



St Modwen Homes Ltd.

Blythe Vale, Blythe Bridge

Transport Assessment

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I Introduction

I.1 Overview

- 1.1.1 PJA has been commissioned by St Modwen Homes Ltd. to prepare a Transport Assessment to accompany a full planning application pertaining to redevelopment proposals for the first phase of 'Land south east of the A521 Uttoxeter Road, north of the A50, Blythe Bridge (Blythe Vale), hereafter referred to as 'the Site'.
- 1.1.2 Full planning permission was granted on 10th May 2018 for 118no. dwellings and associated infrastructure on the Site (Application Ref: SMD/2017/0512). In lieu of this planning permission, the Site is now subject to a revised planning application which proposes the development of 146 dwellings with access from the A521; proposing a net increase of 28 dwellings on permission Ref. SMD/2017/0512.
- 1.1.3 This Transport Assessment aims to identify the travel patterns associated with this development, and to examine the likely transport implications on the surrounding area.
- 1.1.4 A separate Travel Plan report has been prepared by PJA, which should be read in conjunction with this document.

I.2 Planning History and Context

- 1.2.1 The Site falls within a wider site area, including land to the east and west of the A50, which is allocated for employment development in the adopted Development Plan (Staffordshire Moorlands Core Strategy, 2014).
- 1.2.2 This wider site area (including the Site) benefits from historic planning permission for employment development (including Ref. 11/00405/REM), which permits access to the Site from Uttoxeter Road. As stated in Paragraph 1.1.2, the most relevant and recent planning permission for Site access remains to be App Ref. SMD/2017/0512, to which this planning application most directly relates.
- 1.2.3 As part of App Ref. SMD/2017/0512, access was approved via a three-arm signal controlled junction with the A521, approximately 130m east of the A50/A521 roundabout. The access arrangement included a single right turn lane inbound, and permitted a reduced speed limit on the A521 to 50mph. This has since been amended to 40mph as part of the S278 agreement. The Transport Assessment and SCC Response Note associated with the consented scheme has been included within **Appendix A**.

I.3 Structure of Report

- 1.3.1 The remainder of this report is structured as follows:



- Chapter 2: Policy Context;
- Chapter 3: Baseline Transport Conditions;
- Chapter 4: Development Proposals;
- Chapter 5: Travel Demand;
- Chapter 6: Junction Capacity Assessment; and
- Chapter 7: Summary and Conclusion.

2 Policy Context

2.1 Revised National Planning Policy Framework (2018)

2.1.1 The Revised National Planning Policy Framework (NPPF) was published in July 2018 and sets out the Government’s planning policies for England and how these are expected to be applied to achieve sustainable development.

2.1.2 Policies aimed at promoting sustainable transport are covered within Section 9, Paragraphs 102 to 111 of the NPPF, with Paragraph 102 stating 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.”*

2.1.3 Paragraph 103 states:

“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 109 states:

“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.”



2.1.5 Paragraph 111 states:

“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.”

2.2 Planning Practice Guidance (PPG) 2014

2.2.1 PPG 2014 stipulates that the scope and level of detail in a Transport Assessment or Statement will vary from site to site but the following should be considered when setting the scope of the proposed assessment:

- *“Information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport)*
- *Information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;*
- *Data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;*
- *A qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;*
- *An assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);*
- *Data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;*
- *An analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area;*
- *An assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);*
- *Measures to improve the accessibility of the location (such as provision/ enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;*
- *A description of parking facilities in the area and the parking strategy of the development;*
- *Ways of encouraging environmental sustainability by reducing the need to travel; and*

- *Measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads.”*

2.2.2 The PPG continues:

“In general, assessments should be based on normal traffic flow and usage conditions (e.g. non-school holiday periods, typical weather conditions) but it may be necessary to consider the implications for any regular peak traffic and usage periods (such as rush hours). Projections should use local traffic forecasts such as TEMPRO drawing where necessary on National Road Traffic Forecasts for traffic data.”

2.2.3 This report has been written in accordance with the principles of the Planning Practice Guidance (2014) set out above.

2.3 Staffordshire Local Transport Plan (LTP 2011-2026)

2.3.1 The Staffordshire LTP provides the transport strategy for the whole Staffordshire area, for the period 2011-2026. The document represents the long-term strategy and details how Staffordshire’s transport ambitions will be achieved.

2.3.2 Staffordshire’s transport aims are outlined below:

- 1 To support growth and regeneration;
- 2 To maintain the highway network;
- 3 To make transport easier to use and places easier to get to;
- 4 To improve safety and security;
- 5 To reduce road transport emissions and their effects on the highway network;
- 6 To improve health and quality of life; and
- 7 To respect the environment.

2.3.3 This Transport Assessment has been prepared in accordance with SCC’s LTP.



3 Baseline Transport Conditions

3.1 Site Location

- 3.1.1 The Site is located on land adjacent to the A521, to the south east of Blythe Bridge. The Site is bound by the A521 to the north, A50 to the west, residential properties off Woodlands Lane to the east and greenfield land to the south.

Figure 3-1: Site Location (outlined in red)



3.2 Local Highway Network

A521

- 3.2.1 The A521 is a dual carriageway, connecting the A50 and A52 east of Stoke-on-Trent. The road is subject to a national speed limit. The A521 meets the A50 by means of an at grade three-arm roundabout immediately to the northwest of the Site, and Uttoxeter Road by means of a priority



junction with a right turn central reservation to the northeast of the Site. There are no pedestrian footways along the A521.

A50

- 3.2.2 The A50 is a dual carriageway, providing a strategic east-west link between the M1 and M6. Locally it provides the key highway connection from the Site to Stoke-on-Trent. The road is subject to a national speed limit. There are no pedestrian footways along the A50.

Uttoxeter Road

- 3.2.3 Uttoxeter Road is a single carriageway road, operating in a northeast/southwest alignment. The road is approximately 6m in width and is subject to a 30mph speed limit. There are pedestrian footways, approximately 1-2m in width, along both sides of the carriageway.

3.3 Access by Sustainable Modes

Pedestrian & Cycle Facilities

- 3.3.1 Lit footways approximately 1-2m in width are provided along Uttoxeter Road on both sides of the carriageway. There are no pedestrian facilities on either the A50 or A521 in the vicinity of the Site access.
- 3.3.2 There are no dedicated cycling facilities in the immediate vicinity of the Site.

Bus Services

- 3.3.3 The nearest bus stops to the Site are located on Uttoxeter Road, approximately 450m from the Site access point. The services available from these bus stops are summarised in Table 3-1.

Table 3-1: Bus Services Summary

Route No.	Operator	Route	Peak Hour Frequency	Days of Operation
6A	First Potteries	Hanley – Longton – Meir Park – Blythe Bridge	3 per hour	Mon-Sun

Rail Services

- 3.3.4 The closest railway station, Blythe Bridge, is approximately a 1.4km walk (17 minutes, assuming a walk speed of 1.4m/s¹) to the northwest of the Site. Blythe Bridge is served by an East Midlands Trains service between Crewe and Derby. Northbound and southbound services each call once per hour.

¹ As given in the IHT publication 'Guidelines for Providing for Journeys on Foot' (2000)



3.4 Accessibility

- 3.4.1 Guidance provided by the Institution of Highways and Transportation (IHT) in their publication 'Guidelines for Providing for Journeys on Foot' (2000) suggests that in terms of commuting, walking to school and recreational journeys; walk distances of up to 2km can be considered as a preferred maximum, with 'desirable' and 'acceptable' distances being 500m and 1km respectively. It should however be noted that journeys of a longer length are often undertaken.
- 3.4.2 For non-commuter journeys, the Guidance suggests that walk distances of up to 1-2km can be considered as a preferred maximum, with the 'desirable' and 'acceptable' distances being 400m and 800m respectively. Again, it should be noted that journeys of a longer length are often undertaken.

Table 3-2: Walk Journey Distance and Time Thresholds

IHT Standard	Distance (m)		Walk Time (mins)	
	Commuting, Walking to School and Recreation	Other, non-commuter journeys	Commuting, Walking to School and Recreation	Other, non-commuter journeys
Desirable	500	400	6	5
Acceptable	1000	800	12	10
Preferred Maximum	2000	1200	24	15

- 3.4.3 As illustrated in Figure 3-2 there are a number of local facilities within walking distance of the Site providing a wide range of services for everyday needs. The Government's Index of Multiple Deprivation statistics includes an indicator of "Transport Inclusion", which is defined in terms of access to four essential types of facilities, which are:
- Primary Schools;
 - Health Centres;
 - Convenience Stores; and
 - Post Offices.
- 3.4.4 To the northwest of the Site, there are several local amenities including shops and schools. These amenities and their calculated walking time from the Site access are given in Table 3-3.

Table 3-3: Accessibility from Site Access

Amenity	Amenity Type	Location	Distance from Site (km)	Walking Time (mins)
Blythe Bridge Health Centre	Health Centre	Uttoxeter Road	0.5	6
William Amory Primary School	Primary School	Stallington Road	0.9	11
The Co-operative Food	Convenience Store	Uttoxeter Road	0.9	11
Tesco Express	Convenience Store	Uttoxeter Road	1.0	12
Blythe Bridge Post Office	Post Office	Uttoxeter Road	1.1	13
Blythe Bridge High School & Sixth Form	Secondary School & Sixth Form	Cheadle Road	1.1	13
Forsbrook C of E Primary School	Primary School	Cheadle Road	1.3	16
Draycott Moor College	Secondary School	Draycott Old Road	1.3	16
Blythe Bridge Railway Station	Railway Station	Uttoxeter Road	1.4	17
Trinity Medical Centre	Health Centre	Uttoxeter Road	1.6	19

Figure 3-2: Walking Isochrones

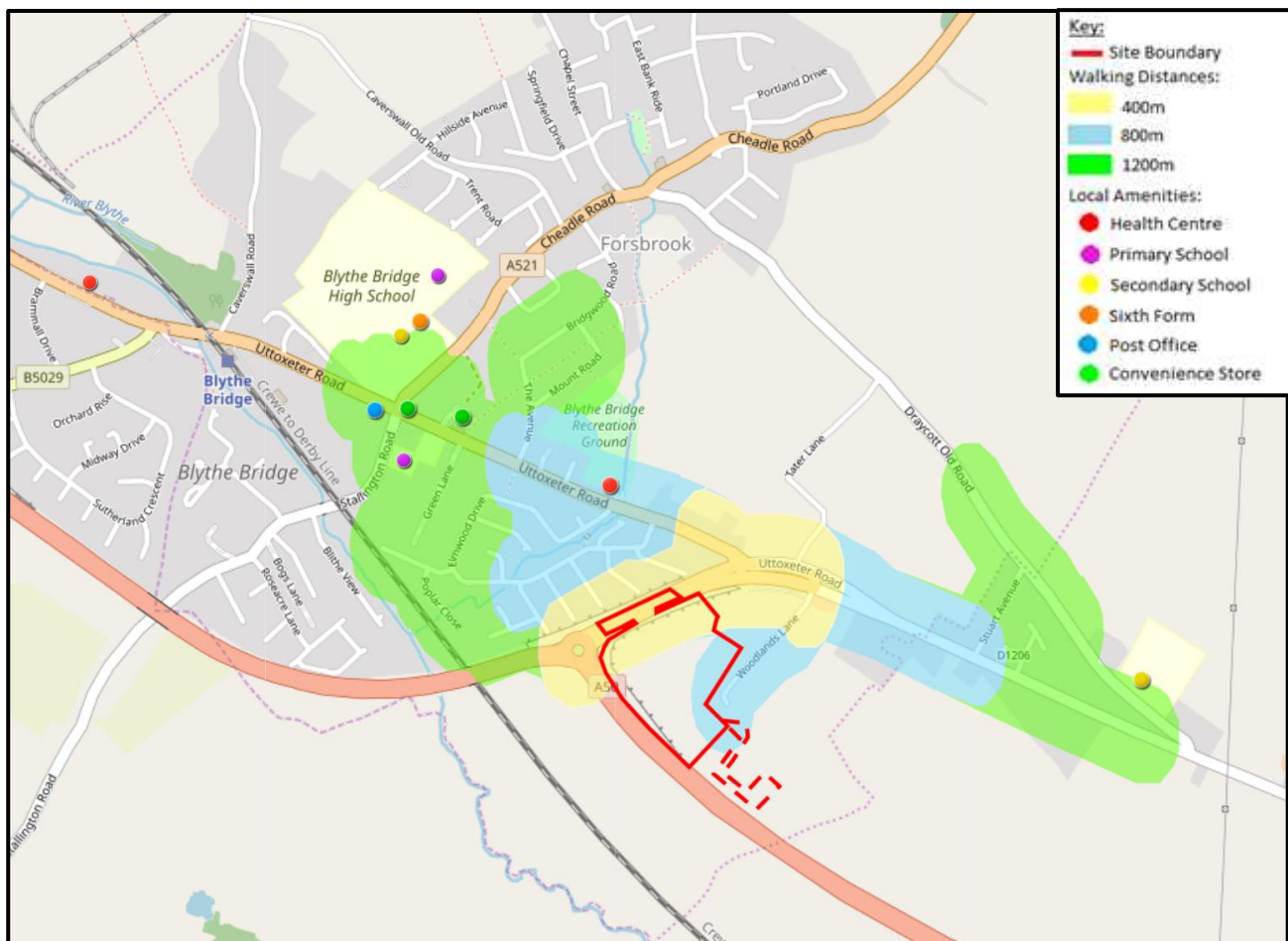
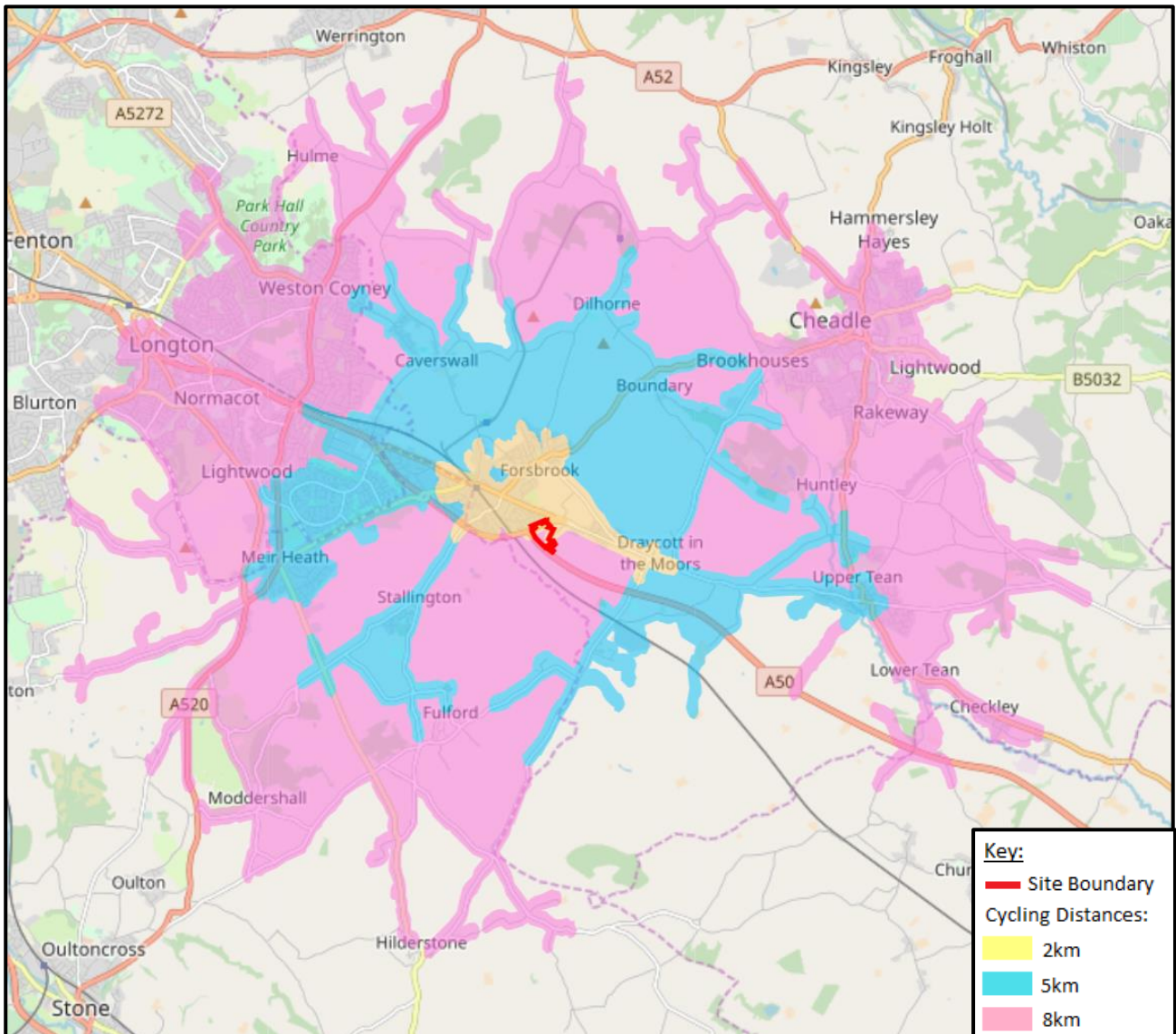




Figure 3-3: Cycling Isochrones



3.4.5 Figure 3-2 indicates that each of the core local amenities are present within reasonable walking distance from the Site. Figure 3-3 indicates that a number of local towns and villages with employment opportunities including Longton, Mier, Cheadle and Tean are within a reasonable cycling distance.

3.5 Highway Safety

3.5.1 Personal Injury Collision (PIC) data has been obtained from SCC for the most recent five-year period, for which data is available. The full collision records are provided within **Appendix B** and summarised in Table 3-4.

**Table 3-4: Summary of PICs**

Junction/Link	Accident Severity			Involving Sensitive Users		
	Slight	Serious	Fatal	Pedestrian	Cycle	Motorcycle
A50/A521 (Junction)	17	-	-	-	-	2
Utttoxeter Road/Cheadle Road/Stallington Road (Junction)	6	-	-	-	2	2
Utttoxeter Road/The Avenue (Junction)	2	-	-	-	-	1
Utttoxeter Road/Elmwood Drive (Junction)	3	-	-	-	-	1
A521/Utttoxeter Road (Junction)	2	-	-	-	-	-
A521/Green Lane (Junction)	1	-	-	1	-	-
A50 (Link)	2	-	-	-	-	-
Utttoxeter Road (Link)	4	-	-	3	-	-
Total	37	0	0	4	2	6

A50/A521

- 3.5.2 A total of 17 collisions have occurred at this junction, all of which were slight in severity. Two collisions involved motorcyclists. These collisions were the result of deposit on the road and a vehicle failing to judge the motorcyclists path appropriately. The majority of collisions were the result of poor manoeuvres and driver error.

Utttoxeter Road/Cheadle Road/Stallington Road

- 3.5.3 A total of six collisions have occurred at this junction, all of which were slight in severity. Two collisions involved cyclists, and another two motorcyclists. All collisions were the result of vehicles failing to look properly before making a manoeuvre.

Utttoxeter Road/The Avenue

- 3.5.4 A total of two collisions have occurred at this junction, both of which were slight in severity. One collision was the result of a vehicle overshooting the junction, the other a result of a vehicle turning into the path of an oncoming motorcyclist.

Utttoxeter Road/Elmwood Drive

- 3.5.5 A total of three collisions have occurred at this junction, all of which were slight in severity. All of these collisions were the result of driver error as the vehicles failed to give way to oncoming traffic. One collision involved a motorcyclist.

A521/Utttoxeter Road

- 3.5.6 A total of two collisions have occurred at this junction, both of which were slight in severity. No sensitive road users were involved. Both collisions were the result of driver error as they failed to judge the path and speed of other road users.



A521/Green Lane

- 3.5.7 One collision occurred at this junction, which was slight in severity and involved a pedestrian.

A50

- 3.5.8 A total of two collisions have occurred on the A50, both of which were slight in severity and involved no sensitive road users. The collisions were the result of driver error, with a poorly judged overtake manoeuvre, and defective/deflated tyres.

Uttoxeter Road

- 3.5.9 A total of four collisions have occurred on Uttoxeter Road, all of which were slight in severity. Three collisions involved pedestrians. The collisions were the result of driver or pedestrian error whereby vehicles failed to give way to oncoming traffic, were impaired by alcohol and failed to look properly. In one case, the collision was the result of a pedestrian crossing the road while masked by a stationary vehicle.

