Highway & Transport Assessment

Proposed Residential Development
on Land at Oakfields Farm,
Hanwood Road, Edgebold, Shrewsbury.
SY5 8NT.

Assessment prepared for
Davies Parry (Oakfields) Ltd

Assessment prepared by
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1.0. Introduction.

Woodsyde Developments Limited has been instructed by Roger Parry and Partners – Planning Agent on behalf of Davies Parry (Oakfields) Ltd to undertake a Highway & Transport Assessment to support the allocation of land for up to circa 450 dwellings in the Shropshire Local Plan on land at Oakfields Farm, Edgebold, Shrewsbury.

The site has good highway links and connectivity to the town centre and via the A488 to the A5 Trunk Road to the south west of the proposed site.

The Transport Assessment has been prepared to satisfy the local planning and highways authority in support of this allocation of land. The assessment will set out the highway and transport matters associated with the development proposals and set out the principles of the proposed site access arrangements.

The proposed development land is circa 20.07 hectares and is capable of accommodating circa 450 dwellings from a new access located fairly centrally along the site road frontage of the A488, which is maintained at the public expense by Shropshire Council. The existing property known as Oakfields Farm will keep its existing access which is located in the south westerly corner of the land allocation.

The access will be served from the A488 Hanwood Road by means of a ghost island arrangement. The proposals will also include the introduction of a 40mph speed limit from the south eastern corner of the site into the mini roundabout at the junction of Hanwood Road and Bank Farm Road. The remainder of the road between the site access and the A5 will remain at the national speed limit. A footpath will be provided along the site road frontage and further along the A488 to connect to the existing pedestrian facilities in a north easterly direction along the A488 into Shrewsbury. In addition, where possible pedestrian connectivity could be made to the culs-de-sac serving development along the eastern and northern boundaries of the site, land ownership permitting.

Currently traffic prediction is complex in that the COVID-19 Pandemic has changed businesses and work as a whole, disrupted and changed personal lives and leisure activities and going forward it is likely that the dynamics of traffic movements will see a shift where more people work from home where possible and therefore will see a significant reduction in traffic movements to and from development. Moreover, meetings of all types have also changed with less need to meet face to face with many of these now being undertaken through media connectivity, in this regard whilst TRICS data would provide an ordinary view on the traffic movements , our professional opinion is that this is much changed over the last 12 months and it could be argued that this data is now out of date. Typically, traffic movements in the peak hours amount to around 0.6 movements per household, I would readily expect this figure to be reduced. Given the nature of the immediate and wider highway network it is considered that there is satisfactory capacity to accommodate the likely traffic movements generated and there will not be any significant transport implications.

This assessment evaluates and appraises access ability to the local amenities and sustainable transport modes in the local area.

The National Planning Policy Framework (NPPF) advises that in general development should be supported where a safe and suitable access to the site can

be achieved for all people; and improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of the development are severe.

2.0. Review of Local Highway Network Conditions.

2.1 Site Location and Existing Land Use

The site is located off the A488 on the western fringes of the town of Shrewsbury. (NGR 346693, 311162). The A488 Hanwood Road is one of the main arterial routes into the town together with the B4368, A458, B4380 and A5112 from the south and east.

The site is Greenfield which has a mix of agricultural uses, predominantly laid to pasture. The property known as Oakfield Farm in the south western corner will remain but it is not clear whether the outbuildings will be removed as part of the development going forward. The site proposes an access directly onto the A488 which will be central to the site frontage and allows for the existing access to be retained for the dwellings and potential barn conversion. The parcel of land is 19.7 hectares (48.68 acres) in size. The site sits along the A488 along the site road frontage is to the national speed limit of 60mph, the suggested access is approximately 300m from the existing 40mph speed limit entering the Radbrook area.

Currently the site is split into a number of fields and the intention will be to retain as many of the existing hedge lines as possible. There is existing residential development to the north and east and further open land to the western boundary. Access to the lands to the west of the site could be made available from the estate road serving the proposed allocation land. The existing access to the land is through Oakfield Farm itself.

The site falls within the administrative area of Shropshire Council.

