D3	0.3	9.86	0.21	A	1.16	109 %	D4	0.2	9.29	0.16	A	1.02	129 %
Stream C-AB		0.0	5.25	0.01	A		[Stream B-AC]		0.0	5.57	0.02	A		[Stream B-AC]

5.6.10 The analysis demonstrates that the site access would operate within capacity in the future with the proposed development.

5.7 Local Road Network Assessments

6. Cat and Kittens Lane \ Greenfield Lane Junction

5.7.1 The operation of the Cat and Kittens Lane \ Greenfield Lane junction was assessed using the PICADY module within Junctions 10. The results of the assessment are copied below in **Table 13**.

Table 13 – Cat and Kittens Lane \ Greenfield Lane Assessment Results

	AM							PM						
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
	2022													
Stream B-C	D1	0.1	7.17	0.08	A	2.87	52 % [Stream B-A]	D2	0.1	8.24	0.12	A	4.00	29 % [Stream B-A]
Stream B-A		0.6	13.26	0.36	B				1.0	16.74	0.49	C		
Stream C-AB		0.3	5.42	0.14	A				0.3	5.60	0.14	A		
	2038 Without Dev													
Stream B-C	D3	0.1	8.02	0.10	A	3.19	29 % [Stream B-A]	D4	0.2	9.49	0.14	A	4.75	13 % [Stream B-A]
Stream B-A		0.8	16.82	0.44	C				1.4	22.47	0.58	C		
Stream C-AB		0.4	5.51	0.17	A				0.4	5.35	0.17	A		
	2038 + DEV													
Stream B-C	D7	0.1	7.39	0.05	A	2.74	32 % [Stream B-A]	D8	0.2	10.38	0.15	B	5.12	7 % [Stream B-A]
Stream B-A		0.4	16.10	0.29	C				1.7	26.62	0.63	D		
Stream C-AB		1.1	6.63	0.37	A				0.5	5.20	0.18	A		

5.7.2 The analysis demonstrates that the junction would operate within capacity in the future with the proposed development and that mitigation is not required.

7. Northycote Lane \ Legs Lane Roundabout

5.7.3 The operation of the Northycote Lane \ Legs Lane roundabout was assessed using the ARCADY module within Junctions 10. The results of the assessment are copied below in **Table 14**.

Table 14 – Northycote Lane \ Legs Lane Assessment Results

	AM							PM						
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
	2022													
1 - Northycote Lane (N)	D1	0.5	3.34	0.34	A	3.13	146 % [1 - Northycote Lane (N)]	D2	0.5	3.18	0.31	A	3.34	134 % [2 - Legs Lane (S)]
2 - Legs Lane (S)		0.3	2.96	0.25	A				0.6	3.53	0.38	A		
3 - Legs Lane (W)		0.2	2.96	0.19	A				0.2	3.22	0.20	A		
	2038 Without Dev													
1 - Northycote Lane (N)	D3	0.6	3.60	0.38	A	3.42	120 % [1 - Northycote Lane (N)]	D4	0.7	3.61	0.39	A	3.68	109 % [2 - Legs Lane (S)]
2 - Legs Lane (S)		0.5	3.30	0.33	A				0.8	3.85	0.43	A		
3 - Legs Lane (W)		0.3	3.24	0.21	A				0.3	3.43	0.22	A		
	2038 + DEV													
1 - Northycote Lane (N)	D7	0.7	3.76	0.40	A	3.57	109 % [1 - Northycote Lane (N)]	D8	0.8	3.88	0.43	A	3.89	99 % [1 - Northycote Lane (N)]
2 - Legs Lane (S)		0.5	3.47	0.35	A				0.8	4.02	0.44	A		
3 - Legs Lane (W)		0.3	3.38	0.24	A				0.4	3.64	0.26	A		

5.7.4 The analysis demonstrates that the junction would operate within capacity in the future with the proposed development and that mitigation is not required.

8. <u>Legs Lane \ Underhill Lane \ Bushbury Lane Mini Roundabout</u>

5.7.5 The operation of the Legs Lane \ Underhill Lane \ Bushbury Lane Mini Roundabout was assessed using the PICADY module within Junctions 10. The results of the assessment are copied below in **Table 15**.

Table 15 – Legs Lane \ Underhill Lane \ Bushbury Lane Assessment Results

	AM							PM						
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
	2022													
1 - Legs Lane (N)	D1	1.2	7.01	0.55	A	9.91	23 % [2 - Underhill Lane]	D2	1.0	6.35	0.50	A	11.56	20 % [2 - Underhill Lane]
2 - Underhill Lane		1.8	15.13	0.64	C				2.1	16.15	0.68	C		
3 - Bushbury Lane		0.7	8.61	0.41	A				1.6	13.56	0.62	B		
	2038 Without Dev													
1 - Legs Lane (N)	D3	1.7	8.38	0.62	A	18.84	-1 % [2 - Underhill Lane]	D4	1.7	8.42	0.62	A	16.39	6 % [2 - Underhill Lane]
2 - Underhill Lane		5.5	36.75	0.85	E				3.7	25.05	0.79	D		
3 - Bushbury Lane		1.0	11.13	0.49	B				2.4	18.54	0.70	C		
	2038 + DEV													
1 - Legs Lane (N)	D7	1.9	8.98	0.65	A	27.75	-6 % [2 - Underhill Lane]	D8	2.1	9.84	0.68	A	21.24	0 % [2 - Underhill Lane]
2 - Underhill Lane		9.4	60.83	0.92	F				5.2	34.38	0.85	D		
3 - Bushbury Lane		1.2	12.35	0.53	B				3.2	24.06	0.77	C		

5.7.6 The analysis demonstrates that the junction would be approaching capacity in the future without the proposal and that it would operate marginally worse as a result of the Cross Green development. An indicative mitigation scheme has therefore been considered and this is discussed further in **Chapter 6**.

9. Bushbury Lane \ Kempthorne Avenue \ Elston Hall Lane Roundabout

5.7.7 The operation of the Bushbury Lane \ Kempthorne Avenue \ Elston Hall Lane roundabout was assessed using the ARCADY module within Junctions 10. The results of the assessment are copied below in **Table 16**.

Table 16 – Bushbury Lane \ Kempthorne Avenue \ Elston Hall Lane Assessment Results

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
2022														
1 - Bushberry Lane (N)	D1	1.4	8.47	0.57	A	6.10	40 % [1 - Bushberry Lane (N)]	D2	1.1	7.01	0.52	A	5.69	55 % [1 - Bushberry Lane (N)]
2 - Kempthorne Avenue		1.0	6.93	0.48	A				1.0	6.88	0.50	A		
3 - Bushberry Lane (S)		0.3	4.13	0.24	A				0.5	4.72	0.34	A		
4 - Elston Hall Lane		0.8	4.21	0.43	A				0.5	3.71	0.33	A		
2038 Without Dev														
1 - Bushberry Lane (N)	D3	1.8	10.04	0.63	B	6.94	29 % [1 - Bushberry Lane (N)]	D4	1.3	7.93	0.57	A	6.36	43 % [2 - Kempthorne Avenue]
2 - Kempthorne Avenue		1.2	7.80	0.53	A				1.2	7.82	0.56	A		
3 - Bushberry Lane (S)		0.4	4.40	0.27	A				0.6	5.16	0.38	A		
4 - Elston Hall Lane		0.9	4.60	0.47	A				0.6	3.97	0.37	A		
2038 + DEV														
1 - Bushberry Lane (N)	D5	1.9	10.58	0.65	B	7.23	27 % [1 - Bushberry Lane (N)]	D6	1.5	8.46	0.60	A	6.73	39 % [1 - Bushberry Lane (N)]
2 - Kempthorne Avenue		1.3	8.10	0.55	A				1.4	8.33	0.58	A		
3 - Bushberry Lane (S)		0.4	4.46	0.27	A				0.6	5.29	0.39	A		
4 - Elston Hall Lane		0.9	4.66	0.47	A				0.6	4.05	0.37	A		

5.7.8 The analysis demonstrates that the junction would operate within capacity in the future with the proposed development and that mitigation is not required.

10. Broadlands \ Stafford Road Traffic Signal Controlled Junction

5.7.9 The operation of the Broadlands \ Stafford Road traffic signal controlled junction was assessed using LinSig. The results of the assessment are copied below in **Table 17**, which presents the results for the links with the highest Degree of Saturation (DoS).

Table 17 – Broadlands \ Stafford Road Assessment Results

Arm	AM Peak		PM Peak	
	DoS	Queue	DoS	Queue
	2022 Existing			
Stafford Road (North)	57.6	9	56.1	8
Broadlands	56.8	4	65.0	6
Stafford Road (South)	57.3	11	65.2	13
	2038 without Development			
Stafford Road (North)	61.5	10	64.9	12
Broadlands	75.7	6	82.3	8
Stafford Road (South)	74.8	18	81.1	20
	2038 with Development			
Stafford Road (North)	64.2	11	67.1	13
Broadlands	75.7	6	82.3	8
Stafford Road (South)	77.6	19	85.9	23

5.7.10 The analysis demonstrates that the junction would operate within capacity in the future with the proposed development and that mitigation is not required.

11. Springfield Lane \ Stafford Road Traffic Signal Controlled Junction

5.7.11 The operation of the Springfield Lane \ Stafford Road traffic signal controlled junction was assessed using LinSig. The results of the assessment are copied below in **Table 18**, which presents the results for the links with the highest Degree of Saturation (DoS).

Table 18 – Springfield Lane \ Stafford Road Traffic Signal Controlled Junction

Arm	AM Peak		PM Peak	
	DoS	Queue	DoS	Queue
	2022 Existing			
Stafford Road (North)	70.3	8	66.7	23
Springfield Lane	67.0	7	59.0	6
Stafford Road (South)	59.0	19	66.4	13
Employment Access	4.9	1	66.8	8
	2038 without Development			
Stafford Road (North)	84.9	38	87.2	42
Springfield Lane	83.8	9	73.8	7
Stafford Road (South)	77.9	32	83.0	19
Employment Access	6.2	1	83.5	9
	2038 with Development			
Stafford Road (North)	88.7	43	88.7	44
Springfield Lane	83.8	9	78.7	8
Stafford Road (South)	79.8	34	90.6	17
Employment Access	6.2	1	89.1	10

5.7.12 The analysis demonstrates that the junction would be approaching capacity in the future with the proposed development and that mitigation is not required.

12. Bushbury Lane \ Stafford Road Roundabout

5.7.13 The operation of the Bushbury Lane Stafford Road roundabout was assessed using the ARCADY module within Junctions 10. The results of the assessment are copied below in **Table 19**.

Table 19 – Bushbury Lane \ Stafford Road Roundabout

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
2022														
1 - A449 Stafford Road (N)	D1	3.1	7.07	0.75	A	7.56	11 % [2 - Bushberry Lane]	D2	1.5	4.44	0.60	A	11.02	7 % [3 - A449 Stafford Road (S)]
2 - Bushberry Lane		2.2	13.87	0.67	B				3.1	14.50	0.75	B		
3 - A449 Stafford Road (S)		2.9	5.97	0.73	A				7.7	13.73	0.88	B		
2038 Without Dev														
1 - A449 Stafford Road (N)	D3	6.5	12.94	0.86	B	14.82	0 % [2 - Bushberry Lane]	D4	3.2	7.32	0.76	A	62.52	-4 % [2 - Bushberry Lane]
2 - Bushberry Lane		4.9	31.81	0.83	D				16.0	78.03	0.95	F		
3 - A449 Stafford Road (S)		6.8	11.82	0.87	B				60.6	95.19	1.00	F		
2038 + Dev														
1 - A449 Stafford Road (N)	D5	9.5	18.17	0.90	C	21.02	-3 % [2 - Bushberry Lane]	D6	3.7	8.15	0.78	A	138.23	-7 % [3 - A449 Stafford Road (S)]
2 - Bushberry Lane		8.5	56.55	0.90	F				36.8	175.44	1.01	F		
3 - A449 Stafford Road (S)		8.3	14.14	0.89	B				146.9	215.93	1.04	F		

5.7.14 The analysis demonstrates that the junction would be at capacity in the future without the proposed development and that the proposals for the Cross Green development would have a detrimental impact on junction operation. An indicative mitigation scheme has therefore been considered and this is discussed further in **Chapter 6**.

13. Underhill Lane \ Cannock Road Junction

5.7.15 The operation of the Cat and Kittens Lane \ Greenfield Lane junction was assessed using the PICADY module within Junctions 10. The results of the assessment are copied below in **Table 20**.

Table 20 – Underhill Lane \ Cannock Road Assessment Results

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2022													
Stream B-C	D1	1.4	17.49	0.58	C	6.42	-7 % [Stream B-A]	D2	1.6	20.32	0.62	C	7.30	-6 % [Stream B-A]
Stream B-A		1.1	49.05	0.51	E				1.0	47.60	0.49	E		
Stream C-AB		1.4	12.05	0.53	B				1.8	14.48	0.59	B		
	2038 Without Dev													
Stream B-C	D3	26.7	319.18	1.06	F	62.93	-19 % [Stream B-A]	D4	85.5	1162.56	1.36	F	248.26	-25 % [Stream B-A]
Stream B-A		11.2	382.52	1.02	F				44.6	1184.63	1.34	F		
Stream C-AB		2.4	14.16	0.62	B				2.8	17.17	0.67	C		
	2038 + DEV													
Stream B-C	D5	55.7	704.52	1.21	F	136.59	-23 % [Stream B-A]	D6	102.2	1493.26	1.47	F	323.08	-27 % [Stream B-A]
Stream B-A		26.0	740.09	1.18	F				58.7	1510.98	1.45	F		
Stream C-AB		2.4	14.38	0.63	B				3.0	17.63	0.68	C		

5.7.16 The analysis demonstrates that the junction would be over capacity in the future without the proposed development. The proposals are forecast to generate an additional circa 40 two-way trips through the junctions during the peaks, equivalent to around a 1-2% increase in vehicle movements through the junction. This is demonstrated to have a disproportionate impact on the operation of the junction in terms of queuing and delay, which is a product of the junction already being overcapacity in the baseline position. Nevertheless, an indicative mitigation scheme for the junction has been identified and this is discussed further in **Chapter 6**.

