

LAND WEST OF RATCLIFFE ROAD, SILEBY, LEICESTERSHIRE.

Initial Transport Appraisal

JNY11145-01 Initial Transport Appraisal Version -23 August 2021

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1 INTRODUCTION

Introduction

- 1.2 RPS Consulting Services Ltd have been instructed by Redrow Homes Ltd to provide transport planning advice with respect to potential development on land west of Ratcliffe Road, Sileby.
- 1.3 This Initial Transport Appraisal report has been prepared to consider the issues and opportunities associated with the potential development of circa 650 residential dwellings, local centre and a new primary school at the site as illustrated on the Concept Masterplan P21-2418003B-01 prepared by Pegasus Design. The scope of the assessment is to consider the opportunities for access to the site and the overall potential impact of the development on the local highway network. As part of this work, consideration will also be given to the opportunities to maximise sustainable travel from this location.
- 1.4 At this stage, the report provides an overview of the assessment of the development in relation to highways and transportation matters, including a review of potential impact on the surrounding highway network. Clearly a more detailed transport assessment will be required to support any future planning promotion of the site and ultimately a planning application. However, overall it is considered that this location for development represents a sustainable location and that suitable access can be provided for all modes of transport.

Report Structure

- 1.5 **Section 2** of the report considers the site location in relation to the existing surrounding transport network. The report also identifies the opportunities to travel to and from the site by modes of transport other than private car.
- 1.6 Within this section details are also provided on the local census data to understand the general travel modes and work-place destination of the existing local residents within the vicinity of the site.
- 1.7 **Section 3** of this report provides an overview of the development proposals and the potential access arrangements for the site. This section also identifies the opportunities for improvements to the local highway network, together with measures that could be provided to improve accessibility of the site and hence the potential for sustainable travel.
- **Section 4** considers the potential traffic that could be generated by the site and the potential impact of the development on the local highway network based on the distribution identified in Section 2.
- 1.9 **Section 5** reviews the potential impact of the development traffic on the local highway network and the junctions that are likely to require further detailed assessments within a Transport Assessment.
- 1.10 **Section 6** provides a summary and conclusion of the key issues and opportunities highlighted within the report.



2 EXISTING SITE AND SURROUNDING TRANSPORT NETWORK

Introduction

2.1 This section of the report provides details of the site's location, the transport infrastructure in close proximity to the site and the site's accessibility to modes other than the private car.

Site Context

2.2 The site is located on land to the west of Ratcliffe Road to the south and east of Sileby and is currently a series of open fields and agricultural land. Sileby is identified as a "Service Centre", within the Local Plan settlement hierarchy which is identified as

"Provides all the essential services and facilities including good accessibility to employment and at least six of the desirable services and facilities."

2.3 Furthermore the assessment of Sileby considered as part of the Local Plan evidence states:-

"Sileby has good transport connections to Leicester with a 30 minute daytime and hourly evening service that gets residents into the city within 30 minutes travel time as well as an hourly train service to Loughborough and Leicester with a journey time of less than 20 minutes. This ensures there is good access to both jobs and higher order services."

- 2.4 The site is bound in part by development to the north which forms the south extent of Sileby, the rail line to the west, Ratcliffe Road to the east, and to the south by agricultural land and Blackberry Lane. Details of the site's location is shown in **Figure 1** below.
- 2.5 The site is referenced as PSH493 in the Charnwood Local Plan SHELAA site assessment report. The comments provided are highlighted in the following summary (**Table 2.1**) although there are no specific comments provided on transport and sustainability issues.

Question	Comment
Is the site suitable	There are no known irresolvable physical/environmental constraints preventing development and a suitable access could potentially be achieved.
Is the site available	The site does not have planning permission but put forward through the SHELAA process.
Is the site achievable	There is considered to be a reasonable prospect that development will be delivered within the timeframe shown based on a judgement of the potential economic viability of the site and developer capacity to complete and let/sell the development over that period.

Table 2.1 – Extract from Local Plan Site Assessments

2.6 On the basis of the above the Local Plan SHELAA assessment concluded that there are no irresolvable physical/environmental constraints, hence the site is included in the SHELAA assessment.

