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### **APPENDIX 3: REFERENCE INFORMATION**







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# **D3. Access and Movement Framework**

Stantec



## **Wisloe New Settlement**

**Access & Movement Framework** 

On behalf of The Ernest Cook Trust & Gloucestershire County Council



Project Ref: 332310150 | Rev: | Date: July 2021



### **Document Control Sheet**

Project Name: Wisloe New SettlementProject Ref:332310150Report Title:Access & Movement FrameworkDate:July 2021



#### For and on behalf of Stantec UK Limited



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### Contents

1	Introdu	ction	1
	1.1	The Brief	1
	1.2	The Site	1
	1.3	Report Structure	2
2	Existing	g Conditions	3
	2.1	Strategic Highway Network	3
	2.2	Local Highway Network	3
	2.3	Cam Dursley Uley Greenway	6
	2.4	Existing Public Transport	6
	2.5	Local Facilities	8
3	Propos	ed Development	9
3	<b>Propos</b> 3.1	ed Development Emerging Local Policy Context	<b> 9</b> 9
3	<b>Propos</b> 3.1 3.2	ed Development Emerging Local Policy Context Stroud Sustainable Transport Strategy	<b> 9</b> 9 9
3	Propos 3.1 3.2 3.3	ed Development Emerging Local Policy Context Stroud Sustainable Transport Strategy Concept Masterplan	9 9 9 10
3	Propos 3.1 3.2 3.3 3.4	ed Development Emerging Local Policy Context Stroud Sustainable Transport Strategy Concept Masterplan Multi Modal Access.	9 9 9 10 11
3	Propos 3.1 3.2 3.3 3.4 3.5	ed Development Emerging Local Policy Context Stroud Sustainable Transport Strategy Concept Masterplan Multi Modal Access Future Ways of Working and Travelling	9 9 9 10 11 18
3	Propos 3.1 3.2 3.3 3.4 3.5 3.6	ed Development Emerging Local Policy Context Stroud Sustainable Transport Strategy Concept Masterplan Multi Modal Access Future Ways of Working and Travelling Traffic Impact	9 9 10 11 18 21
3	Propos 3.1 3.2 3.3 3.4 3.5 3.6 Summa	ed Development Emerging Local Policy Context Stroud Sustainable Transport Strategy Concept Masterplan Multi Modal Access Future Ways of Working and Travelling Traffic Impact	9 9 10 11 18 21 <b>23</b>
3	Propos 3.1 3.2 3.3 3.4 3.5 3.6 Summa 4.1	ed Development Emerging Local Policy Context Stroud Sustainable Transport Strategy Concept Masterplan Multi Modal Access Future Ways of Working and Travelling Traffic Impact ry & Conclusion Summary	9 9 10 11 18 21 <b>23</b> 23

### **Tables**

Table 2-1	Local Bus Routes	. 7
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### **Appendices**

- Appendix A Figures
- Appendix B Drawings
- Appendix C Non Motorised User M5 Bridge Feasibility Report

iii



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## **1** Introduction

#### 1.1 The Brief

- 1.1.1 Stantec is instructed by Gloucestershire County Council and The Ernest Cook Trust to submit an Access & Movement Framework (AMF) to Stroud District Council in relation to the Regulation 19 consultation on the Stroud District Pre-Submission Draft Local Plan.
- 1.1.2 It is submitted on their behalf in their capacity as joint landowners of the land which has been identified for a new residential led mixed-use community in the plan under proposed allocation PS37. This framework provides transport representations to set out the access strategy principles that have been used to inform the development of a concept masterplan for Wisloe New Settlement.
- 1.1.3 Wisloe New Settlement is proposed to deliver a mixed-use community of approximately 1,500 homes, employment, education and community facilities that can be carbon neutral and accord with Garden City Principles. This AMF has been developed to demonstrate that the site allocation is sound and deliverable from a highways and transport perspective in being able to meet the related emerging Local Plan policy requirements.
- 1.1.4 In the development of the access strategy, Stantec has engaged with Highways England and Gloucestershire County Council, as the relevant highway authorities to discuss the access strategy principles for the site. Engagement has also been undertaken with Stagecoach in their role as the key existing local bus operator.

#### 1.2 The Site

1.2.1 The 80 hectare site is located between the A38 and M5 in Gloucestershire, to the east of Slimbridge and south of Cambridge, with parcels of land to the north and south of the A4135 as shown in Figure 1 contained in Appendix A and broadly indicated in Figure 1-1 below.



Figure 1-1 Strategic Site Location



- 1.2.2 As shown, the site is located very close to Cam & Dursley Station to the south of it and separated from it by the M5 motorway. The station is situated on the Bristol Birmingham line and provides direct services to Bristol, Gloucester and the wider rail network.
- 1.2.3 The communities of Cam and Dursley are located to the south of the railway station. To the north-west the Gloucestershire and Sharpness Canal (1.5 miles) and Slimbridge Wildfowl & Wetland Trust (2 miles) are popular leisure destinations.

#### 1.3 Report Structure

- 1.3.1 The remainder of this report is structured as follows:
  - Chapter 2: Reviews the existing conditions around the site including the local highway network and existing walking, cycling and public transport facilities along with its proximity to surrounding local facilities.
  - Chapter 3: Sets out details of the emerging policy context and supporting transport evidence base along with the access strategy principles that have been developed to inform the concept masterplan.
  - Chapter 4: Provides a summary and conclusion to the report.



## 2 Existing Conditions

#### 2.1 Strategic Highway Network

- 2.1.1 The M5 motorway abuts the south eastern boundary of the site. Junction 13 is located around six kilometres to the north and Junction 14 is located around 12 kilometres to the south, both of which are accessed via the A38.
- 2.1.2 The M5 runs between Exeter and Birmingham and includes sections of 3 and 4-lane motorways together with more recent 'smart' motorways. The section of motorway between Junctions 13 and 14 has three mainline lanes and is not smart motorway controlled.

#### 2.2 Local Highway Network

2.2.1 The local highway network is shown on Figure 1 contained in Appendix A.

A38

- 2.2.2 The A38 abuts the north western boundary of the northern and southern parcels of the site. It extends on a south west north east alignment next to the site towards Gloucester at M5 Junction 13 in the north, and Bristol and M5 Junction 14 in the south. In the vicinity of the site, it predominately takes the form of a two way single lane carriageway. It is currently subject to a 50mph speed limit along the site frontage, but it reduces to 40mph immediately to the north east of the northern parcel of the site upon entering Cambridge.
- 2.2.3 Footways are provided along the north western side of the A38 and around the roundabout it forms with the A4135 which is located between the two development parcels. The footway that is present on the opposite side of the A38 from the southern parcel commences at the junction which serves Gossington where it is slightly overgrown as this section is not currently heavily used.
- 2.2.4 From the above point the footway provision extends to the north east up to the provision that is present around the roundabout with the A4135 where it takes the form of a shared use foot/cycleway which is street lit. All 4 arms of the roundabout have informal pedestrian/cycle crossing facilities which contain refuge islands. From this point the provision continues to the north east in the form of a street lit footway along the same side of the A38 where it is better maintained and used as it extends to provide a continuous provision through Cambridge.
- 2.2.5 A street lit footway provision is also provided on the south eastern side of the A38 in Cambridge. This commences approximately 400 metres to the north east of the frontage via an informal pedestrian crossing facility that features a refuge island. From this point the footway extends throughout Cambridge up to the junction it forms with Dursley Road where it then recommences to the north of it.
- 2.2.6 In terms of cycling provision on road advisory cycle lanes commence along the frontage of the southern parcel of the site from which point they extend to the south west. Immediately to the north east of the roundabout with the A4135 advisory cycle lanes recommence on both sides of the carriageway to extend throughout Cambridge and beyond.



