

## **TRANSPORT & INFRASTRUCTURE PLANNING**

Pinnacle International Capital  
Throckmorton New Settlement Strategic  
Allocation  
Worcestershire  
Sustainable Transport Strategy

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## 1. INTRODUCTION

### Background

- 1.1 BWB Consulting (BWB) have been providing transportation and highways advice to assist with the emerging masterplan for a proposed new Garden Village settlement centred around the Throckmorton Airfield in Worcestershire. The new settlement is referred to as Throckmorton New Settlement Strategic Allocation (Throckmorton NSSA).
- 1.2 It is considered that approximately 2,000 dwellings and 20 hectares of employment land can be delivered by the end of the current Local Plan period (2041). It is anticipated that development will not commence until 2030 by which time critical transport infrastructure, such as a 500-space car park at Pershore Railway Station will have been provided.

### SWDPR 50: Land at Throckmorton NSSA

- 1.3 The development aspiration is:
- 2,000 dwellings (with a further 3,000 beyond 2041).
  - 20 ha of employment land (with a further 40 ha beyond 2041).
  - Local centre comprising retail, office, medical and community uses (expanding to a town centre beyond 2041).
  - Education; secondary school and two primary schools (possible adding a second secondary school and 2-3 more primary schools beyond 2041).
  - At least 40% Green Infrastructure and sufficient solar power capacity to power the whole development
- 1.4 Proposals to develop land within the strategic allocation at Throckmorton will be expected to deliver:
- Critical movement infrastructure, to include:
    - a new link road from the A44 to the centre of the new settlement ,
    - a dedicated and direct active travel route linking Pershore Railway Station to the centre of the new settlement including the provision of an electric shuttle bus (or equivalent) linking the site with Pershore Station, Worcestershire Parkway and nearby settlements, enhancements to Pershore Railway Station to include a second platform, a 500-space car park and a pedestrian bridge over the railway tracks.
    - In addition, junction improvements, new cycle routes, public footpaths and mobility hubs will be provided throughout the new settlement.
    - The provision of this critical movement infrastructure will provide the catalyst for development at Throckmorton Airfield.
  - A comprehensive network of direct, convenient and safe active travel routes designed to prioritise pedestrian and cycle movement over motorised vehicles. Active travel routes should be direct, safe and convenient and link residential areas, the town centre, Pershore station and surrounding villages.

- Approximately 2,000 dwellings within the plan period, (with a further 3,000 dwellings beyond 2041) including:
- 20 hectares of job generating employment land within the plan period, (with a further 40 hectares beyond 2041), predominantly on land adjacent to the A44 and also within the town centre, including
  - A clean, green local / town centre providing services, retail etc with good facilities for easy in/easy out office hubs;
  - provision for small to mid-sized business starter units;
  - An agricultural technology centre of excellence;
  - Increased levels of local energy generation building on the ethos of existing schemes within the area;
- Land safeguarded for a new centrally located two-form entry Primary School with a 52 place Nursery, an All-through School providing a 52 place Nursery, two-form entry Primary provision and four-form entry secondary provision and space identified in local communities to support two – three private nurseries. This requirement will be expanded beyond 2041 to support the additional 3000 dwellings. In total the 5,000 dwelling development will require: three two-form entry Primary Schools, each with 52 place nurseries, one seven-form entry Secondary School, space identified in the local communities to support six – eight private nurseries (dependant on size) and space identified for Post-16 College education.

