Ellesmere Road, Shrewsbury

Transport Strategy

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1. EXECUTIVE SUMMARY

1.1 David Tucker Associates has been commissioned by Barratts West Midlands to consider the transport implications of the proposed development of land to the West of Ellesmere Road, Shrewsbury. This report sets out the preferred transport strategy for the promotion of the site.

1.2 The site was previously promoted for development at the Local Plan. A previous transport strategy report was prepared for the site by RPS. Since this report was prepared there have been significant changes in planning policy with regard to transport (NPPF, Circular 02/2013) together with changes in the design philosophy advocated for highway and urban design (MfS, MfS2).

1.3 For the Local Plan it was identified that the site as a whole could deliver up to 700 residential properties together with public open space and a local centre. The excellent sustainable transport credentials of the site were acknowledged at the time however the deliverability of the site was associated with the construction of a North Western Relief Road. This infrastructure project (circa £100M) was cancelled. This was considered by the Local Planning Authority to be a significant factor in the decision not to allocate the site for development.

1.4 This report therefore considers the transport implications of development of the site in the context of the changes in policy and design guidance. To inform this review, traffic surveys have been commissioned to understand the existing trip making of residents within the existing adjacent residential areas.

1.5 Based on this information, an access strategy has been recommended for the site which identifies the key linkages required to integrate the site into the existing urban area and also includes preliminary access designs.

1.6 As was previously established by RPS, there are no constraints to forming appropriate vehicular access(es) to the site.

1.7 Linkages are required not only to the local road network but equally important given the proximity of the site to key local destinations including the town centre, railway station and local facilities such as schools are strong pedestrian and cycle links. There are good existing routes in the local area and these networks have been subject to good investment in recent years including through the cycle town demonstration project. These links are identified.

1.8 There is potential to improve the public transport provision on the Ellesmere Road corridor. Existing services are relatively infrequent although the proximity of the site to the town centre is shorter than the optimum distances for public transport take up i.e. walking and cycling are both viable alternatives over these distances. Any service improvements will need to be agreed with Shropshire County Council (SCC) at the Transport Assessment stage.

1.9 A trip distribution and assignment have been derived based on existing patterns. Overall, the traffic forecasts predict that for a development of around 250 dwellings, the additional traffic into the town centre will be around 38 vehicles per hour during the peak hour periods. This is commensurate to less than one vehicle every minute. For a development of around 350 dwellings, the additional traffic into the town centre will be around 53 vehicles per hour during the peak hour periods. This is commensurate to less than one additional vehicle every minute. In absolute terms, these increases are small and are unlikely to result in a 'severe' impact, within the context of the NPPF test.

1.10 Overall with respect to the previously planned North West Relief Road, the development of the site does not preclude its construction. Nor should the construction of the road preclude the development of the site. The alignment of this road does not correspond to any significant desire line for travel to and from the site. The benefit of the road is wider capacity which it releases within the network. As set out above the additional traffic generated from the site which routes to the town centre is modest. Ultimately the need for such a road is a strategic decision for Shrewsbury as a whole rather than a local issue to be addressed by this site.

1.11 In terms of the way forward, from a highways and transport point of view, the issues arising from the 250 dwelling and 350 dwelling scenarios are likely to be the same. The site has good sustainable transport credentials, which should perform well against alternative sites within the town. As with any residential site there will be travel demand to the town centre where ultimately it will need to be managed within the existing constraints. In any event, the demand from the site is forecast to be low and there are no clear thresholds crossed between the two scenarios.

2. POLICY CONTEXT

2.1 National Policy

2.1.1 The publication of the White Paper 'A New Deal for Transport: Better for Everyone' in July 1998 and of the Transport 2010 agenda in July 2000, resulted in greater emphasis on integrated transport strategy and sustainable travel in both local and national policies. The Government, in particular, set out the aspiration for a transport system that provides:

- "modern high quality public transport, both locally and nationally. People will have more choice about how they travel, and more will use public transport
- easier access to jobs and services through improved transport links to regeneration areas and better land use planning"

Ref: Transport 2010, para 1.4

2.1.2 The document states that better integration between land use and transport planning at national, regional and local levels will help to promote patterns of development that can be served more effectively by public transport. As a result, the Government has updated national planning guidance to ensure that new developments provide safer and easier access to jobs, shopping, leisure and services (cf Transport 2010, para 6.37). This revised planning guidance for transport considers measures to reduce travel and provide opportunities for sustainable travel, this includes the need to ensure that development is located where it can be served by sustainable forms of transport.

2.1.3 The policy context in transport terms, therefore, supports the development of appropriately located sites with good public transport connectivity and linkages into pedestrian and cycle routes particularly, where this would reduce the overall quantum of road based traffic. To maximise the potential of such sites, it is also important to ensure that the benefits are not eroded by over-supply of parking, and that there is an on-going transport planning process to review operation of, and accessibility to the site.

National Planning Policy Framework (March 2012)

2.1.4 In March 2012, the Government published the National Planning Policy Framework (NPPF) which replaces much national policy previously found in Planning Policy Guidance/ Planning Policy Statements. This report should therefore be read in the context of the new NPPF.

2.1.5 Two of the core planning principles held in the NPPF as set out in paragraph 17, include actively managing "patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable" and to "take account of and support local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services

to meet local needs."

2.1.6 Additionally, in promoting sustainable transport, paragraph 31 states that "Local authorities should work with neighbouring authorities and transport providers to develop strategies for the provision of viable infrastructure necessary to support sustainable development" and also that

> "All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:
>
> - The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
> - 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 development are severe."

2.1.7 Paragraph 36 goes on to state that

> "A key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan."

2.1.8 In reinforcing the principle of supporting sustainable development, paragraph 197 states that

> "In assessing and determining development proposals, local planning authorities should apply the presumption in favour of sustainable development."

Guidance on Transport Assessment (March 2007)

2.1.9 The 'Guidance on Transport Assessment' (GTA) document was issued by the DfT and DCLG in March 2007. It is intended to assist stakeholders in determining if an Assessment is required for a particular development and provides guidance on the content. The document places an emphasis on five key elements as part of any transport assessment:

- ensuring at the outset that thought is given to reducing the need to travel to and from the development (paragraph 4.3);
- demonstrating that other opportunities have been fully explored before considering the provision of additional road space (paragraph 1.19);
- best use should be made of existing transport infrastructure, through improvements to existing infrastructure e.g. bus lanes, advanced signal control systems (paragraph 1.19);
- mitigation measures should focus on maximising sustainable accessibility to the development, considering measures such as improvements of site layout, walking and cycling networks and the local public transport network (paragraph 4.90); and

- the presumption should be to give preference where possible to solutions other than the construction of new roads (paragraph 4.85).

2.1.10 The document makes it clear that Government transport policy is, wherever possible, to seek alternative solutions to building new roads. Paragraph 4.8.5 concludes that:

> "... presumption should be to give preference where possible to solutions other than construction of new roads".

2.1.11 In addition, paragraph 4.90 (referring specifically to the level and type of mitigation set out in Transport Assessments and other documents) states that:

> "In all cases, the transport mitigation plan or package of measures should focus on maximising sustainable accessibility to the development".