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- 2.7 In terms of planning policy, national and local transport planning policy requires new residential development to be located where a range of facilities and services can be accessed by a number of modes of transport including walking, cycling and public transport, so as to minimise the number and length of car journeys
- 2.8 The main route that the site connects to is Ratcliffe Road to the east of the site which in turn links to the A46 further to the south and the wider road network. To the north of the site Ratcliffe Road links to the centre of Sileby and the local facilities together with the rail station at Sileby.
- 2.9 The southern boundary of the site in part abuts Blackberry Lane. This appears to be adopted highway over part of the route and provides access to existing properties to the western end of the route. The route is also signed as part of a wider walking network route.

Figure 1: Site Location Plan



Highway Network

Ratcliffe Road (B581)

- 2.10 Ratcliffe Road is a single lane carriageway forming a link between Sileby to the north to the junction with the A46 to the south. From the northern boundary of the site the speed limit is 30mph to the north of the site and toward Sileby, with the remaining part of the route to the south being at the national speed limit of 60mph.
- 2.11 Some 200m north of the site, is the proposed new roundabout to the development of land associated with Planning Application no. P17/1578/2, Peashill Farm for circa 170 dwellings. This development is accessed from the new roundabout junction with an emergency access, pedestrian /cycle link from Ratcliffe Road further to the north of the site.
- 2.12 From the northern point of the site, there is a footway along Ratcliffe Road, together with street lighting connecting into the centre of Sileby. Traffic routing north from the site toward Loughborough would travel through Sileby and then north on Barrow Road to connect to the A6.
- 2.13 To the south the junction of Ratcliffe Road with the A46 provides all movement slip roads to the A46 in the form of priority junctions.

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2.14 Traffic flows on Ratcliffe Road are in the region of 620 vehicles two way in the AM peak and 640 vehicles two way in the PM peak. This level of traffic is well within the capacity if the route, and in practice it will be the impact on junctions that will need to be assessed.

A46.

- 2.15 The A46 is a dual carriageway and as a Trunk Road forms part of the Highways England Strategic Road network. The route provides connections to the north to Newark and the A1, to the east via the A607 to Melton Mowbray, and to the south to Leicester and the M1.
- 2.16 The A46 is an important link within the overall network and forms a key route with the overall midlands network. To the north there are current proposals to dual the Newark Bypass which would provide a dual carriageway between the A1 in the north and the M1 at Leicester.
- 2.17 To the south of the site on the A46, HE has been considering the Hobby Horse Junction and the section of the A46 between that junction and the M1. This forms part of the wider Midlands Connect strategy.
- 2.18 It is understood that there are proposals to grade separate the Hobby Horse junction but these are at an early stage and do not form part of the Road Investment Strategy 2 funding programme.

Sileby Local Road Network.

- 2.19 Within Sileby, Ratcliffe Road connects to The Banks, which in turn links with Cossington Road/ Barrow Road which is the main north / south route through Sileby.
- 2.20 As previously identified traffic accessing Loughborough would make use of Barrow Road and the A6. In this regard it is recognised that the route to the A6 via Mountsorrel Lane is constrained at the junction within Sileby and this would need to be reviewed as part of any transport assessment process.
- 2.21 The alternative would be for traffic to travel further north on Barrow Road and access the A6 via Barrow on Soar. Traffic flows on Barrow Road in the peak hours are between 400 and 500 vehicles two way, whilst on Mountsorrel Way they are around 500 vehicles two way. The local road network is shown at Fig 2 below.







Walking and Cycling

- 2.22 Presently the site has access to the existing footway adjacent to Ratcliffe Road for links to Sileby and would have the potential to provide pedestrian and cycle access to the south and west via Blackberry Lane.
- 2.23 Opportunities may also exist in the future to connect the site to the Peashill Farm development to the north and also to the existing residential areas access via Kendal Road.
- 2.24 The Public Rights of Way (PROW) in the vicinity of the site is shown in **Figure 3** below. This shows that there is an existing bridle way to the southeast of the site that links Ratcliffe College and footpaths to the west that could be accessed via Blackberry Lane.



