



**LAND AT BROCKHILL EAST,
REDDITCH**

TRANSPORT APPRAISAL

**ON BEHALF OF PERSIMMON HOMES
SOUTH MIDLANDS**

31 July 2013

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1 INTRODUCTION

1.1 Context

- 1.1.1 RPS Planning and Development Ltd has been commissioned by Persimmon Homes South Midlands and Gallagher Estates to provide transport and highways advice in relation to the proposed residential development of land at Brockhill East, Redditch.
- 1.1.2 RPS submitted representations to Bromsgrove District Council and Redditch Borough Council in May 2013 which strongly supported the identification of Site 2 as an appropriate means of delivering a modest extension of some 600 to 670 dwellings to the Brockhill East Strategic Site that is identified in the Draft Redditch Local Plan No. 4.
- 1.1.3 The May 2013 representations submitted by RPS set out how development at Site 2 provides an excellent opportunity to integrate well with the existing and planned new development at Brockhill East given its peripheral location which is close to the town centre. Moreover, the access strategy for Site 2 has been well conceived since the 'North West Redditch Master Plan' exercise undertaken in the early 2000's which contemplated the comprehensive development of the area including a potential link road through to Weights Lane in the north.
- 1.1.4 In particular, the RPS representations agreed with the general findings of the Council's January 2013 Development Study which found that Site 2 is a particularly sustainable location, having few technical and environmental constraints to its delivery and none that are insurmountable.

1.2 Transport Appraisal

- 1.2.1 Guidance provided in the National Planning Policy Framework (NPPF) states that the core planning principle relating to transport is that patterns of growth should be actively managed to make the fullest possible use of public transport, walking and cycling, and to focus significant development in locations which are or can be made sustainable.
- 1.2.2 In respect of promoting sustainable travel the NPPF advocates that planning policies and decisions should consider 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.
- 1.2.3 The guidance advises that, subject to the above considerations, development should not be prevented or refused on transport grounds unless the residual impacts of the development are severe.

- 1.2.4 The proposals for development at the Brockhill East Strategic Site and Site 2 would be supported by a full and detailed Transport Assessment in due course at planning application stage. Meanwhile, the purpose of this Technical Report is to provide further information in respect of the transport related credentials of Site 2 in order to demonstrate how the core transport principles as set out in the NPPF are achieved.
- 1.2.5 The high level analysis presented within this Technical Report seeks to demonstrate that the close proximity of Site 2 to Redditch town centre provides an excellent opportunity to encourage sustainable forms of travel. The analysis also identifies that there is opportunity to enhance the existing pedestrian, cycle and public transport networks in the vicinity of Site 2 to ensure that trips by non car modes of travel can be accommodated in a satisfactory manner.
- 1.2.6 This Technical Report also identifies how safe and satisfactory vehicular access to Site 2 is readily achievable and also how the likely off-site impacts of the traffic that would be generated can be appropriately mitigated.

1.3 Report Structure

1.3.1 This Technical Report is structured as follows:

- Section 2 – Appraisal of the opportunities to exploit the proximity of Redditch town centre in order to encourage travel by walk and cycle.
- Section 3 – Demonstration of the high level of public transport accessibility that can be delivered at Site 2 given that new bus services can be provided in a comprehensive manner in conjunction with the other development areas at the Brockhill East Strategic Site.
- Section 4 – Appraisal of the ability to provide satisfactory vehicular access to Site 2 which would deliver a high level of connectivity and integrate fully with the other development areas at the Brockhill East Strategic Site.
- Section 5 – Broad assessment of the number of vehicular trips that are likely to be generated along with an appraisal of the likely key off site impacts to demonstrate that the impacts can be satisfactorily mitigated.
- Section 6 – Summary of the findings of this Technical Report.