2.1.12 Furthermore, Figure 4.1 of the document makes it clear that an iterative approach to Transport Assessments should be adopted, commencing with reducing the need to travel, followed by maximising sustainable accessibility, and then dealing with residual car-based trips where appropriate.

2.1.13 Appendix B of the Guidance on Transport Assessment provides the indicative thresholds for Transport Assessments and when a Travel Plan is required. For the land use classifications relevant to the proposed development, a Transport Assessment and a Travel Plan are required for >80 residential units. The proposed development exceeds this threshold such that both a Transport Assessment and Travel Plan are required.

Good Practice Guidelines – Delivering Travel Plans through the Planning Process (April 2009)

2.1.14 In April 2009 the DfT published 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process'. The Guidelines aim to bring together some of the best practice from around the country, together the key principles and mechanisms that have been found to help secure effective TPs in England.

2.1.15 The Good Practice Guidelines defines a TP as:

> "...a long-term management strategy for an occupier or site that seeks to deliver sustainable transport objectives through positive action and is articulated in a document that is regularly reviewed. It involves the development of agreed explicit outcomes linked to an appropriate package of measures aimed at encouraging more sustainable travel, with an emphasis on reducing single occupancy car use".
>
> Good Practice Guidelines: Delivering Travel Plans through the Planning Process. April 2009 Para 2.1

2.1.16 In terms of residential TPs, the guidelines recognise that an origin based approach to travel planning focussed primarily on commuter travel is required, where "...journeys are made to

many and varied places for a variety of different purposes".

2.1.17 The Guidance focuses on an 'outcomes' approach to TPs, requiring that specific outcomes or targets are established by agreement on what should be achieved through the TP over time.

Highways Agency (HA) Circular 02/2013: The Strategic Road Network and the delivery of sustainable development (September 2013)

2.1.18 Relevant guidance is also set out in Circular 02/2013 'The Strategic Road Network and the delivery of sustainable development' published in September 2013, which outlines the role of the Highways Agency in developing regional planning policy, dealing with individual planning applications, and their impact on the strategic road network.

2.1.19 This document reflects key elements of Government policy (NPPF), stating in paragraph 9 that:

> 'Development proposals are likely to be acceptable if they can be accommodated within the existing capacity of a section (link or junction) of the strategic road network, or they do not increase demand for use of a section that is already operating at over-capacity levels, taking account of any travel plan, traffic management and/or capacity enhancement measures that may be agreed. However, development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe'

2.1.20 Paragraph 18 goes on to states that:

> Capacity enhancements and infrastructure required to deliver strategic growth should be identified at the Local Plan stage, which provides the best opportunity to consider development aspirations alongside the associated strategic infrastructure needs. Enhancements should not normally be considered as fresh proposals at the planning application stage. The Highways Agency will work with strategic delivery bodies to identify infrastructure and access needs at the earliest possible opportunity in order to assess suitability, viability and deliverability of such proposals, including the identification of potential funding arrangements.

2.1.21 With respect to individual sites paragraph 21 states that:

> Where development proposals are consistent with an adopted Local Plan, the Highways Agency does not anticipate the need for engagement in a full assessment process at the planning application stage. In such circumstances, considerations will normally be limited to the agreement of the details of the transport solution, including any necessary mitigation measures, and to ensuring that the transport impacts are included in the overall environmental assessment provided to the local planning authority, rather than the principle of the development itself.

2.2 Local Planning Policy

Shropshire Local Transport Plan

2.2.1 The LTP3 is a 15 year strategy which sets out the objectives, policies and targets for improving transport between 2011 and 2026. It covers all modes of transport (including walking, cycling, public transport, car based travel, and freight), the management and maintenance of the highway network, and the relationships between transport and wider policy issues.

2.2.2 The LTP3 comprises the three goals

- Economy and growth;
- Carbon reduction and environment; and,
- Healthy, safe and confident people and communities.

2.2.3 Detailed policies are included within the LTP3

Policy E4: Network capacity management hierarchy

We will aim to tackle and prevent congestion and delays through the application of a hierarchy of measures:

1st – reducing demand through encouraging non-travel alternatives, car sharing and use of sustainable modes;

2nd – Network management to managing the network more effectively;

3rd – Targeted capacity improvements at junctions;

4th – Road widening

5th – New road links or bypasses

Policy E6: Capacity improvements and new roads

Where demand and network management measures have been proven to be insufficient to deal with network problems we will make best use of our existing roads by increasing capacity before any consideration of building new roads.

New Road building will be restricted to where all other options have been fully considered, the benefits significantly outweigh the costs (both financially and environmental), and for which funding is available. Schemes would be prioritised on the basis of their cost benefit assessment.

E7: Tackling Shrewsbury's traffic problems

> *We will implement a Transport Strategy for Shrewsbury as funding opportunities become available. We do not expect to promote full construction of the Shrewsbury North West Relief Road during the plan periods, but will retain the ability to construct the road in the future if necessary and affordable.*

Shropshire Local Development Framework

2.2.4 The Local Development Framework includes two key documents:

- The Shropshire Core Strategy
- Site Allocations and Management of Development (SAMDev)

2.2.5 The Core Strategy was adopted in 2011 and provides the strategic planning policy for the whole district up to the year 2026.

2.2.6 The preferred options for the SAMDev were published in March 2012. As part of the site selection process, the development site scored highly on accessibility and was taken forward to the final selection round (2B). It was not taken forward as:

> *If development were to proceed on these sites (including SHREW15) a major new access would be required off Ellesmere Road, breaking into a currently undeveloped area. With any development off Ellesmere Road, there are concerns about increased traffic on Ellesmere Road/Chester Street, with the approach to the town centre already suffering from congestion at peak times. It is considered that if development is to be brought forward in this area, then it should be as part of a co-ordinated approach which makes allowance for the provision of the northern stretch of the Shrewsbury North West Relief Road which remains a Council aspiration. In the absence of such an approach and with the issues identified in relation to development in this area, the site is not considered a realistic option to be identified for development.*

2.2.7 It should be noted that the above conclusions are not aligned with the County's Transport Policies which clearly set out that the construction of new roads is to be restricted and that the SNWRR is not a scheme that SCC will promote during LTP3 (i.e. up to 2026).

3. SITE CONTEXT

3.1 Existing Site

3.1.1 The site is currently farmland. The farmhouse and associated buildings are access from a direct access onto Ellesmere Road. In addition to this access there are field accesses onto Ellesmere Road. There are potentially accesses through Cedar Drive, a small residential cul-de-sac. These will be subject to confirmation of the highway extents.

3.2 Local Road Network

3.2.1 A528 Ellesmere Road is a single carriageway road which is oriented north-south. In the vicinity of the site the road is subject to a 30mph speed limit, is lit with a footway along the eastern side. To the south of the site, the existing development takes direct access or via access roads with simple priority junction arrangements. To the east of the site, there is a housing estate built out in the 1980s - 1990s which adheres to a strict hierarchy of streets which feed into a single access, Hubert Way, which has a ghost island priority junction with Ellesmere Road. To the north of the site, the junction of Ellesmere Road with Mount Pleasant is a simple priority junction.

