

Arden Green, Solihull

Draft Site Appraisal - Transport

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Prepared by:

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Prepared for:

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DN/RT/22087-01a Site Appraisal

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1.0 INTRODUCTION

- 1.1 This site appraisal has been prepared by David Tucker Associates (DTA) to assess the suitability of proposed residential development in transport and highways terms at Arden Green, Solihull.
- 1.2 This appraisal supports the proposed allocation of the site for housing within Solihull Metropolitan Borough Council's (SMBC) emerging Local Plan.

2.0 EXISTING CONDITIONS

2.1 Site Location

- 2.1.1 The proposed site is located to the west of Tilehouse Lane on the western boundary of the Borough of Solihull in Tidbury Green. The concept masterplan is shown in **Appendix A** and the location can be seen in **Figure 1**.

- 2.1.2 There is existing residential development to the north and south of the site including a recently consented residential development of 200 dwellings. There is farm land and playing fields to the east and the site is bound to the west by the railway line.

2.2 Local Highway Network

- 2.2.1 Tilehouse Lane is a single carriageway road with a width of approximately 5.5m within the vicinity of the existing site access. The road benefits from a footway along its western side and is subject to a 40mph speed limit which reduces to 30mph approximately 400m north of the site.
- 2.2.2 Tythe Barn Lane is a single carriageway road which runs between Tilehouse Lane and Dickens Heath Village. The road is approximately 5.0m in width and benefits from a footway on the southern side of the road. The road is subject to a 30mph speed limit with a number of traffic calming measures.
- 2.2.3 The M42 motorway Junction 3 is approximately 5.3km south-west of site. Junction 4 is also easily accessible and is 5.9km east of the site.

2.3 **PIC Data**

2.3.1 Personal Injury Collision (PIC) data has been obtained from Transport for West Midlands for the most recent 5-year period to highlight any existing safety issues on the local highway network. The full output can be seen in **Appendix B**.

2.3.2 This shows there has been three PICs along Tilehouse Lane in the vicinity of the site access; one 'slight' and two 'serious'. No fatal accidents have been recorded.

2.3.3 Overall, it is concluded that the level and nature of incidents recorded within the vicinity of the site does not indicate any existing highway safety issues that would warrant mitigation as part of the development proposals.

2.4 **Accessibility**

Local Facilities

2.4.1 The site is located approximately 1.4-1.8km from the centre of Dickens Heath where there are a number of facilities including, but not limited to, Tesco Express, a medical centre, a pharmacy, Village Hall, restaurants and eateries.

2.4.2 The nearest primary school, Tidbury Green Primary School, is located off Dickens Heath Road approximately 900m from the site. Dickens Heath Primary School is approximately 1.3km from the site via Tythe Barn Lane.

2.4.3 The nearest secondary school, Woodrush High School, is located in Hollywood approximately 2.5km from the site.

2.4.4 All measurements are based on the most direct walking routes, from the accesses to the site.

2.4.5 Paragraph 4.4.1 of Manual for Streets (Dft, 2007) confirms that:

"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2km. MfS encourages a reduction in the need to travel by car through the creation of mixed-use neighbourhoods with interconnected street patterns, where daily needs are within walking distance of most residents."

2.4.6 In addition, it is generally considered that for distances under 2km, walking offers the greatest potential to replace short car trips. For distances under 5km, cycling also has the potential to substitute for short car trips.

Walking and Cycling

2.4.7 Continuous footway links are provided from the site to Whitlocks End and Dickens Heath. Dropped kerbs are provided at pedestrian crossing points.

2.4.8 The shortest route from the site to Dickens Heath, via Birchy Leasowes Road, has no footways, however the routes via Tythe Barn Lane and Dickens Heath Road provide continuous footways. Both are subject to a 30mph speed limit, with Tythe Barn Lane also being street lit.