2 PEDESTRIAN & CYCLE ACCESSIBILITY

2.1 Context

- 2.1.1 Government guidance in respect of accessibility planning advises that residential development should be accessible to a range of land uses including education, employment, health, retail and leisure.
- 2.1.2 The provision of residential development in close proximity to the above variety of land uses helps to maximise the number of shorter distance trips that are undertaken and therefore capitalises on the potential for these journeys to be made by non car modes of travel.
- 2.1.3 Walking can play an important role both in delivering accessibility at the local level and in contributing towards sustainable development patterns in the longer term. Indeed, walking is considered to be the most important mode of travel at a local level and offers the greatest potential to replace short car trips, particularly under 2 kilometres. Cycling can also contribute to transport sustainability and accessibility, and is a good substitute for short car trips, particularly those less than 5km.
- 2.1.4 Redditch town centre provides a range of higher order retail shops within the Kingfisher Shopping Centre, in addition to significant leisure and employment opportunities. The town centre is located approximately 1.7km to the south of the centre of Site 2. Indeed, all areas of Site 2 are located within 2km of the town centre which therefore offers an excellent opportunity to encourage walk and cycle trips from the proposed development.
- 2.1.5 The wide range of uses provided within Redditch town centre are complemented by other facilities that lie in close proximity to Site 2. These include the local centre located on Batchley Road which offers a convenience store, greengrocers, pharmacy and takeaway food restaurants. Additional convenience shops are located on Poplar Road to the south-west while Sainsbury's Supermarket is located within Abbey Retail Park to the east. There are also a number of first, middle and high schools located within reasonable walk and cycle distances.
- 2.1.6 It is also important to note that the Brockhill East Strategic Site will contain a new first school and also local retail provision. Future residents at Site 2 would therefore enjoy a very high level of accessibility to these uses.

2.2 Existing Pedestrian and Cycle Provision

- 2.2.1 There is a well established network of footways, footpaths, on-street cycle lanes and segregated cycle routes within the residential areas of Brockhill and Batchley. This existing provision facilitates movement throughout the area to the south of the Brockhill East Strategic Site and Site 2 and, importantly, into Redditch town centre.
- 2.2.2 The pedestrian links in the area are generally of a good standard. Footways are provided along the length of Hewell Road to the south whilst dropped kerbs and crossing facilities are provided at the majority of junctions.

2.2.3 On-road and off-road cycle routes are provided throughout the north-western area of Redditch. An advisory on-road cycle route extends from the site along the length of Hewell Road towards the town centre. The advisory route serves the town centre bus and rail stations and forms a link with the National Cycle Network (NCN) Route 5.

2.2.4 A segregated shared footpath and cycle route is also provided alongside the Batchley Brook, extending west from the Windsor Road roundabout to Batchley Local Centre. The path provides a safe off-road alternative to Batchley Road for pedestrians and cyclists accessing local schools and shops.

2.3 Opportunities for Pedestrian and Cycle Improvements

2.3.1 Pedestrian and cycle links within the Site 2 development would be provided to a high standard with an emphasis on providing direct and continuous connections through the development in order to maximise the key desire lines to the south. In this respect, there is an excellent opportunity to ensure that the internal pedestrian and cycle infrastructure within Site 2 is provided with a high degree of integration with the proposals for the Brockhill East Strategic Site which will ensure that the new infrastructure is delivered in a coordinated and comprehensive manner.

2.3.2 Development at the Brockhill East Strategic Site and Site 2 also offers the opportunity to deliver further enhancements to the existing pedestrian and cycle provision to the south. For example, there is scope to provide better links between the current provision along Brockhill Lane and Hewell Road to the cycle path running adjacent to Batchley Road and Windsor Road. Such measures, which could include the promotion of formal crossing points, would act to provide a high standard continuous route for pedestrians and cyclists between the development and Redditch town centre.

2.3.3 Notwithstanding that the key pedestrian and cycle desire lines are to the south towards the town centre, development at the Brockhill East Strategic Site and Site 2 will also enable a continuous footway to be provided along the southern side of Weights Lane connecting into the existing facilities along the A441 Birmingham Road corridor.