14. B4156 \ Bognop Road Mini-Roundabout

5.7.17 It was requested by SCC that the impact of the development proposals on the B4156 / Bognop mini-roundabout be considered as part of the STA work. In traffic generation terms, the proposals for Cross Green are forecast to generate 12-13 two-way vehicle trips through the junction at peak times which is not significant and would be within the daily variation in traffic movements.

6.0 POTENTIAL MITIGATION WORKS

6.1 Introduction

6.1.1 Following the assessment of development impact discussed in **Chapter 5**, highway mitigation measures have been identified at three junctions, including:

- Legs Lane \ Underhill Lane \ Bushbury Lane Mini Roundabout
- Bushbury Lane \ Stafford Road Roundabout
- Underhill Lane \ Cannock Road Junction

6.1.2 These are discussed in turn below.

6.2 Legs Lane \ Underhill Lane \ Bushbury Lane Mini Roundabout

6.2.1 As set out in **Chapter 5**, this junction is forecast to be approaching capacity in the future without the proposal and that it would operate marginally worse as a result of the Cross Green development. An indicative mitigation scheme has therefore been identified and this is sketched on **Drawing 23199-J8** and includes some minor widening works on the Underhill Lane approach.

6.2.2 Updated modelling has been undertaken and the results of this assessment are presented in **Table 21** below. This shows that the works would fully mitigate the impact of the development proposals.

Table 21 – Legs Lane \ Underhill Lane \ Bushbury Lane Mitigation Results

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2038 + DEV													
1 - Legs Lane (N)	D7	1.9	8.98	0.65	A	15.28	5 % [2 - Underhill Lane]	D8	2.1	9.84	0.68	A	16.34	6 % [3 - Bushbury Lane]
2 - Underhill Lane		4.0	25.03	0.80	D				2.9	18.50	0.74	C		
3 - Bushbury Lane		1.2	12.38	0.53	B				3.2	24.10	0.77	C		

6.3 Bushbury Lane \ Stafford Road Roundabout

6.3.1 As set out in **Chapter 5**, this junction is forecast to be approaching capacity in the future without the proposed development and that the proposals for the Cross Green development would have a detrimental impact on junction operation. An indicative mitigation scheme has therefore been identified and this is sketched on **Drawing 23199-12-GAB** and includes the following works:

- Widening to the north of Bushbury Lane to create a two lane entry with extended flare;
- Localised widening to the south of Bushbury Lane and amendment of the splitter island geometry; and
- South to north bypass lane to be provided through road markings only.

6.3.2 Updated modelling has been undertaken using the ARCADY module in Junctions 10 and the results of this assessment are presented in **Table 22** below. This shows that the works would fully mitigate the impact of the development proposals.

Table 22 – Bushbury Lane\ Stafford Road Mitigation Results

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2038 + Dev													
1 - A449 Stafford Road (N)	D5	9.5	18.18	0.90	C	11.90	4 % [1 - A449 Stafford Road (N)]	D6	3.9	8.50	0.79	A	8.94	6 % [2 - Bushberry Lane]
2 - Bushberry Lane		2.2	13.95	0.67	B				3.6	16.84	0.78	C		
3 - A449 Stafford Road (S)		1.0	5.73	0.48	A				1.2	6.71	0.55	A		

6.4 Underhill Lane \ Cannock Road Junction

6.4.1 As set out in **Chapter 5**, this junction is forecast to be over capacity in the future without the proposed development and that the proposals for the Cross Green development would have a detrimental impact on junction operation. An indicative mitigation scheme has therefore been identified and this is sketched on **Drawing 23199-13-GAB** at and includes the following works:

- Proposed three arm roundabout with painted central roundel with existing signal controlled pedestrian crossing to be retained.

6.4.2 Updated modelling has been undertaken using the ARCADY module in Junctions 10 and the results of this assessment are presented in **Table 23** below. This shows that the works would fully mitigate the impact of the development proposals.

Table 23 – Underhill Lane\ Cannock Road Mitigation Results

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2038 + DEV													
A - A460 Cannock Road (SW)	D5	3.3	14.86	0.76	B	34.89	-4 % [C - A460 Cannock Road (NE)]	D6	5.6	22.66	0.85	C	26.22	-5 % [B - Underhill Lane]
B - Underhill Lane		2.4	19.54	0.70	C				6.8	51.72	0.88	F		
C - A460 Cannock Road (NE)		16.7	55.19	0.95	F				4.2	16.11	0.80	C		

6.5 Summary

6.5.1 Overall, the analysis demonstrates that the impact of the development proposals on the operation of the local highway network can be accommodated with the mitigation works proposed. These would be subject to a more detailed review and analysis at the planning application stage. A summary of the assessment results is provided in **Table 24**.

Table 24 – Junction Assessment Results Summary

unction	Operation in 2038 without Dev	Operation in 2038 with Dev	Mitigation Required?	Operation with Mitigation
1. New Link Road – Southern Access	-	Within Capacity (highest RFC of 0.33 and Q of 1)	-	-
2. New Link Road – Northern Access	-	Within Capacity (highest RFC of 0.21 and Q of 0)	-	-
3. Brinsford Lane – Southern Access	-	Within Capacity (highest RFC of 0.01 and Q of 0)	-	-
4. Brinsford Lane – Northern Access	-	Within Capacity (highest RFC of 0.20 and Q of 0)	-	-
5. New Road Access	-	Within Capacity (highest RFC of 0.21 and Q of 0)	-	-
6. Cat and Kittens Lane/ Greenfield Lane	Within Capacity (highest RFC of 0.58 and Q of 1)	Within Capacity (highest RFC of 0.63 and Q of 2)	N	-
7. Cat and Kittens Lane / Northycote Lane / Legs Lane	Within Capacity (highest RFC of 0.43 and Q of 1)	Within Capacity (highest RFC of 0.44 and Q of 1)	N	-
8. Northycote Lane / Bushbury Lane	Within Capacity (highest RFC of 0.85 and Q of 6)	Approaching Capacity (highest RFC of 0.92 and Q of 9)	Y	Within Capacity (highest RFC of 0.80 highest Q of 4)
9. Bushbury Lane \ Kempthorne Avenue \ Elston Hall Lane Roundabout	Within Capacity (highest RFC of 0.63 and Q of 2)	Within Capacity (highest RFC of 0.65 and Q of 2)	N	-
10. Broadlands \ Stafford Road Traffic Signal Controlled Junction	Within Capacity (highest DoS of 82.3% and Q of 8)	Approaching Capacity (highest DoS of 85.9% and Q of 23)	N	-
11. Springfield Lane \ Stafford Road Traffic Signal Controlled Junction	Approaching Capacity (highest DoS of 87.2% and Q of 42)	Approaching Capacity (highest DoS of 90.6% and Q of 17)	N	-
12. Bushbury Lane \ Stafford Road Roundabout	Over Capacity (highest RFC of 1.00 and Q of 61)	Over Capacity (highest RFC of 1.04 and Q of 147)	Y	Approaching Capacity (highest RFC of 0.90 and Q of 10)
13. Underhill Lane \ Cannock Road Junction	Over Capacity (highest RFC of 1.36 and Q of 86)	Over Capacity (highest RFC of 1.47 and Q of 102)	Y	Approaching Capacity (highest RFC of 0.95 and Q of 17)

7.0 CONCLUSIONS

7.1 DTA Transportation Limited has been commissioned on behalf of Taylor Wimpey to provide transport advice in relation to the proposed allocation of Land at Cross Green for residential development within the emerging South Staffordshire Local Plan.

7.2 This Strategic Transport Assessment has been prepared following discussions with South Staffordshire Council, Staffordshire County Council, the City of Wolverhampton Council and National Highways. It provides a high level strategic review of the impact of the proposed site allocation within the emerging Local Plan and focusses on deliverability. A more detailed TA would be required at the planning application stage.

7.3 The pertinent paragraphs from the National Planning Policy Framework in relation to the transport evidence base are set out below:

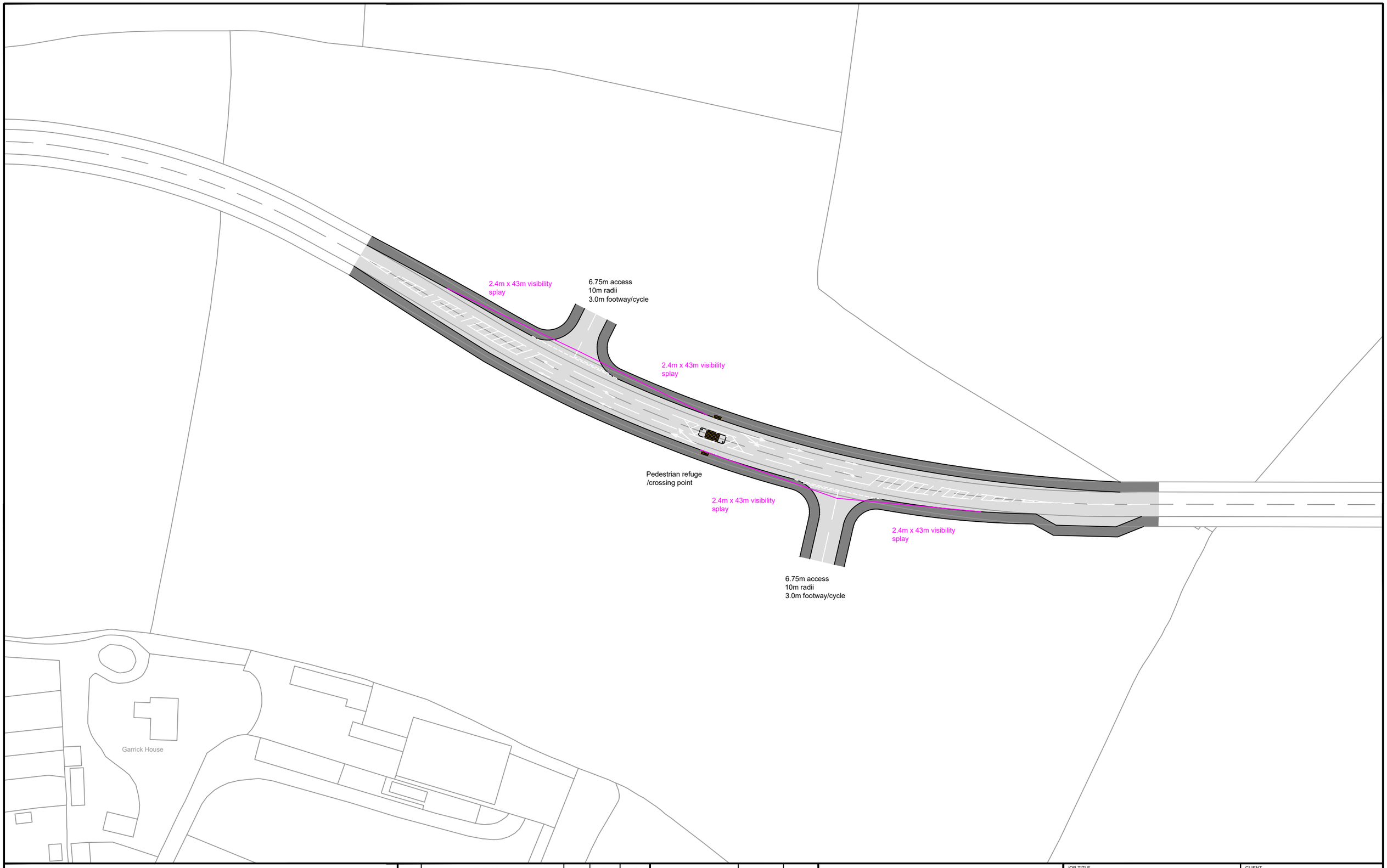
> ***Para 104.*** *Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*
>
> *a) the potential impacts of development on transport networks can be addressed;*
>
> *b) opportunities from existing or proposed transport infrastructure, and changing 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.*
>
> ***Para 105.*** *The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.*

7.4 In terms of sustainable accessibility, the site is well located to take advantage of existing foot, cycle and public transport services in the local area. Opportunities for maximising connectivity between the proposed development and the local area are discussed in this report and detailed schemes would be developed in conjunction with the local highway authorities at the planning application stage.

7.5 At this stage, it is proposed that primary vehicle access to the site is to be taken from the new A449 link road proposed as part of the ROF Featherstone scheme. Secondary points of vehicle access are proposed onto Brinsford Lane and New Road. Separate pedestrian/ cycle access points are also proposed, which will form part of a pedestrian and cycle priority route through the site. The exact form of the accesses and their locations would need to be agreed at the planning application stage as part of a detailed Transport Assessment.

7.6 As part of this preliminary work, an assessment of the impact of the development proposals on the operation of the highway network has been undertaken. Mitigation works have been identified at a number of locations for the purposes of deriving indicative costs to inform the viability assessment of the emerging Local Plan. Further detailed analysis of impact would be required in the future should the site be brought forward through planning.