Highway Safety Summary

- 3.5.10 A total of 37 collisions have occurred within the vicinity of the development Site within the most recent five-year period (01/07/11-30/06/16). It is recognised there is a cluster of collisions at the A50/A521 roundabout. Given this junction forms a major arterial route with high levels of traffic flows, the development is unlikely to exacerbate any existing safety issue. The majority of accidents within the scope are considered to have been caused as a result of driver error, therefore, there is not considered to be any highway safety concerns that need to be addressed as part of development.

3.6 Summary

- 3.6.1 The Site is considered to be suitably located for residential development for the following reasons:
- Key local amenities, including a primary school, GP surgery and supermarket are accessible within reasonable walking distance;
 - Bus stops are located within 450m of the Site, providing frequent services to local towns including Hanley and Longton;
 - The closest train station to the Site is Blythe Bridge, approximately 1.4km to the northwest of the Site, providing services between Crewe and Derby; and
 - A review of Personal Injury Collision data revealed no highway safety concerns that require further assessment.



4 Development Proposals

4.1 Development Mix

4.1.1 This report accompanies a full planning application for the construction of up to 146 dwellings, representing Phase 1 of the development. The Site has an existing consent for the development of 118 dwellings, therefore, this application represents a net increase of 28 dwellings. The development mix comprises:

Privately Owned:

- 4 x two-bedroom houses;
- 12 x three-bedroom houses; and
- 78 x four-bedroom houses.

Affordable:

- 12 x one-bedroom flats;
- 6 x two-bedroom flats;
- 22 x two-bedroom houses; and
- 23 x three-bedroom houses.

4.1.2 A Site layout is included within **Appendix C**.

4.2 Access

4.2.1 In accordance with the previous consent, vehicular access to the Site will be provided via a new three-arm signal controlled junction on the A521, approximately 130m east of the A50/A521 roundabout. Drawing 0253-A-SK912 illustrates the access and has been included within **Appendix D**.

4.2.2 As part of the access proposals, the speed limit of the A521 between the A50/A521 roundabout and Draycott in the Moors will be reduced from national speed limit to 40mph, to facilitate pedestrian/cycle movement across the A521.

4.2.3 As such, the signal controlled access will incorporate a controlled pedestrian crossing, providing a safe and sustainable link to the Site from Blythe Bridge. As per the permitted scheme, it is proposed to accommodate a 3m wide shared footway/cycleway on the northern side of the A521 connecting the Site into the existing pedestrian infrastructure on Uttoxeter Road. A dropped kerb crossing will be provided on Uttoxeter Road.



4.3 Internal Arrangement

4.3.1 In accordance with the consented scheme, the internal layout comprises the following parameters:

- Primary Road - 7.3m wide, so as to not preclude any future employment uses in future phases, in line with the consented scheme; and
- Secondary Street – 5m wide with 2m wide footways.

4.3.2 Internal junction and forward visibility has been undertaken where necessary for the appropriate speeds. Swept path analysis illustrating a refuse vehicle and fire tender servicing the Site has been undertaken. Drawings indicating these have been included within **Appendix E**.

4.4 Parking Provision

DCLG Paper Method

4.4.1 In accordance with the previous consent, a parking demand calculation has been undertaken to determine the parking provision of the development.

4.4.2 Parking demand factors have been calculated for the development based on the Department for Communities and Local Government (DCLG) paper method. The paper sets out how to calculate parking demand for residential developments based on Census local car ownership (availability) statistics by dwelling type, size and tenure.

4.4.3 Census 2011 statistics were used to determine car or van availability for the Staffordshire Moorlands area. Calculations were carried out with Temprow V7 growth factors for the E02006215: Staffordshire Moorlands 012 MSOA area. The Research paper and spreadsheet calculations are contained in **Appendix F** and the resultant parking demand is outlined in Table 4-1.

Table 4-1: DCLG Parking Demand

Tenure	Habitable Rooms	Bedrooms	DCLG Calculated Parking Standards for Staffordshire Moorlands Area		Total Dwellings		Total Required Spaces
			1 Allocated Space (Inc. Visitors)	2 Allocated Spaces (Inc. Visitors)	1 Allocated Space	2 Allocated Spaces	
Private House	4	2	1.32	2.26	0	4	9
	5	3	1.70	2.31	0	12	28
	6	4	1.86	2.36	0	78	184
Affordable ² Flat	3	1	1.20	2.20	12	0	14
	4	2	1.34	2.20	6	0	8
Affordable ² House	4	2	1.32	2.20	22	0	29
	5	3	1.59	2.24	0	23	27
Grand Total							299

² 'Affordable' assumed to be 'Shared Ownership' for the purpose of the DCLG calculations.



- 4.4.4 The development will provide 270 surface car parking spaces (252 allocated and 18 unallocated spaces). The parking demand has been developed using only the number of surface car parking spaces, thus assumes no garage parking. A total of 81 properties on Site will have at least one garage space, measuring 3.5x6m. Therefore, it is considered that the proposed level of parking is acceptable.



5 Travel Demand

5.1 Introduction

- 5.1.1 This chapter summarises the methodology for establishing trip generation and distribution associated with the development proposals.
- 5.1.2 The development comprises up to 146 dwellings, the impact of which has been considered within this chapter for the AM and PM peak hours of 08:00-09:00 and 17:00-18:00 respectively.

5.2 Vehicular Trip Generation

- 5.2.1 Trip rates utilised within the existing consented planning application have been used to estimate vehicular trip rates for the development. Full details are provided within the consented TA (**Appendix A**). The previously approved vehicle trip generation is shown in Table 5-1 below.

Table 5-1: Approved Trip Generation

Land Use	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Approved Trip Rate (per dwellings)	0.134	0.356	0.490	0.342	0.156	0.498
Phase 1 Permitted Envelope (118 dwellings)	16	42	58	40	18	59

Net Change in Trip Generation

- 5.2.2 Given that the Site has a permitted trip envelope, it is necessary to consider the level of traffic generated by the development mix that benefits from a planning permission against those associated with the revised proposals.
- 5.2.3 The proposed trip rate per dwelling will remain unchanged from that approved previously (shown in Table 5-1). The net change in overall vehicle trips between the approved and proposed developments is shown in Table 5-2 below.

Table 5-2: Net Change in Vehicle Trips Between Permitted and Revised Proposals

	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Phase 1 Permitted Envelope (118 dwellings)	16	42	58	40	18	59
Revised Proposals (146 dwellings)	20	52	72	50	23	73
Net Change in Trips (Total)	4	10	14	10	4	14

- 5.2.4 In summary, the proposed development, would generate 72 vehicular trips in the AM peak, and 73 trips in the PM peak respectively. The proposed development would therefore result in an increase

of 14 two-way trips in both the AM and PM peak periods, when compared to the previous consent. This increase in trips is not considered to be significant.

5.3 Multi-modal Trip Generation

5.3.1 Mode splits have been sourced from the 2011 Census (Journey to Work MSOA) for E02006215: Staffordshire Moorlands 012. These have been applied proportionately to the trip generation of the Site. Table 5-3 summarises the results.

Table 5-3: Multi-modal Trip Generation

Mode of Travel	Percentage of Mode Split	Two Way Trip Generation	
		AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Train	1%	1	1
Bus	2%	2	2
Car (Driver)	86%	72	73
Car (Passenger)	6%	5	5
Bicycle	1%	1	1
Walk	4%	3	3
Total	100%	83	85

5.4 Trip Distribution and Assignment

5.4.1 Consistent with the previous consent, the likely residential trip distribution has been calculated using 2011 Journey to Work Census data. The distribution of vehicular employment trips from MSOA E02006215: Staffordshire Moorlands 012, has been used as a proxy for the vehicular trip distribution for the proposed development.

5.4.2 ArcGIS software has been used assign development traffic onto the local highway network. Following this, the route assignment has been manually sense checked. A summary of the route assignment is provided in Table 5-4.

Table 5-4: Development Trip Route Assignment Summary

Route Assignment (from/to)	Percentage	AM (08:00-09:00) Trips		PM (17:00-18:00) Trips	
		Arrive	Depart	Arrive	Depart
Site Access onto A50 (West)	75%	12	32	30	14
Site Access onto A50 (South)	9%	1	4	4	2
Site Access onto Uttoxeter Road	3%	0	1	1	1
Site Access onto Cheadle Road	3%	0	1	1	1
Site Access onto A521/Uttoxeter Road	10%	2	4	4	2



5.5 School Trips – Cheadle Road Junction

- 5.5.1 As part of the existing Phase 1 permission, the number of school trips at the Cheadle Road junction were assessed as a result of SCC comments. This assessment has been updated to reflect the increased development quantum.
- 5.5.2 In order to determine the number of school trips, the following assumptions have been made. The assumptions made are in line with those outlined within the consented Phase 1 TA.
- SCC Education Planning Obligations Policy (Version 1.7) states a standard formula for calculating the number of pupils a site generates as three pupils per year group per 100 houses. In accordance with this formula, the proposed development (146 dwellings) would result in 31 primary school pupils and 22 secondary school pupils.
 - The resultant pupils have been split between three local schools. It has been assumed that the primary school trips are split equally between William Amory Primary School and Forsbrook Church of England Primary School. All secondary school pupils are assumed to go to Blythe Bridge High School. As a result, each school receives the following number of pupils:
 - William Amory Primary School – 16 pupils;
 - Forsbrook C of E Primary School – 15 pupils; and
 - Blythe Bridge High School – 22 pupils.
 - National Travel Survey (NTS) 2016 Journey to School data has been used to apply an average mode share to these trips. NTS 2016 suggests that vehicle trips constitute 41% and 26% of all primary and secondary school trips respectively. The resultant vehicular trips to each school are:
 - William Amory Primary School – 7 vehicle trips;
 - Forsbrook C of E Primary School – 6 vehicle trips; and
 - Blythe Bridge High School – 6 vehicle trips.
 - All vehicle trips have been assumed to be two-way (arrival and departure) with all trips leaving and returning to the development (which, of course would require further interrogation if the increase in vehicular trips was significant). The distribution does not take into account 'linked trips' and is therefore considered to be robust.
 - School AM and PM peak periods have been assumed to be 08:00-09:00 and 15:00-16:00 respectively. It is assumed no school trips are undertaken in the network peak of 17:00-18:00.
- 5.5.3 The total vehicular trip generation results in a total of 24 two-way trips through the Cheadle Road junction. When considered over the AM peak period, this equates to approximately one additional trip every two to three minutes.
- 5.5.4 Whilst this level of impact is not considered to be significant, a sensitivity scenario has been modelled which includes the level of school trips identified above onto the proposed trip

generation. This scenario has been modelled at the Cheadle Road crossroads junction, as outlined in Section 6 below.



6 Junction Capacity Assessment

6.1 Introduction

6.1.1 This section provides a summary of the detailed capacity assessments that have been undertaken to understand the impact of the revised development proposals on the highway network.

6.2 Scope of Assessment

6.2.1 Junction capacity assessments have been carried out on the following junctions, consistent with the previous consent;

- Site Access/A521 Signalised Junction;
- A521/Uttoxeter Road Priority Junction;
- Uttoxeter Road Slip/Woodlands Road Priority Junction;
- A50/A521 Roundabout; and
- Cheadle Road/Uttoxeter Road/Stallington Road Crossroad Junction.

6.3 Survey Data

6.3.1 The baseline data for the assessment has taken from the previous Phase 1 consented application.

6.4 Traffic Growth

6.4.1 TEMPRO V7 calibrated with the National Transport Model (NTM AF15) dataset has been used to generate traffic growth factors specific to car drivers in E02006215: Staffordshire Moorlands 012.

- Dataset: 70
- Result Type: Trip ends by time period
- Trip Purpose Group: All purposes
- Transport Mode: Car Driver
- Time Period: Weekday AM peak period (0700 - 0959) and Weekday PM peak period (1600 – 1859)
- Trip End Type: Origin/Destination
- Area/Road type: All

**Table 6-1: TEMPRO Growth Factors**

	AM Peak	PM Peak
2017-2018	1.0119	1.0114
2017-2020	1.0358	1.0340
2017-2023	1.0631	1.0608
2017-2030	1.1095	1.1076

6.5 Assessment Scenarios

6.5.1 The following scenarios have been modelled at the above junctions, with traffic flow diagrams for each of these scenarios contained within **Appendix G**.

- 2018 Base;
- 2020 Base (HE opening year in accordance with HE Circular 02/13);
- 2020 Base + Committed Development + Previous Ph1 Consent;
- 2020 Base + Committed Development + Development;
- 2023 Base;
- 2023 Base + Committed Development + Previous Ph1 Consent;
- 2023 Base + Committed Development + Revised Development;
- 2030 Base (HE opening year +10 in accordance with HE Circular 02/13);
- 2030 Base + Committed Development + Previous Ph1 Consent; and
- 2030 Base + Committed Development + Revised Development.

6.5.2 Given that the 2020 and 2030 future year scenarios are required for junctions on the HE network, in accordance with HE Circular 20/13, these scenarios have not been assessed at the Cheadle Road junction. However, the following additional scenarios have been modelled at Cheadle Road in accordance with SCC comments made during determination of the existing Phase 1 consent.

- 2023 Base + Committed Development + Revised Development (School Sensitivity); and
- 2023 Base + Committed Development + Revised Development (Route Assignment Sensitivity).

6.5.3 It should be noted that the 2030 future year assessments are, in accordance with HE Circular 02/13 'for information only'. The impact of the development is not assessed in 2030, but rather it allows HE to understand and plan investment on the strategic road network.



6.6 Modelling Results

6.6.1 Results of the junction capacity assessments are set out below with full outputs provided within **Appendix H**.

6.6.2 In accordance with the previous consent, the junctions have been modelled using a 'Flat' profile, which is considered to be representative of the base flow traffic observed.

Site Access/A521 Signalised Junction

6.6.3 LinSig V3 modelling software has been used to assess the performance of the signalised Site Access/A521 junction. The results for each of the scenarios are summarised in Tables 6-2 to 6-4.

Table 6-2: Site Access/A521 - 2020 Base + Committed Dev + Proposed Dev

Arm (turning)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	DoS	Delay (s/pcu)	Queue (PCU)	DoS	Delay (s/pcu)	Queue (PCU)
A521 E (ahead, left)	34.0%	15	4	52.1%	19	6
A521 E (ahead)	34.0%	15	4	52.0%	19	6
Site Access (right, left)	7.6%	21	1	2.8%	17	0
A521 W (ahead)	28.4%	13	3	40.4%	16	4
A521 W (ahead, right)	31.3%	14	4	44.9%	17	5
Cycle Time	70 seconds			60 seconds		
PRC (%)	164.7			72.7		

Table 6-3: Site Access/A521 - 2023 Base + Committed Dev + Proposed Dev

Arm (turning)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	DoS	Delay (s/pcu)	Queue (PCU)	DoS	Delay (s/pcu)	Queue (PCU)
A521 E (ahead, left)	34.9%	15	4	53.3%	19	6
A521 E (ahead)	34.8%	15	4	53.4%	19	6
Site Access (right, left)	7.6%	21	1	2.8%	17	0
A521 W (ahead)	29.2%	13	3	41.5%	16	4
A521 W (ahead, right)	31.9%	14	4	46.0%	17	5
Cycle Time	70 seconds			60 seconds		
PRC (%)	158.2			68.7		

**Table 6-4: Site Access/A521 - 2030 Base + Committed Dev + Proposed Dev**

Arm (turning)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	DoS	Delay (s/pcu)	Queue (PCU)	DoS	Delay (s/pcu)	Queue (PCU)
A521 E (ahead, left)	36.4%	15	4	55.5%	20	6
A521 E (ahead)	36.3%	15	4	55.6%	20	6
Site Access (right, left)	7.6%	21	1	2.8%	17	0
A521 W (ahead)	30.4%	13	4	43.3%	16	5
A521 W (ahead, right)	33.2%	14	4	47.8%	17	6
Cycle Time	70 seconds			60 seconds		
PRC (%)	147.6			61.9		

6.6.4 The results indicate that the junction operates with significant reserve capacity in all scenarios.

A521/Uttoxeter Road/Uttoxeter Road Slip Priority Junction

6.6.5 Junctions 9 modelling software (PICADY module) has been used to assess the performance of the A521/Uttoxeter Road/Uttoxeter Road Slip priority junction. The results for each of the scenarios are summarised in Tables 6-5 to 6-14.

Table 6-5: A521/Uttoxeter Road/Uttoxeter Road Slip - 2018 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.23	0	7	0.16	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.06	0	5
Uttoxeter Road RT Slip (right)	0.07	0	5	0.06	0	5

Table 6-6: A521/Uttoxeter Road/Uttoxeter Road Slip - 2020 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.24	0	7	0.17	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.06	0	5
Uttoxeter Road RT Slip (right)	0.07	0	5	0.07	0	5

Table 6-7: A521/Uttoxeter Road/Uttoxeter Road Slip - 2020 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.27	0	7	0.18	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

**Table 6-8: A521/Utttoxeter Road/Utttoxeter Road Slip – 2020 Base + Committed Dev + Proposed Dev**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Utttoxeter Road (left)	0.27	0	7	0.019	0	6
Utttoxeter Road RT Slip (ahead)	0.07	0	5	0.07	0	5
Utttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 6-9: A521/Utttoxeter Road/Utttoxeter Road Slip – 2023 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Utttoxeter Road (left)	0.24	0	7	0.17	0	6
Utttoxeter Road RT Slip (ahead)	0.07	0	5	0.06	0	5
Utttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 6-10: A521/Utttoxeter Road/Utttoxeter Road Slip - 2023 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Utttoxeter Road (left)	0.27	0	7	0.19	0	6
Utttoxeter Road RT Slip (ahead)	0.08	0	5	0.07	0	5
Utttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 6-11: A521/Utttoxeter Road/Utttoxeter Road Slip – 2023 Base + Committed Dev + Proposed Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Utttoxeter Road (left)	0.27	0	7	0.19	0	6
Utttoxeter Road RT Slip (ahead)	0.08	0	5	0.07	0	5
Utttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 6-12: A521/Utttoxeter Road/Utttoxeter Road Slip - 2030 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Utttoxeter Road (left)	0.26	0	7	0.18	0	6
Utttoxeter Road RT Slip (ahead)	0.08	0	5	0.07	0	5
Utttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 6-13: A521/Utttoxeter Road/Utttoxeter Road Slip - 2030 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Utttoxeter Road (left)	0.29	0	7	0.20	0	7
Utttoxeter Road RT Slip (ahead)	0.08	0	5	0.08	0	5
Utttoxeter Road RT Slip (right)	0.08	0	5	0.08	0	5

**Table 6-14: A521/Uttoxeter Road/Uttoxeter Road Slip – 2030 Base + Committed Dev + Proposed Dev**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.29	0	7	0.20	0	7
Uttoxeter Road RT Slip (ahead)	0.08	0	5	0.08	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.08	0	5

6.6.6 The results indicate that the junction operates with significant reserve capacity in all scenarios. The proposed development has a negligible impact on the operation of the junction.

Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road Priority Junction

6.6.7 Junctions 9 modelling software (PICADY module) has been used to assess the performance of the Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road priority junction. The results for each of the scenarios are summarised in Tables 6-15 to 6-24.

Table 6-15: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road - 2018 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.09	0	5	0.07	0	5

Table 6-16: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road – 2020 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.07	0	5

Table 6-17: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road - 2020 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.08	0	5

Table 6-18: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road – 2020 Base + Committed Dev + Proposed Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.31	1	8	0.22	0	7
Uttoxeter Road RT Slip (ahead)	0.07	0	7	0.07	0	6
Uttoxeter Road RT Slip (right)	0.08	0	7	0.07	0	6

**Table 6-19: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road - 2023 Base**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.00	0	5

Table 6-20: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road - 2023 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.08	0	5

Table 6-21: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road – 2023 Base + Committed Dev + Proposed Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.32	1	8	0.22	0	8
Uttoxeter Road RT Slip (ahead)	0.07	0	7	0.07	0	6
Uttoxeter Road RT Slip (right)	0.08	0	7	0.07	0	6

Table 6-22: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road - 2030 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.08	0	5

Table 6-23: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road – 2030 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.11	0	5	0.08	0	5

Table 6-24: Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road – 2030 Base + Committed Dev + Proposed Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Lane	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.11	0	5	0.08	0	5

6.6.8 The results indicate that the junction operates with significant reserve capacity in all scenarios. The proposed development has a negligible impact on the operation of the junction, with a maximum increase in queuing and delay of one PCU and two seconds.

A50/A521 Roundabout

6.6.9 Junctions 9 modelling software (ARCADY module) has been used to assess the performance of the A50/A521 roundabout. The results for each of the scenarios are summarised in Tables 6-25 to 6-34.

