

**Persimmon Homes West Midlands**  
**Brookhouse Lane, Featherstone**  
**Highway Access and Sustainable Transport Note**

April 2020

Project Code: 04832

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## Version Control and Approval

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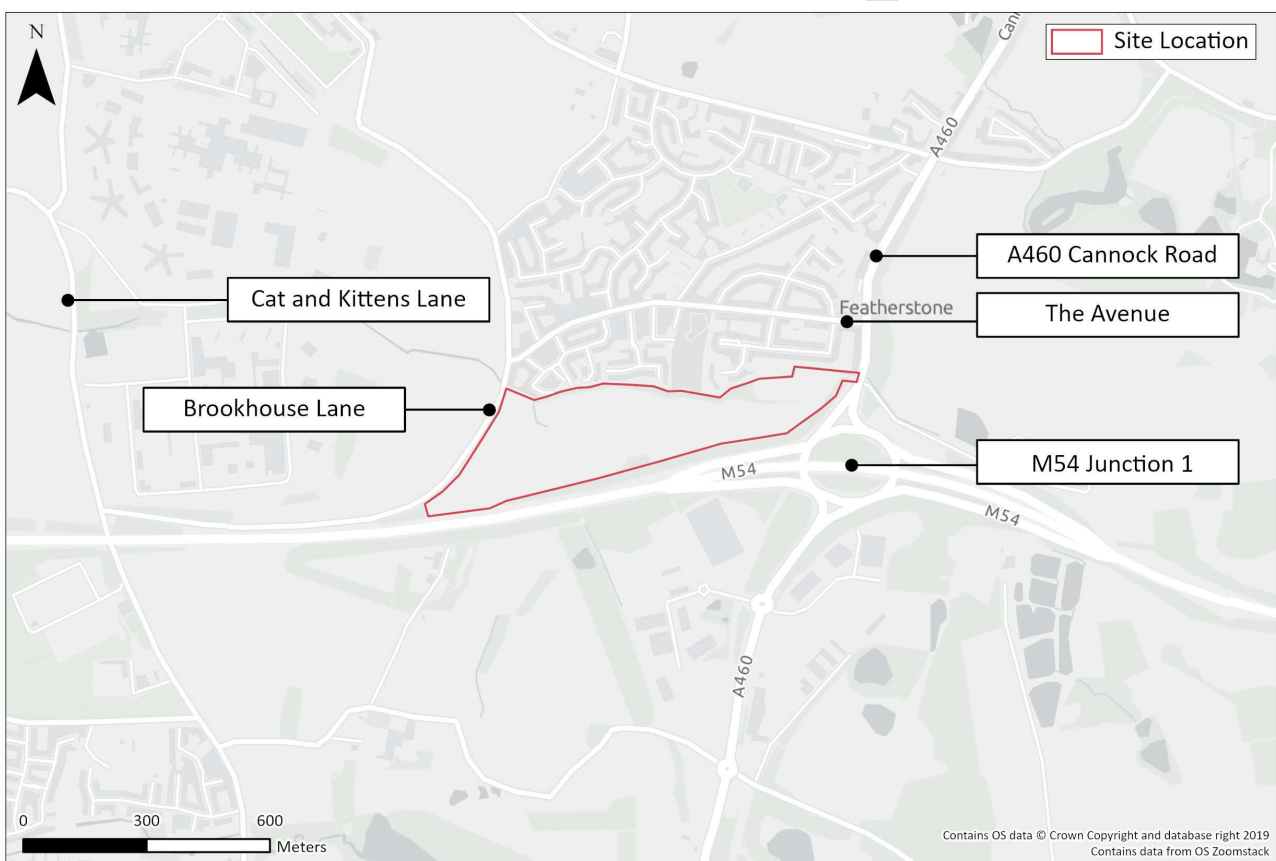
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# I Introduction

## I.1 Overview

1.1.1 PJA have been commissioned by Persimmon Homes West Midlands to provide transport services in relation to promotion of a site on Brookhouse Lane, Featherstone to the review of the South Staffordshire Local Plan. The site can accommodate 150 dwellings and is shown in Figure 1-1.

**Figure 1-1: Site Location**



## I.2 Report Purpose

1.2.1 This desktop appraisal considers the key transport issues and opportunities. Based on this analysis, a comprehensive transport strategy is presented which demonstrates that:

- Vehicular access to the site is deliverable from Brookhouse Lane;
- Pedestrian and cycle connections can be provided to enable access to the site by sustainable modes and provide access to existing local facilities in Featherstone;
- The site is accessible to regular public transport services;



- The site is well located for travel to the key commuting destinations of Wolverhampton and Cannock and also to Junction 1 of the M54; and
- A planned improvement scheme to provide a link road between the M54 and M6 will release capacity to accommodate new development.

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## 2 Baseline Conditions

### 2.1 Local Facilities

2.1.1 Figure 2-1 shows the location of the nearest local facilities in terms of retail, education, open space, and health.

**Figure 2-1: Local Facilities (education, health, and retail)**



2.1.2 There are a number of local facilities in the locality of the proposed development. Using a point on Brookhouse Lane at the north-western extent of the site boundary and on A460 to the north-eastern extent of the site boundary as a starting point, Table 2-1 summarises the walking and cycling distances to these facilities (stating the shortest distance). It should be noted that this does not account for the distance walked within the site to reach the access point.