2.2 Local Highway Network Features

The A488 Hanwood Road along the site road frontage represents a local distributor road route which links outlying villages such as Hanwood, Minsterley, Pontesbury

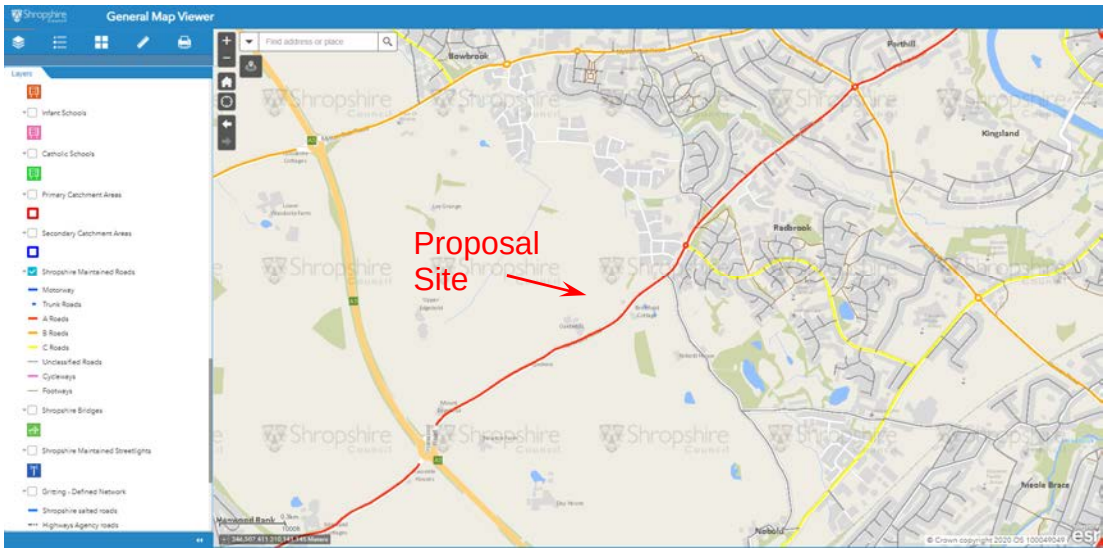
and Bishops Castle to the County town of Shrewsbury. The A488 Hanwood Road is maintained as a county highway and along the site road frontage is subject to the national speed limit of 60mph. The road is typical of the county principal roads and has more than adequate width to allow all vehicles to traverse east and west along its route. The site is approximately 300m south east of the existing 40mph speed limit entering the Radbrook area of Shrewsbury and approximately 1km from the A5/A488 Edgebold Roundabout.

The A488 from the A5 into Radbrook has little site road frontage with only a small number of dwellings having access to Hanwood Road. The road has a number of bends and is edged primarily with hedge lines as boundaries. Inevitably over time and site allocation development will edge closer to the A5 bypass with land already developed, being developed or in the process of consideration for allocation. These areas will become the natural infill and extension of the county town. We are aware that a northern relief road is proposed, connecting to Woodcote roundabout, currently there are no pedestrian links to the site and is not served by any other means of transport such as a local bus service and these will be considered and provided as part of the development when a full application is made.

The access will be in a form of a dedicated right turn facility design and laid out in accordance with Design Manual for Roads and Bridges– CD123 – Geometric Design of at-grade priority and signal-control junctions which replaced the former TD/4195 and TD/4295. The design of the right turn facility will be based on the existing speed limit being altered from the current 60mph, to 40mph (70kph).

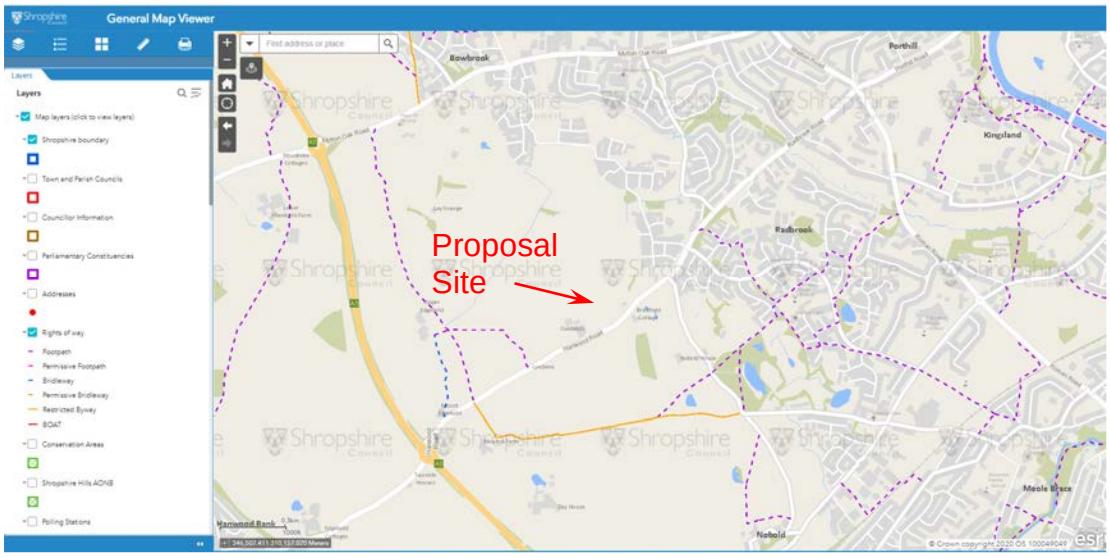
Adequate site road frontage is available to the A488 (Hanwood Road) to accommodate the proposed right turn lane and the requisite junction visibility splays.