DRAWINGS



REV	DESCRIPTION	DRAWN	INITIALS	DATE

DRAWING STATUS	CHECKED BY	DATE

david tucker associates
transport planning consultants

Forester House, Doctors Lane,
Henley in Arden,
Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
www.dtatransportation.co.uk

JOB TITLE	CLIENT
Featherstone, Staffordshire	Taylor Wimpey

DRAWING TITLE

Proposed Site Access
New Access Road

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
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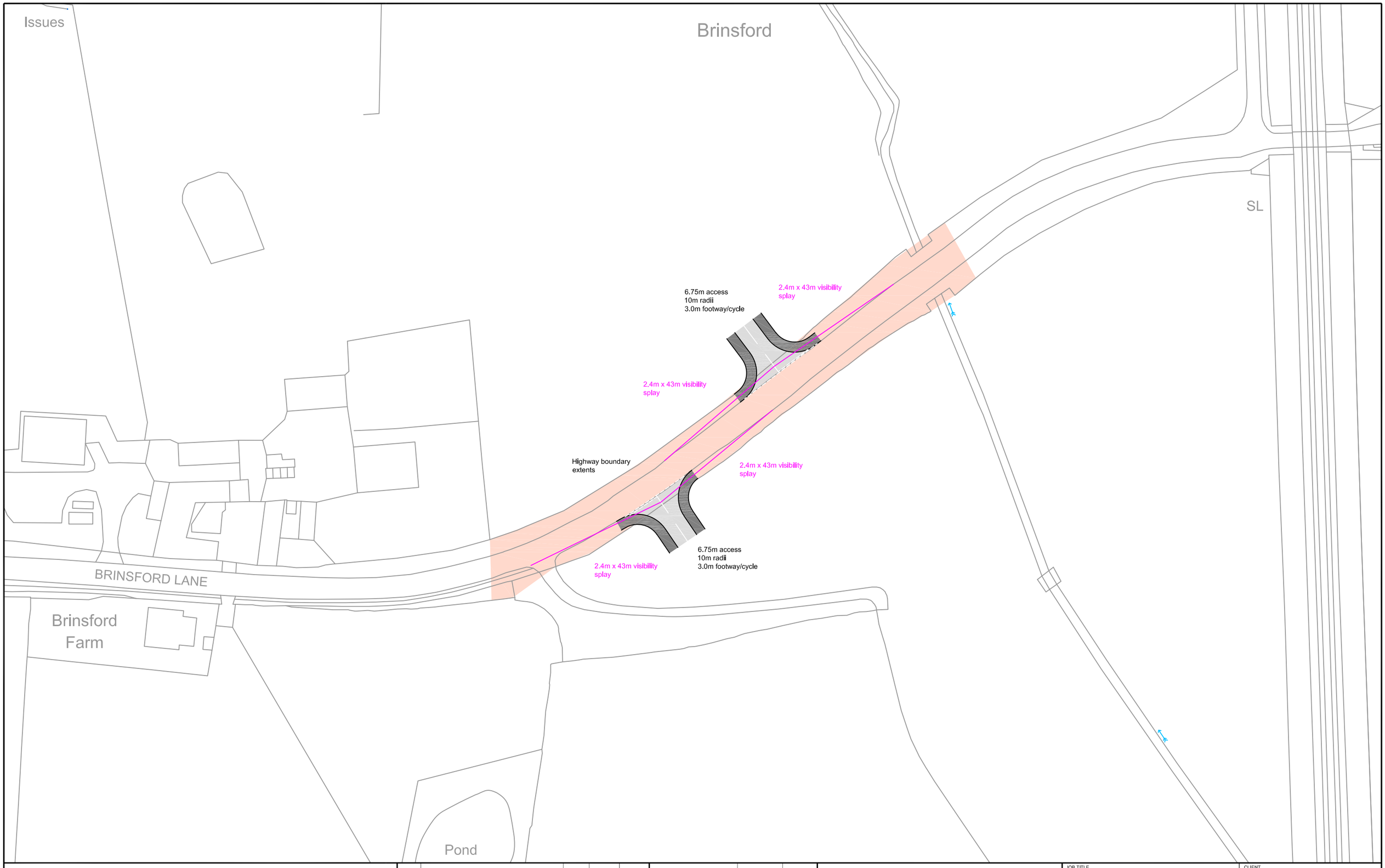

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DRAWING STATUS	CHECKED BY	DATE

david tucker associates
transport planning consultants
Forester House, Doctors Lane,
Henley In Arden,
Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
www.dtatransportation.co.uk

JOB TITLE	CLIENT
Featherstone, Staffordshire	Taylor Wimpey

DRAWING TITLE

Proposed Site Access
Brinsford Lane

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
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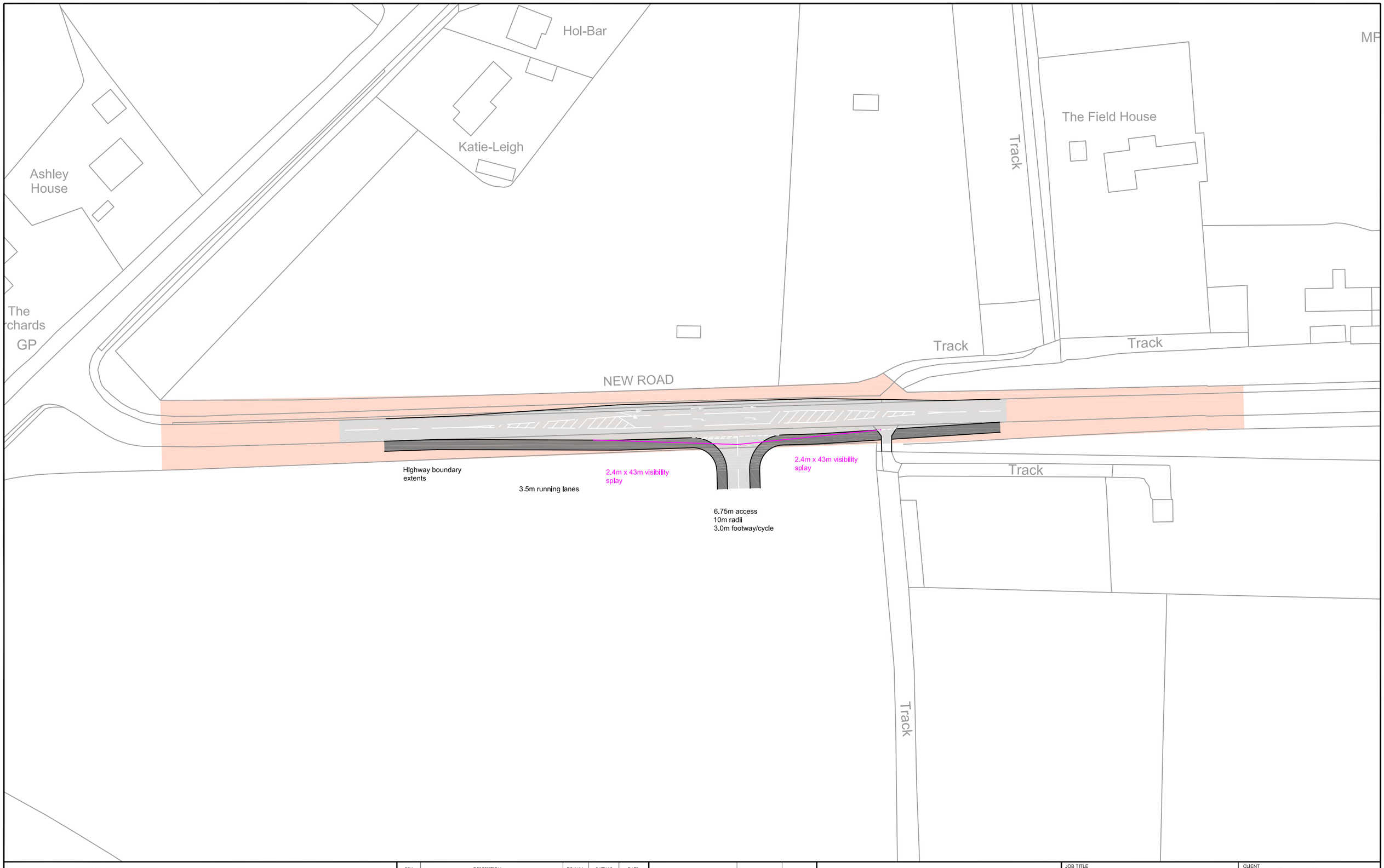

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DRAWING STATUS	CHECKED BY	DATE

david tucker associates
transport planning consultants
Forester House, Doctors Lane,
Henley In Arden,
Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
www.dtatransportation.co.uk

JOB TITLE: Featherstone, Staffordshire
CLIENT: Taylor Wimpey

DRAWING TITLE: Proposed Site Access New Road

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1/500@A3	BP	June21	23199-01-3	

REV	DESCRIPTION	DRAWN	INITIALS	DATE

DTA
Transport Planning Consultants

Forester House, Doctors Lane,
Henley in Arden,
Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
www.dtatransportation.co.uk

JOB TITLE	CLIENT
Featherstone, Staffordshire	Taylor Wimpey

DRAWING TITLE

Junction 8 Underhill Lane
Improvements

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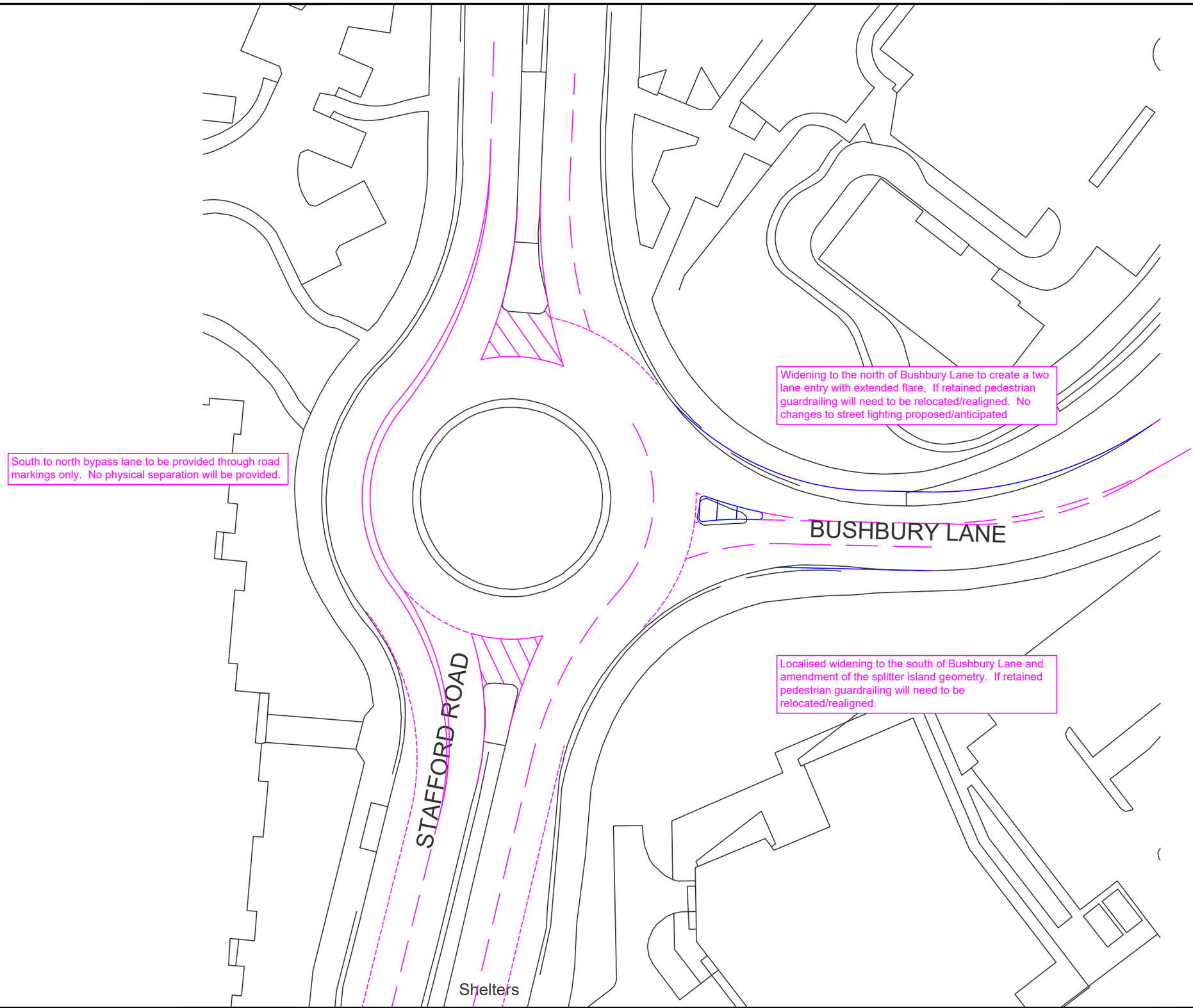

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DTA
Transport Planning Consultants

Forester House, Doctors Lane,
Henley in Arden,
Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
www.dtatransportation.co.uk

JOB TITLE	CLIENT
CROSS GREEN	TAYLOR WIMPEY

DRAWING TITLE
A449 Stafford Road – Bushbury Lane Roundabout
Northbound bypass lane and extended flare on
Bushbury Lane