**Table 2-1: Access to Local Facilities**

| Type       | Name                                       | Distance from site access point            | Approximate walking journey time (minutes) | Approximate cycling journey time <sup>1</sup> (minutes) |
|------------|--|--|--|---|
| Healthcare | Featherstone Family Health Centre          | 750m (A460 Cannock Road)                   | 9 minutes                                  | 4 minutes   |
| Retail     | Featherstone Post Office/Convenience Store | 150m (A460 Cannock Road)                   | 2 minutes                                  | 1 minute  |
|            | Costcutter                                 | 300m (A460 Cannock Road)                   | 4 minutes                                  | 1 minute  |
|            | Londis                                     | 350m (A460 Cannock Road)                   | 4 minutes                                  | 1 minute  |
| Education  | Featherstone Academy                       | 550m (Brookhouse Lane / A460 Cannock Road) | 7 minutes                                  | 2 minutes   |

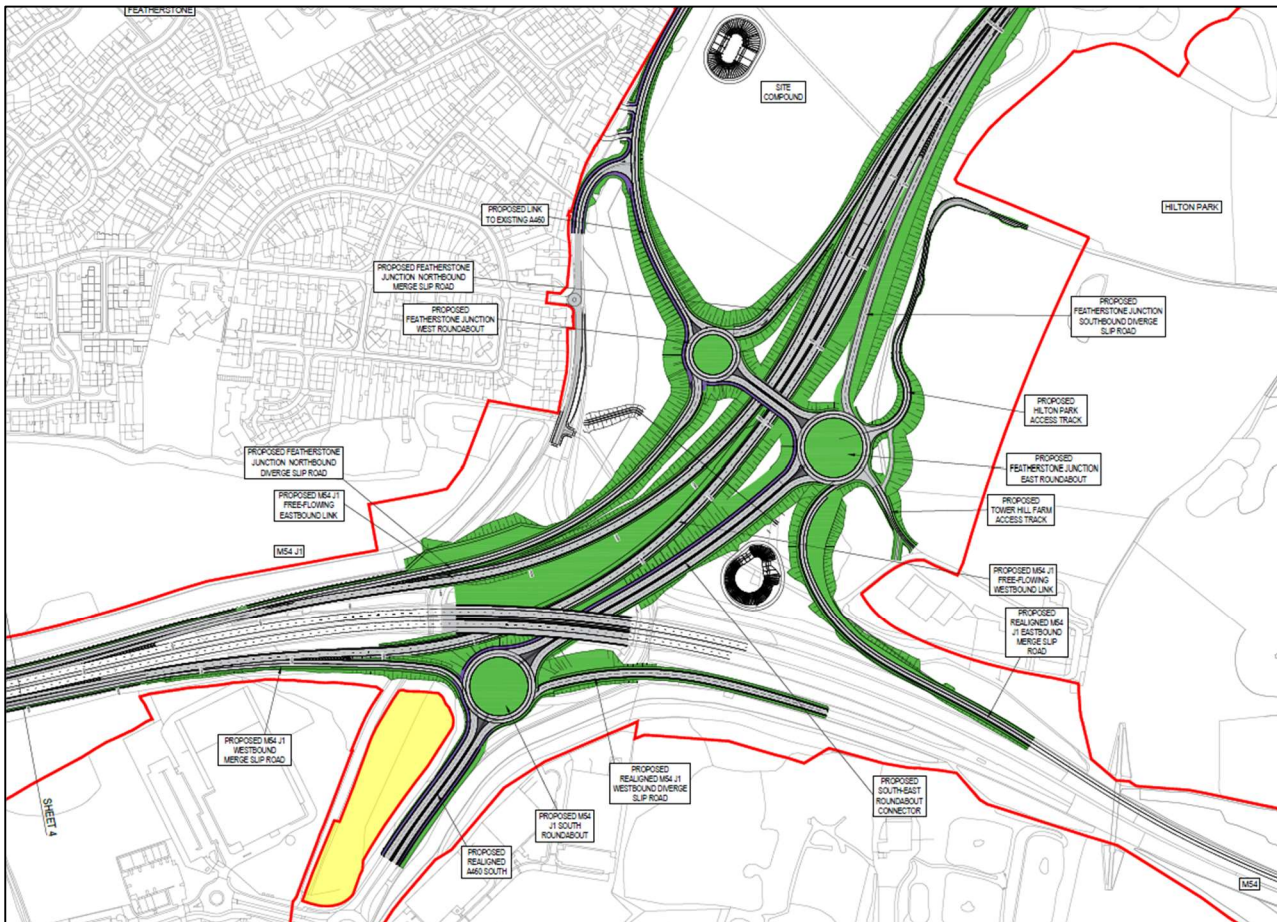
## 2.2 Local Highway Network

- 2.2.1 The site, presented in Figure 1-1 is bounded by Brookhouse Lane to the west, A460 to the east, M54 to the south, and existing residential properties to the north.
- 2.2.2 Brookhouse Lane is a single carriageway road which runs east-west providing access to surrounding residential areas, local facilities and A460 to the east. Between its junctions with East Lane and The Avenue, Brookhouse Lane has a speed limit of 30mph, with traffic calming in the form of speed cushions outside Featherstone Academy. South of the site, the road becomes more rural in nature, and the speed limit increases to the national speed limit (60mph).
- 2.2.3 A460 is a single carriageway road which runs north-south to the east of the development site. To the south, it provides access towards Wolverhampton and M54 Junction 1, and to the north, it provides access to Cannock. Within the vicinity of the site it has a speed limit of 30mph. The A460 is currently the only direct link between M54 and M6. As a result, it experiences high traffic volumes and severe congestion during network peak periods.
- 2.2.4 The M54 runs parallel to the southern site boundary, providing access to the M6 to the east and Telford to the west. Highways England have identified a scheme to provide an improved link road between M54 junction 1 and M6 junction 11. A Development Consent Order (DCO) for the preferred scheme was submitted to the Planning Inspectorate on 30 January 2020, with a decision anticipated in 2021 with completion of the scheme in 2024<sup>2</sup>. General arrangement plans for the areas surrounding the site are provided in Figure 2-2, with full drawings provided in **Appendix A**.