Table 6-25: A50/A521 - 2018 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.89	9	14	0.88	8	13
A521	0.38	1	4	0.44	1	4
A50 (S)	0.78	4	9	0.94	15	31

Table 6-26: A50/A521 – 2020 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.91	11	17	0.90	10	16
A521	0.40	1	4	0.45	1	4
A50 (S)	0.81	5	10	0.97	23	45

Table 6-27: A50/A521 - 2020 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.93	14	22	0.93	14	22
A521	0.44	1	4	0.50	1	5
A50 (S)	0.82	5	11	0.99	39	74

Table 6-28: A50/A521 – 2020 Base + Committed Dev + Proposed Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.93	14	23	0.93	14	22
A521	0.44	1	5	0.50	1	4
A50 (S)	0.83	6	12	0.99	39	81

Table 6-29: A50/A521 - 2023 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.93	14	23	0.93	13	21
A521	0.42	1	4	0.48	1	5
A50 (S)	0.83	6	12	1.00	45	130

**Table 6-30: A50/A521 - 2023 Base + Committed Dev + Consented Dev**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.95	20	32	0.95	19	30
A521	0.46	1	5	0.52	1	5
A50 (S)	0.85	7	12	1.02	74	130

Table 6-31: A50/A521 – 2023 Base + Committed Dev + Proposed Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.95	20	32	0.96	20	23
A521	0.46	1	5	0.52	1	5
A50 (S)	0.85	7	14	1.02	76	132

Table 6-32: A50/A521 - 2030 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.97	29	45	0.97	25	39
A521	0.45	1	5	0.51	1	5
A50 (S)	0.88	8	16	1.05	125	207

Table 6-33: A50/A521 - 2030 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	1.00	47	69	0.99	44	66
A521	0.49	1	5	0.56	1	5
A50 (S)	0.89	10	19	1.08	167	281

Table 6-34: A50/A521 – 2030 Base + Committed Dev + Proposed Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	1.00	48	71	1.00	47	70
A521	0.50	1	5	0.56	1	5
A50 (S)	0.90	10	19	1.08	172	286

6.6.10 The results indicate that the junction is approaching capacity in all scenarios. The addition of the revised development proposals has a negligible impact on the junction, with a maximum increase in RFC of 0.01 when compared with the existing consent.

6.6.11 Again, it should be noted that the 2029 future year assessments are, in accordance with HE Circular 02/13 'for information only'. The impact of the development is not assessed in 2029, but rather it allows HE to understand and plan investment on the strategic road network.

Cheadle Road/Utttoxeter Road/Stallington Road Crossroad Junction

6.6.12 Junctions 9 modelling software (PICADY module) has been used to assess the performance of the Cheadle Road/Utttoxeter Road/Stallington Road roundabout. The results for each of the scenarios are summarised in Tables 6-35 to 6-40.

Table 6-35: Cheadle Road/Utttoxeter Road/Stallington Road - 2018 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (ahead, right)	0.11	0	11	0.43	1	32
Cheadle Road (left)	0.65	2	22	0.86	6	57
Utttoxeter Road N/W (left, ahead, right)	0.12	0	5	0.25	1	5
Stallington Road (left, ahead, right)	0.35	1	11	0.37	1	14
Utttoxeter Road S/E (left, ahead, right)	0.14	0	6	0.17	0	8

Table 6-36: Cheadle Road/Utttoxeter Road/Stallington Road - 2023 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (ahead, right)	0.13	0	13	0.87	5	188
Cheadle Road (left)	0.70	2	26	0.92	10	94
Utttoxeter Road N/W (left, ahead, right)	0.13	0	5	0.28	1	5
Stallington Road (left, ahead, right)	0.37	1	12	0.40	1	15
Utttoxeter Road S/E (left, ahead, right)	0.15	0	7	0.18	0	8

Table 6-37: Cheadle Road/Utttoxeter Road/Stallington Road - 2023 Base + Committed Dev + Consented Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (ahead, right)	0.14	0	13	0.90	5	197
Cheadle Road (left)	0.70	2	27	0.93	11	103
Utttoxeter Road N/W (left, ahead, right)	0.13	0	5	0.28	1	5
Stallington Road (left, ahead, right)	0.38	1	12	0.40	1	15
Utttoxeter Road S/E (left, ahead, right)	0.16	0	7	0.19	0	8

Table 6-38: Cheadle Road/Utttoxeter Road/Stallington Road – 2023 Base + Committed Dev + Proposed Dev

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (ahead, right)	0.14	0	13	0.89	5	197
Cheadle Road (left)	0.70	2	27	0.93	11	104
Utttoxeter Road N/W (left, ahead, right)	0.13	0	5	0.28	1	5
Stallington Road (left, ahead, right)	0.38	1	12	0.40	1	15
Utttoxeter Road S/E (left, ahead, right)	0.16	0	7	0.19	0	8

**Table 6-39: Cheadle Road/Utttoxeter Road/Stallington Road – 2023 Base + Committed Dev + Proposed Dev (School Trip Sensitivity)**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (ahead, right)	0.17	0	13	0.89	5	197
Cheadle Road (left)	0.71	3	29	0.93	11	104
Utttoxeter Road N/W (left, ahead, right)	0.13	0	5	0.28	1	5
Stallington Road (left, ahead, right)	0.38	1	13	0.40	1	15
Utttoxeter Road S/E (left, ahead, right)	0.19	0	7	0.19	0	8

Table 6-40: Cheadle Road/Utttoxeter Road/Stallington Road – 2023 Base + Committed Dev + Proposed Dev (Route Assignment Sensitivity)

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (ahead, right)	0.14	0	13	0.90	5	202
Cheadle Road (left)	0.71	2	28	0.94	11	108
Utttoxeter Road N/W (left, ahead, right)	0.13	0	5	0.28	1	5
Stallington Road (left, ahead, right)	0.38	1	12	0.40	1	15
Utttoxeter Road S/E (left, ahead, right)	0.16	0	7	0.19	0	8

6.6.13 The results indicate that the junction would operate with reserve capacity in all scenarios. When compared to the consented development, the proposed development will have a negligible impact on the operation of the junction.

6.7 Summary

6.7.1 The results indicate that the Utttoxeter Road/Utttoxeter Road Slip/A521, Utttoxeter Road/Utttoxeter Road Slip/Woodlands Road and A521/Site Access junctions operate with significant reserve capacity in all scenarios. The A50/A521 roundabout and Cheadle Road crossroads junction are approaching capacity in all scenarios, however the impact of the development on the operation of the junction is negligible.

6.7.2 Notwithstanding that, when compared against the impact of the existing consent, the revised proposals would have a negligible impact on the operation of the junctions.

6.7.3 Overall, the revised proposals would have a negligible impact on the operation of the local and strategic highway network.



7 Summary and Conclusion

7.1 Summary

- 7.1.1 PJA has been commissioned by St Modwen Homes Ltd. to prepare a Transport Assessment to accompany a full planning application pertaining to redevelopment proposals for the first phase of 'Land south east of the A521 Uttoxeter Road, north of the A50, Blythe Bridge (Blythe Vale), referred to as 'the Site'.
- 7.1.2 Full planning permission was granted on 10th May 2018 for 118no. dwellings and associated infrastructure on the Site (Application Ref: SMD/2017/0512). In lieu of this planning permission, the Site is now subject to a revised planning application which proposes the development of 146 dwellings with access from the A521; proposing a net increase of 28 dwellings on permission Ref. SMD/2017/0512.
- 7.1.3 The Site is considered to be ideally located for residential development for the following reasons:
- Key local amenities and the village of Blythe Bridge is easily accessible within a reasonable walking distance;
 - Bus stops are located within 450m of the Site that offer frequent services to key local towns/cities including Hanley and Longton; and
 - Blythe Bridge railway station is 1.4km from the Site and provides services between Crewe and Derby.
- 7.1.4 A review of Personal Injury Collision data revealed that there are no highway safety issues that need to be addressed to make this development acceptable.
- 7.1.5 The Site currently benefits from a live planning permission for residential development comprising 118 dwellings (application reference: SMD/2017/0512).
- 7.1.6 In accordance with the existing consent, access will be gained via a new signal controlled junction on the A521, and a speed limit reduction to 40mph (in line with the S278 agreement) is proposed to facilitate a safe and suitable controlled pedestrian crossing. A 3m shared footway/cycleway will be provided on the northern side of the A521, connecting into existing facilities on Uttoxeter Road.
- 7.1.7 The proposed residential development is predicted to generate an additional 14 trips in the AM and PM peaks when compared to the existing consent. This level of increase in trips is not considered to be significant.
- 7.1.8 Junction capacity modelling has been undertaken on five junctions including the A50 junction with the A521. All of the models indicate that the impact of the revised development proposals is negligible when compared to the existing consent.



7.2 Conclusion

- 7.2.1 In conclusion, it is considered that the Site is a sustainable location for development and that the local highway network can accommodate the proposals.
- 7.2.2 Therefore, it is considered that there are no highway or transport reasons why the proposed development should not be granted planning permission.



Appendix A

Consented Phase I Transport Assessment & Response

Note



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Blythe Vale, Blythe Bridge

Transport Assessment

July 2017

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I Introduction

I.1 Overview

- 1.1.1 Phil Jones Associates (PJA) has been commissioned by St Modwen Developments Ltd. to prepare a Transport Assessment to accompany a full planning application for the first phase of development at Blythe Vale. This will be for 118 dwellings with access from the A521, Blythe Bridge.
- 1.1.2 This Transport Assessment aims to identify the travel patterns associated with this development, and to examine the likely transport implications on the surrounding area.
- 1.1.3 A separate Travel Plan report has been prepared by PJA, which should be read in conjunction with this document.

I.2 Planning History

- 1.2.1 The Blythe Vale application site falls within a wider site area (including land to the east and west of the A50) which has been allocated in the adopted Development Plan (Core Strategy 2014) for employment development. The wider site has outline planning permission for a 'Premium Employment Site' consisting of up to 120,000sqm of B1 land use (application reference SM.97-0216). The initial planning permission has been subject to three extension of time and two reserved matters permissions, although none have been implemented.
- 1.2.2 This application is for land known as Phase 1 of the wider site and had previously comprised 15,000sqm of B1 Office land uses, as detailed within the approved 2003 Transport Assessment (application reference: 03/00498/FUL_MJ, originally registered as 03/0629). This Transport Assessment has been included within **Appendix A** for reference.
- 1.2.3 The scheme, which benefits from planning permission, proposed access was from a three-arm signal controlled junction with the A521, approximately 130m east of the A50/A521 roundabout. This access arrangement included two right turn lanes from the A521 West into the site, however an 'interim' scheme was agreed with Staffordshire Country Council (SCC) and Highways England (HE) to serve the initial phases of development. This only has a single right turn lane inbound. The scheme also proposed to reduce the speed limit on the A521 to 50mph.
- 1.2.4 The access included provision for pedestrians and cyclists with a controlled crossing of the A521 and a 3m wide shared footway cycleway on its northern side to accommodate movements to Blythe Bridge, via Uttoxeter Road.

I.3 Scoping Discussions

- 1.3.1 Scoping discussions were carried out with SCC and HE in advance of this planning submission. A meeting was held with SCC on 17th May 2017 and subsequently a Scoping Note was submitted to



both SCC and HE. The Scoping Note and key correspondence is contained within **Appendix B**. The pertinent points arising are summarised as follows:

- The site can be accessed via a three-arm signal controlled junction with the A521, in accordance with the scheme that benefits from a detailed planning permission;
- In line with the previous scheme, the proposals will also include a pedestrian/cycle controlled crossing and a 3m wide shared footway/cycleway linking the site with Blythe Bridge, via Uttoxeter Road;
- SCC would support a reduction in speed limit to 50mph between the A50 roundabout and Draycott in the Moors (currently national speed limit), to ensure visibility from the access is achievable and the pedestrian/cycle crossing is safe and attractive;
- The access road can be maintained at a width of 7.3m, so as to not preclude the potential for employment uses in future phases;
- SCC has agreed that the remainder of the internal layout can comprise:
 - 5m wide secondary streets, with 2m wide footways where appropriate
 - Shared surface streets with a total width of 7.5m
- In addition to the site access, further consideration should be given to the following scope of junctions:
 - A50/A521 roundabout (HE);
 - A521/Uttoxeter Road priority junction (x2 central reservations); and
 - Uttoxeter Road/Cheadle Road/Stallington Road priority crossroads.
- The approved Blythe Park scheme with outline permission for up to 168 residential dwellings and 33,480sqm B1, B2 and B8 uses (application reference: SMD/2014/0576) should be included as committed development.

1.4 Structure of Report

1.4.1 The remainder of this report is structured as follows:

- Chapter 2: Policy Context;
- Chapter 3: Baseline Transport Conditions;
- Chapter 4: Permitted Scheme;
- Chapter 5: Development Proposals;
- Chapter 6: Travel Demand;
- Chapter 7: Junction Capacity Assessment; and
- Chapter 8: Summary and Conclusion.



2 Policy Context

2.1 National Planning Policy Framework (2012)

2.1.1 The National Planning Policy Framework (NPPF) was published in March 2012 and sets out the Government's planning policies for England and how these are expected to be applied to achieve sustainable development. The NPPF replaces the previous policy guidance contained within PPS 3 - Housing and PPG 13 - Transport.

2.1.2 The core planning principles, which are set out on pages five and six of the NPPF, set out the Government's overarching roles that the planning system ought to play. One of the principles being to:

"Actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable."

2.1.3 Policies aimed at promoting sustainable development are covered by Paragraphs 29 to 41 of the NPPF with Paragraph 32 stating that:

2.1.4 *"All developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:*

- *The opportunities for sustainable modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;*
- *Safe and suitable access to the site can be achieved for all people; and*
- *Improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of the development are severe."*

2.1.5 Paragraph 34 states:

"Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised..."

2.1.6 Paragraph 35 states:

"Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods and people. Therefore, developments should be located and designed where practical to:

- *Accommodate the efficient delivery of goods and supplies;*



- *Give priority to pedestrians and cycle movements, and have access to high quality public transport facilities;*
- *Create safe and secure layouts which minimise conflicts between traffic and cyclists and pedestrians, avoiding street clutter and where appropriate establishing homes zones;*
- *Incorporate facilities for charging plug-in and other low emission vehicles; and*
- *Consider the needs of people with disabilities by all modes of transport."*

2.1.7 Paragraph 36 states:

"A key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan."

2.1.8 It is considered that the site is well located, provides opportunities for sustainable travel, and the residual cumulative impacts of the development are not severe, and is therefore in compliance with the NPPF.

2.2 Planning Practice Guidance (PPG) 2014

2.2.1 PPG 2014 stipulates that the scope and level of detail in a Transport Assessment or Statement will vary from site to site but the following should be considered when setting the scope of the proposed assessment:

- *"Information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport)"*
- *Information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;*
- *Data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;*
- *A qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;*
- *An assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);*
- *Data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;*



- *An analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area;*
- *An assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);*
- *Measures to improve the accessibility of the location (such as provision/ enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;*
- *A description of parking facilities in the area and the parking strategy of the development;*
- *Ways of encouraging environmental sustainability by reducing the need to travel; and*
- *Measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads.”*

2.2.2 The PPG continues:

“In general, assessments should be based on normal traffic flow and usage conditions (e.g. non-school holiday periods, typical weather conditions) but it may be necessary to consider the implications for any regular peak traffic and usage periods (such as rush hours). Projections should use local traffic forecasts such as TEMPRO drawing where necessary on National Road Traffic Forecasts for traffic data.”

2.2.3 This report has been written in accordance with the principles of the Planning Practice Guidance (2014) set out above.

2.3 Staffordshire Local Transport Plan (LTP 2011-2026)

2.3.1 The Staffordshire LTP provides the transport strategy for the whole Staffordshire area, for the period 2011-2026. The document represents the long-term strategy and details how Staffordshire’s transport ambitions will be achieved.

2.3.2 Staffordshire’s transport aims are outlined below:

- 1 To support growth and regeneration;
- 2 To maintain the highway network;
- 3 To make transport easier to use and places easier to get to;
- 4 To improve safety and security;
- 5 To reduce road transport emissions and their effects on the highway network;



2. Policy Context

6 To improve health and quality of life; and

7 To respect the environment.

2.3.3 This Transport Assessment has been prepared in accordance with SCC's LTP.

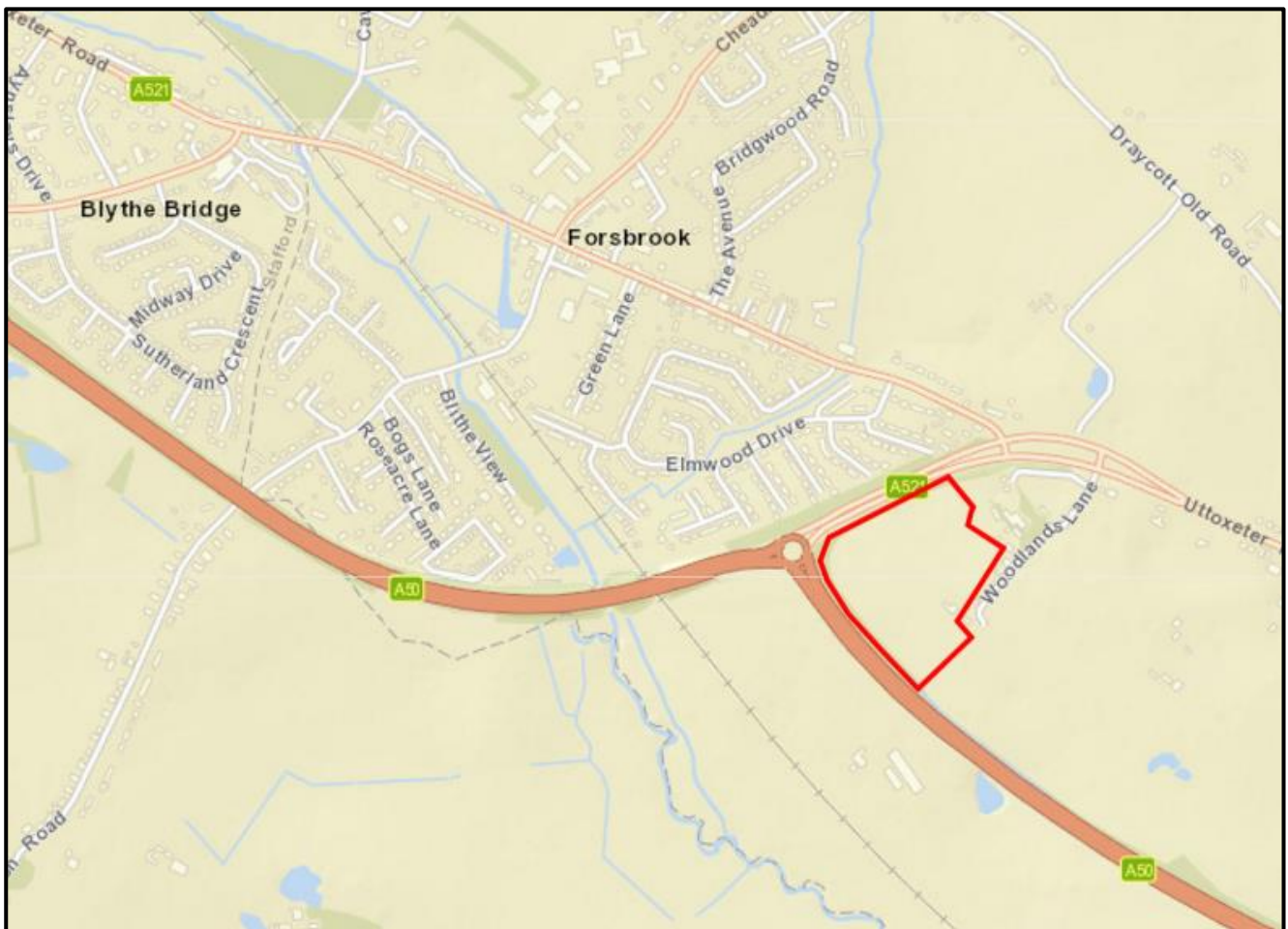


3 Baseline Transport Conditions

3.1 Site Location

- 3.1.1 The development site is located on land adjacent to the A521, to the south east of Blythe Bridge. The site is bound by the A521 to the north, A50 to the west, residential properties off Woodlands Lane to the east and greenfield land to the south.

Figure 3-1: Site Location (outlined in red)



3.2 Local Highway Network

A521

- 3.2.1 The A521 is a dual carriageway, connecting the A50 and A52 east of Stoke-on-Trent. The road is subject to a national speed limit. The A521 meets the A50 by means of an at grade three-arm roundabout immediately to the northwest of the site, and Uttoxeter Road by means of a priority junction with a right turn central reservation to the northeast of the site. There are no pedestrian footways along the A521.



