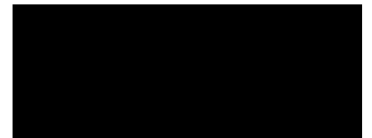


Raymond Cole  
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17th September 2020

Council Reference Number: PAA/81/20/

Dear Sir/Madam,

**Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended)**  
**Request for a Screening Opinion**  
**Land to the south of Barnham Station, Barnham.**

On behalf of our client Gleeson Strategic Land Ltd (the "client"), a planning application will be submitted in due course on land to the south of Barnham Station ("the Site")- this site has previously been referred to as 'Tars Farm' within correspondence. The planning application will be submitted in outline form with all matters reserved other than means of access to the highways for:

*"Development of approximately 200 dwellings, associated green infrastructure provision and access from Marshall Close" ("the Proposed Development").*

We are writing to request a Screening Opinion from the Council under Regulation 6(1) of the Environmental Impact Assessment Regulations 2017 ("the EIA Regulations"), to confirm whether or not there is a requirement for an Environmental Impact Assessment ("the EIA") in respect of the Proposed Development. For the reasons set out below, our conclusion is that an EIA is not required.

In accordance with Regulation 6 (2) of the EIA Regulations, this request is accompanied by:

- a) A plan sufficient to identify land (Appendix 1);
- b) A description of the development, including in particular:
  - i. A description of the physical characteristics of the development and, where relevant, of demolition works;

London

Birmingham

Manchester

Reading

- ii. A description of the location of the development, with particular regard to the environmental sensitivity of geographical areas likely to be affected;
- c) A description of the aspects of the environment likely to have significant effects of the Proposed Development;
- d) To the extent the information is available, a description of any likely significant effects of the proposed development on the environment resulting from:
  - i. The expected residues and emissions and the production of waste, where relevant; and
  - ii. The use of natural resources, in particular soil, land, water and biodiversity; and
- e) Such other information or representations as the person making the request may wish to provide or make, including any features of the proposed development or any measures envisaged to avoid or prevent what might otherwise have been significantly adverse effects on the environment.

Further information to support the Screening Request, provided by a professional technical team, has been incorporated into this letter and includes inputs with regard to:

- a) Highways and Transport
- b) Landscape
- c) Ecology
- d) Heritage
- e) Flood Risk
- f) Noise

#### **Location / Site**

The Site comprises approximately 13 hectares of agricultural land, with a small cluster of ancillary agricultural buildings, and is located on the southern side of the village of Barnham. The Site is adjacent to Barnham's existing built-up area boundary as defined in the adopted Local Plan.

The Site is not subject to any specific international, European, national or local landscape constraints and does not contain any listed buildings.

The Site's topography is mainly flat, with some elevation to the south of the Site. The north western boundary is formed by the existing railway line. Public Right of Way (PROW) FP 323 crosses the Site on a northwest-southeast alignment and connects the west of Barnham with Church Lane.

The majority of the Site is located within Flood Zone 1, with some areas within Flood Zone 2 and Flood Zone 3. Further information on this is provided later in this screening request.

The Site is located within walking distance of the range of services and facilities within Barnham which include shops, Barnham Community Hall, St Philip Howard Secondary School and Barnham train station. In terms of sustainable transport modes for journeys further afield, the close proximity to Barnham train station provides future residents with excellent services to destinations including Brighton, Southampton, Littlehampton, Gatwick Airport and London Victoria. Public bus services which can currently be accessed from Yapton Road and provide additional services to facilities in neighbouring settlements such as Bognor Regis, Eastergate and Yapton.

#### **Requirement for an EIA**

The Proposed Development does not fall within any category listed under Schedule 1 of the EIA Regulations. However, it does fall within item 10(b) of Schedule 2 of the EIA Regulations as an "Urban Development Project" on land with an overall area comprising more than 5 hectares for more than 150 dwellings. This does not mean an EIA is automatically required, instead the EIA Regulations require that an EIA be undertaken where the

development is *"likely to have significant effects on the environment by virtue of factors such as its nature, size or location"*.

National Planning Policy Guidance ("NPPG") (ID-4-018-20170728) states that *"only a very small proportion of Schedule 2 development will require an Environmental Impact Assessment"*. To aid local planning authorities to determine whether or not a project is likely to have a significant environmental effects, the PPG provides a set of indicative thresholds (ID-4-057-2070720). The threshold indicates that an EIA is unlikely to be required unless a development is for more than 1,000 dwellings (ID: 4-057-2070720).

In order to assess any significant environmental effects, the selection criteria contained in Schedule 3 of the EIA Regulations should be applied. These are:

- a) The characteristics of development (having regard to size and design, cumulative impacts, use of natural resources, production of waste, pollution and nuisances, risk of major accidents and risk to human health);
- b) The location of development by reference to the environmental sensitivity of the area;
- c) This type and characteristic of the potential impact (having regard to the magnitude and spatial extent, nature, transboundary, intensity and complexity, probability, expected onset, duration frequency and reversibility, cumulative impact and possibility of effectively reducing the impact).

Items (a) and (b) of the above criteria will be explored within the following sections of this screening request. Item (b) has been provided in the introduction to this screening letter and is informed by the attached plans.

It should be noted the EIA Regulations require EIA for qualifying developments only where there are likely significant environmental impacts, and not solely where there would be likely environmental impacts that could be mitigated. Where likely impacts have been identified and potential mitigation is known to be capable of reducing such impacts to less than "significant" then such environmental considerations would be sufficient and an EIA would not be required. This is an important distinction.

The project technical team has already conducted a number of baseline surveys and preliminary investigations concerning the proposed project area. Their comments and technical input have been incorporated into this request under the relevant section criteria for screening Schedule 2 development (as outlined within Schedule 3 of the EIA Regulations).

The characteristics of the development and potential environmental impacts are explored below.

#### **Characteristics of Development**

The Proposed Development, for the purpose of this screening request, has been based upon an assumed maximum unit total and in consideration of the potential environmental impacts (whether they are significant or not).

The Proposed Development includes:

- Approximately 200 units
- Access from Marshall Close
- Associated landscaping

#### **Characteristics of the Potential Impact**

Any environmental impacts arising from the Proposed Development will be addressed through the supporting reports that will accompany the outline planning application, as identified earlier within this screening request. The core environmental considerations are provided below, together with input from technical consultants on

each issue. There may also be potential for landscape and habitat enhancement as a result of the Proposed Development.

### Highways and Transport

A Transport Assessment Scoping report has been prepared by i-Transport (see Appendix 2). As part of the outline application, a Transport Assessment (TA) and a Residential Travel Plan will be submitted and will assess the impact of the proposed development on the highways network.

Access to the Site is proposed via an extension of Marshall Close and an additional opportunity exists to provide an emergency access onto Church Lane (if required). To support this strategy, improvements to Marshall Close have been identified.

The TA will focus on three key transport tests which are set out in national and local guidance, namely:

- a) appropriate opportunities to promote sustainable transport modes can be or have been taken up, given the type of development and its location;
- b) safe and suitable access to the site can be achieved for all users; and
- c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

It is clear from the initial work undertaken by i-Transport that transport considerations would not form a justified basis upon which to require an EIA on the basis that potential environmental impacts are not considered to be significant.

### Landscape

The Site and its immediate setting are not covered by any national or local landscape designations (National Park, Area of Outstanding Natural Beauty etc..) and, therefore, the Proposed Development would not result in any significant adverse effects on any landscape designations.

It is acknowledged that the Proposed Development would result in the direct loss of an area of agricultural land and changes to views within the Site and the immediate area. However, it is considered that the proposed nature and scale of the built form and landscape strategy would reduce and mitigate any significant adverse effects that may arise to landscape character and visual amenity - indeed there is the potential to provide features that would deliver a benefit to the immediate and local area.

Whilst the potential nature and magnitude of impacts on landscape character and visual amenity will need to be identified and assessed in line with both national and local policy, it is considered that the effects arising from the proposals would not be 'significant' and, therefore, would not require an EIA. We propose to carry out a Landscape and Visual Impact Assessment which will fully assess the nature of effects arising from the proposals and will be submitted as part of the planning application.

### Ecology

Aspect Ecology have undertaken a number of ecological surveys on Site.

The Site does not fall within any statutory ecological designations and no designated sites or nature reserves are located within 3km. Whilst the Site is located within an SSSI Impact Risk Zone in relation to the Fairmile Bottom SSSI, the Impact Risk Zone does not apply to residential development.

The nearest non-statutory designation is located approximately 1.9km away from the Site, and the nearest European designation is 4.2km. The Site is not located within any zones of influences, other than the Sussex

Bats SAC sites. However, the Proposed Development is not likely to have a significant effect on the relevant bat populations from these roosts.

The Site is dominated by semi-improved grassland, with the boundary comprising a mix of mature hedgerows with scattered mature trees and a small stream on the eastern boundary. Located towards the northern boundary are small patches of bare ground, brash piles and ruderal vegetation. As such, some faunal species are likely to be present. Faunal species survey work is underway and set to be completed in November 2020. Should any of the species be affected by the Proposed Development, suitable mitigation strategies will be put in place to adequately limit any impacts.

Botanical surveys have not identified any areas of specific botanical interest that would be affected by the Proposed Development.

Having regard to the work undertaken to date, it is not considered that development on the Site would cause any significant environment impacts in terms of ecological interests, either individually, or in combination with nearby proposed or consented schemes, or those under construction.

### Heritage

The Site does not contain any designated heritage assets (such as listed buildings) and neither is it located within or include any part of a designated area, such as a conservation area or a Registered Park and Garden. As such, the Proposed Development would not give rise to a direct loss of significance from a designated heritage asset.

The Site is located in proximity to the Barnham (Church Lane) Conservation Area and a number of listed buildings contained within that designated heritage asset, although the Proposed Development is only likely to result in an indirect loss of significance from the conservation area and the listed buildings are unlikely to be adversely affected.

Whilst the potential nature and magnitude of impacts on heritage assets will need to be identified and assessed in line with paragraph 189 of the National Planning Policy Framework, there is no reason to believe or expect that the effects arising in that regard would be 'significant' in terms of the EIA Regulations and, as such, no EIA would be required. Instead, the relevant issues could quite satisfactorily be dealt with through the completion of a Heritage Statement to be submitted as part of the planning application.

### Flood Risk

The MAGIC Defra Map records shows that the Site lies outside any Groundwater Source Protection Zone or Principal aquifer designation.

The majority of the Site falls within Flood Zone 1 in respect of fluvial flows, this being land where the risk of flooding from rivers and seas is considered low. However, sections of the Site are located within both Flood Zones 2 and 3, where risks are higher.

A site-specific Flood Risk Assessment (FRA) and Drainage Strategy will therefore be prepared in accordance with the MHCLG's PPG: Flood Risk and Coastal Change policy document and submitted as part of the forthcoming planning application. This report will assess all forms of flooding and include comprehensive hydraulic modelling of the prevailing flood zones using the latest hydrology and Environment Agency data. The report will also include a schematic surface and foul water drainage strategy.

The above measures are considered to constitute standard, best practice mitigation measures in accordance with all relevant legislation and result in no likely significant effects, as a result of possible flooding and drainage issues.

Surface water run-off and foul water drainage will be managed on-site during the construction and operational phases. A comprehensive Sustainable Drainage System (SuDS) will be provided as part of the development

proposals alongside traditional sewer design. The SuDS features not only capture and attenuate surface water but they also enhance water quality as well as providing significant ecological, biodiversity and amenity opportunities.

The development once completed will result in peak surface water runoff and volumes being significantly reduced over that observed pre-development, thereby offering betterment to the wider community.

Foul drainage is likely to be dealt with by way of a gravity connection to nearby public sewers. The necessary on site infrastructure will be delivered as part of the site works and will therefore have no significant effects off site.

Any hazardous materials used on site during the construction phase will be placed in locations not susceptible to flooding and secure locations.

It is not considered the above provides a reason for an EIA to be undertaken.

### Noise

A Noise Impact Assessment (NIA) will be submitted in support of the planning application to assess the suitability of the Proposed Development with regards to noise and vibration.

The aims of the NIA will be to:

- establish the suitability of existing noise and vibration levels at the Site for the Proposed Development;
- to identify appropriate measures, where required, to optimise the acoustic design of the development and achieve acceptable noise and vibration levels in habitable areas;
- to assess the potential impact of noise emissions from operational activities associated with the development at the positions of existing sensitive receptors in the area.

Initial work has found the impact of noise and vibration from passing trains and from Barnham station to be manageable with appropriate mitigation measures, siting and design. As such, it is considered that the Proposed Development will be able to mitigate noise and vibration impacts such that there are no significant impacts and, therefore, that no EIA is required in this respect.

### Cumulative Impact

Each technical consultant has considered the potential environmental impacts which may arise as a result of the Proposed Development, in combination with nearby consented and / or under construction developments. In particular, technical input has focussed on the potential for 'significant' environmental impacts.

None of the technical disciplines have identified the likelihood of significant environmental impacts individually or in combination with nearby developments following mitigation. Furthermore, given that all potential impacts could be mitigated to bring them to a less than significant level it would not be likely, even when considering the combination of the impacts upon each environmental consideration, that it could be deemed significant.

### Summary

The EIA Regulations are specifically designed to consider the potential "significant" environmental impacts for developments where there is a likelihood of there being significant environmental impacts individually or in combination with nearby developments. The likelihood of impacts alone is not sufficient, in line with the EIA Regulations. Nor would an EIA be required where there is potential or likelihood for significant environmental impacts but where the presence of appropriate mitigation is already known.

On this basis, our assessment as to whether the Proposed Development should be considered EIA development and require the production of an ES is that it should not. EIAs should be reserved, as intended by the legislation, for developments, which have a realistic likelihood of causing "significant" environmental impact individually

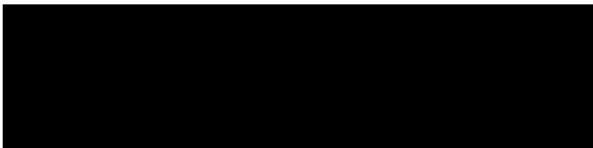
Screening Request continued

or in combination, of which the Proposed Development is not one following the findings from a number of technical assessments.

It is noted that the Council has 21 days from the date of receipt to form a Screening Opinion.

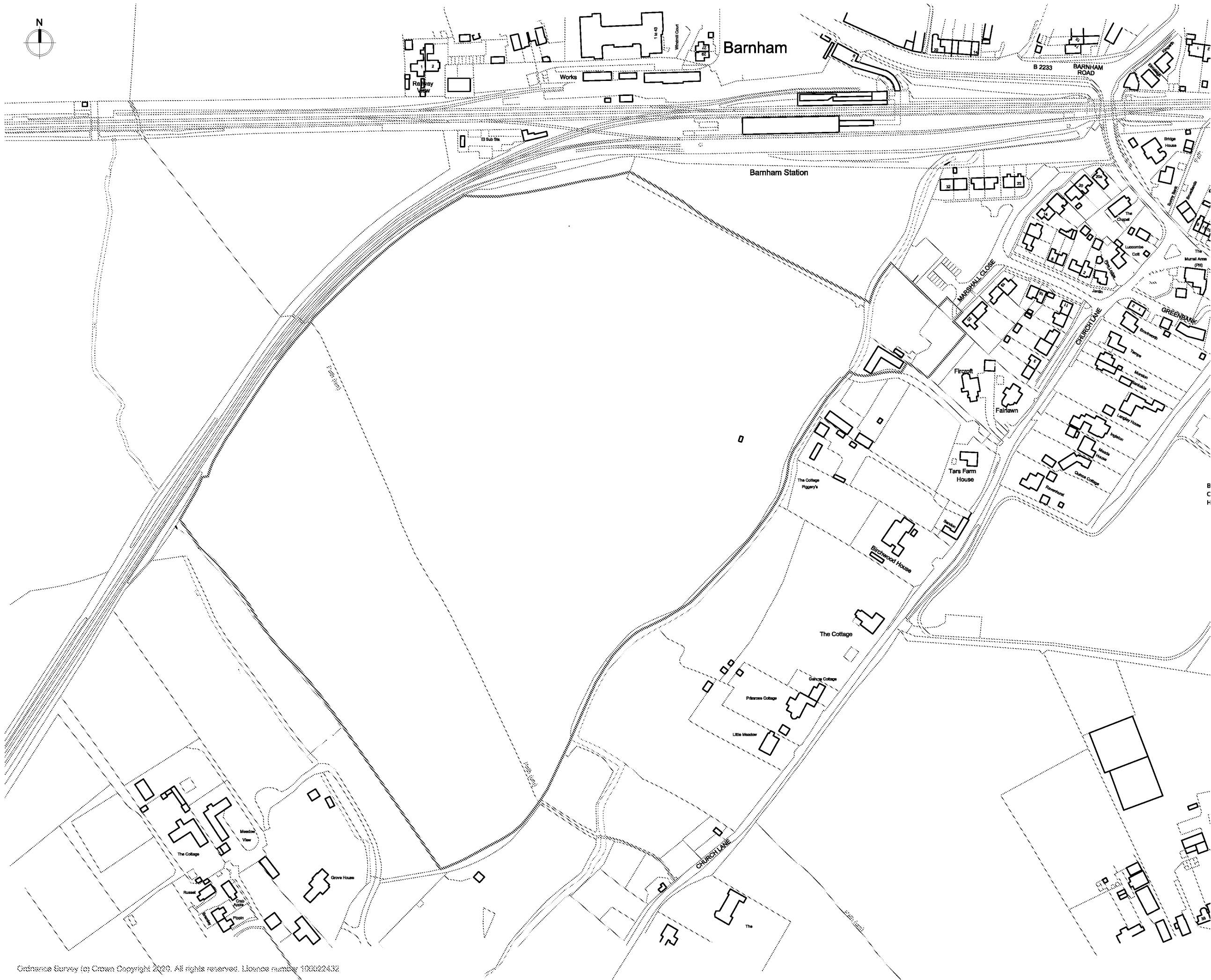
I trust that you have sufficient information to determine whether this is an EIA development under the EIA Regulations; but should you need any further information or clarification, please do not hesitate to contact either myself or my colleague Adam Ross.