A4135

- 2.2.7 The A4135 is a two way single lane carriageway that bisects the site and forms a roundabout with the A38. It then follows a north west south east alignment providing access to Cam and Dursley and is subject to a 50mph speed limit in the vicinity of the site.
- 2.2.8 A footway is provided on the north eastern side of the road between the A38 roundabout to where the A4135 passes over the Bristol Birmingham railway line. However, due to the restricted width of the bridge the footway narrows down to approximately ½m in order to maintain a lane in each direction across it. Immediately south of the railway bridge, the footway briefly terminates prior to the cul de sac, which provides access to several dwellings parallel to the A4135.
- 2.2.9 On site observations suggest that pedestrians walk across the bridge and along the verge at which point they use the carriageway of the cul de sac due to its very lightly trafficked nature to access the footway that begins at the junction it forms with the A4135. The above situation where pedestrians have to use the verge is due to be remedied though in the near future by a short section of footway that is due to be delivered by the Millfields consented development on Box Road.
- 2.2.10 To the south of the above cul de sac, the footway continues along the eastern side of the A4135 up to its junction with Box Road. Again, this junction is one that is proposed to be improved by a committed development scheme along Box Road which is obligated to improve its geometry, extend a new section of footway into Box Road along its northern side and improve the existing informal crossing provision to reduce the distance that pedestrians have to cross.
- 2.2.11 From the above junction, pedestrians will have the choice in future as to whether they continue south along the A4135 as a continuous footway provision extends into Cam and Dursley or walk / cycle along the Cam, Dursley and Uley Greenway which is proposed to tie in with the southern extent of Box Road once complete.

**Dursley Road and Wisloe Road** 

- 2.2.12 Dursley Road and Wisloe Road are minor unclassified roads that extend across the site to link the A4135 with Cambridge and the A38 to the north. Both are two way single track lanes which are relatively lightly trafficked and subject to modest speeds based on on-site observations. They are rural in character and of a variable width generally around 5 to 5½m wide for the most part. Both have limited footway facilities beyond their immediate junctions with the A38 and the A4135 respectively and neither have any formal cycle provision.
- 2.2.13 The roads currently facilitate access to a combination of a modest number of dwellings, small industrial units, and local facilities including Slimbridge football club.

**Unnamed Track** 

2.2.14 An unnamed track which used to form part of Wisloe Road abuts the northern parcel of the site. It extends between the point where Dursley Road and Wisloe Road merge with one another and the embankment next to the M5. Highway adoption mapping confirms that this track is still publicly maintained highway; the through connection of which was stopped up when the M5 was constructed with the extent the other side of it still adopted where it emerges opposite Cam & Dursley railway station.



2.2.15 As a result of this route being severed it results in pedestrians and cyclists having to use the A4135 to access Cam and Dursley along with the railway station. This results in access to the railway station requiring use of the route via Box Road. As a result, the M5 has somewhat of a severance effect on surrounding communities particularly given the lack of a dedicated cycle route being present along the A4135 and the pinch point that exists at the rail overbridge.

St John's Road

- 2.2.16 St John's Road is a lit, two way single lane carriageway road which provides access into Slimbridge village and onwards to the Slimbridge Wetland Centre. It is subject to a speed limit of 30mph with footways provided on at least one side.
- 2.2.17 Slimbridge Primary School is located around 60 metres north of the A38/A4135 roundabout. A warning sign with flashing amber warning lights known as Wig-Wags are located on the approach to the school. "School Keep Clear" zig-zag lines and pedestrian barriers to deter parking are present along the school's frontage with further 'keep clear' markings to the north.

**Box Road** 

- 2.2.18 Box Road forms the minor arm of a priority T junction with the A4135 approximately 600 metres south of the rail overbridge. It extends broadly on a northeast southwest alignment from the A4135 in the south to serve Cam & Dursley railway station in the north. In terms of its characteristics, it is a street lit, two way single lane carriageway approximately 5½ metres wide which is subject to a 30 mph speed limit.
- 2.2.19 As part of the ongoing residential and employment development schemes coming forward along Box Road the disused section of railway line which connects Box Road with Draycott Mills to the southeast, is proposed to be converted into a pedestrian/cycleway. This will provide a connection onto Box Road around 100 metres north of the junction with the A4135 but also branch off as part of an upgraded public right of way to extend through the development sites on the southern eastern side of Box Road to connect with Cam & Dursley railway station, some of which has already been completed. The route will comprise part of the '*Cam, Dursley & Uley Greenway*' project, which when complete will provide an 8 kilometre cycle, horse rider & pedestrian route linking Cam (up to Cam & Dursley railway station), Dursley and Uley.
- 2.2.20 In addition to the improvements cited above the committed development sites along Box Road have already or are due to also deliver a series of highway and transport related improvements including:
  - works to the A4135 junction with Box Road including a street lighting upgrade, a pedestrian crossing improvement and the provision of a footway on the northern side to provide a continuous provision along this side to the railway station as part of other works further along it.
  - (ii) two priority chicane arrangements, one of which has been installed along Box Road as a traffic calming measure.
  - (iii) improvements to the pedestrian network in Cam, including the installation of uncontrolled crossings and upgrading of existing footpaths along the A4135 to the north and south of the junction it forms with Box Road
  - (iv) a 41 space overflow car park accessed off Box Road to provide additional parking for Cam & Dursley railway station. This has been constructed and is temporarily been used to provide parking for site workers whilst the associated Lister Gardens residential development is being constructed.



2.2.21 Footways are now currently provided on at least one side of the carriageway for its entire length from its junction with the A4135 up to Cam & Dursley railway station. To the north east of the railway station the footway terminates, and the road extends to the north to cross the railway via the Halmore Mill overbridge. After the bridge the road turns through c.90 degrees where it meets the south eastern section of the unnamed track that was bisected by the M5 when it was built. From this point the road continues to the east to serve the village of Coaley.

#### 2.3 Cam Dursley Uley Greenway

- 2.3.1 The Cam, Dursley and Uley (CDU) Greenway is proposed to be an 8km cycle, horse rider & pedestrian link to connect Uley, Dursley and Cam up to Cam & Dursley railway station. The ultimate aspiration though is that it would eventually be extended to connect with the National Cycle Network Route (NCN) 41 in Slimbridge albeit no route is understood to have been formally identified for this yet given the constraint that is posed by the M5. The intention is that the route would be used for a variety of trips purposes in terms of commuting, leisure, shopping, travelling to/from school and accessing the rail station once complete.
- 2.3.2 The proposed alignment of the route in the vicinity of the site is shown indicatively in **Figure 3**. It is intended to be delivered in stages with parts of route open already with others due to be completed shortly as part of the development of the land to the south east of Box Road which is obligated to deliver this section.
- 2.3.3 Provision of a pedestrian and cycle link across the site to connect the CDU Greenway and NCN41 would therefore have strategic benefits as the latter connects Bristol with Gloucester locally as a part of a continuous route that will eventually link with Stratford-upon-Avon and Rugby when complete. Locally the NCN41 combines with NCN45 to serve existing key settlements including Stonehouse and Stroud.