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
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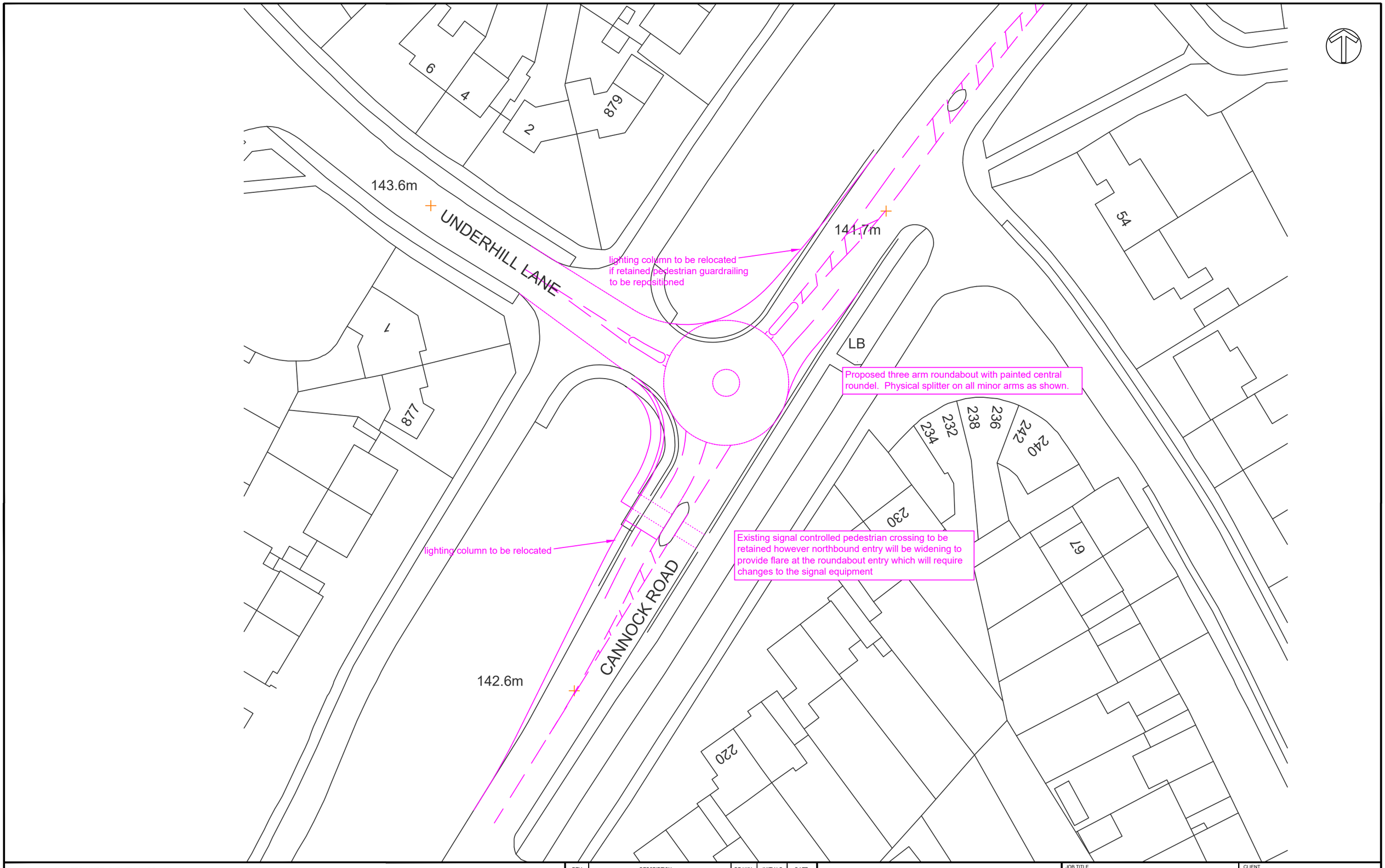


REV	DESCRIPTION	DRAWN	INITIALS	DATE

DTA
Transport Planning Consultants

Forester House, Doctors Lane,
Henley in Arden,
Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
www.dtatransportation.co.uk

JOB TITLE	CLIENT
CROSS GREEN	TAYLOR WIMPEY

DRAWING TITLE
A460 Cannock Road – Underhill Lane
Proposed Mini–Roundabout layout

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1:500@A3	RM	08/06/22	23199–13–GA	B

APPENDIX A

Illustrative Site Layout Plan

KEY

- SITE BOUNDARY (TBC)
  63.76 HA
  157.56 ACRES
- POTENTIAL SITE ACCESS VIA BRINSFORD LANE, NEW ROAD AND OLD STAFFORD ROAD
- PROPOSED HIGH DENSITY RESIDENTIAL DEVELOPMENT PARCELS (50 DPH)
  NDA 5.09 HA / 12.58 ACRES
  UP TO **255** DWELLINGS (AT 50 DPH)
- PROPOSED MEDIUM DENSITY RESIDENTIAL DEVELOPMENT PARCELS (40 DPH)
  NDA 7.44 HA / 18.37 ACRES
  UP TO **300** DWELLINGS (AT 40 DPH)
- PROPOSED LOW DENSITY RESIDENTIAL DEVELOPMENT PARCELS (35 DPH)
  NDA 18.1 HA / 44.72 ACRES
  UP TO **635** DWELLINGS (AT 35 DPH)

  COMBINED TOTAL QUANTUM = 1190 UNITS
- PROPOSED CENTRAL VILLAGE HUB
  0.77 HA / 1.9 ACRES
- POTENTIAL LOCATION FOR PRIMARY SCHOOL
  - 2.05 HA / 5.08 ACRES
- POTENTIAL PARKING FOR RAIL HALT
  - 1.47 HA / 3.6 ACRES (UP TO 500 SPACES)
- POTENTIAL ROUNDABOUT ACCESS VIA STAFFORD ROAD
- PROPOSED DISTRICT ROAD MOVEMENT
- PRIMARY MOVEMENT ROUTE (INCORPORATING CYCLE AND PEDESTRIAN MOVEMENT)
- SECONDARY MOVEMENT ROUTE
- TERTIARY LINK ROAD MOVEMENT
- PRIVATE LANE MOVEMENT
- EXISTING RAIL MOVEMENT PROVIDING ACCESS TO NEARBY URBAN CENTRES
- PROPOSED NEW RAIL HALT STOP
- POTENTIAL PEDESTRIAN CROSSING POINT (TBC)
- PUBLIC RIGHT OF WAYS
- POTENTIAL PEDESTRIAN ROUTES WITHIN DEVELOPMENT
- EXISTING VEGETATION
- PROPOSED STRUCTURAL PLANTING PROVIDING A REDUCTION IN ACOUSTIC DISTURBANCE
- PROPOSED WETLAND WOODLAND PLANTING
- ORNAMENTAL PLANTING
- COMMUNITY ORCHARD PLANTING
- NEIGHBOURHOOD EQUIPPED AREA OF PLAY
- LOCALLY EQUIPPED AREAS OF PLAY
- AREA OF NATURAL PLAY
- COMMUNITY TRIM TRAIL ROUTE
- COMMUNITY ALLOTMENT SPACES
- CONFIRMED EXTENTS OF FLOOD LINE
- SUSTAINABLE URBAN DRAINAGE (TBC)

KEY PRINCIPLES

1. POTENTIAL ACCESS VIA NEW ROUNDABOUT AND DISTRICT ROAD OFF EXISTING STAFFORD ROAD (A449);
2. POTENTIAL ACCESS VIA BRINSFORD LANE, NEW ROAD AND OLD STAFFORD ROAD;
3. PRIMARY RESIDENTIAL MOVEMENT PROVIDING GREEN FORMS OF MOVEMENT;
4. SECONDARY MOVEMENT ROUTES PROVIDING ACCESS TO LARGER PARCELS OF DEVELOPMENT;
5. TERTIARY MOVEMENT ROUTES PROVIDING ACCESS TO SMALLER CLUSTERS OF DEVELOPMENT
6. PRIVATE LANES WITH OUTWARD FACING DWELLINGS PROVIDING PASSIVE SURVEILLANCE OVER PROPOSED OPEN SPACE;
7. POTENTIAL LOCATION FOR PROPOSED PRIMARY SCHOOL;
8. POSSIBLE LOCATION FOR A CENTRAL VILLAGE HUB PROVIDING OPPORTUNITIES FOR RETAIL AND COMMUNITY USES;
9. NEWLY PROPOSED RAIL HALT STATION PROVIDING SUSTAINABLE FORMS OF MOVEMENT;
10. A SERIES OF LANDSCAPED COMMONS OFFERING LOCATIONS FOR EQUIPPED AREAS OF PLAY AND SPORTING PURSUITS;
11. NEWLY CREATED "CANALSIDE WALK" LINEAR PARK PROVIDING A LANDSCAPED BUFFER TO THE EXISTING CANAL NETWORK PROVIDING LEISURE AND SOCIAL OPPORTUNITIES FOR RESIDENTS;
12. COMMUNITY ALLOTMENTS TO BENEFIT NEW AND EXISTING RESIDENTS;
13. PLANTED COMMUNITY ORCHARD RETURNING THE AREA TO ITS HISTORIC LAND USE;
14. PROPOSED LOCATION FOR COMMUNITY TRIM TRAIL PROVIDING OPPORTUNITIES FOR COMMUNITY EXERCISE AND SOCIAL INCLUSION;
15. MAXIMUM RETENTION OF EXISTING VEGETATION AND ECOLOGY ON SITE;
16. WETLAND WOODLAND PLANTING AIDING BIO-DIVERSITY AND ECOLOGY ON SITE;
17. NEW STRUCTURAL WOODLAND PLANTING TO CREATE AN ACOUSTIC BARRIER TO EXISTING AND PROPOSED MOVEMENT INFRASTRUCTURE;
18. SERIES OF THEMED GREENWAYS HELPING TO RETAIN EXISTING ECOLOGY WITH OPPORTUNITIES FOR ENHANCED PLANTING AND OPEN EXPANSES OF AMENITY GREENSPACE;
19. MAXIMUM PROVISION FOR PEDESTRIAN MOVEMENT TO PROVIDE MAXIMUM PERMEABILITY THROUGHOUT THE DEVELOPMENT; AND
20. UTILISATION OF EXISTING SITE LOW POINTS FOR SUSTAINABLE URBAN DRAINAGE SOLUTIONS.

Pegasus Group

CROSS GREEN VILLAGE, FEATHERSTONE | **DEVELOPMENT FRAMEWORK PLAN**

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS www.pegasusgroup.co.uk | TEAM/DRAWN BY: RL | APPROVED BY: JW | DATE: 15/10/21 | SCALE: 1:2500 @ A1 | DRWG: P20-0904_001-1 REV: | CLIENT: TAYLOR WIMPEY STRATEGIC |

APPENDIX B

ROF Featherstone New Link Road

OF CENTRAL
ENING TO BE
NSIDERED AT
ESIGN STAGE

PUBLIC FOOTPATH No.39

APPLICATION SITE BOUNDARY

2m FOOTWAY

3m FOOTWAY / CYCLEWAY

7.3m CARRIAGEWAY

RAILWAY TRACKS

OVERHEAD POWER LINES

ROAD TO PASS OVER RAILWAY TRACKS ON A BRIDGE STRUCTURE

TIE INTO EXISTING CARRIAGEWAY

2m VERGE

30m ICD COMPACT ROUNDABOUT WITH SINGLE LANE ENTRIES AND EXITS

TIE INTO INTERNAL SITE LAYOUT

OVERRUN AREA FOR LARGE VEHICLES

TIE INTO EXISTING CARRIAGEWAY WIDTH OF CAT AND KITTENS LANE

UNCONTROLLED DROPPED CROSSING LINKING TO EASTERN FOOTWAY

7.3m WIDE SITE ACCESS

60m JUNCTION SPACING TO OVLA GOODS VEHICLE TESTING CENTRE

SCALE BAR @ 1:1250

0 10 25 50 100 125

A449 ROUNDABOUT DESIGN TAKEN FROM BWB DRAWING - FEA-BWB-HGN-XX-M2-C-0100

i-Transport

Centurion House, 129 Deansgate
Manchester, M3 3WR

Tel: 0161 830 2172

www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APP
G	16.06.21	JB	AMENDED JUNCTION ARRANGEMENT	JW	SE
F	19.01.21	PH	BUS STOP LAY-BY AMENDED	SE	SE
E	11.12.20	PH	RED LINE BOUNDARY UPDATED	SE	SE
D	10.12.20	PH	CAT & KITTENS ROUNDABOUT AMENDED	SE	SE
C	09.12.20	JB	HIGHWAY BOUNDARY UPDATED	SE	SE
B	25.11.20	JB	MINOR EDITS TO KEY	SE	SE

STATUS: FOR INFORMATION

TITLE: PROPOSED ACCESS ROAD

PROJECT: LOGIC 54

CLIENT: ST FRANCIS GROUP (FEATHERSTONE 2) LTD / PEVERIL SECURITIES LIMITED

DRAWN:	CHECKED:	APPROVED:
JB	JW	SE
PROJECT No:	SCALE @ A1:	DATE:
ITM15267	1:1250	27.01.20
DRAWING No:		REV:
ITM15267-GA-013		G

Z:\Projects\ITM15267\A449 Featherstone\Transport Strategy\Drawings\ITM15267-GA-013-rev G.dwg

APPENDIX C

M54 – M6 Link Road

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX

IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROPRIATE METHOD STATEMENT.

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT.

EXCEPTIONAL RISKS RELATING TO THE WORKS ASSOCIATED WITH THIS DRAWING ARE IDENTIFIED BELOW.

CONSTRUCTION

MAINTENANCE / OPERATION / DECOMMISSIONING / DEMOLITION

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
2. DO NOT SCALE FROM THIS DRAWING, USE ONLY PRINTED DIMENSIONS.
3. ALL DIMENSIONS IN MILLIMETRES, ALL CHAINAGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH & SAFETY FILE FOR ANY IDENTIFIED POTENTIAL RISKS.
5. GENERAL ARRANGEMENT BASED ON MODEL REV P03.