Yours sincerely,



**Zoe Knott**  
Associate

## Appendix 1: Plan sufficient to identify land



Site  
**LAND AT TARS FARM,  
 BARNHAM**

Drawing  
 Site location plan

Scale  
 1:2500@A3

Date  
 28.07.20

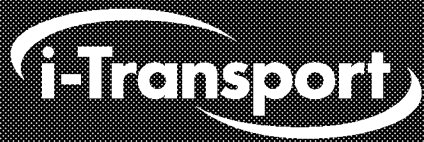
Drawing ref  
**1311.01**

1:2500@A3

**KEY**

Site boundary (13.8ha)

## Appendix 2: Transport scoping report



Tars Farm, Barnham

Transport Assessment Scoping

Client: Gleeson Strategic Land

i-Transport Ref: MG/ITB14160-002 R

Date: 21 August 2020

Tars Farm, Barnham

Transport Assessment Scoping

Client: Gleeson Strategic Land

i-Transport Ref: MG/ITB14160-002 R

Date: 21 August 2020

**i-Transport LLP**

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## Quality Management

| Report No.   | Comments | Date     | Author | Authorised |
|--------------|----------|----------|--------|------------|
| ITB14160-002 | Draft    | 13/08/20 | DS/PS  | MG         |
| ITB14160-002 | Issue    | 21/08/20 | DS/PS  | MG         |
|              |          |          |        |            |

File Ref: T:\Projects\14000 Series\14160ITB Tars Farm, Barnham\Admin\Report and Tech Notes\002 Transport Assessment Scoping\ITB14160-002 Tars Farm Barnham TA Scoping.docx

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## Appendices

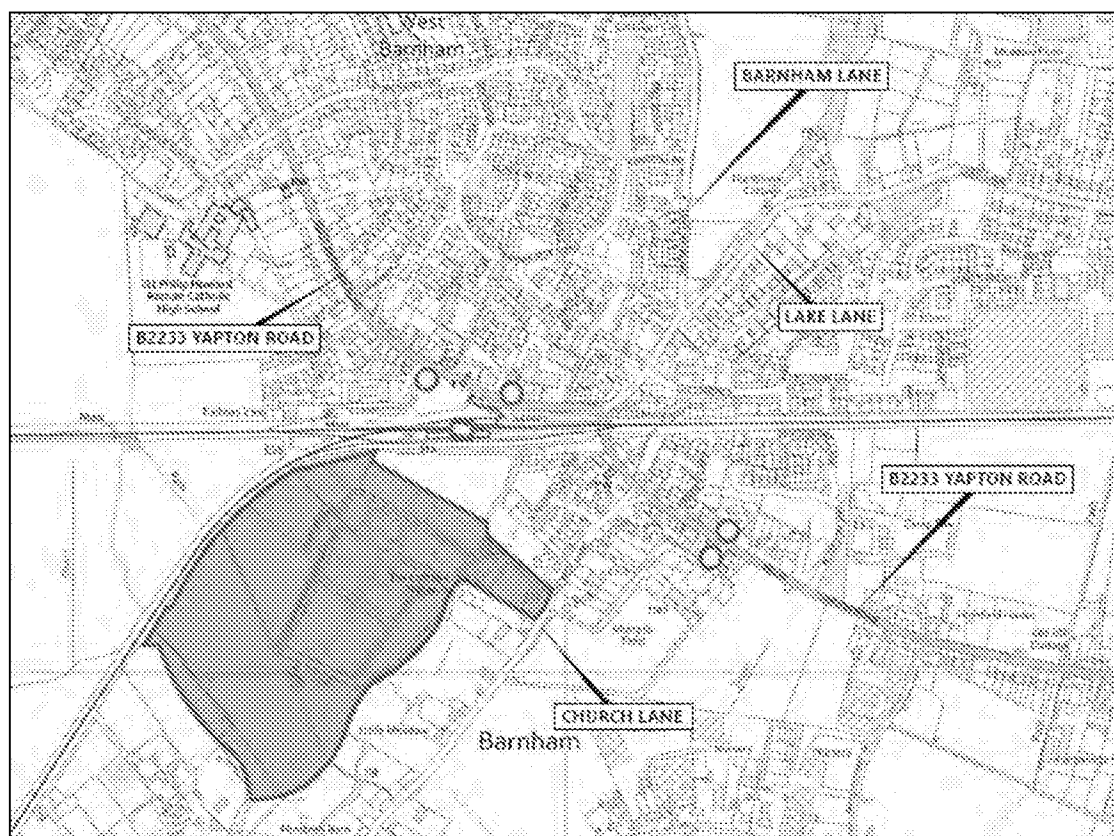
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## SECTION 1 Introduction

### 1.1 Background

- 1.1.1 Gleeson Strategic Land controls land at Tars Farm, Barnham. A site location plan is provided at **Figure 1.1**, an extract of which is shown in **Image 1.1**.

**Image 1.1: Extract of Site Location Plan**



Source: Consultants' image

- 1.1.2 Gleeson proposes to submit an outline planning application (with all matters reserved except access) for a development of up to 200 dwellings. Access is proposed via an extension of Marshall Close to the site. An emerging masterplan is provided at **Appendix A**.
- 1.1.3 I-Transport has been appointed by Gleeson to provide highways and transport advice on the project.

## 1.2 Scope

1.2.1 This Transport Assessment Scoping Report (TASR) has been prepared by i-Transport to obtain comments on the approach and the key transport issues from the local highway authority, West Sussex County Council (WSCC), and the local planning authority, Arun District Council (ADC). The objective is to progress the Transport Assessment (TA) on an agreed basis.

1.2.2 Section 9 of the National Planning Policy Framework promotes and encourages sustainable transport. Paragraph 108 of the NPPF states that:

*“In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

*a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*

*b) safe and suitable access to the site can be achieved for all users; and*

*c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”*

1.2.3 Paragraph 109 of the NPPF states that:

*“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”*

1.2.4 The remainder of this TASR is framed around addressing these key transport tests.

## 1.3 Structure

1.3.1 The remainder of this report is structured as follows:

- Section 2 – Local Planning Context;
- Section 3 - Promoting Sustainable Transport;
- Section 4 – Proposed Site Access Arrangements;
- Section 5 – Traffic Impact; and
- Section 6 – Summary and Way Forward.

## SECTION 2 Transport Planning Context

### 2.1 Introduction

2.1.1 This section of the TASR covers the local planning context and is set out in the following sub sections:

- The Arun Local Plan 2011-2031 (July 2018);
- Local Parking Standards;
- Barnham and Eastergate Neighbourhood Plan – 2014 – 2029; and
- Committed development.

### 2.2 The Arun Local Plan 2011-2031 (Adopted July 2018)

2.2.1 Section 15 of the Arun Local Plan covers Transport. Policy T SP1 covers Transport and Development – see policy extract below

#### Policy T SP1

##### Transport and Development

To ensure that growth in the District strengthens Arun's economic base, reduces congestion, works to tackle climate change and promotes healthy lifestyles; the Council will ensure that development: provides safe access on to the highway network; contributes to highway improvements and promotes sustainable transport, including the use of low emission fuels, public transport improvements and the cycle, pedestrian and bridleway network.

The Council will support transport and development which:

- a. is designed to reduce the need to travel by car by identifying opportunities to improve access to public transport services and passenger transport services whilst making provision for safe access to the highway network through improvements to the existing road network and the promotion of vehicles which use low-carbon energy;

- b. Is incorporated into the District's green infrastructure network and gives priority to pedestrian and cycle movements;
- c. Protects committed and indicative lines of major road schemes from development and, where applicable, contributes towards new road schemes which improve north-south links between Bognor Regis and Littlehampton and the A27, to ensure that they are delivered in line with strategic growth in the District;
- d. Incorporates appropriate levels of parking in line with West Sussex County Council guidance on parking provision and the forthcoming Arun Design Guide taking into consideration the impact of development upon on-street parking and;
- e. Is supported by an effective and deliverable Transport Assessment which demonstrates that the transport effects of development on the local and strategic road network can be satisfactorily mitigated and a Travel Plan, which is effective and deliverable, and;
- f. Explains how the development has been designed to:
  - i. accommodate the efficient delivery of goods and supplies;
  - ii. give priority to pedestrian and cycle movements and have access to high quality public transport facilities;
  - iii. create safe and secure layouts for traffic, cyclists and pedestrians whilst avoiding street clutter;
  - iv. incorporate facilities for charging electric and plug-in hybrid vehicles (where charging facilities are to be omitted from the development, evidence of market demand and viability must be provided); and
  - v. consider the needs of people with disabilities by all modes of transport
- g. Provides improved crossing points over the railway line to improve transport links between the coast and the A27, in particular at Ford.

2.2.2 Policy T DM1 covers Sustainable Travel and Public Rights of Way – see policy extract below:

#### Policy T DM1

##### **Sustainable Travel and Public Rights of Way**

New development must ensure ease of movement, prioritising safe pedestrian and cycle access to the green infrastructure network and access to public transport and community transport services where a need has been identified. Access to alternative modes of transport including public transport services, the public right of way and cycle networks, must be available and accessible to all members of the community.

Proposals for all new development must:

- a. Be located within easy access of established public transport service(s), existing pedestrian and cycle networks, the committed and aspirational cycle networks and the green infrastructure network which links the development with key destinations including places of work, education, leisure and town centres;
- b. Where applicable, contribute to the extension of public transport services to serve the development and community transport services to ensure that a wide range of transport services are available to all residents;

- c. Make provision for cycling and pedestrian facilities to meet the County Council Parking Standards, including cycle storage, convenient and secure cycle parking in association with retail and educational uses and sufficient secure parking and changing/showering facilities at places of work;
- d. Contribute towards the provision of a joined up cycle network and Public Rights of Way network, taking into account the aspirational cycle network, which provides convenient, accessible, safe, comfortable and attractive routes for pedestrians and cyclists and, where appropriate, horse riders, both within the development and in the form of links between the development and:
  - i. places of work, education, leisure and food retail;
  - ii. the South Downs National Park;
  - iii. along the coast particularly between Bognor Regis and Littlehampton;
  - iv. along the coast to Chichester;
  - v. Bognor Regis to Arundel; and
  - vi. Littlehampton to Goring.

2.2.3 The TA will review the development proposals against these transport policies.

## 2.3 Local Parking Standards

### Arun District Council Parking Standards SPD (Adopted January 2020)

2.3.1 The Arun District Council Parking Standards January 2020 SPD was officially adopted at the Full Council meeting of 15th January 2020.

2.3.2 The following levels of cycle parking are recommended for new residential developments:

Table 2.3: Recommended levels of cycle provision.

| Type   | Dwelling Size             | Cycle Provision (per unit)                                      |
|--------|---------------------------|-----------------------------------------------------------------|
| Houses | Up to 4 rooms (1 & 2 bed) | 1 space                                                         |
| Houses | 5+ rooms (3+ bed)         | 2 spaces                                                        |
| Flats  | Up to 3 rooms (1 & 2 bed) | 1 space (if communal storage otherwise same as 1 & 2 bed house) |
| Flats  | 4+ rooms (3+ bed)         | 1 space                                                         |

2.3.3 The following levels of car parking are recommended for new residential developments; the site, and Barnham itself, is located in Parking Behaviour Zone 2:

Table 3.1 – Expected level of provision for new residential developments

| Number of beds/rooms | Number of habitation units | Parking Behaviour Zone |   |   |
|----------------------|----------------------------|------------------------|---|---|
|                      |                            | 1                      | 2 | 3 |
| 1                    | 1 to 3                     | 2                      | 2 | 3 |
| 2                    | 4                          | 2                      | 3 | 4 |
| 3                    | 5 to 6                     | 2                      | 3 | 5 |
| 4+                   | 7 or more                  | 3                      | 3 | 5 |

Figures have been rounded to whole numbers compared to the 'West Sussex County Council Guidance on Parking at New Developments, May 2019' for ease of interpretation and implementation.

### 2.3.4 Electric Vehicle Charging recommendations are provided below:

Table 3.2 – Electric Vehicle Charging Points Minimum Requirements

| Year | % of Parking Spaces with Active EV Charging Points<br>Houses with a driveway and garage | % of Parking Spaces with Active EV Charging Points<br>All other developments |
|------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 2018 | 100                                                                                     | 20                                                                           |
| 2023 | 100                                                                                     | 30                                                                           |
| 2028 | 100                                                                                     | 50                                                                           |
| 2033 | 100                                                                                     | 100                                                                          |

Note: these percentages are lower than shown in the WSCC GPNP 2019, but aim to ensure that 100% of new parking spaces associated with new development have active EV charging points by 2033. Unlike the WSCC GPNP, the % requirement increases every 5 years instead of incrementally every year. Also, the percentage figures are rounded to the nearest 10, for ease of implementation.

Appendix 1 – Arun District Council's Electric Vehicle Information Leaflet (November 2017)  
Enclosed in the parking charging points information document (11/17) is the

| Development including (recommended) |                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| House                               | Two charging points per house with access to electricity.                                                           |
| Flat (1-20 units)                   | One parking bay allocated for each car to electric vehicle user, together with charging infrastructure and cabling. |
| Flat (21-50 units)                  | One parking bay allocated for each car to electric vehicle user, together with charging infrastructure and cabling. |
| Flat (51-100 units)                 | One parking bay allocated for each car to electric vehicle user, together with charging infrastructure and cabling. |
| Flat (101-200 units)                | One parking bay allocated for each car to electric vehicle user, together with charging infrastructure and cabling. |
| Office                              | One parking bay allocated for each car to electric vehicle user, together with charging infrastructure and cabling. |
| Caravan                             | One parking bay allocated for each car to electric vehicle user, together with charging infrastructure and cabling. |

Appendix 2 – Parking Behaviour Zone – Arun District Council's 'West Sussex County Council Guidance on Parking at New Developments May 2019' (19/04/19) GPNP 2019.

1. Development includes a car to charge for (these parking spaces include the carport)

2. Includes the charging infrastructure required  
3. Includes the charging infrastructure required (see Appendix 1)

### West Sussex County Council Guidance on Parking at New Developments (June 2020)

### 2.3.5 The following levels of cycle parking are recommended for new residential developments:

Table 1: Minimum levels of cycle provision

| Type   | Dwelling Size             | Cycle Provision (per unit)                                        |
|--------|---------------------------|-------------------------------------------------------------------|
| Houses | Up to 4 rooms (1 & 2 bed) | 1 space                                                           |
| Houses | 5+ rooms (3+ bed)         | 2 spaces                                                          |
| Houses | Multiple Occupation       | 1 space                                                           |
| Flats  | Up to 3 rooms (1 & 2 bed) | 0.5 space (if communal storage otherwise same as 1 & 2 bed house) |
| Flats  | 4+ rooms (3+ bed)         | 1 space                                                           |

2.3.6 The following levels of car parking are recommended for new residential developments; both the Site and Barnham are again located in Parking Behaviour Zone 2.

Table 2: Residential Parking Demand (spaces per dwelling)

| Number of Bedrooms | Number of Habitable Rooms | PBZ1 | PBZ2 | PBZ3 | PBZ4 | PBZ5 |
|--------------------|---------------------------|------|------|------|------|------|
| 1                  | 1 to 3                    | 1.5  | 1.4  | 0.9  | 0.9  | 0.6  |
| 2                  | 4                         | 1.7  | 1.7  | 1.3  | 1.1  | 1.1  |
| 3                  | 5 to 6                    | 2.2  | 2.1  | 1.8  | 1.7  | 1.6  |
| 4+                 | 7 or more                 | 2.7  | 2.7  | 2.5  | 2.2  | 2.2  |

2.3.7 Additionally, the guidance states that developers should take an approach that is consistent with national research which suggests, "that no special provision should be made for visitors where at least half of the parking provision associated with the development is unallocated. In all other circumstances it may be appropriate to allow for additional demand for Visitor parking of 0.2 spaces per dwelling".

2.3.8 The emerging Masterplan will have regard to these local car parking standards.

## 2.4 Barnham and Eastergate Neighbourhood Plan – 2014 – 2029

2.4.1 Policy GA1 Connection to Sustainable Transport states that:

*"New developments should integrate with the current green infrastructure network and provide access to public and community transport, to connect with the social, community and retail facilities of the villages."*

2.4.2 Policy GA2 Footpath and Cycle Path Network states that:

*"Support will be given to proposals that improve and extend the existing footpath and cycle path network, allowing greater access to new housing, the village centres, green spaces and the open countryside. The loss of existing footpaths and cycle paths will be resisted."*

2.4.3 Policy GA3 Contributions to Maintain and Improve the Network states that:

*"Funds raised from the Community Infrastructure Levy (CIL) will be put towards the costs of maintaining and improving the network of footpaths and cycle paths. Developer contributions towards those costs will be sought in appropriate cases."*

2.4.4 Policy GA4 Parking and New Development states that:

*"Development proposals will be supported only if they include the maximum level of off-street parking consistent with the current standards under the Local Plan. Developments that reduce the amount of off-street parking currently available will only be supported if they make enforceable provision for equivalent off-street parking nearby. Parking spaces provided in connection with such proposals will be required to be made available in perpetuity."*

## 2.5 Committed Development

2.5.1 The Planning Practice Guidance discusses Travel Plans, Transport Assessments and Statements. It provides useful guidance on the cumulative impacts arising from committed development:

*"It is important to give appropriate consideration to the cumulative impacts arising from other committed development (ie development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next 3 years). At the decision-taking stage this may require the developer to carry out an assessment of the impact of those adopted Local Plan allocations which have the potential to impact on the same sections of transport network as well as other relevant local sites benefitting from as yet unimplemented planning approval"*

2.5.2 In terms of sites that benefit from unimplemented planning approval, it is proposed that the assessment includes as committed development the land at Angels Nursery Yapton Road Barnham PO22 0AY - Planning permission BN/93/19/PL for the development of 95 dwellings. Arun District Council and / or West Sussex County Council are requested to confirm whether additional sites that benefit from unimplemented planning approvals should be taken into account as committed development in the TA.

2.5.3 The Local Plan allocates a strategic site at Barnham / Eastergate / Westergate for up to 3,000 dwellings alongside other social infrastructure including two new primary schools and two local centres, the latter which will include shops and a library facility (Policy H SP2C). An extract from

Policy H SP2C along with an extract from the proposals map is provided at **Appendix B** and it is noted that there is a consultation during August 2020 on the development proposals -

[REDACTED]

2.5.4 Arun District Council and / or West Sussex County Council are requested to confirm:

- In the context of the PPG guidance on committed development, whether there is a reasonable degree of certainty that the strategic site at Barnham / Eastergate / Westergate will proceed within the next 3 years; and
- If we are required to carry out an assessment of the impact of the strategic site where it has the potential to impact on the same section of transport network and, if so, whether there is any transport analysis / information for the strategic site in the public domain.

## 2.6 **Way Forward**

2.6.1 Input is requested from Arun District Council and / or West Sussex County Council to:

- Confirm that all the relevant policy documentation is referred to; and
- Agree the committed development that should be allowed for in the transport assessment.

## SECTION 3 Promoting Sustainable Transport

### 3.1 Introduction

3.1.1 This section of the TA will consider the accessibility of the site by walking, cycling and public transport to local services and facilities, including education, employment, health, leisure and shopping.

3.1.2 To consider the propensity for residents to walk or cycle to local facilities, consideration has been given to the distances that people are prepared to travel by walking and cycling.