Figure 2.2.1 Shropshire Council Map overview showing maintained roads and highways.



The above map clearly shows the publically maintained roads in red for an A road, orange for a B road, yellow for a C road and grey for unclassified roads, however it shall be noted that the estate roads to the north and east of the site whilst most of these are constructed are likely still to be under a Section 38 Agreement awaiting completion and adoption by the local highway authority.

Figure 2.2.2 Shropshire Council Map overview showing public rights of way.



Footpaths are shown as a purple dashed line, bridleways are shown dashed blue and restricted byways are coloured orange.

From the above it is seen that there are no footpaths through the site and indeed there are no public footways along the site road frontage to Hanwood Road. Nonetheless, connectivity will be made to the existing facilities along Hanwood Road and also to the new estates to the north and east.

2.3 Site Sustainability

The site is considered to be sustainable and is close to a number of alternative sustainable modes of transport and pedestrian links, such that there will be less reliance on the private car to gain access to Shrewsbury and the local facilities available. Moreover, with the current COVID-19 pandemic unlikely to see any change in the near future and the government guidelines, a high proportion of people now work from home and will do so for the foreseeable future. In our opinion even when the COVID-19 pandemic peters out it is likely that many businesses where possible will operate on smaller premises and workers will continue to work from home, where meetings will also take place through the internet. This will change the dynamics of sustainability and ultimately traffic flows on the highway network. Obviously no data is available currently to assess this by, but from our understanding many companies are satisfied that the working from home is perhaps the future.

Figure 2.3.1 – Diagram showing proximity of bus stops to Oakfields and site.

Table 1.0 – Bus Routes in Close Proximity to Site Proposal (Appendix A).

Service	Route Description	Mon-Sat		Sat	Sun
		Day	Eve (after 1900)		
20	Radbrook Bank Drive West Jct – Shrewsbury Bus Station	30mins	0	30mins	0

Table 1.1 – Bus Routes passing site frontage (Appendix B).

Service	Route Description	Mon-Sat		Sat	Sun
		Day	Eve (after 1900)		
552/553	Bishops Castle - Stiperstones – Shrewsbury	07:18, 08:18, 12:17, 15:40	0	0	0
552/553	Shrewsbury – Stiperstones – Bishops Castle	07:47, 08:22, 09:02, 11:12, 12:42, 14:47, 16:37, 17:12, 18:22	0	0	0

It would be proposed to discuss with the bus operator the option of providing a further stop along the site road frontage which would enhance sustainability of the site and ensure connectivity to available buses.

From the above it can be seen that the closest bus stops to the proposal site are located along Hanwood Road and Radbrook Road between the A5 roundabout and Crowmeole Lane. The eastbound stop which comprises on-street flag post is approximately 600m from the proposed site access, and the westbound stop is provided by a layby. These bus stops are only a short and relatively flat walk from the site. It is proposed to make connectivity to the existing pedestrian facilities to the east, however we see no reason why it would not be possible to arrange bus stops along the site road frontage to A488 Hanwood Road.

The Chartered Institution of Highways and Transportation (CIHT) Document 'Providing for Journeys on Foot' (2000) states that "walking accounts for over a quarter of all journeys and four fifths of journeys less than one mile". This guidance also suggests that walking distances for commuters can be considered as desirable at 500m, acceptable at 1km and should preferably be no greater than 2km. The guidance recommends that for other trips that 'desirable' distance would be 400m, an 'acceptable' distance 800m and a 'preferred maximum' of 1.2km.