## **Aims**

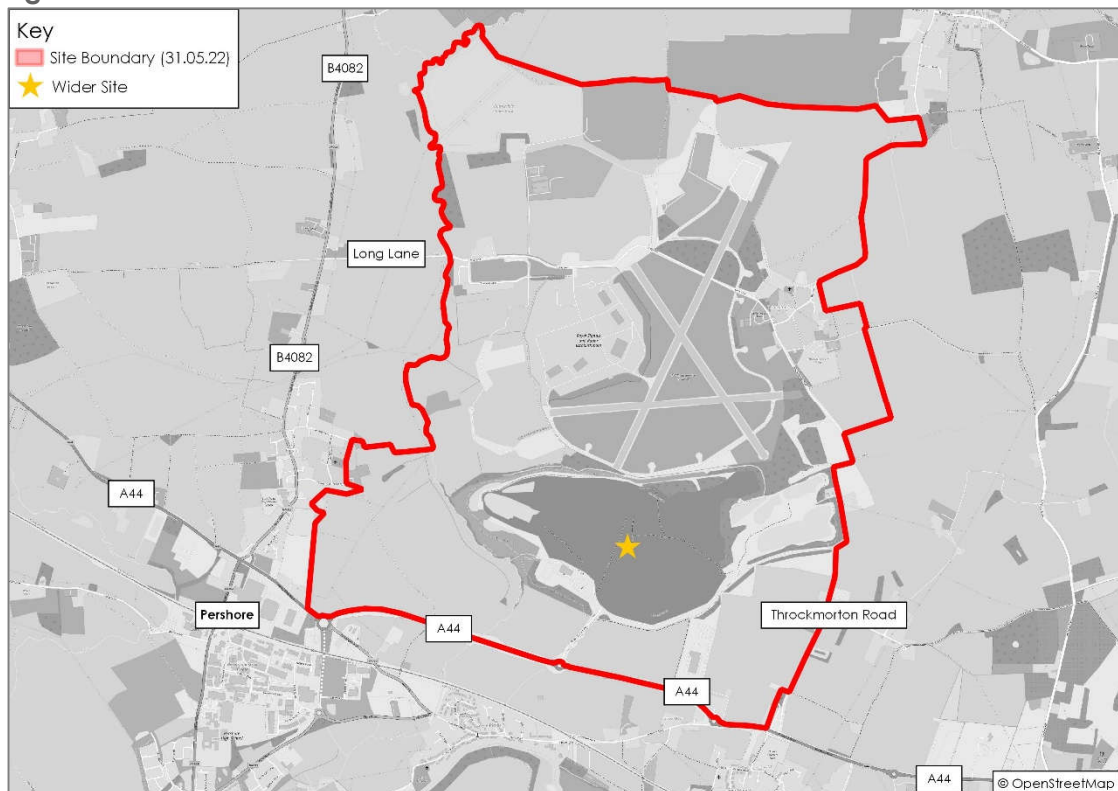
- 1.5 The aim of this Technical Note is to provide a summary of the existing sustainable travel infrastructure in the area and to identify any potential opportunities to develop a Sustainable Transport Strategy for the development.

## 2. EXISTING CONDITIONS

### Site Location and Context

- 2.1 Throckmorton Airfield is located to the west of the village of Throckmorton in rural Worcestershire.
- 2.2 The Site is located between Worcester and Evesham approximately 9 miles to the south east of Worcester City Centre. Evesham lies approximately 6 miles further to the south east. The site will be centred around Throckmorton Airfield to the north of the A44.
- 2.3 The airfield site currently comprises several surfaced hardstanding historic runways currently being used for the storage of vehicles, in addition to B1c/B2 employment units with access taken from Long Lane to the north of the airfield. Long Lane routes west to the B4082 which provides access south to the A44 at Pinvin Crossroads and north to the A422. To the east of the airfield, Long Lane provides a connection to Throckmorton village and forms part of the signed HGV route to the A44 to the southeast.
- 2.4 The site location in relation to the local area and highway network is shown in **Figure 1**.

**Figure 1: Site Location Plan**



- 2.5 Current access to the airfield site is off Long Lane. The airfield site comprises a number of hangars, buildings, outhouses, cabins and runways (currently being used as open air storage).

- 2.6 Long Lane ranges in width between approximately 3.5m at its narrowest to 6m. Along the site frontage Long Lane is subject to national speed limit. Access to the A44 is via Long Lane and the B4082 Upper Snodsbury Road to Pinvin for light vehicles or via Long Lane and Throckmorton Road for heavy vehicles.
- 2.7 Public Rights of Way (PROW) are located on the western and southern edge of the airfield site with PROW 529(C) to the east and PROW 528 (C) to the south. Further PROW connects towards Piddle Brook Lane and Bridleway 512 (C) towards the A44.
- 2.8 The nearest public transport infrastructure to the site is Pershore Railway Station (and bus stops) 2km to the southwest. Pershore Railway Station provides regular train services to Worcester and Evesham and further afield to London (Paddington) and Great Malvern. Bus services in the direction of Worcester, Inkberrow, Pershore and Eckington are also available from the bus stops adjacent to the station

## **Surrounding Highway Network**

### Long Lane

- 2.9 Current access to the airfield site is off Long Lane and it is anticipated that the access will be retained and used as a secondary access to the Garden Village.
- 2.10 Long Lane ranges in width between approximately 3.5m at its narrowest to 6m. Along the site frontage Long Lane is subject to national speed limit.