2.3.4 It is important to note that the Brockhill East Strategic Site and Site 2 developments are located in such a manner that enables a high level of integration with the existing residential areas to the north of the town centre. The off-site improvements that would be delivered would therefore not only act to encourage walk and cycle travel from the proposed development but also deliver benefits for the existing residents in the wider area.

3 PUBLIC TRANSPORT OPPORTUNITIES

3.1 Context

- 3.1.1 There are a number of bus services that operate immediately to the south of the Brockhill East Strategic Site and Site 2 development areas. The existing bus Route 51 operates along Batchley Road at a very high frequency. Bus Route 50 operates along Hewell Road, albeit at a lower frequency.
- 3.1.2 Both the above bus services provide connections with Redditch bus and rail stations which form an interchange located in the town centre. The Site 2 development is therefore readily able to facilitate travel by bus and is also very well placed to encourage longer distance trips to be undertaken by rail.

3.2 Proposed Public Transport Strategy

- 3.2.1 A key element of the access strategy would be the introduction of a high quality bus service that would operate in a loop through the Brockhill East Strategic Site and Site 2 development areas off the Hewell Road corridor. This approach would ensure that walk distances to bus stops within the development would be minimised and therefore enable future residents to benefit from a very high level of accessibility to public transport.
- 3.2.2 Bus stop provision throughout the development would be provided to a high standard to accord with Worcestershire County Council's 'Gold Standard' specification.
- 3.2.3 A high quality bus service would need to be provided to serve the Brockhill East Strategic Site and, in this respect, the promotion of development at Site 2 would provide additional new patronage for the service. This is an important consideration as the additional patronage that would be generated would help to sustain a higher frequency than would otherwise be achievable. The promotion of Site 2 would therefore help to facilitate an even more attractive level of bus service for the area.
- 3.2.4 In addition, it is understood from discussions with Worcestershire County Council that there is a desire to improve the frequency of bus Route 50 which currently operates along Hewell Road. The standard of this service is relatively poor and therefore improvements may help to secure its long term viability. There is therefore an excellent opportunity to make use of this existing service as the basis for the new service at the Brockhill East Strategic Site and Site 2. This approach offers a 'win-win situation' as, firstly, utilising an existing service results in lower initial running costs which enables higher frequencies to be sustained at the outset. Secondly, the new developments would provide additional patronage for the existing service which would help to secure the long term viability which will be of significant benefit to existing residents along the route.

- 3.2.5 There are a number of permutations of how the new bus service could be delivered and the ultimate strategy would be formulated in close liaison with Worcestershire County Council and the local bus operators. Notwithstanding this, it is evident that future residents at Site 2 would enjoy a high level of public transport accessibility which would be further enhanced given that the strategy would be delivered in a co-ordinated manner in conjunction with development at the Brockhill East Strategic Site, given they are an integrated comprehensive proposal.

3.3 Travel Planning

- 3.3.1 The provision of bus services through the development would be complemented by a comprehensive Travel Plan which would set out how a range of measures would be introduced to actively encourage the new residents to use sustainable modes of travel. The Travel Plan measures would seek to complement the opportunities that would be provided as a result of the physical infrastructure that would accompany the development.
- 3.3.2 The Travel Plan would seek to maximise travel by all sustainable modes. However, typical measures that would be promoted in respect of encouraging public transport include the provision of free introductory bus passes as well as a range of marketing initiatives including the implementation of a personalised Travel Planning Program for the future residents of the development. In this respect, an important consideration will be the formulation of measures aimed at rail users as it is important that the close proximity of Redditch rail station is exploited given that it offers a real opportunity to reduce the quantum of longer distance car trips that are generated.

4 VEHICULAR ACCESS STRATEGY

4.1 Context

- 4.1.1 Discussions have been held with Worcestershire County Council in respect of the access strategy for the Brockhill East Strategic Site. Indeed, the key elements of the strategy have been agreed in principle with Worcestershire County Council subject to the normal detailed appraisals that will be undertaken in support of a planning application. Importantly, development at Site 2 would fully integrate with and complement the access proposals that have already been formulated for the Brockhill East Strategic Site development.