#### 2.4 Existing Public Transport

**Bus Services** 

- 2.4.1 Given the routes that they serve, the closest pair of key bus stops to both the northern and southern elements of the site are located in its immediate vicinity on the A4135 to the north of the junction with Wisloe Road as shown on Figure 1. Additional stops are also located on the A38 to the north of the roundabout it forms with the A4135 and next to the Gossington junction along the frontage of the southern parcel.
- 2.4.2 Overall, there are a number of bus services which provide access to a range of local facilities, settlements and employment destinations. Services 60, 60F and 61 provide regular commuting services to the likes of Gloucester, Stonehouse and Stroud. They also serve key destinations in the vicinity of the site including Cam & Dursley railway station, Draycott, Lower Cam and Dursley incl. Rednock School (Secondary), employment provision, local hospital, bus station and Sainsburys supermarket. Bus Service 65 operates every two hours to provide additional services to the likes of Lower Cam, Dursley and Stroud whilst also serving some of the surrounding nearby villages such as Coaley.



No.	Route	Weekdays	Saturday	Sunday	Weekday First/Last Bus
60	Gloucester - Dursley via Quedgeley, Whitminster, Draycott, Cam & Dursley Rail Station, Draycott, Lower Cam & Rednock School	Every 2 hours	Every 2 hours	Every 2 hours	0609/1856
60F	Dursley - Gloucester via Lower Cam, Draycott, Cambridge & Quedgeley	1 daily return service	1 daily return service	-	0718/1817
61	Woodmancote - Bussage via Rednock School, Dursley, Lower Cam, Draycott, Stonehouse & Stroud	Hourly	Hourly	-	0616/1829
65	Woodfield - Stroud via Lower Cam, Draycott, Cam & Dursley Rail Station, Coaley, Upper Cam, Rednock School, Dursley, Uley and Nailsworth	Approx. every 2 hours	-	-	0716/1825
346	Whitminster - Rednock School, Dursley	1 daily return service	-	-	0808/1515
X1A	Gossington - Rednock School, Dursley	1 daily return service	-	-	0754/1541
X3	Eastington - Rednock School, Dursley	1 daily return service	-	-	0809/1518

#### Table 2-1Local Bus Routes

#### **Rail Services**

- 2.4.1 Cam & Dursley railway station is accessed from Box Road and is located on the Bristol to Birmingham line on the opposing side of the M5 from the site. The station provides hourly direct connections to Bristol Temple Meads, Bristol Parkway, Gloucester, Cheltenham, Ashchurch for Tewkesbury, Worcester and Great Malvern. The fastest journey time for direct services to Gloucester is 15 minutes whilst the quickest to Bristol Temple Meads is 33 minutes. Some services also continue onto Bath, Weymouth, and Brighton. This station is of strategic importance as it provides the only rail access to Bristol and the South West from Stroud District.
- 2.4.2 The Birmingham-Bristol mainline broadly follows the same alignment as the M5, so it provides a genuine alternative to car-based travel. Whilst the current service frequency is hourly there are proposals to increase it to half hourly as part of the MetroWest2 scheme which would increase its attractiveness.
- 2.4.3 The station has cycle parking facilities for 30 bicycles and 90 car parking spaces with the latter due to be supplemented with a further 41 car parking spaces within an offsite car park located along Box Road. There is a ticket machine, and each platform has a shelter and seating. A ramped footbridge over the railway line provides access between the two platforms.
- 2.4.4 It is served by the 60 and 65 bus services and access to it on foot has recently been improved by footway improvements that have been delivered along Box Road. Access to it by active modes will be improved further by additional improvements that are due to be delivered along Box Road and through completion of the CDU Greenway which will extend directly up to the station.



#### 2.5 Local Facilities

- 2.5.1 The area around the junction of the A4135 and Wisloe Road currently includes an employment area and Slimbridge football club. These facilities are supplemented further by Slimbridge which contain a primary school incl. pre-school, post office, church, village hall, sports field and a playground. Limited facilities are located in Cambridge except for The George public house.
- 2.5.2 To the south of the site along the A4135 are Draycott, Cam and Dursley with a combined population of c.15,000 which make them a significant conurbation and focus for the District. As a result, they both represent a significant centre for homes, jobs, retail, transport, services and facilities including community, health, leisure and secondary education.
- 2.5.1 It is generally recognised in guidance documents that walking offers the greatest potential to replace short car journeys, particularly trips under 2 kilometres in length, and similarly cycling has the potential to substitute car trips particularly those under 5 kilometres. On this basis these surrounding settlements in terms of distance are accessible by a combination of walking, cycling and public transport.



## **3** Proposed Development

#### 3.1 Emerging Local Policy Context

- 3.1.1 The Stroud District Pre-Submission Draft Local Plan identifies the site for '... a new garden community, which will deliver a high quality mixed use new settlement, including housing, employment, retail and community uses within a landscaped setting that meets the day to day needs of its residents. It goes onto propose that the Site,'...will be developed to accommodate approximately 1,500 dwellings and 5 hectares of office, B2 and B8 employment land and a local centre comprising retail and new community uses, including a new primary school and surgery, to meet the day to day needs of the new community'.
- 3.1.2 The Plan goes onto identify a number of objectives for the site including but not limited to education and community provision, green infrastructure, drainage, landscaping, energy and transport related matters.

#### 3.2 Stroud Sustainable Transport Strategy

- 3.2.1 A Sustainable Transport Strategy (STS) was produced by AECOM in February 2021 on behalf of Stroud District Council to inform and provide a transport evidence base for the Local Plan. Its aim is to ensure that new strategic developments such as this site deliver on the overall objectives of the Plan in order to reduce their transport related impacts and develop a transformational strategy in favour of sustainable forms of transport. It was produced in consultation with the following parties given the strategic nature of the work:
  - Stroud District Council local planning authority
  - Gloucestershire County Council local highway authority
  - Highways England strategic highway authority.
- 3.2.2 The STS has identified a number of interventions for the site which it recommends should be reflected in the layout and design of the scheme to ensure sustainable transport enhancements are prioritised above the provision of additional highway capacity.
- 3.2.3 The sustainability measures that have been identified for the site are as follows:
  - Provision of a primary school, local centre and employment space to increase the proportion of internalised trips
  - Masterplan layout that prioritises pedestrian and cycle movements and provides a walkable/cyclable neighbourhood
  - Contributions and support to sustainable transport measures on the A38 and A4135 sustainable transport corridors
  - Contributions and support to link the site to the wider pedestrian and cycle network, including to the CDU Greenway to the south and to the NCN 41 to the north.
  - Improvements required to pedestrian and cycle accessibility between the site and facilities in Draycott and Lower Cam, as well as to Cam & Dursley Railway Station to the south of the site, increasing the attractiveness of rail as a potential mode of transport.



Connect with and enhance the nearby bus network through increasing service frequency as well as seeking to divert some services through the site in order to provide a viable alternative to the private car. This should include both longer distance services along the A38, and connections with Cam and Dursley.