3.2.2 To the south, Ellesmere Road is a radial route directly into the town centre. The town centre network reflects the historic development of the town and as such must address a wide range of competing demands other than the movement of private cars.

3.2.3 To the north, Ellesmere Road meets with a section of the ring road at a roundabout junction. The ring road covers three quadrants of the town. The section from the north via the east to the south is provided via the A49. The section across the south to the west is provided by the A5. These are both modern roads to contemporary design standards. Together these effectively accommodate all strategic movements.

3.3 Public Transport Network

3.3.1 Shrewsbury Railway Station is located 1.4km – 2.1km from the site. The station is operated by Arriva Trains Wales and has a good level of facilities. There is car parking available at the station. With respect to the train services these include the following:

- Alternate hourly service from Holyhead via Chester and Wrexham General to Birmingham International or Cardiff Central.
- Two-hourly services from Aberystwyth and Pwllheli via the Cambrian Line to Birmingham International.
- Hourly services from Manchester Piccadilly to Cardiff Central.
- Four trains per day each way to Swansea Monday–Saturday and two trains each way on Sundays.

- Holyhead and Cardiff Central via Chester. One train each way per day.
- Local Stopping services to Wrexham General
- On a Sunday, Arriva Trains Wales operate a second hourly service to Birmingham International from Shrewsbury to give two trains per hour to Birmingham, as London Midland only operate Shrewsbury to London services from Mondays to Saturdays.
- London – Midland (Wolverhampton to Shrewsbury) Monday to Saturday Hourly

3.3.2 There is an hourly bus service which operates along Ellesmere Road. The 501 service runs from Shrewsbury to Ellesmere via Cockshutt, Burlton, Marton, Albridgton and Battlefield Way. The service is operated by Bryn Melyn.

3.4 Walking and Cycling Networks

3.4.1 In 2008 Shrewsbury was chosen to be a cycling town by Cycling England. Cycle Shrewsbury was a campaign run by Shropshire Council Council to get more people cycling in Shrewsbury. Cycling town funding enabled both funding of investment in cycling routes together with education and marking. Funding ended in 2011 although Cycle Shrewsbury continues to promote and improve cycling.

3.4.2 The walking and cycling networks are shown on **Figure 1** in the context of the site. As can be seen there are a number of off-carriageway pedestrian and cycle routes which run through the existing residential areas to the East of the site and link across to the town centre and up to the employment and retail areas to the north of the town.

3.4.3 The site itself is currently undeveloped and therefore the existing routes do not extend into the site. Similarly there are no existing footways on the west of Ellesmere Road in the immediate vicinity of the site.

4. SITE ACCESSIBILITY

4.1 Introduction

4.1.1 Accessibility is dependent on what is being accessed, i.e. what is the purpose of the trips. This information is not available from the TRICS database or similar and so it is necessary to look to alternative data sources, principally the Census and the National Travel Survey (NTS). The Census contains a broad range of information including where people work and how they travel there. However the Census is only carried out every 10 years, the most recent available information is for 2001. The NTS however is an annual survey. The data used here is from 2008.

4.1.2 Reproduced below in **Table 1** is data from the 2008 NTS. This breaks down the trips by purpose and by time of day. Here the typical network peak hours, i.e. in the morning 08:00 to 09:00 and in the afternoon 17:00 to 18:00 have been summarised together with the shoulder periods, an hour either side of the peak hours. Also summarised are the results for a full weekday. The results are given as percentages.

Table 1 – Trips by time of day and trip purpose (M-Fr only): 2004-2008

	Commuting	Business	Education	Escort education	Shopping	Other personal business and escort	Social/ entertainment	Holiday/ Day trip/ Other	All purposes
0700 – 0759	*58*	*5*	*10*	*2*	*3*	*13*	*4*	*5*	*100*
0800 – 0859	25	4	29	18	4	14	3	3	100
0900 – 0959	*12*	*5*	*3*	*8*	*24*	*28*	*13*	*7*	*100*
1600 – 1659	*23*	*5*	*5*	*3*	*16*	*21*	*18*	*8*	*100*
1700 – 1759	36	4	2	1	12	20	19	6	100
1800 – 1859	*21*	*3*	*1*	*-*	*14*	*20*	*33*	*8*	*100*
All day	19	4	8	6	18	20	19	7	100

(based on Table 8.3 NTS 2008)

4.1.3 As can be seen from this table, in the AM peak 29% trips are commuting or business related, 47% trips are education related, 18% retail or personal business and 6% are social and holiday trips. In the PM peak 40% trips are commuting or business related, just 3% trips are education related, 32% are retail or personal business and 25% are social and holiday trips. It can be seen from this data that there are significant differences between the trip purpose compositions of the two peak periods. In the AM peak education and employment related

trips are dominant. In the PM peak, employment, shopping and leisure trips are more significant. For this assessment it is assumed that all the trips have at least one home trip end.

4.1.4 The above analysis provides an assessment of the trip patterns that will arise assuming that the site achieves a typical level of accessibility. The CfIT guidance however advises that:

> *The aim for practitioners should be to reduce per capita distance travelled by car in new developments compared with the average for the transport authority area and good practice benchmarks.*

4.1.5 There is a presumption that development should be encouraged towards locations with good accessibility. Here, the reference case will be defined as the average intensity of travel as defined by the NTS i.e. will residents on this site be afforded access to employment, education, retail and leisure opportunities to a higher or lesser extent compared to the national average, unless local benchmarks are available such as through the Census.

4.2 Employment

4.2.1 Details of the employee destinations from the 2011 Census have not yet been published. However the residential areas adjacent were all established long before the 2001 Census was undertaken. The tables below summarise the workplace destinations of residents in the Bagley ward.

4.2.2 As can be seen from the below **Tables 2 and 3** 63% of residents work within Shrewsbury and Atcham, 14% in Telford and Wrekin and 7% in North Shropshire. Of those residents who work within Shrewsbury and Atcham, the town centre (Castlefields and Quarry), Bagley ward itself and the employment areas to the north of Shrewsbury in Battlefield and Heathgates and Harlescott are the most significant destinations. The rural hinterland and the wards to the south of Shrewsbury provide relatively few employment opportunities.