2.4.9 The route to the train station from the site follows the footway on the western side of Tilehouse Lane which is lit. The speed limit reduces to 30mph from 40mph part way along the route. Whilst not necessary to support development on the site, if it was considered beneficial, the developer could fund the relocation of the 30mph speed limit.

2.4.10 Whilst potential improvements to the existing footway between the site and Tidbury Green would deliver modest benefits, the development has the potential to provide internal footways shown on the movement framework drawing/ masterplan of vision statement. These would provide useable direct links for pedestrians and cyclists. These works would offer an improved pedestrian route to Tidbury Green, including the primary School.

2.4.11 There are numerous Public Rights of Way (PROW) in the vicinity of the site, including advisory routes and shared use routes as well as local cycle routes connecting to Dickens Heath. These can be seen in **Figure 2**.

Figure 2 – Public Right of Way Locations



Bus

2.4.12 The closest bus stop from the site is just off the Tilehouse Lane/ Houndsfield Lane junction located approximately 200m from the site access. This stop is served by the A4 which runs between Inkford Brook and Solihull.

2.4.13 The service operates Monday to Friday with a 15 minutes frequency and on a Sunday with a 2-hour frequency. Services from Inkford Brook start at 07:07 towards Solihull until 17:07. Services in the opposite direction start at 08:07 until 18:07.

2.4.14 The journey from the site into Solihull Town Centre takes circa 30-minutes with the route also travelling through Shirley another potential employment area. With a 15-minute frequency, it is therefore very convenient to access Solihull by bus and serve commuting journeys well.

2.4.15 A recent publication by Moseley Marketing Limited confirmed that at the 2015 Transport Practitioners Meeting in London, results of the National Travel Survey data analysis were presented. The results showed that half of existing bus users walk over 480m i.e. around 6 minutes, to where they board their bus; one in six walks around 800m, i.e. around 10 minutes, or further. The publication concluded that 'Guidance published by or on behalf of central Government refers to 800m as being an acceptable walking distance.

Rail

2.4.16 The nearest railway station is at Whitlocks End located approximately 650m from the proposed site access a circa 8-minute walk with a continuous footway available from the site. The cycling time would be 2-3 minutes. The railway station can also be accessed via the A4 bus service if needed. Services are operated by West Midlands Trains.

2.4.17 Between Monday and Saturday there is an hourly service between 06.42 and 22.36 to Birmingham Moor Street and Birmingham Snow Hill with some continuing to Kidderminster and Worcester. There is also an hourly service between 07.27 and 22.28 to Stratford-upon-Avon with the last service in this direction terminates at Whitlocks End at 23.40.

2.4.18 On Sundays, there is an hourly service to Worcester Foregate Street via Snow Hill between 10.36 and 19.38. There is also an hourly service to Stratford-upon-Avon between 09.28 and 18.28.

Conclusion

2.4.19 It is clear the site is well situated in terms of access to sustainable modes of travel in Whitlocks End within walking distances of the site.

2.4.20 The site is located adjacent to existing residential development to the north of the site. Existing bus services provide convenient access to Solihull.

2.4.21 The train station at Whitlocks End is accessible by bus and provides regular services to wider destinations including Birmingham, Kidderminster, Worcester and Stratford-upon-Avon.

3.0 DEVELOPMENT PROPOSALS

3.1 Introduction

3.1.1 This appraisal considers the release of 19.6ha of Green Belt. Of this area 6.7ha has been identified as developable area and 12.9ha will be made a public open space. At 30-35 dwellings to the hectare, the land would accommodate approximately 200-235 dwellings. The concept masterplan can be seen in **Appendix A**.

3.2 Site Access

3.2.1 Vehicular access to the site will be taken from the existing access previously used for the golf course and current residential development. The junction would however, be modified to provide a 6m carriageway with 8m radii. There would also be the potential to provide a 3m shared footway/ cycleway along the south side of the carriageway. However, the final solution for pedestrians and cyclists would be explored further and agreed with both the Local Highway and Planning Authorities, in relation to minimising impacts on existing hedgerows whilst providing the most direct useable links.