#### 3.3 Concept Masterplan

- 3.3.1 A concept masterplan and an accompanying report have been developed to demonstrate how the site can respond to a combination of the emerging policy context, transport evidence base and in doing so developed with Garden Village Principles and be carbon neutral.
- 3.3.2 Garden City Principles are defined by the Town and Country Planning Association as, 'A Garden City is a holistically planned new settlement which enhances the natural environment and offers high-quality affordable housing and locally accessible work in beautiful, healthy and sociable communities'. Transport related principles within the framework that has been identified include:
  - A wide range of local jobs in the Garden City within easy commuting distance of homes
  - Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods
  - Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport.
- 3.3.3 The masterplan report sets out the background, rationale and vision for the development of a new sustainable community at Wisloe. It confirms proposals to deliver approximately 1,500 dwellings, new employment provision, a new local centre comprising local community facilities, retail provision, health and education provision, public open space and integrated green and blue infrastructure. The provision of these facilities will result in trips being internalised within the site thereby reducing the need to travel off-site.
- 3.3.4 A number of technical inputs have been undertaken to support the development of the masterplan and demonstrate viability and deliverability. Transport and highway inputs have as a result played a key part in shaping the high level site access strategy that is reflected in the concept masterplan.

**Core Principles** 

- 3.3.5 The concept site layout proposes two new walkable neighbourhoods within the northern and southern areas of the site, set within a new multifunctional landscape framework that will provide a buffer to the M5, make connections to the wider area and provide separation between the new settlement and Cambridge and Slimbridge.
- 3.3.6 The proposed new neighbourhood centres are intended to form two of the 'five villages' within the wider area which will allow the existing settlements of Slimbridge, Cambridge and Lower Cam to retain their own separate identities, by creating new distinctive neighbourhood centres set within a strong landscape framework whilst being well connected. The five villages are proposed to be linked by excellent sustainable transport and pedestrian/cycle connections, enabling good connectivity to facilities for both existing and new residents alike.



- 3.3.7 The development will look to provide an excellent range of on-site facilities and supporting infrastructure which allow for enhanced connectivity for new residents and people within existing neighbouring communities. Strategic pedestrian, cycle and bus links will be integral to the design of proposed layout of the site. The site's proximity to strategic travel corridors will ensure it is well connected with surrounding settlements and facilities, with access to public transport being made a highly desirable option for travel with a focus on high quality walking and cycling links to the station being intrinsic to the framework of the masterplan.
- 3.3.8 The mix of uses proposed within the new neighbourhood centres, will ensure that proposed and existing residents can meet the majority of their day to day needs without the need for vehicular travel to the wider area. The neighbouring communities of Slimbridge and Cambridge will benefit from the access to these on-site facilities.
- 3.3.9 A new pedestrian/cycle link can provide an accessible route east-west across the site linking Slimbridge, Cambridge and Gossington to the west of the A38 with Cam & Dursley railway station and their respective settlements to the east. Two new access points can provide vehicular, pedestrian and cycle access from the A38 to the new neighbourhoods without increasing traffic along the northern extent of Dursley Road. Dursley Road itself can be reduced to provide public transport and/or cycle and pedestrian access for the prospective community, with associated high quality provisions provided across the A4135 to allow a connected sustainable transport route to be formed to all of the aforementioned villages.
- 3.3.10 The residential area can be focused into the two neighbourhood centres, with a higher density core within each and lower density edges adjacent to existing residential areas. It is envisaged that small scale employment and commercial uses can be incorporated within the neighbourhood centres and at key nodes within the development, and feature uses including small shops, a café, workshops and office space to support local working. House designs can also be developed to allow home working and flexible use of internal space.
- 3.3.11 The primary school is proposed to be located within the northern part of the site, close to the neighbourhood centre, where it will best serve both the new and existing communities. It is proposed that the school could be sited next to Slimbridge AFC and adjacent to the proposed landscape framework to support engagement with the outdoors and other curricula activities.

#### 3.4 Multi Modal Access

- 3.4.1 The access strategy that has been developed has taken account of the garden city and core principles set out above in order to shape the masterplan to ensure a sustainable and low carbon form of development can be achieved. Initial transport visioning work undertaken helped inform the core principles that were developed for the site early in the design process.
- 3.4.2 The key objectives of the access strategy complement these principles as they are to reduce the need to travel where possible and manage the car demand generated by the development in looking to provide genuine high quality alternatives to the car through the provision of a package of supporting measures to engender sustainable patterns of movement.

#### Vehicular, Pedestrian and Cycle Access Strategy

3.4.3 The Stroud District Pre-Submission Draft Local Plan suggests that vehicular access for the site will be primarily from the A38 and potentially from the A4135 as well. Concept highway design work has been undertaken in order to establish how vehicular, pedestrian, cycle and public transport access can be achieved from these locations to support an all-encompassing sustainable access strategy.



- 3.4.4 Instead of just focussing on vehicular access, the concept access strategy that has been developed seeks to prioritise walking, cycling and public transport use in line with the ambitions of the Plan. The concept masterplan and the supporting access strategy in combination set out how high quality active travel routes can be provided throughout the development to provide walkable and cyclable neighbourhoods. These can then be supplemented with supporting off-site improvements to serve key desire lines to surrounding communities. Existing and improved provisions that could potentially be delivered are shown in Figure 2.
- 3.4.5 The Cam and Dursley corridor is in the top 5 routes in Gloucestershire for the potential to increase cycle flows, even without the development of this site. Should the development come forward along with other nearby allocations then this has significant potential to increase further. According to the Propensity to Cycle Tool (PCT) for England and Wales, which provides an evidence base to inform cycling investment, this corridor is top in terms of 'number of cyclists', potential increase in cyclists (with investment) and health economic gain.
- 3.4.6 Further to liaison with the local highway authority as to the access strategy, concept design work was undertaken to establish the potential to provide gateway multimodal access points off the A38 and A4135.

#### A38 – Northern Development Parcel

- 3.4.7 With sustainable and vehicular connections in mind, concept design work was undertaken to establish the potential to accommodate a signalised junction along the A38 site frontage in order to serve the northern development parcel. Given that traffic flows are higher along the A38 to the north of the roundabout it forms with the A4135, this is considered to represent the most appropriate form of junction to allow traffic to readily and safely exit this element of the site. Two variations have been developed with **Drawing 005** set out in **Appendix B** incorporating a right turn filter lane whilst **Drawing 004** shows this movement being restricted on the basis that traffic could alternatively access this element of the site from the A4135 if necessary.
- 3.4.8 Another key reason for initially considering this form of junction design was with pedestrians and cyclists in mind in terms of them being able to readily cross the A38 at this point. However, whilst controlled crossing facilities could still be provided in this location as part of a third option it was felt at this stage that they might be better located either side of this junction as there is not a desire line located directly opposite it.
- 3.4.9 There is also the potential to extend a segregated foot/cycleway facility into the site and run it along the eastern side of the A38 in both directions towards Slimbridge. To the north, this facility can be extended to a point where pedestrians are likely to want to cross in order to access the existing footway and on-road cycle lane located on the opposing side of the A38 in Cambridge.
- 3.4.10 To the south of the junction there is the potential to extend a foot/cycleway up to the roundabout with the A4135 and tie in with the existing shared use facilities located at this point as indicated on **Drawing 003**. To complement this there is the potential to upgrade some of the existing informal crossing facilities that are present around this roundabout. The crossing on the northern arm of the A38 is shown to be upgraded at this stage to a signalised Toucan facility in order to cater for pedestrian/cyclist movements to and from the likes of Gossington, Slimbridge and NCN41.
- 3.4.11 Access for private vehicular traffic can be restricted to access being taken from the A38 and A4135. In doing so there is the potential to restrict vehicular access into the northern extent of this parcel from Dursley Road through the provision of a bus gate or a pedestrian and cycle modal filter. Either option would benefit active modes as it would ensure that a lightly trafficked route can be maintained into/from Cambridge as an alternative to using the A38 for the benefit of new and existing residents alike. Not allowing bus access at this point though
- 168 J:\50753 New Settlement at Wisloe\5501\_Transport Task\_TTR\Reports\210715 Access & Movement Framework.docx



may provide more potential to upgrade the existing footway provision along the northern extent of Dursley Road to improve this connection into Cambridge.