In addition, the DTF National Travel Survey (England) 2014 concluded that walking constitutes to 22% of all journeys made in a year and that approximately 3 out of 4 of the walking trips were under 1 mile. On average therefore, people are willing to travel 18 minutes per walking trip. Moreover, Manual for Streets states that "walkable neighbourhoods" have a range of facilities within 800m. This distance is not however regarded as the upper limit for walking journeys and MFS uses the criterium that walking offers the greatest potential to replace short car trips, particularly those under 2km. MFS also states that the propensity to walk is not only influenced by distance but also the quality of the walking experience, as influenced by the overall environment, vehicular traffic flows/speeds, etc.

With regard to the closest railway station this is located approximately 4km northeast of the site in Shrewsbury town centre. Shrewsbury railway station has 2 trains an hour to Birmingham New Street and International, and an hourly service southbound to Cardiff Central. Furthermore, there are 2 trains every hour northbound to Crewe, where connections to Liverpool Stations can be found.

The number 20, 552 and 553 bus services connects to Shrewsbury Bus Centre, which is located within an approximate 230m walk.

Shrewsbury Town Centre is approximately 4km (2.5miles) from the site. The town has a wide variety of job opportunities and employment as well as shops, retail outlets, cafes, restaurants, bars and local markets.

Figure 2.3.2 – Indicates the proximity of key amenities and facilities and major employers.

Number	Key Amenities and Facilities (from centre of site)	Distance (km)
1	Royal Shrewsbury Hospital	2.1
2	Mytton Oak Doctors Surgery	2.2
3	Onslow Balti Lounge Indian	3.0
4	Co-op Supermarket	2.0
5	Ambrosia Express	1.7
6	Beacon Hotel	2.3
7	Shrewsbury School	2.7
8	Shropshire Squash Club	2.2
9	Radbrook Green Shopping Centre	1.5
10	Radbrook Green Surgery	1.4
11	The Priory School	2.3
12	Roman Road Sports Centre	2.0
13	St Kenelm Business Park	2.1
14	'Red Barn' Public House	2.5
15	'Inn on the Green' Public House	1.4
16	Radbrook Primary School	1.6
17	St George's Junior School	2.2

In addition to the local public transport connections which are set out above, the location of the proposal site is anticipated to allow for journeys to be undertaken on foot or by cycle. There will be connectivity to existing pedestrian facilities in the adjacent developments along the eastern boundary and connectivity to the existing pedestrian footways along Radbrook Road (A488).

The site is well positioned in the road hierarchy and whilst no dedicated cycle lanes are provided along the A488, it is of sufficient width to allow cyclists to feel safe.

Figure 2.3.3 – Local walk catchment for commuters measured from the access to the proposal site (downloaded on 23/09/20).

