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LAND AT WEST ROAD SAWBRIDGEWORTH

Access and Accessibility Report

31/01/2014

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Access and Accessibility Report

31/01/2014

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1 Introduction

1.1 Forward

1.1.1 WSP has been commissioned by Taylor Wimpey to provide an initial review of access and accessibility to the proposed residential site at Land North of West Road, Sawbridgeworth, Hertfordshire.

1.1.2 This report contains the following:

- A description of the site, the town and the transport facilities available near the site;
- Details of the potential site access arrangement for both vehicles and pedestrians.
- A review of the accessibility of the site to and from the surrounding area by a variety of modes of travel including walking, cycling and public transport.

1.2 Report Format

1.2.1 Section 2 describes the site and the local area with reference to local facilities and the local transport network.

1.2.2 Section 3 describes the potential access option for the site.

1.2.3 Section 4 reviews the accessibility of the site by non-car modes and offers options for improving the accessibility of the site.

1.2.4 Section 5 provides a summary of the report and an overall conclusion.

2 Background Information

2.1 Site Description

- 2.1.1 The site is located on land to the north of West Road in Sawbridgeworth, Hertfordshire. This site is currently agricultural land which is bound by Leventhorpe School to the north, Sawbridgeworth football club, residential properties and Mandeville Primary School to the East, West Road to the south and agricultural land to the west. A site location plan is provided at Figure 1.
- 2.1.2 The site currently has a gated field access located at the south western boundary with West Road and the rest of the frontage is made up of hedge and vegetation.

2.2 Surrounding Area

- 2.2.1 The town of Sawbridgeworth is four miles south of Bishop's Stortford and north of Harlow, twelve miles east of Hertford and nine miles north of Epping and has a population of approximately 8.500 people. It lies on the A1184 and has a railway station that links to Liverpool Street in London and Cambridge.
- 2.2.2 The facilities in the town include
- Convenience food stores
 - A doctor's and dentist surgery
 - Hospital
 - A petrol filling station
 - Church
 - Public Houses / Hotels
 - Post Office
 - Bank / Building society
 - Pharmacy
 - Senior, Junior and Primary Schools
 - Football and cricket club
- 2.2.3 The approximate locations of these facilities are shown on Figure 2. The nearest large towns to Sawbridgeworth are Bishop's Stortford to the north and Harlow to the south, as shown on Figure 1.

2.3 Road Network

- 2.3.1 The A1184 runs north to south through the centre of Sawbridgeworth and is subject to a 30mph. The A1184 provides connections to Bishop's Stortford to the north and Harlow to the south.
- 2.3.2 The site is to be accessed via West Road, which connect to the A1184 via the double mini roundabout with Station Road that effectively forms the town centre cross roads. West Road in the vicinity of the site is signed as a school safety zone and traffic calmed by a series of raised tables.

2.4 Walking and Cycling

- 2.4.1 West Road is provided with a footway on the southern side in the vicinity of the site, with no footpath provision along the site frontage. To the east of the site footways are provided on both sides of West Road although the footway on the northern side is approximately 2m above the carriageway level providing access to a number of houses. At the western end there are steps and this elevated footway continues eastward for approximately 120m at which point it ends back onto West Road. For a short section of 35m on the north side of West Road there is no footway provision up to the access leading to Mandeville Primary School. The elevated footway is separated from the road by a hedge which in turn abuts the edge of the carriageway. The footway provision beyond the Primary School access is provided on both sides to the A1184.
- 2.4.2 There are no formal crossing points provided along West Road, although due to the traffic calming provided it is considered that the speed of traffic will be sufficiently low to allow pedestrians to cross safely.
- 2.4.3 There are footways on both sides of the A1184 that provide access to the majority of the towns facilities to the south of the double mini roundabout. A signalised pedestrian crossing is provided to the north of the double mini roundabout on the A1184 and uncontrolled pedestrian crossings are located on all other arms of the junction. A further signalised pedestrian crossing is located on the A1184 just to the north of the junction with Bell Street.
- 2.4.4 There are no dedicated cycle facilities in the local area, and cycling takes place on road. A cycle catchment plan is shown on Figure 3.