#### A38 – Southern Development Parcel

- 3.4.12 For the southern parcel whilst another signalised junction could potentially be provided to access it off the A38, it is deemed that a priority T junction incorporating a formalised right lane arrangement would be sufficient as indicated in **Drawing 002**. In order to support the provision of this junction along with the one to the north there is the potential to reduce the existing speed limit from 50mph to 40mph to the south of the junction given that the stretch of A38 which serves Cambridge is currently subject to this limit.
- 3.4.13 The speed limit reduction set out above could therefore also potentially be extended to cover the A38 frontage of the northern parcel along with that of the A4135. In doing so it would help enhance road safety, aid pedestrian crossing movements, improve the residential amenity of the site and the surrounding area and make it more conducive to cycle along the A38 using existing/upgraded on-road facilities.
- 3.4.14 As no footway provision is directly located along the frontage of this element of the site, the above drawing demonstrates the potential to provide a shared use foot/cycleway facility to the north. This facility could extend between the site access and the roundabout that the A38 forms with the A4135 in order to connect with the existing provision located at this point. Whilst it is not shown, there is the potential to accommodate a pedestrian refuge island within the hatched area indicated next to the proposed access in order to improve the linkage to/from Gossington.
- 3.4.15 It is clear that there are a number of ways in which the pedestrian and cycle facilities could be improved along both the A38 and A4135. The options listed therefore are not intended to be exhaustive as to what could be achieved as the STS produced by AECOM, as previously set out, states that the site should provide, *'contributions and support to sustainable transport measures on the A38 and A4135 sustainable transport corridors'*. It is clear that this can be achieved but that any improvements that are ultimately put forward should complement the wider corridor strategy for the A38 and A4135 which may involve a slightly different approach to that set out.

#### A4135

- 3.4.16 With a combination of vehicle, pedestrian and cycle access in mind concept design work has been undertaken to confirm the potential to provide a signalised crossroads along the A4135 to serve both the northern and southern development parcels. **Drawing 006** indicates the potential to accommodate a junction being positioned approximately 130 metres to the south east of the existing junction that the A4135 forms with Wisloe Road. The design shows that given that land located either side of the road at this point falls within the site ownership that a junction can readily be formed. This has the potential to include dedicated right lane provisions.
- 3.4.17 As set out previously there is the potential to reduce the speed limit along the A4135 from 50mph to 40mph particularly given that it already reduces to this limit on the opposing side of the M5 when entering Cam.
- 3.4.18 The above drawing also shows the potential to extend a foot/cycleway facility into the site from both site access arms located on opposing sides of the A4135. These can be connected via a signalised Toucan crossing facility via either a staggered or a straight over arrangement. From this point there is the potential to upgrade the existing footway that runs along the northern side of A4135 to a shared use foot/cycleway to connect in with the existing provision that is present around the roundabout it forms with the A38. Alternatively, there is the potential to use the wide verge that is present on the opposing side of the road to deliver a similar type of facility.



#### **Internal Connectivity**

- 3.4.19 The proposed development is focused on the provision of two new interconnected walkable neighbourhoods that will provide community facilities, employment and leisure opportunities and high quality open space for new and existing residents / employees to use alike. High quality provision for active modes are intended to be made throughout both the northern and southern extents of the site so that the site is readily accessible and permeable for pedestrians, cyclists and public transport usage.
- 3.4.20 On key desire lines high quality foot and cycleway facilities can be provided to link the potential site accesses onto the A38 and A4135 for both development parcels which would readily link with one another and serve the proposed local centre. Along with an integrated bus route these provisions would provide a sustainable spine through the site as a whole. In the northern parcel there is the potential to link the aforementioned accesses with the proposed pedestrian and cycle bridge over the M5 with a sustainable connection onto Dursley Road which would prioritise provision for active modes over cars in both instances.
- 3.4.21 Pedestrian and cycle routes would be designed to ensure legible and direct routes are available throughout the site for commuting and leisure use. These will be integrated within the masterplan to ensure routes are safe and incorporated with the landscape strategy to maximise opportunities for attractive and high quality green space.

#### M5 Foot and Cycle Bridge

- 3.4.22 In order to improve the accessibility of the site by active travel modes a high quality foot/cycle bridge can be provided across the M5 to overcome the current severance issue. Given the desire line that exists a new bridge across the M5 would link the rail station, CDU Greenway with the communities and the facilities on either side. The alignment for it is intended to be immediately to the north of the existing tracks that used to comprise of Wisloe Road on both sides of the motorway as this land is within the control of the landowners.
- 3.4.23 The principle for such a facility was initially discussed with both the local highway authority and Highways England (HE). HE confirmed in principle support for it with the only proviso being that any bridge structure would need to have a clear span across the motorway. Similarly, the local highway was also supportive of it particularly given that they were planning to submit a Local Pinch Point Funding bid to the Department for Transport (DfT) to fund a pedestrian/cycle bridge across the M5 at more or less the same location at the time.
- 3.4.24 Through further discussions with the local highway authority, it transpired that their bid was intended to be based on looking to provide a bridge to connect the existing tracks located either side of the M5 on the basis that these extents still technically form part of the adopted highway. It was confirmed that their rationale for looking to submit a bid was to support an extension of the CDU Greenway to link in with the NCN41 in Slimbridge, improve the accessibility of the rail station, accelerate delivery of the Greenway between Uley and Cam and improve the accessibility of the site if it were to be allocated albeit it would not be reliant on it. It subsequently emerged though that the bid they submitted was unsuccessful as the DfT unexpectedly decided to withdraw this fund completely.
- 3.4.25 A bridge feasibility study was still progressed by Stantec. The appended report set out in Appendix C confirms the options to provide a bridge on the alignment set out based on the structure having a clear width of 5½m for pedestrians and cyclists to use in accordance with Local Transport Note (LTN) 1/20 Cycle Infrastructure Design.



- 3.4.26 A number of options were considered but two concept designs were developed as follows:
  - Option 1 Foot/cycle bridge fully spanning HE land based on provision of a single 58m square span bow arch truss bridge
  - Option 2 Foot/cycle bridge with minimum span over existing carriageway based on provision of a single 43m square span bow warren truss bridge.
- 3.4.27 The bridge design options as set out in the appended feasibility report were developed in consultation with the masterplanner/landscape architect and acoustic consultant in order to integrate them into the landscape and noise bund concept design. As a result, steel ramps do not need to be provided to serve it as there is the potential to incorporate a segregated foot/cycle path into the landscaped bunds that can be sited either side of the bridge.
- 3.4.28 Provision of a bridge for active travel as part of the development of the site would allow a higher quality and more cost effective design to be provided than would be possible otherwise. The same can also be said of the segregated pedestrian and cycle route that can be provided through the site to connect the A38 with it as well.