3. Baseline Transport Conditions

A50

- 3.2.2 The A50 is a dual carriageway, providing a strategic east-west link between the M1 and M6. Locally it provides the key highway connection from the site to Stoke-on-Trent. The road is subject to a national speed limit. There are no pedestrian footways along the A50.

Uttoxeter Road

- 3.2.3 Uttoxeter Road is a single carriageway road, operating in a northeast/southwest alignment. The road is approximately 6m in width and is subject to a 30mph speed limit. There are pedestrian footways, approximately 1-2m in width, along both sides of the carriageway.

3.3 Access by Sustainable Modes

Pedestrian & Cycle Facilities

- 3.3.1 Lit footways approximately 1-2m in width are provided along Uttoxeter Road on both sides of the carriageway. There are no pedestrian facilities on either the A50 or A521 in the vicinity of the site access.
- 3.3.2 There are no dedicated cycling facilities in the immediate vicinity of the site.

Bus Services

- 3.3.3 The nearest bus stops to the site are located on Uttoxeter Road, approximately 450m from the site access point. The services available from these bus stops are summarised in Table 3-1.

Table 3-1: Bus Services Summary

Route No.	Operator	Route	Peak Hour Frequency	Days of Operation
6A	First Potteries	Hanley – Longton – Meir Park – Blythe Bridge	3 per hour	Mon-Sun
12	D & G Coach & Bus	Dulford – Longton – Stone	1 per hour	Mon-Sat



Rail Services

- 3.3.4 The closest railway station, Blythe Bridge, is approximately a 1.4km walk (17 minutes, assuming a walk speed of 1.4m/s¹) to the northwest of the site. Blythe Bridge is served by an East Midlands Trains service between Crewe and Derby. Northbound and southbound services each call once per hour.

3.4 Accessibility

- 3.4.1 Guidance provided by the Institution of Highways and Transportation (IHT) in their publication 'Guidelines for Providing for Journeys on Foot' (2000) suggests that in terms of commuting, walking to school and recreational journeys; walk distances of up to 2km can be considered as a preferred maximum, with 'desirable' and 'acceptable' distances being 500m and 1km respectively. It should however be noted that journeys of a longer length are often undertaken.
- 3.4.2 For non-commuter journeys, the Guidance suggests that walk distances of up to 1-2km can be considered as a preferred maximum, with the 'desirable' and 'acceptable' distances being 400m and 800m respectively. Again, it should be noted that journeys of a longer length are often undertaken.

Table 3-2: Walk Journey Distance and Time Thresholds

IHT Standard	Distance (m)		Walk Time (mins)	
	Commuting, Walking to School and Recreation	Other, non-commuter journeys	Commuting, Walking to School and Recreation	Other, non-commuter journeys
Desirable	500	400	6	5
Acceptable	1000	800	12	10
Preferred Maximum	2000	1200	24	15

- 3.4.3 As illustrated in Figure 3-2 there are a number of local facilities within walking distance of the site providing a wide range of services for everyday needs. The Government's Index of Multiple Deprivation statistics includes an indicator of "Transport Inclusion", which is defined in terms of access to four essential types of facilities, which are:

- Primary Schools;
- Health Centres;
- Convenience Stores; and
- Post Offices.

¹ As given in the IHT publication 'Guidelines for Providing for Journeys on Foot' (2000)



3. Baseline Transport Conditions

3.4.4 To the northwest of the site, there are several local amenities including shops and schools. These amenities and their calculated walking time from the site access are given in Table 3-3.

Table 3-3: Accessibility from Site Access

Amenity	Amenity Type	Location	Distance from Site (km)	Walking Time (mins)
Blythe Bridge Health Centre	Health Centre	Uttoxeter Road	0.5	6
William Amory Primary School	Primary School	Stallington Road	0.9	11
The Co-operative Food	Convenience Store	Uttoxeter Road	0.9	11
Tesco Express	Convenience Store	Uttoxeter Road	1.0	12
Blythe Bridge Post Office	Post Office	Uttoxeter Road	1.1	13
Blythe Bridge High School & Sixth Form	Secondary School & Sixth Form	Cheadle Road	1.1	13
Forsbrook C of E Primary School	Primary School	Cheadle Road	1.3	16
Draycott Moor College	Secondary School	Draycott Old Road	1.3	16
Blythe Bridge Railway Station	Railway Station	Uttoxeter Road	1.4	17
Trinity Medical Centre	Health Centre	Uttoxeter Road	1.6	19

Figure 3-2: Walking Isochrones

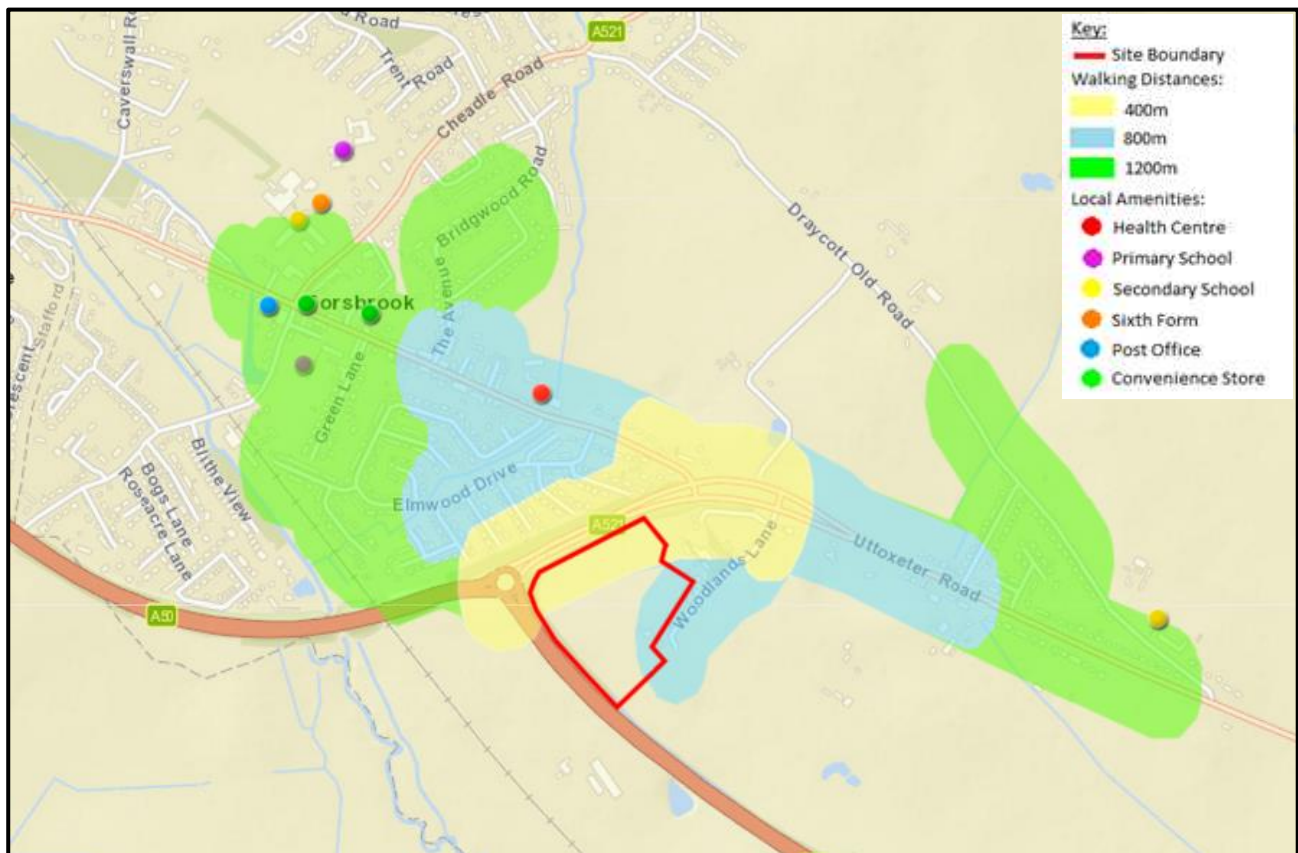
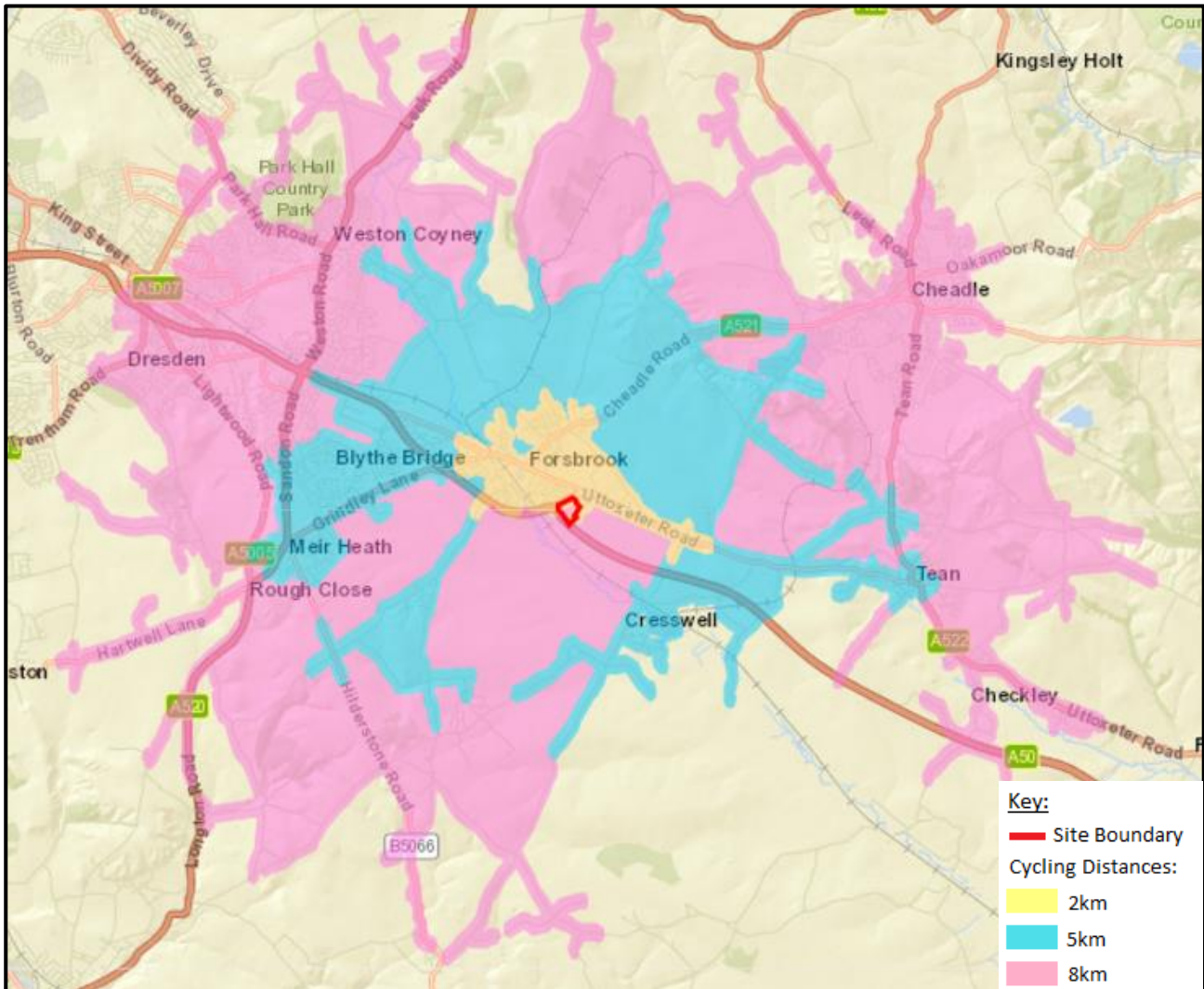




Figure 3-3: Cycling Isochrones



3.4.5 Figure 3-2 indicates that each of the core local amenities are present within reasonable walking distance from the site. Figure 3-3 indicates that a number of local towns and villages with employment opportunities including Longton, Mier, Cheadle and Tean are within a reasonable cycling distance.

3.5 Highway Safety

3.5.1 Personal Injury Collision (PIC) data has been obtained from SCC for the most recent five-year period, for which data is available, between 01/07/11 and 30/06/16. The full collision records are provided within **Appendix C** and summarised in Table 3-4.

**Table 3-4: Summary of PICs**

Junction/Link	Accident Severity			Involving Sensitive Users		
	Slight	Serious	Fatal	Pedestrian	Cycle	Motorcycle
A50/A521 (Junction)	17	-	-	-	-	2
Uttoxeter Road/Cheadle Road/Stallington Road (Junction)	6	-	-	-	2	2
Uttoxeter Road/The Avenue (Junction)	2	-	-	-	-	1
Uttoxeter Road/Elmwood Drive (Junction)	3	-	-	-	-	1
A521/Uttoxeter Road (Junction)	2	-	-	-	-	-
A521/Green Lane (Junction)	1	-	-	1	-	-
A50 (Link)	2	-	-	-	-	-
Uttoxeter Road (Link)	4	-	-	3	-	-
Total	37	0	0	4	2	6

A50/A521

- 3.5.2 A total of 17 collisions have occurred at this junction, all of which were slight in severity. Two collisions involved motorcyclists. These collisions were the result of deposit on the road and a vehicle failing to judge the motorcyclists path appropriately. The majority of collisions were the result of poor manoeuvres and driver error.

Uttoxeter Road/Cheadle Road/Stallington Road

- 3.5.3 A total of six collisions have occurred at this junction, all of which were slight in severity. Two collisions involved cyclists, and another two motorcyclists. All collisions were the result of vehicles failing to look properly before making a manoeuvre.

Uttoxeter Road/The Avenue

- 3.5.4 A total of two collisions have occurred at this junction, both of which were slight in severity. One collision was the result of a vehicle overshooting the junction, the other a result of a vehicle turning into the path of an oncoming motorcyclist.

Uttoxeter Road/Elmwood Drive

- 3.5.5 A total of three collisions have occurred at this junction, all of which were slight in severity. All of these collisions were the result of driver error as the vehicles failed to give way to oncoming traffic. One collision involved a motorcyclist.

**A521/Uttoxeter Road**

- 3.5.6 A total of two collisions have occurred at this junction, both of which were slight in severity. No sensitive road users were involved. Both collisions were the result of driver error as they failed to judge the path and speed of other road users.

A521/Green Lane

- 3.5.7 One collision occurred at this junction, which was slight in severity and involved a pedestrian.

A50

- 3.5.8 A total of two collisions have occurred on the A50, both of which were slight in severity and involved no sensitive road users. The collisions were the result of driver error, with a poorly judged overtake manoeuvre, and defective/deflated tyres.

Uttoxeter Road

- 3.5.9 A total of four collisions have occurred on Uttoxeter Road, all of which were slight in severity. Three collisions involved pedestrians. The collisions were the result of driver or pedestrian error whereby vehicles failed to give way to oncoming traffic, were impaired by alcohol and failed to look properly. In one case, the collision was the result of a pedestrian crossing the road while masked by a stationary vehicle.

Highway Safety Summary

- 3.5.10 A total of 37 collisions have occurred within the vicinity of the development site within the most recent five-year period (01/07/11-30/06/16). It is recognised there is a cluster of collisions at the A50/A521 roundabout. Given this junction forms a major arterial route with high levels of traffic flows, the development is unlikely to exacerbate any existing safety issue. The majority of accidents within the scope are considered to have been caused as a result of driver error, therefore, there is not considered to be any highway safety concerns that need to be addressed as part of development.

3.6 Summary

- 3.6.1 The site is considered to be suitably located for residential development for the following reasons:
- Key local amenities, including a primary school, GP surgery and supermarket are accessible within reasonable walking distance;
 - Bus stops are located within 450m of the site, providing frequent services to local towns including Hanley and Stone;



3. Baseline Transport Conditions

- The closest train station to the site is Blythe Bridge, approximately 1.4km to the northwest of the site, providing services between Crewe and Derby; and
- A review of Personal Injury Collision data revealed no highway safety concerns that require further assessment.



4 The Extant Planning Permission

4.1 Background

4.1.1 Given that the wider Blythe Vale site has an extant planning consent, the revised proposals for the site and any associated impact on transport infrastructure must be considered against the baseline position established by the earlier planning permission (application reference: 03/00498/FUL, originally 03/0629).

4.1.2 The approved Transport Assessment is included within **Appendix A**.

4.2 Development Mix and Access

4.2.1 The proposals for the wider employment site comprised up to 120,000sqm B1 industrial development, with 60,000sqm each situated either side of the A50.

4.2.2 The site was proposed to be accessed via a three-arm signal controlled junction with the A521, approximately 130m east of the A50/A521 roundabout. The arrangement included two right turn lanes from the A521 West into the site, however an 'interim' scheme was agreed with Staffordshire County Council (SCC) and Highways England (HE) to serve the initial phases of development. This was to provide only a single right turn lane inbound. The scheme involved reducing the speed limit on the A521 to 50mph.

4.2.3 The access included the provision of a controlled pedestrian crossing and a 3m wide shared footway cycleway on the northern side of the A521 carriageway to accommodate pedestrian/cycle movements between the site and Blythe Bridge, via Uttoxeter Road.

4.3 Trip Envelope

4.3.1 Trip rates had been taken from Staffordshire County Council's Proof of Evidence submitted for the Staffordshire Local Plan Public Inquiry in November 1995, at the request of the Highway Authority. The agreed trip rates and trip envelope is given in Tables 4-1 to 4-2.

Table 4-1: Agreed Trip Rates

	AM Peak		PM Peak	
	Arrival	Departure	Arrival	Departure
B1 (per 100sqm GFA)	1.62	0.18	0.225	1.275

Table 4-2: Trip Envelope for Phase One

Level of Development	AM Peak			PM Peak		
	Arrival	Departure	Total	Arrival	Departure	Total
15,000sqm	243	27	270	34	191	225



- 4.3.2 In summary, the agreed trip envelope for Phase One was a total of 270 two-way trips in the AM peak, and 225 two-way trips in the PM peak.

4.4 Trip Distribution

- 4.4.1 The distribution for the employment site had been extracted from previous traffic impact work undertaken, as agreed with the Highway Authority. The distribution is summarised in Table 4-3.

Table 4-3: Trip Distribution

Direction	Percentage of Trips
A50(T) West	60%
A50(T) South	10%
A521	30%

4.5 Junction Assessments

- 4.5.1 The Transport Assessment had presented junction capacity assessments in the opening year (2003) and future year (2018) with traffic surveys undertaken in 2000. Assessments were carried out at the following junctions:
- Site Access/A521; and
 - A50/A521 Roundabout.
- 4.5.2 For the initial phase of development (15,000sqm), the site access junction was modelled in the form of a priority junction, which would operate with reserve capacity. In this instance, the A50/A521 roundabout would operate beyond practical capacity but would not be significantly affected by the development.
- 4.5.3 For the second phase of development (15,000sqm – 60,000sqm) the site access junction was modelled as a signal controlled junction, which would operate with reserve capacity. It was concluded that at this level of development the A50/A521 roundabout would need signalisation.
- 4.5.4 For the final phases of development, comprising the western parcel of land (west of the A50) with up to 60,000sqm B1, access would be sought from a grade separated junction with the A50/A521 roundabout.
- 4.5.5 Further analysis of the site access junction concluded that it could accommodate up to 90,000sqm. For this level of development a bridge arrangement across the A50 would be required to connect the parcel of land to the west. However, should the A50/A521 junction to be grade separated to accommodate the final phase of development, the bridge crossing would not be required, with both parcels of land being accessed separately.



4.6 Summary

4.6.1 A summary of the permitted development proposals is as follows:

- Planning permission was granted (application reference: SMD/2003/0629) for an Employment Zone comprising up to 120,000sqm B1 land use;
- Phase one of the development, comprising 15,000sqm employment uses, and forms the proposed development site, which is the subject of this application;
- The trip envelope for phase one was a total of 270 trips in the AM peak, and 225 in the PM peak; and
- Capacity modelling carried out on two junctions concluded that the signalised site access junction could accommodate up to 90,000sqm B1. Between 60,000sqm and 90,000sqm would involve the development of the western parcel of land, and would require a bridge across the A50 connecting the two parcels of land. Further development of the parcel of land to the west of the A50 would require grade separation of the A50 junction with A521.