### 3.2 Existing Travel Patterns

3.2.1 Analysis of Method of travel to work data sources from the 2011 census for the MSOA Arun 003 has been undertaken in order to identify the current levels vehicle use for Barnham. **Table 3.1** summarises the existing methods of travel to work excluding those who are unemployed and those who work from home. It should be noted that this data was sourced before the current Covid-19 pandemic therefore it is likely that there is, and will continue to be, an increase in home working when compared with the 2011 census data.

**Table 3.1: Method of Travel to Work**

| Method of Travel               | Proportion of Trips |
|--------------------------------|---------------------|
| Driving a car or van           | 76%                 |
| Train                          | 9%                  |
| On Foot                        | 6%                  |
| Passenger in a car or van      | 4%                  |
| Bicycle                        | 2%                  |
| Bus, minibus or coach          | 1%                  |
| Motorcycle, scooter or moped   | 1%                  |
| Other method of travel to work | 1%                  |
| <b>Total</b>                   | <b>100%</b>         |

Source: Census 2011

### Walking Distances

3.2.2 Paragraph 4.4.1 of the Manual for Streets states:

*“Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes’ (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2km. MfS encourages a reduction in the need to travel by car through the creation of mixed-use neighbourhoods with interconnected street patterns, where daily needs are within walking distance of most residents.”*

3.2.3 This is corroborated by the National Travel Survey (NTS) 2019 which identifies the mode share journeys of different lengths (Image 3.1) and confirms that the vast majority (80%) of trips of up to one mile (1.6km) are undertaken on foot.

**Image 3.1: Proportion of Trips per Year by Journey Purpose (all modes)**



Source: National Travel Survey, England, 2019

3.2.4 A walking distance of up to 1.6km is identified to offer the greatest potential to replace car trips, and this is therefore considered to be a ‘reasonable’ walking distance.

3.2.5 It is important to note that 2km is not however a maximum walking distance. Historically, the Design Manual for Roads and Bridges (DMRB) TD91/05 “Provision for Non-Motorised Users” at paragraph 2.3 has stated that:

*“Walking is used to access a wide variety of destinations including educational facilities, shops, and places of work, normally within a range of up to 2 miles. Walking and rambling can be undertaken as a leisure activity, often over longer distances”.*

3.2.6 Whilst TD91/05 has been superseded there is no evidence to suggest that isn't still the case. On this basis, it is reasonable to consider a journey of 2 miles / 3.2km as a 'maximum' walking distance for most day-to-day journeys.

3.2.7 Against this background research, the following distances have been used for assessing the likelihood of walking journeys to and from the site:

- 1.6km – comfortable walking distance; and
- 3.2km – acceptable walking distance.

#### Cycling Distances

3.2.8 DMRB TA 91/05 "Provision for Non-Motorised Users" paragraph 2.11 states:

*"Cycling is used for accessing a variety of different destinations, including educational facilities, shops and places of work, up to a range of around 5 miles. Cycling is also undertaken as a leisure activity, often over much longer distances. As well as being a mode of transport in its own right, cycling frequently forms part of a journey in combination with car and public transport."*

3.2.9 Paragraph 1.5 in the Department for Transport's (DfT) Local Transport Note 2/08 'Cycle Infrastructure Design' (October 2008) states that:

*"Urban networks are primarily for local journeys. In common with other modes, many utility cycle journeys are under three miles (4.8km) (ECF, 1998), although for commuter journeys, a trip distance of over 5 miles (8km) is not uncommon."*

3.2.10 Data provided within the National Travel Survey demonstrates that the average distance per journey by bike is approximately 4.4km, with the current average length of an employment and leisure cycle trip some 5.2km.

3.2.11 For the purpose of this assessment, a 5km cycling distance is considered to represent a 'reasonable' cycle distance, with 8km considered to be 'maximum' cycling distance.

3.2.12 The West Sussex County Council (WSCC) Cycling Design Guide sets out the vision of WSCC in providing cycle infrastructure across the county and, while the application only seeks outline consent and the layout is therefore only in indicative form, the principles of this document will be taken into account as part of the design process.

### 3.3 Local Facilities and Key Destination

3.3.1 Barnham offers a good range of local facilities and services which future residents of the site are likely to visit on a day to day basis. These are summarised in **Table 3.2** and Identified in **Figure 3.1**.

**Table 3.2: Key Destinations and Services**

| Purpose    | Destination                      | Total Distance (m) | Walking Journey Time (mins) | Cycle Journey Time (mins) |
|------------|----------------------------------|--------------------|-----------------------------|---------------------------|
| Leisure    | Murrells Field                   | 430                | 5                           | 2                         |
|            | The Murrell Arms                 | 520                | 6                           | 2                         |
|            | Barnham Community Hall           | 700                | 8                           | 3                         |
|            | Barnham Play Park                | 700                | 8                           | 3                         |
|            | Farnhurst Road Play Park         | 1,250              | 15                          | 5                         |
|            | Eastergate Parish Hall           | 2,300              | 27                          | 9                         |
|            | Six Villages Sports Centre       | 3,400              | 40                          | 13                        |
| Retail     | Farley Butchers                  | 510                | 6                           | 2                         |
|            | Barnham Trading Post             | 750                | 9                           | 3                         |
|            | Tesco Express                    | 800                | 10                          | 3                         |
|            | Barnham Village Centre           | 850                | 10                          | 3                         |
|            | Windmill Shopping Village        | 1,300              | 15                          | 5                         |
|            | Eastergate Post Office           | 2,800              | 33                          | 11                        |
| Employment | Fordingbridge Industrial Estate  | 1,900              | 23                          | 7                         |
|            | Orchard Business Park            | 3,000              | 36                          | 11                        |
| Education  | St Philip Howard Catholic School | 1,400              | 17                          | 5                         |
|            | Barnham Primary School           | 1,500              | 18                          | 6                         |

| Purpose    | Destination                   | Total Distance (m) | Walking Journey Time (mins) | Cycle Journey Time (mins) |
|------------|-------------------------------|--------------------|-----------------------------|---------------------------|
|            | Yapton CE Primary School      | 2,800              | 33                          | 11                        |
|            | Yapton Community Pre School   | 2,800              | 33                          | 11                        |
|            | Eastergate CE Primary School  | 3,200              | 38                          | 12                        |
|            | Ormiston Six Villages Academy | 3,300              | 39                          | 12                        |
| Healthcare | Five Villages Pharmacy        | 950                | 11                          | 4                         |
|            | Chantry House Dental Practice | 1,700              | 20                          | 6                         |
|            | The Croft Surgery             | 2,500              | 30                          | 9                         |

Source: Consultants Estimates

#### Key

|                                                                                     |                                                                        |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|
|  | Comfortable walking distance (1.6km) / Reasonable cycle distance (5km) |
|  | Acceptable walking distance (3.2km) / Commuter cycle distance (8km)    |

3.3.2 Table 3.2 demonstrates that there are a wide range of everyday facilities within a comfortable or reasonable walking distance of residents including education, convenience retail, healthcare, a range of leisure facilities and employment opportunities. All of the services and facilities outlined in Table 3.2 are within a reasonable cycling distance.

3.3.3 In addition to the services and facilities identified in Table 3.2, the allocated strategic development at Barnham, Eastergate and Westergate (BEW) will provide additional facilities that could be accessed by residents on the proposed development within a reasonable walk/cycle distance of the proposed development.

## 3.4 Walking

3.4.1 A footway is located on the eastern side of the Marshall Close carriageway, separated from the road by a wide verge. Continuous pedestrian infrastructure is provided from the termination of Marshall Close cul-de-sac to the south, along Marshall Close and joining the B2233 at the

northern end of Marshall Close via a bound surface footway adjacent to properties 20 and 20a. The route forms part of the adopted public highway.

- 3.4.2 Footways are also provided on both the northern and southern sides of the east-west section of Marshall Close, connecting to Church Lane. The footways are again separated from the road by wide verges and the route terminates at the Church Lane carriageway.
- 3.4.3 There are no footways along Church Lane between the proposed site access location and the B2233 Yapton Road; however, traffic levels on Church Lane are expected to be low given the lack of through road to additional towns or villages. Church Lane has a set speed limit of 30mph. Given these characteristics, Church Lane provides conditions conducive to provide a shared surface for pedestrians.
- 3.4.4 Church Lane meets B2233 Yapton Road approximately 190m northwest of the side access. Footways are present on the western side of the B2233 Yapton Road and are street lit. Northbound, the footway provided access to Barnham village centre and railway station. Southbound, the footway provides access to facilities including the Murrell Arms, Barnham Community Hall and Barnham Village Hall bus stop.
- 3.4.5 Public Right of Way FP 323 crosses the site on a northwest-southeast alignment towards the west of Barnham and connects with Church Lane. The Right of Way continues on the eastern side of Church Lane along FP157.

### 3.5 Cycling

- 3.5.1 The road network surrounding the site and within the village of Barnham is suitable for on street cycling, being made up of street lit, single carriageway roads with 30mph speed limits.
- 3.5.2 Paragraph 6.4.1 of Manual for Streets states:

***“Cycling should generally be accommodated on the carriageway. In areas with low traffic volumes and speeds, there should not be any need for dedicated cycle lanes on the street”***

- 3.5.3 All of Barnham lies within a reasonable cycling distance of 5km.

### 3.6 Public Transport

#### Bus

- 3.6.1 The nearest bus stop is located 350m east of the proposed vehicular access on the B2233 Yapton Road. These bus stops consist of bus flags and timetable information. Additional bus stops are located 450m north of the proposed site access at Barnham railway station and consist of bus flag and timetable information. The most western bus stop at Barnham railway station also consists of a bus shelter.
- 3.6.2 A summary of bus services from B2233 Village Hall and Barnham are provided in Table 3.3 below.

**Table 3.3: Bus Service Summary**

| Bus Stop        | Service              | Route                                | Service Frequency                                                 |                                                                   |        |
|-----------------|----------------------|--------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|--------|
|                 |                      |                                      | Monday-Friday                                                     | Saturday                                                          | Sunday |
| Village Hall    | 66A                  | Bognor Regis - Yapton - Bognor Regis | Four services a day (07:26, 10:38, 15:05 and 18:01)               | Three services a day (10:38, 15:05 and 18:01)                     | -      |
|                 | 66C                  | Bognor Regis - Yapton - Bognor Regis | Three services a day (08:57, 13:16 and 17:13)                     | Three services a day (08:57, 13:16 and 17:13)                     | -      |
| Railway Station | 66A                  | Bognor Regis - Yapton - Bognor Regis | Four services a day (07:26, 10:38, 15:05 and 18:01)               | Three services a day (10:38, 15:05 and 18:01)                     | -      |
|                 | 66C                  | Bognor Regis - Yapton - Bognor Regis | Six services a day (08:38, 08:59, 12:57, 13:17, 16:56, and 17:14) | Six services a day (08:38, 08:59, 12:57, 13:17, 16:56, and 17:14) | -      |
|                 | 85A                  | Arundel - Barnham - Chichester       | Four services a day (10:12, 13:14, 14:12 and 17:03)               | -                                                                 | -      |
|                 | 665 (School Service) | Littlehampton - Westergate           | Two services (depart at 07:42, return at 14:55)                   | -                                                                 | -      |

Source: Traveline

## Rail

- 3.6.3 The nearest railway station is Barham railway station, located 550m north of the site access on B2233 Barnham Road. Barnham is on the West Coastway line railway between Brighton and Southampton. A summary of key services from Barnham is provided below in **Table 3.4**.

**Table 3.4: Rail Service Summary**

| Destination         | Frequency of Services |          | Journey Time (minutes) |
|---------------------|-----------------------|----------|------------------------|
|                     | Peak                  | Off-Peak |                        |
| Chichester          | 5                     | 5        | 7                      |
| Brighton            | 2                     | 2        | 50                     |
| Littlehampton       | 3                     | 2        | 10                     |
| Bognor Regis        | 4                     | 4        | 7                      |
| London Victoria     | 4                     | 4        | 87                     |
| Southampton Central | 2                     | 2        | 64                     |
| Portsmouth Harbour  | 1                     | 1        | 36                     |

Source: National Rail

- 3.6.4 The railway station provides an excellent opportunity for residents of the proposed development to undertake journeys by rail to both local towns and larger destinations further afield. The station is located within a 5-minute walk of the site enabling access on foot or by bicycle.

## 3.7 Local Highway Network

- 3.7.1 Marshall Close is situated immediately to the north of the development site and to the west of Church Lane. It comprises a "T" shaped cul-de-sac formed of 4.8m wide carriageways, all of which form part of the adopted public highway. The cul-de-sac is bounded on its western side primarily by a playing field, with residential properties located on the eastern side of Marshall Close. Wide verges on either side of the carriageway also form part of the adopted public highway. Marshall Close connects with Church Lane via a simple priority junction.
- 3.7.2 Church Lane is characterised as a single carriageway lane measuring between circa 4.5 – 6.1m in width and is subject to a 30mph speed limit. Church Lane continues north east bound for 190m before meeting B2233 Yapton Road at a triangle priority junction.
- 3.7.3 B2233 Yapton Road is the primary route that passes south to north through Barnham. Yapton Road has a typical carriageway width of between 5m and 6m in width, is street lit and is subject to a 30mph speed limit.

- 3.7.4 Northbound, the B2233 routes through Barnham and Eastergate. Approximately 5.5km northwest of the site the B2233 provides access to the A27. Southbound, the B2233 provides access to the A259 after approximately 4.9km.
- 3.7.5 An Automatic Traffic Counter (ATC) will be placed on Church Lane in the vicinity of the proposed access and will record 85<sup>th</sup> percentile speeds and observed traffic flows. Whilst the vehicle speeds derived from the ATC surveys will be accurate, observed traffic flows may be lower due to the restrictions and reduced travel arising from the current Covid-19 pandemic.
- 3.7.6 Further data will be sourced, either from Department for Transport statistics or from any relevant WSCC-held data for the local area and, if necessary, used as a means of determining a factor to multiply the observed traffic flows to provide pre-Covid-19 traffic flows (the methodology is discussed in greater detail in Section 5 of this TASR).

### 3.8 PIA Data

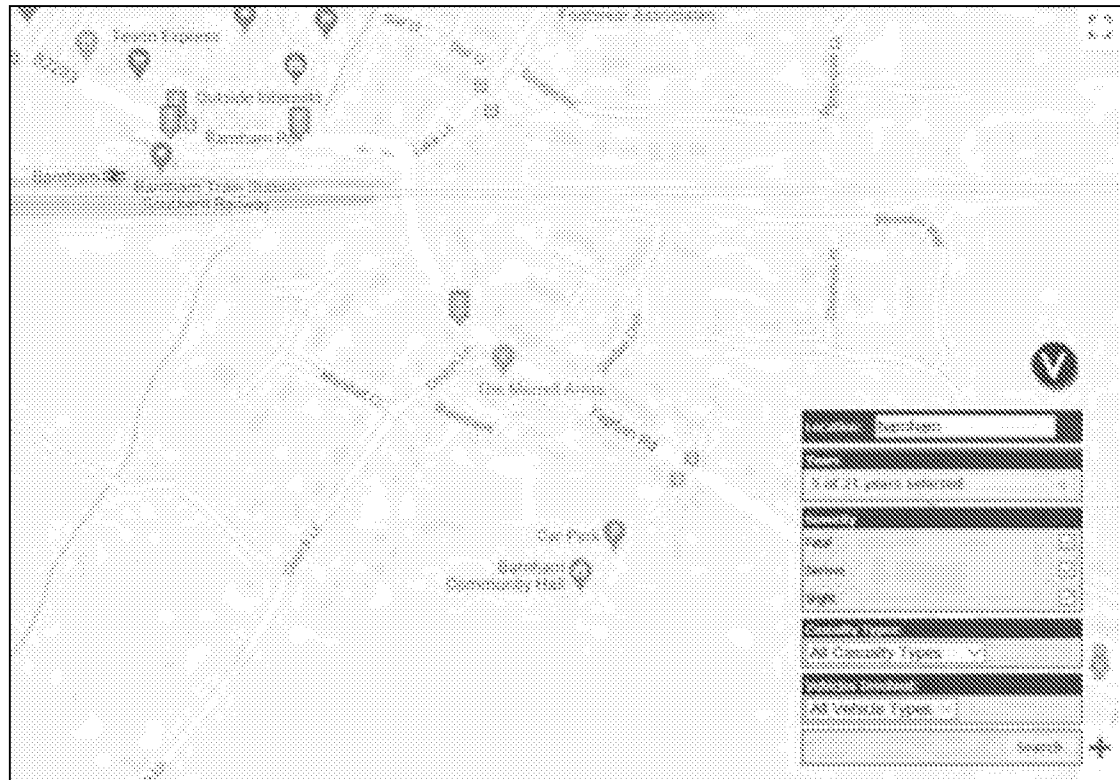
- 3.8.1 Personal Injury Accident (PIA) data will be obtained from Sussex Safer Roads for the latest five-year period to identify whether there are any recorded road safety issues in the local area that need to be considered further in the TA.
- 3.8.2 The proposed study area for the PIA data request is outlined below in **Image 3.3**.

**Image 3.3: PIA Study Area**



- 3.8.3 An initial PIA search using the Crashmap database, an extract of which is provided in **Image 3.4**, identifies that there have been no recorded accidents on Marshall Close, Church Lane or at the junction of Church Lane/B2233 in the most recent 5-year search period.

**Image 3.4**



Source: Crashmap

## 3.9 Travel Plan

- 3.9.1 In line with the draft 'West Sussex County Council Development Travel Plan Policy' document, a separate Framework Travel Plan will be prepared. The WSCC Development Travel Plan Policy identifies that Residential Travel Plans should provide a ***"commitment to delivering a range of measures to promote sustainable modes of transport"***. The draft document also sets out the thresholds for when a Travel Plan will be required in line with the former DfT 'Guidance on Transport Assessments'.
- 3.9.2 The proposed Framework Travel plan will incorporate soft measures that includes information provision (through welcome packs, Personalised Journey Planning, websites and maps), and incentives, including the provision of a sustainable travel voucher for each household to encourage residents to try public transport, or to assist with the purchase of a bicycle.

### 3.10 **Way Forward**

3.10.1 Arun District Council and / or West Sussex County Council are requested to confirm:

- That they are satisfied with the parameters identified for undertaking the assessment of the accessibility of the site by sustainable modes of transport;
- That they are satisfied with the suggested approach for establishing baseline traffic conditions (speed and volume) of Church Lane; and
- That they are satisfied with the extent of the proposed PIA assessment.

## SECTION 4 Proposed Site Access Arrangements

### 4.1 Introduction

4.1.1 This section of the TASR explores the access opportunities for both vehicular and non-vehicular traffic and presents the proposed access strategy.

4.1.2 The TA will provide a full assessment of the site access strategy to demonstrate that safe and suitable access can be achieved in accordance with the requirements of the NPPE.