#### Linkage between M5 Foot/Cycle Bridge and Rail Station

- 3.4.29 In order to complement the range of on and off-site pedestrian and cycle improvements previously set out, consideration has also been given to the pedestrian and cycle desire line to Cam & Dursley railway station and the CDU Greenway from the point where the bridge is intended to land on the southern side of the M5 opposite the site.
- 3.4.30 Given that there is no foot/cycle provision to connect with the station from this point, there is the potential to provide a segregated foot/cycle path up to the lane that Box Road ties in with that passes over the railway line via Halmore Mill bridge immediately to the east of the railway station. As this lane is lightly trafficked and subject to relatively low speeds there is the potential to introduce a signalised shuttle working system across it in order to provide a continuous pedestrian link to the station. The other option would be to investigate the potential to introduce a modal filter across the bridge to only allow use of it by active modes and buses.
- 3.4.31 With the above shuttle working arrangement cyclists could use the carriageway at this point for a short distance and then rejoin an off-road provision after the bridge by way of a shared use foot/cycleway. This could then extend up to the station access in order to provide a continuous route to it and tie in with the existing footway facility on Box Road.
- 3.4.32 In providing a connection to the railway station, this provision would also connect in with where the committed section of CDU Greenway is intended to commence/terminate on the opposing side of Box Road. This linkage when combined with the on-site provision and associated off-site works would effectively extend the Greenway to provide the 'missing link' between it and the NCN41 in Slimbridge. In doing so, it would form part of a wider link to the Cotswolds to the south and to the Gloucester and Sharpness Canal and to the north.
- 3.4.33 Provision of the bridge and associated on/off site pedestrian and cycle infrastructure that could accompany it, would link the station with the site so that is readily accessible by non-car modes in future so as not to increase car parking pressures at Cam & Dursley railway station. This infrastructure would even stand to relieve some of the existing parking pressures as the improved pedestrian, cycle and public transport linkages set out would also help bring about a mode shift amongst existing communities such as Slimbridge and Cambridge.



- 3.4.34 A combination of the existing and potential cycling infrastructure set out would also be suitable for micro-mobility use given the recent emergence of e-bikes and e-scooters particularly if current trials for the latter are completed successfully. Given the size of e-scooters in particular they stand to lend themselves to help overcome first/last mile connectivity issues which can often be a deterrent to public transport use. One such example of this is where a passenger has to get from their point of origin to their major form of transit (such as the train or a bus), and then get from that mode to their ultimate destination.
- 3.4.35 With the uptake in use of e-bikes becoming ever more prominent, the issue of distance will become less of a barrier to cycling. E-bikes will also allow greater accessibility for cyclists that are less mobile, or may struggle with a conventional bicycle, opening new sustainable transport opportunities for those users.

#### **Micro-mobility**

- 3.4.36 The 'Inrix: Micromobility Potential in the US, UK and Germany' report dated September 2019 explains that, 'Driving and public transportation have historically been the most popular ways to travel, but the explosion of micromobility technology has brought a wide variety of new options that could make urban mobility more efficient, accessible and convenient. The emergence of micromobility-as-a-service defined as shared bikes, e-bikes and e-scooters highlights both the consumer and commercial appeal'.
- 3.4.37 The Inrix report further states that; "The benefits of micromobility services stem from their higher efficiency in terms of energy and space. For example, the minimum square footage of one parallel parking space is 212 square feet, whereas scooters and bikes require three to six square feet to park. There's also a sharp contrast in energy efficiency; an e-scooter can travel up to 83-miles with the same amount of energy it takes an average gas vehicle to travel one-mile. However, nuance is needed in their adoption".
- 3.4.38 The Inrix study concludes that, *'micromobility faces a promising future by replacing short distance vehicle trips and providing currently underserved first- and last-mile solutions for public transit riders. The exceptionally high number of short duration trips found in all three countries highlights micromobility's massive market potential. Their flexible networks enable dynamic management of transportation networks providing travellers with fast, efficient alternatives to driving'.*
- 3.4.39 The DfT has fast tracked and expanded trials for e-scooter hire schemes in support of a green restart to local travel and to help mitigate reduced public transport capacity in the short term resulting from the COVID-19 pandemic. The DfT believe that e-scooters have potential to offer fast, clean and inexpensive travel, which can also help ease the burden on transport networks. An initial 12 month trial period began in July 2020, following legislative changes to allow it to proceed, which has now been extended until March 2022. Therefore, although not lawful to use on public highways at present (i.e., on highways, adopted footways, cycleways and the like), the growth of personal transport modes is likely to see changes to the way that these are used and lead to a resulting reduction in car usage.
- 3.4.40 The combination of the proposed on-site cycle provision, pedestrian/cycle bridge, off-site improvements and the CDU Greenway stand to provide just the type of infrastructure required for micro-mobility usage in future. It will also help address first/last mile connectivity issues which can be experienced with use of bus and/or rail thereby helping improve their uptake as well.



Public Transport Strategy

- 3.4.41 In order to maximise the opportunities for sustainable travel further, there is the potential to improve the existing local bus service provision. In doing so, it would allow for an even greater mode shift to non-car modes to be achieved which in turn will help decarbonise travel to and from the site. It would also complement the promotion of active modes, micro-mobility and the potential to provide improved linkages to Cam & Dursley railway station so that all modes offer a credible alternative to personal car use for both short and longer-distance journeys.
- 3.4.42 Given that that the site is extremely well located on the junction of two sustainable movement corridors there is scope to readily improve the bus and coach offer. This could be improved as part of a wider strategy with other proposed allocations such as the one at North West Draycott (PS24) and that proposed on the southern fringe of Gloucester around Junction 12. This strategy complements the proposed Local Plan spatial strategy in steering development to corridors such as this as it will enable a greater level of improvement to be achieved in combination rather than what would be possible just for this site or others by themselves.
- 3.4.43 In evaluating potential public transport improvements, it is anticipated that public transport demand to the south towards Yate and Bristol could be met by the existing rail service from Cam & Dursley railway station given that the pedestrian/cycle accessibility of it is proposed to be improved. This will offer a similar frequency to Gloucester to access the city centre. Therefore, the focus has been on the potential to improve the Dursley to Stonehouse element of the bus corridor setting out the potential to improve the 61 service in consultation with the operator Stageoach.
- 3.4.1 Of the existing local bus routes the 61 service, which runs past the site on an hourly basis, is the most frequent and well used one in the southern part of the District. To the east it extends along the A4135 directly into Cam and then into Dursley to serve key education, retail and employment sites. To the north the service uses the A38 to serve the major employment area west of Stonehouse, thereafter it extends to serve the town centre and secondary and post-16 education sites, before terminating at the heart of the commercial and employment core of Stroud as the key centre within the District. It is an attractive service to use in that many of the on-bus journey times from Wisloe are broadly comparable to driving, as the route mainly follows the logical driving route between the site and both Dursley (11 minutes) and Stonehouse (18 minutes).
- 3.4.2 To improve the appeal of the 61 service going forwards there is the potential to increase its frequency to operate at least every 30 minutes during core operating hours (0700-1930) from Monday to Saturday. Beyond Dursley, journeys could either continue along the 61 route to Stroud, or, alternatively, continue to Quedgeley and Gloucester via the B4008 depending on the best means of maximising take-up of the additional capacity created. This intervention would require an additional two-buses to provide. It is therefore acknowledged that developer contributions would be required to fund it until the patronage improves sufficiently for it to be able to be sustained in commercial terms going forwards.
- 3.4.3 The masterplan has been developed with integrated bus travel in mind with the intention that a bus could extend through both parts of the site rather than simply just run along the periphery of them on the A38 and A4135. Stagecoach have confirmed the potential to divert the 61 service into the site in order to order to improve public transport permeability and increase the attractiveness of using it by prospective residents, employees and visitors. This permeability would also benefit passengers wanting to interchange to and from rail given the improved pedestrian and cycle link that is intended to be forged to Cam & Dursley railway station.