2.5 Bus Services

- 2.5.1 Figure 4 shows the locations of the bus stops in Sawbridgeworth. There are no bus services that operate on West Road and the closest bus stops in the vicinity of the site are located on both sides of the A1184 to the north of the double mini roundabout. These bus stops are approximately 680 metres walking distance from the centre of the proposed residential site, based on a walking speed of 80 metres per minute it would take 8 ½ minutes.
- 2.5.2 These bus stops are served by routes 347, 509 /510 and the 511 and provide connections to Harlow, Bishop's Stortford, Stansted and other local areas. The walking distance to the nearest bus stops exceeds the recommend 400 metres maximum walk distance from a residential development. However, considering the scale of the development it is unlikely that bus operators would consider it viable to divert bus services from the A1184 to serve the site due to the additional delay and limited patronage.
- 2.5.3 The frequency and routing details of the available bus services are summarised in Table 2.1 below. A detailed bus route map is shown on Figure 4 of this report.

Table 2.1: Bus Route Summary

Bus No.	Route		First Bus	Last Bus	Daytime Frequency
347 – Bus Stops located on the A1184 to the north of the double mini roundabout	Hatfield Broad Oak – Harlow	Weekdays	0927	1403	3 service only
		Saturday	0927	1403	3 services only
		Sundays	No Service	No Service	3 service only
509 /510	Stansted Airport	Weekdays	0340	0240	4 every hour

	– Harlow	Saturday	0340	0240	4 every hour
		Sundays	0340	0240	1 every hour
511/512	Harlow – Bishop's Stortford &	Weekdays	0613	1935	3 bus per hour
		Saturdays	0613	1935	3 bus per hour
		Sundays	No Service	No Service	No Service

2.5.4 It can be seen that the above bus routes provide good links to Bishop's Stortford to the north and Harlow to the south. These are the two largest towns in proximity to the development site and are likely to provide employment opportunities for future residents. The frequency of the weekday buses would provide a realistic alternative to the private car for residents at the proposed development.

2.6 Rail Services

2.6.1 The nearest railway station is Sawbridgeworth Station approximately 1.6km (approx. 20 minutes walking time) to the east of the site. The station is within easy cycle distance of the proposed development and based on a cycle speed of 250 metres a minute would take 6 minutes.

2.6.2 The station is on the West Anglia main line and the trains are managed by Greater Anglia, serving Sawbridgeworth in Hertfordshire. Both platforms were extended in 2011 to accommodate 12 coach trains.

2.6.3 The typical Monday – Saturday off peak services are as follows:

- 2 trains per hour to London Liverpool Street, of which;
 - 1 calls at Harlow Town, Broxbourne, Cheshunt and Tottenham Hale, taking 41 minutes. (passengers can also reach Liverpool Street by taking the Stratford service and changing at Harlow Town)
 - 1 train per hour to Stansted Airport, calling at Bishop's Stortford and Stansted Mountfichet, taking 21 minutes. (Passengers can also reach Stansted Airport by taking either Cambridge service and changing at Bishop's Stortford.)
- 2 trains per hour to Cambridge, of which;
 - 1 calls at Bishop's Stortford, Audley End and Whittlesford Parkway taking 37 minutes.
 - 1 calls at Bishop's Stortford, Stansted Mountfichet, Elsenham, Newport, Audley End, Great Chesterford, Whittleford Parkway and Shelford, taking 44 minutes.

2.6.4 The typical Sunday services are as follows:

- 1 train per hour to London Liverpool Street taking 38 minutes
- 1 train per hour to Stratford, calling at Harlow Mill, Harlow Town, Roydon, Broxbourne, Cheshunt, Waltham Cross, Enfield Lock, Brinsdown, Ponders End and Tottenham Hale, taking 51 minutes. (Passengers can reach Stansted Airport by taking either Cambridge service and changing at Bishop's Stortford).

2.6.5 The stations close proximity to the development would allow future residents to commute to central London as well as Cambridge, Bishops Stortford, Harlow and Stansted.

2.7 Summary

2.7.1 The site is situated geographically within a good location with easy links to the surrounding highway network. The primary junction that is likely to be affected by the development will be the double mini

roundabout junction at the West Road/ A1184 junction; this will be assessed as part of a Transport Assessment. In terms of sustainability, there is currently no footway provided along the site frontage and limited provision is provided on the northern side between the site and the Primary School. However the traffic calming along West Road will slow vehicles speeds sufficiently to allow pedestrians to cross the road safely and there appears to be opportunities to link to the Primary School access from the site. It is identified that the site is located within a reasonable walking distance to local shops and facilities and is ideally located for links to the local Primary School.