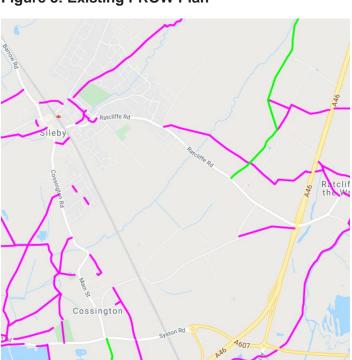


Figure 3: Existing PROW Plan

Extract from LCC Interactive PRoW Map

- 2.25 In the context of cycling, the closest routes considered suitable for on road cycling near to the site are Ratcliffe Road. A map showing the recommended cycle routes around the site are shown in **Figure 4** below.
- 2.26 However routes to the south to connect to Leicester are within cycling distance of the site and connections could be provided to these routes via Blackberry Lane. This includes cycle route 1 within Leicester.



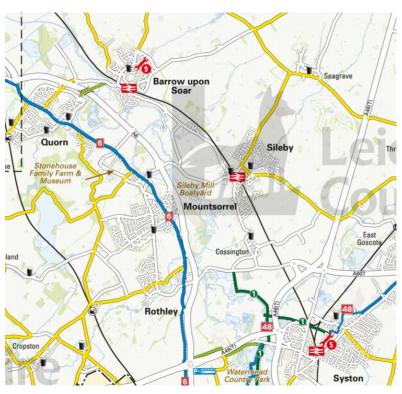


Figure 4 – Existing Cycle Routes

Extract from LCC Cycle Map

Public Transport

Bus

2.27 The nearest bus services to the site is route 2 operated by Kinchbus. This service links Loughborough with Leicester and routes within Sileby and operates a 30min service in both directions. The closest bus stop is currently 1.2km from the site, however the development would look to route services pass the site or within the development area as part of the development proposals.

Rail

2.28 The closest rail station to the site is Sileby Station. This is approximately 1.7km from the centre of the site and offers a service linking to Leicester, Loughborough, Nottingham, and Lincoln, together with intervening stations.

Travel to Work Characteristics

2.29 The site lies within the Sileby Ward and the 2011 Census data base has been reviewed to obtain modal split data for this area is shown below in **Table 2.2**, which is considered likely to demonstrate the modal split for journeys to work of the local residents.



Mode	Percentage Main Mode of Travel to Work
Train	3 %
Bus, minibus or coach	5 %
Motorcycle, scooter or moped	1 %
Driving in a car or van	76 %
Passenger in a car or van	5 %
Bicycle	2 %
On foot	8 %
Total	100%

Table 2.2: Journey to Work Mode Split (2011 Census)

- 2.30 The census data shows that within the local area some 8 % of residents use public transport to travel to work, with 10% travelling by foot / cycle, resulting in 18 % of existing residents currently travelling to work by sustainable modes.
- 2.31 **Table 2.3** identifies the work place destinations of existing residents living within the Sileby Ward (2011 Census data).

Table 2.3: Work Place Destinations (2011 Census)

Location of Employment	% of Residents (all Modes)
Leicester	25 %
Loughborough	18 %
Sileby	11 %
Blaby	6 %
Syston Queniborough	5 %
Barrow on Soar	4 %
Wymeswold	4 %
Quorn	4 %
Thurmaston	2 %
Rest of Charnwood	6 %
North West Leicestershire	4 %
Rest of UK	11 %

2.32 The above table identifies that the majority of resident's work either within Charnwood or within Leicester City.

Accessibility

2.33 The table below identifies the facilities available and the distance from the centre of the site via Kendal Road to walk/ cycle to these facilities.