- 3.4.4 There are a number of ways in which this route could be integrated into the site, but one option discussed with Stagecoach would initially involve diverting the 61 service off the A38 in Cambridge via Dursley Road to serve the northern development parcel. Southbound services could then extend along it and at the point where development frontage starts, there is the potential to introduce a bus gate facility as indicated in **Figure 2**. This facility could provide priority for buses to access/exit the site at this point and ensure that general development / through traffic does not use this section. It would also help bring about benefits for pedestrians and cyclists as previously highlighted.
- 3.4.5 Upon entering the site via Dursley Road there is the potential for a bus to stop close to the northern extent of the proposed pedestrian/cycle bridge that is intended to be provided to serve the desire line to Cam & Dursley railway station and the CDU Greenway. In doing so rail passengers may look to alight/board at this location as the station could then be within an c.800 metre walk distance with the bridge in place. A bus could then continue to serve the proposed local centre before briefly exiting onto the A38 in order to serve the southern development parcel. It could then route through it and exit via the proposed access onto the A4135 to continue its journey on into Cam and Dursley. Buses travelling in the opposing direction could therefore use this route in reverse.
- 3.4.6 High quality on-site bus stop infrastructure could be provided at regular intervals at key nodes within both extents of the site to serve the diversion of the 61 service. In addition, existing bus stops in the vicinity of the site on the A38 and A4135 could also be upgraded to increase the attractiveness of using the 60, 60F and 65 bus services. In combination these routes would combine, based on a combination of service frequencies, journey/operating times and destinations served, to provide a very good level of service overall based on the local context.
- 3.4.7 The potential bus strategy would also complement the walking and cycling strategy for the site particularly in relation to greatly improving the accessibility of Cam & Dursley railway station by these means. The combination of bus and rail would therefore stand to provide an excellent public transport provision for the site based on the local context. This holistic approach would help maximise the opportunities for sustainable travel and secure a low level of private car use amongst future residents of the development. In addition, the benefits would extend far wider than the site residents as people currently living and / or working in surrounding areas will also stand to benefit from this package too.

#### 3.5 Future Ways of Working and Travelling

#### Overview

- 3.5.1 There is a growing body of evidence which suggests that the way people in general, and especially younger generations, consider travel and mobility is changing. The rapid development of new technologies is challenging existing travel models and advances such as car clubs, micro-mobility, bike hire systems and mobility as a service (MaaS) are now realities that will play an increasing role in the way people travel in the future.
- 3.5.2 Furthermore, advances in vehicle technologies such as electric and autonomous vehicles create opportunities to rethink established means of delivering transport solutions. Development in mobile technology also creates a new realm of possibility when considering how the built environment is designed and how people use it. Increased internet access and improved broadband speeds now allow people to work in more 'agile' ways as has been shown through the COVID-19 pandemic.



- 3.5.1 The transport proposals put forward in support of development at Wisloe aim to deliver a framework for access and movement that is sustainable, deliverable and effective based on current technologies but also resilient to future travel patterns and systems.
- 3.5.2 In this context, the AMF for the site could be supported by Smart Travel Concepts, that would work across the proposed walking and cycling, public transport, and vehicular access strategies. The Smart Travel Concepts are:
  - Smart Worker Package
  - Smarter Choices Package
  - Sharing Economy Package
  - Informed Traveller Package.

Smart Worker Package

- 3.5.3 The number of people working from home has increased in recent times as employers have been encouraged to adopt more flexible working practices.
- 3.5.4 The recent COVID-19 pandemic has then brought about more of a sudden acceleration in the way people work with many forced to work from home, some for the very first time. As businesses adapt going forwards one of the positive legacies of COVID-19 is that large proportions of the workforce are likely to continue to work from home more often; saving money on travel, improving their work-life balance and helping the environment.
- 3.5.5 The Government's Opinion and Lifestyle Survey, presented in one of their early daily COVID-19 briefings, showed an increase in home working from 12% in 2019 to 39% in 2020 during the lockdown. Further, data published by Office of National Statistics established that in April 2020 46.6% of people in employment did some work at home, of which 86% did so as a result of the pandemic.
- 3.5.6 Furthermore, recent studies conducted in the United States and Norway, estimate around 36% of jobs could be performed from home. Whilst these are international studies, the types of jobs are consistent with that in the UK and the local area. Therefore, it is likely that the 'new normal' will include a significant percentage of the workforce continuing to work from home for more than one day a week. A key consideration in people's ability to work from home is access to fast broadband. Increased internet access allows people to work in more 'agile' ways, where 'work' is not a place you go to but more something you do.
- 3.5.7 There is considered to be an opportunity to encourage homeworking as it is expected that telecommunication providers will supply the development with high-speed broadband, high speed mobile phone services and potentially Wi-Fi in public spaces such as in the local centre and at bus stops etc. In addition, there is the potential to provide a high-quality work hub in the development site (potentially as part of an Active Travel Hub), that includes facilities for meetings, conference calls, printing etc. to support home-based businesses and teleworking. Such a facility could also double up and provide a concierge service to accept parcels and deliveries etc for residents.

#### **Smarter Choices**

3.5.8 A key element of the transport strategy will be to implement a package of measures / initiatives that are designed to encourage travellers to, from and within the development site to adopt more sustainable patterns of travel and to make optimum use of a package of measures.



- 3.5.9 Over a number of years, there has been growing interest in a range of transport and travel initiatives, which are now widely described as 'soft' transport policy measures. These seek to give better information and opportunities, aimed at helping people to choose to reduce their car use while enhancing the attractiveness of alternatives.
- 3.5.10 In this instance, it is proposed to undertake the following:

#### Framework Travel Plan

- 3.5.11 A site wide Travel Plan (TP) is proposed to accompany any future planning application for the development of the site. This would look to set out a series of 'soft' measures to compliment the 'hard' infrastructure and public transport related improvements such as those previously outlined. An accompanying strategy to deliver and monitor its effectiveness against defined targets would also be provided.
- 3.5.12 A TP is a long-term management strategy that seeks to deliver sustainable transport objectives through positive action. It would seek to ensure that the development will be sustainable and integrated with local transport strategies as envisaged. In doing so it would seek to reduce the impact of the development of the site on the surrounding highway network and maximise the use of non-car modes of transport in line with current Government policy.
- 3.5.13 The Plan would identify a site-specific package of measures aimed at promoting and raising awareness of sustainable travel and reducing the reliance of single occupancy car trips. It would also operate as a management tool, bringing together transport and other organisational issues, providing a package of initiatives to minimise the number and length of car trips generated by the development, while also supporting more sustainable forms of travel and reducing the overall need to travel. It would help bring about behavioural change in influencing and promoting sustainable forms of travel amongst residents and employees of site through initiatives such as personalised travel planning (PTP).