- 2.7.2 In terms of accessibility the site benefits from being within a reasonable walking distance to existing bus services that link to the station and surrounding towns and villages. The sites close proximity to Sawbridgeworth Railway Station also provides the opportunity to use rail links to London, Cambridge and other surrounding towns and villages on the West Anglia mainline for employment, shopping and leisure opportunities.. The site therefore provides residents with a realistic alternative to the private car, further details in terms of accessibility are identified in Section 4.

3 Development Proposals & Access Arrangements

- 3.1.1 The development proposal is expected to accommodate in the region of 100 dwellings on land north of West Road, Sawbridgeworth. This section reviews the proposed access arrangement to the site by both vehicular traffic and pedestrians.

3.2 Vehicular Access

- 3.2.1 Vehicle access to the development will be via a single point of access forming a priority junction with West Road as illustrated on drawing number 2185-GA-01 provided at Appendix A.
- 3.2.2 The proposed arrangement will be provided at a width of 6m narrowing to 5.5 metres approximately 25m into the site, sufficient to allow two large vehicles to pass and re pass and consistent with the advice contained within Manual for Streets (MfS). It is proposed that the junction radii are provided at 6 metres to accommodate the swept path of the largest design vehicle a large refuse vehicle.

Visibility at the Proposed Access Arrangements

- 3.2.3 The visibility at the proposed junction ensures there is adequate inter-visibility between vehicles and the major and minor arms:
- 3.2.4 MfS states the following regarding the application of visibility standards:
“MfS focusses on lightly trafficked residential streets, but mainly its key principles may be applied to other types of street, for example high streets and lightly traffic rural areas.”
- 3.2.5 Paragraph 1.4.4 of MfS expands on the above and states:
“The Design Manual for Roads and Bridges is not an appropriate design standard for most streets, particularly those in lightly trafficked residential and mixed-use areas.”
- 3.2.6 The volume of traffic movements along Western Road recorded an average of 1,700 two-way movements over a 24 hour period. This is considered a lightly trafficked residential road and therefore MfS will apply.
- 3.2.7 In terms of traffic speeds MfS states the following at paragraph 7.5.1:
“This section provides guidance on stopping sight distances (SSD’s) for streets where the 85th percentile speeds are up to 60km/hr. At speeds above this, the recommended SSD’s in the Design Manual for Roads and Bridges may be appropriate.”

Speed Survey

- 3.2.8 In order to ensure that the proposed access arrangement accords to the relevant design standards an ATC (Automated Traffic Counter) has been placed on West Road in the vicinity of the proposed access to establish the 85th percentile speed. The results of the speed survey undertaken at the proposed access are as follows:
- Eastbound - 26 mph
 - Westbound - 26 mph

-
- 3.2.9 The result of the speed survey indicates that the derived SSD for streets in Table 7.1 of MfS can be applied. It should also be noted that West Road in the vicinity of the proposed access is within a school safety zone and traffic calmed by a series of raised tables. The traffic calming physically restricts the speed of vehicles at the proposed access and will ensure that reduced visibility criteria in MfS will be appropriate to use.
- 3.2.10 The level of visibility that can be achieved from the proposed vehicular access is 2.4m x 70m generally measured back from the 'give-way line'. An x distance of 2.4 metres should normally be used in most built up situations, as this represents a reasonable maximum distance between the front of the car and the driver's eye.
- 3.2.11 This level of visibility is in accordance with DMRB (Design Manual for Roads and Bridges) for a 30mph speed limit, however based on the 85th percentile speed measurement and using the calculation provided in MfS, the visibility requirements are 2.4m x 35m.
- 3.2.12 The visibility splays from the proposed access arrangement are indicated on drawing 2185-GA-01 in Appendix C of this report.

3.3 Pedestrian Access

- 3.3.1 It is proposed that pedestrian footway will be provided on the eastern side of the vehicle access and an uncontrolled pedestrian crossing in the form of dropped kerbs to allow pedestrians to gain access to the southern West Road footway. In addition, it is proposed to provide a pedestrian link via the eastern boundary of the site to connect to the existing Mandeville Primary School access footway. The school access connects to West Road to the east of the site.