Table 2 – Journey to work trips from Bagley ward to Shrewsbury & Atcham (2001)

Shrewsbury and Atcham Wards	All	Driver
Bagley	17.0%	8.4%
Battlefield and Heathgates	7.2%	7.3%
Bayston Hill	0.1%	0.2%
Belle Vue	1.1%	1.3%
Bowbrook	5.8%	7.8%
Castlefields and Quarry	18.3%	9.0%
Column	2.0%	2.4%
Condover	0.5%	0.6%
Copthorne	0.7%	1.1%
Harlescott	7.8%	8.5%
Haughmond and Attingham	0.6%	0.9%
Lawley	0.2%	0.4%
Meole Brace	1.7%	2.6%
Monkmoor	1.6%	1.9%
Montford	0.1%	0.2%
Pimhill	0.5%	0.9%
Porthill	2.3%	2.6%
Rea Valley	0.4%	0.6%
Rowton	0.5%	0.6%
Severn Valley	0.6%	0.9%
Sundorne	1.0%	1.3%
Sutton and Reabrook	0.9%	0.9%
Underdale	1.9%	2.3%
Total	72.9%	62.7%

Table 3 – Journey to work trips from Bagley ward out of the District (2001)

District	%driver	%all
Shrewsbury and Atcham	62.7%	72.9%
Telford and Wrekin	14.1%	10.0%
North Shropshire	6.8%	4.5%
Oswestry	3.0%	2.0%
South Shropshire	1.7%	1.4%
Wolverhampton	1.7%	1.5%
Bridgnorth	1.5%	0.9%
Birmingham	1.1%	1.4%
Powys	0.6%	0.4%
Other Districts (<0.5%)	6.8%	5.20%

4.2.3 To further illustrate that the area is well located with respect to employment opportunities, **Table 4** summarises the distance travelled to work (excluding home working and no fixed workplace). As can be seen the Bagley ward compares very favourably with 67% of residents working within 5km compared to the national average of 46%.

Table 4 – Distance to work trips from Bagley ward (2001)

	Bagley Ward	Shropshire Unitary Authority	West Midlands Region	England Country
Less than 2km	37%	30%	23%	23%
2km to less than 5km	30%	16%	26%	23%
5km to less than 10km	5%	13%	22%	21%
10km to less than 20km	9%	18%	16%	18%
20km to less than 30km	10%	11%	6%	6%
30km to less than 40km	1%	4%	2%	3%
40km to less than 60km	3%	3%	2%	3%
60km and over	5%	4%	3%	3%
	100%	100%	100%	100%

4.2.4 **Table 5** summarises the mode of travel to work. As can be seen Bagley ward already has high proportions of walking and cycling trips compared to the national average.

Table 5 – Mode of travel for work trips from Bagley ward (2001)

	Bagley Ward	Shropshire Unitary Authority	West Midlands Region	England Country
Underground, metro, light rail or tram	0.1%	0.1%	0.2%	3.5%
Train	1.4%	0.9%	1.7%	4.7%
Bus, minibus or coach	4.0%	3.0%	9.6%	8.3%
Taxi or minicab	0.7%	0.4%	0.5%	0.6%
Driving a car or van	63.1%	68.1%	65.9%	60.5%
Passenger in a car or van	7.7%	7.3%	7.9%	6.7%
Motorcycle, scooter or moped	1.4%	1.0%	1.0%	1.2%
Bicycle	5.9%	4.0%	2.5%	3.1%
On foot	15.3%	14.6%	10.5%	11.0%
Other	0.3%	0.7%	0.4%	0.5%

4.3 Education

4.3.1 The proposed residential development would be expected to result in a proportional increase the demand for education with the resulting trips to access the local schools. These trips will

coincide with the network AM peak hour, indeed according to the national travel survey (2008) around 43% of trips in progress during the AM peak are school related (education & education escort). Education trips are therefore, one of the most significant factors influencing the 'garden gate' vehicle trip generation of a residential site particularly given the apparent sensitivity to distance.

4.3.2 As shown by the 2008 national travel survey, for primary school trips, pupils are over three times more likely to travel to school by private car if their journey to school is 1 to 2 miles compared to those whose journey is under a mile. Nationally, the average journey length is 1.6 miles. A similar relationship is also apparent for secondary school pupils although they are more likely to take the bus rather than be driven for long journey lengths. Nationally the average journey length is 3.4 miles.

Table 6 - Primary school travel by mode and length
Chart 5.5 School trips by age, mode and length, 2007-08
Primary school: 2007-08 (5-10 years)

Percentage

	Under 1 mile	1 to 2 miles	2 to 5 miles	5 miles and over	Total
Walk	80	31	3	0	49
Bicycle	1	2	1	0	1
Car/van	18	61	76	70	42
Bus	1	6	18	28	7
Other	0	0	2	2	1
Total	100	100	100	100	100

Table 7 – Secondary school travel by mode and length
Secondary school: 2007-08 (11-16 years)

Percentage

	Under 1 mile	1 to 2 miles	2 to 5 miles	5 miles and over	Total
Walk	91	65	10	0	41
Bicycle	1	4	3	0	2
Car/van	6	21	34	22	22
Bus	2	11	50	68	32
Other	0	1	3	10	3
Total	100	100	100	100	100

4.3.3 The nearest primary school is Greenfields Primary School which is located on Hemsworth Way to the East of the A528 Ellesmere Road. This school is between 200m and 900m from the site. Subject to the provision of suitable crossing facilities on Ellesmere Road, access to the school by foot should be convenient and attractive to parents.

4.3.4 There are five secondary schools within Shrewsbury. The nearest secondary school is the Grange which is located on Mount Pleasant Road between 1.3km and 2.0km from the site. This equates to a 15 to 20 minute walk. The Sundorne School is around 3.2km to 3.9km walk/drive to the East.

4.4 Retail and Leisure

4.4.1 According to the NTS, shopping accounts for more trips for the population as a whole than any other trip purpose. Whilst there are more trips, these trips tend to be much shorter than say commuting trips. How much shorter depends upon the accessibility of the site. It should be noted though that shopping does not represent a significant proportion of peak hour traffic, but it is nevertheless important factor in the overall intensity of travel generated by the site.

4.4.2 Grouped together here with retail trips are personal business trips. These include trips to services such as a bank, doctor or library. These have been grouped because many of these destinations will be co-located in town centres with shops and as such these trips in NTS are similar in length and trip time to retail trips.

4.4.3 Key local destinations have been identified. These are shown on **Figure 1**. As can be seen these are clustered in the town centre. The town centre is between 1.8km and 2.5km from the site. This equates to a 20 to 30 minute walk from the site. The full ranges of retail and leisure opportunities available within the town centre are therefore nearby and conveniently accessible by all models. As discussed above for education trips, there is good permeability through the adjacent residential areas and only few main roads to cross. Shopping trips to the town centre can therefore easily be made by a wide range of modes and the overall distances will be well within the average shopping trip distances set out in NTS.

4.4.4 Whilst general shopping trips can be made by a wide range of modes, by the nature of household food shopping, regardless of distance, the car is likely to be the main mode for 76% of trips (NTS average). It is therefore the typical trip length that is important. According to the NTS the average food shopping trip is 5.0 km as opposed to an average shopping trip length of 8.6 km. The nearest supermarket is the Morrison superstore on Whitchurch Road which is approximately 3.0 km from the site. Also on Whitchurch Road there is a Tesco (3.9km) and other non-food retailers.

4.4.5 There are local shops on Mount Pleasant and Wood Street (to the south of Greenfield Street). These are around 500m - 1.8km from the site and therefore residents will have a choice for top-up and day-to-day shopping needs. There are no local shops within the Hubert Way estate.