KEY

LIMITS OF LAND TO BE ACQUIRED OR USED PERMANENTLY OR TEMPORARILY (THE ORDER LIMITS)

LAND NOT INCLUDED WITHIN THE ORDER LIMITS

Purpose of issue

SUITABLE FOR INFORMATION

Client
Highways England
The Cube
199 Wharfside Street
Birmingham
B1 1RN

Working on behalf of highways england

Project Title

M54 M6 Link Improvements

Drawing Title

GENERAL ARRANGEMENT SCHEME WIDE

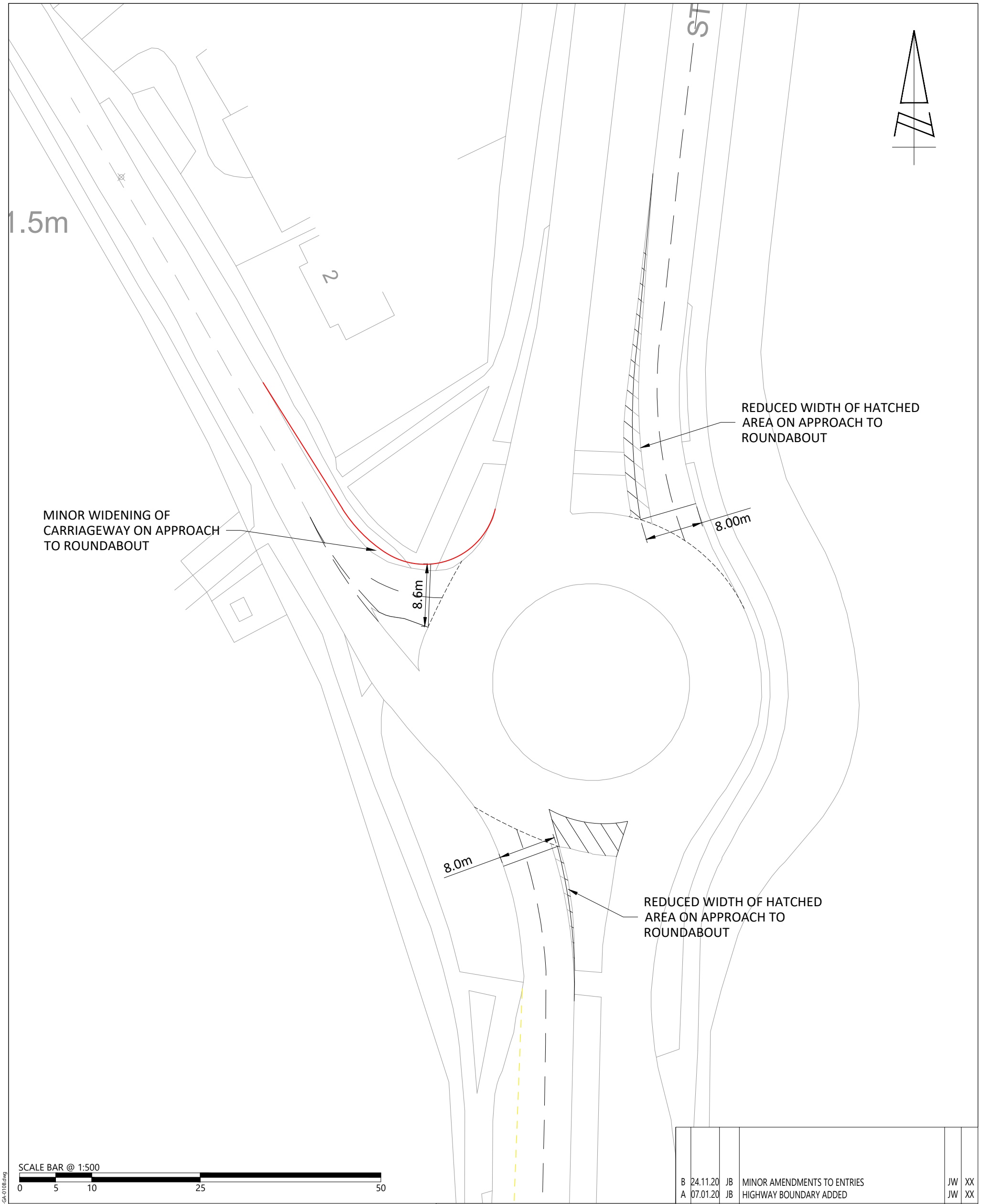
Internal Project No.	Suitability
60536736	S2
Scale @ A1	Zone
NTSH/NTSV	Highways General

Drawing Number
Highways England PIN | Originator | Volume
HE514465 -ACM -HGN-
Location | Type | Role | Number
M54_SW_PR_Z -DR-CH-1001

Rev P07

APPENDIX D

A460/ Brewood Road Mitigation



SCALE BAR @ 1:500

0 5 10 25 50

REV	DATE	BY	DESCRIPTION	CHK	APD
B	24.11.20	JB	MINOR AMENDMENTS TO ENTRIES	JW	XX
A	07.01.20	JB	HIGHWAY BOUNDARY ADDED	JW	XX

CLIENT:

ST FRANCIS GROUP (FEATHERSTONE) LTD & PEVERIL SECURITIES LTD

STATUS:

FOR INFORMATION

i-Transport

Centurion House, 129 Deansgate
Manchester, M3 3WR

Tel: 0161 830 2172

www.i-transport.co.uk

TITLE:

A449 STAFFORD ROAD/BREWOOD ROAD
POTENTIAL MITIGATION SCHEME

PROJECT:

LOGIC 54

DRAWN:	CHECKED:	APPROVED:
JB	JW	

PROJECT No:	SCALE @ A3:	DATE:
ITM15267	1:500	25.11.19

DRAWING No:	REV:
ITM15267-GA-010	B

Z:\Projects\15267ITM ROP\Tech\Acad\i-Transport Drawings\Working Drawings\GA\ITM15267-GA-010B.dwg

APPENDIX E

South Staffordshire Cycle Map

General advice

Before setting off
Check your bike, especially if you have not ridden in a while. Your bike will need to be suitable for the terrain on which you will be cycling. Plan for emergencies – take a pump, puncture kit and some form of ID. Make sure that your brakes work, your chain is not too loose or tight, and your tyres are pumped up. If it has been a long time since your bike has been out you could get a reputable dealer to service it.

Cycle Helmets
Cycle helmets are not a legal requirement but they will help to reduce the severity of a head injury in the event of an accident.

Clothing
A cyclist can cycle in the majority of weather conditions; the key is to wear appropriate clothing to protect you against the elements. However, always consider how visible you are; when it is dull and dark you need to be certain that motorists can see you! Wear bright or fluorescent colours during the day and reflective material at night.

Lights
Check your lights are working; it is a legal requirement to have a steady light on your bike at night and on dull days.

Cycling along canals

The Canal & River Trust (formerly British Waterways) welcomes considerate cyclists to its towpaths and you don't need a permit to use your bike on any of our towpaths. Lots of people visit the waterways for many different reasons and everyone is entitled to feel happy and safe whilst they're visiting.

So the Canal & River Trust asks everyone to follow **the Greenways Code for Towpaths** –10 points which encourage considerate, safe and courteous use of towpaths:

- **Share the space** Consider other people and the local environment whenever you're on a towpath. Remember some people may move less predictably, for example young children or those with visual or mobility impairments.
- **Drop your pace** Considerate sharing of the limited towpath space is the key. Jogging and cycling are welcome, but drop your pace in good time and let people know you are approaching by ringing a bell or politely calling out before waiting to pass slowly.
- **Pedestrians have priority** Towpaths are 'Greenways' or shared use routes where pedestrians have priority and vehicles are generally excluded.
- **Be courteous to others** A smile can go a long way. Abusive or threatening behaviour is not acceptable and should be reported to the Police.
- **Follow signs** They are there for the safety of everyone. Cyclists should dismount where required and use common sense in busy or restricted areas, recognising that pedestrians have priority.
- **Give way to oncoming people beneath bridges** Whether they are on foot or bike and be extra careful at bends and entrances where visibility is limited.
- **When travelling in large groups** especially if you are running or cycling, please use common sense and give way to others.
- **Try to avoid wearing headphones** as this makes you less aware of your surroundings possible hazards and others sharing the same space.
- **Keep dogs on a short lead** and clean-up after them. Dog fouling is very unpleasant and is a health hazard.
- **Keep children close to you at all times** and encourage them to learn and follow the Greenway Code for Towpaths.

Useful contacts

To report potholes, damaged pavements, blocked drains, broken streetlights and pedestrian crossings, call the County Council's contact centre on 0300 111 8000.

British Cycling
0161 274 2000
www.britishcycling.org.uk

Sustrans and the National Cycle Network
0117 929 0888; info@sustrans.org.uk
www.sustrans.co.uk

Cyclists' Touring Club
www.ctc.org.uk

Tourist Information
08705 00 44 44
www.staffordshire.gov.uk/tourism

Journey Planner
www.transportdirect.info

Sustainable Travel Advice
www.staffordshire.gov.uk/intostafford

Cycle Journey Planner
www.cyclestreets.net

Walking Route Planner
www.walkit.com

Use Staffordshire Share-A-Lift to find potential travel companions. Visit: www.share-a-lift.com for more information.

Key

- Cycle path
- On-carriageway cycle lane
- Signed cycle route
- Advisory cycle routes (one-way arrows shown on cycle routes only)
- Bridleways and byways
- Path or footway where you must walk your bicycle
- Canal towpath
- Bus lane
- Chase Heritage Trail
- Minor road
- B road
- A road
- Steep gradient pointing downhill
- Railway Station (with name)
- District Boundary
- National Cycle Network
- Pelican crossing
- Toucan crossing
- Cycle hire
- Cycle shop
- Cycle parking
- Car parking
- Level crossing
- School
- College
- Hospital
- Post office
- Library
- Public house
- Place of worship
- Toilets
- Tourist Information Centre
- Visitor centre
- Viewpoint

0 Miles 1 2 3 4
0 Kilometres 2 4 6

Common signs

Common road signs and markings that you may come across when cycling through the district.

- **No entry** (for all vehicles including cycles)
- **Motor vehicles prohibited** (cycles permitted)
- **No cycling**
- Segregated route
- Routes for use by pedal cycles only
- Shared route for cyclists and pedestrians together
- With-flow cycle lane ahead
- Cycle lane
- Cycle route
- End of cycle route
- Cyclists dismount
- Direction sign showing recommended route (Town centre 3)
- Cycle parking
- Cycle route forming part of the NCN network

Advanced stop lines

Advanced stop lines are designed to improve safety & convenience for cyclists. In the advanced position cyclists can be seen, reducing the chance of a conflict as vehicles turn left.

Cyclists must stay behind the front stop line and must proceed when the lights are green. Motorists must stay behind the first stop line and not obstruct the forward area.

Common road markings

Cycle lane, track or route

End of cycle lane, track or route

Direction arrow on cycle lane, track or route

Public rights of way

Public footpath: for walkers only

Public bridleway: for walkers, cyclists and horse riders. No motorcycles or cars

Cycling in **South Staffordshire**

WHY CYCLE?

- Cycling can save you money.
- Cycling improves your strength, stamina and aerobic fitness with little risk of over-exertion.
- At 10-20mph door to door, it is the fastest travel mode in urban peak hours.
- According to the British Medical Association (BMA), cycling five miles four times a week can cut risks of coronary heart disease by up to half. Regular activity also reduces chances of strokes, colon cancers and osteoporosis.
- Riding your bike to work is a great way to make two aerobic workouts part of your daily routine.
- Cycling produces no atmospheric pollution and virtually no noise.
- Cycle instead of going by car and you'll help cut congestion.
- Around three quarters of all journeys made in the UK are less than 5 miles. Many of these journeys could be made by bicycle.