3.4 Summary

- 3.4.1 It is concluded, that the site can be effectively served by a simple priority junction and the visibility splay will accord with the appropriate standards contained within MfS. `

4 Accessibility

4.1 Introduction

4.1.1 This section of the report describes the accessibility of the site by modes of travel that are available in the local area. The National Travel Survey indicates that the average duration of trips by most modes of travel is between 20 and 30 minutes, and therefore this section focuses on destinations that can be reached within a 30 minute journey from the site by a variety of modes of travel.

4.2 Mode Share from 2011 Census

4.2.1 The 2011 census provides data about the mode of travel that people use to travel to their place of work. Although the mode share does not include for other journey purposes, it provides an indication of the modes of travel that residents of Sawbridgeworth use to travel. Table 4.1 summarises the modes of travel from the 2011 census for Sawbridgeworth ward.

Table 4.1: Mode of travel to work (2011 Census)

Mode	Share
Rail	12%
Bus	3%
Taxi	1%
Motorcycle	1%
Car Driver	70%
Car Passenger	5%
Bicycle	1%
Walk	7%
Other	100%

4.2.2 The mode data indicates that the three most likely modes of travel from the site are car, rail and walk, which comprise 96% of journeys to work. The high level of rail use reflects the good accessibility to the station and close proximity to London.

4.3 Walking

4.3.1 Walking is most appropriate for short distance journeys, and more often than not walking trips are made to destinations within the town or village which they start in.

4.3.2 Figure 5 shows indicative walking isochrones from the site at five minute intervals (approximately a 400m walk based on a walk speed of 80 metres per minute). The isochrones indicate that the majority of destinations that can be reached on foot located within Sawbridgeworth.

4.3.3 Table 4.2 summarises the main destinations that are accessible on foot from the site, along with an approximate journey time.

Table 4.2: Walking destinations and approximate journey times

Destination	Approx. Journey Time
Convenience Food Store	780 (10min walk)
Post Office	900m (11min walk)
Primary School Mandeville	100m (1min walk)
Leventhorpe School Senior	1Km (12min walk)
Reedings Junior School	1Km (12min walk)
Bank / Building Society	980m (12min walk)
Pharmacy	980m (12min walk)
Doctor Surgery	900m (11min walk)
Dentist	700m (9min walk)
Public house	690m (12min walk)
Railway Station	1.6Km (20min walk)

- 4.3.4 Manual for Streets states in para 4.4.1 “*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.*” PPG13 has been replaced by the National Planning Policy Framework, however this simply states under Core Planning Principles planning should “*actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling...*”
- 4.3.5 The walking isochrones indicates that many local facilities in Sawbridgeworth are located within 12 minutes’ walk of the site, meaning that walking would be the most practical mode of travel to these shops. The shops are small local shops allowing residents to buy top up items such as milk and bread, and have limited car parking, although a small car park is provided in town and some on street parking is permitted.
- 4.3.6 The Mandeville primary school is located at the south eastern boundary of the site and these trips will be in effect internalised. The local senior school and junior schools are also within easy walk and cycle distance.
- 4.3.7 It is therefore considered that the site offers a good level of accessibility on foot to the local facilities.

4.4 Cycling

- 4.4.1 There are no dedicated cycle facilities in Sawbridgeworth and cycling therefore normally takes place on road.
- 4.4.2 Figure 6 shows indicative cycling isochrones from the site, showing a 30 minute cycle catchment at a speed of 15kph (9.3mph). All the local facilities within Sawbridgeworth are within easy cycle distance of the site.
- 4.4.3 The main destinations outside Sawbridgeworth that are accessible within a 30 minute cycle ride are Bishop’s Stortford and Harlow.
- 4.4.4 It can be concluded that the site offers a reasonable level of accessibility to surrounding settlements for confident / experienced cyclists who are happy to cycle on road.

4.5 Public Transport

- 4.5.1 As described in section 2 of this report, there are 4 bus services that operate in Sawbridgeworth, the most regular being the 509/510 and 511/512 that provide connections to Harlow, Stansted and Bishop's Stortford.
- 4.5.2 Table 4.3 summarises the main destinations for bus services and the approximate journey time.