4.5 Overall Accessibility Summary

4.5.1 The site is well located with respect to accessing education. Perhaps more than any other category, the journey to school, shows a high degree of sensitivity between distance and mode share. The proximity of both primary and secondary school to the site should afford residents and their children the flexibility and independence to walk to and from school with little reliance on the private car.

4.5.2 A higher than the national average proportion of jobs within Shrewsbury are provided for locally. These jobs can be accessed via sustainable modes and this is reflected in the reported travel patterns. Within Shrewsbury the site is conveniently placed for all the main employment areas within the town, in particular the employment areas in Harlescott and the town centre, and as such is readily accessible by modes other than the private car. As such, in terms of employment accessibility the site is considered to be above average for the local area.

4.5.3 Finally, retail and leisure accessibility has been considered. Accessibility by all modes is very good and there are a range of supermarkets all well within the average trip lengths from the NTS as a whole.

5. SUSTAINABLE ACCESS AND TRAVEL STRATEGY

5.1 Introduction

5.1.1 The travel strategy seeks to fully embrace National, Regional and Local Policies on achieving sustainable development with walking, cycling and public transport links to local employment, schools and retail and leisure facilities.

5.1.2 The proposals will be supported by a comprehensive sustainable travel strategy which includes the provision of dedicated pedestrian and cycle routes to key destinations to and from the site and high quality public transport services providing access between the whole of the development site and Shrewsbury town centre and key employment destinations.

5.1.3 The Sustainable Travel Strategy aims to interact with all aspects of the development providing an action plan for promoting sustainable travel throughout the site as a whole whilst providing co-ordination between individual site specific travel plans adopted by businesses, schools and the residential development areas.

5.1.4 The Travel Strategy will manage the development's travel demands both within the community and to wider destinations, building upon the foundations provided at the design stage of the development.

5.1.5 The Strategy sets out the individual initiatives to be put into place in order to fill accessibility 'gaps' with the aim of making sustainable travel feasible for all those travelling to and from the development.

5.1.6 The Strategy provides a framework for promotion, management and monitoring to ensure that initiatives achieve their maximum potential and that the following overarching objectives are realised:

- Provide safe and easy, sustainable access for all, increasing awareness of choice of travel modes and promoting social inclusion;
- Encourage healthy lifestyles and a sustainable development;
- Address the causes and potential impacts of climate change through reducing energy use and reducing emissions with the ultimate aim of delivering low-carbon development. The overall Strategy is shown at Appendix C.

5.2 Site Access

5.2.1 In developing the access strategy for the site it is important to ensure that the proposals balance the needs for all road users such that car use does not dominate.

5.2.2 It is proposed that the site would take access from A528 Ellesmere Road. Vehicular access onto the A528 Ellesmere Road would be achieved via a new simple priority junction. It is not

considered that a right turn lane would be essential nor encouraged by current design guidance (MfS). A right turn lane could however be provided if required by the Local Highway Authority. It would however be preferable to have two or more low key junctions than a single large point of access. This detail would be agreed with the Local Highway Authority at the planning application stage. There is considerable flexibility in terms of the precise location of the site access given the significant highway frontage that the site enjoys. The location of the site access is therefore not a constraint on achieving good design internally within the site.

5.2.3 It was previously envisaged that access would be taken from the junction of Ellesmere Road and Hubert Way through the creation of a new four arm roundabout to replace the existing priority junction. Ultimately this could still be provided although not considered to be essential on capacity or road safety grounds.

5.2.4 To the south there is an existing farm access. This access is around 3m and would be ideally suited as a pedestrian/cycle route as well as a possible access for emergency vehicles.

5.3 Sustainable Travel Strategy – Planning Stage

5.3.1 The ongoing progression of planning and development of the site will be informed by the sustainable transport strategy. This will set out the principles and objectives required to ensure that the appropriate mix and level of development is provided. It will also set out the level of public transport, walking and cycling infrastructure required to serve the needs to the development.

5.4 Walking and Cycling Trips

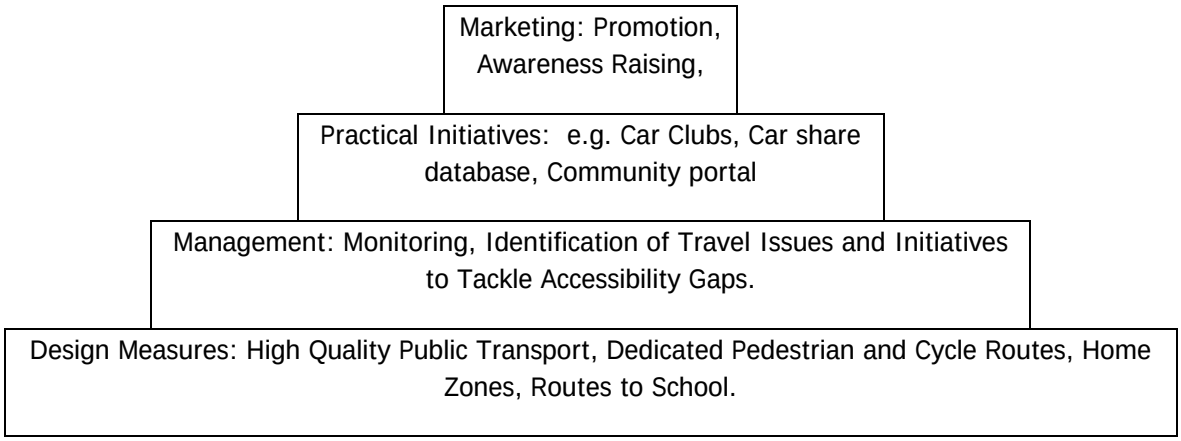
5.4.1 The development proposals will provide effective and safe pedestrian linkages between the site and the wider area. There are already extensive routes within the existing urban area. Connections will be required which will include crossing points on Ellesmere Road to link into the existing networks. It is also likely that improvements will be required to existing pedestrian and cycle routes off-site. The final form will be identified once the linkages to be delivered by Crest Nicholson through their site are confirmed.

5.4.2 The benefits of walking and cycling will be promoted through travel plan initiatives. There is already a significant amount of information prepared by Cycle Shrewsbury however it will still be important to ensure that there is strong awareness of the infrastructure and routes that are available.

5.5 Sustainable Travel Strategy – Development Stage

5.5.1 Reference has been made to 'Making residential travel plans work: good practice guidelines' published by the Department for Transport in September 2005. This sets out the concept of

the 'Travel Plan Pyramid'. This has been adapted for the purposes of the Sustainable Travel Strategy and is below.



5.6 The design measures implemented at the early stages of the site's development will effectively underpin the subsequent tiers of the strategy. The proximity of primary education, leisure and shopping facilities, alongside employment opportunities within will reduce the need to travel longer distances.

5.7 Furthermore by providing an attractive environment for walking and cycling whilst facilitating integration with existing public transport, the potential for journeys to be made by sustainable means to destinations both within the wider area will be significantly increased.

5.8 A package of measures will be prepared for the residential development to ensure that sustainable patterns of travel are encouraged from the moment of first occupancy of the site.