		Appropriate Journey Time (minutes)	
Facility	Distance from Site Access via Kendal Road	Walking	Cycling
Educational Facilities			
Sileby Redlands Community Primary School	1500m	19min	5min
Highgate Community Primary School	2300m	29min	8min
Lime Tree Day Nursery	2200m	27min	7min
Recreational/ local Facilities			
Sileby Community Centre	1350m	17min	4min
Sileby Post Office	1500m	19min	5min
McColl's Convenience Store	1400m	18min	5min
Tesco Express	1400m	18min	5min
Sileby Memorial Park	1550m	19min	5min
Health			
The Banks Surgery	1250m	16min	4min
Highgate Medical Centre	1700m	21min	6min
Public Transport			
Rail Station	1500m	19min	5min
Bus Stops on Back Lane (route No.2)	1300m	17min	4min

Table 2.4: Walking & Cycling Distances to Local Facilities

- 2.34 In terms of sustainability, the site benefits from being adjacent to the existing Service Centre of Sileby and will be within easy walking/cycling distance of many of the local facilities that are currently available.
- 2.35 From the 2011 Census data it is shown that for the ward area the main workplace destinations are Loughborough and Leicester City which are accessible via train or the existing bus service.
- 2.36 It is considered that the site's location would provide residents with a realistic opportunity to travel by modes other than the private car which would be further enhanced through footway and cycleway connections and the provision of a Travel Plan. Further details of potential accessibility improvements are provided in **Section 3**.



3 DEVELOPMENT PROPOSALS

Introduction

3.1 This section of the report provides an overview of the potential development allocation together with the opportunities the site offers to improve accessibility and provide improvements to the local highway network.

Development Proposals

3.2 The potential for development could see circa 650 residential dwellings, local centre and a new primary school, on land located south and east of Sileby, within Charnwood.

Vehicle Access

- 3.3 As part of the access strategy for the site, the opportunity exists to access the site from Ratcliffe Road in the form of either a priority junction or a new roundabout. Both access options are shown on the plans attached at **Appendix 1** of this report.
- 3.4 As part of the access proposals on Ratcliffe Road the 30 mph speed limit would be relocated to the southern extent of the site. Furthermore as part of the access works, measures would be provided to Ratcliffe Road to create a new footway link from the site to the existing footway further north on Ratcliffe Road.
- 3.5 Whilst it is recognised that LCC generally seek to restrict development of no more than 400 dwellings from a single point of access, the access proposals can be designed to provide two access points to the site in the form of an internalised loop road arrangement or to provide a separate emergency access from Blackberry Lane.

Pedestrian / Cycle Access

- 3.6 As part of this development, the opportunity exists to link the site with the existing development to the north either via Kendal Road or via the proposed development further north on Ratcliffe Road.
- 3.7 In addition it is proposed that pedestrian / cycle links are created within the development to connect to Blackberry Lane to the south and the wider network. This could include further measures to connect the development to Cossington via Back Lane and Platts Lane with onward connection to cycle route 1 and Leicester City centre.
- 3.8 Such measures would not only benefit the new residents of the development but also existing residents of Sileby that would access the site or travel further afield.

Travel Planning Measures

- 3.9 Should the site be allocated, a Travel Plan would also be provided to support a planning application. A Travel Plan would include initiatives, targets and measures proposed to encourage residents of the site to use modes other than the private car. These measures may include, but not be limited to the following:
 - Provide details of footway / suitable roads for cyclists and cycle parking locations;
 - Providing public transport information including bus stop locations, timetables etc.;



- Providing residents with bus taster tickets for local bus routes;
- Providing links to web sites that enable residents to plan their journeys;
- Provide a site-based website; and
- Provide details of car sharing clubs.
- 3.10 The provision of a Travel Plan together with initiatives within the site and good connections to existing infrastructure would make it easier for residents of the site to be able to use modes other than the private car and in turn encourage the use of non-car modes.

- 3.11 In summary, this section demonstrates that safe and suitable access could be provided to serve the development on land to the south and east of Sileby with access taken from Ratcliffe Road.
- 3.12 Should the site be allocated for development, an application would be accompanied by a Transport Assessment and a Travel Plan which would promote and develop the opportunities for the use of sustainable transport modes.



4 TRIP GENERATION AND DISTRIBUTION

Introduction

4.1 This section of the report considers the potential traffic generation from the site and also the potential distribution of traffic based on the 2011 Census database. **Section 5** reviews the potential impact of this traffic on the surrounding highway network.