### 4.2 Context

4.2.1 A plan showing the adopted highway in the area surrounding the site is provided at **Appendix C** and an extract is reproduced in **Image 4.1** below.

**Image 4.1 Highway Boundary**



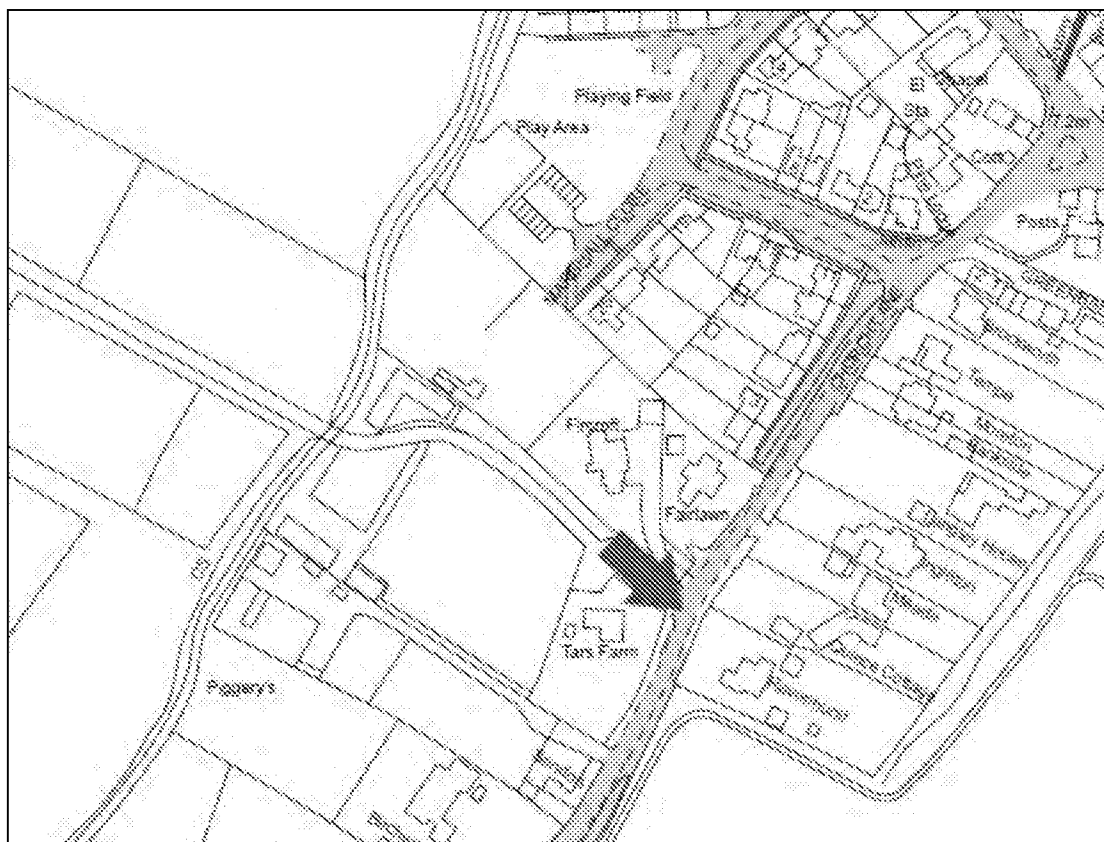
## 4.3 Site Access

- 4.3.1 Access to the site is proposed via an extension to Marshall Close, as shown in drawing **ITS14160-GA-005**. The access comprises an extension of the existing carriageway to provide a 5.5m access road that turns westwards into the site. A 25m forward visibility splay is provided across the bend on a design speed of 20mph. The bend is also provided with additional width to facilitate the passing of a car and refuse vehicle.
- 4.3.2 The existing footway situated on the eastern side of Marshall Close is to be extended into the site to provide a 2m wide pedestrian route. A second footway is to be provided within the site on the northern side of the access road, with a dropped kerb and tactile paving crossing to facilitate transition to the footway on the southern side of the carriageway. The extension of the footway will provide continuous pedestrian infrastructure between the site and Barnham via Marshall Close on the key pedestrian desire line.
- 4.3.3 It is noted that the proposed access arrangement crosses unregistered land within the site boundary and this matter is being explored with the Applicants' solicitors. The proposed access road also crosses a watercourse and floodplain in Flood Zones 2 and 3; a Flood Risk Assessment is being undertaken which will determine the road/crossing structure.
- 4.3.4 A Stage 1 Road Safety Audit will be undertaken as part of the design process in accordance with the WSCC Road Safety Audit Policy.

## 4.4 Church Lane – Emergency Access

- 4.4.1 An alternative point of entry to the site is provided from Church Lane, through the existing site access to Tars Farm House; the location is denoted by the blue arrow shown in **Image 4.2**.

**Image 4.2: Potential Emergency Access**



- 4.4.2 The width of Church Lane at this location is not considered wide enough to serve as a primary access to the site. However, the access would be suitable for use for access by emergency vehicles and, while not on a key desire line, pedestrians and cyclists.

#### 4.5 **Marshall Close**

- 4.5.1 Marshall Close has a carriageway width of circa 4.8m with pedestrian footways separated from the carriageway by wide verges. From observation of the site it was apparent that some on-street parking occurred.
- 4.5.2 The proposed development presents the opportunity to utilise part of the verge widen the carriageway to a width of 5.5m and to formalise the existing on-street parking into parking laybys.
- 4.5.3 Drawing **ITB14160-GA-001** shows a potential scheme of improvements that incorporates the above and also changes the priority of the northern section of Marshall Close, so that the new access road has priority into the site due to the majority of movements being into the site in a 'with development' scenario. The views of WSCC of such an improvement are sought.

- 4.5.4 Drawing 001 also shows visibility splays at the junction of Marshall Close and Church Lane extending 43m from a set-back of 2.4m on an assumed 85<sup>th</sup> percentile speed of 30mph. From observation of the site it is evident that vehicles using Church Lane are not travelling at 30mph, and ATCs will be placed to establish vehicular speeds and ascertain visibility requirements.

#### 4.6 Church Lane/B2233

- 4.6.1 To the north of Marshall Close, the Church Lane carriageway is 5.5m – 6.1m in width, providing sufficient width for a car and refuse vehicle to pass one another.
- 4.6.2 While not forming a key desire line, the opportunity also exists for pedestrian journeys to be accommodated on Church Lane. While there is insufficient width to provide separate pedestrian infrastructure, the lightly trafficked and low speed nature of Church Lane, coupled with good forward visibility given its alignment, is conducive to a shared use arrangement.
- 4.6.3 Access to the B2233 is achieved from Church Lane via a triangular priority junction arrangement. It is observed that some on-street parking occurs in the vicinity of the residential properties and public house. However, a review of the Crashmap database identifies that there have been no recorded accidents at the junction.
- 4.6.4 Operational assessment of the junction will be undertaken as part of the Transport Assessment (a discussed in Chapter 5 of this TASN), however, it is not anticipated that the proposed development would have a detrimental impact upon the operation of this junction.

#### 4.7 Summary and Way Forward

- 4.7.1 The proposed access strategy for the site is for access to be achieved via an extension of Marshall Close cul-de-sac. The opportunity exists to provide a second point emergency access from the existing Tars Farm House access onto Church Lane.
- 4.7.2 Pedestrian journeys will be accommodated via an extension of the existing pedestrian provision on Marshall Close, connecting directly with provision along the B2233, and providing a continuous route through to Barnham on the key pedestrian desire line.
- 4.7.3 To support the access strategy, an indicative scheme of improvements have been identified to widen Marshall Close to 5.5m and to formalise existing on-street parking into laybys adjacent to the carriageway.

4.7.4 Arun District Council and / or West Sussex County Council are requested to:

- ♦ Confirm that they are satisfied with the principle of the proposed access strategy; and
- ♦ Provide any views on the proposed scheme of works to Marshall Close.

## SECTION 5 Traffic Impact

### 5.1 Introduction

5.1.1 This section provides an overview of the proposed parameters for the traffic impact analysis.

### 5.2 Development Traffic Generation

5.2.1 The potential traffic generation of the development has been calculated using surveys of similarly located sites in the 'houses privately owned' category contained in the TRICS database. The trips rates are robust as they make no allowance for affordable homes.

5.2.2 The trip rates are based on the following parameters:

- England excluding Greater London;
- Up to 500 units;
- Weekdays; and
- Suburban Area and Edge of Town.

5.2.3 The trip rates are summarised in **Table 5.1**. The full TRICS outputs are included in **Appendix D**.

**Table 5.1: Trip Rates and Traffic Generation – 200 dwellings**

|                        | Morning Peak Hour (08:00 – 09:00) |       |       | Evening Peak Hour (17:00 – 18:00) |       |       |
|------------------------|-----------------------------------|-------|-------|-----------------------------------|-------|-------|
|                        | In                                | Out   | Total | In                                | Out   | Total |
| Trip rate per Dwelling | 0.130                             | 0.379 | 0.509 | 0.345                             | 0.160 | 0.505 |
| Traffic Generation     | 26                                | 76    | 102   | 69                                | 32    | 101   |

Source: TRICS

5.2.4 The assessment identifies that a development of 200 dwellings at this location is expected to generate some 101 to 102 vehicular trips during network peak hours – i.e. less than 2 vehicles per minute on average across the hour.

## 5.3 Baseline Traffic Data

5.3.1 Traffic surveys will be undertaken outside of the summer school holidays during September 2020 to establish baseline traffic conditions. Manual Classified Counts (MCC) will be undertaken at all junctions requiring operational assessment and Automatic Traffic Counts (ATC) will be placed to establish link flows and speeds.

5.3.2 It is recognised that the impact of the current Covid-19 pandemic may continue to affect traffic flows at the time of the surveys. Therefore, ATCs will be commissioned to collect data on key approaches to the site (e.g. Barnham Road, Yapton Road and Lake Lane) and the data will be compared against data collected pre-Covid that has been submitted as part of other planning applications (e.g. Mode Transport Assessment J324375) or available through the WSCC Traffic Counts database. **Image 5.1** identifies locations at which WSCC hold publicly accessible data:

**Image 5.1: WSCC Traffic Data Locations**



Source: WSCC Traffic Counts website

- 5.3.3 Should the assessment of these reference cases denote a significant change in traffic flows then growth factors will be derived from the data and applied to the baseline data collected to inform the TA.

## 5.4 Assessment Years and Growth Rates

- 5.4.1 In line with the WSCC Transport Assessment Methodology guidance, it is proposed to undertake traffic impact assessments for the proposed opening year for the development (2023) and for five years from the submission of a planning application (2025) on an assumed submission year of 2020. In addition, a sensitivity test for information purposes will be undertaken for the future year of 2031, which accords with the end of the adopted local plan period.
- 5.4.2 To establish forecast growth between the collection of baseline data and identified assessment years, TEMPRO growth rates have been sourced. These are summarised in **Table 5.2**, with the full TEMPRO outputs provided in **Appendix E**.

**Table 5.2: TEMPRO Growth Rates**

| AM Peak Hour | PM Peak Hour |
|--------------|--------------|
| 2020 - 2023  |              |
| 1.023        | 1.023        |
| 2020 - 2025  |              |
| 1.038        | 1.039        |
| 2020 - 2031  |              |
| 1.079        | 1.083        |

Source: TEMPRO

- 5.4.3 In addition to the inclusion of TEMPro growth, traffic arising from committed development will be included in the assessment. In accordance with NPPG, committed development is defined as any development that has a reasonable chance of proceeding within the next 3 years. On this basis, the following committed development has been identified:
- Angels Nursery Yapton Road Barnham PO22 0AY - Planning permission BN/93/19/PL for the development of 95 dwellings
- 5.4.4 Clarification is sought from WSCC and/or ADC as to whether any further committed development, which satisfies the NPPG criteria, should be included within the assessment.

## 5.5 Traffic Distribution

- 5.5.1 The likely journey purpose for the generated car driver peak hour trips can be identified using the National Travel Survey (NTS) 2019 (DfT). The proportion of peak hour trips by journey purpose by car is presented in **Table 5.3**.

**Table 5.3: Proportion of Peak Hour Trips by Journey Purpose (Car Driver Only)**

| Trip Purpose               | AM Peak (0800-0900) | PM Peak (1700-1800) |
|----------------------------|---------------------|---------------------|
| Commuting/Business         | 37.6%               | 43.9%               |
| All Other Journey Purposes | 62.4%               | 56.1%               |
| <b>Total</b>               | <b>100%</b>         | <b>100%</b>         |

Source: Car driver trip start time by trip purpose (Monday to Friday only): Great Britain, 2014/18. National Travel Survey, DfT, 2019

- 5.5.2 Some 38% of the total vehicular trips generated by the residential development will be for employment journeys in the morning peak hour period. The remaining 62% of the vehicle trips will be all other purposes, including education, shopping, leisure and personal business trips. In the evening peak hour, 44% of journeys are employment related with other journeys comprising 56% of the total vehicular trips.
- 5.5.3 For the purpose of this assessment, the analysis has been undertaken on the basis that 44% of the total vehicular trips generated by the residential development will be for employment journeys and the remaining 56% of the vehicle trips will be for all other purposes for both the morning and evening peak hours. This provides a robust estimate because it assumes a greater proportion of non-local journeys.
- 5.5.4 In order to provide an accurate assessment of the likely distribution of traffic from the site, separate methodologies will be applied to consider the destinations of commuting and business trips to other trip purposes from the Arun-003 MSOA:
- For commuting and business trips, the National Census Journey to Work statistics (for car drivers) is to be used. These identify the location of existing resident's employment locations and so identify existing commuting patterns; and
  - For other journey purpose trips a  $P/T^2$  gravity model will be undertaken using the population of key urban areas (from the 2011 census) within a 35 minute drive from the site (estimated from Google Maps Directions facility).

- 5.5.5 The two sets of data will then be combined to generate a single set of distribution parameters to inform the development trip assignment.

## 5.6 Traffic Assignment

- 5.6.1 To determine the routing of vehicle trips to these destinations, trips will be assigned to the road network based on the quickest route from the site to the destination location, which is identified using the Google Maps 'Directions' Facility. Within the Directions facility, a start time for journeys of 08:00 will be utilised to reflect peak period traffic conditions.
- 5.6.2 In some cases, a single route option may be identified by the assessment. However, for some destinations, the assessment may identify multiple routes. In these cases, development trips have been assigned to the possible routes based upon the journey times identified, with the quickest route assigned a larger number of trips.

## 5.7 Operational Assessments

- 5.7.1 As part of the TA detailed junction operational assessments will be undertaken at key junctions where the development is likely to have an impact and, if necessary, identify improvements to mitigate the impact of the development in accordance with NPPF criteria.
- 5.7.2 The assessment will be carried out in accordance with the WSCC 'Transport Assessment Methodology', and capacity testing undertaken where junction entry flows increase by 30 or more movements during any hour. While the extent of the analysis will be informed by the distribution and assignment exercise, it is envisaged that the following junctions will be assessed:
- Church Lane / B2233 Yapton Road Triangle junction;
  - B2233 Yapton Road / Lake Lane Priority junction; and
  - B2233 Barnham Road / Elm Grove Cross Road.

## 5.8 Way Forward

- 5.8.1 Arun District Council and / or West Sussex County Council are requested to confirm:
- That they are satisfied with the parameters identified for undertaking the traffic impact of the proposed development;

- ♦ Satisfied with the proposed methodology to establish suitable baseline traffic conditions to inform the TA; and
- ♦ Identify whether any further committed development, consistent with NPPG, should be included within the assessment.

## SECTION 6 Summary and Way Forward

6.1 Gleeson proposes to submit an outline planning application (with all matters reserved except access) for a development of up to 200 dwellings on land at Tars Farm, Barnham. i-Transport has been appointed by Gleeson to provide highways and transport advice on the project. This Transport Assessment Scoping Report has been prepared to agree the parameters upon which a Transport Assessment will be prepared.

6.2 The TA will focus on the three key transport tests set out in the National Planning Policy Framework, which are reflected in local policy and guidance, namely:

*a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*

*b) safe and suitable access to the site can be achieved for all users; and*

*c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”*

6.3 The TASR sets out the parameters on which the TA will consider accessibility by sustainable modes of transport. Arun District Council and / or West Sussex County Council are requested to confirm:

- That they are satisfied with the parameters identified for undertaking the assessment of the accessibility of the site by sustainable modes of transport;
- That they are satisfied with the suggested approach for establishing baseline traffic conditions (speed and volume) of Church Lane; and
- That they are satisfied with the extent of the proposed PIA assessment.

6.3.1 The TASR sets out a proposed access strategy for the site, with access achieved via Marshall Close from Church Lane. To support this strategy, improvement of both Marshall Close has been identified. Arun District Council and / or West Sussex County Council are requested to confirm that they are satisfied with the principle of the proposed access strategy.