<sup>1</sup> A cycling speed of 4.4m/s has been taken from the Sustrans Information Sheet FF11 or 'Cycle Friendly Employers' Information Sheet' and states that "a five mile journey can be comfortably cycled by an adult in 30 minutes".

<sup>2</sup> <https://highwaysengland.co.uk/projects/m54-to-m6-link-road>

**Figure 2-2: M54 junction 1 and M6 junction 11 proposals**



2.2.5 The scheme would re-route the A460 within the vicinity of the site, stopping up the A460 south of its junction with The Avenue. As a result of the scheme there would be a significant reduction in traffic volumes on the A460, reducing congestion and making it a more attractive route for pedestrians and cyclists.

## 2.3 Sustainable Transport

### Walking and Cycling

2.3.1 Brookhouse Lane, A460 Cannock Road, The Avenue and Hilton Road provide footways on at least one side of the carriageway. There is no footway or crossing facilities provided along the site frontage onto Brookhouse Lane. The roads are subject to 30mph speed limits and street lighting is provided.



2.3.2 Based on the South Staffordshire Cycle Map<sup>3</sup>, Brookhouse Lane and East Road both form advisory cycle routes, as part of a network of local routes between surrounding settlements such as Snareshill, Cheslyn Hay, Great Wyrley and Coven as well providing connections towards Cannock to the north, and Wolverhampton to the south. To the south of the site, a shared footway/cycleway is provided on the eastbound side of Brookhouse Lane until the junction with Cat and Kitten Lane. A copy of this map is provided in **Appendix B**.

### **Public Transport**

#### *Bus*

2.3.3 Figure 2-3 shows the nearest bus stops to the development site and the routes serving these stops. Table 2-2 provides a summary of these services. The number 67 bus service routes along Brookhouse Lane but does not stop in the vicinity of the site .

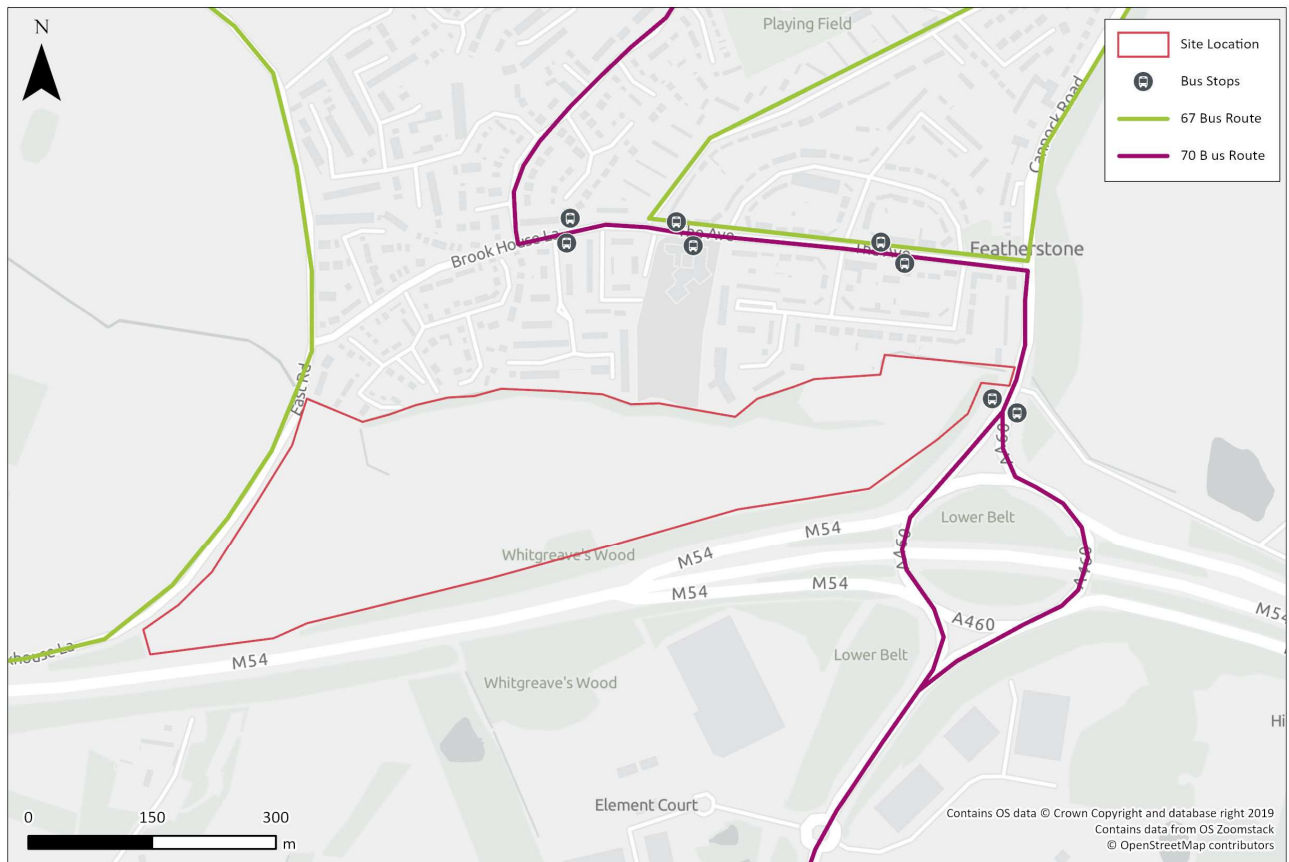
2.3.4 The 70 bus route provides an hourly service between Cannock and Wolverhampton. The M54 – M6 link road scheme is likely to require a diversion of this route although details of any changes have yet to be confirmed.