Table 4.3 Bus service destinations and journey times

Destination	Approx. Journey Time
Harlow	16 mins
Stansted Airport	39 mins
Bishop's Stortford	20 mins

- 4.5.3 The above destinations are likely to offer employment opportunities for future residents. The frequency of the weekday buses would provide a realistic alternative to the private car for journeys to these destinations.

4.6 Proposed Accessibility Improvements

- 4.6.1 In terms of accessibility, it is clear that the site benefits from accessibility to existing bus services that link to the station and surrounding towns and villages. The sites close proximity to Sawbridgeworth Railway Station also provides the opportunity to use rail links to London, Cambridge and other towns and villages for employment opportunities. Local facilities including shops, schools within Sawbridgeworth are within easy walking and cycle distance. The site therefore provides residents with a realistic alternative to the private car for work, retail, school and leisure trips.
- 4.6.2 Based on the scale of the development and the existing accessibility it is considered that significant accessibility improvements are unlikely to be required to bring the site forward. However, there may be the requirement to provide a contribution towards improving the existing bus stops to the north of the double mini roundabout. This could include shelters, bus border kerbs and real time information.

5 Summary and Conclusions

- 5.1.1 This report has assessed the accessibility and access options for the proposed development site Land north of West Road, Sawbridgeworth, Hertfordshire.
- 5.1.2 The proposed access is a priority junction with West Road. The proposed arrangement will be provided at a width of 6m narrowing to 5.5 metres approximately 25m into the site, sufficient to allow two large vehicles to pass and re-pass and consistent with the advice in Manual for Streets.
- 5.1.3 The visibility at the proposed access has been based on the results of speeds surveys and accords with the advice contained within MfS.
- 5.1.4 It is proposed that a 2 metre wide pedestrian footway will be provided on the eastern side of the vehicle access and uncontrolled pedestrian crossing point to allow pedestrians to gain access to the southern West Road footway.
- 5.1.5 The site has a good level of accessibility on foot, with facilities in Sawbridgeworth being within a 12min walk of the site. There are no dedicated cycle facilities in Sawbridgeworth and cycling therefore takes place on the road, although the local residential roads would be suitable routes to cycle on road, enabling local facilities to be within easy cycle distance of the proposed residential development. Cycle accessibility to surrounding towns and villages is poor as the road network is only suitable for experienced cyclists due to traffic volumes, vehicle speeds and the distance to nearby towns.
- 5.1.6 The local bus routes provide good links to Bishop's Stortford to the north and Harlow to the south. These are the two largest towns in proximity to the development site and are likely to provide employment, shopping and leisure opportunities. The frequency of the Monday – Saturday buses would provide a realistic alternative to the private car for residents. There is more limited bus provision on a Sunday with only bus 509/510 operating, which provides links to Harlow and Stansted Airport.
- 5.1.7 Sawbridgeworth Railway Station is approximately 1.6 km from the centre of the proposed development site. This translates to approximately 20 minute walk and 6 minute cycle time. The close proximity of the development to the railway station will allow future residents the opportunity to use rail links to London, Cambridge and other towns and villages on the West Anglia main line.
- 5.1.8 Overall it is concluded that the proposed 100 residential units can be accessed via a suitable priority junction with West Road and the site benefits from good accessibility to local facilities, existing bus routes and rail connections meeting with the local and central government planning policies. Accordingly it is considered that there are no highway or transportation reasons why the site should not be promoted for the scale of development proposed.