4.2 Access Junctions

- 4.2.1 Vehicular access to the south from Site 2 would be provided through the Brockhill East Strategic Site development onto the southern access roundabout along Hewell Road. A number of alternative routes through the development would be provided to ensure a high degree of connectivity and integration is provided within the Brockhill East Strategic Site and Site 2 development areas.
- 4.2.2 The access arm into the Brockhill East Strategic Site from the southern access roundabout on Hewell Road was recently formed to facilitate the Phase 1 development at Brockhill East. Importantly, the development approach to the roundabout was designed with spare capacity so that it can accommodate traffic from the full Brockhill East Strategic Site development. Moreover, further analysis indicates that the roundabout can also accommodate the traffic that would be generated by the Site 2 development.
- 4.2.3 A second point of access onto the external highway network from Site 2 would be provided via an access junction onto Weights Lane at the northern frontage of the development. Indeed, given that the Site 2 development area abuts the Weights Lane corridor there is the opportunity to improve the carriageway width and pedestrian provision along Weights Lane in this location.

4.3 Weights Lane Link

- 4.3.1 A further point of access onto Weights Lane from the Brockhill East Strategic Site would be provided in the vicinity of the rail bridge. This access roundabout, coupled with the internal street network running north-south through the development, would deliver a link between the Hewell Road and Weights Lane corridors. This is an important feature as provides an alternative route for background traffic that would otherwise utilise the Windsor Road and A441 Birmingham Road corridors for trips between northern and western destinations in Redditch.
- 4.3.2 The implementation of the Weights Lane Link through the development therefore offers the potential to provide some relief to the Hewell Road and Windsor Road corridors to the south-east of the site which would benefit the operation of the highway network in this area. The key parameters of the Weights Lane Link as it runs through the development have been discussed and agreed in principle with Worcestershire County Council although the precise nature of the Link will be confirmed following detailed traffic modelling work that will be undertaken in due course.

- 4.3.3 A similar consideration is the standard of the eastern section of the Weights Lane corridor between the rail bridge and the A441 Birmingham Road. There is an opportunity to improve the carriageway width along this section and, again, agreement in principle has been reached with Worcestershire County Council that the improvement measures proposed are satisfactory subject to the normal safety audit process and the findings of the detailed traffic modelling work.
- 4.3.4 The traffic generated by the Brockhill East Strategic Site and Site 2 along the Weights Lane corridor would access the A441 Birmingham Road via a new roundabout which would be provided in place of the existing priority junction. This improvement scheme is to be delivered in conjunction with the recently consented Gallagher Estates development which is located on land to the south of Weights Lane, east of the rail line, which forms part of the Brockhill East Strategic Site. Again, an important consideration is that this roundabout scheme has been designed to operate with spare capacity. Indeed, modelling work that has been undertaken demonstrates that the proposed A441 / Weights Lane roundabout layout can accommodate the traffic generated by the remainder of the Brockhill East Strategic Site and Site 2.

5 OFF SITE IMPACT

5.1 Context

5.1.1 The impact of the traffic that would be generated by the Site 2 development will be assessed in detail using Worcestershire County Council's traffic model which allows the effects to be appraised on a cumulative basis in conjunction with the Brockhill East Strategic Site and other planned development in the area.

5.1.2 Notwithstanding the above, in order to provide an indication of the level of traffic that would be generated, this Technical Report sets out in broad terms the quantum and directional distribution of the additional vehicular trips that would occur along the local highway network. This information is then used to inform a high level appraisal of the extent of highway impacts that might occur and also the scope for mitigating any adverse effects.

5.2 Trip Generation

5.2.1 Use has been made of the residential trip rates used within Worcestershire County Council's traffic model in order to forecast the number of vehicular trips that are likely to be generated by the proposed Site 2 development in conjunction with the Brockhill East Strategic Site. For the purposes of this Technical Report it has been assumed that the proposed Site 2 development would deliver some 650 dwellings along with 625 dwellings at the Brockhill East Strategic Site.