### B4082 Upton Snodsbury Road / Main St

- 2.11 The B4082 Upper Snodsbury Road runs to the western edge of the proposed development. It forms a part of the site access route for light vehicles by connecting the A44 to Long Lane. provides access to the site via Long Lane and to Pinvin for light vehicles.
- 2.12 It is a single carriageway with a 40mph speed limit. It changes its name to Main Street in the village of Pinvin where the speed limit reduces to 30mph and the road benefits from footways adjacent to both sides of the carriageway.

### Throckmorton Road

- 2.13 Throckmorton Road is a rural single carriageway running along the eastern edge of the proposed development and links the village of Throckmorton to the A44. It forms a part of the access route for heavy vehicles.

### A44

- 2.14 The A44 is a major road runs from Oxford in southern England to Aberystwyth in west Wales. It is a 7.3m wide single carriageway in the proximity of the site. Whilst the part to the east of the A44/B4083 roundabout is subject to the national speed limit, the part to the west of the roundabout has 40mph speed limit.



- 2.15 The A44 provides access to Evesham about 6 miles to the east and to Worcester and the M5 approximately 9 miles to the west.

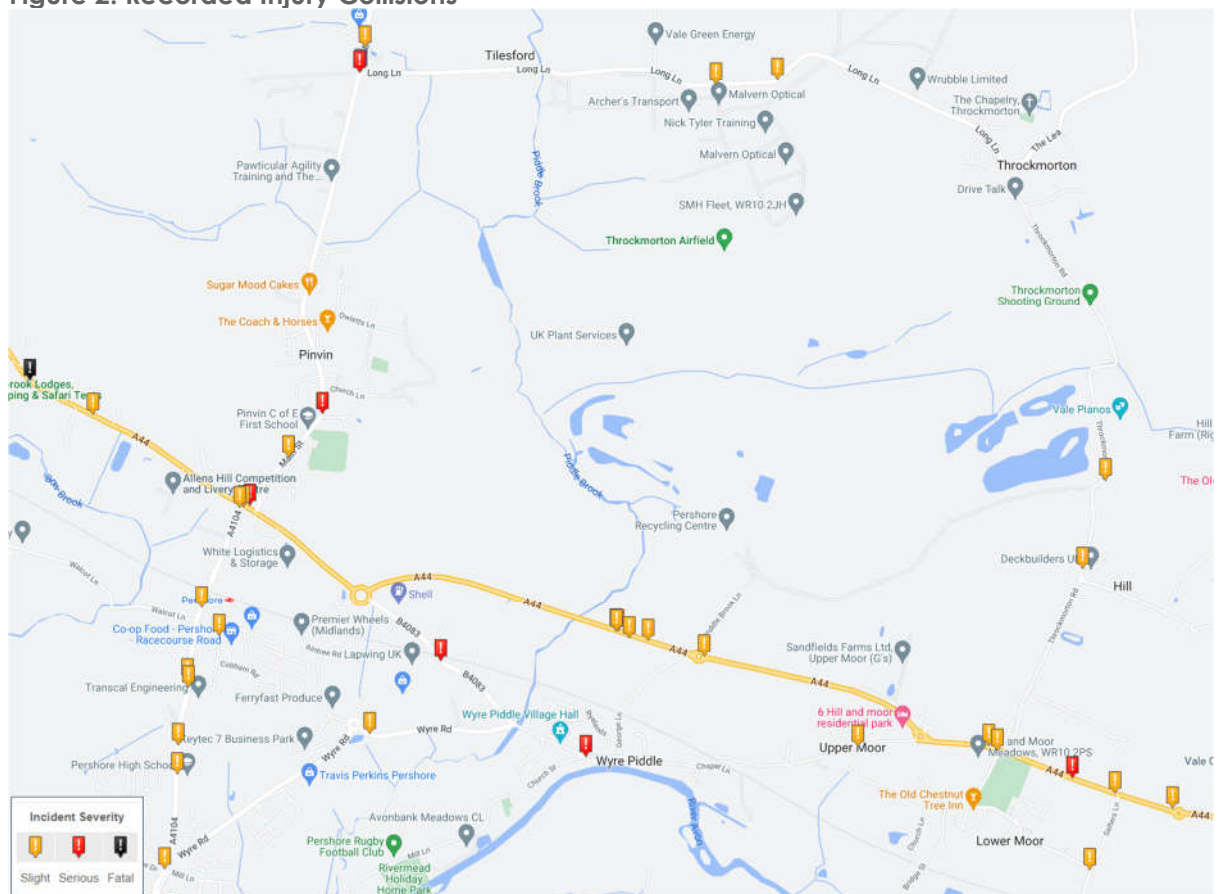
### Link Road

- 2.16 Primary access to the site is anticipated to be taken directly from the A44 via a new roundabout junction to the east of the existing A44/B4083 junction. The exact specification and positioning of this access will be subject to future modelling and layout requirements.
- 2.17 The internal spine road is likely to form a 7.3m wide road to cater for potential bus services through the site. A shared footway/cycleway of at least 3.5m in width would also be provided utilising the most direct available route between the site and Pershore Railway Station. Off-site pedestrian/cycle improvements would be required to complete the connection to Pershore Railway Station.

### Highway Safety

- 2.18 A review of the CrashMap database indicates that the local highway safety record is relatively good with small clusters of collisions at or close to the busiest junctions in the area, as would be expected with heightened activity.