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<sup>3</sup> <https://www.staffordshire.gov.uk/Transport/cycling/Documents/Cycling-in-South-Staffordshire-Issue-4.pdf>

**Figure 2-3: Public transport provision**



**Table 2-2: Bus Service Provision**

| Service | Route  | Operator            | Direction             | Weekday Service |       |   | Saturday Service |       |           |
|---------|--|---------------------|-----------------------|-----------------|-------|---|------------------|-------|-----------|
|         |  |                     |                       | First           | Last  | Frequency   | First            | Last  | Frequency |
| 67      | Cannock to Wolverhampton<br>Via Dunstall, Low Hill and Featherstone                            | Select Bus Services | Towards Wolverhampton | 09:11           | 16:55 | Every 1- 2 hours  | No service       |       |           |
|         |  |                     | Towards Cannock       | 08:10           | 14:41 |   |                  |       |           |
| 70      | Cannock to Wolverhampton<br>Via Longford, Cheslyn Hay and Featherstone                         | Arriva              | Towards Wolverhampton | 08:08           | 18:13 | Hourly  | 08:08            | 18:13 | Hourly    |
|         |  |                     | Towards Cannock       | 08:04           | 18:02 |   | 08:04            | 18:02 |           |
| 71A     | Cannock to Wolverhampton<br>Via Longford, Cheslyn Hay, Featherstone, Essington and Wednesfield | Arriva              | Towards Wolverhampton | 15:42           |       | One service per day in each direction<br>(School Days Only) | No service       |       |           |
|         |  |                     | Towards Cannock       | 08:15           |       |   |                  |       |           |



*Rail*

- 2.3.5 The nearest railway stations to the site are Wolverhampton (approximately 8.1km) and Landywood (approximately 7.1km).
- 2.3.6 Landywood Railway Station is served by two trains per hour (Monday to Saturday) in each direction between Birmingham New Street and Rugeley Trent Valley. No cycle parking is available at the station. A free car park with 26 spaces is available at the station.
- 2.3.7 Wolverhampton Railway Station is served by regular services to a range of local, regional, and national destinations. The station provides 86 cycle parking spaces and 832 car parking spaces and can be accessed by the number 70 bus service from the site.

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## 3 Transport Strategy

### 3.1 Constraints and Opportunities

3.1.1 A comprehensive transport strategy has been developed based on the baseline conditions and the following key opportunities:

- The Highways England scheme to provide a direct link between M54 and M6 is likely to reduce traffic levels, congestion, and delay on the local highway network during peak periods and will also create a more attractive environment for pedestrians and cyclists on A460 Cannock Road;
- The site is within convenient walking and cycling distance of local facilities in Featherstone; and
- There are a number of bus routes operating within close proximity of the site, providing an opportunity for diversion of existing services or creation of new services to accommodate existing demand.

3.1.2 The development transport strategy has also been prepared with regard to the following constraints;

- The lack of footway or crossing facilities on Brookhouse Lane along the site frontage; and
- Congestion on the A460 corridor.

### 3.2 Vehicular Access

3.2.1 The vehicle access strategy has been prepared based on an initial assessment of trip generation, distribution and assignment, details of which are provided in **Appendix C**. Census data demonstrates that the majority of trips to/from the site would travel towards Wolverhampton and Cannock.

3.2.2 Access to the site would be provided from a priority junction onto Brookhouse Lane as shown in Drawing 04832-SK-0001-P01 contained within **Appendix D**. This junction can achieve required visibility splays based on posted speed limits (30mph).

3.2.3 It is recommended that observed speed data (85<sup>th</sup> percentile) is collected prior to submission of a planning application for the site, to inform visibility splays. The speeds in this location may be greater than the posted speed limit (30mph), however as the road is relatively straight and flat in nature, no issues with providing required visibility splays for higher measured speeds are foreseen. The site's extensive frontage onto Brookhouse Lane provides flexibility to accommodate any changes to the access design and longer visibility splays if required.

### 3.3 Pedestrian/Cycle Access

3.3.1 There are multiple opportunities to maximise access to the site for pedestrians and cyclists. Opportunities are summarised in Figure 3-1, and as follows:



- **Option 1** – Extension of existing footway on Brookhouse Lane into the site, either within the site boundary, or adjacent to carriageway;
- **Option 2** – Provision of a link for pedestrians and cyclists onto Whilmot Close;
- **Option 3** – Provision of a link for pedestrians and cyclists onto Brookhouse Close;
- **Option 4** - Provision of a link for pedestrians and cyclists onto A460 Cannock Road; and
- **Option 5** – Provision of a link for pedestrians and cyclists onto Whitgreave Avenue adjacent to school playing fields.