5 Development Proposals

5.1 Development Mix

5.1.1 This report accompanies a full planning application for the construction of up to 118 dwellings, representing Phase 1 of the development. The development mix comprises:

Privately Owned:

- 5 x two-bedroom houses;
- 30 x three-bedroom houses;
- 39 x four-bedroom houses; and
- 5 x five-bedroom houses.

Affordable:

- 4 x one-bedroom flats;
- 23 x two-bedroom houses; and
- 12 x three-bedroom houses.

5.1.2 A site layout is included within **Appendix D**.

5.2 Access

5.2.1 Vehicular access to the site will be provided via a new three-arm signal controlled junction on the A521, approximately 130m east of the A50/A521 roundabout. The proposed access accords with the 'interim' access junction proposed as part of the permitted scheme. Drawing 02523-A-0105 illustrating this access is included within **Appendix E**.

5.2.2 As part of the access proposals, the speed limit of the A521 between the A50/A521 roundabout and Draycott in the Moors will be reduced from national speed limit to 50mph, to facilitate pedestrian/cycle movement across the A521.

5.2.3 As such, the signal controlled access will incorporate a controlled pedestrian crossing, providing a safe and sustainable link to the site from Blythe Bridge. As per the permitted scheme, it is proposed to accommodate a 3m wide shared footway/cycleway on the northern side of the A521 connecting the site into the existing pedestrian infrastructure on Uttoxeter Road. A dropped kerb crossing will be provided on Uttoxeter Road.

5.2.4 A swept path analysis drawing is also contained within **Appendix E**, illustrating that a large HGV (16.5m in length) can manoeuvre around all parts of the proposed access without conflict.



5.3 Internal Arrangement

5.3.1 As agreed with SCC, the internal layout comprises the following parameters:

- Primary Road - 7.3m wide, so as to not preclude any future employment uses in future phases, in line with the consented scheme;
- Secondary Street – 5m wide with 2m wide footways; and
- Shared surface streets – 7.5m total width.

5.3.2 Internal junction and forward visibility has been undertaken where necessary for the appropriate speeds. Swept path analysis illustrating a refuse vehicle and fire tender servicing the site has been undertaken. Drawings indicating these have been included within **Appendix E**.

5.4 Parking Provision

DCLG Paper Method

5.4.1 During scoping discussions, it was agreed that a calculation based parking demand would be suitable to determine the parking provision of the development.

5.4.2 Parking demand factors have been calculated for the development based on the Department for Communities and Local Government (DCLG) paper method. The paper sets out how to calculate parking demand for residential developments based on Census local car ownership (availability) statistics by dwelling type, size and tenure.

5.4.3 Census 2011 statistics were used to determine car or van availability for the Staffordshire Moorlands area. Calculations were carried out with Temprow V7 growth factors for the E02006215: Staffordshire Moorlands 012 MSOA area. The Research paper and spreadsheet calculations are contained in **Appendix F** and the resultant parking demand is outlined in Table 5-1.

**Table 5-1: DCLG Parking Demand**

Tenure	Habitable Rooms	Bedrooms	DCLG Calculated Parking Standards for Staffordshire Moorlands Area		Total Dwellings		Total Required Spaces
			1 Allocated Space (Inc. Visitors)	2 Allocated Spaces (Inc. Visitors)	1 Allocated Space	2 Allocated Spaces	
Private House	4	2	1.32	2.20	0	5	11
	5	3	1.70	2.31	0	30	69
	6	4	1.86	2.36	0	39	92
	7	5	1.73	2.35	0	5	12
Affordable ² Flat	3	1	1.20	2.20	4	0	5
Affordable ² House	4	2	1.32	2.20	0	23	51
	5	3	1.59	2.24	0	12	27
Grand Total							266

5.4.4 The development will provide 220 surface car parking spaces (203 allocated and 17 unallocated spaces). The parking demand has been developed using only the number of surface car parking spaces, thus assumes no garage parking. A total of 74 properties on site will have at least one garage space, measuring 3.5x6m; 13 dwellings will have two garage spaces. Therefore, it is considered that the proposed level of parking is acceptable.

² 'Affordable' assumed to be 'Shared Ownership' for the purpose of the DCLG calculations.



6 Travel Demand

6.1 Introduction

- 6.1.1 This chapter summarises the methodology for establishing trip generation and distribution associated with the development proposals.
- 6.1.2 The development comprises up to 118 dwellings, the impact of which has been considered within this chapter for the AM and PM peak hours of 08:00-09:00 and 17:00-18:00 respectively.

6.2 Vehicular Trip Generation

- 6.2.1 TRICS 7.3.4 has been used to estimate vehicular trip rates for the development, under the following criteria. All data is contained within **Appendix G**.
- Land Use 03/A Residential Privately Owned;
 - Excluding Greater London, Ireland, Wales and Scotland; and
 - Use of sites within an Edge of Town or Suburban Area location.
- 6.2.2 Table 6-1 identifies the resultant trip rates.

Table 6-1: Proposed Vehicle Trip Rates

Land Use	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Privately Owned Dwellings	0.134	0.356	0.490	0.342	0.156	0.498

- 6.2.3 The subsequent peak hour vehicle trip generation for the proposed development is outlined in Table 6-2.

Table 6-2: Proposed Trip Generation

	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
118 Dwellings	16	42	58	40	18	59

- 6.2.4 In summary, the proposed development, would generate 58 vehicular trips in the AM peak, and 59 trips in the PM peak respectively.

6.3 Net Change in Trip Generation

- 6.3.1 Given that the site has a permitted trip envelope, it is necessary to consider the level of traffic generated by the development mix that benefits from a planning permission against those associated with the revised proposals.

**Table 6-3: Net Change in Vehicle Trips Between Permitted and Revised Proposals**

	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Phase 1 Permitted Envelope	243	27	270	34	191	225
Revised Proposals (118 dwellings)	16	42	58	40	18	59
Net Change in Trips (Total)	-227	+15	-212	+7	-173	-166

6.3.2 The proposed development would result in a reduction of 212 two-way trips in the AM peak, and 166 in the PM peak when compared to the previous consent. Against the previous proposals this development will have a positive impact on the local highway network.

6.4 Multi-modal Trip Generation

6.4.1 Mode splits have been sourced from the 2011 Census (Journey to Work MSOA) for E02006215: Staffordshire Moorlands 012. These have been applied proportionately to the trip generation of the site. Table 6-4 summarises the results.

Table 6-4: Multi-modal Trip Generation

Mode of Travel	Percentage of Mode Split	Two Way Trip Generation	
		AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Train	1%	1	1
Bus	2%	1	1
Car (Driver)	86%	58	59
Car (Passenger)	6%	4	4
Bicycle	1%	1	1
Walk	4%	3	3
Total	100%	67	68

6.5 Trip Distribution and Assignment

6.5.1 2011 Journey to Work Census has been used to calculate residential trip distribution. The distribution of vehicular employment trips from MSOA E02006215: Staffordshire Moorlands 012, has been used as a proxy for the vehicular trip distribution for the proposed development.

6.5.2 ArcGIS software has been used assign development traffic onto the local highway network. Following this, the route assignment has been manually sense checked. A summary of the route assignment is provided in Table 6-5.

**Table 6-5: Development Trip Route Assignment Summary**

Route Assignment (from/to)	Percentage	AM (08:00-09:00) Trips		PM (17:00-18:00) Trips	
		Arrive	Depart	Arrive	Depart
Site Access onto A50 (West)	75%	12	32	30	14
Site Access onto A50 (South)	9%	1	4	4	2
Site Access onto Uttoxeter Road	3%	0	1	1	1
Site Access onto Cheadle Road	3%	0	1	1	1
Site Access onto A521/Uttoxeter Road	10%	2	4	4	2

6.6 Cheadle Road Junction

- 6.6.1 During scoping discussions with SCC, the impact of potential trips to schools and local shops from the development on the Cheadle Road junction was raised. Therefore, the impact on this junction has been quantified, with the distribution diagram included within **Appendix H**.
- 6.6.2 For trips to Blythe Bridge local shops, it has been assumed that all trips are 'linked trips' and would therefore already be taken into account in the trip generation calculations.
- 6.6.3 For all school trips, the following assumptions have been made:
- SCC Education Planning Obligations Policy (Version 1.7) states a standard formula for calculating the number of pupils a site generates as three pupils per year group per 100 houses. In accordance with this formula, the proposed development (118 dwellings) would result in 25 primary school pupils and 18 secondary school pupils.
 - The resultant pupils have been split between three local schools. It has been assumed that the primary school trips are split equally between William Amory Primary School and Forsbrook Church of England Primary School. All secondary school pupils are assumed to go to Blythe Bridge High School. As a result, each school receives the following number of pupils:
 - William Amory Primary School – 13 pupils;
 - Forsbrook C of E Primary School – 12 pupils; and
 - Blythe Bridge High School – 18 pupils.
 - National Travel Survey (NTS) 2014 Journey to School data has been used to apply an average mode share to these trips. NTS 2014 suggest that vehicle trips constitute 46% and 23% of all primary and secondary school trips respectively. The resultant vehicular trips to each school are:
 - William Amory Primary School – 6 vehicle trips;
 - Forsbrook C of E Primary School – 6 vehicle trips; and
 - Blythe Bridge High School – 4 vehicle trips.
 - All vehicle trips have been assumed to be two-way (arrival and departure) with all trips leaving and returning to the development (which, of course would require further interrogation if the



6. Travel Demand

increase in vehicular trips was significant). The distribution does not take into account 'linked trips' and is therefore considered to be robust.

- School AM and PM peak periods have been assumed to be 08:00-09:00 and 15:00-16:00 respectively. It is assumed no school trips are undertaken in the network peak of 17:00-18:00.

6.6.4 The total vehicular trip generation results in a total of 20 two-way trips through the Cheadle Road junction. When considered over the AM peak period, this equates to approximately one additional trip every three minutes. This level of impact is not considered to be significant, therefore, no further assessment has been undertaken.



7 Junction Capacity Assessment

7.1 Introduction

- 7.1.1 This section provides a summary of the detailed capacity assessments that have been undertaken to understand the impact of the development proposals on the highway network.

7.2 Scope of Assessment

- 7.2.1 Junction capacity assessments have been carried out on the following junctions, as agreed with SCC:

- Site Access/A521 Signalised Junction;
- A521/Utttoxeter Road Priority Junction;
- Utttoxeter Road Slip/Woodlands Road Priority Junction; and
- A50/A521 Roundabout.

7.3 Survey Data

- 7.3.1 The baseline data for the assessment has been captured by Manual Classified Turning Counts (MCC) undertaken for the period of 07:00-10:00 and 16:00-19:00 on Wednesday 10th May 2017 at the following junctions:

- Utttoxeter Road/Woodlands Lane Priority Junction;
- Utttoxeter Road/A521 Priority Junction; and
- A50/A521 Roundabout.

- 7.3.2 All survey data has been included within **Appendix I**.

7.4 Committed Development

- 7.4.1 Development traffic flows have been extracted from the approved Blythe Park Transport Assessment (application reference: SMD/2014/0576) and included as committed development.

- 7.4.2 The traffic flows associated with the committed development have been included within **Appendix J**.

7.5 Traffic Growth

- 7.5.1 TEMPRO V7 calibrated with the National Transport Model (NTM AF15) dataset has been used to generate traffic growth factors specific to car drivers in E02006215: Staffordshire Moorlands 012.

- Dataset: 70



- Result Type: Trip ends by time period
- Trip Purpose Group: All purposes
- Transport Mode: Car Driver
- Time Period: Weekday AM peak period (0700 - 0959) and Weekday PM peak period (1600 – 1859)
- Trip End Type: Origin/Destination
- Area/Road type: All

Table 7-1: TEMPRO Growth Factors

	AM Peak	PM Peak
2017-2019	1.0204	1.0209
2017-2022	1.0481	1.0488
2017-2029	1.1046	1.1036

7.6 Assessment Scenarios

7.6.1 The following scenarios have been modelled at the above junctions, with traffic flow diagrams for each of these scenarios contained within **Appendix K**.

- 2017 Base;
- 2019 Base (HE opening year in accordance with HE Circular 02/13);
- 2019 Base + Committed Development;
- 2019 Base + Committed Development + Development;
- 2022 Base;
- 2022 Base + Committed Development;
- 2022 Base + Committed Development + Development;
- 2029 Base (HE opening year +10 in accordance with HE Circular 02/13);
- 2029 Base + Committed Development; and
- 2029 Base + Committed Development + Development.

7.6.2 It should be noted that the 2029 future year assessments are, in accordance with HE Circular 02/13 'for information only'. The impact of the development is not assessed in 2029, but rather it allows HE to understand and plan investment on the strategic road network.



7.7 Modelling Results

- 7.7.1 Results of the junction capacity assessments are set out below with full outputs provided within **Appendix L**.
- 7.7.2 The junctions have been modelled using a 'Flat' profile – this is considered to be representative of the base flow traffic observed as the data identified no definitive peak 15-minute interval within each peak hour. Table 7-2 identifies the total traffic observed through each junction in intervals of each peak.

Table 7-2: Observed Traffic Flows

Time Period	A50/A521 Roundabout		Uttoxeter Road/A521 Priority Junction	
	Vehicle Numbers	Percentage of Total	Vehicle Numbers	Percentage of Total
AM Peak				
08:00-08:15	979	25%	350	26%
08:15-08:30	1037	27%	387	28%
08:30-08:45	922	24%	319	24%
08:45-09:00	929	24%	290	22%
PM Peak				
17:00-17:15	1129	26%	404	26%
17:15-17:30	1105	25%	409	26%
17:30-17:45	1079	25%	419	26%
17:45-18:00	1075	24%	348	22%

- 7.7.3 Overall, there is no significant variation between 15-minute periods. Therefore, a flat profile is considered appropriate.

Site Access/A521 Signalised Junction

- 7.7.4 LinSig V3 modelling software has been used to assess the performance of the signalised Site Access/A521 junction. The results for each of the scenarios are summarised in Tables 7-3 to 7-5.

**Table 7-3: Site Access/A521 - 2019 Base + Committed Development + Development**

Arm (turning)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	DoS	Delay (s/pcu)	Queue (PCU)	DoS	Delay (s/pcu)	Queue (PCU)
A521 E (ahead, left)	43.0%	26	6	53.6%	28	8
A521 E (ahead)	43.0%	26	6	53.7%	28	8
Site Access (right, left)	4.0%	17	0	1.8%	17	0
A521 W (ahead)	41.2%	27	6	49.1%	28	7
A521 W (ahead, right)	43.9%	27	7	52.8%	28	8
Cycle Time	90 seconds			90 seconds		
PRC (%)	104.9			67.5		

Table 7-4: Site Access/A521 - 2022 Base + Committed Development + Development

Arm (turning)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	DoS	Delay (s/pcu)	Queue (PCU)	DoS	Delay (s/pcu)	Queue (PCU)
A521 E (ahead, left)	44.1%	26	7	55.0%	28	9
A521 E (ahead)	44.2%	26	7	55.1%	28	9
Site Access (right, left)	4.0%	17	0	1.8%	17	0
A521 W (ahead)	42.3%	27	6	50.5%	29	7
A521 W (ahead, right)	45.0%	27	7	54.2%	28	9
Cycle Time	90 seconds			90 seconds		
PRC (%)	99.9			63.4		

Table 7-5: Site Access/A521 - 2029 Base + Committed Development + Development

Arm (turning)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	DoS	Delay (s/pcu)	Queue (PCU)	DoS	Delay (s/pcu)	Queue (PCU)
A521 E (ahead, left)	46.5%	26	7	57.8%	29	9
A521 E (ahead)	46.4%	26	7	57.7%	29	9
Site Access (right, left)	4.0%	17	0	1.8%	17	0
A521 W (ahead)	44.6%	28	6	53.2%	29	8
A521 W (ahead, right)	47.1%	28	7	56.7%	29	9
Cycle Time	90 seconds			90 seconds		
PRC (%)	91.2			55.8		

7.7.5 The results indicate that the junction operates with significant reserve capacity in all scenarios.



A521/Uttoxeter Road/Uttoxeter Road Slip Priority Junction

7.7.6 Junctions 9 modelling software (PICADY module) has been used to assess the performance of the A521/Uttoxeter Road/Uttoxeter Road Slip priority junction. The results for each of the scenarios are summarised in Tables 7-6 to 7-15.

Table 7-6: A521/Uttoxeter Road/Uttoxeter Road Slip - 2017 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.23	0	7	0.16	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.06	0	5
Uttoxeter Road RT Slip (right)	0.07	0	5	0.06	0	5

Table 7-7: A521/Uttoxeter Road/Uttoxeter Road Slip - 2019 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.23	0	7	0.17	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.06	0	5
Uttoxeter Road RT Slip (right)	0.07	0	5	0.06	0	5

Table 7-8: A521/Uttoxeter Road/Uttoxeter Road Slip - 2019 Base + Committed Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.26	0	7	0.18	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 7-9: A521/Uttoxeter Road/Uttoxeter Road Slip – 2019 Base + Committed Development + Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.26	0	7	0.18	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

**Table 7-10: A521/Uttoxeter Road/Uttoxeter Road Slip - 2022 Base**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.24	0	7	0.17	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.06	0	5
Uttoxeter Road RT Slip (right)	0.07	0	5	0.07	0	5

Table 7-11: A521/Uttoxeter Road/Uttoxeter Road Slip - 2022 Base + Committed Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.27	0	7	0.18	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 7-12: A521/Uttoxeter Road/Uttoxeter Road Slip – 2022 Base + Committed Development + Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.27	0	7	0.19	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 7-13: A521/Uttoxeter Road/Uttoxeter Road Slip - 2029 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.26	0	7	0.18	0	6
Uttoxeter Road RT Slip (ahead)	0.08	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 7-14: A521/Uttoxeter Road/Uttoxeter Road Slip - 2029 Base + Committed Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.28	0	7	0.19	0	7
Uttoxeter Road RT Slip (ahead)	0.08	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.08	0	5

**Table 7-15: A521/Uttoxeter Road/Uttoxeter Road Slip – 2029 Base + Committed Development + Development**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.28	0	7	0.20	0	7
Uttoxeter Road RT Slip (ahead)	0.08	0	5	0.08	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.08	0	5

7.7.7 The results indicate that the junction operates with significant reserve capacity in all scenarios. The proposed development has a negligible impact on the operation of the junction.

Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road Priority Junction

7.7.8 Junctions 9 modelling software (PICADY module) has been used to assess the performance of the Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road priority junction. The results for each of the scenarios are summarised in Tables 7-16 to 7-25.

Table 7-16: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2017 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.09	0	5	0.07	0	5

Table 7-17: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2019 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.09	0	5	0.07	0	5

Table 7-18: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2019 Base + Committed Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.07	0	5

**Table 7-19: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2019 Base + Committed Development + Development**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.07	0	5

Table 7-20: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2022 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.07	0	5

Table 7-21: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2022 Base + Committed Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.07	0	5

Table 7-22: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2022 Base + Committed Development + Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.08	0	5

Table 7-23: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2029 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.08	0	5

**Table 7-24: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2029 Base + Committed Development**

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.08	0	5

Table 7-25: Uttoxeter Road Slip/Uttoxeter Road/Woodlands Road - 2029 Base + Committed Development + Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.08	0	5

7.7.9 The results indicate that the junction operates with significant reserve capacity in all scenarios. The proposed development has a negligible impact on the operation of the junction.

A50/A521 Roundabout

7.7.10 Junctions 9 modelling software (ARCADY module) has been used to assess the performance of the A50/A521 roundabout. The results for each of the scenarios are summarised in Tables 7-26 to 7-35.