If you need a copy of this information in large print, Braille, another language or on cassette, please call 01785 (27) 6615.

www.staffordshire.gov.uk

Issue 4

Cycling map and information guide

Staffordshire County Council

0 Miles 1 2 3 4

0 Kilometres 2 4 6

N W E S

For more detail see the Telford and Wrekin Walking & Cycling Map www.telford.gov.uk

For more detail see Shropshire Council www.shropshire.gov.uk

See Stafford map

For more detail see the Cannock map

See Lichfield map

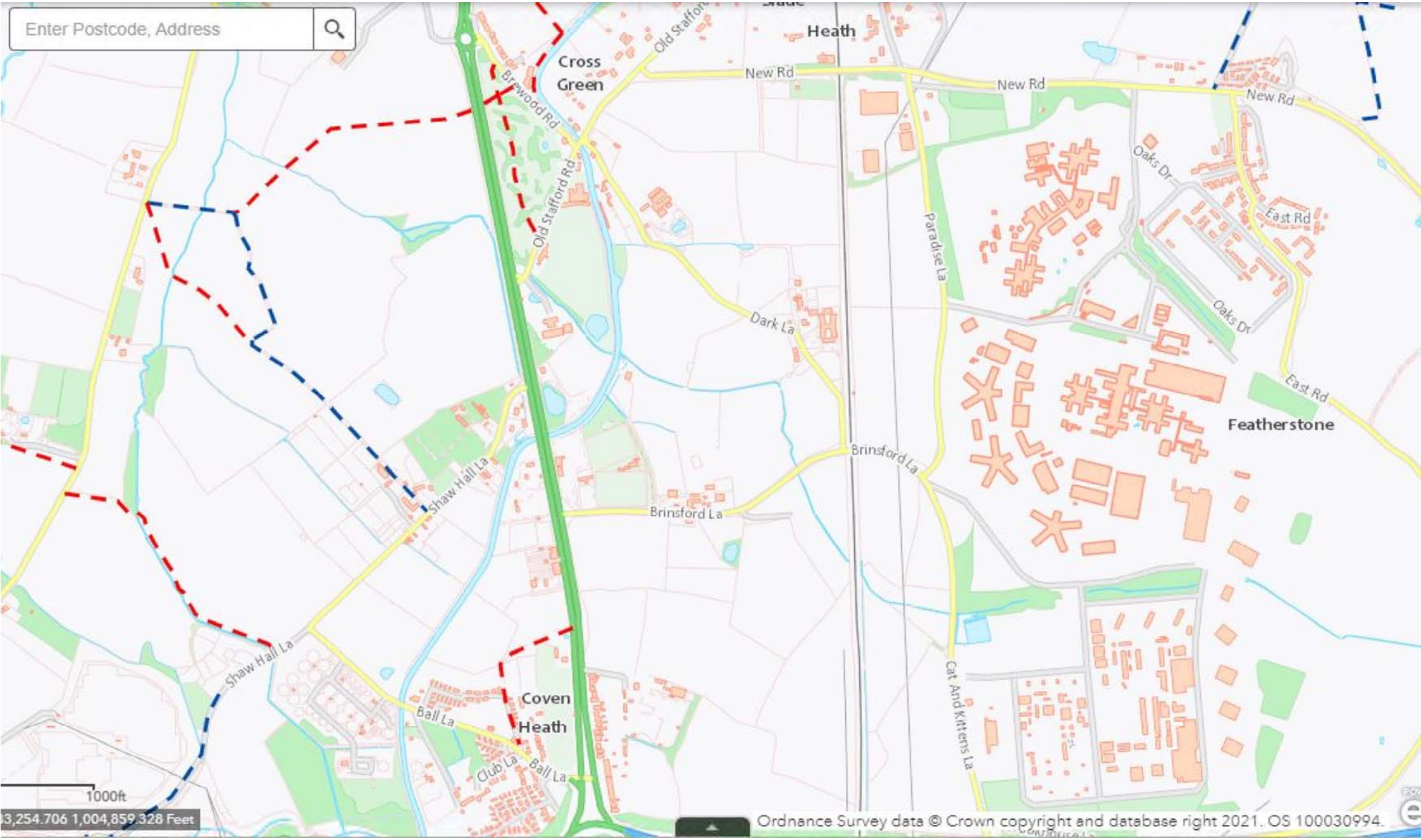
For more detail see the Walsall Cycle Map www.walsall.gov.uk

Codsall

Gnosall
Haughton
To Stafford
Hyde Lea
Coppenhall
STAFFORD
Brocton
Brocton Coppice
Cannock Chase Country Park
Haywood Warren
Wolseley Park
Staffordshire Wildlife Trust HQ
Silver Trees static caravan park
Slitting Mill
RUGELEY
Cafe Birches Valley Forest Centre
Chase Heritage Trail
Tackeroo Caravan Site
Follow the Dog Trail
Fairoak Trail
Springslade Cafe Lodge
Cannock Chase Trekking Centre
Cannock Chase Visitor Centre
Regent's Wood
Lower Cliff Monkey Trail
Stile Cop Bike Park (not suitable for inexperienced riders)
Upper Cliff Monkey Trail
Beaudesert Old Park
Ramp
Steps
Ford
Moreton
Church Eaton
Bradley
Dunston
Acton Trussell
Bednall
Levedale
Teddesley Park
Mitton
Whiston
Penkridge
Leisure Centre
The Chase Golf Club
Huntington
Conical Mound
Green Heath
Hednesford
Hednesford Hills Raceway
Rawnsley
Marston
Wheaton Aston
Lapley
Stretton Wood
Blymhill
Rodbaston
Horsemoor Wood
Fullmoor Wood
Gailey Reservoir
Staffordshire & Worcestershire Canal
Shropshire Union Canal
Weston-under-Lizard
Weston Hall
Weston Park
Belvide Reservoir
Bishops Wood
Homestead Static Caravan Park
Brewood
Four Ashes
CANNOCK
Heath Hayes
Norton Canes
Cannock
Chasewater
Cheslyn Hay
Great Wyrley
Landywood
Coven
Big Wood
The Pool
Shareshill
Featherstone
Codsall Wood
Essington
Bloxwich
Bloxwich North
Oaken
Fordhouses
Codsall
Bilbrook
Lane Green
SHROPSHIRE

APPENDIX F

PROW Extract


Enter Postcode, Address
Heath
Cross Green
New Rd
New Rd
New Rd
Brewood Rd
Old Stafford Rd
Old Stafford Rd
Oaks Dr
East Rd
Paradise La
Dark La
Oaks Dr
East Rd
Featherstone
Brinsford La
Brinsford La
Shaw Hall La
Shaw Hall La
Coven Heath
Ball La
Club La
Ball La
Cat And Kittens La
1000ft
3,254.706 1,004,859.328 Feet
Ordnance Survey data © Crown copyright and database right 2021. OS 100030994.

APPENDIX G

TRIP Distribution Data

Workplace	All	Home	Underground	Train	Bus	Taxi	Motorcycle	Car_Driver	Car_Passenger	Bike	Foot	Other
Amber Valley 005	1	0	0	0	0	0	0	1	0	0	0	0
Amber Valley 010	1	0	0	0	0	0	0	1	0	0	0	0
Ashfield 010	1	0	0	0	0	0	0	1	0	0	0	0
Barnsley 002	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 004	2	0	0	0	0	0	0	2	0	0	0	0
Birmingham 008	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 010	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 016	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 018	3	0	0	0	0	0	0	3	0	0	0	0
Birmingham 021	2	0	0	0	0	0	0	2	0	0	0	0
Birmingham 023	1	0	0	0	0	0	1	0	0	0	0	0
Birmingham 024	4	0	0	0	0	0	1	3	0	0	0	0
Birmingham 025	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 026	2	0	0	0	0	0	0	2	0	0	0	0
Birmingham 028	8	0	0	0	0	0	0	8	0	0	0	0
Birmingham 029	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 030	2	0	0	0	0	0	0	2	0	0	0	0
Birmingham 031	3	0	0	0	0	0	0	3	0	0	0	0
Birmingham 033	1	0	0	0	0	0	0	0	0	1	0	0
Birmingham 037	5	0	0	0	0	0	0	5	0	0	0	0
Birmingham 039	3	0	0	0	0	0	0	3	0	0	0	0
Birmingham 040	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 042	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 043	4	0	0	0	0	0	0	4	0	0	0	0
Birmingham 047	7	0	0	1	0	0	0	6	0	0	0	0
Birmingham 048	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 049	3	0	0	0	0	0	0	3	0	0	0	0
Birmingham 050	40	0	1	7	1	0	3	24	1	2	1	0
Birmingham 052	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 053	3	0	1	0	0	0	0	2	0	0	0	0
Birmingham 056	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 057	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 071	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 074	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 079	1	0	0	1	0	0	0	0	0	0	0	0
Birmingham 081	2	0	0	0	1	0	0	1	0	0	0	0
Birmingham 087	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 089	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 094	3	0	0	0	0	0	0	3	0	0	0	0
Birmingham 097	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 102	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 113	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 121	1	0	0	0	0	0	0	1	0	0	0	0
Birmingham 134	6	0	0	2	0	0	0	3	1	0	0	0
Birmingham 135	4	0	0	2	0	0	0	2	0	0	0	0
Birmingham 137	5	0	1	1	0	0	0	3	0	0	0	0
Birmingham 138	23	0	1	14	0	0	0	8	0	0	0	0
Birmingham 140	3	0	0	2	0	0	0	1	0	0	0	0
Blackburn with Darwen 011	1	0	0	0	0	0	0	1	0	0	0	0
Bradford 020	1	0	0	0	0	0	0	1	0	0	0	0
Bristol 054	1	0	0	0	0	0	0	1	0	0	0	0
Bromsgrove 014	1	0	0	0	0	0	0	1	0	0	0	0
Calderdale 008	5	0	0	0	0	0	0	5	0	0	0	0
Cannock Chase 001	1	0	0	0	0	0	0	1	0	0	0	0
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Cheltenham 014	1	0	0	0	0	0	0	1	0	0	0	0
Cheshire East 012	1	0	0	0	0	0	0	1	0	0	0	0
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Cornwall 039	1	0	0	0	0	0	0	0	0	0	1	0
Coventry 004	1	0	0	0	0	0	0	1	0	0	0	0
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Daventry 007	1	0	0	0	0	0	0	1	0	0	0	0
Derby 007	1	0	0	0	0	0	0	0	1	0	0	0
Derby 018	1	0	0	0	0	0	0	1	0	0	0	0
Doncaster 014	1	0	0	0	0	0	0	1	0	0	0	0
Dudley 001	1	0	0	0	0	0	0	1	0	0	0	0
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Dudley 006	4	0	0	0	0	0	0	4	0	0	0	0
Dudley 007	2	0	0	0	0	0	0	2	0	0	0	0
Dudley 010	2	0	0	0	0	0	0	2	0	0	0	0
Dudley 011	10	0	0	0	0	0	0	10	0	0	0	0
Dudley 012	7	0	0	0	0	0	0	7	0	0	0	0
Dudley 013	8	0	0	0	1	0	0	7	0	0	0	0
Dudley 015	8	0	0	0	0	0	0	7	1	0	0	0
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Dudley 030	3	0	0	0	0	0	0	3	0	0	0	0
Dudley 031	1	0	0	0	0	0	0	1	0	0	0	0
Dudley 034	4	0	0	0	0	0	0	4	0	0	0	0
Dudley 035	1	0	0	0	1	0	0	0	0	0	0	0
Dudley 039	1	0	0	0	0	0	0	1	0	0	0	0
Dudley 040	1	0	0	0	0	0	0	1	0	0	0	0
Dudley 042	1	0	0	0	0	0	0	1	0	0	0	0
Ealing 025	1	0	0	0	0	0	0	1	0	0	0	0
East Devon 006	1	0	0	0	0	0	0	1	0	0	0	0
East Northamptonshire 005	1	0	0	0	0	0	0	1	0	0	0	0
East Northamptonshire 007	1	0	0	0	0	0	0	1	0	0	0	0
East Riding of Yorkshire 024	1	0	0	0	0	0	0	1	0	0	0	0
East Staffordshire 001	1	0	0	0	0	0	0	0	0	0	0	1
East Staffordshire 003	1	0	0	0	0	0	0	0	0	0	1	0
East Staffordshire 006	5	0	0	0	0	0	0	3	0	0	2	0
East Staffordshire 008	1	0	0	0	0	0	0	1	0	0	0	0
East Staffordshire 009	5	0	0	0	0	0	0	4	0	1	0	0
East Staffordshire 011	1	0	0	0	0	0	0	1	0	0	0	0
East Staffordshire 013	2	0	0	0	0	0	0	2	0	0	0	0
East Staffordshire 015	1	0	0	0	0	0	0	1	0	0	0	0
Erewash 003	1	0	0	0	0	0	0	1	0	0	0	0
Gwynedd 010	1	0	0	0	0	0	0	1	0	0	0	0
Hambleton 007	1	0	0	0	0	0	0	0	0	0	1	0
Harborough 009	1	0	0	0	0	0	0	1	0	0	0	0