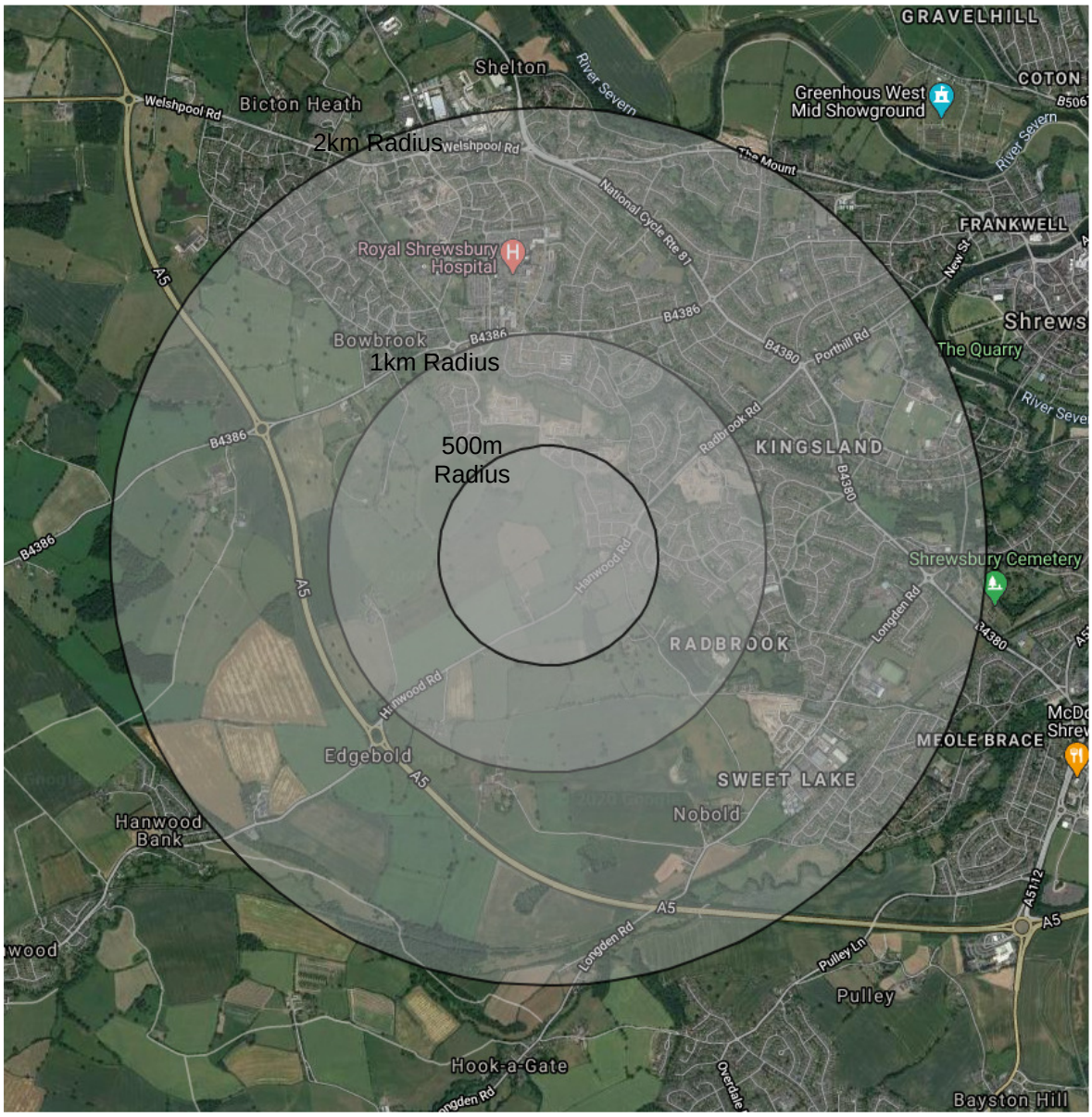
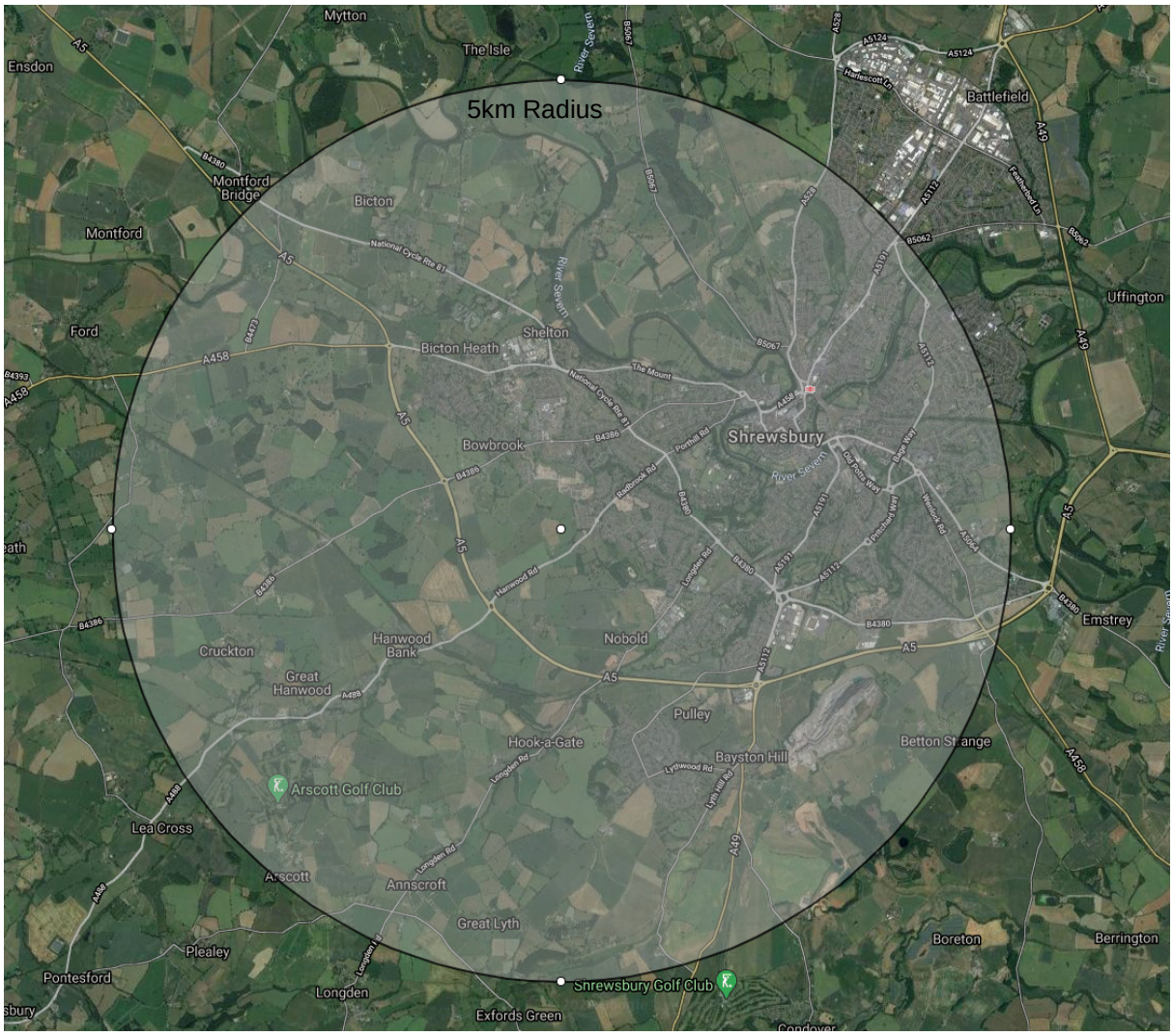