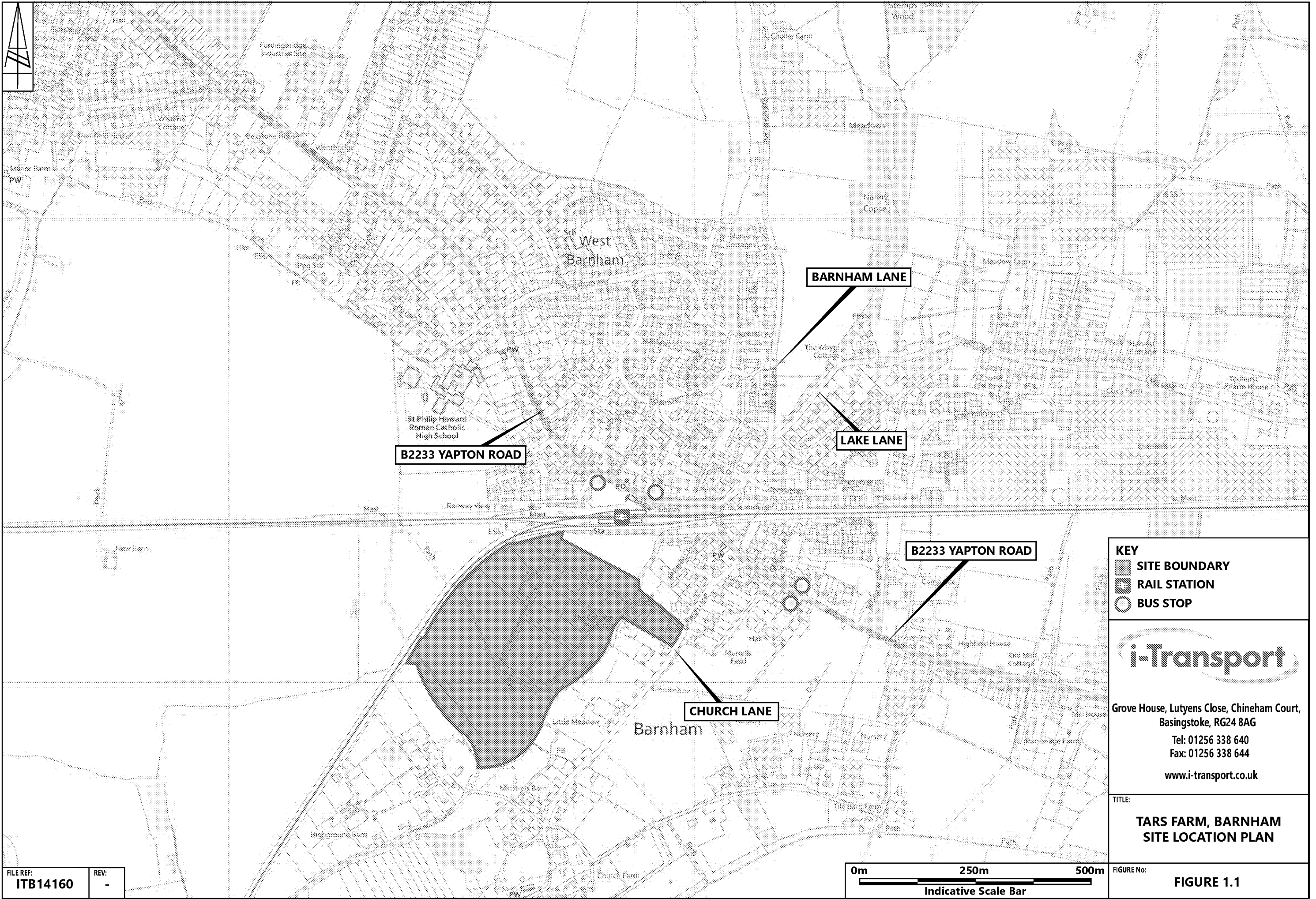
6.3.2 A detailed traffic impact assessment is set out. The TASR establishes trips rates to be used in the assessment and a methodology for the distribution and assignment of traffic generated by the proposed development. Traffic data will be collected in September 2020 and a methodology for

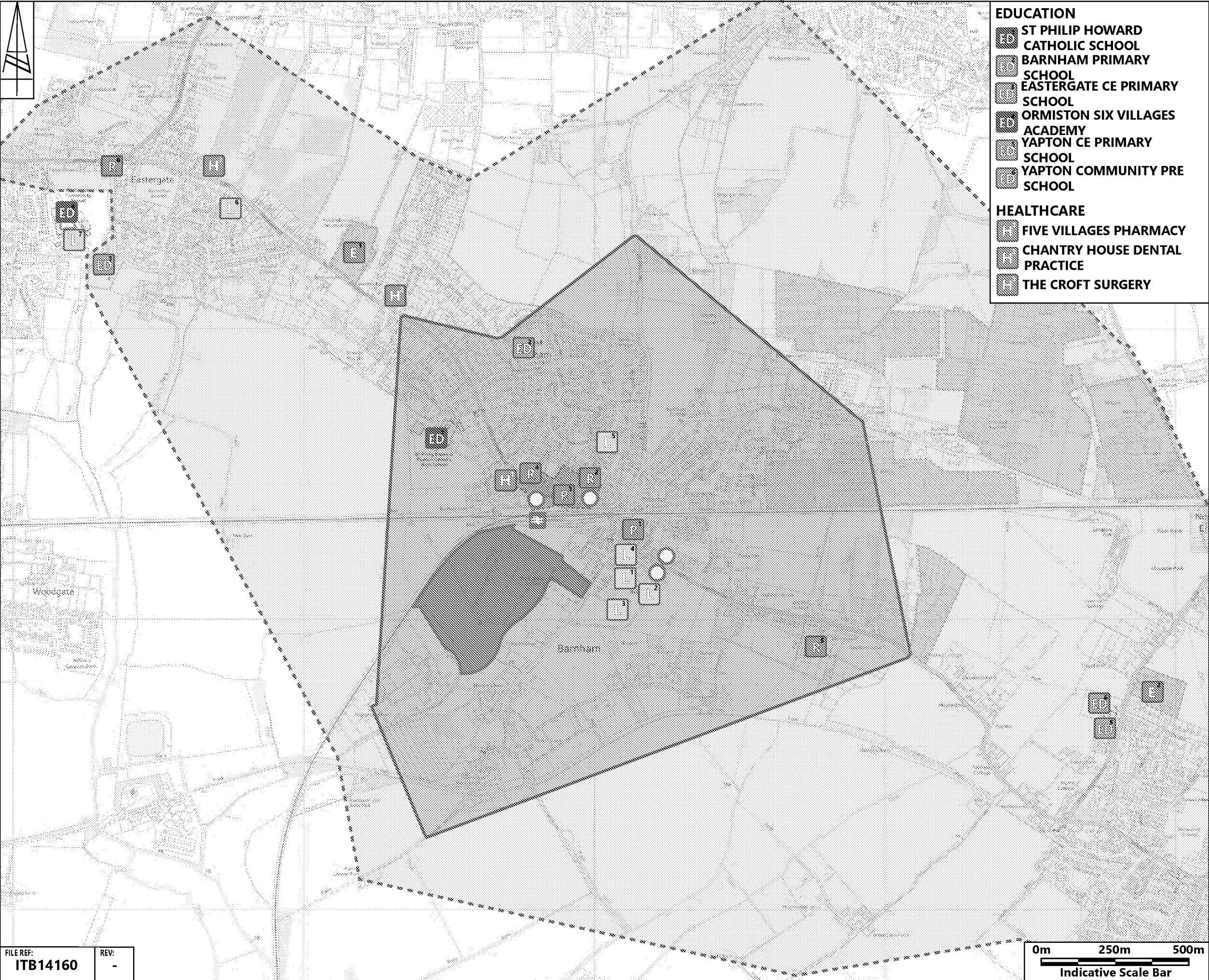
verifying and, if necessary, adjusting the collected data is proposed in light of the possible impact restrictions on movement associated with the Covid-19 response.

6.3.3 Arun District Council and / or West Sussex County Council are requested to confirm:

- That they are satisfied with the parameters identified for undertaking the traffic impact of the proposed development;
- Satisfied with the proposed methodology to establish suitable baseline traffic conditions to inform the TA; and
- Identify whether any further committed development, consistent with NPPG, should be included within the assessment.

## FIGURES





- EDUCATION**
- ST PHILIP HOWARD CATHOLIC SCHOOL
  - BARNHAM PRIMARY SCHOOL
  - EASTERGATE CE PRIMARY SCHOOL
  - ORMISTON SIX VILLAGES ACADEMY
  - YAPTON CE PRIMARY SCHOOL
  - YAPTON COMMUNITY PRE SCHOOL

- HEALTHCARE**
- FIVE VILLAGES PHARMACY
  - CHANNY HOUSE DENTAL PRACTICE
  - THE CROFT SURGERY

- KEY**
- SITE BOUNDARY
  - RAIL STATION
  - TOWN CENTRE
  - EMPLOYMENT AREA
  - BUS STOP
  - 1600M CATCHMENT
  - 3200M CATCHMENT
- LEISURE**
- BARNHAM PLAY PARK
  - BARNHAM COMMUNITY HALL
  - MURRELLS FIELD
  - THE MURRELL ARMS
  - FARNHURST ROAD PLAY PARK
  - EASTERGATE PARISH HALL
  - SIX VILLAGES SPORTS CENTRE

- EMPLOYMENT**
- FORDINGBRIDGE INDUSTRIAL ESTATE
  - ORCHARD BUSINESS PARK

- RETAIL**
- EARLEY BUTCHERS
  - BARNHAM TRADING POST
  - TESCO EXPRESS
  - BARNHAM VILLAGE CENTRE
  - WINDMILL SHOPPING VILLAGE
  - EASTERGATE POST OFFICE



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Fax: 01256 338 644  
[www.i-transport.co.uk](http://www.i-transport.co.uk)

TITLE:  
**TARS FARM, BARNHAM  
LOCAL FACILITIES PLAN**

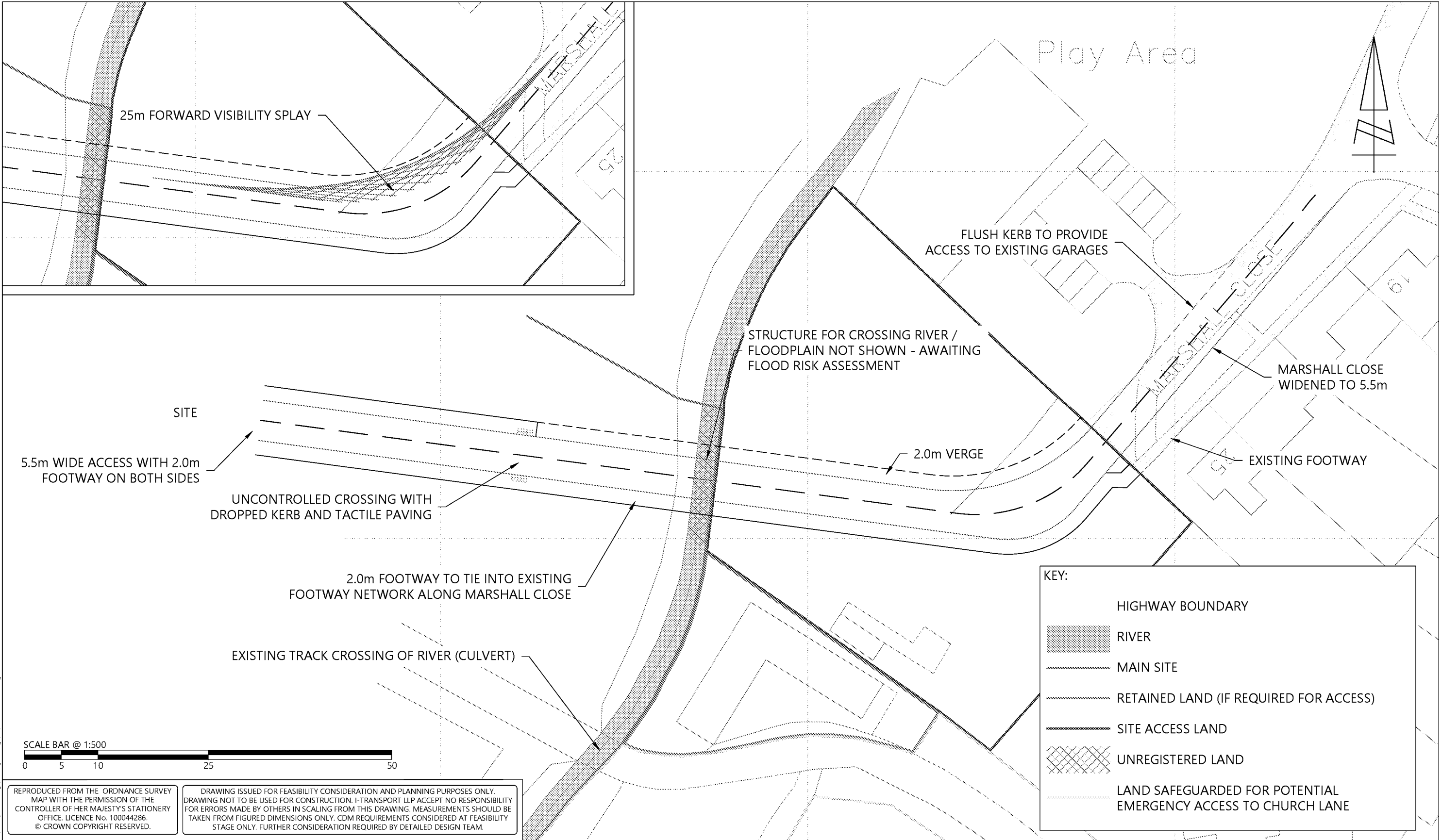
FIGURE No: **FIGURE 3.1**

FILE REF:  
**ITB14160**

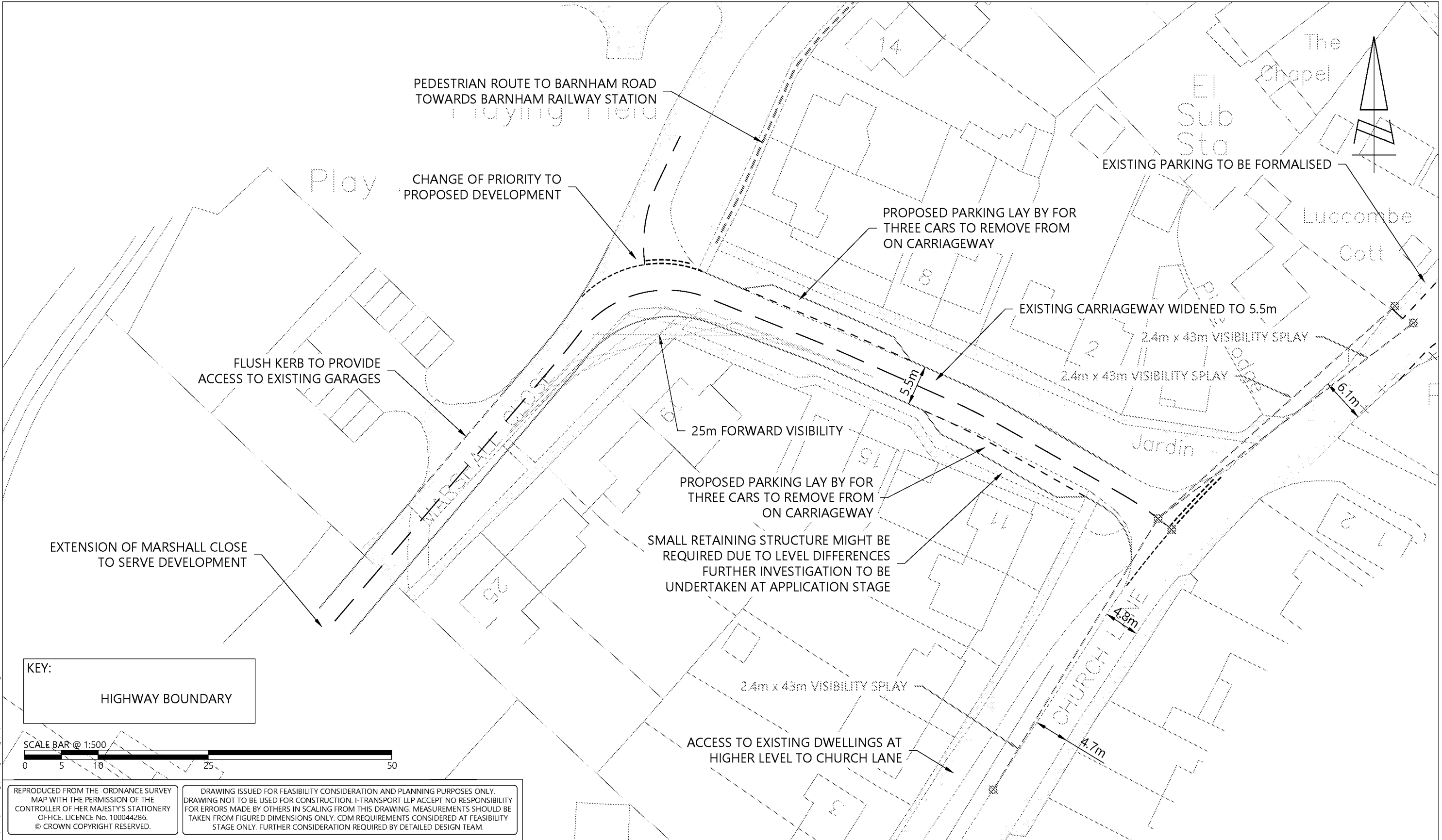
REV:  
**-**

0m 250m 500m  
Indicative Scale Bar

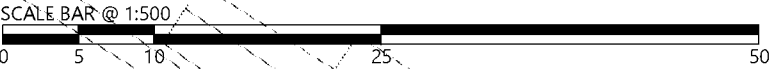
# DRAWINGS



|                                                                                                                                                                                                                      |                                |      |    |             |  |  |                                                                     |     |                                    |                                       |                                    |                          |                       |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------|----|-------------|--|--|---------------------------------------------------------------------|-----|------------------------------------|---------------------------------------|------------------------------------|--------------------------|-----------------------|---------------|
| <div></div> <div>Grove House, Lutyens Close, Chineham<br/>Basingstoke, Hampshire, RG24 8AG</div> <div>www.i-transport.co.uk</div> |                                |      |    |             |  |  | TITLE:<br><br>POTENTIAL SITE ACCESS FROM MARSHALL CLOSE - OPTION 1B |     | DRAWN:<br><br>MC                   | CHECKED:<br><br>MG                    | APPROVED:<br><br>MG                |                          |                       |               |
|                                                                                                                                                                                                                      | REV                            | DATE | BY | DESCRIPTION |  |  | CHK                                                                 | APD | PROJECT:<br><br>TARS FARM, BARNHAM | CLIENT:<br><br>GLEESON STRATEGIC LAND | PROJECT No:<br><br>ITB14160        | SCALE @ A3:<br><br>1:500 | DATE:<br><br>29.07.20 |               |
|                                                                                                                                                                                                                      | STATUS:<br><br>FOR INFORMATION |      |    |             |  |  |                                                                     |     |                                    |                                       | DRAWING No:<br><br>ITB14160-GA-005 |                          |                       | REV:<br><br>- |
|                                                                                                                                                                                                                      |                                |      |    |             |  |  |                                                                     |     |                                    |                                       |                                    |                          |                       |               |



KEY:  
HIGHWAY BOUNDARY



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Tel: 01256 338640

| REV | DATE | BY | DESCRIPTION     | CHK | APD |
|-----|------|----|-----------------|-----|-----|
|     |      |    | FOR INFORMATION |     |     |

|                                              |                                   |
|----------------------------------------------|-----------------------------------|
| TITLE:<br>POTENTIAL SITE ACCESS ARRANGEMENTS |                                   |
| PROJECT:<br>TARS FARM, BARNHAM               | CLIENT:<br>GLEESON STRATEGIC LAND |

|                                |                      |                   |
|--------------------------------|----------------------|-------------------|
| DRAWN:<br>MC                   | CHECKED:<br>MG       | APPROVED:<br>MG   |
| PROJECT No:<br>ITB14160        | SCALE @ A3:<br>1:500 | DATE:<br>25.04.19 |
| DRAWING No:<br>ITB14160-GA-001 | REV:<br>-            |                   |

## APPENDIX A. Emerging Masterplan



## APPENDIX B. Policy H SP2C Extract

## 12 Housing Delivery

developments will be in the form of urban extensions to existing settlements. Development in these locations will build upon, and link to existing infrastructure, where required. In addition, whilst below the threshold for a strategic site allocation, the Plan allocates 250 dwellings at Angmering South and East. Such an allocation is associated with existing planning permissions on adjoining sites.