FIGURES



Key

Site Location

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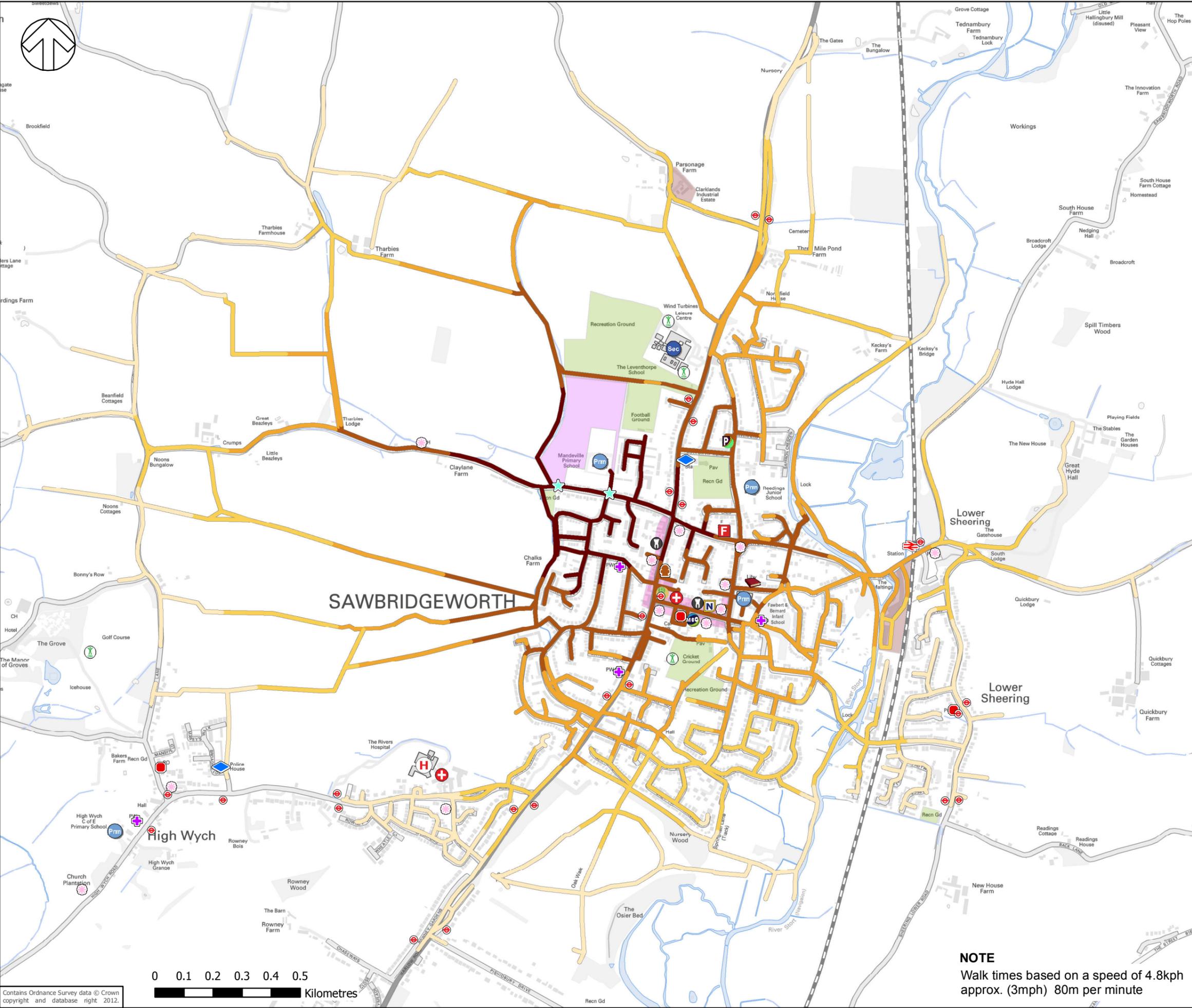


TITLE:

SITE LOCATION PLAN

FIGURE No:

FIGURE 1



Key

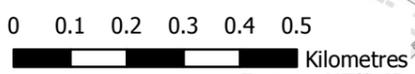
- Site Location
- Employment
- Main Retail Area
- Recreation / Sports Ground
- X Sport / Fitness Venue
- H The Rivers Private Hospital
- + Doctor
- D Dentist
- B Budgens
- MCC McColl's
- P Premier
- N Nisa
- PO Post Office
- L Library
- PW Place of Worship
- Prm Primary School
- Sec Secondary School
- PUB Pub
- PS Police Station
- F Fire Station
- PS Petrol Station
- BS Bus Stop
- SWS Sawbridgeworth Station
- ★ Walk Start Point
- 0 - 5 Minute Walk
- 5 - 10 Minute Walk
- 10 - 15 Minute Walk
- 15 - 20 Minute Walk
- 20 - 25 Minute Walk