Table 7-26: A50/A521 - 2017 Base

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.88	8	13	0.87	7	12
A521	0.37	1	4	0.43	1	4
A50 (S)	0.77	4	9	0.93	13	26

Table 7-27: A50/A521 - 2019 Base

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.89	9	15	0.89	9	14
A521	0.38	1	4	0.44	1	4
A50 (S)	0.79	4	9	0.95	18	35

**Table 7-28: A50/A521 - 2019 Base + Committed Development**

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.91	11	18	0.90	10	16
A521	0.40	1	4	0.48	1	4
A50 (S)	0.80	5	10	0.97	24	47

Table 7-29: A50/A521 - 2019 Base + Committed Development + Development

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.92	12	19	0.92	11	19
A521	0.42	1	4	0.49	1	4
A50 (S)	0.81	5	11	0.97	27	53

Table 7-30: A50/A521 – 2022 Base

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.92	12	20	0.92	11	19
A521	0.41	1	4	0.47	1	4
A50 (S)	0.82	5	11	0.98	33	62

Table 7-31: A50/A521 – 2022 Base + Committed Development

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.94	15	24	0.93	13	21
A521	0.42	1	4	0.50	1	5
A50 (S)	0.83	6	11	1.00	48	87

Table 7-32: A50/A521 – 2022 Base + Committed Development + Development

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.94	16	26	0.94	16	26
A521	0.45	1	5	0.51	1	5
A50 (S)	0.84	6	12	1.01	55	100

**Table 7-33: A50/A521 – 2029 Base**

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.97	26	41	0.96	23	37
A521	0.45	1	5	0.51	1	5
A50 (S)	0.87	8	15	1.05	117	195

Table 7-34: A50/A521 – 2029 Base + Committed Development

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.99	38	57	0.98	30	46
A521	0.46	1	5	0.54	1	5
A50 (S)	0.88	8	17	1.07	148	247

Table 7-35: A50/A521 – 2029 Base + Committed Development + Development

Arm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A50 (W)	0.99	42	63	0.99	40	60
A521	0.49	1	5	0.55	1	5
A50 (S)	0.89	9	18	1.08	160	267

- 7.7.11 The results indicate that the junction is approaching capacity in all scenarios. The addition of the proposed development has a negligible impact on the junction, with an increase in RFC of 0.01 for all ‘with development’ scenarios.
- 7.7.12 Again, it should be noted that the 2029 future year assessments are, in accordance with HE Circular 02/13 ‘for information only’. The impact of the development is not assessed in 2029, but rather it allows HE to understand and plan investment on the strategic road network.

7.8 Summary

- 7.8.1 The results indicate that the Uttoxeter Road/Uttoxeter Road Slip/A521, Uttoxeter Road/Uttoxeter Road Slip/Woodlands Road and A521/Site Access junctions operate with significant reserve capacity in all scenarios. The A50/A521 roundabout is approaching capacity in all scenarios, however the impact of the development on the operation of the junction is negligible.
- 7.8.2 Notwithstanding that, when compared against the impact of the employment scheme that benefits from planning permission, the proposed residential development would have a much lower traffic impact.



7. Junction Capacity Assessment

- 7.8.3 The proposed development would have a negligible impact on the operation of the local and strategic highway network.



8 Summary and Conclusion

8.1 Summary

- 8.1.1 Phil Jones Associates has been commissioned by St Modwen Developments Ltd. to prepare a Transport Assessment to accompany a full planning application for the development of 118 dwellings on land adjacent to the A521, to the south east of Blythe Bridge.
- 8.1.2 The site is considered to be ideally located for residential development for the following reasons:
- Key local amenities and the village of Blythe Bridge is easily accessible within a reasonable walking distance;
 - Bus stops are located within 450m of the site that offer frequent services to key local towns/cities including Hanley and Stone; and
 - Blythe Bridge railway station is 1.4km from the site and provides services between Crewe and Derby.
- 8.1.3 A review of Personal Injury Collision data revealed that there are no highway safety issues that need to be addressed to make this development acceptable.
- 8.1.4 The development site currently benefits from an extant planning permission. Under planning permission 03/00498/FUL_MJ (originally 03/0629) the application site accommodated the equivalent of 15,000sqm of B1 land use.
- 8.1.5 Access will be gained via a new signal controlled junction on the A521, and a speed limit reduction to 50mph is proposed to facilitate a safe and suitable controlled pedestrian crossing. A 3m shared footway/cycleway will be provided on the northern side of the A521, connecting into existing facilities on Uttoxeter Road.
- 8.1.6 The proposed residential development is predicted to generate 212 fewer trips in the AM peak, and 166 fewer in the PM peak than the permitted scheme for the application site area.
- 8.1.7 Junction capacity modelling has been undertaken on four junctions including the A50 junction with the A521. All of the models indicate that the impact of the development is negligible.

8.2 Conclusion

- 8.2.1 In conclusion, it is considered that the site is a sustainable location for development and that the local highway network can accommodate the proposals.
- 8.2.2 Paragraph 32 of the NPPF states that:



“.... Development should only be prevented or refused on transport grounds where the residual cumulative impacts of the development are severe.”

8.2.3 This report has demonstrated that the impacts of the proposed development are not severe.

Technical Note

Project: Blythe Vale, Blythe Bridge

Subject: Response to SCC Highways Consultation Response

Client:	St Modwen Developments Ltd.	Version:	A
Project No:	2628	Author:	BL
Date:	5 October 2017	Approved:	SB

I Introduction

I.1 Background

- 1.1.1 A full planning application for the development of land at Blythe Vale, Blythe Bridge was submitted to Staffordshire Moorlands District Council (SMDC) in July 2017 (Application Reference: SMD/2017/0512).
- 1.1.2 Staffordshire County Council (SCC) has provided a response to the application (dated 25th September 2017) which set out several highways matters to be resolved. The purpose of this note is to provide a response to the matters raised.

I.2 Document Structure

- 1.2.1 The remainder of this technical note is structured as follows:
- Section 2: Local Centre Trips;
 - Section 3: School Trips;
 - Section 4: Distribution;
 - Section 5: Cheadle Road Junction;
 - Section 6: A521;
 - Section 7: Site Access Junction;
 - Section 8: Internal Layout; and
 - Section 9: Summary.

2 Local Centre Trips

- 2.1.1 The Transport Assessment (TA) sets out a standard TRICS based trip generation. The TRICS surveys do not differentiate between trip purpose and therefore encompass trips made to retail facilities, educational establishments and places of work, amongst others. When applied to the development, it is considered that trips to Blythe Bridge local shops have been accounted for within the calculated trip generation. The methodology undertaken is considered to be robust. To consider trips to the local shops separately would result in a double counting of trips.

3 School Trips

3.1 Pupil Yields

- 3.1.1 The TA assessed the number of vehicular school trips based upon a standard estimated pupil yield of three pupils per year group per 100 houses. This equated to 25 primary school pupils and 18 secondary school/sixth form pupils. SCC has noted that completed developments in the Blythe Bridge area have resulted in a higher pupil yields and have suggested that assessments should be based on an estimated yield of 35 primary school pupils and 14 secondary school/sixth form pupils.
- 3.1.2 The minor difference in pupil yields is not considered to alter the conclusion of the TA. Notwithstanding this, a sensitivity test has been undertaken with the updated pupil yields.
- 3.1.3 SCC note that the Education team have not specified a suggested school split, and therefore it has been agreed that the split used within the TA is acceptable.

3.2 Vehicular Trips

- 3.2.1 Journey to school data used within the TA to identify expected vehicular trips was taken from the National Travel Survey (NTS) 2014: Travel to School Factsheet. This document has been included within **Appendix A**.
- 3.2.2 Since the application, 2016 NTS statistics have been released, including Travel to School data. NTS Table 0613 details trips to and from school per year by main mode, and has been included within **Appendix B**. Table 3-1 summarises the vehicle mode split for both 2014 and 2016.

Table 3-1: NTS Trips to school by Car/Van

Pupil Age	2014	2016	Difference
5-10	46%	41%	-5%
11-16	23%	26%	+3%

3.2.3 Table 3-1 identifies a minor difference in the percentage of pupils travelling to school by car. The 2016 statistics identify fewer primary school pupils and a greater number of secondary school pupils being driven to school than when compared to 2014. This difference is not considered to impact the conclusion of the TA. However, the sensitivity test reflects the most recent 2016 NTS data.

3.3 Sensitivity Test

3.3.1 As a sensitivity test, the updated school trips have been added onto the site distribution. A flow diagram illustrating this has been included within **Appendix C**.

3.3.2 This scenario has then been modelled at the Uttoxeter Road/A521 and Uttoxeter Road/Woodlands Lane junctions, with the results summarised in Tables 3-2 to 3-3. All model outputs have been included within **Appendix E**.

Table 3-2: Uttoxeter Road/A521 – 2022 Base + Committed Development + Development (School Sensitivity)

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.29	0	7	0.19	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 3-3: Woodlands Road/A521 – 2022 Base + Committed Development + Development (School Sensitivity)

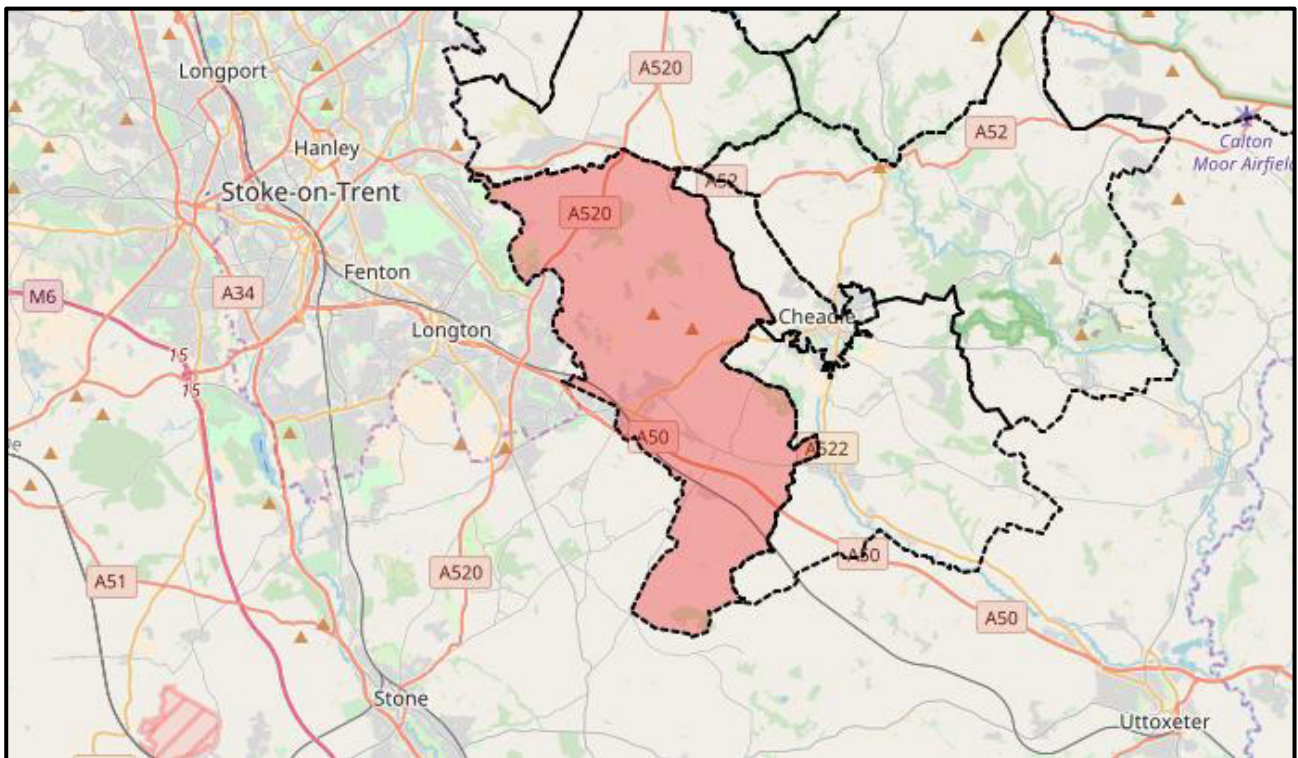
Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	0	6	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.12	0	5	0.08	0	5

3.3.3 The results indicate that the junctions would operate with significant reserve capacity in both the AM and PM peak with the additional school traffic.

4 Distribution

- 4.1.1 The development distribution as outlined in the TA has been developed based upon 2011 Census Journey to Work data for the Staffordshire Moorlands 012 MSOA. Figure 4-1 illustrates the MSOA boundary.

Figure 4-1: Staffordshire Moorlands 012 MSOA



- 4.1.2 Although the MSOA covers a wide area of the Staffordshire Moorlands District, the only residential areas within the MSOA are Caverswell, Forsbrook and Blythe Bridge. Given that Blythe Bridge is the largest of these, the resultant distribution is considered to be representative of the Blythe Bridge area.
- 4.1.3 A further query regarding the Journey to Work census data used with the distribution has been raised by SCC. Table 4-1 provides a summary of the Journey to Work distribution by Local Authority Area. A number of Local Authority Areas, accounting for less than one percent of the distribution each have been excluded from the table.

Table 4-1: Journey to Work Distribution by Local Authority Area

Local Authority Area	%
Stoke-on-Trent	44.2%
Staffordshire Moorlands	20.6%
Stafford	12.7%
Newcastle-under-Lyme	8.6%
East Staffordshire	7.0%
Cheshire East	2.2%

4.1.4 SCC commented on route assignment, with questions specifically relating to the number of vehicles routing through Blythe Bridge village centre (via Uttoxeter Road). Route assignment was undertaken using Journey to Work data and has been manually sense checked as part of the assignment process. The manual sense check confirmed the ArcGIS assignment as being appropriate.

4.1.5 In order to satisfy SCC comments, a sensitivity test has been undertaken which has manually adjusted the assignment in order that 10% more trips route from the development site north through Blythe Bridge village (via Uttoxeter Road). A diagram illustrating the resultant distribution is included within **Appendix D**.

4.1.6 This manually adjusted assignment scenario has been modelled at the Uttoxeter Road/A521 and Uttoxeter Road/Woodlands Lane junctions, with the results summarised in Tables 4-2 to 4-3.

Table 4-2: Uttoxeter Road/A521 – 2022 Base + Committed Development + Development (Sensitivity Distribution)

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Uttoxeter Road (left)	0.27	0	7	0.19	0	6
Uttoxeter Road RT Slip (ahead)	0.07	0	5	0.07	0	5
Uttoxeter Road RT Slip (right)	0.08	0	5	0.07	0	5

Table 4-3: A521/Woodlands Road – 2022 Base + Committed Development + Development (Sensitivity Distribution)

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Woodlands Road (left)	0.00	06	0	0.01	0	6
Uttoxeter Road RT Slip (ahead)	0.01	0	7	0.00	0	6
Uttoxeter Road RT Slip (right)	0.10	0	5	0.08	0	5

4.1.7 The results indicate that the junctions operate with significant reserve capacity in both the AM and PM peaks, despite the adjusted distribution.

5 Cheadle Road Junction

- 5.1.1 SCC has requested that the Cheadle Road/Utttoxeter Road crossroad junction is assessed. Within the TA, routing assignment identifies a low number (up to 22 trips) of development traffic routing through the junction. Given the low level of additional traffic it was not considered to impact the operation of the junction, therefore the junction was not modelled.
- 5.1.2 However, in order to satisfy SCC comments, the junction has been modelled using PICADY software, with the results summarised in Tables 5-2 to 5-7. The aforementioned sensitivity tests have also been modelled for completeness. All model outputs have been included within **Appendix E**.
- 5.1.3 Base flows used within the assessment have been sourced from the approved Tesco Express, Utttoxeter Road application (12/00603/FUL). TEMPRO V7 calibrated with the National Transport Model (NTM AF15) dataset has been used to generate traffic growth factors, from 2012 to 2017, in line with the criteria outlined within the TA. The factored flows are considered to be a reasonable comparison to the manual counts undertaken at the Utttoxeter Road/A521 junction and therefore suitable for assessment. Table 5-1 summarises the flows.

Table 5-1: Utttoxeter Road/A521 2017 MCC flows compared to Utttoxeter Road/Cheadle Road 2017 factored flows

	Utttoxeter Road/A521 MCC Flows		Utttoxeter Road/Cheadle Road Factored Flows	
	AM	PM	AM	PM
Northbound	228	232	264	218
Southbound	174	120	127	225

Table 5-2: Cheadle Road/Utttoxeter Road/Stallington Road Crossroad Junction - 2017 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (left, ahead)	0.11	0	11	0.39	1	27
Cheadle Road (right)	0.64	2	21	0.84	5	51
Utttoxeter Road (W) (left, ahead, right)	0.12	0	5	0.25	1	5
Stallington Road (left, ahead, right)	0.34	1	11	0.37	1	14
Utttoxeter Road (E)	0.14	0	6	0.17	0	8

Table 5-3: Cheadle Road/Utttoxeter Road/Stallington Road Crossroad Junction - 2022 Base

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (left, ahead)	0.12	0	12	0.74	2	103
Cheadle Road (right)	0.68	2	25	0.91	8	81
Utttoxeter Road (W) (left, ahead, right)	0.13	0	5	0.28	1	5
Stallington Road (left, ahead, right)	0.36	1	12	0.39	1	14
Utttoxeter Road (E)	0.15	0	6	0.18	0	8

Table 5-4: Cheadle Road/Utttoxeter Road/Stallington Road Crossroad Junction - 2022 Base + Committed Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (left, ahead)	0.13	0	12	0.84	4	157
Cheadle Road (right)	0.69	2	26	0.91	9	88
Utttoxeter Road (W) (left, ahead, right)	0.13	0	5	0.27	1	5
Stallington Road (left, ahead, right)	0.37	1	12	0.40	1	15
Utttoxeter Road (E)	0.15	0	7	0.19	0	8

Table 5-5: Cheadle Road/Utttoxeter Road/Stallington Road Crossroad Junction – 2022 Base + Committed Development + Development

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (left, ahead)	0.13	0	12	0.86	4	170
Cheadle Road (right)	0.69	2	27	0.92	9	89
Utttoxeter Road (W) (left, ahead, right)	0.13	0	5	0.27	1	5
Stallington Road (left, ahead, right)	0.37	1	12	0.40	1	15
Utttoxeter Road (E)	0.16	0	7	0.19	0	8

Table 5-6: Cheadle Road/Utttoxeter Road/Stallington Road Crossroad Junction – 2022 Base + Committed Development + Development (Distribution Sensitivity)

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (left, ahead)	0.14	0	12	0.87	4	184
Cheadle Road (right)	0.69	2	26	0.92	10	92
Utttoxeter Road (W) (left, ahead, right)	0.13	0	5	0.27	1	5
Stallington Road (left, ahead, right)	0.37	1	12	0.40	1	15
Utttoxeter Road (E)	0.16	0	7	0.19	0	8

Table 5-7: Cheadle Road/Utttoxeter Road/Stallington Road Crossroad Junction – 2022 Base + Committed Development + Development (School Sensitivity)

Arm (turn)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Cheadle Road (left, ahead)	0.16	0	12	0.86	4	170
Cheadle Road (right)	0.70	2	27	0.92	9	92
Utttoxeter Road (W) (left, ahead, right)	0.13	0	5	0.27	1	5
Stallington Road (left, ahead, right)	0.37	1	12	0.40	1	15
Utttoxeter Road (E)	0.18	0	7	0.19	0	8

- 5.1.4 The results indicate that the junction operates with reserve capacity in the AM peak and at capacity in the PM peak for all scenarios. The addition of the proposed development results in a negligible impact, with an additional one vehicle queuing on the Cheadle Road arm. Therefore, it is considered that the impact is not severe, and no further mitigation of the junction is considered necessary.

6 A521

- 6.1.1 As part of the TA the impact of the development on the A50 roundabout was assessed. The ARCADY modelling indicated a low level of queuing on the A521 arm, which was easily accommodated within the 150m stacking space between junctions and would not result in any backing up across the site access junction.
- 6.1.2 As part of the proposed scheme, the speed limit of the A521 will be reduced to 50mph. In order to provide sufficient visibility to the junction and signal heads and enable a safe pedestrian crossing environment, the cutting back of the embankment and proposed 50mph speed limit reduction is required to accommodate the site access junction. The proposed speed limit change had been previously agreed as part of the previously consented scheme.
- 6.1.3 It is considered that the development of the site access junction itself will change the nature of the road, and aid the 50mph speed limit on the A521. If necessary, consideration can be given to provision of further speed enforcement measures, such as Variable Message Signs at S278 stage.

7 Site Access Junction

7.1 Junction Design

- 7.1.1 SCC has made a number of comments regarding the site access junction design. These include:

- A splitter island should be provided between the two A521 ahead lanes and right turn lane. The splitter island should be 2m wide to achieve 450mm clearance to signal heads;
- The pedestrian crossing should be relocated to the east side of the junction;
- Pedestrian guard railing should be considered for the proposed footway alongside the A521;
- A high PSV aggregate surfacing may be more appropriate; and
- The proposed footway narrows to 1.9m at one point of its route. Should further residential phases be proposed this will need to be widened.

7.1.2 The site access junction was designed to reflect an interim scheme proposed as part of the consented scheme. Therefore, the location of the pedestrian crossing is considered to be appropriate. Furthermore, an initial analysis has indicated that the relocation of the pedestrian crossing (to the east) would have a detrimental impact to the overall junction capacity. With a view to a possible Phase 2 development (accessed via the same junction), it is considered important to retain as much reserve capacity as possible at the access.

7.1.3 The junction design has been amended to incorporate SCC comments regarding the splitter island. Drawing 2523-A-0105-P3 illustrating the final site access design has been included within **Appendix F**.