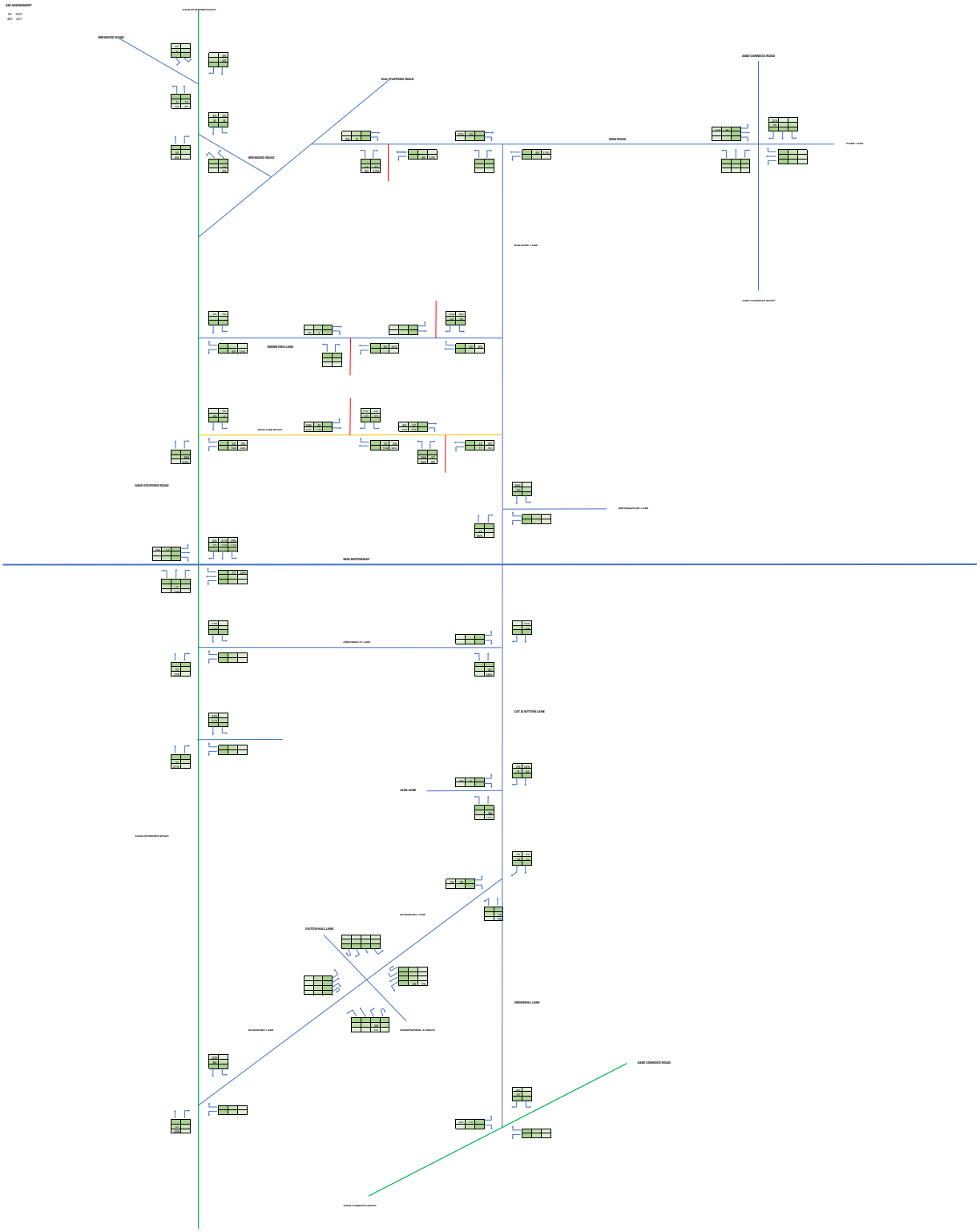
Herefordshire 007	1	0	0	0	0	0	0	1	0	0	0	0
Hillingdon 014	1	0	0	0	0	0	0	1	0	0	0	0
Hillingdon 030	1	0	0	0	0	0	0	1	0	0	0	0
Hinckley and Bosworth 011	1	0	0	0	0	0	0	1	0	0	0	0
Kingston upon Thames 005	1	0	0	0	0	0	0	1	0	0	0	0
Kirklees 054	1	0	0	0	0	0	0	1	0	0	0	0
Knowsley 015	1	0	0	0	0	0	0	1	0	0	0	0
Lancaster 014	1	0	0	0	0	0	0	1	0	0	0	0
Leeds 011	1	0	0	0	0	0	0	1	0	0	0	0
Leicester 008	1	0	0	0	0	0	0	1	0	0	0	0
Lichfield 001	3	0	0	0	0	0	0	3	0	0	0	0
Lichfield 002	4	0	0	0	0	0	0	4	0	0	0	0
Lichfield 004	9	0	0	0	0	0	0	7	2	0	0	0
Lichfield 005	4	0	0	0	0	0	0	3	0	0	1	0
Lichfield 006	9	0	0	0	0	0	0	9	0	0	0	0
Lichfield 007	5	0	0	0	0	0	1	4	0	0	0	0
Lichfield 008	1	0	0	0	0	0	0	1	0	0	0	0
Lichfield 009	1	0	0	0	0	0	0	1	0	0	0	0
Lichfield 010	8	0	0	0	0	0	0	8	0	0	0	0
Lichfield 011	3	0	0	0	0	0	0	3	0	0	0	0
Lichfield 012	5	0	0	0	0	0	0	3	0	0	2	0
Lincoln 004	1	0	0	0	0	0	0	0	1	0	0	0
Manchester 036	1	0	0	1	0	0	0	0	0	0	0	0
Manchester 055	1	0	0	1	0	0	0	0	0	0	0	0
Medway 007	1	0	0	0	0	0	0	0	0	0	1	0
Merton 012	4	0	0	0	0	0	0	4	0	0	0	0
Middlesbrough 001	1	0	0	0	0	0	0	0	1	0	0	0
Milton Keynes 017	1	0	0	0	0	0	0	1	0	0	0	0
Newcastle upon Tyne 008	1	0	0	0	1	0	0	0	0	0	0	0
Newcastle-under-Lyme 007	1	0	0	0	0	0	0	1	0	0	0	0
Newcastle-under-Lyme 010	1	0	0	0	0	0	0	1	0	0	0	0
Newcastle-under-Lyme 012	2	0	0	0	0	0	0	1	0	0	1	0
North Warwickshire 001	2	0	0	0	0	0	0	2	0	0	0	0
North Warwickshire 002	2	0	0	0	0	0	0	2	0	0	0	0
North Warwickshire 003	1	0	0	0	0	0	0	1	0	0	0	0
North Warwickshire 004	2	0	0	0	0	0	0	2	0	0	0	0
North Warwickshire 006	4	0	0	0	0	0	0	3	1	0	0	0
North West Leicestershire 003	1	0	0	0	0	0	0	1	0	0	0	0
North West Leicestershire 012	1	0	0	0	0	0	0	1	0	0	0	0
North West Leicestershire 013	1	0	0	0	0	0	0	0	0	0	0	1
Northampton 021	1	0	0	0	0	0	0	1	0	0	0	0
Northumberland 004	2	0	0	0	0	0	0	2	0	0	0	0
Nuneaton and Bedworth 003	2	0	0	0	0	0	0	2	0	0	0	0
Nuneaton and Bedworth 006	1	0	0	0	0	0	0	1	0	0	0	0
Nuneaton and Bedworth 015	2	0	0	0	0	0	0	2	0	0	0	0
Nuneaton and Bedworth 018	1	0	0	0	0	0	0	1	0	0	0	0
Oadby and Wigston 006	1	0	0	0	0	0	0	1	0	0	0	0
Oxford 007	1	0	0	1	0	0	0	0	0	0	0	0
Peterborough 022	1	0	0	0	0	0	0	1	0	0	0	0
Redditch 001	1	0	0	0	0	0	0	1	0	0	0	0
Redditch 004	1	0	0	0	0	0	0	0	0	1	0	0
Redditch 007	1	0	0	0	0	0	0	1	0	0	0	0
Reigate and Banstead 010	2	0	0	1	0	0	0	1	0	0	0	0
Richmondshire 004	1	0	0	0	0	0	0	0	0	0	1	0
Runnymede 006	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 001	3	0	0	0	0	0	0	3	0	0	0	0
Sandwell 002	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 003	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 004	2	0	0	0	0	0	0	2	0	0	0	0
Sandwell 005	6	0	0	0	0	0	0	6	0	0	0	0
Sandwell 006	2	0	0	0	0	0	0	2	0	0	0	0
Sandwell 007	2	0	0	0	0	0	0	2	0	0	0	0
Sandwell 009	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 010	4	0	0	0	0	0	0	4	0	0	0	0
Sandwell 013	15	0	0	0	0	0	1	13	1	0	0	0
Sandwell 014	2	0	0	0	0	0	0	2	0	0	0	0
Sandwell 015	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 016	8	0	0	0	0	0	0	7	1	0	0	0
Sandwell 017	5	0	0	0	1	0	0	4	0	0	0	0
Sandwell 018	9	0	0	0	0	0	0	9	0	0	0	0
Sandwell 019	5	0	0	0	0	0	0	5	0	0	0	0
Sandwell 020	8	0	0	0	0	0	0	8	0	0	0	0
Sandwell 021	8	0	0	0	0	0	0	8	0	0	0	0
Sandwell 023	5	0	0	0	0	0	0	5	0	0	0	0
Sandwell 024	5	0	0	0	0	0	0	5	0	0	0	0
Sandwell 026	5	0	0	0	0	0	0	5	0	0	0	0
Sandwell 027	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 031	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 033	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 037	1	0	0	0	0	0	0	1	0	0	0	0
Sandwell 038	3	0	0	0	0	0	0	2	1	0	0	0
Sandwell 039	1	0	0	0	0	0	0	1	0	0	0	0
Sefton 037	1	0	0	0	0	0	0	1	0	0	0	0
Sheffield 049	1	0	0	0	0	0	0	1	0	0	0	0
Sheffield 073	1	0	0	1	0	0	0	0	0	0	0	0
Shropshire 008	1	0	0	0	0	0	0	1	0	0	0	0
Shropshire 009	2	0	0	0	0	0	0	2	0	0	0	0
Shropshire 010	1	0	0	0	0	0	0	1	0	0	0	0
Shropshire 016	1	0	0	0	0	0	0	1	0	0	0	0
Shropshire 018	1	0	0	0	0	0	0	1	0	0	0	0
Shropshire 019	3	0	0	0	0	0	0	3	0	0	0	0
Shropshire 020	2	0	0	0	0	0	0	2	0	0	0	0
Shropshire 021	2	0	0	0	0	0	0	2	0	0	0	0
Shropshire 022	2	0	0	0	0	0	0	2	0	0	0	0
Shropshire 024	1	0	0	0	0	0	0	1	0	0	0	0
Shropshire 025	6	0	0	0	0	0	0	6	0	0	0	0
Shropshire 027	23	0	0	0	0	0	1	16	5	1	0	0
Shropshire 028	1	0	0	0	0	0	0	1	0	0	0	0
Shropshire 033	6	0	0	0	0	0	0	6	0	0	0	0
Shropshire 034	3	0	0	0	0	0	0	3	0	0	0	0
Slough 011	1	0	0	0	0	0	0	1	0	0	0	0
Solihull 009	6	0	0	0	0	0	0	6	0	0	0	0
Solihull 011	5	0	0	0	0	0	0	5	0	0	0	0
Solihull 015	5	0	0	0	0	0	0	0	5	0	0	0
Solihull 016	1	0	0	0	0	0	0	1	0	0	0	0
Solihull 017	1	0	0	0	0	0	0	1	0	0	0	0
Solihull 022	1	0	0	0	0	0	0	1	0	0	0	0
South Derbyshire 001	3	0	0	0	0	0	0	3	0	0	0	0
South Derbyshire 003	1	0	0	0	0	0	0	1	0	0	0	0
South Gloucestershire 017	1	0	0	0	0	0	0	1	0	0	0	0
South Northamptonshire 004	2	0	0	0	0	0	0	2	0	0	0	0
South Northamptonshire 007	1	0	0	0	0	0	0	1	0	0	0	0
South Staffordshire 001	67	0	0	0	3	1	1	52	7	3	0	0
South Staffordshire 002	42	0	0	0	1	0	0	33	4	1	1	2
South Staffordshire 003	48	0	0	0	2	0	2	36	6	0	2	0
South Staffordshire 004	19	0	0	0	0	0	0	9	3	0	7	0
South Staffordshire 005	15	0	0	0	0	0	0	10	3	1	1	0
South Staffordshire 006	288	0	0	3	3	1	2	147	12	15	103	2
South Staffordshire 007	59	0	0	0	0	2	0	41	1	0	15	0
South Staffordshire 008	39	0	0	1	0	0	0	36	0	1	1	0
South Staffordshire 009	17	0	0	0	1	0	0	16	0	0	0	0
South Staffordshire 010	5	0	0	0	0	0	0	5	0	0	0	0