5.9 For example, new occupiers will be offered a Welcome Pack, which will include local bus and train timetables, details of local cycle and pedestrian facilities, and will identify the locations of the bus stops nearest to each dwelling. The information pack will also identify notable local destinations, such as medical facilities and town centre shopping facilities and provide information on how to access these facilities from the site.

6. TRAFFIC ASSESSMENT

6.1 Other Developments

6.1.1 Crest Nicholson propose for a site immediately to the south for 75 dwellings. This assessment derives trip rates from the TRICS database. The trip assignment has been based on existing link flows on a pro-rata basis. Any Transport Assessment will need to take this into account this development although there would be merit in aligning the assumptions with those proposed for this site.

6.1.2 There is also outstanding consent for around 150 dwellings on former railway land to the west of Ellesmere Road.

6.2 Traffic Generation

6.2.1 To assess the likely traffic generation of the proposed development, the existing traffic patterns arising from the existing residential areas immediately adjacent to the site were assessed. This is possible as large areas of the existing residential development to the East of Ellesmere Road are accessed from culs-de-sac. Weekday traffic flow on Greenfield Street and Hubert Way were surveyed (07:00 – 19:00).

6.2.2 Greenfield Street is a residential street, approximately 250m in length from which a number of other streets take access including: Hotspur Street, Percy Street, Falstaff Street, Glendower Court and Northumberland Place. It also provides access to public open space at Spring Gardens. Houses within this area vary considerably in age and style of housing. The majority of houses are terraced or semi-detached. Parking does take place on street although some properties have off-street or allocated parking. The existing density is around 40 hh/Ha. The number of households taking access from Greenfield Street on to Ellesmere Road has been counted using OS detailed mapping. Potentially this may understate the number of households where properties have been sub-divided however from on-site observations the majority of houses appear to be single dwellings. On this basis, in total there are 305 households.

6.2.3 The observed trip generation and the equivalent traffic generation rates per household are summarised in **Table 8** below.

Table 8 - Greenfield Street Area Residential Traffic Generation

	Observed traffic movements			Trip rates per household		
	in	out	Two-way	in	Out	Two-way
AM Peak (08:00 – 09:00)	22	76	98	0.0721	0.2492	0.3213
PM Peak (17:00 – 18:00	94	46	140	0.3082	0.1508	0.4590
12 Hr (07:00 – 19:00)	534	561	1095	1.7508	1.8393	3.5902

6.2.4 2011 Census data for the Greenfield Street Area suggests that the car ownership rates are around 1.0 – 1.5.

6.2.5 Hubert Way is a residential distributor road, approximately 500m in length. Very few properties take direct access from Hubert Way rather they are accesses from a large number of residential culs-de-sac. Houses within this area are around 20 – 30 years old. The majority of houses are detached or semi-detached. The majority of properties have off-street or allocated parking. The existing density is around 30 hh/Ha. The number of households taking access from Hubert Way on to Ellesmere Road has been counted using OS detailed mapping. In total there are 506 households.

6.2.6 The observed trip generation and the equivalent traffic generation rates per household are summarised in **Table 9** below.

Table 9 - Hubert Way Area Residential Traffic Generation

	Observed traffic movements			Trip rates per household		
	In	out	Two-way	in	Out	Two-way
AM Peak (08:00 – 09:00)	76	220	296	0.15	0.43 (net 0.28)	0.58
PM Peak (17:00 – 18:00	221	88	309	0.43 (net 0.26)	0.17	0.60
12 Hr (07:00 – 19:00)	1210	1297	2507	2.39	2.56	4.95

6.2.7 2011 Census data for the Greenfield Street Area suggests that the car ownership rates are around 1.5 – 2.0.

6.2.8 As can be seen from the table above the trip rates of the residential units on Hubert Way are around 50% higher than Greenfield Street during the peak hour periods. Over the 12 hours surveyed, the rates are around 35% higher. This higher level of car use parallels the car ownership rates.

6.2.9 Further analysis of the turning movements at the Greenfield Street and Hubert Way junctions show that whilst the traffic generation from the Hubert Way is greater overall than Greenfield Street, the amount of traffic which routes to and from the town centre via Ellesmere Road is more or less the same. There is a small increase in the AM peak inbound and outbound which is likely to be associated with the 'school-run' to the local primary school.

Table 10 - Greenfield Area Residential Traffic Generation

Greenfield		Observed traffic movements			Trip rates per household		
		in	out	2-way	in	Out	2-way
AM Peak (08:00 – 09:00)	North	13	37	50	0.043	0.121	0.164
	South	9	39	48	0.030	0.128	0.157
	Combined	22	76	98	0.072	0.249	0.321
PM Peak (17:00 – 18:00)	North	58	29	87	0.190	0.095	0.285
	South	36	17	53	0.118	0.056	0.174
	Combined	94	46	140	0.308	0.151	0.459
12 Hr (07:00 – 19:00)	North	281	280	561	0.921	0.918	1.839
	South	252	280	532	0.826	0.918	1.744
	Combined	533	560	1093	1.748	1.836	3.584

Table 11 - Hubert Way Area Residential Traffic Generation

Hubert Way		Observed traffic movements			Trip rates per household		
		in	out	2-way	in	Out	2-way
AM Peak (08:00 – 09:00)	North	40	145	185	0.079	0.287	0.366
	South	36	75	111	0.071	0.148	0.219
	Combined	76	220	296	0.150	0.435	0.585
PM Peak (17:00 – 18:00	North	160	51	211	0.316	0.101	0.417
	South	61	37	98	0.121	0.073	0.194
	Combined	221	88	309	0.437	0.174	0.611

6.2.10 The actual trip generation from the development of the site will be dependent on a number of factors such as the unit size, tenure and density. For the initial estimation of trips it is proposed to assume 25% Greenfield Area and 75% Hubert Area which is predicated on a low density development coming forward.

Table 12 - Greenfield Area Residential Traffic Generation

Greenfield		250 dwellings			350 dwellings		
		in	Out	Two-way	in	Out	Two-way
AM Peak	North	20	72	91	28	100	128
(08:00 – 09:00)	South	18	37	55	25	52	77
	Combined	38	109	146	53	152	205
PM Peak	North	79	25	104	111	35	146
(17:00 – 18:00	South	30	18	48	42	26	68
	Combined	109	43	153	153	61	214

Table 13 - Hubert Way Area Residential Traffic Generation

Greenfield		250 dwellings			350 dwellings		
		in	Out	Two-way	in	Out	Two-way
AM Peak	North	11	30	41	15	42	57
(08:00 – 09:00)	South	7	32	39	10	45	55
	Combined	18	62	80	25	87	112
PM Peak	North	48	24	71	67	33	100
(17:00 – 18:00	South	30	14	43	41	20	61
	Combined	77	38	115	108	53	161

Table 14 - Composite Traffic Generation

		250 dwellings			350 dwellings		
		in	Out	Two-way	in	Out	Two-way
AM Peak	North	17	61	79	24	86	110
(08:00 – 09:00)	South	15	36	51	21	50	71
	Combined	33	97	130	46	136	182
PM Peak	North	71	25	96	100	35	134
(17:00 – 18:00	South	30	17	47	42	24	66
	Combined	101	42	143	142	59	200

6.3 Traffic Impact

6.3.1 The traffic generation forecasts have been assigned to the local road network to provide an indication of which areas of the local road network will be subject to additional traffic demand. These have been summarised for the AM and PM peak hour periods.