7.1.4 It is considered that drawing 2523-A-0105-P3 is a sufficient access design for planning purposes. It is anticipated that the provision of pedestrian guard railing and surfacing material will be considered at the S278 and detailed design stage.

7.2 Road Safety Audit

7.2.1 A Road Safety Audit (RSA) has not been undertaken on the site access junction. Again, it is considered sufficient for planning purposes, however it is acknowledged that a Stage 1/2 RSA would be beneficial once the access is agreed and prior to commencing the S278 design.

8 Internal Layout

8.1.1 SCC has raised a number of queries on the internal site layout, which are detailed, along with a response below.

8.2 Footways

8.2.1 SCC would like to see the footways adjacent to plots 30/31 and 71-63 be moved to be adjacent to the carriageway.

- 8.2.2 It should be noted that the footway has been placed behind the green verge for a number of reasons, including engineering/levels issues with the spine road, the retention of existing vegetation and to provide a betterment in terms of urban design (as agreed with the planners and urban designers). It should be noted that a maintenance zone is envisaged abutting the carriageway to ensure works can be carried out off-highway.

8.3 Visitor Parking Bays

- 8.3.1 SCC has recommended that visitor parking bays opposite plots 92/93, 94/95, 55 and 58 be relocated to an alternative location closer to points where they will be most needed i.e. in the vicinity of the Shared Ownership and Affordable Rent properties.
- 8.3.2 The location of the visitor parking bays has been carefully considered throughout the masterplan process. An earlier iteration of the scheme included visitor parking in the recommended locations, but difficulties with regards to engineering and levels along the western boundary has led to these being positioned in their current location.

8.4 Carriageway Features

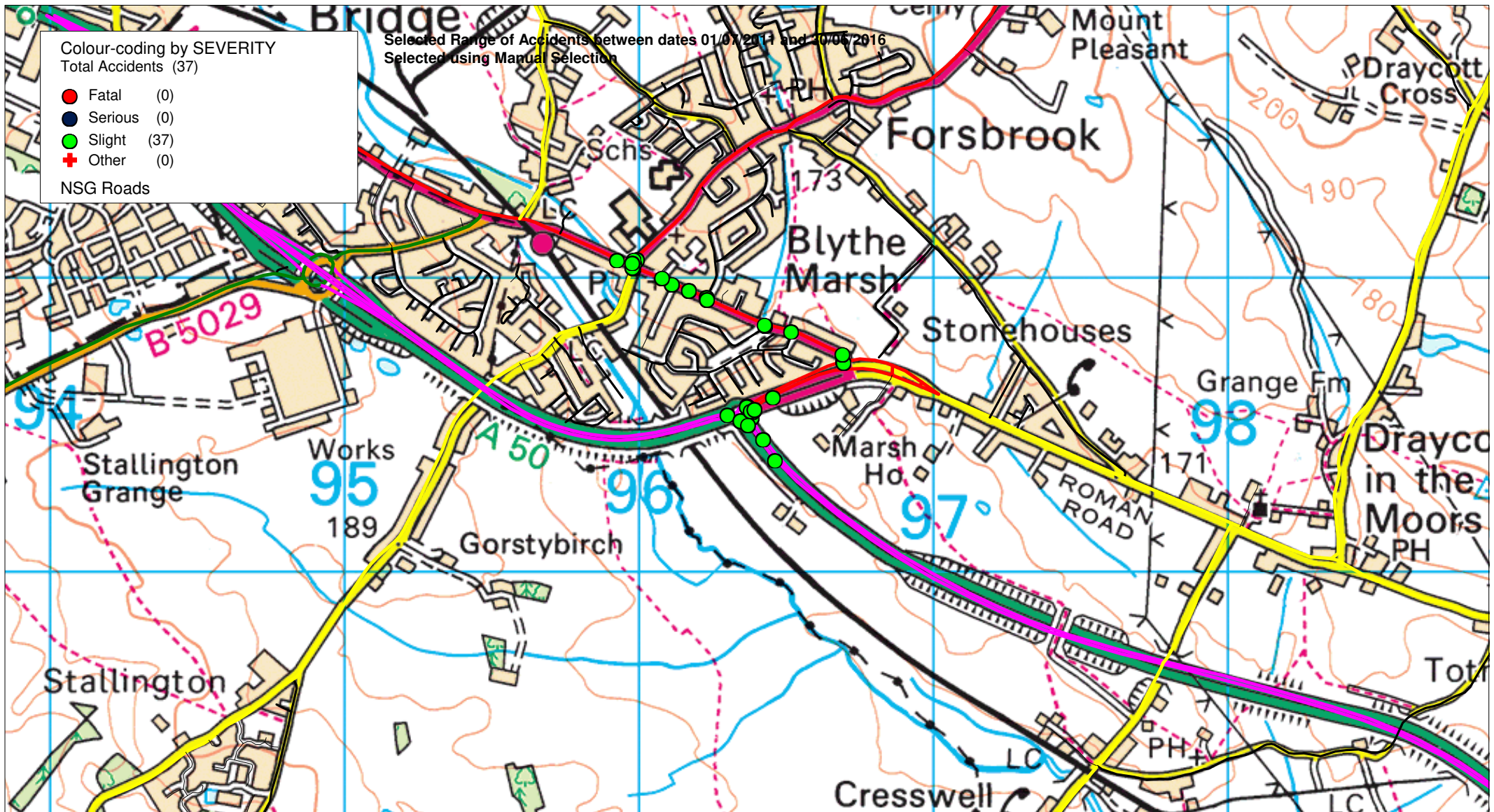
- 8.4.1 SCC would like clarity on the carriageway features outside plots 83 and 48. SCC also recommend the removal of table top junctions and inclusion of ramps to shared surface areas in order to provide a gateway feature into shared surface areas and facilitate pedestrian crossing. SCC note this would also facilitate pedestrian access.
- 8.4.2 The carriageway features indicated on the masterplan adjacent to plots 82 and 48, represent a change of material, i.e. block paving.
- 8.4.3 The masterplan has been updated to include shared surface areas on all table tops, which therefore provide a ramp/transition between the standard carriageways and the shared surface areas. The updated masterplan is contained within **Appendix G**.

9 Summary

- 9.1.1 This technical note responds to comments raised by Staffordshire County Council Highways in relation to the Blythe Vale development. It is considered that all comments have been addressed and that the contents of this note will allow Staffordshire Highways to provide a response of no objection on highway grounds.



Appendix B PIC Collision Data



Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	11003671	Road:	A 521	Grid Reference:	396172	340961
District Council:	Staffordshire Moorland	Time:	1910	Saturday	02-July-2011	
Lighting:	Daylight:street lights present	Weather:	Fine without high winds			Speed limit: 30
Severity:	SLIGHT	Road surface	Dry			
Location:	UTTOXETER RD BLYTHE BRIDGE NR NO.355					

The accident occurred on the A521, a single carriageway.

Special conditions and hazards: None

Vehicle 1	Car, travelling from NW to SE was going ahead other on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 79 lived in ST10.
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Casualty 1 (Vehicle 1) A male pedestrian aged 24 suffered a slight injury9.

Contributory Factors

Casualty 1 Impaired by alcohol

Casualty 1 Dangerous action in carriageway

Casualty 1 Impaired by drugs (illicit or medicinal)

Casualty 1 Careless/Reckless/In a hurry

Acc. Ref. No:	11004999	Road:	A 50	Grid Reference:	396347	340519
District Council:	Staffordshire Moorland	Time:	2055	Saturday	10-September-2011	
Lighting:	Darkness: street lights present and lit	Weather:	Fine without high winds		Speed limit:	70
Severity:	SLIGHT	Road surface	Wet/Damp			
Location:	A50 DRAYCOTT R'BT J/W A521					

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1 Motorcycle over 500cc, travelling from SE to W was turning left on the main carriageway. The vehicle was leaving roundabout and collided with vehicle 2. The male driver aged 41 lived in DH8 .

Vehicle 2 Car, travelling from SE to NE was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road and collided with vehicle 1. The female driver aged 54 lived in ST11.

Casualty 1 (Vehicle 1) A male rider aged 41 suffered a slight injury.

Contributory Factors

Vehicle 1 Failed to look properly

Vehicle 1	Failed to judge other persons path or speed
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Vehicle 2	Failed to signal/Misleading signal
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Acc. Ref. No:	11005386	Road:	A 521	Grid Reference:	395980	341039
District Council:	Staffordshire Moorland	Time:	1722	Tuesday	27-September-2011	
Lighting:	Daylight:street lights present	Weather:	Fine without high winds		Speed limit:	30
Severity:	SLIGHT	Road surface	Dry			
Location:	UTTOXETER ROAD J/W STALLINGTON ROAD BLYTHE BRIDGE					

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the C237 controlled by a stop sign. There was a pelican/puffin/toucan within 50 metres..

Special conditions and hazards: None

Vehicle 1 Car, travelling from SW to NE was stopping on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 35 lived in ST10.

Vehicle 2 Motorcycle over 500cc, travelling from SE to SW was turning left on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 45 lived in ST11.

Casualty 1 (Vehicle 2) A male vehicle or pillion passenger aged 13 suffered a slight injury.

Contributory Factors

Vehicle 1	Failed to judge other persons path or speed
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Vehicle 2	Failed to signal/Misleading signal
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AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	11005904	Road:	A 51	Grid Reference:	396390	340554
District Council:	Staffordshire Moorland	Time:	1118	Friday	21-October-2011	
Lighting:	Daylight: street lighting unknown	Weather:	Fine without high winds			Speed limit: 50
Severity:	SLIGHT	Road surface	Dry			
Location:	A50 ROUNDABOUT J/W UTTOXETER RD BLYTHE BRIDGE					

The accident occurred at a roundabout on the A51, at its junction with the A521 controlled by a give way or uncontrolled.

Special conditions and hazards: Dislodged vehicle load in carriageway

Vehicle 1 Goods 7.5 tonnes mgw and over, travelling from W to S was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 23 lived in CA3 .

Vehicle 2 Car, travelling from NE to SW was going ahead other on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 73 lived in ST5 .

Casualty 1 (Vehicle 2) A female driver aged 73 suffered a slight injury.

Contributory Factors

Vehicle 1	Overloaded or poorly loaded vehicle or trailer
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Acc. Ref. No:	12000214	Road:	A 50	Grid Reference:	396373	340504
District Council:	Staffordshire Moorland	Time:	1730	Day:	Saturday	07-January-2012
Lighting:	Darkness: street lights present and lit	Weather:	Fine with high winds	Speed limit:	50	
Severity:	SLIGHT	Road surface	Dry			
Location:	A50 R/BT APPROX 13MTS SOUTH J/W UTTOXETER RD BLYTHE BRIDGE					

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled.

Special conditions and hazards: Any animal in carriageway (except ridden horse)

Vehicle 1 Motorcycle over 500cc, travelling from SE to SW was turning left on the main carriageway. The vehicle was entering roundabout and skidded. The male driver aged 51 lived in CW2.

Casualty 1 (Vehicle 1) A male rider aged 51 suffered a slight injury.

Contributory Factors

Vehicle 1 Deposit on road (eg oil, mud, chippings)

Acc. Ref. No:	12000692	Road:	A 50	Grid Reference:	396382	340551	
District Council:	Staffordshire Moorland	Time:	2050	Friday	03-February-2012		
Lighting:	Darkness: street lights present and lit	Weather:	Fine without high winds			Speed limit:	60
Severity:	SLIGHT	Road surface	Dry				
Location:	A50 BLYTHE BRIDGE BYPASS J/W UTTOXETER RD R/BT BLYTHE BRIDGE						

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from NE to SW was going ahead other on the main carriageway. The vehicle was entering roundabout. The male driver aged 19 lived in ST5.
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Casualty 1 (Vehicle 1) A male vehicle or pillion passenger aged 19 suffered a slight injury.

Casualty 2	(Vehicle 1)	A male vehicle or pillion passenger aged 26 suffered a slight injury.
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Contributory Factors

Vehicle 1	Loss of control
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Vehicle 1 Impaired by alcohol

Vehicle 1	Aggressive driving
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AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	12002851	Road:	A 521	Grid Reference:	396693	340744	
District Council:	Staffordshire Moorland	Time:	1835	Monday	04-June-2012		
Lighting:	Daylight:street lights present	Weather:	Fine without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Wet/Damp				
Location:	UTTOXETER RD OUTSIDE NO. 459 BLYTHE BRIDGE						

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1 Car, travelling from SW to NW was turning left on the main carriageway. The vehicle was entering main road. The male driver aged 33 lived in ST1.

Casualty 1 (Vehicle 1) A male driver aged 33 suffered a slight injury.

Contributory Factors

Vehicle 1	Other
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2	2
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100	100

Acc. Ref. No:	12003373	Road:	A 521	Grid Reference:	396233	340930	
District Council:	Staffordshire Moorland	Time:	0025	Sunday	01-July-2012		
Lighting:	Darkness: street lights present and lit	Weather:	Fine without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Dry				
Location:	UTTOXETER RD J/W THE AVENUE BLYTHE BRIDGE						

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the Unclassified186 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from NE to NW was turning right on the main carriageway. The vehicle was entering main road and collided with vehicle 2. The male driver aged 59 lived in ST6 .
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Vehicle 2 Motor Cycle over 125 cc and up to 500cc, travelling from SE to NW was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road and collided with vehicle 1. The male driver aged 19 lived in ST10.

Casualty 1 (Vehicle 2) A male rider aged 19 suffered a slight injury.

Contributory Factors

Vehicle 1 Failed to look properly

Acc. Ref. No:	12004900	Road:	A 521	Grid Reference:	395984	341065
District Council:	Staffordshire Moorland	Time:	1540	Friday	14-September-2012	
Lighting:	Daylight:street lights present	Weather:	Fine without high winds			Speed limit: 30
Severity:	SLIGHT	Road surface	Dry			
Location:	CHEADLE RD BLYTHE BRIDGE APPROX 15 MTRS N/E OF J/W UTTOXETER RD					

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the A521 controlled by a give way or uncontrolled. There was a pelican/puffin/toucan within 50 metres..

Special conditions and hazards: None

Vehicle 1 Motor Cycle over 50 cc and up to 125cc, travelling from NW to NE was turning left on the main carriageway. The vehicle was leaving main road. The male driver aged 34 lived in ST11.

Casualty 1 (Vehicle 1) A male rider aged 34 suffered a slight injury.

Contributory Factors

Vehicle 1 Poor turn or manoeuvre

Vehicle 1 Careless/Reckless/In a hurry

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	12005733	Road:	A 521	Grid Reference:	396395	340557
District Council:	Staffordshire Moorland	Time:	1505	Friday	26-October-2012	
Lighting:	Daylight:street lights present	Weather:	Fine without high winds			Speed limit: 30
Severity:	SLIGHT	Road surface	Dry			
Location:	A521 BLYTHE BRIDGE APPROX 5 MTRAS N/E OF J/W A50 R'BOUT					

The accident occurred at a roundabout on the A521, at its junction with the A50 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Goods 7.5 tonnes mgw and over, travelling from NE to SW was overtaking a static vehicle on the offside on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach and collided with vehicle 2.
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Vehicle 2 Car, travelling from NE to SW was going ahead but held up on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach and collided with vehicle 1. The female driver aged 29 lived in ST3.

Vehicle 3 Goods over 3.5 tonnes and under 7.5 tonnes mgw, travelling from S to E was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver of an unknown age.

Casualty 1 (Vehicle 2) A female driver aged 29 suffered a slight injury.

Contributory Factors

Vehicle 1 Poor turn or manoeuvre

Vehicle 1 Failed to judge other persons path or speed

Vehicle 1 Swerved

Vehicle 1 Careless/Reckless/In a hurry

Acc. Ref. No:	12006084	Road:	A 521	Grid Reference:	395979	341055	
District Council:	Staffordshire Moorland	Time:	0635	Monday	12-November-2012		
Lighting:	Daylight:street lights present	Weather:	Fine without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Wet/Damp				
Location:	CHEADLE RD APPROX 4MTS NORTH J/W UTTOXETER RD BLYTHE BRIDGE						

The accident occurred at a crossroads on the A521, a single carriageway at its junction with the A521 controlled by a give way or uncontrolled.

There was a pelican/puffin/toucan within 50 metres..

Special conditions and hazards: None

Vehicle 1	Car, travelling from SE to NE was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road and collided with vehicle 2. The male driver aged 52 lived in ST11.
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Vehicle 2 Pedal Cycle, travelling from E to W was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road and collided with vehicle 1. The female driver aged 14 lived in ST11.

Vehicle 3 Bus or coach, travelling from NW to NE was waiting to turn left on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 66 lived in ST3.

Casualty 1 (Vehicle 2) A female rider aged 14 suffered a slight injury.

Contributory Factors

Vehicle 1 Failed to look properly

Vehicle 1	Failed to judge other persons path or speed
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Vehicle 2 Cyclist entering road from pavement

Vehicle 3	Failed to signal/Misleading signal
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AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	13002946	Road:	A 50	Grid Reference:	396464	340384	
District Council:	Staffordshire Moorland	Time:	1645	Thursday	06-June-2013		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	70
Severity:	SLIGHT	Road surface	Dry				
Location:	A50 W/B BLYTHE BRIDGE APPROX 160MTS SE R'BT J/W UTTOXETER RD						

The accident occurred on the A50, a dual carriageway.

Special conditions and hazards: None

Vehicle 1 Car, travelling from SE to N was going ahead on a right bend on the main carriageway. The vehicle was not at, or within 20M of a junction. The female driver aged 30 lived in CW11.

Vehicle 2 Car, was stopping on the main carriageway. The vehicle was not at, or within 20M of a junction. The female driver aged 40 lived in ST14.

Vehicle 3 Car, travelling from SE to N was stopping on the main carriageway. The vehicle was not at, or within 20M of a junction. The female driver aged 43 lived in L31.

Casualty 1 (Vehicle 1) A female driver aged 30 suffered a slight injury.

Casualty 2 (Vehicle 2) A female driver aged 40 suffered a slight injury.

Contributory Factors

Vehicle 1	Failed to judge other persons path or speed
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Vehicle 2	Failed to judge other persons path or speed
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Acc. Ref. No:	13003243	Road:	A 521	Grid Reference:	396114	340982
District Council:	Staffordshire Moorland	Time:	0850	Tuesday	18-June-2013	
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit: 30
Severity:	SLIGHT	Road surface	Dry			
Location:	A521 UTTOXETER ROAD JUNC GREEN LANE BLYTHE BRIDGE					

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the Unclassified0 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1 Bus or coach, travelling from SE to NW was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road. The untraced driver of an unknown age .

Casualty 1 (Vehicle 1) A female pedestrian aged 38 suffered a slight injury⁸.

Contributory Factors

Vehicle 1	Road layout (eg bend, hill etc.)
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100	100

Acc. Ref. No:	13003540	Road:	A 521	Grid Reference:	396696	340719
District Council:	Staffordshire Moorland	Time:	1040	Sunday	07-July-2013	
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit: 70
Severity:	SLIGHT	Road surface	Dry			
Location:	UTTOXETER RD BLYTHE BRIDGE J/W UTTOXETER RD					

The accident occurred at a T or staggered junction on the A521, a dual carriageway at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from E to NW was turning right on the main carriageway. The vehicle was leaving main road. The female driver aged 70 lived in NN10.
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Vehicle 2 Car, travelling from SW to E was going ahead on a right bend on the main carriageway. The vehicle was mid junction - on roundabout or main road. The female driver aged 32 lived in ST4 .

Casualty 1 (Vehicle 1) A female driver aged 70 suffered a slight injury.

Casualty 1	(Vehicle 1)	A female driver aged 75 suffered a slight injury.
Casualty 2	(Vehicle 2)	A female driver aged 32 suffered a slight injury.

Contributory Factors

Vehicle 1	Road layout (eg bend, hill etc.)

Vehicle 1	Failed to look properly
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Vehicle 1 Failed to load

Vehicle 1 Vegetation

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	13004101	Road:	D 186	Grid Reference:	396232	340938
District Council:	Staffordshire Moorland	Time:	1135	Sunday	04-August-2013	
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit: 30
Severity:	SLIGHT	Road surface	Wet/Damp			
Location:	THE AVENUE BLYTHE BRIDGE J/W UTTOXETER RD					

The accident occurred at a T or staggered junction on the D186, a single carriageway at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from NE to SW was going ahead other on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 17.
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Vehicle 2 Car, travelling from SE to NE was waiting to turn right on the main carriageway. The vehicle was leaving main road. The male driver aged 21 lived in ST1 .

Casualty 1 (Vehicle 2) A female vehicle or pillion passenger aged 18 suffered a slight injury.