### Policy H SP2c

#### Inland Arun

#### Barnham/Eastergate/Westergate (SD5)

This allocation is located around the small settlements of Barnham Eastergate and Westergate. This Strategic Allocation will provide at least 2,300 dwellings over the plan period, and up to 3,000 in total (a further 700 beyond 2031). Development proposals must demonstrate compliance with the following key design and infrastructure requirements:

- a. Preserve the separate identities and avoid any further physical coalescence of the three villages of Barnham, Eastergate and Westergate through the delivery of green infrastructure. Eastergate and Barnham should be protected from a continuous urban form / coalescence along the north and south aspects of the B2233,
- b. the design of development and landscaping shall ensure that there is continuity between the existing landscape setting and villages,
- c. the design and layout of the development shall take account of the location of the railway line crossing the site,
- d. housing shall be designed around a Linear Park which follows along the Lidsey Rife,
- e. A comprehensive strategy for surface water management will be developed in line with specific recommendations for this locality, in the Arun Strategic Surface Water Management Study;
- f. significant views to and from the South Downs shall be incorporated within the site,
- g. provide a Community Hub which has been designed and will include;
  - i. a new well connected local centre, with connections to the train station at Barnham,
  - ii. the location and scale of the local centre shall support and respect the relationship with existing facilities within the six villages area;
  - iii. new retail, commercial and community facilities
  - iv. new Tier 7 library facility; and

- v. healthcare facilities to serve BEW (SD5) and Fontwell (SD6)

h. transport requirements including:

- i. a new A29 route through the allocation which provides all necessary linkages and routing between the A259 (Bognor Regis Relief Road) to the south and A27 to the north and includes a bridge over the railway to the east of the current Woodgate crossing. The construction of this new route will be regarded as not only mitigating the effect of additional development traffic from the strategic site, but also providing significant additional benefits to the primary local road network and reducing the potential for future congestion in the wider area. In the event that the any landowner delays the delivery of the route and/or does not reasonably make available part or all of the route then Arun District Council will utilise Compulsory Purchase Order powers to deliver the entire route of the road from the A29 Fontwell Avenue in the north to the A29 Lidsey Road in the south;
- ii. provision of an east-west route north of the railway line that will join the existing A29 route to the new A29 route and continue eastwards to Barnham railway station;
- iii. access to Barnham railway station shall be maximised through the provision of direct and attractive routes for all transport modes including additional car parking to serve facilities in Barnham's centre including at the railway station;
- iv. regular bus services linking BEW with Bognor Regis (A29 route) and local facilities and employment; and
- v. Westergate Link cycle scheme, in addition to further cycle routes to/from Bognor Regis and linkages,

i. provide a new two-form entry primary school, a new one-form (expandable to two-form) entry primary school and nursery places,

j. incorporate two new sports pitches and changing facilities, and

k. incorporate planned new employment provision.

### Fontwell (SD6)

Located to the south-west of the main Fontwell settlement, this Strategic Allocation will provide at least 400 dwellings over the plan period. Development proposals must demonstrate compliance with the following key design and infrastructure requirements:

- a. the design and layout shall integrate Fontwell with the existing urban area at Wandleys Close.

## 12 Housing Delivery

### Yapton (SD7)

Located to the south west of Yapton development proposals in the Strategic Allocation will provide at least 500 dwellings over the plan period. Development proposals must comply with the following key design and infrastructure requirements:

- a. provide a contribution towards new nursery and primary places education facilities or the improvement or expansion of the relevant existing facilities,
- b. contributions towards the equivalent of Tier 7 library facilities or the improvement or expansion of the relevant existing facility,
- c. improvements to the A259 between Climping and Littlehampton, and
- d. contributions towards new healthcare facilities which will be incorporated at Ford (SD8) or the improvement or expansion of the relevant existing facilities.

### Ford (SD8)

Development proposals in the Ford Strategic Allocation will provide at least 1,500 dwellings over the plan period. The site is functionally connected to Arun Valley SPA and development should avoid adverse effects on this designated area. Development proposals must demonstrate compliance with the following key design and infrastructure requirements:

- a. to take account of sustainable links for all modes of transport between the development, Ford Railway Station and the Littlehampton/Arundel cycleway,
- b. provide a new two-form entry primary school and nursery places,
- c. provide a Community hub to meet identified local need which includes,
  - i. new retail, commercial and community facilities,
  - ii. a new Tier 7 library facility, and
  - iii. provision of new healthcare facilities for Ford (SD8), Yapton (SD7) and Climping (SD10). Alternatively, where appropriate, proposals may make a contribution towards new facilities or the improvement or expansion of the relevant existing facilities, subject to agreement with the Council,
- d. incorporate two new sports pitches and changing facilities,
- e. provide a new 3G pitch facility to serve the east of the District,

- f. improvements to the A259 between Climping and Littlehampton,
- g. incorporate planned new employment provision,
- h. Reflect the historic alignment of the canal,
- i. maintain visual separation between Ford and Yapton and between Climping and Ford through the layout of the development and provision of landscaped open space; and
- j. take into account the siting of Ford Wastewater Treatment Works, including the outcomes of an odour assessment, and not prejudice the operation of or the expansion of the treatment plant as required to accommodate future growth in the District.

### **Angmering North (SD9)**

Development proposals in the Angmering North Strategic Allocation will provide at least 800 dwellings over the plan period. Development proposals must demonstrate compliance with the following key design and infrastructure requirements which are specific to the allocation:

- a. explore opportunities to provide library access to meet identified local need either on-site, or by making a contribution towards new facilities or the improvement or expansion of the relevant existing facilities,
- b. extend the existing local village health facilities in the locality,
- c. accommodation for nursery places, linked to the primary school provision,
- d. primary school provision (1 FE expandable to 2FE to serve Angmering North SD9 and Angmering South and East SD11), either on-site, or by making a contribution towards new facilities or the improvement or expansion of the relevant existing facilities,
- e. be supported by a detailed Landscape Appraisal which has regard to the special qualities of the South Downs National Park, and must include landscape mitigation measures which address harmful impacts identified within the Appraisal, and
- f. Incorporate planned new employment provision in conjunction with EMP SP3.

## 12 Housing Delivery

### Climping (SD10)

Development proposals in the Climping Strategic Allocation will provide at least 300 dwellings over the plan period. Development proposals must demonstrate compliance with the following key design and infrastructure requirements which are specific to the allocation:

- a. provide contributions to allow the expansion of the existing primary school or if this is not feasible contributions to the improvement or expansion of relevant primary school facilities.
- b. improvements to the A259 between Climping and Littlehampton
- c. provide a Community hub with;
  - i. new retail, commercial and community facilities,
  - ii. a new Tier 7 library facility, and
  - iii. contributions towards new healthcare facilities which will be provided in Ford (SD8).
- d. and, provide a controlled crossing on the A259.

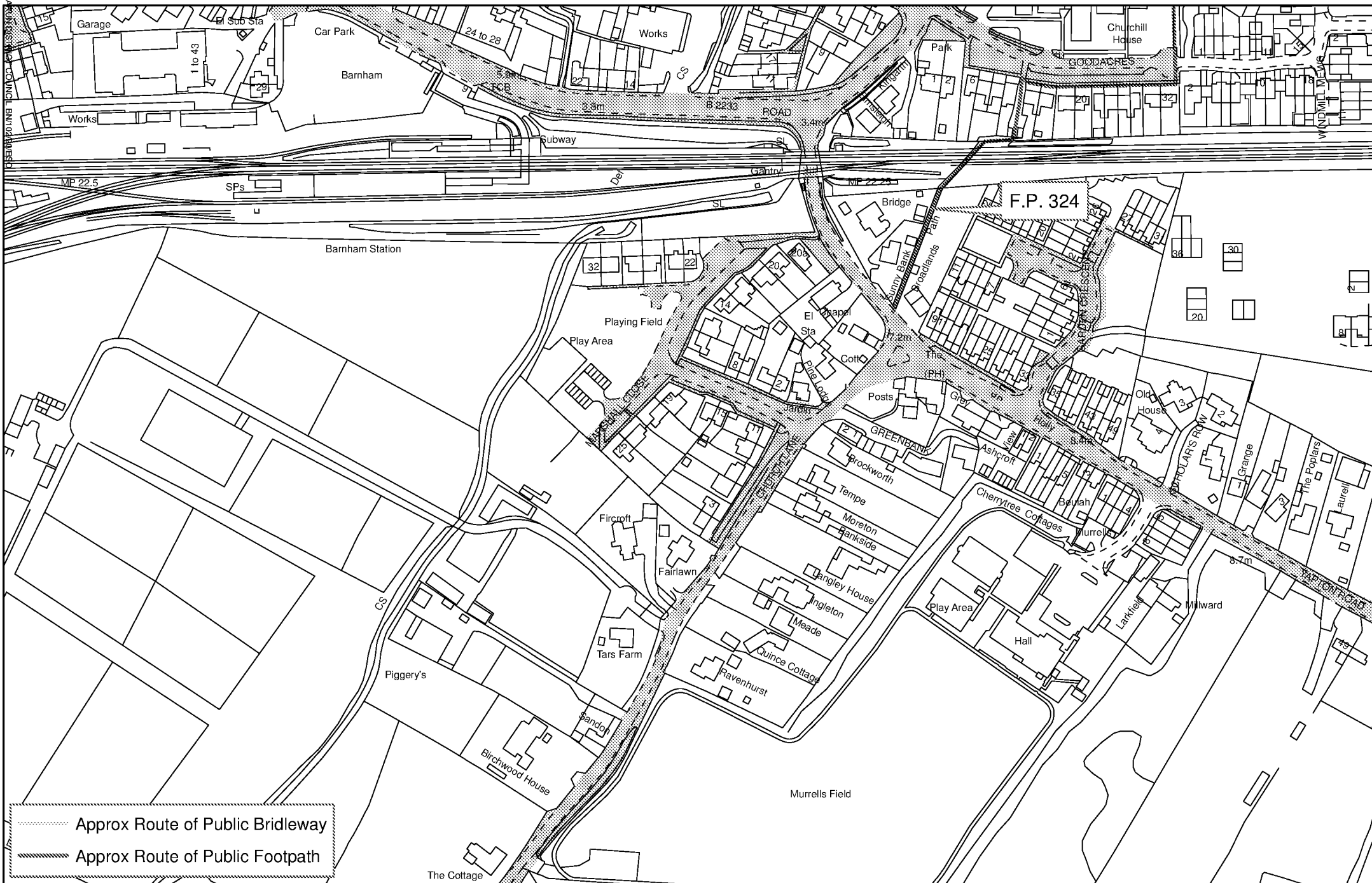
### Angmering South and East (SD11)

Development proposals in the Angmering South and East Allocation are required to facilitate the relocation of Worthing Rugby Club.

## 12.2 Housing mix

- 12.2.1** The balance and mix of household and dwelling types together with community and social facilities strongly influences the way a community develops.
- 12.2.2** Developers should consider the findings of the Strategic Housing Market Assessment (SHMA), housing needs surveys and any other relevant information to determine the most appropriate housing mix for a new development site in order to make sure the proposed scheme meets the needs of potential residents. Given the proportion of older residents, a proportion of dwellings will be required which are suitable for people with limited mobility.

## APPENDIX C. Highway Boundary



## APPENDIX D. TRICS Outputs

Calculation Reference: AUDIT-236601-200807-0809

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

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

**VEHICLES**Selected regions and areas:

|           |                                           |        |
|-----------|-------------------------------------------|--------|
| <b>02</b> | <b>SOUTH EAST</b>                         |        |
|           | ES EAST SUSSEX                            | 3 days |
|           | EX ESSEX                                  | 1 days |
|           | HC HAMPSHIRE                              | 3 days |
|           | HF HERTFORDSHIRE                          | 1 days |
|           | KC KENT                                   | 4 days |
|           | SC SURREY                                 | 2 days |
|           | WS WEST SUSSEX                            | 5 days |
| <b>03</b> | <b>SOUTH WEST</b>                         |        |
|           | DC DORSET                                 | 1 days |
|           | DV DEVON                                  | 3 days |
|           | SM SOMERSET                               | 1 days |
|           | WL WILTSHIRE                              | 1 days |
| <b>04</b> | <b>EAST ANGLIA</b>                        |        |
|           | CA CAMBRIDGESHIRE                         | 1 days |
|           | NF NORFOLK                                | 9 days |
|           | SF SUFFOLK                                | 3 days |
| <b>05</b> | <b>EAST MIDLANDS</b>                      |        |
|           | DS DERBYSHIRE                             | 1 days |
|           | LN LINCOLNSHIRE                           | 1 days |
| <b>06</b> | <b>WEST MIDLANDS</b>                      |        |
|           | SH SHROPSHIRE                             | 2 days |
|           | ST STAFFORDSHIRE                          | 2 days |
|           | WK WARWICKSHIRE                           | 3 days |
| <b>07</b> | <b>YORKSHIRE &amp; NORTH LINCOLNSHIRE</b> |        |
|           | NE NORTH EAST LINCOLNSHIRE                | 1 days |
|           | NY NORTH YORKSHIRE                        | 5 days |
|           | SY SOUTH YORKSHIRE                        | 1 days |
| <b>08</b> | <b>NORTH WEST</b>                         |        |
|           | CH CHESHIRE                               | 4 days |
|           | LC LANCASHIRE                             | 1 days |
|           | MS MERSEYSIDE                             | 1 days |
| <b>09</b> | <b>NORTH</b>                              |        |
|           | DH DURHAM                                 | 2 days |
|           | TW TYNE & WEAR                            | 1 days |

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

**Primary Filtering selection:**

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

Parameter: No of Dwellings  
Actual Range: 7 to 432 (units: )  
Range Selected by User: 6 to 500 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

**Public Transport Provision:**

Selection by: Include all surveys

Date Range: 01/01/12 to 19/11/19

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

**Selected survey days:**

|           |         |
|-----------|---------|
| Monday    | 14 days |
| Tuesday   | 11 days |
| Wednesday | 17 days |
| Thursday  | 13 days |
| Friday    | 8 days  |

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

**Selected survey types:**

|                       |         |
|-----------------------|---------|
| Manual count          | 60 days |
| Directional ATC Count | 3 days  |

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

**Selected Locations:**

|                                    |    |
|------------------------------------|----|
| Suburban Area (PPS6 Out of Centre) | 24 |
| Edge of Town                       | 39 |

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

**Selected Location Sub Categories:**

|                  |    |
|------------------|----|
| Residential Zone | 60 |
| Out of Town      | 1  |
| No Sub Category  | 2  |

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

**Secondary Filtering selection:****Use Class:**

|    |         |
|----|---------|
| C3 | 63 days |
|----|---------|

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

**Population within 1 mile:**

|                  |         |
|------------------|---------|
| 1,000 or Less    | 1 days  |
| 1,001 to 5,000   | 6 days  |
| 5,001 to 10,000  | 17 days |
| 10,001 to 15,000 | 18 days |
| 15,001 to 20,000 | 9 days  |
| 20,001 to 25,000 | 7 days  |
| 25,001 to 50,000 | 5 days  |

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

**Secondary Filtering selection (Cont.):**

Population within 5 miles:

|                    |         |
|--------------------|---------|
| 5,001 to 25,000    | 6 days  |
| 25,001 to 50,000   | 7 days  |
| 50,001 to 75,000   | 9 days  |
| 75,001 to 100,000  | 13 days |
| 100,001 to 125,000 | 2 days  |
| 125,001 to 250,000 | 18 days |
| 250,001 to 500,000 | 8 days  |

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

Car ownership within 5 miles:

|            |         |
|------------|---------|
| 0.6 to 1.0 | 18 days |
| 1.1 to 1.5 | 43 days |
| 1.6 to 2.0 | 2 days  |

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

Travel Plan:

|     |         |
|-----|---------|
| Yes | 18 days |
| No  | 45 days |

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

PTAL Rating:

|                 |         |
|-----------------|---------|
| No PTAL Present | 62 days |
| 2 Poor          | 1 days  |

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

LIST OF SITES relevant to selection parameters

|          |                                    |                                     |                       |
|----------|------------------------------------|-------------------------------------|-----------------------|
| <b>1</b> | <b>CA-03-A-05</b>                  | <b>DETACHED HOUSES</b>              | <b>CAMBRIDGESHIRE</b> |
|          | EASTFIELD ROAD                     |                                     |                       |
|          | PETERBOROUGH                       |                                     |                       |
|          | Suburban Area (PPS6 Out of Centre) |                                     |                       |
|          | Residential Zone                   |                                     |                       |
|          | Total No of Dwellings:             | 28                                  |                       |
|          | Survey date: MONDAY                | 17/10/16                            | Survey Type: MANUAL   |
| <b>2</b> | <b>CH-03-A-08</b>                  | <b>DETACHED</b>                     | <b>CHESHIRE</b>       |
|          | WHITCHURCH ROAD                    |                                     |                       |
|          | CHESTER                            |                                     |                       |
|          | BOUGHTON HEATH                     |                                     |                       |
|          | Suburban Area (PPS6 Out of Centre) |                                     |                       |
|          | Residential Zone                   |                                     |                       |
|          | Total No of Dwellings:             | 11                                  |                       |
|          | Survey date: TUESDAY               | 22/05/12                            | Survey Type: MANUAL   |
| <b>3</b> | <b>CH-03-A-09</b>                  | <b>TERRACED HOUSES</b>              | <b>CHESHIRE</b>       |
|          | GREYSTOKE ROAD                     |                                     |                       |
|          | MACCLESFIELD                       |                                     |                       |
|          | HURDSFIELD                         |                                     |                       |
|          | Edge of Town                       |                                     |                       |
|          | Residential Zone                   |                                     |                       |
|          | Total No of Dwellings:             | 24                                  |                       |
|          | Survey date: MONDAY                | 24/11/14                            | Survey Type: MANUAL   |
| <b>4</b> | <b>CH-03-A-10</b>                  | <b>SEMI-DETACHED &amp; TERRACED</b> | <b>CHESHIRE</b>       |
|          | MEADOW DRIVE                       |                                     |                       |
|          | NORTHWICH                          |                                     |                       |
|          | BARNTON                            |                                     |                       |
|          | Edge of Town                       |                                     |                       |
|          | Residential Zone                   |                                     |                       |
|          | Total No of Dwellings:             | 40                                  |                       |
|          | Survey date: TUESDAY               | 04/06/19                            | Survey Type: MANUAL   |
| <b>5</b> | <b>CH-03-A-11</b>                  | <b>TOWN HOUSES</b>                  | <b>CHESHIRE</b>       |
|          | LONDON ROAD                        |                                     |                       |
|          | NORTHWICH                          |                                     |                       |
|          | LEFTWICH                           |                                     |                       |
|          | Suburban Area (PPS6 Out of Centre) |                                     |                       |
|          | Residential Zone                   |                                     |                       |
|          | Total No of Dwellings:             | 24                                  |                       |
|          | Survey date: THURSDAY              | 06/06/19                            | Survey Type: MANUAL   |
| <b>6</b> | <b>DC-03-A-08</b>                  | <b>BUNGALOWS</b>                    | <b>DORSET</b>         |
|          | HURSTDENE ROAD                     |                                     |                       |
|          | BOURNEMOUTH                        |                                     |                       |
|          | CASTLE LANE WEST                   |                                     |                       |
|          | Edge of Town                       |                                     |                       |
|          | Residential Zone                   |                                     |                       |
|          | Total No of Dwellings:             | 28                                  |                       |
|          | Survey date: MONDAY                | 24/03/14                            | Survey Type: MANUAL   |
| <b>7</b> | <b>DH-03-A-01</b>                  | <b>SEMI DETACHED</b>                | <b>DURHAM</b>         |
|          | GREENFIELDS ROAD                   |                                     |                       |
|          | BISHOP AUCKLAND                    |                                     |                       |
|          | Suburban Area (PPS6 Out of Centre) |                                     |                       |
|          | Residential Zone                   |                                     |                       |
|          | Total No of Dwellings:             | 50                                  |                       |
|          | Survey date: TUESDAY               | 28/03/17                            | Survey Type: MANUAL   |
| <b>8</b> | <b>DH-03-A-03</b>                  | <b>SEMI-DETACHED &amp; TERRACED</b> | <b>DURHAM</b>         |
|          | PILGRIMS WAY                       |                                     |                       |
|          | DURHAM                             |                                     |                       |
|          | Edge of Town                       |                                     |                       |
|          | Residential Zone                   |                                     |                       |
|          | Total No of Dwellings:             | 57                                  |                       |
|          | Survey date: FRIDAY                | 19/10/18                            | Survey Type: MANUAL   |