6.3.2 To the north and south of the site, the traffic flows have been assigned through the junctions with Mount Pleasant and Berwick Road respectively.

6.3.3 The junction of Mount Pleasant and Ellesmere Road is a simple priority junction. There is a fairly significant right turn demand (circa 45%) from Ellesmere Road South. Ahead traffic is blocked by right turn traffic which can lead to queuing on the mainline but this dissipates quickly. There is similarly a left turn demand from Mount Pleasant to Ellesmere Road which is broadly equivalent.

6.3.4 The junction of Coton Hill and Berwick Road is a traffic signal controlled junction. At the time of the RPS study, this junction was priority controlled. The layout is geometrically constrained. To accommodate the swept paths of large vehicles, the stop lines have been setback particularly on the Berwick Road arm. The majority of the traffic remains on the mainline movements through the junction with around 15% right turning from Ellesmere Road North.

6.3.5 As can be seen from the flow forecasts, by the first main road junctions to the north and south of the site the traffic generation of the site has dispersed such as the traffic flows are less than 1 additional vehicle per minute.

6.4 Public Transport Impact

6.4.1 There is potential to improve the public transport provision on the Ellesmere Road corridor. Existing services are relatively infrequent although the proximity of the site to the town centre is shorter than the optimum distances for public transport take up i.e. walking and cycling are both viable alternatives over these distances. Any service improvements will need to be agreed with SCC at the Transport Assessment stage.

6.5 Shrewsbury North West Relief Road

6.5.1 As set out above the additional traffic generated from the site which routes to the town centre is modest. The component of this traffic that is routeing through the town to the south west will be extremely small. The alignment of this proposed road does not correspond to any significant desire line for travel to and from the site.

6.5.2 One of the key benefits of the site is that there are significant employment, retail and education opportunities to the north of the town. Indeed it is likely that residential development to the south of the town would give rise to more cross town traffic than development to the north.

6.5.3 The benefit of the proposed SNWR road is therefore whether it releases wider capacity within the network. Ultimately the need for such a road is a strategic decision for Shrewsbury as a whole rather than local issue to be addressed by this site.

7. CONCLUSIONS

7.1 David Tucker Associates have reviewed the transport implications of residential development on land to the West of Ellesmere Road, Shrewsbury on behalf of Barratts West Midlands. The site was previously promoted for the development of up to 700 dwellings. The current scenarios considered are for up to 250 dwellings and up to 350 dwellings.

7.2 Crest Nicholson propose development of a site immediately to the south for 75 dwellings. There is also outstanding consent for around 150 dwellings on former railway land to the west of Ellesmere Road. Any Transport Assessment accompanying a planning application will need to take these developments into account.

7.3 To inform this appraisal, surveys have been undertaken on the travel patterns arising from existing residential development on Ellesmere Road. These surveys show that:

- the Initial Transport Appraisal undertaken on behalf of Mosaic Estates by RPS overstated the traffic generation potential of the site; and,
- the Transport Assessment undertaken on behalf of Crest Nicholson by URS overstates the amount of traffic routeing to and from the town centre.

7.4 Based on this information, an access strategy has been recommended for the site which identifies the key linkages required to integrate the site into the existing urban area and also includes preliminary access designs. There are no constraints to forming appropriate vehicular access(es) to the site as was previously established by RPS.

7.5 Linkages are required not only to the local road network but equally important given the proximity of the site to key local destinations including the town centre, railway station and local facilities such as schools are strong pedestrian and cycle links. There are good existing routes in the local area and these networks have been subject to good investment in recent years including through the cycle town demonstration project. These links are identified.

7.6 There is potential to improve the public transport provision on the Ellesmere Road corridor. Existing services are relatively infrequent although the proximity of the site to the town centre is shorter than the optimum distances for public transport take up i.e. walking and cycling are both viable alternatives over these distances. Any service improvements will need to be agreed with SCC at the Transport Assessment stage.

7.7 A trip distribution and assignment have been derived based on existing patterns. Overall, the traffic forecasts predict that for a development of around 250 dwellings, the additional traffic into the town centre will be around 38 vehicles per hour during the peak hour periods. This is commensurate to less than one vehicle every minute. For a development of around 350 dwellings, the additional traffic into the town centre will be around 53 vehicles per hour during the peak hour periods. This is commensurate to less than one additional vehicle every minute. In absolute terms, these increases are small and would not result in a 'severe'

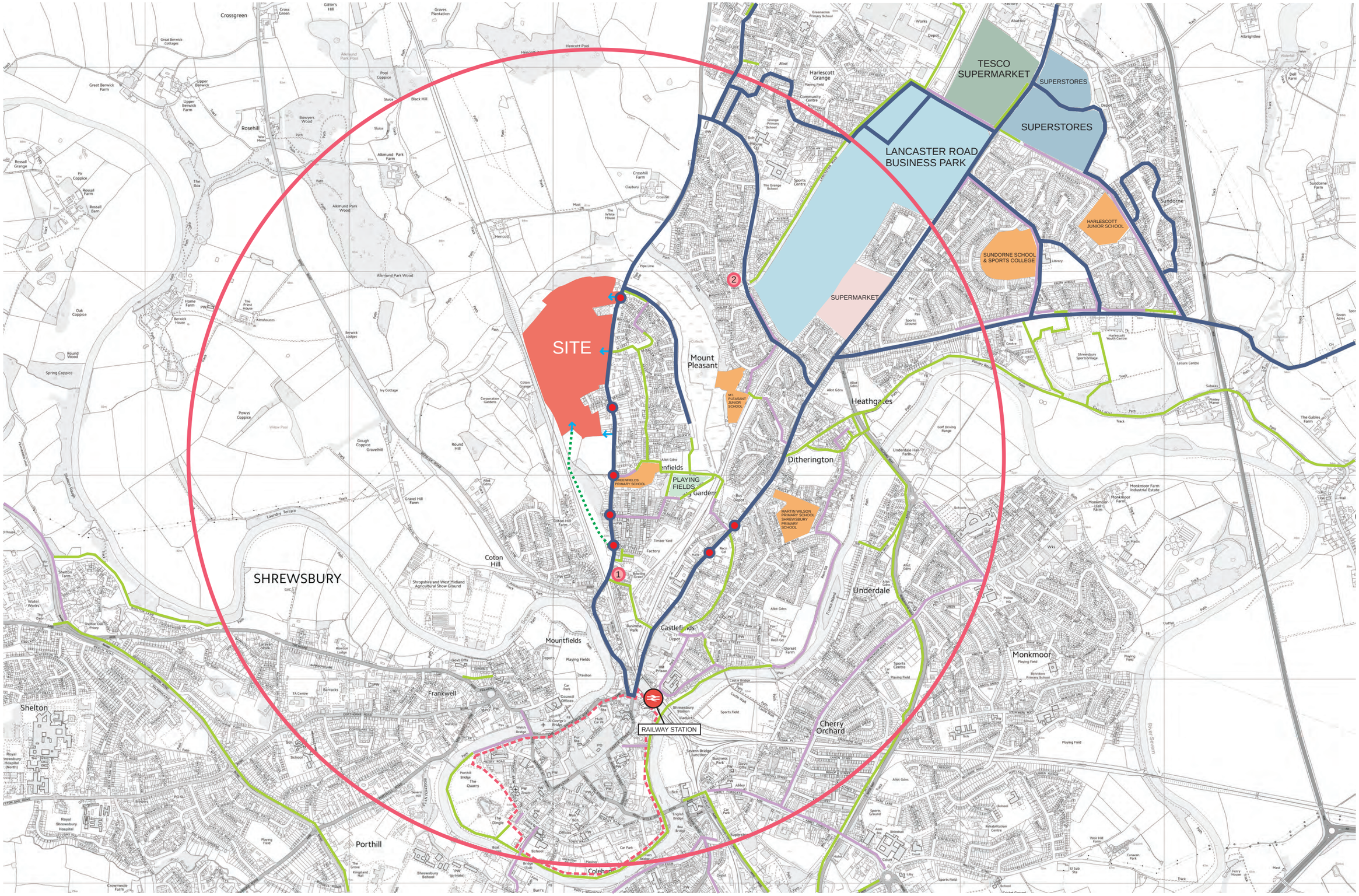
impact, within the context of the NPPF test.