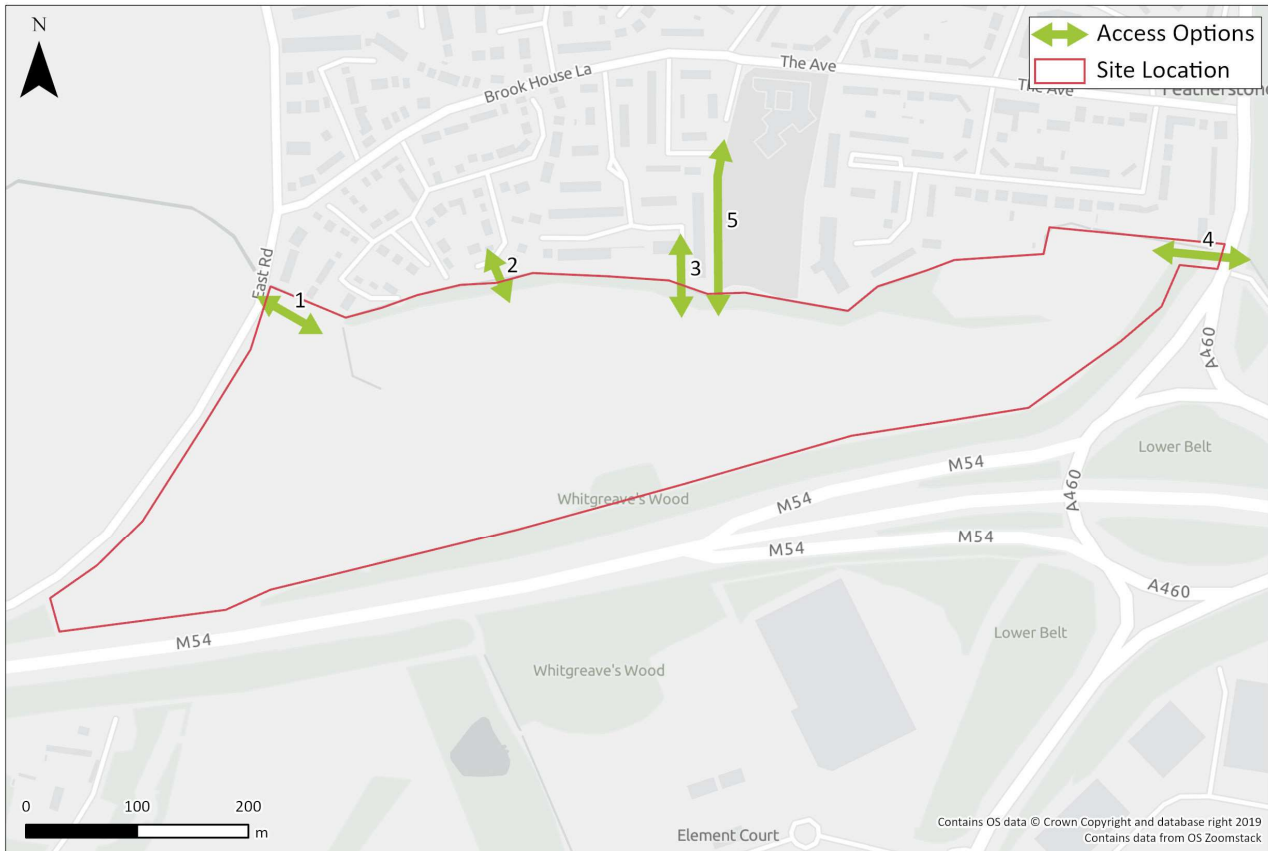
3.3.2 At a minimum, it is recommended that Option 1 and 4 are provided. Provision of at least one of option 2, 3 or 5 would improve accessibility to local facilities in the centre of Featherstone. However, the feasibility of providing these links would be dependent on land ownership and the extent of land within the highway boundary. Providing a pedestrian access adjacent to the vehicular site access, and extension of the existing footway along the frontage of the site may result in loss or translocation of the existing hedgerow along Brookhouse Lane.

3.3.3 Options 1 and 4 are wholly deliverable within control of the landowner. In the event that the other options could not be provided, the site would remain within acceptable walking and cycling distance of local facilities.

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**Figure 3-1: Access options for pedestrians and cyclists**



### 3.4 Public Transport Strategy

3.4.1 It is considered that there are two options to improve access to/from the site by public transport:

- **Option 1** – Re-route existing services through the site; and
- **Option 2** – Maximise pedestrian access to existing bus stops.

#### **Option 1**

3.4.2 One option to improve access by public transport is to re-route existing bus services through the site.

3.4.3 The number 70 bus service provides the most regular and frequent bus service within the vicinity of the site, however, only 7-8 minutes of layover time is provided at either end of the route. The Highways England scheme to provide a direct link between M54 and M6, once completed, is likely to considerably reduce congestion on a large proportion of this bus route, therefore reducing journey times during peak periods. This could provide some additional time within the existing timetable to extend the loop of this bus route through Featherstone, to include routing through the site. This would either require a loop within the site, or a bus only link onto the A460 on the eastern



boundary of the site. It is considered that the extension of this route would only be feasible once the M54/M6 works had been completed, and further discussion with SCC and the bus operator would be required.