Figure 2.3.4 – Local walk catchment for other trips measured from the access to the proposal site (downloaded on 23/09/20).

Figure 2.3.5 – Local cycle catchment measured from the access to the proposal site (downloaded on 23/09/20).



In addition to walking opportunities, it is also recognised that cycling has the potential to substitute short car trips, in particular those less than 5km and also to form part of a longer journey by public transport. Figure 2.3.5 above provides a 5km cycle iso-distance plan and demonstrates that the location of the proposal site allows for practical cycling access to a large majority of Shrewsbury. There are a number of key local cycle routes available throughout Shrewsbury to the nearby villages, notably National Cycle Route 44 which passes through Annscroft, Hook-a-gate, Nobold and onto Shrewsbury which is within the 5km radius in Figure 2.3.5.

The proposal site is considered to represent an appropriate location for development in transport sustainability terms, being located within a short walk to bus stops (potential new bus stop outside of site entrance), which are served by regular bus connections and are within a suitable walking distance of key everyday local facilities.

2.4 Personal Injury Accident Data

Personal Injury Accident (PIA) data for the local highway network in the vicinity of the proposed site has been obtained by Woodsyde Developments using CrashMap.co.uk, which provides official PIA data that has been collected by the

police so that the results are the most reliable available. Further data is provided from the Department for Transport to keep the map as up to date. Data has been obtained for the most recently available 5-year period and is shown below.

Given this data, it is considered that the access and immediate highway does not have a poor safety record, with no accidents recorded over the last 5 years along the A488 across the site road frontage.

From review of the data it identifies that no incidents have occurred in the proximity to the proposed site entrance. This would therefore indicate that the local highway network in the vicinity of the proposal site has a positive accident record with no recorded accident events. It is therefore considered that there are no road safety issues along this stretch of road.

3.0. Description of the Proposal Scheme

3.1 Overview of the Proposals

The proposals comprise an area of land sized 20.07 hectares for inclusion in the upcoming local plan for a residential scheme at Oakfields Farm, Edgebold. The existing farmhouse located at the site is to be retained.

The proposal scheme is for up to circa 450 residential dwellings. It is proposed that the dwellings would be developed to provide a range of unit types across the site.

Access to the potential development would be via a new right turn facility located centrally to the frontage to the A488 Hanwood Road. The new access would be provided with a ghost island which would accommodate right turning traffic and the junction bell mouth will be provided with 20m entry and exit radii and a typical road width of between 6.0-6.5m wide. This carriageway width will enable a route to be plotted to the northern and western boundary for potential further development and connectivity to land to the north. It is proposed to introduce an extension of the existing 40mph speed limit to the south western corner of the site road frontage.

Internally to the site the access route would continue onwards to form a number of cul-de-sac terminations located off a main spine road route. The layout will be detailed once planning has been allocated. All roads will be offered for adoption pursuant to the Highways Act and the relevant agreements with Shropshire Council in the normal fashion.

Footways would be provided along the proposed new main spine road route, and into the culs-de-sac. Additional pedestrian connectivity would be made along the A488 leading into Shrewsbury and also to existing culs-de-sac along the eastern and north eastern boundary where land ownership permits.