TITLE:
**LOCAL FACILITIES
SHOWING
WALKING CATCHMENT**

FIGURE No:
FIGURE 2

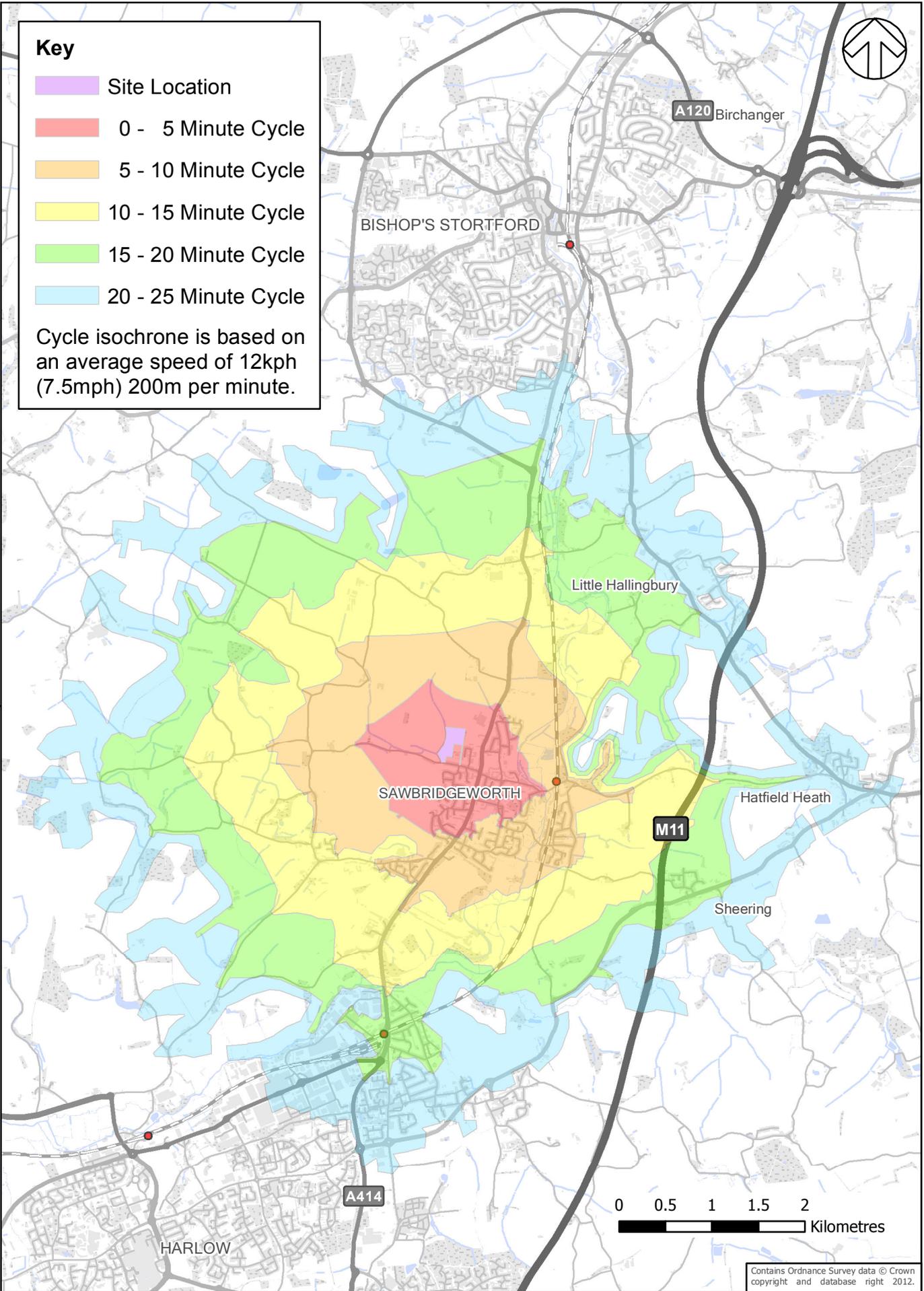
NOTE
Walk times based on a speed of 4.8kph approx. (3mph) 80m per minute



Key

-  Site Location
-  0 - 5 Minute Cycle
-  5 - 10 Minute Cycle
-  10 - 15 Minute Cycle
-  15 - 20 Minute Cycle
-  20 - 25 Minute Cycle

Cycle isochrone is based on an average speed of 12kph (7.5mph) 200m per minute.