5.2.2 The resultant trip generation for the morning and evening peak hours is presented in Table 5.1 below.

Table 5.1: Trip Generation of Site 2 Development and Brockhill East Strategic Site

| | AM Peak Hour (0800-0900) | | | PM Peak Hour (1700-1800) | | |
|--------------------------------|--------------------------|-----------|-------------|--------------------------|-----------|-------------|
| | Arrival | Departure | Total | Arrival | Departure | Total |
| Vehicular Trip Rate (per unit) | 0.16 | 0.39 | 0.55 | 0.45 | 0.24 | 0.69 |
| Vehicle Trips (1,275 units) | 204 | 497 | 701 | 574 | 306 | 880 |

5.2.3 The combined trips at Brockhill East shown in Table 5.1 have been distributed along the highway network corridors using a distribution profile calculated using 2001 census Journey to Work data. The resultant increases in traffic that would occur along each key corridor is shown in Table 5.2 below.

Table 5.2 : Distribution of Combined Trips at Brockhill East Development

| Highway Corridor | | Percentage Distribution | Number of Two-Way Trips | |
|------------------------|-----------------------|-------------------------|-------------------------|--------------|
| | | | AM Peak Hour | PM Peak Hour |
| A441 (north) | North of M42 Corridor | 14% | 98 | 123 |
| | M42 (east) | 11% | 77 | 97 |
| | M42 (west) | 3% | 21 | 26 |
| | Dagnell End Road | 1% | 7 | 9 |
| A441 (south) | | 23% | 161 | 202 |
| Redditch (town centre) | | 15% | 105 | 132 |
| Redditch (north-west) | | 8% | 56 | 70 |
| A448 corridor (north) | | 12% | 84 | 106 |
| A448 corridor (south) | | 13% | 91 | 114 |
| TOTAL | | 100% | 701 | 880 |

A441 (north)

- 5.2.4 As can be seen from Table 5.2, the Site 2 development is likely to generate a total of 255 two way movements along the A441 (north) corridor during the evening peak hour. These movements would route via the Weights Lane corridor. As stated in Section 4 of this Technical Report, the proposed A441 / Weights Lane roundabout improvement is able to accommodate the additional trips in a satisfactory manner.
- 5.2.5 The above traffic would pass through the A441 / Dagnell End Road junction which is currently operating at capacity. It should however be noted that there is scope to provide some additional capacity at the junction by extending the approach lanes to the signal junction. Further capacity can also be achieved through the implementation of intelligent traffic signals which would be able to actively respond to the variations in traffic demand that will occur throughout the day.
- 5.2.6 The trips further north along the A441 corridor through Bordesley represent approximately four vehicle movements each minute during the peak hours. It is considered that increases of this magnitude can be mitigated satisfactorily through the implementation of a traffic management scheme through Bordesley which would seek to ensure that vehicle speeds are contained and pedestrian and cycle amenity is not compromised in this area of the network.
- 5.2.7 Increases in traffic along the M42 corridor further to the north would equate to approximately two vehicles each minute during the peak hours and would not be discernable. It should be noted that some of the trips heading to the M42 (west) corridor may elect to instead join the M5 corridor via the A448 Bromsgrove Highway join and therefore the increase in traffic using Junction 2 of the M42 motorway may be lower than indicated in Table 5.2

A441 (south), Redditch (town centre) and Redditch (north-west)

5.2.8 Trips heading towards Redditch town centre and the A442 (south) corridor would result in increases in traffic along Hewell Road and Windsor Road corridors. It is important to note however that the creation of the Weights Lane Link through the Brockhill East Strategic Site would act to reduce background traffic in this area of the network. As a consequence, the net impact of the combined trips at Brockhill East in this location is likely to be lower than that shown in Table 5.2.

5.2.9 The trips heading to the north-west area of Redditch would disperse along the local highway network including along Salters Lane, Lily Green Lane and Appletree Lane. The quantum of traffic heading along these routes would not trigger any significant impacts.