**Figure 2: Recorded Injury Collisions**

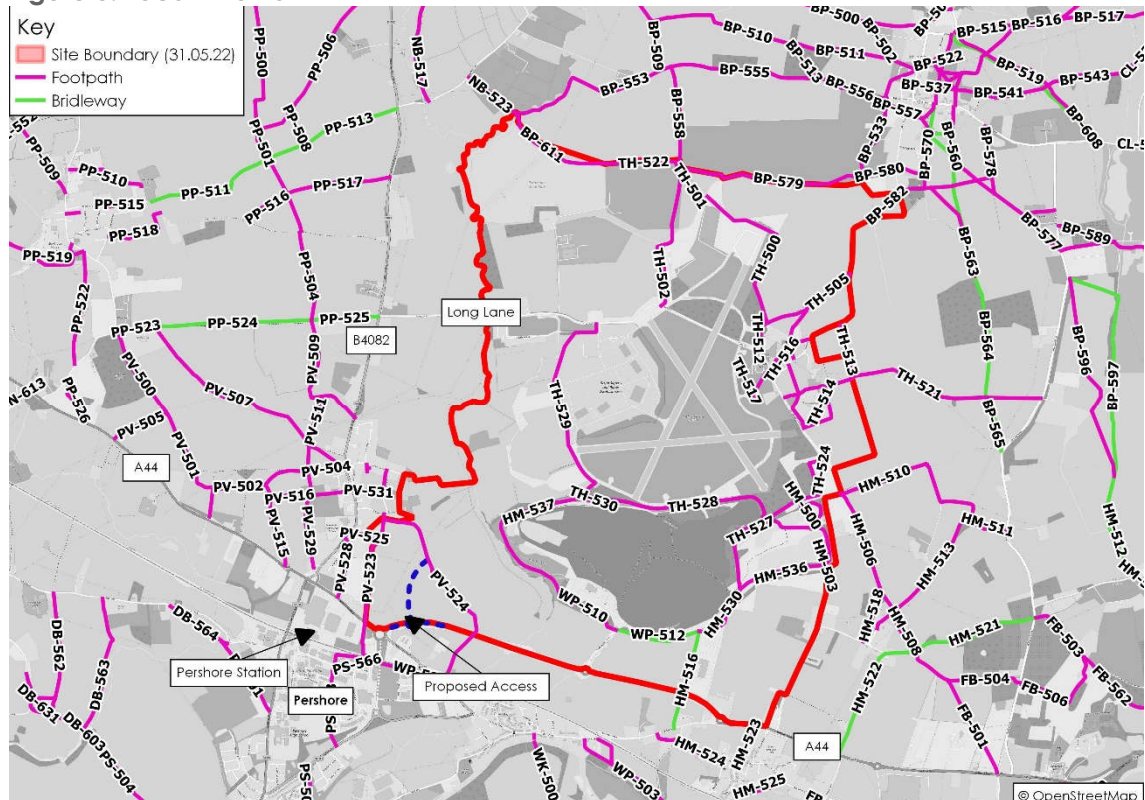


## Accessibility

### Walking and Cycling / Public Rights of Way

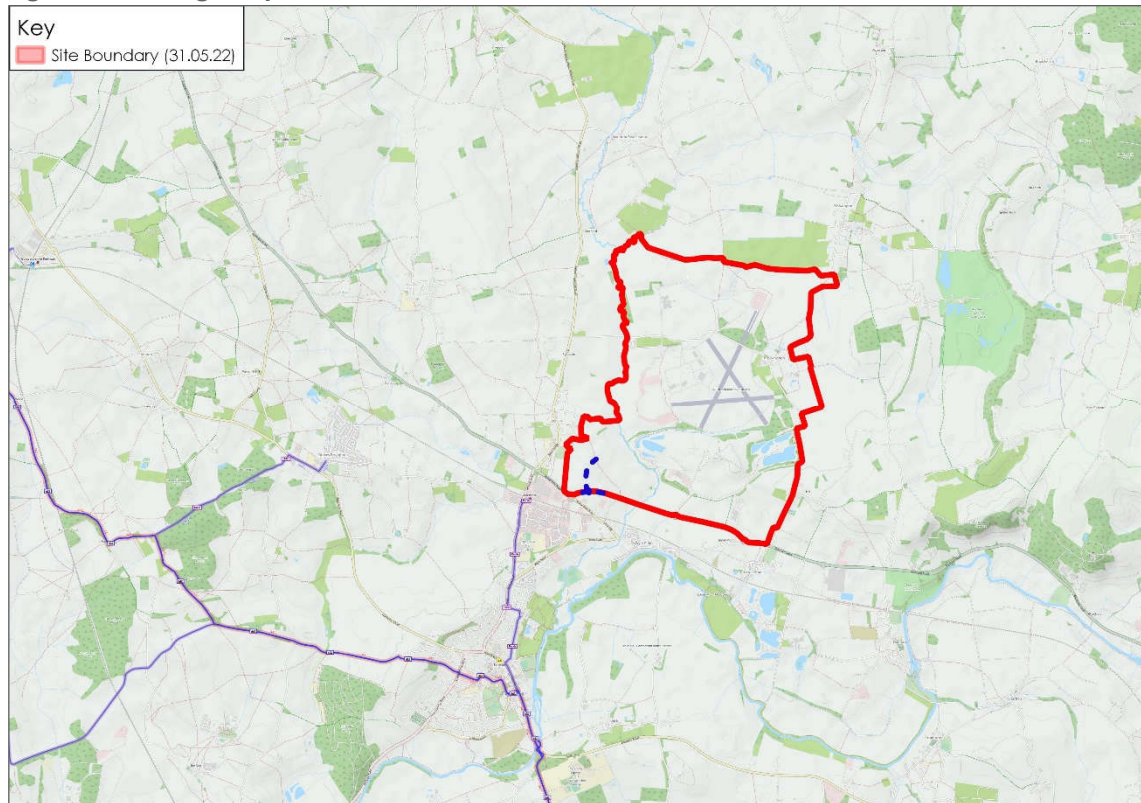
- 2.19 The airfield site currently has limited footway connections. **Figure 3** illustrates the existing public footpaths which surround the site. The Piddle Brook which runs roughly north – south along the western side of the Site forms a barrier for active travel movements.

**Figure 3: Local PROWs**



- 2.20 Cyclists are expected to travel on roads with traffic.
- 2.21 Long Lane and Throckmorton Road are generally lightly trafficked routes, but are only suitable for confident / experienced cyclists.
- 2.22 Further afield, National Cycle Route NCN442 runs east-west through southern Worcestershire and connects Pershore to Worcester (**Figure 4**).

**Figure 4: Strategic Cycle Routes**



2.23 The existing PRow and NCN routes will be incorporated, and connections provided to within the internal layout of the site

#### Public Transport

2.24 Given the rural setting, public transport links to and from the site are currently limited.

2.25 The 564 and 565 bus route (operated by LMS Travel) provide one service in each direction during weekdays between Evesham and Inkberrow via Pershore and Throckmorton. The closest stops are located in Throckmorton Village. There are also stops adjacent to Pershore Railway Station.

2.26 Pershore Railway Station is approximately 1.5 miles southwest of the centre of the Site. Currently Pershore Railway Station is served by one train per hour in both direction, providing frequent trains to London (Paddington) and Worcester (Foregate Street).