3.2 Measures to Encourage Sustainable Transport

The proposed scheme would be delivered to include a number of measures to encourage access to the site via alternative travel modes to the private car, such as footway connections from the site to the A488 Hanwood Road. In addition, footpath links could be made from the site into Wrekin Dove Close and Bluebell Place, where possible, to increase the ease of accessibility of alternative travel modes and encourage walking and cycling.

Clearly, current conditions with the COVID-19 Pandemic has resulted in many people working from home and I see no reason why this would not be encouraged going forward when the pandemic has been eradicated. Clearly modern technology has advanced and continues to do so, meetings no longer need to be face to face and can simply be arranged via one of the media alternatives such as Skype or Microsoft Teams.

It is noted that the site is in close proximity to a national cycle route along the travels between Annscroft, Hook-a-gate, Nobold and the onto Shrewsbury. Further routes are available.

4.0. Anticipated Trip Generation

In terms of traffic movements as mentioned above the country is currently subject to the COVID-19 pandemic and as such the whole dynamic of travel and movement for work and pleasure has dramatically changed. Judging by the current situation and reports from Government the pandemic is here for the foreseeable future which will ultimately affect people's choices, workplaces, use of amenities and overall daily travel. No data is available of how this pandemic has affected travel movement, although the Government have stipulated that as many people as possible do in fact work from home. According to Government Figures in April 2020 46.6% of people in employment did some work at home, of those who did some work at home, 86.0% did so as a result of the COVID-19 pandemic. This is a massive change to those working from home and if this trend is to continue which is considered highly possible there would be a significant reduction in the overall traffic movements generated by such a development. Typically, one would reference TRICS data for an accurate traffic prediction, however we do not consider that this would be a fair reflection on the current situation or situation going forward. I am sure that a number of businesses would choose to operate with staff continuing to work from home and only going into offices when absolutely necessary.

From other similar scheme TRICS data gave the following actual trip rates.

Trip Rates Vehicles	Arrivals	Departure	Total	Total Anticipated Movements
Network AM Peak (08:00 – 09:00)	0.139	0.450	0.589	265
Network PM Peak (17:00 – 18:00)	0.423	0.219	0.642	289

Trips for Dwellings	Arrivals	Departure	Total
Network AM Peak (08:00 – 09:00)	63	202	265
Network PM Peak (17:00 – 18:00)	190	99	289

It is considered that the data and figures show worst case traffic movements for the proposed development. It is further noted that these traffic movements will be further split where vehicles turn left and turn right out of the access. It is predicted that ordinarily we would expect a higher number of the traffic movements to gravitate towards the town centre rather than the A5 bypass. Nonetheless, if these were split 50/50 in the AM peak there would be 101 vehicles departing from the site turning towards the bypass and a similar number turning towards Shrewsbury town centre. In the PM peak leaving the site there would be around 49 movements turning towards the A5 and a similar number towards Shrewsbury Town Centre. In real terms therefore these figures should be satisfactorily accommodated within the existing highway network.

The access arrangements themselves for a ghost island would readily accommodate around 500-600 traffic movements in the peak hour before consideration would be given to providing a traffic island.

Of course, trip rates will vary depending on the nature of the development with private housing and rented housing having slightly different trip rates. No accurate figures can be provided at this time until the development is set out, the number of dwellings confirmed and the amount of affordable housing element within the development. If in the future residents do tend to work from home, clearly there would be a reduction in residual traffic figures suggested and that at this present time we can only speculate how this will effect the highway network, but it is fair to say there is a reduction in traffic movements over the recent past due to the onset of the pandemic. Ordinarily, a single household will make between 6-9 movements per day, therefore if this analysis was used on the basis of 300 dwellings the typical 24-hour flows would be between 2100-2700 movements per day. Given likely destinations for work, school, pleasure and trips to amenity facilities there will be a spread of traffic movements throughout the day and indeed those who have to travel may do so outside of the county, choosing either to select public transport where this is available or by private car at a time where they are able to reach their destination suitable to their own requirements. If this scenario occurs, then a number of movements would automatically occur outside of the peak hours.

Drawing conclusion from this assessment it is clear that the volume of traffic generated from the allocation of this site would likely see a small increase in overall traffic generation, which would not on its own be considered to be significantly material to cause demonstrable congestion or highway safety issues to A488 Hanwood Road or the wider highway network.