Trip Generation

- 4.2 To predict the vehicle trips that would be attributable to the proposed site, comparable TRICS sites for C3 private houses have been selected from the TRICS database.
- 4.3 The total vehicle trip rates from the selected comparable sites for a weekday morning and evening peak hour and daily trip rates are set out in **Table 4.1**. To calculate the total vehicle arrival and departure trip generation in the aforementioned time periods the trip rates have been applied to the potential number of residential dwellings.

Table 4.1: Vehicle Trip Generation, Circa 650 Dwellings

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
Vehicle trip rate (per dwelling)	0.141	0.367	0.508	0.312	0.176	0.488
Vehicle Trips	92	238	330	203	114	317

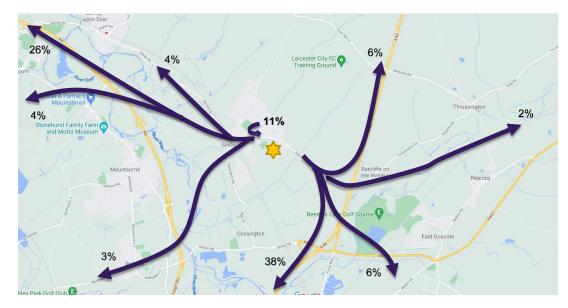
- 4.4 **Table 4.1** demonstrates that a development of circa 650 dwellings could generate circa 330 twoway vehicle trips in the morning peak hour and 317 two-way vehicular trips in the evening peak hour.
- 4.5 A primary School on the site would primarily be used by local residents who would be within easy walking distances and as such the level of vehicle movements associated with this use will be low. More detailed assessment of trips to the site will be discussed and agreed with the local highway authority as part of transport assessment work that would support an application on this site.

Trip Distribution and Assignment

4.6 The 2011 Census provides detailed data regarding the location of usual residence and place of work for the Output Areas that covers the site. A summary of the place of work destinations that residents are likely to travel to/from the site is provided in Table 2.3 included in Section 2 and **Figure 5** below summarises the likely distribution of trips.



Figure 5 – Work Place distribution



4.7 A review of the potential impact on the highway network is provided in **Section 5**.

- 4.8 This section of the report identifies the potential traffic movements that would be generated by a development of circa 650 dwellings. The traffic movements associated with development on this site have been based on a vehicle trip generation assessment taken from the suitable surveyed sites from the TRICS database. The vehicle trip generation assessment predicts circa 330 two-way vehicle trips in the morning peak hour and 317 two-way vehicular trips in the evening peak hour.
- 4.9 The distribution of external trips has been based on the 2011 journey to work census data which identifies that around 48% are likely travel east of the site and around 52% west of the site, a more detailed review of distribution would be carried out as part of a Transport Assessment which would accompany an application for this proposal.



5 POTENTIAL HIGHWAY IMPACT

Introduction

5.1 This section of the report considers the potential traffic impact that a development of circa 650 residential dwellings may have on the local highway network. This review considers the predicted traffic movements from the site and the junctions that are likely to require further investigation as part of a detailed Transport Assessment.

Predicted Traffic Impact

- 5.2 Based on the trips and distribution identified in **Section 4**, the key junctions that would require further investigation as part of a TA (in addition to the site accesses) would include;
 - Ratcliffe Road / A46 Junction.
 - A46 Hobby Horse Junction.
 - A46 / A607 Junction.
 - The Banks / Brook Street / Burton Road Junction.
 - Brook Street / Cossington Road Junction.
 - Barrow Road / Mountsorrel Lane Junction.
- 5.3 Based on the likely distribution of traffic the greatest impact will be the additional traffic travelling toward the A46 and the impact on the junction of the Ratcliffe Road with the A46. In the context of the levels of traffic likely to impact on this junction it is considered that the junction can accommodate this increase in traffic flow or that measures could be introduced to address this impact.
- 5.4 Likewise it is recognised that the impact of the traffic on the Barrow Road / Mountsorrel Lane junction would need to be assessed which would reflect an increase in traffic movements of around 100 cars in the peak hour.
- 5.5 Beyond these junctions, the effect of the development traffic is considered unlikely to be a material impact. However, the extent of impact would be reviewed as part of any scoping discussions with the local highway authority and as part of the Transport Assessment work that would support this proposal.
- 5.6 Any mitigation required to ensure the impact of the development is not severe will be considered as part of a Transport Impact assessment.