## **Option 2**

3.4.4 A second option to improve access by public transport is to provide high quality pedestrian routes to existing bus stops. The Highways England scheme to provide a direct link between M54 and M6 is likely to result in the existing stops on A460 Cannock Road being re-located. Therefore, it is considered that routes to the existing bus stops on Brookhouse Road and The Avenue should be maximised.

3.4.5 The approximate distance from access point (1) and (2), shown in Figure 3-1, to the nearest bus stop is approximately 410m, for (3) and (4) it is approximately 250m and it is approximately 300m for access point (5) It is therefore considered that in terms of facilitating access to public transport either access point 3,4 or 5 is provided to ensure that the majority of the development is within 400m of an existing bus stop with a regular service. As previously mentioned, the feasibility of providing these links would be dependent on land ownership and the extent of land within the highway boundary.

## **Summary**

3.4.6 It is considered that option 1, to re-route existing bus services through the site would be the preferential option to maximise use of public transport by residents. Further discussion with SCC and public transport operators would be required to assess the feasibility of this.

## **3.5 Highway Infrastructure**

3.5.1 The A460 is currently the only direct link between M54 and M6. It is understood that as a result it experiences high traffic volumes and severe congestion during network peak periods within the vicinity of the site. The Highways England scheme to provide a direct link between M54 junction 1 and M6 junction 11, re-routing the A460 within the vicinity of the site, is forecast to significantly relieve congestion on this corridor during peak periods and provide headroom to accommodate new development.

3.5.2 This is also likely to affect the distribution of traffic from the development, encouraging more vehicles travelling towards Wolverhampton to use the A460 rather than Cat and Kittens Lane. Vehicles from the development travelling on the M6 north are also likely to use M54 junction 1 and the direct link road, rather than M6 Junction 11.



## 4 Summary

4.1.1 PJA have been commissioned by Persimmon Homes West Midlands to provide transport services in relation to promotion of a site on Brookhouse Lane, Featherstone to the South Staffordshire Local Plan Review.

4.1.2 This appraisal demonstrates that the proposed site allocation is suitable for development as part of a comprehensive masterplan in that:

- The site benefits from being in close proximity to the strategic road network, and key routes towards Wolverhampton and Cannock;
- Safe and suitable vehicular access to the site can be delivered from Brookhouse Lane, without the need for third party land;
- A pedestrian and cycle access strategy will maximise links to existing local facilities in Featherstone;
- The site can be made accessible by public transport through diversion of an existing bus service, or provision of additional pedestrian and cycle links onto Brookhouse Lane and A460 Cannock Road; and
- The proposals to provide a direct link between M54 and M6 will reduce traffic levels on the A460 within the vicinity of the site. This will provide a more attractive walking and cycling route for local residents, alter the route of existing local bus services, and also change the likely trip distribution for the development traffic to access Wolverhampton and the wider strategic road network. The scheme will provide additional capacity on the highway network to accommodate new development.



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## Appendix A M54 to M6 Link – General Arrangement Plans

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## Appendix B Cycle Map

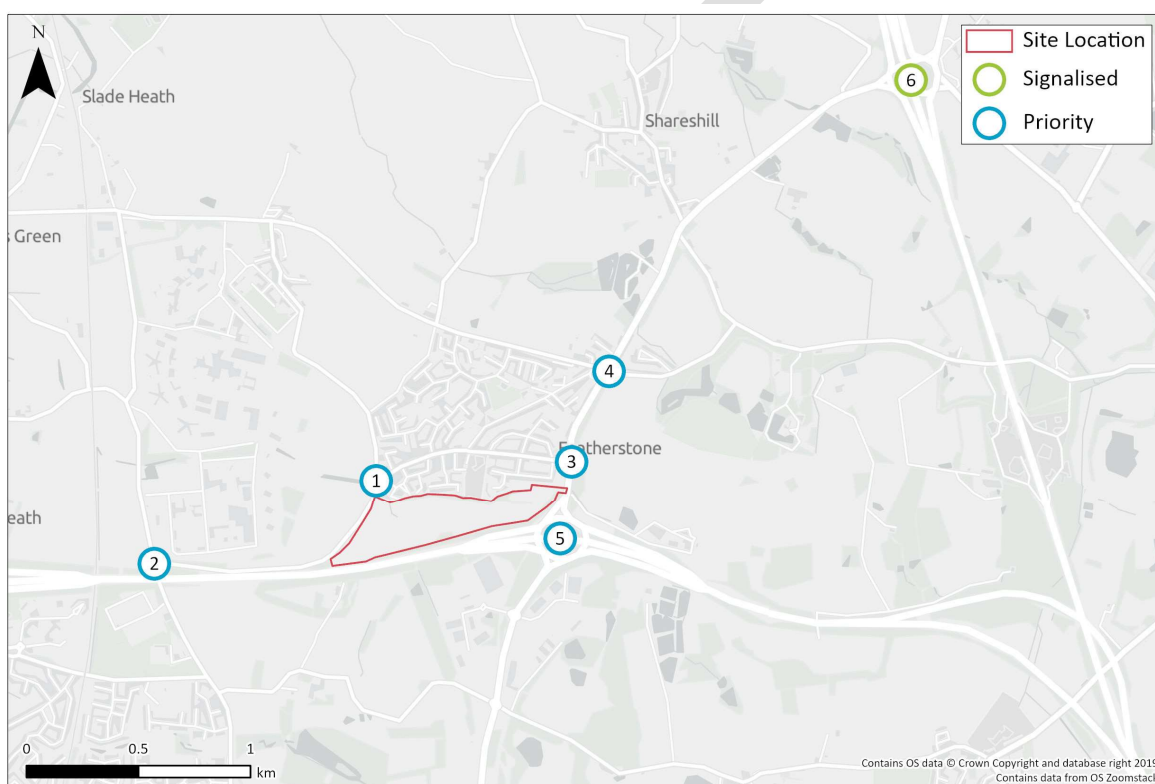
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## Appendix C Trip Generation, Distribution and Assignment Assessment