Table 4.0 Accessibility Assessment

Facility	Approx Distance (from centre of site) (m)	Approx Journey Time (minutes)	
		Walking	Cycling
Royal Shrewsbury Hospital	2100	25	10
Mytton Oak Doctors Surgery	2200	26	10
Onslow Balti Lounge Indian	3000	35	13
Co-op Supermarket	2000	24	8
Ambrosia Express	1700	20	8
Beacon Hotel	2300	28	10
Shrewsbury School	2700	33	12
Shropshire Squash Club	2200	26	10
Radbrook Green Shopping Centre	1500	18	7
Radbrook Green Surgery	1400	17	6
The Priory School	2300	28	10
Roman Road Sports Centre	2000	24	8
St Kenelm Business Park	2100	25	10
‘Red Barn’ Public House	2500	30	11
‘Inn on the Green’ Public House	1400	17	6
Radbrook Primary School	1600	19	8
St George’s Junior School	2200	26	10

The below table highlights the accessibility of the local services and amenities from the proposed development for realistic sustainable transport modes. Primarily, the majority of these key facilities and amenities all within the 2km distance which is considered acceptable for a maximum walk distance and easily accessible for cyclists.

4.1 Employment and Education

Clearly employment opportunities for the long term perspective residents for any development constructed on this site access to the local business hubs, industrial parks, business parks and indeed the town centre can be accessed through a mixture of walking, cycling and use of the bus service which has been illustrated above. The existing doctors serving the locality is located adjacent to the Radbrook Green Shopping Centre which is circa 1.2km, therefore the surgery can be accessed by foot, bicycle, car or bus.

4.2 Sustainability Conclusion

The allocation of this land for a development of circa 450 dwellings would not give rise to any sustainability concerns based on the information reviewed in this report. The site is located within a sustainable location, with direct access to public transport links, as well as an existing sustainable travel infrastructure, employment opportunities and community facilities.

5.0. Conclusion.

This assessment has been based on the allocation of land that may serve upwards of 400 dwellings. Clearly, we are in a uncertain period given the COVID-19 pandemic whereby it is likely that going forward people's habits and working arrangements will see dramatic changes and developers incorporating offices within the homestead. This approach has been in place within the last 12 months and it appears that businesses can operate successfully without the need to gather in one large office. The continual updating and upgrading of technology has allowed suitable connectivity and accessibility to all staff and workers where they do not have to always attend an office. It is appreciated that this is not relevant for all industries and trades such as hospitals, supermarkets, manufacturing and construction etc, however as mentioned above 46.6% did a proportion of their work at home. I see no reason why this type of arrangement would not continue in the future as it gives a significant benefit in terms of working conditions, need for travel, company overheads and reducing the carbon footprint. Some traffic figures have been calculated and these would be considered a worst-case scenario with the figures likely reduced given the argument surrounding COVID-19.

This Highway and Transport Assessment has considered the impact of a prospective residential development on this proposed land allocation. A brief review of the highway capacity has been made and it is considered that there should be adequate capacity in the immediate and wider highway network where there will be approximately 236 movements two-way in the AM peak and 257 two-way traffic movements in the PM peak.

It is considered that the provision of a ghost island right turn facility to service the site is appropriate which is capable of receiving circa 600 two-way peak hour movements

It has been indicated that the proposals for circa 450 residential dwellings will have no significant demonstrable harm to the safe movement and free flow of traffic on the A488, Hanwood Road or the wider highway network. Presently there is no data available or collected information to assist in calculating the effects of the COVID-19 pandemic and the likely reduction in traffic movements that have occurred as a result. It is considered that the highway network is capable of receiving and distributing this traffic, such that the free flow and safe movement on the highway network is not compromised.

Potential pedestrian links will be formed along the A488 to connect to the existing facilities and this will include potential links where possible into the nearby developments of Wrekin Dove Close, Bluebell Place or Violet Grove land ownership permitting. A number of facilities and amenities are located within the 2km walking distance of the site and further facilities can be located and accessed within the town centre which can be accessed via bus service 20, 552 and 553 which operate along the A488 and Radbrook Road.

It is considered that based on the information contained in this report that there are no outstanding transport related issues that need to be addressed prior to the allocation of this land.

In transportation terms, the proposals will not have a severe impact upon the local highway. The proposals will include an extension to the existing 40mph speed limit to cover the site road frontage of the land. Based on the analysis and assumptions

provided in this Assessment, it is clear that the cumulative impacts of the development will not be severe in terms of vehicular traffic or transportation terms to the development.