## 3. CATCHMENT

### Internalisation

- 3.1 With a variety of land uses proposed, there is opportunity for people to live, work, study, play and shop within the development. It is anticipated that there is likely to be high levels of trips that remain internal to the site and do not leave the site boundary during peak hours.
- 3.2 The concept of internalisation is emphasised by the principles for Garden Villages and are founded upon providing a mix of land uses including a range of employment as well as local centres and education. The basis of this is to result in a proportion of trips being captured internally within the development.
- 3.3 The results of the internalisation review (**TWS-BWB-GEN-XX-RP-TR-0004**) show that approximately 51% of two-way person trips in during a typical weekday AM peak hour are internalised to the site and 25% during a typical weekday PM peak.

### Destinations

- 3.4 Despite the predicted level of internalisation, three key areas are expected to form the main destination of trips from the residential element of the Site:
  - Pershore
  - Worcester
  - Evesham
- 3.5 Train services to Worcester (Foregate Street) and Evesham run from Pershore Railway Station, making Pershore the key destination to and from the Site and heightening the importance of providing a strong and sustainable link between the Site and Pershore Railway Station.

### Travel Modes

- 3.6 To provide a representative illustration of the existing and forecast modal split anticipated at the development site, Journey to Work (JTW) data from the 2011 Census has been analysed.
- 3.7 The modal splits of two nearby MSOA's containing similar local settlements are fairly consistent and presented with modal splits by usual residence shown within **Table 1** and by place of work shown in **Table 2**. Journeys with both origin and destination within the same MSOA have been excluded to derive a mode share for external trips. Average values have been calculated based on sums of people in both zones.

**Table 1: Travel Modes (Residents)**

MODE (EXTERNAL TRIPS ONLY)	USUAL RESIDENCE		
	WYCHAVON 010 (THROCKMORTON AND VILLAGES)	WYCHAVON 012 (PERSHORE)	AVERAGE
Car / van driver	88%	84%	86%
Car / van passenger	5%	5%	5%
Walk	2%	3%	3%
Cycle	1%	2%	2%
Bus	1%	2%	2%
Train	1%	2%	1%
Motorcycle	1%	1%	1%

**Table 2: Travel Modes (Employees)**

MODE (EXTERNAL TRIPS ONLY)	PLACE OF WORK		
	WYCHAVON 010 (THROCKMORTON AND VILLAGES)	WYCHAVON 012 (PERSHORE)	AVERAGE
Car / van driver	87%	88%	87%
Car / van passenger	6%	4%	5%
Walk	3%	3%	3%
Bus	2%	2%	2%
Cycle	1%	1%	1%
Train	<1%	1%	1%
Motorcycle	<1%	1%	1%

- 3.8 The dominant travel mode in the area is currently car. Provision of infrastructure to encourage sustainable travel modes to accompany development of Throckmorton NSSA is therefore key.
- 3.9 The Masterplan for the development should encourage a modal shift of 15% away from car journeys and onto active travel modes, such as walking and cycling along with public transport (bus and train).

## **4. SUSTAINABLE TRAVEL OPPORTUNITIES**

### **On Site (Internal) Infrastructure**

- 4.1 Given the nature of the site, effectively forming a new settlement, high quality internal infrastructure connecting the various on-site land uses together will be implemented to reduce the need to travel off site, and therefore reduce the reliance on single occupancy car travel. Subsequently, the development will form walkable neighbourhoods with a range of facilities and amenities within each distinct 'neighbourhood' at Throckmorton NSSA.
- 4.2 Footway and cycleway links will be provided throughout the site and will connect with the proposed indicative active travel routes and green infrastructure routes. The current runways will be re-purposed to form active travel corridors.
- 4.3 The existing public footpaths should be maintained and enhanced to provide and build towards a comprehensive network of leisure routes through and around the Site.
- 4.4 A new, direct shared pedestrian and cycle route between the new settlement and Pershore Railway Station, to incorporate a grade separated crossing of A44 adjacent to Pershore Railway Station is therefore a key piece of supporting infrastructure.
- 4.5 Primary vehicle access will be provided via a new access link road connecting the heart of the settlement with the A44 to the southwest. The accesses and road hierarchy will be designed to accommodate a spine route for buses for potential future services through the site which will link directly to Pershore Railway Station. Implementation of bus gates and bus lanes to improve bus priority will also be considered where appropriate.
- 4.6 All bus stops will be within 400m of the majority of the Site (i.e. dwellings and main entrances to other uses), with direct links provided to walking and cycling routes. All bus stops will include shelters and real-time travel information.