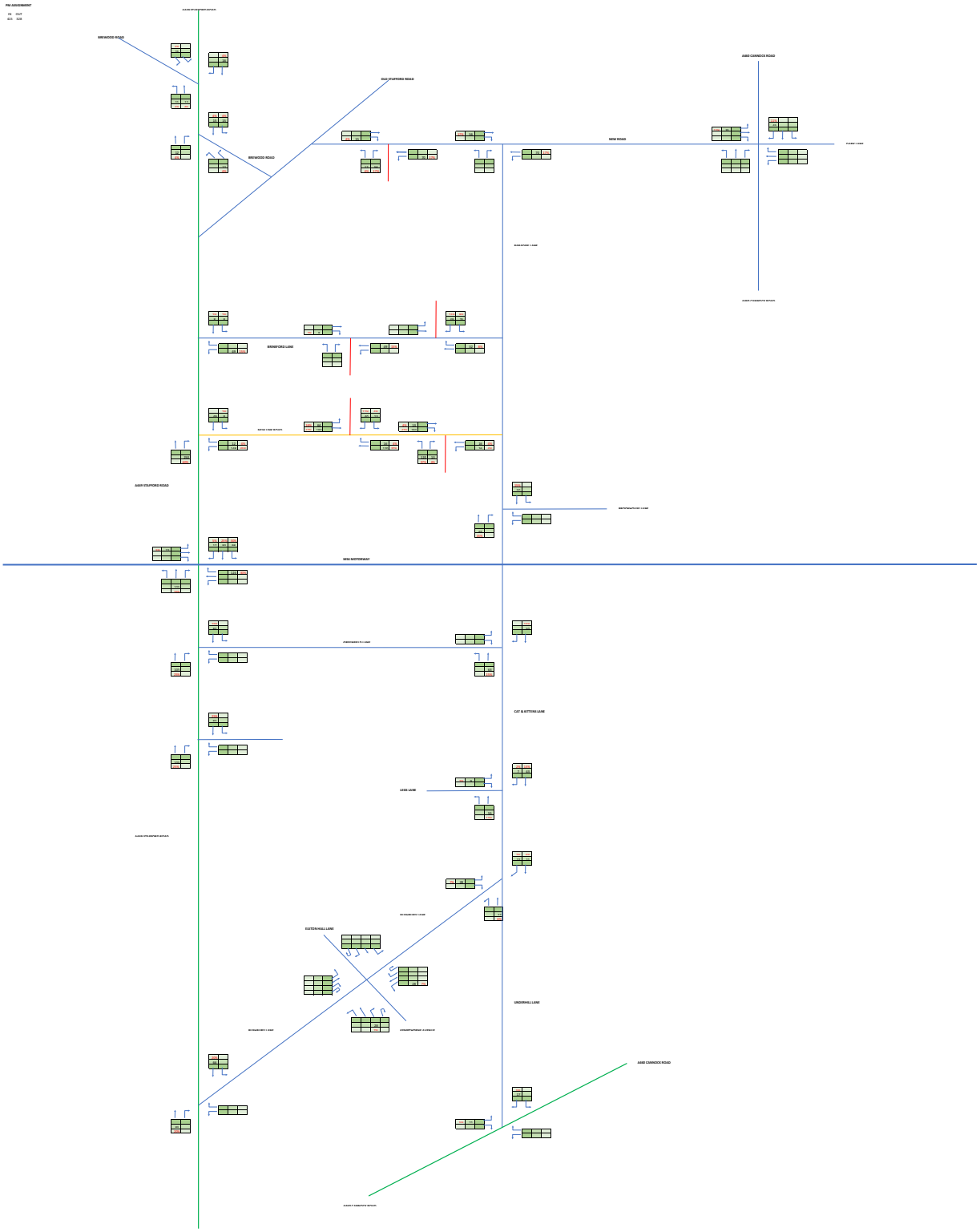
South Staffordshire 011	5	0	0	0	0	0	0	5	0	0	0	0
South Staffordshire 012	20	0	0	0	1	0	0	16	2	0	1	0
South Staffordshire 013	5	0	0	0	0	0	0	4	1	0	0	0
South Staffordshire 014	6	0	0	0	0	0	0	2	0	2	2	0
Southwark 003	1	0	0	1	0	0	0	0	0	0	0	0
Southwark 020	1	0	0	0	0	0	0	1	0	0	0	0
St Edmundsbury 002	1	0	0	0	0	0	0	0	0	0	1	0
Stafford 002	1	0	0	0	0	0	0	1	0	0	0	0
Stafford 003	3	0	0	0	0	0	0	2	0	0	1	0
Stafford 004	4	0	0	0	0	0	0	4	0	0	0	0
Stafford 005	4	0	0	0	0	0	0	4	0	0	0	0
Stafford 006	8	0	0	0	0	0	0	6	2	0	0	0
Stafford 008	2	0	0	0	0	0	0	2	0	0	0	0
Stafford 009	4	0	0	0	0	0	0	4	0	0	0	0
Stafford 010	31	0	0	0	1	0	0	30	0	0	0	0
Stafford 011	12	0	0	0	0	0	0	11	1	0	0	0
Stafford 012	3	0	0	0	0	0	0	3	0	0	0	0
Stafford 013	1	0	0	0	0	0	0	1	0	0	0	0
Stafford 014	1	0	0	0	0	0	0	1	0	0	0	0
Stafford 015	1	0	0	0	0	0	0	1	0	0	0	0
Staffordshire Moorlands 009	2	0	0	0	0	0	0	1	1	0	0	0
Staffordshire Moorlands 011	1	0	0	0	0	0	0	1	0	0	0	0
Staffordshire Moorlands 013	3	0	0	0	0	0	0	3	0	0	0	0
Stockport 013	1	0	0	0	0	0	0	1	0	0	0	0
Stoke-on-Trent 002	1	0	0	0	0	0	0	1	0	0	0	0
Stoke-on-Trent 005	2	0	0	0	0	0	0	2	0	0	0	0
Stoke-on-Trent 009	2	0	0	0	0	0	0	2	0	0	0	0
Stoke-on-Trent 015	3	0	0	0	0	0	0	3	0	0	0	0
Stoke-on-Trent 016	1	0	0	1	0	0	0	0	0	0	0	0
Stoke-on-Trent 018	3	0	0	0	0	0	0	3	0	0	0	0
Stoke-on-Trent 020	1	0	0	0	0	0	0	1	0	0	0	0
Stoke-on-Trent 023	1	0	0	0	0	0	0	1	0	0	0	0
Stoke-on-Trent 032	2	0	0	0	0	0	0	2	0	0	0	0
Stratford-on-Avon 005	1	0	0	0	0	0	0	1	0	0	0	0
Stratford-on-Avon 006	1	0	0	0	0	0	0	1	0	0	0	0
Tameside 029	2	0	0	0	0	0	0	2	0	0	0	0
Tamworth 002	7	0	0	0	0	0	0	7	0	0	0	0
Tamworth 003	3	0	0	0	0	0	0	3	0	0	0	0
Tamworth 005	4	0	0	0	1	0	0	3	0	0	0	0
Tamworth 007	1	0	0	0	0	0	0	1	0	0	0	0
Tamworth 010	2	0	0	0	0	0	0	2	0	0	0	0
Telford and Wrekin 003	1	0	0	0	0	0	0	1	0	0	0	0
Telford and Wrekin 005	3	0	0	0	0	0	0	3	0	0	0	0
Telford and Wrekin 007	1	0	0	0	0	0	0	1	0	0	0	0
Telford and Wrekin 008	4	0	0	0	0	0	0	3	1	0	0	0
Telford and Wrekin 009	10	0	0	0	0	0	0	10	0	0	0	0
Telford and Wrekin 010	1	0	0	0	0	0	0	1	0	0	0	0
Telford and Wrekin 011	2	0	0	0	0	0	0	2	0	0	0	0
Telford and Wrekin 012	2	0	0	0	0	0	0	2	0	0	0	0
Telford and Wrekin 013	1	0	0	0	0	0	0	1	0	0	0	0
Telford and Wrekin 014	2	0	0	0	0	0	0	2	0	0	0	0
Telford and Wrekin 015	3	0	0	0	1	0	0	2	0	0	0	0
Telford and Wrekin 016	22	0	0	0	0	0	0	22	0	0	0	0
Telford and Wrekin 018	16	0	0	1	0	0	0	15	0	0	0	0
Telford and Wrekin 022	1	0	0	0	0	0	0	1	0	0	0	0
Telford and Wrekin 023	10	0	0	0	0	0	0	10	0	0	0	0
Three Rivers 011	1	0	0	0	0	0	0	1	0	0	0	0
Torbay 003	1	0	0	0	0	0	0	1	0	0	0	0
Trafford 002	1	0	0	0	0	0	0	1	0	0	0	0
Trafford 020	1	0	0	0	0	0	0	1	0	0	0	0
Wakefield 013	1	0	0	0	0	0	0	1	0	0	0	0
Wakefield 030	1	0	0	0	0	0	1	0	0	0	0	0
Walsall 001	6	0	0	0	0	0	0	5	0	0	1	0
Walsall 002	6	0	0	0	0	0	0	6	0	0	0	0
Walsall 003	1	0	0	0	0	0	0	1	0	0	0	0
Walsall 004	3	0	0	0	0	0	0	3	0	0	0	0
Walsall 005	1	0	0	0	0	0	0	1	0	0	0	0
Walsall 008	7	0	0	0	0	0	1	6	0	0	0	0
Walsall 009	1	0	0	0	0	0	0	1	0	0	0	0
Walsall 010	1	0	0	0	0	0	0	1	0	0	0	0
Walsall 011	1	0	0	0	0	0	0	1	0	0	0	0
Walsall 012	8	0	0	0	1	0	0	7	0	0	0	0
Walsall 014	1	0	0	0	0	0	0	1	0	0	0	0
Walsall 015	15	0	0	0	0	0	0	13	1	1	0	0
Walsall 016	4	0	0	0	0	0	0	4	0	0	0	0
Walsall 017	21	0	0	0	0	0	1	20	0	0	0	0
Walsall 018	14	0	0	0	0	0	1	12	1	0	0	0
Walsall 019	2	0	0	0	0	0	0	2	0	0	0	0
Walsall 020	17	0	0	0	0	0	0	17	0	0	0	0
Walsall 021	3	0	0	0	0	0	0	3	0	0	0	0
Walsall 022	6	0	0	0	0	0	0	6	0	0	0	0
Walsall 023	2	0	0	0	0	0	0	2	0	0	0	0
Walsall 024	3	0	0	0	0	0	0	3	0	0	0	0
Walsall 025	33	0	0	0	0	0	0	23	10	0	0	0
Walsall 026	18	0	0	0	1	0	0	14	2	1	0	0
Walsall 027	13	0	0	0	1	0	0	11	1	0	0	0
Walsall 030	43	0	0	0	0	0	0	41	2	0	0	0
Walsall 031	2	0	0	0	0	0	0	1	1	0	0	0
Walsall 032	1	0	0	0	0	0	0	1	0	0	0	0
Walsall 033	15	0	0	0	0	0	0	15	0	0	0	0
Walsall 034	5	0	0	0	0	0	0	5	0	0	0	0
Walsall 036	9	0	0	0	0	0	1	8	0	0	0	0
Walsall 037	3	0	0	0	0	0	0	3	0	0	0	0
Walsall 038	8	0	0	0	0	0	0	8	0	0	0	0
Walsall 039	1	0	0	0	0	0	0	1	0	0	0	0
Warwick 010	1	0	0	0	0	0	0	1	0	0	0	0
Warwick 012	4	0	0	0	0	0	0	4	0	0	0	0
West Berkshire 010	1	0	0	0	0	0	0	1	0	0	0	0
Westminster 013	2	0	1	1	0	0	0	0	0	0	0	0
Wirral 016	1	0	0	0	0	0	0	1	0	0	0	0
Wolverhampton 001	54	0	0	0	0	0	0	50	2	1	1	0
Wolverhampton 002	106	0	0	0	3	0	0	86	9	5	3	0
Wolverhampton 003	14	0	0	0	0	0	0	11	0	2	1	0
Wolverhampton 004	21	0	0	0	0	0	0	20	1	0	0	0
Wolverhampton 005	5	0	0	0	0	0	0	5	0	0	0	0
Wolverhampton 006	20	0	0	0	0	0	1	15	3	1	0	0
Wolverhampton 007	15	0	0	0	2	0	0	12	1	0	0	0
Wolverhampton 008	13	0	0	0	0	0	0	12	0	0	1	0
Wolverhampton 009	21	0	0	0	0	0	0	16	4	0	1	0
Wolverhampton 010	10	0	0	0	1	0	0	9	0	0	0	0
Wolverhampton 011	22	0	0	0	2	0	0	18	2	0	0	0
Wolverhampton 012	59	0	0	0	1	0	3	50	3	1	1	0
Wolverhampton 013	36	0	0	0	1	0	0	32	1	2	0	0
Wolverhampton 014	21	0	0	0	1	0	0	18	1	0	0	1
Wolverhampton 015	110	0	0	0	6	0	0	95	9	0	0	0
Wolverhampton 016	15	0	0	0	1	0	0	12	2	0	0	0
Wolverhampton 017	42	0	0	0	1	0	0	39	2	0	0	0
Wolverhampton 018	40	0	0	0	1	0	0	37	2	0	0	0
Wolverhampton 019	3	0	0	0	0	0	0	3	0	0	0	0
Wolverhampton 020	254	0	0	2	36	1	1	189	21	2	2	0
Wolverhampton 021	14	0	0	0	1	0	0	12	1	0	0	0
Wolverhampton 022	3	0	0	0	0	0	0	3	0	0	0	0

Wolverhampton 023	11	0	0	0	1	0	0	10	0	0	0	0
Wolverhampton 026	7	0	0	0	0	0	0	5	2	0	0	0
Wolverhampton 027	22	0	1	0	2	0	1	18	0	0	0	0
Wolverhampton 028	5	0	0	0	0	0	0	5	0	0	0	0
Wolverhampton 029	34	0	0	0	1	0	2	31	0	0	0	0
Wolverhampton 030	3	0	0	0	0	0	0	3	0	0	0	0
Wolverhampton 031	6	0	0	0	0	0	0	5	1	0	0	0
Wolverhampton 032	8	0	0	0	0	0	0	8	0	0	0	0
Wolverhampton 033	3	0	0	0	0	0	0	3	0	0	0	0
Wolverhampton 034	6	0	0	0	0	0	0	6	0	0	0	0
Wolverhampton 035	47	0	0	0	7	0	0	38	2	0	0	0
Worcester 010	1	0	0	0	0	0	0	1	0	0	0	0
Worcester 013	1	0	0	0	0	0	0	1	0	0	0	0
Wrexham 008	1	0	0	1	0	0	0	0	0	0	0	0
Wychavon 001	2	0	0	0	0	0	0	1	1	0	0	0
Wychavon 019	1	0	0	0	0	0	0	1	0	0	0	0
Wyre 013	1	0	0	0	0	0	0	1	0	0	0	0
Wyre Forest 007	1	0	0	0	0	0	0	1	0	0	0	0
Wyre Forest 009	1	0	0	0	0	0	0	1	0	0	0	0
York 020	1	0	0	0	0	0	0	1	0	0	0	0

APPENDIX H

Development Traffic Diagrams


AM ASSIGNMENT
BREWOOD ROAD
OLD STAFFORD ROAD
A449 CANNOCK ROAD
NEW ROAD
BIRMFORD LANE
A449 STAFFORD ROAD
M54 MOTORWAY
CAT & KITTENS LANE
LOCO LANE
EUSTON HALL LANE
UNDERHILL LANE


PM ASSIGNMENT
A34 OUT
A34 IN
BREWOOD ROAD
A34 STAFFORD ROAD
OLD STAFFORD ROAD
BREWOOD ROAD
A460 CANNOCK ROAD
NEW ROAD
BIRMINGHAM ROAD
A34 STAFFORD ROAD
M54 MOTORWAY
CAT & KITTENS LANE
LEGG LANE
A34 STAFFORD ROAD
EUSTON HALL LANE
UNDERHILL LANE
A460 CANNOCK ROAD

Forester House
Doctor's Lane
Henley-in-Arden
Warwickshire
B95 5AW

Tel: +44(0)1564 793598
inmail@dtatransportation.co.uk
www.dtatransportation.co.uk