### Introduction

4.1.3 This section of the report sets out the likely vehicle trip generation, distribution, and assignment for the site, as well as the impact this may have on the local highway network. The study area for the assessment is shown in Figure 4-1.

Figure 4-1: Study Area



### Trip Generation

4.1.4 To calculate the travel demand for the site, person trip rates have been extracted from the TRICs database (v7.7.1). The following criteria were applied to the TRICs category “Residential – Houses Privately Owned”:

- **Site Location** – Sites in Greater London, Scotland, Wales, Republic of Ireland, and Northern Ireland have been excluded;
- **Survey Day** – Only surveys carried out Monday to Friday have been included;
- **Survey Date** – Only the most recent survey has been included for each site;



- **Size** – Sites between 5 and 300 dwellings have been included; and
- **Location** – Only sites classified as Neighbourhood Centre have been included.

4.1.5 The resultant person trip rate per dwelling and person trip generation for 150 dwellings is presented in Table 4-1. The full outputs are provided in **Appendix E**.

**Table 4-1: Person Trip Generation**

|                                 | Weekday AM Peak (08:00 – 09:00) |            |         | Weekday PM Peak (17:00 -18:00) |            |         |
|---------------------------------|---------------------------------|------------|---------|--------------------------------|------------|---------|
|                                 | Arrivals                        | Departures | Two-Way | Arrivals                       | Departures | Two-Way |
| Person Trip Rate (per dwelling) | 0.197                           | 0.556      | 0.753   | 0.456                          | 0.185      | 0.641   |
| Person Trip Generation*         | 30                              | 83         | 113     | 68                             | 28         | 96      |

*\*Numbers in table have been rounded*

4.1.6 To calculate the vehicle trip generation, multi-modal trip purpose data has been extracted from TEMPro (v7.2b) for the Middle Super Output Area (MSOA) that the majority of the site is within (South Staffordshire 006). South Staffordshire 006 MSOA includes the western half of the village of Featherstone as well as adjacent villages of Coven, Coven Heath, Four Ashes and Shareshill. It is considered that for the purposes of this assessment it provides a robust basis for assessment.

4.1.7 The mode share data for home based trips extracted from TEMPro for South Staffordshire 006 is presented in Table 4-2.

**Table 4-2: TEMPro Mode Share Data (Home Based Trips) - South Staffordshire 006**

| Mode               | Weekday AM Peak |             | Weekday PM Peak |             |
|--------------------|-----------------|-------------|-----------------|-------------|
|                    | Origin          | Destination | Origin          | Destination |
| Walk               | 12%             | 11%         | 10%             | 11%         |
| Cycle              | 2%              | 2%          | 2%              | 2%          |
| Car Driver         | 55%             | 63%         | 63%             | 59%         |
| Car Passenger      | 23%             | 20%         | 21%             | 23%         |
| Bus & Coach        | 6%              | 4%          | 3%              | 4%          |
| Rail & Underground | 2%              | 0%          | 1%              | 2%          |
| <b>Total</b>       | <b>100%</b>     | <b>100%</b> | <b>100%</b>     | <b>100%</b> |

4.1.8 Table 4-3 presents the resultant vehicle trip generation when the mode share set out in Table 4-2 is applied to the person trip generation in Table 4-1. This shows that the site is forecast to generate 65 two-way vehicle trips in the AM peak and 58 two-way vehicle trips in the PM peak. Given that the site is located within the village of Featherstone, it is likely that a number of trips to local facilities would be self-contained within the village. At planning application stage, trip generation may need to be considered through assessment of a local donor site in Featherstone, and the methodology agreed with SCC as highway authority.



**Table 4-3: Vehicle Trip Generation**

|                                 | Weekday AM Peak (08:00 – 09:00) |            |           | Weekday PM Peak (17:00 -18:00) |            |           |
|---------------------------------|---------------------------------|------------|-----------|--------------------------------|------------|-----------|
|                                 | Arrivals                        | Departures | Two-Way   | Arrivals                       | Departures | Two-Way   |
| Person Trip Rate (per dwelling) | 0.197                           | 0.556      | 0.753     | 0.456                          | 0.185      | 0.641     |
| Person Trip Generation*         | 30                              | 83         | 113       | 68                             | 28         | 96        |
| <b>Vehicle Trip Generation*</b> | <b>19</b>                       | <b>46</b>  | <b>65</b> | <b>40</b>                      | <b>17</b>  | <b>58</b> |