### **Green Travel District**

- 4.7 The aim for Green Travel Districts (GTD) is to create an environment where people are put before cars, where residents, workers and visitors can safely walk, cycle or take public transport. The vision is for districts with less congestion, less pollution, fewer accidents, and healthier, safer, more productive communities.
- 4.8 The idea of a GTD is to provide long-term sustainability in specific locations to support people and businesses in contributing towards local carbon and air quality targets where packages of initiatives can be brought together to influence travel behaviour at a local level. GTD's will be the mechanism by which this new approach to transport is made relevant to local areas, encouraging residents and businesses to make smarter travel choices.
- 4.9 The following principles sit behind GTDs:

- Walkable & Cycle Friendly – where non-motorised transport modes are prioritised;
- Permeable & Connected – a network of connected streets for non-motorised transport;
- Sustainable Transit Led & Low Carbon – where there is access to high-quality public transport; and
- Mixed Use & Compact – plan for multi-modal and shorter commutes.

4.10 The key objectives of the GTD are:

- To achieve and sustain challenging targets for single-occupancy vehicle use;
- To harness the modal shift potential of innovative technology and smarter choices measures in both established communities at newly created developments;
- To promote sustainable travel initiatives within the GTD and across the region, serving as models of best practice and exemplars of what is achievable;
- To demonstrate successful modal shift which can be adopted elsewhere in the region;
- To enhance the attractiveness and quality of the urban environment within the GTD; and
- To embed a culture of sustainable travel within the GTDs and provide strong motivations for travel behaviour change.

Creation of a New Green Travel District

4.11 It is proposed that a GTD will be created covering Throckmorton NSSA. This could potentially then also be extended to cover nearby areas of Pinvin, Wyre Piddle and Pershore. This will ensure that Section 106 contributions secured for sustainable travel enhancements as part of any potential future planning application are invested in schemes to best benefit all those travelling through the GTD area and therefore maximise the potential to reduce car dependency.

4.12 The formation of the GTD will initially be spearheaded and funded by the Throckmorton NSSA development with the objectives and priorities established collaboratively with key stakeholders in the area. This will ensure that any potential future Section 106 contributions secured for sustainable travel enhancements are invested in schemes that best benefit all those travelling within the GTD area.

4.13 This funding will include for the appointment of a GTD Director post to lead the GTD and to work closely with all key stakeholders. The role will include liaising with the Throckmorton NSSA Travel Plan Co-ordinator who will be charged with delivering the aims and objectives of the site wide Travel Plan.

4.14 The following steps will be followed in establishing the GTD:

- Agree the remit and parameters for the GTD, e.g. location, members, aims & objectives;
- Carry out stakeholder mapping and analysis across the GTD area;
- Conduct an audit of the GTD area, including the main sites within it;

- Undertake travel surveys across key groups/stakeholders, e.g. residents, staff, visitors, students;
- Carry out wider community engagement around transport issues where relevant;
- Develop and agree a Green Travel (or sustainable travel) action plan;
- Identify the funding and resources needed to effectively deliver these actions;
- Arrange for communications, marketing and promotion to support these activities;
- Ensure monitoring, evaluation and reporting arrangements are in place to review this; and
- Recognise, reward and celebrate the achievements and impact of the GTD.

### **Bike Share / E-Bike Scheme**

- 4.15 A bike share scheme is a service whereby cycles are made available for use by individuals on a short-term basis for a small fee. Many bike share schemes allow people to borrow a bike from a docking station (bike rack) where it is locked until release by computer control following payment. The user then returns the bike to a dock from the same system. Other bike share schemes are dockless and bikes can be picked up and dropped off from virtual docks in a range of locations, which can be identified via a mobile phone app.
- 4.16 Bike share schemes have been found to be successful in achieving modal shift. The Bike Share Users Survey 2018 quantified this by asking respondents how they previously travelled for the trip that they last made by bike share. The results were as follows:
- 42% previously walked
  - 23% previously used the bus
  - 4% previously used the train/tram or light rail
  - 18% previously travelled by car or taxi
  - 7% previously used their own bike
  - 7% were using the bike share scheme as a new journey.
- 4.17 Bike share has also been found to add flexibility to a journey and is often used as the first or last mile of a journey. The survey identified that 26% of respondents used bike share in conjunction with the bus and 21% in conjunction with the train. 24% of respondents use bikeshare in conjunction with the car.
- 4.18 Subsequently, new bike/e-bike hire hub/s could also be incorporated within Throckmorton NSSA which would provide easy, convenient access to cycle travel.
- 4.19 This provision will provide good opportunities for the employees and visitors to Throckmorton NSSA to cycle for all or part of their journey. In addition, the membership pricing system and the provision of bike stations at Parshore Railway Station could also encourage multi-modal journeys. Funding can also be provided for an initial annual subscription to promote the scheme to Throckmorton NSSA residents and employees.