#### Sharing Economy Package

- 3.5.14 The Sharing Economy is seen as one of the main game changers in the future of our society. In simple terms, it is a hybrid market model between owning and gift sharing which refers to peer-to-peer based sharing of access to goods and services.
- 3.5.15 There are considered to be opportunities to promote the Sharing Economy at the proposed development site in the following potential ways:
  - Active promotion of existing range of car sharing opportunities such as Gloucestershire liftshare and others if they come forward through the 'Smarter Choices' package
  - Build on the success of car clubs in the likes of Stroud, Cheltenham and Gloucester by delivery of an on-site car club thereby providing prospective residents, employees and the surrounding community with a viable alternative to private car ownership
  - Provision of a bike hire scheme incl. electric and cargo bikes
  - Seek to encourage emerging initiatives where they are seen to benefit sustainable travel and reduce car ownership such as peer-to-peer car hire schemes
  - Provision of electric vehicle and bike charging points
  - Provision of dedicated car sharing parking spaces for on-site employment provision incl. school.



- 3.5.16 It is acknowledged that many people choose to own a private car for the convenience that it can provide. This includes the ability to visit friends and family, link trips such as work and shopping or perhaps simply because public transport provision is not available for undertaking certain trips. As such, although residents/staff of the proposed development may wish to walk, cycle or get a bus they may still want access to a vehicle on certain occasions.
- 3.5.17 A self-service car club would therefore have a role to play as schemes elsewhere offer on-site hybrid/electric vehicles within dedicated car parking spaces to hire for as little as 30 minutes. Several vehicles could be provided and be available all year round for reservation well in advance or at short notice. The provision of car clubs is acknowledged to help reduce the need for households to own a second car, particularly where there is also good active mode and public transport provision as is proposed in this case.
- 3.5.18 The sharing economy and public transport packages set out stand to provide all the key ingredients to potentially form part of a full MaaS system or a 'lite' version to be provided in the future if an operator/s come forward to provide them. The MaaS model brings together multiple modes of travel, combining options for different transport providers into a single service. From e-scooters to bikes, car clubs and ride sharing to public transport, the idea is to have access to all modes of transport via a single payment platform. It is envisaged it will have an important role to play in the future, contributing to a reduction in both CO2 emissions and air pollution, while improving the overall efficiency of the transport system and reducing reliance on private cars.

#### **Informed Traveller Package**

- 3.5.19 The site could deliver an Informed Traveller package with the aim of providing the information needed for future residents and employees of the site to confidently undertake more sustainable patterns of travel. The ability to implement / deliver some of these potential measures will be dependent on the appropriate opportunities emerging (most likely through the private sector), such as improved journey planning apps already available to smart-phone users.
- 3.5.20 An Informed Traveller Package could deliver:
  - A bespoke community website providing site-specific travel information and advice
  - Real time public transport information at key interchanges and bus stops.

#### 3.6 Traffic Impact

- 3.6.1 The traffic impacts that are forecast to be associated with the development of the site have been considered by the traffic forecasting that has been undertaken in relation to the Draft Local Plan. This exercise was carried out on behalf of Stroud District Council by Mott MacDonald to assess the impact of the proposed site allocation along with all the other ones on both the local and strategic road networks such as the A4135/A38 and M5 respectively to demonstrate that they can be accommodated.
- 3.6.2 The traffic modelling work undertaken has considered a cumulative assessment of the traffic impacts associated with the draft allocations, rather than just considering each of them individually to ensure the combined impacts are assessed. The Gloucestershire Countywide Traffic Model (GCTM) developed on behalf of Gloucestershire County Council was used to assess the Local Plan proposals based on use of a 2040 future year forecast scenario.



- 3.6.3 The SATURN traffic modelling work undertaken was done in parallel with development of the STS produced by AECOM on behalf of Stroud District Council as set out previously. In combination these two workstreams identified a package of highway capacity improvements to mitigate the impact of the Local Plan sites along with a strategic approach to achieve more of a mode shift to non-car modes of transport.
- 3.6.4 In the immediate vicinity of the site this modelling exercise considered the cumulative traffic impacts of the draft Local Plan site allocations upon the A38/A4135 roundabout. With the addition of this traffic onto the network, the A38 northbound approach to this roundabout was forecast to exceed capacity in the local highway network AM peak. Mitigation has therefore been identified consisting of the removal of existing hatch markings and minor carriageway widening to provide a similar level of capacity as to that experienced in the 2040 baseline scenario considered. The latter scenario was provided for comparison purposes as it represents one in which the proposed Local Plan housing and employment allocations are not included but that committed developments and transport schemes are.
- 3.6.1 The draft Local Plan transport evidence base demonstrates that the traffic impacts of the proposed site allocation along with the cumulative impact of others can be largely addressed to allow junctions on the local and strategic highway network to perform at a similar level to the baseline situation assessed. The development of the site is therefore considered to be deliverable as its associated traffic impact can be mitigated. The conclusions are considered to be robust on the basis that there is a growing evidence base regarding a reduction in car trips in future due to various factors including increased home working, emerging micromobility options, increased uptake of active modes, emergence of MaaS/MaaS 'lite' and the changing fleet to electric vehicles beyond what it considered.
- 3.6.2 It is accepted though that a reasonable proportion of people will continue to travel to work and use private cars and therefore requirement for sustainable development, located close to employment / education facilities with options for sustainable travel as in this case, remains imperative to a new development. Furthermore, evidence suggests that the impact of travel planning measures is greater for shorter journey lengths.
- 3.6.3 All of this points to the conclusion that a spatial strategy which seeks to locate development at Wisloe is inherently (and quantifiably) sustainable as it will avoid spatial planning mistakes of the past by locking-in car-centric travel patterns, with significantly reduced opportunities for positive travel behaviour change. Development at Wisloe will therefore assist Stroud District Council to make progress on their Climate Emergency and Local Plan objectives.



## 4 Summary & Conclusion

#### 4.1 Summary

- 4.1.1 This Access & Movement Framework (AMF) has been prepared on behalf of Gloucestershire County Council and The Ernest Cook Trust as joint landowners to provide transport representations to support the proposed PS37 site allocation for a residential led mixed use development within the Stroud District Local Plan. The framework sets out the access strategy considerations that have been used in the development of the concept masterplan for Wisloe New Settlement.
- 4.1.2 The purpose of this framework is to demonstrate that the site allocation is sound and deliverable from a highways and transport perspective in being able to meet the related emerging Local Plan policy requirements.

#### 4.2 Conclusion

- 4.2.1 This framework has proven that a sustainable access strategy can be achieved to ensure that the proposed site allocation is deliverable and can be provided to accord with the overall Local Plan objectives of reducing transport related environmental impacts in being able to deliver a transformative rebalancing of transport provisions in favor of sustainable modes. The access strategy which has informed the concept masterplan has incorporated numerous potential sustainable travel related interventions in relation to a sharing economy package, active modes, micro-mobility and public transport that can be imbedded into the design of a new community.
- 4.2.2 The concept masterplan and supporting access strategy demonstrates that the development of a new community at Wisloe can provide a self-contained settlement whilst also helping serve the needs of surrounding communities.
- 4.2.3 Whilst sustainable modes of transport can be prioritised over that of the private car, the access strategy confirms that suitable vehicular site access arrangements can be achieved and that associated traffic impacts of the development can be mitigated.





## Appendix A Figures



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## Appendix B Drawings

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