3.2.2 The general layout of how the site access could be arranged is shown on **Drawing 22087-01**.

3.2.3 The site's movement plan/ masterplan provides a pedestrian/cycle access to both the north and south-eastern corners of the site onto Tilehouse Lane. There is also potential for an emergency access point onto Tilehouse Lane, which would facilitate further pedestrian/cycle access into the site.

3.3 Traffic Generation

3.3.1 To assess the potential traffic movements from the development, the TRICS database was interrogated (TRICS v7.7.1 online). This database contains surveys of the vehicle and multimodal trip generation of a wide variety of sites which are classified by land use and various other attributes. The database was interrogated for multimodal vehicular surveys for 'Land Use 03 – Residential/A – Houses Privately Owned', with sites in London, Scotland, Ireland and Wales manually excluded. The resulting TRICS printouts are attached at **Appendix C**.

3.3.2 The vehicle trips and associated traffic generation are presented in **Table 1**.

Table 1 – TRICS vehicle trip rates and traffic generation (235 dwellings)

Time Range	Vehicle Trip Rates			Vehicle Traffic Generation		
	Arrivals	Departures	Totals	Arrivals	Departures	Totals
08:00-09:00	0.123	0.372	0.495	29	87	116
17:00-18:00	0.338	0.148	0.486	79	35	114
07:00-19:00	2.201	2.250	4.451	517	529	1046

3.3.3 The forecast traffic generation results in around 2 additional vehicles per minute on the local network which would not materially affect the operation of any junctions or routes in the vicinity of the site. This traffic would further disperse from the site resulting in a reduced impact.

3.4 Traffic Distribution

3.4.1 The forecast traffic generation has been distributed using Census Journey to Work data (2011) for the Solihull 029 Middle Super Output Area (MSOA). A breakdown of the distribution trips from this ward to employment destinations is summarised in **Table 2**.

Table 2 - Summary of the workplace destinations from Solihull 029 MSOA

Destination	Proportion %
Solihull (Solihull 029)	36.3% (1.3%)
Birmingham	29.6%
Warwick	5.0%
Stratford-on-Avon	4.9%
Coventry	4.0%
Bromsgrove	3.4%
Redditch	2.8%
North Warwickshire	1.5%
Sandwell	1.1%
Dudley	0.7%
Walsall	0.6%
Wychavon	0.6%
Worcester	0.5%

3.4.2 Based on the census data and using the most direct route to employment destinations, it shows that around 1.3% of people work within Solihull 029 containing Tidbury Green, 35% in other areas in Solihull, 30% will travel to Birmingham, 5% to Warwick, 5% to Stratford-on-Avon, with the remaining trips being distributed to the other main settlements beyond those above.

3.4.3 In terms of assignment of trips, from the site the vast majority of traffic will route north from the site access via the junction of Tilehouse Lane/ Haslucks Green Road. Trips to Solihull 029 will route east towards Dickens Heath.

3.5 Traffic impact

3.5.1 The impact at any one junction on the wider network will be modest in the context of existing background traffic flow. Typical traffic impacts presented online for weekday peak periods around the Tilehouse Lane/ Haslucks Green Road junction would suggest the existing local road network and approaches to/ from the junction operates with minimal queueing or delay.

3.5.2 Due to there being forecast to be no more than 2 additional vehicle per minute generated by the development, there would be negligible change to the operation of any nearby junctions due to the development.

4.0 CONCLUSIONS

- 4.1 This appraisal has considered the high-level impacts of the potential residential development on Arden Green, Solihull.
- 4.2 It concludes that the impact of the development would have a negligible impact on the operation of the local network.
- 4.3 Safe and suitable access to the site can be achieved from Tilehouse Lane for all.
- 4.4 The development is in an accessible location in close proximity to train and bus services that provide realistic alternative travel choices to the private car, with convenient journeys to the major employment centres of Solihull and Birmingham especially well catered for.