LIST OF SITES relevant to selection parameters (Cont.)

|           |                                    |                                     |                     |
|-----------|------------------------------------|-------------------------------------|---------------------|
| <b>9</b>  | <b>DS-03-A-02</b>                  | <b>MIXED HOUSES</b>                 | <b>DERBYSHIRE</b>   |
|           | RADBOURNE LANE                     |                                     |                     |
|           | DERBY                              |                                     |                     |
|           | Edge of Town                       |                                     |                     |
|           | Residential Zone                   |                                     |                     |
|           | Total No of Dwellings:             | 371                                 |                     |
|           | Survey date: TUESDAY               | 10/07/18                            | Survey Type: MANUAL |
| <b>10</b> | <b>DV-03-A-01</b>                  | <b>TERRACED HOUSES</b>              | <b>DEVON</b>        |
|           | BRONSHILL ROAD                     |                                     |                     |
|           | TORQUAY                            |                                     |                     |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                     |
|           | Residential Zone                   |                                     |                     |
|           | Total No of Dwellings:             | 37                                  |                     |
|           | Survey date: WEDNESDAY             | 30/09/15                            | Survey Type: MANUAL |
| <b>11</b> | <b>DV-03-A-02</b>                  | <b>HOUSES &amp; BUNGALOWS</b>       | <b>DEVON</b>        |
|           | MILLHEAD ROAD                      |                                     |                     |
|           | HONITON                            |                                     |                     |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                     |
|           | Residential Zone                   |                                     |                     |
|           | Total No of Dwellings:             | 116                                 |                     |
|           | Survey date: FRIDAY                | 25/09/15                            | Survey Type: MANUAL |
| <b>12</b> | <b>DV-03-A-03</b>                  | <b>TERRACED &amp; SEMI DETACHED</b> | <b>DEVON</b>        |
|           | LOWER BRAND LANE                   |                                     |                     |
|           | HONITON                            |                                     |                     |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                     |
|           | Residential Zone                   |                                     |                     |
|           | Total No of Dwellings:             | 70                                  |                     |
|           | Survey date: MONDAY                | 28/09/15                            | Survey Type: MANUAL |
| <b>13</b> | <b>ES-03-A-03</b>                  | <b>MIXED HOUSES &amp; FLATS</b>     | <b>EAST SUSSEX</b>  |
|           | SHEPHAM LANE                       |                                     |                     |
|           | POLEGATE                           |                                     |                     |
|           | Edge of Town                       |                                     |                     |
|           | Residential Zone                   |                                     |                     |
|           | Total No of Dwellings:             | 212                                 |                     |
|           | Survey date: MONDAY                | 11/07/16                            | Survey Type: MANUAL |
| <b>14</b> | <b>ES-03-A-04</b>                  | <b>MIXED HOUSES &amp; FLATS</b>     | <b>EAST SUSSEX</b>  |
|           | NEW LYDD ROAD                      |                                     |                     |
|           | CAMBER                             |                                     |                     |
|           | Edge of Town                       |                                     |                     |
|           | Residential Zone                   |                                     |                     |
|           | Total No of Dwellings:             | 134                                 |                     |
|           | Survey date: FRIDAY                | 15/07/16                            | Survey Type: MANUAL |
| <b>15</b> | <b>ES-03-A-05</b>                  | <b>MIXED HOUSES &amp; FLATS</b>     | <b>EAST SUSSEX</b>  |
|           | RATTLE ROAD                        |                                     |                     |
|           | NEAR EASTBOURNE                    |                                     |                     |
|           | STONE CROSS                        |                                     |                     |
|           | Edge of Town                       |                                     |                     |
|           | Residential Zone                   |                                     |                     |
|           | Total No of Dwellings:             | 99                                  |                     |
|           | Survey date: WEDNESDAY             | 05/06/19                            | Survey Type: MANUAL |
| <b>16</b> | <b>EX-03-A-02</b>                  | <b>DETACHED &amp; SEMI-DETACHED</b> | <b>ESSEX</b>        |
|           | MANOR ROAD                         |                                     |                     |
|           | CHIGWELL                           |                                     |                     |
|           | GRANGE HILL                        |                                     |                     |
|           | Edge of Town                       |                                     |                     |
|           | Residential Zone                   |                                     |                     |
|           | Total No of Dwellings:             | 97                                  |                     |
|           | Survey date: MONDAY                | 27/11/17                            | Survey Type: MANUAL |

LIST OF SITES relevant to selection parameters (Cont.)

|    |                                    |                                     |                      |
|----|------------------------------------|-------------------------------------|----------------------|
| 17 | <b>HC-03-A-21</b>                  | <b>TERRACED &amp; SEMI-DETACHED</b> | <b>HAMPSHIRE</b>     |
|    | PRIESTLEY ROAD                     |                                     |                      |
|    | BASINGSTOKE                        |                                     |                      |
|    | HOUNDMILLS                         |                                     |                      |
|    | Edge of Town                       |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 39                                  |                      |
|    | Survey date: TUESDAY               | 13/11/18                            | Survey Type: MANUAL  |
| 18 | <b>HC-03-A-22</b>                  | <b>MIXED HOUSES</b>                 | <b>HAMPSHIRE</b>     |
|    | BOW LAKE GARDENS                   |                                     |                      |
|    | NEAR EASTLEIGH                     |                                     |                      |
|    | BISHOPSTOKE                        |                                     |                      |
|    | Edge of Town                       |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 40                                  |                      |
|    | Survey date: WEDNESDAY             | 31/10/18                            | Survey Type: MANUAL  |
| 19 | <b>HC-03-A-23</b>                  | <b>HOUSES &amp; FLATS</b>           | <b>HAMPSHIRE</b>     |
|    | CANADA WAY                         |                                     |                      |
|    | LIPHOOK                            |                                     |                      |
|    | Suburban Area (PPS6 Out of Centre) |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 62                                  |                      |
|    | Survey date: TUESDAY               | 19/11/19                            | Survey Type: MANUAL  |
| 20 | <b>HF-03-A-03</b>                  | <b>MIXED HOUSES</b>                 | <b>HERTFORDSHIRE</b> |
|    | HARE STREET ROAD                   |                                     |                      |
|    | BUNTINGFORD                        |                                     |                      |
|    | Edge of Town                       |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 160                                 |                      |
|    | Survey date: MONDAY                | 08/07/19                            | Survey Type: MANUAL  |
| 21 | <b>KC-03-A-03</b>                  | <b>MIXED HOUSES &amp; FLATS</b>     | <b>KENT</b>          |
|    | HYTHE ROAD                         |                                     |                      |
|    | ASHFORD                            |                                     |                      |
|    | WILLESBOROUGH                      |                                     |                      |
|    | Suburban Area (PPS6 Out of Centre) |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 51                                  |                      |
|    | Survey date: THURSDAY              | 14/07/16                            | Survey Type: MANUAL  |
| 22 | <b>KC-03-A-04</b>                  | <b>SEMI-DETACHED &amp; TERRACED</b> | <b>KENT</b>          |
|    | KILN BARN ROAD                     |                                     |                      |
|    | AYLESFORD                          |                                     |                      |
|    | DITTON                             |                                     |                      |
|    | Edge of Town                       |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 110                                 |                      |
|    | Survey date: FRIDAY                | 22/09/17                            | Survey Type: MANUAL  |
| 23 | <b>KC-03-A-06</b>                  | <b>MIXED HOUSES &amp; FLATS</b>     | <b>KENT</b>          |
|    | MARGATE ROAD                       |                                     |                      |
|    | HERNE BAY                          |                                     |                      |
|    | Suburban Area (PPS6 Out of Centre) |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 363                                 |                      |
|    | Survey date: WEDNESDAY             | 27/09/17                            | Survey Type: MANUAL  |
| 24 | <b>KC-03-A-07</b>                  | <b>MIXED HOUSES</b>                 | <b>KENT</b>          |
|    | RECVLVER ROAD                      |                                     |                      |
|    | HERNE BAY                          |                                     |                      |
|    | Edge of Town                       |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 288                                 |                      |
|    | Survey date: WEDNESDAY             | 27/09/17                            | Survey Type: MANUAL  |
| 25 | <b>LC-03-A-31</b>                  | <b>DETACHED HOUSES</b>              | <b>LANCASHIRE</b>    |
|    | GREENSIDE                          |                                     |                      |
|    | PRESTON                            |                                     |                      |
|    | COTTAM                             |                                     |                      |
|    | Edge of Town                       |                                     |                      |
|    | Residential Zone                   |                                     |                      |
|    | Total No of Dwellings:             | 32                                  |                      |
|    | Survey date: FRIDAY                | 17/11/17                            | Survey Type: MANUAL  |

i-Transport Grove House Basingstoke

Licence No: 236601

LIST OF SITES relevant to selection parameters (Cont.)

|           |                                    |                                     |                                |
|-----------|------------------------------------|-------------------------------------|--------------------------------|
| <b>26</b> | <b>LN-03-A-03</b>                  | <b>SEMI DETACHED</b>                | <b>LINCOLNSHIRE</b>            |
|           | ROOKERY LANE                       |                                     |                                |
|           | LINCOLN                            |                                     |                                |
|           | BOULTHAM                           |                                     |                                |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                                |
|           | Residential Zone                   |                                     |                                |
|           | Total No of Dwellings:             | 22                                  |                                |
|           | Survey date: TUESDAY               | 18/09/12                            | Survey Type: MANUAL            |
| <b>27</b> | <b>MS-03-A-03</b>                  | <b>DETACHED</b>                     | <b>MERSEYSIDE</b>              |
|           | BEMPTON ROAD                       |                                     |                                |
|           | LIVERPOOL                          |                                     |                                |
|           | OTTERSPOOL                         |                                     |                                |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                                |
|           | Residential Zone                   |                                     |                                |
|           | Total No of Dwellings:             | 15                                  |                                |
|           | Survey date: FRIDAY                | 21/06/13                            | Survey Type: MANUAL            |
| <b>28</b> | <b>NE-03-A-02</b>                  | <b>SEMI DETACHED &amp; DETACHED</b> | <b>NORTH EAST LINCOLNSHIRE</b> |
|           | HANOVER WALK                       |                                     |                                |
|           | SCUNTHORPE                         |                                     |                                |
|           | Edge of Town                       |                                     |                                |
|           | No Sub Category                    |                                     |                                |
|           | Total No of Dwellings:             | 432                                 |                                |
|           | Survey date: MONDAY                | 12/05/14                            | Survey Type: MANUAL            |
| <b>29</b> | <b>NF-03-A-01</b>                  | <b>SEMI DET. &amp; BUNGALOWS</b>    | <b>NORFOLK</b>                 |
|           | YARMOUTH ROAD                      |                                     |                                |
|           | CAISTER-ON-SEA                     |                                     |                                |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                                |
|           | Residential Zone                   |                                     |                                |
|           | Total No of Dwellings:             | 27                                  |                                |
|           | Survey date: TUESDAY               | 16/10/12                            | Survey Type: MANUAL            |
| <b>30</b> | <b>NF-03-A-02</b>                  | <b>HOUSES &amp; FLATS</b>           | <b>NORFOLK</b>                 |
|           | DEREHAM ROAD                       |                                     |                                |
|           | NORWICH                            |                                     |                                |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                                |
|           | Residential Zone                   |                                     |                                |
|           | Total No of Dwellings:             | 98                                  |                                |
|           | Survey date: MONDAY                | 22/10/12                            | Survey Type: MANUAL            |
| <b>31</b> | <b>NF-03-A-03</b>                  | <b>DETACHED HOUSES</b>              | <b>NORFOLK</b>                 |
|           | HALING WAY                         |                                     |                                |
|           | THETFORD                           |                                     |                                |
|           | Edge of Town                       |                                     |                                |
|           | Residential Zone                   |                                     |                                |
|           | Total No of Dwellings:             | 10                                  |                                |
|           | Survey date: WEDNESDAY             | 16/09/15                            | Survey Type: MANUAL            |
| <b>32</b> | <b>NF-03-A-04</b>                  | <b>MIXED HOUSES</b>                 | <b>NORFOLK</b>                 |
|           | NORTH WALSHAM ROAD                 |                                     |                                |
|           | NORTH WALSHAM                      |                                     |                                |
|           | Edge of Town                       |                                     |                                |
|           | Residential Zone                   |                                     |                                |
|           | Total No of Dwellings:             | 70                                  |                                |
|           | Survey date: WEDNESDAY             | 18/09/19                            | Survey Type: MANUAL            |
| <b>33</b> | <b>NF-03-A-05</b>                  | <b>MIXED HOUSES</b>                 | <b>NORFOLK</b>                 |
|           | HEATH DRIVE                        |                                     |                                |
|           | HOLT                               |                                     |                                |
|           | Edge of Town                       |                                     |                                |
|           | Residential Zone                   |                                     |                                |
|           | Total No of Dwellings:             | 40                                  |                                |
|           | Survey date: THURSDAY              | 19/09/19                            | Survey Type: MANUAL            |

LIST OF SITES relevant to selection parameters (Cont.)

|           |                                    |                                 |                                    |
|-----------|------------------------------------|---------------------------------|------------------------------------|
| <b>34</b> | <b>NF-03-A-06</b>                  | <b>MIXED HOUSES</b>             | <b>NORFOLK</b>                     |
|           | BEAUFORT WAY                       |                                 |                                    |
|           | GREAT YARMOUTH                     |                                 |                                    |
|           | BRADWELL                           |                                 |                                    |
|           | Edge of Town                       |                                 |                                    |
|           | Residential Zone                   |                                 |                                    |
|           | Total No of Dwellings:             | 275                             |                                    |
|           | Survey date: MONDAY                | 23/09/19                        | Survey Type: MANUAL                |
| <b>35</b> | <b>NF-03-A-07</b>                  | <b>MIXED HOUSES &amp; FLATS</b> | <b>NORFOLK</b>                     |
|           | SILFIELD ROAD                      |                                 |                                    |
|           | WYMONDHAM                          |                                 |                                    |
|           | Edge of Town                       |                                 |                                    |
|           | Out of Town                        |                                 |                                    |
|           | Total No of Dwellings:             | 297                             |                                    |
|           | Survey date: FRIDAY                | 20/09/19                        | Survey Type: DIRECTIONAL ATC COUNT |
| <b>36</b> | <b>NF-03-A-10</b>                  | <b>MIXED HOUSES &amp; FLATS</b> | <b>NORFOLK</b>                     |
|           | HUNSTANTON ROAD                    |                                 |                                    |
|           | HUNSTANTON                         |                                 |                                    |
|           | Edge of Town                       |                                 |                                    |
|           | Residential Zone                   |                                 |                                    |
|           | Total No of Dwellings:             | 17                              |                                    |
|           | Survey date: WEDNESDAY             | 12/09/18                        | Survey Type: DIRECTIONAL ATC COUNT |
| <b>37</b> | <b>NF-03-A-16</b>                  | <b>MIXED HOUSES &amp; FLATS</b> | <b>NORFOLK</b>                     |
|           | NORWICH COMMON                     |                                 |                                    |
|           | WYMONDHAM                          |                                 |                                    |
|           | Edge of Town                       |                                 |                                    |
|           | Residential Zone                   |                                 |                                    |
|           | Total No of Dwellings:             | 138                             |                                    |
|           | Survey date: TUESDAY               | 20/10/15                        | Survey Type: DIRECTIONAL ATC COUNT |
| <b>38</b> | <b>NY-03-A-08</b>                  | <b>TERRACED HOUSES</b>          | <b>NORTH YORKSHIRE</b>             |
|           | NICHOLAS STREET                    |                                 |                                    |
|           | YORK                               |                                 |                                    |
|           | Suburban Area (PPS6 Out of Centre) |                                 |                                    |
|           | Residential Zone                   |                                 |                                    |
|           | Total No of Dwellings:             | 21                              |                                    |
|           | Survey date: MONDAY                | 16/09/13                        | Survey Type: MANUAL                |
| <b>39</b> | <b>NY-03-A-09</b>                  | <b>MIXED HOUSING</b>            | <b>NORTH YORKSHIRE</b>             |
|           | GRAMMAR SCHOOL LANE                |                                 |                                    |
|           | NORTHALLERTON                      |                                 |                                    |
|           | Suburban Area (PPS6 Out of Centre) |                                 |                                    |
|           | Residential Zone                   |                                 |                                    |
|           | Total No of Dwellings:             | 52                              |                                    |
|           | Survey date: MONDAY                | 16/09/13                        | Survey Type: MANUAL                |
| <b>40</b> | <b>NY-03-A-10</b>                  | <b>HOUSES AND FLATS</b>         | <b>NORTH YORKSHIRE</b>             |
|           | BOROUGHBRIDGE ROAD                 |                                 |                                    |
|           | RIPON                              |                                 |                                    |
|           | Edge of Town                       |                                 |                                    |
|           | No Sub Category                    |                                 |                                    |
|           | Total No of Dwellings:             | 71                              |                                    |
|           | Survey date: TUESDAY               | 17/09/13                        | Survey Type: MANUAL                |
| <b>41</b> | <b>NY-03-A-11</b>                  | <b>PRIVATE HOUSING</b>          | <b>NORTH YORKSHIRE</b>             |
|           | HORSEFAIR                          |                                 |                                    |
|           | BOROUGHBRIDGE                      |                                 |                                    |
|           | Edge of Town                       |                                 |                                    |
|           | Residential Zone                   |                                 |                                    |
|           | Total No of Dwellings:             | 23                              |                                    |
|           | Survey date: WEDNESDAY             | 18/09/13                        | Survey Type: MANUAL                |