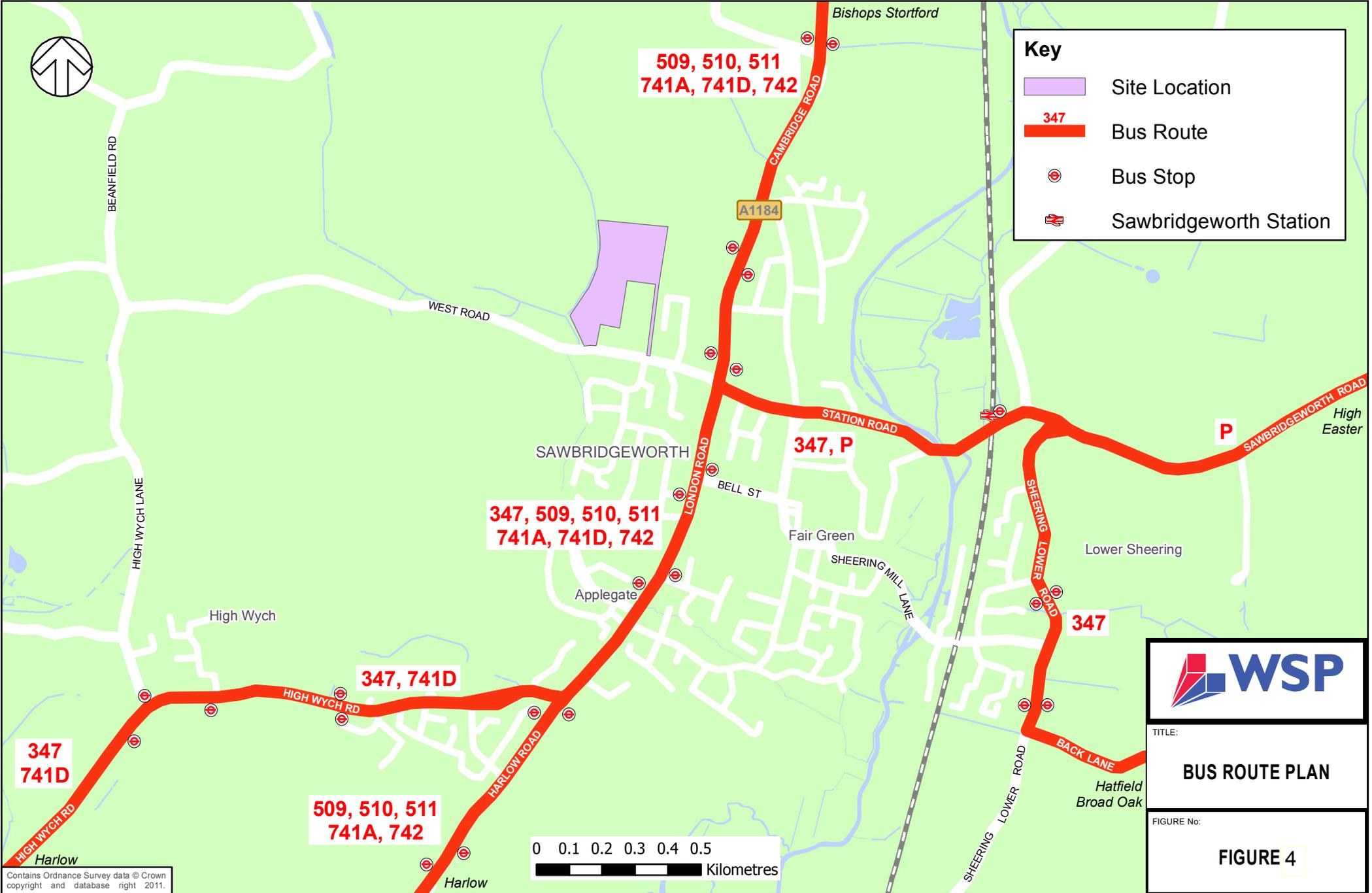


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TITLE:
INDICATIVE CYCLE CATCHMENT

FIGURE No:
FIGURE 3



APPENDICIES

Appendix A. Proposed Access Arrangement

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