A448 Corridor (north and south)

5.2.10 The combined Brockhill East development trips would result in increases in traffic of approximately two vehicles a minute along the A448 northern and southern corridors. The A448 is provided to dual carriageway standard as is able to accommodate this quantum of additional traffic. Similarly, the increase in trips heading along the B4184 Brockhill Drive corridor to the west en-route to the A448 corridor lie within the day to day variation of flows and are unlikely to cause any material impacts that could not be mitigated through localised capacity improvements at the junctions along the corridor.

5.3 Summary

5.3.1 The analysis presented within this Section of the Technical Report demonstrates that the traffic generated by the combined Brockhill East development would not trigger any material impacts along the neighbouring highway network that could not be satisfactorily mitigated.

5.3.2 Notwithstanding this, the impact of the development will need to be appraised in a cumulative manner that allows for the effects of other planned development within the area. In this respect, it should be noted that the Worcestershire County Council traffic model has been recently used to assess the performance of the local highway network on a cumulative basis which allows for the Local Plan allocations and also the Site 2 development. The results of the analysis are presented in two Draft Transport Network Analysis and Mitigation Reports dated May 2013 which have been produced by Halcrow on behalf of Worcestershire County Council. The purpose of the two Reports is to help inform the development of Redditch Borough Council and Bromsgrove District Council Local Plan process.

5.3.3 The Transport Network Analysis and Mitigation Reports identify a number of highway mitigation schemes which are aimed at mitigating the cumulative impact of all the planned development in the area. The schemes that have been identified lie along the broad highway corridors that have been appraised within this Technical Report.

5.3.4 The precise extent of the impact and mitigation measures would need to be determined using the results of detailed traffic modelling which would be undertaken in due course to support a future planning application. Meanwhile, based on an initial review of the findings of the Draft Transport Network Analysis and Mitigation Reports it is evident that there is scope to introduce highway improvements at the locations which would be subjected to stress when allowing for the cumulative impacts of the proposed development.

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- 5.3.5 Moreover, it is important to note that the findings of the Draft Transport Network Analysis and Mitigation Reports do not identify the need for the provision of a Bordesley Bypass in order to mitigate the impact of traffic travelling along the A441 Birmingham Road corridor to the north of Redditch.

6 SUMMARY AND CONCLUSIONS

6.1 Context

- 6.1.1 RPS submitted representations to Bromsgrove District Council and Redditch Borough Council in May 2013 which strongly supported the identification of Site 2 as an appropriate means of delivering a modest extension of some 600 to 670 dwellings to the Brockhill East Strategic Site that is identified in the Draft Redditch Local Plan No. 4. In particular, the RPS representations agreed with the general findings of the Council's January 2013 Development Study which found that Site 2 is a particularly sustainable location, having few technical and environmental constraints to its delivery and none that are insurmountable.
- 6.1.2 The proposals for development at the Brockhill East Strategic Site and Site 2 would be supported by a full and detailed Transport Assessment in due course at planning application stage. Meanwhile, this Technical Report has been produced to provide further information in respect of the transport related credentials of Site 2.

6.2 Pedestrian and Cycle Accessibility

- 6.2.1 It has been demonstrated that the proximity of Site 2 to a variety of land uses, most notably Redditch town centre, offers an excellent opportunity to maximise the number of shorter distance trips that are undertaken and therefore capitalise on the potential for these journeys to be made by non car modes of travel.
- 6.2.2 There is a well established network of footways and cycleways throughout the area to the south of the Brockhill East Strategic Site and Site 2. Moreover, development at the Brockhill East Strategic Site and Site 2 offers the opportunity to deliver further enhancements to the existing networks which would not only act to encourage walk and cycle travel from the proposed development but also deliver benefits for the existing residents in the wider area.