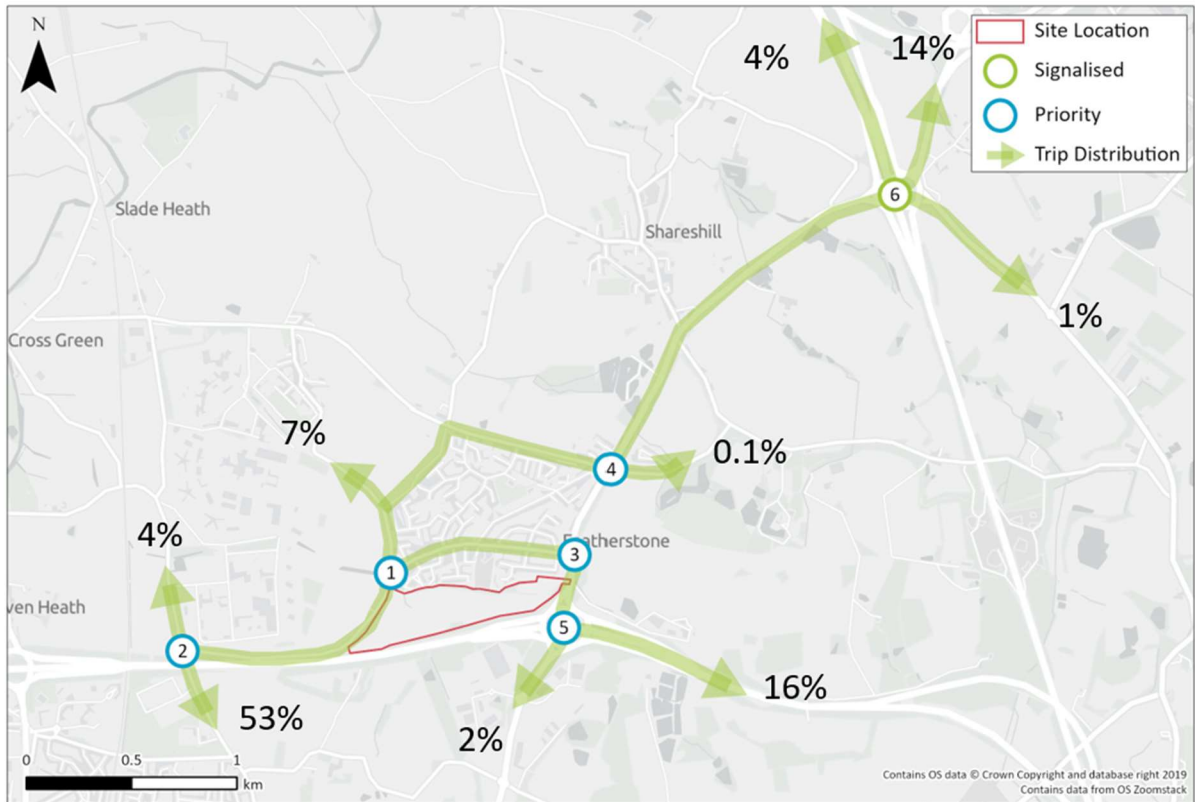
*\*Numbers in table have been rounded*

### Trip Distribution and Assignment

- 4.1.9 The distribution of development traffic is based on 2011 census journey to work data for the MSOA in which the site is located, South Staffordshire 006. South Staffordshire 006 MSOA includes the western half of the village of Featherstone as well as adjacent villages of Coven, Coven Heath, Four Ashes and Shareshill. It is therefore considered that this provides a suitable representation of the likely travel patterns of the development site.
- 4.1.10 The assignment of the development trips onto the local highway network has been calculated using online routing software for a journey during peak periods (typical Wednesday at 08:30am). Development trips were assigned based on the journey from the proposed site access (Brookhouse Lane) to the centre point of each MSOA. The resultant trip assignment is shown in Figure 4-2.



Figure 4-2: Trip Assignment



4.1.11 The distribution provides the routes onto which the trip generation will be assigned. The trip assignment for the weekday AM and PM peak periods through key junctions in the study area is presented in Table 4-4. The location of these junctions is shown in Figure 4-1.

Table 4-4: Vehicle Trip Assignment - Key Junctions

| Junction | Junction Form                            | Two-Way Vehicle Trip Generation |                 |    |
|----------|--|---------------------------------|-----------------|----|
|          |  | Weekday AM Peak                 | Weekday PM Peak |    |
| 1        | Brookhouse Lane / East Road              | Priority                        | 28              | 27 |
| 2        | Brookhouse Lane / Cat and Kittens Lane   | Priority                        | 37              | 33 |
| 3        | The Avenue / A460 Cannock Road           | Priority                        | 11              | 10 |
| 4        | New Road / A460 Cannock Road / Dark Lane | Signalised Crossroads           | 12              | 11 |
| 5        | M54 Junction 1 / A460                    | Roundabout                      | 11              | 10 |
| 6        | M6 Junction 11 / A460 / A462             | Signalised Roundabout           | 12              | 10 |

4.1.12 Table 4-4 shows that the junction through which the development will add the most trips is the Brookhouse Lane / Cat and Kittens Lane junction. It is forecast that 37 two-way trips will be added through this junction in the AM peak and 33 two-way trips in the PM peak. This equates to less than one vehicle per minute. It is likely that due to congestion on the A460 during peak periods, vehicles would use this route to access Wolverhampton and surrounding areas rather than A460. A minimal



level of trips are forecast to route through junctions 3 to 6, with up to 12 two-way trips in each peak period.

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## Appendix D Site Access Drawing

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## Appendix E TRICS outputs - residential

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