- 4.20 Discussions will be made with the key stakeholders to understand the viability of these options.

### **Bus Enhancements**

- 4.21 Existing bus service provision is limited, therefore it is likely that entirely new services will be required.
- 4.22 It is expected that as the population (both residents and employees) grows, new routes and extensions to existing routes in and around Pershore will become more viable.
- 4.23 A new, direct shuttle bus service between Pershore Railway Station and the new settlement is therefore viewed as key supporting infrastructure. The proposed new access spine road will be designed in such a way to encourage bus priority, to make the service as attractive as possible for residents and employees.

### On-Demand Service

- 4.24 The introduction of an on-demand ride sharing minibus service should be explored.
- 4.25 Journeys are booked using an app and passengers are picked up from virtual bus stops, which are located within a short walking distance of their location. Payment is made by pre-registering credit or debit cards. Software calculates the best routes for each journey based on real-time information to ensure that all passengers arrive as soon as possible. The mini-buses can use bus lanes where they are available.
- 4.26 PickMeUp have a stated commitment that “unlike taxi journeys, you will never pay more for your PickMeUp journey even if the traffic means your journey takes a little longer, or we divert to a slightly longer route to save you time”.
- 4.27 Such a service could operate within the area around Throckmorton NSSA, into Pershore and possibly Evesham and Worcester and could be particularly effective in serving the initial phases of the development.
- 4.28 Discussions will be made with the local authority and bus service providers to understand the viability of these potential options.
- 4.29 Within the site, bus stops would be placed to allow the majority of units to be within a 400m walk of the nearest bus stop. These bus stops would be high quality in nature, with live timetable information and bus shelters to attract individuals to use this mode of travel if practical. Implementation of bus gates and bus lanes to improve bus priority will also be considered. S106 contributions could also be made to improve the frequency of these services if required (and financially viable).

### **Car Sharing and Car Clubs**

- 4.30 Car sharing (also called lift-sharing, ride-sharing and car-pooling) is when two or more people share a car and travel together. Car sharing provides people with the

convenience of the car, whilst reducing the costs and the number of single occupancy vehicles on the road, thereby helping to reduce pollution and congestion.

- 4.31 Typically, people sign up to a car share scheme and their details are held on a secure database to be matched with others who can provide or require a lift. Car sharing can take place on a regular basis, or ad hoc if required.
- 4.32 It is proposed that Throckmorton NSSA will be signed up to an established car share organisation such as Liftshare. They will provide the secure database and the messaging system to allow members to find someone to car share with. The scheme will then be promoted to all Throckmorton NSSA residences and businesses as part of the Travel Plan process. Over time, the scheme could then be extended to cover a wider Green Travel District.

### Car Clubs

- 4.33 A car club offers the convenience of being able to use a car for those trips that cannot be undertaken using public transport, cycling or walking, or as an emergency alternative. Car clubs can provide a great alternative to car ownership, as people can have access to a car without having to own one.
- 4.34 Car clubs work by giving members access to a car on a short-term “pay as you go” rental basis and charging by the hour or the day. A car can be booked online or by phone and then unlocked from a designated bay.
- 4.35 This can provide cost savings, as there is no car tax, fuel, MOT or car servicing to pay. Instead users pay for membership to the scheme and the car hire when they use it. Research has shown that low-mileage drivers i.e. those that drive less than 8,000 miles per year could save up to £3,500 a year.
- 4.36 In addition, car club vehicles tend to be more environmentally friendly, emitting over 20% less CO2 per kilometre than the average car, and they are used more efficiently. One car club vehicle can replace over 20 private cars, helping to reduce congestion and free up parking spaces.
- 4.37 It is proposed that parking for car club vehicles will be provide within Throckmorton NSSA for use by employees at the site and also local residents.



**APPENDICES**

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**APPENDIX 1: [Title]**

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**APPENDIX 2: [Title]**

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**APPENDIX 3: [Title]**

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**APPENDIX 4: [Title]**

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**APPENDIX 5: [Title]**

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