Contributory Factors

Vehicle 2 Junction overshoot

Vehicle 2	Loss of control
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Acc. Ref. No:	13005067	Road:	A 50	Grid Reference:	396303	340539	
District Council:	Staffordshire Moorland	Time:	1650	Thursday	26-September-2013		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	50
Severity:	SLIGHT	Road surface	Dry				
Location:	A50 E/B ON APPROACH TO BLYTHE BRIDGE R'BOUT ADJOINING A521						

The accident occurred on the A50, a dual carriageway.

Special conditions and hazards: None

Vehicle 1	Car, travelling from SW to NE was stopping on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 32 lived in ST4 .
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Vehicle 2 Car, travelling from SW to NE was going ahead other on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 38 lived in ST11.

Casualty 1 (Vehicle 1) A male driver aged 32 suffered a slight injury.

Casualty 2 (Vehicle 2) A male driver aged 38 suffered a slight injury.

Contributory Factors

Vehicle 1	Other
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
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10	10
11	11
12	12
13	13
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Acc. Ref. No:	13005216	Road:	A 521	Grid Reference:	396080	341003	
District Council:	Staffordshire Moorland	Time:	0845	Friday	04-October-2013		
Lighting:	Daylight	Weather:	Raining without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Wet/Damp				
Location:	UTTOXETER RD BLYTHE BRIDGE J/W ENT CO-OP						

The accident occurred at a private drive on the A521, a single carriageway controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from NW to NE was turning left on the main carriageway. The vehicle was leaving main road. The female driver aged 21 lived in ST11.
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Casualty 1 (Vehicle 1) A female pedestrian aged 72 suffered a slight injury9.

Contributory Factors

Vehicle 1 Failed to look properly

Vehicle 1 Nervous/Uncertain/Panic

Vehicle 1 Inexperienced or learner driver/rider

AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	13005959	Road:	A 521	Grid Reference:	395984	341037	
District Council:	Staffordshire Moorland	Time:	1350	Thursday	07-November-2013		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Dry				
Location:	UTTOXETER RD BLYTHE BRIDGE J/W CHEADLE RD						

The accident occurred at a crossroads on the A521, a single carriageway at its junction with the A521 controlled by a give way or uncontrolled. There was a pelican/puffin/toucan within 50 metres..

Special conditions and hazards: None

Vehicle 1	Car, travelling from NE to SW was going ahead other on the main carriageway. The vehicle was entering main road. The female driver aged 27 lived in CW12.
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Vehicle 2 Pedal Cycle, travelling from SE to NW was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 61 lived in ST3 .

Vehicle 3 Car, travelling from SE to SW was turning left on the main carriageway. The vehicle was leaving main road. The untraced driver of an unknown age .

Casualty 1 (Vehicle 2) A male rider aged 61 suffered a slight injury.

Contributory Factors

Vehicle 3	Failed to signal/Misleading signal
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Vehicle 1	Failed to look properly
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Acc. Ref. No:	13005975	Road:	A 50	Grid Reference:	396357	340515	
District Council:	Staffordshire Moorland	Time:	1455	Sunday	10-November-2013		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	70
Severity:	SLIGHT	Road surface	Dry				
Location:	A50 BLYTHE BRIDGE R'BT J/W A521						

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from SE to NW was going ahead other on the main carriageway. The vehicle was entering roundabout and skidded. The male driver aged 25 lived in NG7 .
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Vehicle 2 Car, travelling from SW to NE was going ahead but held up on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 59 lived in ST10.

Casualty 1 (Vehicle 1) A male driver aged 25 suffered a slight injury.

Casualty 2	(Vehicle 2)	A male driver aged 59 suffered a slight injury.
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Contributory Factors

Vehicle 1 Junction overshoot

Vehicle 1	Exceeding speed limit
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Vehicle 1 Travelling too fast for conditions

Vehicle 1 Sudden braking

Vehicle 1	Loss of control
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Vehicle 1 Careless/Reckless/In a hurry

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	14001228	Road:	A 50	Grid Reference:	396369	340569	
District Council:	Staffordshire Moorland	Time:	1130	Thursday	13-February-2014		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Dry				
Location:	BLYTHE BRIDGE R'BT J/W A521						

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from SW to NE was going ahead other on the main carriageway. The vehicle was leaving roundabout. The untraced driver of an unknown age .
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Vehicle 2 Car, travelling from SW to SE was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road. The female driver aged 21 lived in ST2 .

Casualty 1 (Vehicle 2) A female driver aged 21 suffered a slight injury.

Contributory Factors

Vehicle 1	Failed to signal/Misleading signal
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Vehicle 1	Failed to look properly
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Vehicle 1 Careless/Reckless/In a hurry

Acc. Ref. No:	14001376	Road:	A 521	Grid Reference:	396457	340598	
District Council:	Staffordshire Moorland	Time:	1705	Thursday	20-February-2014		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	60
Severity:	SLIGHT	Road surface	Dry				
Location:	UTTOXETER RD BLYTHE BR APPROX 76MTS NE R/BT J/W A50						

The accident occurred on the A521, a dual carriageway.

Special conditions and hazards: None

Vehicle 1	Car, travelling from NE to SW was going ahead other on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 78 lived in ST3 .
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Vehicle 2 Car, travelling from NE to SW was stopping on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 51 lived in ST11.

Vehicle 3 Car, travelling from NE to SW was starting on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 23 lived in ST3 .

Casualty 1 (Vehicle 2) A male driver aged 51 suffered a slight injury.

Contributory Factors

Vehicle 1 Careless/Reckless/In a hurry

Vehicle 1 Dazzling sun

AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	14001300	Road:	A 521	Grid Reference:	396698	340716	
District Council:	Staffordshire Moorland	Time:	1725	Tuesday	25-February-2014		
Lighting:	Daylight	Weather:	Raining without high winds			Speed limit:	70
Severity:	SLIGHT	Road surface	Wet/Damp				
Location:	A521 UTTOXETER ROAD BLYTHE BRIDGE						

The accident occurred at a T or staggered junction on the A521, a dual carriageway at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from E to NW was turning right on the main carriageway. The vehicle was leaving main road. The male driver aged 32 lived in BN72.
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Vehicle 2	Car, travelling from SW to E was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 45 lived in ST11.
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Vehicle 3 Car, travelling from NW to E was waiting to turn left on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 46 lived in ST11.

Casualty 1 (Vehicle 2) A male driver aged 45 suffered a slight injury.

Contributory Factors

Vehicle 1 Failed to look properly

Vehicle 1	Failed to judge other persons path or speed
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Acc. Ref. No:	14001429	Road:	A 50	Grid Reference:	396393	340555	
District Council:	Staffordshire Moorland	Time:	1540	Wednesday	05-March-2014		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	70
Severity:	SLIGHT	Road surface	Dry				
Location:	BLYTHE BRIDGE R'BT J/W A521						

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1 Goods 7.5 tonnes mgw and over, travelling from SW to SE was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road and overturned. The male driver aged 46 lived in NN8 .

Vehicle 2 Car, travelling from NE to SW was going ahead but held up on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 41 lived in ST10.

Casualty 1 (Vehicle 2) A female vehicle or pillion passenger aged 14 suffered a slight injury.

Casualty 2	(Vehicle 2)	A female driver aged 41 suffered a slight injury.
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Casualty 3 (Vehicle 1) A male driver aged 46 suffered a slight injury.

Contributory Factors

Vehicle 1 Careless/Reckless/In a hurry

Vehicle 1 Poor turn or manoeuvre

AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	14001968	Road:	A 521	Grid Reference:	396431	340841
District Council:	Staffordshire Moorland	Time:	1910	Saturday	05-April-2014	
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit: 30
Severity:	SLIGHT	Road surface	Wet/Damp			
Location:	UTTOXETER RD BLYTHE BRIDGE J/W ELMWOOD DRIVE					

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the Unclassified226 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from NW to SW was turning right on the main carriageway. The vehicle was leaving main road. The female driver aged 52 lived in ST11.
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Vehicle 2 Motor Cycle over 50 cc and up to 125cc, travelling from SE to NW was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 17 lived in ST11.

Casualty 1 (Vehicle 2) A male rider aged 17 suffered a slight injury.

Contributory Factors

Vehicle 1 Failed to look properly

Vehicle 1 Careless/Reckless/In a hurry

Acc. Ref. No:	14002049	Road:	A 521	Grid Reference:	395995	341066	
District Council:	Staffordshire Moorland	Time:	1520	Thursday	10-April-2014		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Dry				
Location:	CHEADLE RD BLYTHE BRIDGE APPROX 20MTS NE J/W UTTOXETER RD						

The accident occurred at a crossroads on the A521, a single carriageway at its junction with the A521 controlled by a give way or uncontrolled. There was a pedestrian phase at the traffic signal junction.

Special conditions and hazards: None

Vehicle 1	Car, travelling from NE to SW was going ahead other on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 65 lived in ST11.
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Vehicle 2 Car, travelling from NE to SW was stopping on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 43 lived in ST4.

Vehicle 3 Car, travelling from NE to SW was stopping on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 43 lived in ST10.

Vehicle 4 Taxi/Private hire car, travelling from NE to SW was stopping on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 32 lived in ST3 .

Vehicle 5 Car, travelling from NE to SW was stopping on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 45 lived in ST3 .

Casualty 1 (Vehicle 3) A female vehicle or pillion passenger aged 98 suffered a slight injury.

Contributory Factors

Vehicle 1	Loss of control
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AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	14002617	Road:	A 521	Grid Reference:	396519	340821	
District Council:	Staffordshire Moorland	Time:	1615	Monday	12-May-2014		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Dry				
Location:	UTTOXETER RD BLYTHE BRIDGE OPP J/W ELMWOOD DR						

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the Unclassified226 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Van or Goods 3.5 tonnes mgw and under, travelling from NW to SE was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 46 lived in ST4 .
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Vehicle 2 Car, travelling from NW to SE was going ahead but held up on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 59 lived in ST6 .

Vehicle 3 Car, travelling from NW to SE was going ahead but held up on the main carriageway. The vehicle was mid junction - on roundabout or main road. The female driver aged 61 lived in ST9 .

Casualty 1 (Vehicle 3) A female vehicle or pillion passenger aged 84 suffered a slight injury.

Casualty 2	(Vehicle 2)	A male driver aged 59 suffered a slight injury.
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Contributory Factors

Vehicle 1 Failed to look properly

Vehicle 1 Careless/Reckless/In a hurry

Acc. Ref. No:	14004042	Road:	A 50	Grid Reference:	396391	340550	
District Council:	Staffordshire Moorland	Time:	0840	Monday	28-July-2014		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	70
Severity:	SLIGHT	Road surface	Dry				
Location:	BLYTHE BRIDGE RB JW UTTOXETER ROAD						

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled.

Special conditions and hazards: None

Vehicle 1	Car, travelling from NE to SW was going ahead other on the main carriageway. The vehicle was entering roundabout. The female driver aged 66 lived in ST11.
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Vehicle 2 Car, travelling from SW to SE was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road. The female driver aged 45 lived in CW1 .

Casualty 1 (Vehicle 2) A female driver aged 45 suffered a slight injury.

Contributory Factors

Vehicle 1 Failed to judge other persons path or speed

Vehicle 1	Failed to look properly
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Acc. Ref. No:	14004852	Road:	A 50	Grid Reference:	396372	340566	
District Council:	Staffordshire Moorland	Time:	0930	Sunday	14-September-2014		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	40
Severity:	SLIGHT	Road surface	Dry				
Location:	DRAYCOTT ISLAND J/W UTTOXTER RD						

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from SW to NE was going ahead other on the main carriageway. The vehicle was leaving roundabout. The male driver aged 49 lived in ST15.
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Vehicle 2 Goods 7.5 tonnes mgw and over, travelling from SW to SE was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 51 lived in LE67.

Casualty 1 (Vehicle 1) A female vehicle or pillion passenger aged 51 suffered a slight injury.

Contributory Factors

Vehicle 1 Failed to judge other persons path or speed

Vehicle 1 Poor turn or manoeuvre

Vehicle 1	Failed to turn left/misleading
Vehicle 2	Failed to signal/Misleading signal

AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	14005144	Road:	A 521	Grid Reference:	395986	341053
District Council:	Staffordshire Moorland	Time:	1955	Friday	26-September-2014	
Lighting:	Darkness: street lights present and lit	Weather:	Fine without high winds		Speed limit:	30
Severity:	SLIGHT	Road surface	Dry			
Location:	CHEADLE RD APPROX 5MTS NE JW UTTOXETER RD					

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the A521 controlled by a stop sign..

Special conditions and hazards: None

Vehicle 1 Car, travelling from NE to SW was going ahead other on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver of an unknown age .

Vehicle 2 Car, travelling from NE to NW was waiting to turn right on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 26 lived in ST1 .

Casualty 1	(Vehicle 2)	A male driver aged 26 suffered a slight injury.
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Contributory Factors

Vehicle 1 Following too close

Vehicle 1	Travelling too fast for conditions
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Vehicle 1	Failed to judge other persons path or speed
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Vehicle 1 Impaired by alcohol

Vehicle 1 Careless/Reckless/In a hurry

Acc. Ref. No:	14005179	Road:	A 521	Grid Reference:	395927	341064	
District Council:	Staffordshire Moorland	Time:	1510	Friday	26-September-2014		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	30
Severity:	SLIGHT	Road surface	Dry				
Location:	UTTOXETER RD BLYTHE BRIDGE OS ENTRANCE TO LIBRARY						

The accident occurred on the A521, a single carriageway. There was a pelican/puffin/toucan within 50 metres.

Special conditions and hazards: None

Vehicle 1	Car, travelling from SE to NW was going ahead other on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 38 lived in ST10.
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Casualty 1	(Vehicle 1)	A female pedestrian aged 11 suffered a slight injury crossing from driver's offside masked6.
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Contributory Factors

Casualty 1 Crossed road masked by stationary veh

Casualty 1 Failed to look properly

Acc. Ref. No:	15001789	Road:	A 50	Grid Reference:	396386	340530
District Council:	Staffordshire Moorland	Time:	0050	Tuesday	07-April-2015	
Lighting:	Darkness: street lights present and lit	Weather:	Fine without high winds	Speed limit:	60	
Severity:	SLIGHT	Road surface	Dry			
Location:	A50 BLYTHE BRIDGE RB					

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from W to S was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 24 lived in LE4 .
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Vehicle 2 Goods 7.5 tonnes mgw and over, travelling from W to S was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 39 lived in B71 .

Casualty 1 (Vehicle 1) A female vehicle or pillion passenger aged 56 suffered a slight injury.

Casualty 2	(Vehicle 1)	A female vehicle or pillion passenger aged 16 suffered a slight injury.
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Contributory Factors

Vehicle 1 Failed to look properly

Vehicle 1 Failed to judge other persons path or speed

AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	1524199	Road:	A 50	Grid Reference:	396388	340548	
District Council:	Staffordshire Moorland	Time:	1310	Friday	08-May-2015		
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit:	60
Severity:	SLIGHT	Road surface	Wet/Damp				
Location:	DRAYCOTT ISLAND JW UTTOXETER RD						

The accident occurred at a roundabout on the A50, at its junction with the A521 controlled by a give way or uncontrolled.

Special conditions and hazards: None

Vehicle 1	Goods 7.5 tonnes mgw and over, travelling from SW to SE was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road and overturned. The male driver aged 50.
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Casualty 1 (Vehicle 1) A male driver aged 50 suffered a slight injury.

Contributory Factors

Vehicle 1	Road layout (eg bend, hill etc.)
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Vehicle 1 Careless/Reckless/In a hurry

Acc. Ref. No:	1528641	Road:	A 50	Grid Reference:	396369	340508
District Council:	Staffordshire Moorland	Time:	0730	Wednesday	02-September-2015	
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit: 70
Severity:	SLIGHT	Road surface	Dry			
Location:	A50 APPROX 5MTS SE R'B'T J/W A521					

The accident occurred at a roundabout on the A50, a dual carriageway at its junction with the A50 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Car, travelling from SE to NW was going ahead but held up on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 48.
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Vehicle 2 Car, travelling from SE to NW was going ahead other on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 46.

Casualty 1 (Vehicle 1) A female driver aged 48 suffered a slight injury.

Contributory Factors

Vehicle 2 Failed to look properly

Vehicle 2	Following too close
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Vehicle 1 Sudden braking

Acc. Ref. No:	1530901	Road:	A 521	Grid Reference:	396429	340844
District Council:	Staffordshire Moorland	Time:	0725	Tuesday	20-October-2015	
Lighting:	Daylight	Weather:	Fine without high winds			Speed limit: 30
Severity:	SLIGHT	Road surface	Dry			
Location:	UTTOXETER ROAD BLYTHE BRIDGE J/W ELMWOOD DRIVE					

The accident occurred at a T or staggered junction on the A521, a single carriageway at its junction with the Unclassified226 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1 Van or Goods 3.5 tonnes mgw and under, travelling from NW to SE was going ahead other on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 21 lived in ST11.

Vehicle 2 Car, travelling from NW to SW was waiting to turn right on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 31 lived in ST11.

Casualty 1 (Vehicle 2) A female driver aged 31 suffered a slight injury.

Contributory Factors

Vehicle 1 Failed to look properly

Vehicle 1	Failed to judge other persons path or speed
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AccsMap - Accident Analysis System

Accidents between dates **01/07/2011 and 30/06/2016** (60) months

Selection: _____ **Notes:** _____

Selected using Manual Selection

Acc. Ref. No:	1534908	Road:	A 50	Grid Reference:	396368	340567
District Council:	Staffordshire Moorland	Time:	1720	Friday	04-December-2015	
Lighting:	Darkness: street lights present and lit	Weather:	Fine without high winds		Speed limit:	70
Severity:	SLIGHT	Road surface	Dry			
Location:	BLYTHE BRIDGE R'BT J/W UTTOXETER RD					

The accident occurred at a roundabout on the A50, a dual carriageway at its junction with the A521 controlled by a give way or uncontrolled..

Special conditions and hazards: None

Vehicle 1	Goods vehicle - unknown weight, travelling from SW to SE was turning right on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 35 lived in OX26.
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Vehicle 2 Car, travelling from SW to NE was going ahead other on the main carriageway. The vehicle was mid junction - on roundabout or main road. The male driver aged 46 lived in SK7.

Casualty 1 (Vehicle 2) A female vehicle or pillion passenger aged 12 suffered a slight injury.

Casualty 1	(Vehicle 1)	A female vehicle or pillion passenger aged 12 suffered a slight injury.
Casualty 2	(Vehicle 2)	A male vehicle or pillion passenger aged 10 suffered a slight injury.

Contributory Factors

Vehicle 1 Poor turn or manoeuvre

Vehicle 2 Poor turn or manoeuvre

Acc. Ref. No:	1535666	Road:	A 50	Grid Reference:	396369	340509	
District Council:	Staffordshire Moorland	Time:	1620	Saturday	12-December-2015		
Lighting:	Darkness: street lights present and lit	Weather:	Raining without high winds			Speed limit:	70
Severity:	SLIGHT	Road surface	Wet/Damp				
Location:	A50 WB BLYTHE BRIDGE R/BT J/W A521						

The accident occurred at a roundabout on the A50, a dual carriageway at its junction with the A50 controlled by a give way or uncontrolled...

Special conditions and hazards: None

Vehicle 1 Van or Goods 3.5 tonnes mgw and under, travelling from SE to N was going ahead other on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The male driver aged 76 lived in DE24.

Vehicle 2 Car, travelling from SE to SW was waiting to turn left on the main carriageway. The vehicle was approaching junction or waiting/parked at junction approach. The female driver aged 49 lived in NG19.

Casualty 1 (Vehicle 2) A female driver aged 49 suffered a slight injury.

Acc. Ref. No:	1656691	Road:	A 50	Grid Reference:	396424	340455	
District Council:	Staffordshire Moorland	Time:	0112	Wednesday	06-April-2016		
Lighting:	Darkness: no street lighting	Weather:	Fine without high winds			Speed limit:	70
Severity:	SLIGHT	Road surface	Dry				
Location:	A50 EB BLYTHE BRIDGE						

The accident occurred on the A50, a dual carriageway.

Special conditions and hazards: None

Vehicle 1	Car, travelling from NW to SE was going ahead other on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 55 lived in PR1.
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Vehicle 2 Goods 7.5 tonnes mgw and over, travelling from NW to SE was going ahead other on the main carriageway. The vehicle was not at, or within 20M of a junction. The male driver aged 63 lived in ST10.

Casualty 1 (Vehicle 1) A male driver aged 55 suffered a slight injury.

Contributory Factors

Vehicle 1 Tyres illegal, defective or under inflated



Appendix C Site Layout