7.8 Overall with respect to the previously planned North West Relief Road, the development of the site does not preclude its construction. Nor should the construction or otherwise preclude the development of the site.

7.9 The alignment of this road does not correspond to any significant desire line for travel to and from the site. The benefit of the road is therefore whether it releases wider capacity within the network. As set out above the additional traffic generated from the site which routes to the town centre is modest. Ultimately the need for such a road is a strategic decision for Shrewsbury as a whole rather than local issue to be addressed by this site.

7.10 In terms of the way forward, from a highways and transport point of view, the issues arising from the 250 dwelling and 350 dwelling scenarios are likely to be the same. The site has good sustainable transport credentials, which should perform well against alternative sites within the town. As with any residential site there will be travel demand to the town centre where ultimately it will need to be managed within the existing constraints. In any event, the demand from the site is forecast to be low and there are no clear thresholds crossed between the two scenarios.

RJM\16033-01c Transport Strategy
28th April 2014



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- 2km Isochrone
- Bus Routes
- Bus Stops
- Town Centre
- Sustrans Off Road Cycle Routes
- Sustrans On Road Cycle Routes
- 1 Local Centre
- 2 Local Centre
- Pedestrian and Cycle Access

Figure 1
Drawing Title
Job Title
Client

Drawing No : 16033-01
Local Facilities
Ellesmere Road, Shrewsbury
Barrat West Midlands

Scale : NTS

NORTH

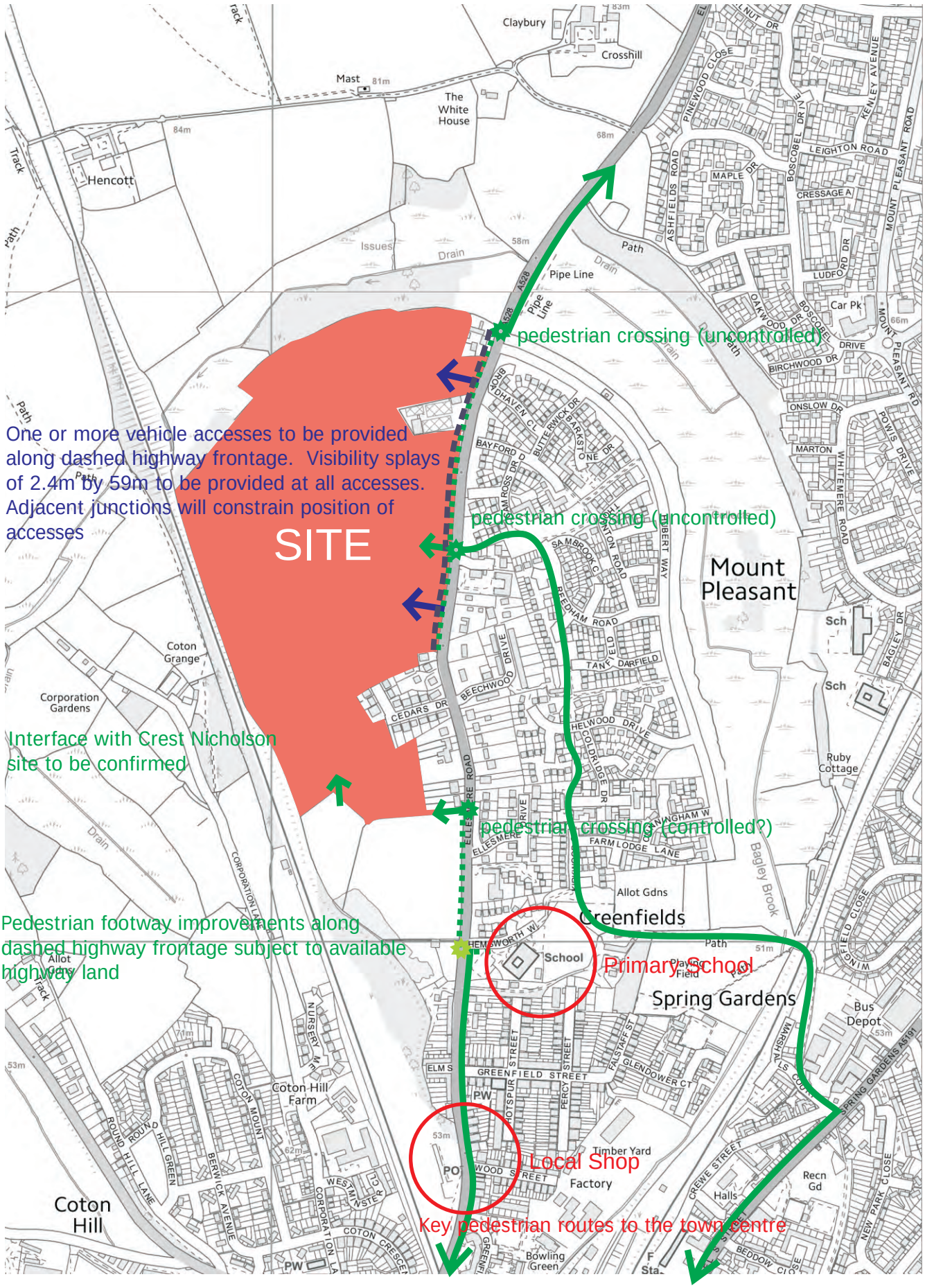

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Figure 1	Drawing No : 16033-02	Scale : NTS
Drawing Title	Access Strategy	
Job Title	Ellesmere Road, Shrewsbury	
Client	Barratts West Midlands	

NORTH

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