6.3 Public Transport Accessibility

- 6.3.1 A key element of the access strategy would be the introduction of a high quality bus service that would operate in a loop through the Brockhill East Strategic Site and Site 2 development areas off the Hewell Road corridor. The promotion of development at Site 2 would provide additional new patronage for the service which will help to sustain a higher frequency than would otherwise be achievable.
- 6.3.2 Moreover, there is an excellent opportunity to make use of an existing bus service as the basis for the new service at the Brockhill East Strategic Site and Site 2. This approach would enable higher frequencies to be sustained at the outset while also providing additional patronage for the existing service which would help to secure the long term viability will be of significant benefit to existing residents along the route.

6.4 Vehicular Access Strategy

- 6.4.1 The key elements of the access strategy for the Brockhill East Strategic Site have been agreed in principle with Worcestershire County Council subject to the normal detailed appraisals that will be undertaken in support of a planning application. Importantly, development at Site 2 would fully integrate with and complement the access proposals that have already been formulated for the Brockhill East Strategic Site development.
- 6.4.2 Satisfactory access to Site 2 can be provided via the Hewell Road / Brockhill Drive access roundabout to the south and onto Weights Lane to the north. The proposals would also facilitate the provision of the Weights Lane Link through the development which offers the potential to provide some relief to the Hewell Road and Windsor Road corridors to the south-east of the development.
- 6.4.3 The eastern section of the Weights Lane corridor between the rail bridge and the A441 Birmingham Road would also be improved to provide increased carriageway width and a new continuous footway link. Agreement in principle has been reached with Worcestershire County Council that the improvement measures proposed are satisfactory subject to the normal safety audit process and the findings of the detailed traffic modelling work.
- 6.4.4 The A441 Birmingham Road / Weights Lane priority junction is to be upgraded to a roundabout as part of the recently consented Gallagher Estates development which is located on land to the south of Weights Lane, east of the rail line, which forms part of the Brockhill East Strategic Site. Modelling work that has been undertaken demonstrates that the proposed roundabout layout can accommodate the traffic generated by the remainder of the Brockhill East Strategic Site and Site 2 in a satisfactory manner.

6.5 Off Site Impact

- 6.5.1 The combined Brockhill East development would generate approximately 880 vehicle movements during the weekday evening peak hour. These trips would disperse fairly evenly along the surrounding highway corridors. The analysis within this Technical Report demonstrates that the traffic generated by the combined Brockhill East development would not trigger any material impacts along the neighbouring highway network that could not be satisfactorily mitigated.
- 6.5.2 The impact of the Brockhill East development will need to be appraised in a cumulative manner that allows for the effects of other planned development within the area. In this respect, it should be noted that the Worcestershire County Council traffic model has been recently used to assess the performance of the local highway network on a cumulative basis which allows for the Local Plan allocations in Bromsgrove District Council and Redditch Borough Council and also the Site 2 development. The results of cumulative modelling have been used to inform two Draft Transport Network Analysis and Mitigation Reports dated May 2013 which have been produced by Halcrow on behalf of Worcestershire County Council. The Transport Network Analysis and Mitigation Reports identify a number of highway mitigation schemes which are aimed at mitigating the cumulative impact of all the planned development in the area.

6.5.3 The precise extent of the impact and mitigation measures would need to be determined using the results of detailed traffic modelling which would be undertaken in due course. Meanwhile, based on an initial review of the findings of the Draft Transport Network Analysis and Mitigation Reports it is evident that there is scope to introduce highway improvements at the locations which would be subjected to stress when allowing for the cumulative impacts of the proposed development.

6.5.4 Moreover, it is important to note that the findings of the Draft Transport Network Analysis and Mitigation Reports do not identify the need for the provision of a Bordesley Bypass in order to mitigate the impact of traffic travelling along the A441 Birmingham Road corridor to the north of Redditch.

6.6 Conclusion

6.6.1 Based on the high level analysis presented within this Technical Report it is considered that the key transport considerations advocated in the National Planning Policy Framework (NPPF) are met; namely:

- There are opportunities for sustainable transport modes which will help 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.

6.6.2 Given that the above NPPF considerations can be met, it is considered that the incorporation of Site 2 into the Brockhill East Strategic Site is a positive proposal which should be fully supported on transport grounds.