- 5.7 This section considers the potential increase of traffic movements on the local highway network as a result of the potential development on land south and east of Sileby. It is considered that based on the predicted trip generation from the site a minimum of six junctions would need to be reviewed as part of any Transport Assessment work.
- 5.8 Detailed assessment of the impact of the development traffic on the local highway network will be undertaken as part of a Transport Assessment and agreed with the local highway authorities should the site be allocated for development.



6 SUMMARY AND CONCLUSION

- 6.1 This report has been prepared on behalf of Redrow Homes Ltd., to provide an initial transport and highway appraisal for the potential development of land south and east of Sileby. This Initial Transport Appraisal report has been prepared to consider the issues and opportunities available as part of a potential development of circa 650 residential dwellings, local centre and a primary school.
- 6.2 The site is located on land to the south and east of Sileby and adjacent to Ratcliffe Road. Sileby is identified as a "Service Centre", within the Local Plan settlement hierarchy which is identified as "Provides all the essential services and facilities including good accessibility to employment and at least six of the desirable services and facilities."
- 6.3 Within the Local Plan evidence base, Sileby is identified as having good transport connections to Leicester as well as Loughborough and Leicester. This ensures there is good access to both jobs and higher order services. It is therefore considered that the site's location would provide residents with a realistic opportunity to travel by modes other than the private car which would be further enhanced through footway and cycleway connections and the provision of a Travel Plan.
- 6.4 From the 2011 Census data it is shown that for the ward area the main workplace destinations are Leicester and Loughborough, with circa 11% of employment being retained within Sileby.
- 6.5 As part of the access strategy for the site, the opportunity exists to access the site from Ratcliffe Road with the access being either a priority junction or new roundabout junction. As part of the access proposals on Ratcliffe Road the speed limit would be reduced over the site frontage to 30mph and the new junction could form a gateway to Sileby from the east.
- 6.6 As part of this development, the opportunity exists to link with the existing pedestrian network to connect the site with Sileby. However there are further opportunities to connect the site to Blackberry Lane for pedestrians and cyclist and route these links further south to the established cycle links connecting to Leicester.
- 6.7 The traffic movements associated with development on this site have been based on a vehicle trip generation assessment taken from the suitable surveyed sites from the TRICS database. The vehicle trip generation assessment predicts circa 330 two-way vehicle trips in the morning peak hour and 317 two-way vehicular trips in the evening peak hour for circa 650 dwellings. The level of traffic associated with the primary school use is considered to be low given the proximity of the school to the existing and new residential development areas.
- 6.8 The distribution of external trips has been based on the 2011 journey to work census data which identifies that around 48% are likely travel east of the site and around 52% to the west. A more detailed review of distribution would be carried out as part of a Transport Assessment which would accompany an application for this proposal.
- 6.9 Based on the predicted trip generation from the site it is considered that a minimum of six junctions would need to be reviewed as part of detailed Transport Assessment work should the site be allocated, although the extent of impact would be reviewed and agreed with the local highway authority.
- 6.10 A Travel Plan would also be provided which will identify measures to encourage the use of modes other than the private car.
- 6.11 In terms of planning policy, national and local transport planning policy requires new residential development to be located where a range of facilities and services can be accessed by a number of

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modes of transport including walking, cycling and public transport, so as to minimise the number and length of car journeys.

- 6.12 It is considered that safe and suitable access to the site can be provided and that the location of the site adjacent Sileby allows opportunities to be made to enable residents to be able to access local facilities by more sustainable modes.
- 6.13 Accordingly, it is considered that the sites location accords with the relevant Local and Central Government Policy Guidelines and offers a good location for residential development.
- 6.14 In conclusion it is considered that subject to the detailed transport assessment of the outlined junctions, the development of the site offers the opportunity to accommodate circa 650 dwellings and a primary school in a sustainable location and through appropriate mitigation the impact on the local highway network is not considered to be severe.



Appendix A – Site Access Options