LIST OF SITES relevant to selection parameters (Cont.)

|           |                                    |                                 |                        |
|-----------|------------------------------------|---------------------------------|------------------------|
| <b>42</b> | <b>NY-03-A-13</b>                  | <b>TERRACED HOUSES</b>          | <b>NORTH YORKSHIRE</b> |
|           | CATTERICK ROAD                     |                                 |                        |
|           | CATTERICK GARRISON                 |                                 |                        |
|           | OLD HOSPITAL COMPOUND              |                                 |                        |
|           | Suburban Area (PPS6 Out of Centre) |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 10                              |                        |
|           | Survey date: WEDNESDAY             | 10/05/17                        | Survey Type: MANUAL    |
| <b>43</b> | <b>SC-03-A-04</b>                  | <b>DETACHED &amp; TERRACED</b>  | <b>SURREY</b>          |
|           | HIGH ROAD                          |                                 |                        |
|           | BYFLEET                            |                                 |                        |
|           | Edge of Town                       |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 71                              |                        |
|           | Survey date: THURSDAY              | 23/01/14                        | Survey Type: MANUAL    |
| <b>44</b> | <b>SC-03-A-05</b>                  | <b>MIXED HOUSES</b>             | <b>SURREY</b>          |
|           | REIGATE ROAD                       |                                 |                        |
|           | HORLEY                             |                                 |                        |
|           | Edge of Town                       |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 207                             |                        |
|           | Survey date: MONDAY                | 01/04/19                        | Survey Type: MANUAL    |
| <b>45</b> | <b>SF-03-A-04</b>                  | <b>DETACHED &amp; BUNGALOWS</b> | <b>SUFFOLK</b>         |
|           | NORMANSTON DRIVE                   |                                 |                        |
|           | LOWESTOFT                          |                                 |                        |
|           | Suburban Area (PPS6 Out of Centre) |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 7                               |                        |
|           | Survey date: TUESDAY               | 23/10/12                        | Survey Type: MANUAL    |
| <b>46</b> | <b>SF-03-A-05</b>                  | <b>DETACHED HOUSES</b>          | <b>SUFFOLK</b>         |
|           | VALE LANE                          |                                 |                        |
|           | BURY ST EDMUNDS                    |                                 |                        |
|           | Edge of Town                       |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 18                              |                        |
|           | Survey date: WEDNESDAY             | 09/09/15                        | Survey Type: MANUAL    |
| <b>47</b> | <b>SF-03-A-07</b>                  | <b>MIXED HOUSES</b>             | <b>SUFFOLK</b>         |
|           | FOXHALL ROAD                       |                                 |                        |
|           | IPSWICH                            |                                 |                        |
|           | Suburban Area (PPS6 Out of Centre) |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 73                              |                        |
|           | Survey date: THURSDAY              | 09/05/19                        | Survey Type: MANUAL    |
| <b>48</b> | <b>SH-03-A-05</b>                  | <b>SEMI-DETACHED/ TERRACED</b>  | <b>SHROPSHIRE</b>      |
|           | SANDCROFT                          |                                 |                        |
|           | TELFORD                            |                                 |                        |
|           | SUTTON HILL                        |                                 |                        |
|           | Edge of Town                       |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 54                              |                        |
|           | Survey date: THURSDAY              | 24/10/13                        | Survey Type: MANUAL    |
| <b>49</b> | <b>SH-03-A-06</b>                  | <b>BUNGALOWS</b>                | <b>SHROPSHIRE</b>      |
|           | ELLESMERE ROAD                     |                                 |                        |
|           | SHREWSBURY                         |                                 |                        |
|           | Edge of Town                       |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 16                              |                        |
|           | Survey date: THURSDAY              | 22/05/14                        | Survey Type: MANUAL    |
| <b>50</b> | <b>SM-03-A-01</b>                  | <b>DETACHED &amp; SEMI</b>      | <b>SOMERSET</b>        |
|           | WEMBDON ROAD                       |                                 |                        |
|           | BRIDGWATER                         |                                 |                        |
|           | NORTHFIELD                         |                                 |                        |
|           | Edge of Town                       |                                 |                        |
|           | Residential Zone                   |                                 |                        |
|           | Total No of Dwellings:             | 33                              |                        |
|           | Survey date: THURSDAY              | 24/09/15                        | Survey Type: MANUAL    |

LIST OF SITES relevant to selection parameters (Cont.)

|           |                                    |                                     |                        |
|-----------|------------------------------------|-------------------------------------|------------------------|
| <b>51</b> | <b>ST-03-A-07</b>                  | <b>DETACHED &amp; SEMI-DETACHED</b> | <b>STAFFORDSHIRE</b>   |
|           | BEACONSIDE                         |                                     |                        |
|           | STAFFORD                           |                                     |                        |
|           | MARSTON GATE                       |                                     |                        |
|           | Edge of Town                       |                                     |                        |
|           | Residential Zone                   |                                     |                        |
|           | Total No of Dwellings:             | 248                                 |                        |
|           | Survey date: WEDNESDAY             | 22/11/17                            | Survey Type: MANUAL    |
| <b>52</b> | <b>ST-03-A-08</b>                  | <b>DETACHED HOUSES</b>              | <b>STAFFORDSHIRE</b>   |
|           | SILKMORE CRESCENT                  |                                     |                        |
|           | STAFFORD                           |                                     |                        |
|           | MEADOWCROFT PARK                   |                                     |                        |
|           | Edge of Town                       |                                     |                        |
|           | Residential Zone                   |                                     |                        |
|           | Total No of Dwellings:             | 26                                  |                        |
|           | Survey date: WEDNESDAY             | 22/11/17                            | Survey Type: MANUAL    |
| <b>53</b> | <b>SY-03-A-01</b>                  | <b>SEMI DETACHED HOUSES</b>         | <b>SOUTH YORKSHIRE</b> |
|           | A19 BENTLEY ROAD                   |                                     |                        |
|           | DONCASTER                          |                                     |                        |
|           | BENTLEY RISE                       |                                     |                        |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                        |
|           | Residential Zone                   |                                     |                        |
|           | Total No of Dwellings:             | 54                                  |                        |
|           | Survey date: WEDNESDAY             | 18/09/13                            | Survey Type: MANUAL    |
| <b>54</b> | <b>TW-03-A-02</b>                  | <b>SEMI-DETACHED</b>                | <b>TYNE &amp; WEAR</b> |
|           | WEST PARK ROAD                     |                                     |                        |
|           | GATESHEAD                          |                                     |                        |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                        |
|           | Residential Zone                   |                                     |                        |
|           | Total No of Dwellings:             | 16                                  |                        |
|           | Survey date: MONDAY                | 07/10/13                            | Survey Type: MANUAL    |
| <b>55</b> | <b>WK-03-A-02</b>                  | <b>BUNGALOWS</b>                    | <b>WARWICKSHIRE</b>    |
|           | NARBERTH WAY                       |                                     |                        |
|           | COVENTRY                           |                                     |                        |
|           | POTTERS GREEN                      |                                     |                        |
|           | Edge of Town                       |                                     |                        |
|           | Residential Zone                   |                                     |                        |
|           | Total No of Dwellings:             | 17                                  |                        |
|           | Survey date: THURSDAY              | 17/10/13                            | Survey Type: MANUAL    |
| <b>56</b> | <b>WK-03-A-03</b>                  | <b>DETACHED HOUSES</b>              | <b>WARWICKSHIRE</b>    |
|           | BRESE AVENUE                       |                                     |                        |
|           | WARWICK                            |                                     |                        |
|           | GUY'S CLIFFE                       |                                     |                        |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                        |
|           | Residential Zone                   |                                     |                        |
|           | Total No of Dwellings:             | 23                                  |                        |
|           | Survey date: WEDNESDAY             | 25/09/19                            | Survey Type: MANUAL    |
| <b>57</b> | <b>WK-03-A-04</b>                  | <b>DETACHED HOUSES</b>              | <b>WARWICKSHIRE</b>    |
|           | DALEHOUSE LANE                     |                                     |                        |
|           | KENILWORTH                         |                                     |                        |
|           | Edge of Town                       |                                     |                        |
|           | Residential Zone                   |                                     |                        |
|           | Total No of Dwellings:             | 49                                  |                        |
|           | Survey date: FRIDAY                | 27/09/19                            | Survey Type: MANUAL    |
| <b>58</b> | <b>WL-03-A-02</b>                  | <b>SEMI DETACHED</b>                | <b>WILTSHIRE</b>       |
|           | HEADLANDS GROVE                    |                                     |                        |
|           | SWINDON                            |                                     |                        |
|           | Suburban Area (PPS6 Out of Centre) |                                     |                        |
|           | Residential Zone                   |                                     |                        |
|           | Total No of Dwellings:             | 27                                  |                        |
|           | Survey date: THURSDAY              | 22/09/16                            | Survey Type: MANUAL    |

LIST OF SITES relevant to selection parameters (Cont.)

|           |                                    |                                 |  |                     |
|-----------|------------------------------------|---------------------------------|--|---------------------|
| <b>59</b> | <b>WS-03-A-04</b>                  | <b>MIXED HOUSES</b>             |  | <b>WEST SUSSEX</b>  |
|           | HILLS FARM LANE                    |                                 |  |                     |
|           | HORSHAM                            |                                 |  |                     |
|           | BROADBRIDGE HEATH                  |                                 |  |                     |
|           | Edge of Town                       |                                 |  |                     |
|           | Residential Zone                   |                                 |  |                     |
|           | Total No of Dwellings:             | 151                             |  |                     |
|           | Survey date: THURSDAY              | 11/12/14                        |  | Survey Type: MANUAL |
| <b>60</b> | <b>WS-03-A-05</b>                  | <b>TERRACED &amp; FLATS</b>     |  | <b>WEST SUSSEX</b>  |
|           | UPPER SHOREHAM ROAD                |                                 |  |                     |
|           | SHOREHAM BY SEA                    |                                 |  |                     |
|           | Suburban Area (PPS6 Out of Centre) |                                 |  |                     |
|           | Residential Zone                   |                                 |  |                     |
|           | Total No of Dwellings:             | 48                              |  |                     |
|           | Survey date: WEDNESDAY             | 18/04/12                        |  | Survey Type: MANUAL |
| <b>61</b> | <b>WS-03-A-08</b>                  | <b>MIXED HOUSES</b>             |  | <b>WEST SUSSEX</b>  |
|           | ROUNDSTONE LANE                    |                                 |  |                     |
|           | ANGMERING                          |                                 |  |                     |
|           | Edge of Town                       |                                 |  |                     |
|           | Residential Zone                   |                                 |  |                     |
|           | Total No of Dwellings:             | 180                             |  |                     |
|           | Survey date: THURSDAY              | 19/04/18                        |  | Survey Type: MANUAL |
| <b>62</b> | <b>WS-03-A-09</b>                  | <b>MIXED HOUSES &amp; FLATS</b> |  | <b>WEST SUSSEX</b>  |
|           | LITTLEHAMPTON ROAD                 |                                 |  |                     |
|           | WORTHING                           |                                 |  |                     |
|           | WEST DURRINGTON                    |                                 |  |                     |
|           | Edge of Town                       |                                 |  |                     |
|           | Residential Zone                   |                                 |  |                     |
|           | Total No of Dwellings:             | 197                             |  |                     |
|           | Survey date: THURSDAY              | 05/07/18                        |  | Survey Type: MANUAL |
| <b>63</b> | <b>WS-03-A-10</b>                  | <b>MIXED HOUSES</b>             |  | <b>WEST SUSSEX</b>  |
|           | TODDINGTON LANE                    |                                 |  |                     |
|           | LITTLEHAMPTON                      |                                 |  |                     |
|           | WICK                               |                                 |  |                     |
|           | Edge of Town                       |                                 |  |                     |
|           | Residential Zone                   |                                 |  |                     |
|           | Total No of Dwellings:             | 79                              |  |                     |
|           | Survey date: WEDNESDAY             | 07/11/18                        |  | Survey Type: MANUAL |

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

**VEHICLES****Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

| Time Range    | ARRIVALS  |             |              | DEPARTURES |             |              | TOTALS    |             |              |
|---------------|-----------|-------------|--------------|------------|-------------|--------------|-----------|-------------|--------------|
|               | No. Days  | Ave. DWELLS | Trip Rate    | No. Days   | Ave. DWELLS | Trip Rate    | No. Days  | Ave. DWELLS | Trip Rate    |
| 00:00 - 01:00 |           |             |              |            |             |              |           |             |              |
| 01:00 - 02:00 |           |             |              |            |             |              |           |             |              |
| 02:00 - 03:00 |           |             |              |            |             |              |           |             |              |
| 03:00 - 04:00 |           |             |              |            |             |              |           |             |              |
| 04:00 - 05:00 |           |             |              |            |             |              |           |             |              |
| 05:00 - 06:00 |           |             |              |            |             |              |           |             |              |
| 06:00 - 07:00 |           |             |              |            |             |              |           |             |              |
| 07:00 - 08:00 | 63        | 91          | 0.084        | 63         | 91          | 0.315        | 63        | 91          | 0.399        |
| 08:00 - 09:00 | 63        | 91          | 0.130        | <b>63</b>  | <b>91</b>   | <b>0.379</b> | <b>63</b> | <b>91</b>   | <b>0.509</b> |
| 09:00 - 10:00 | 63        | 91          | 0.145        | 63         | 91          | 0.174        | 63        | 91          | 0.319        |
| 10:00 - 11:00 | 63        | 91          | 0.129        | 63         | 91          | 0.158        | 63        | 91          | 0.287        |
| 11:00 - 12:00 | 63        | 91          | 0.135        | 63         | 91          | 0.147        | 63        | 91          | 0.282        |
| 12:00 - 13:00 | 63        | 91          | 0.160        | 63         | 91          | 0.153        | 63        | 91          | 0.313        |
| 13:00 - 14:00 | 63        | 91          | 0.162        | 63         | 91          | 0.155        | 63        | 91          | 0.317        |
| 14:00 - 15:00 | 63        | 91          | 0.165        | 63         | 91          | 0.193        | 63        | 91          | 0.358        |
| 15:00 - 16:00 | 63        | 91          | 0.270        | 63         | 91          | 0.181        | 63        | 91          | 0.451        |
| 16:00 - 17:00 | 63        | 91          | 0.289        | 63         | 91          | 0.172        | 63        | 91          | 0.461        |
| 17:00 - 18:00 | <b>63</b> | <b>91</b>   | <b>0.345</b> | 63         | 91          | 0.160        | 63        | 91          | 0.505        |
| 18:00 - 19:00 | 63        | 91          | 0.293        | 63         | 91          | 0.173        | 63        | 91          | 0.466        |
| 19:00 - 20:00 | 1         | 97          | 0.062        | 1          | 97          | 0.052        | 1         | 97          | 0.114        |
| 20:00 - 21:00 | 1         | 97          | 0.031        | 1          | 97          | 0.021        | 1         | 97          | 0.052        |
| 21:00 - 22:00 |           |             |              |            |             |              |           |             |              |
| 22:00 - 23:00 |           |             |              |            |             |              |           |             |              |
| 23:00 - 24:00 |           |             |              |            |             |              |           |             |              |
| Total Rates:  |           |             | 2.400        |            |             | 2.433        |           |             | 4.833        |

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

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

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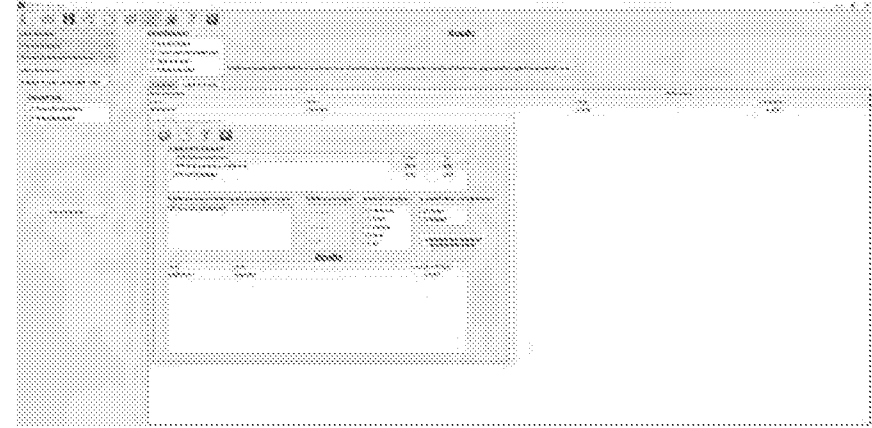
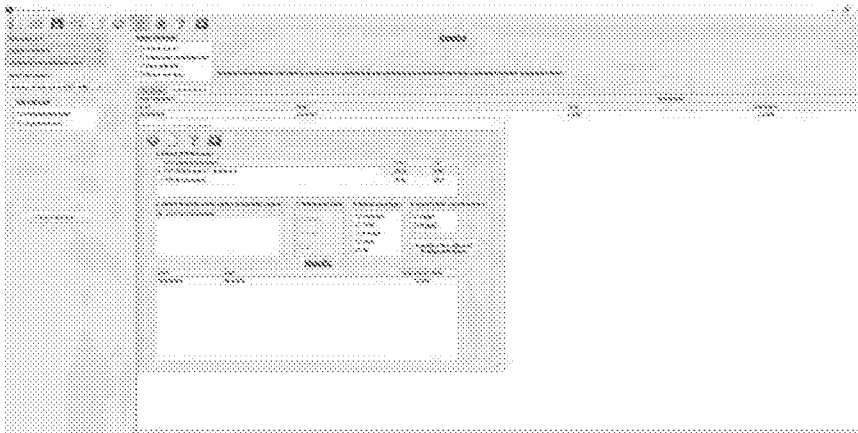
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**Parameter summary**

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 7 - 432 (units: )   |
| Survey date range:                            | 01/01/12 - 19/11/19 |
| Number of weekdays (Monday-Friday):           | 67                  |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 7                   |
| Surveys manually removed from selection:      | 0                   |

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

## APPENDIX E. TEMPPro Outputs



தமிழ்

| !a  |    |     |
|-----|----|-----|
| [T] | !T | [T] |
| 97  | !T | 36  |

| ta  |    |     |
|-----|----|-----|
| [T] | !T | [T] |
| 97  | !T | 36  |