Figures

Drawings

Appendix A

Concept Masterplan

Appendix B

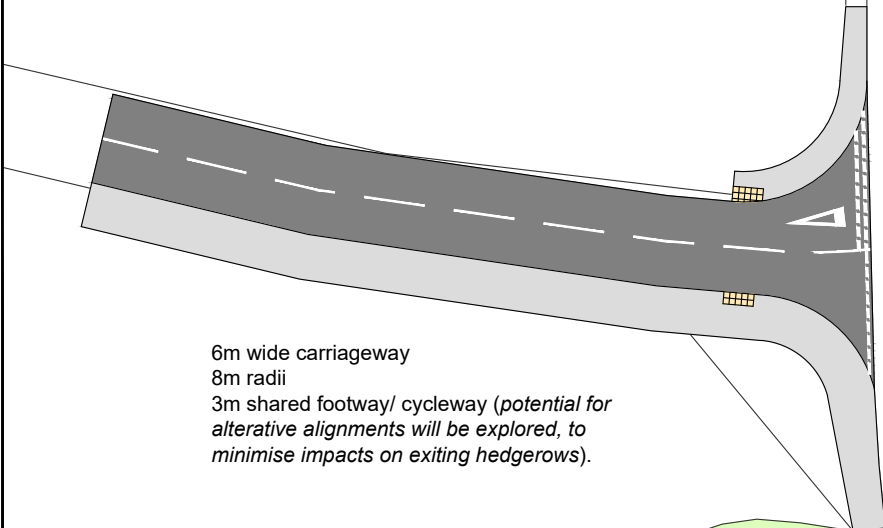
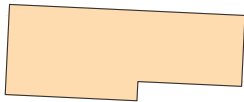
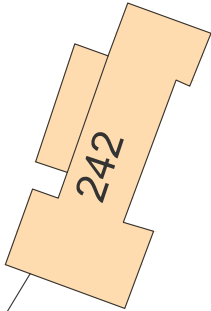
PIC Data

Appendix C

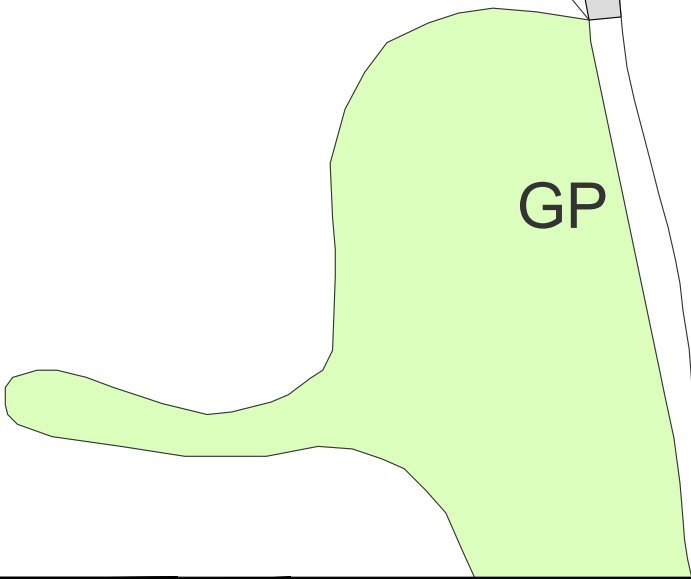
TRICS outputs



House



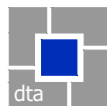
6m wide carriageway
8m radii
3m shared footway/ cycleway (*potential for alternative alignments will be explored, to minimise impacts on exiting hedgerows*).



TILEHOUSE LANE

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JOB TITLE		Arden Green		CLIENT		David Wilson Homes (Mercia)	
DRAWING TITLE							
Site Access							
Potential Improvements							
SCALE	DRAWN BY	DATE	DRAWING No	REVISION			
1:500@A4	DN	Apr 20	22087-01				