

1957-01-TS02a
August 2018

**Proposed Residential Development at Woodlands Farm,
Dodds Lane, Gwersyllt, Wrexham**

Transport Statement

Prepared on behalf of:



Wales and West Housing Association Ltd.



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1.0 INTRODUCTION

1.1 Summary

1.1.1 This Transport Statement has been prepared by Axis on behalf of Wales and West Housing Association Ltd., hereafter referred to as WWH, in support of a planning application related to proposals for a new residential redevelopment of land at Woodlands Farm, Dodds Lane, Gwersyllt, Wrexham.

1.1.2 The purpose of this report is to appraise the Local Planning and Highway Authority Wrexham County Borough Council (WCBC), of the anticipated highway and transport related effects associated with the proposed residential development scheme.

1.1.3 The project would see the redevelopment of Woodlands Farm to deliver up to 23 residential dwellings, which would be served from the route of Dodds Lane via an upgraded site access junction. This report will include an assessment of the proposed site access strategy, a review of the sustainability of the site and its accessibility to existing local services, and the opportunity to encourage trips from the site to be undertaken by alternative travel modes to the private car.

1.1.4 The scope and nature of this assessment reflects the extent of highway issues which are understood as likely being of material interest to the LHA.

1.2 Report Structure

1.2.1 The structure of this Transport Statement is therefore as follows:

- **Section 2** considers the existing conditions and includes; a description of the site location and existing conditions; a description of the local highway network immediately adjacent to the site; the location of the site relative to local amenities,

facilities and alternative transport mode choices; and, a review of local personal injury accident trends;

- **Section 3** of this report outlines the residential redevelopment proposals and includes a review of the proposed site access arrangements, and site servicing arrangements;
- **Section 4** considers the anticipated private car trip generation to/from the site and the proportional impact of the proposed development;
- **Section 5** provides a summary and conclusion to the report derived from the analysis presented in the preceding chapters.

2.0 SITE LOCATION & EXISTING CONDITIONS

2.1 Site Location

2.1.1 The location of the proposed Woodlands Farm redevelopment site is illustrated in **Figure TS1** to this report. This plan identifies the strategic location of the site in relation to the A483(T), the main Town Centre of Wrexham and the local distributor routes of the B5425 Llay Road and Rhosrobin Road.

2.1.2 The immediate context of the site location, including the surrounding local highway network, is illustrated in **Figure TS2** to this statement.

2.2 Description of Site & Local Network

Existing Site Conditions

2.2.1 The Woodlands Farm proposal site currently forms a broadly rectangular shaped parcel of land to the immediate north of the route of Dodds Lane. To the north and east, the site is bounded by open agricultural land, whilst to the west the site is bounded by existing residential development which is largely served from the route of Pen-y-Lyn.

2.2.2 Dodds Lane serves as a 20mph local distributor route between the settlements of Rhosrobin, to the southeast, and Gwersyllt, to the northwest. Approximately 250m further to the northwest Dodds Lane forms the southeastern approach to a four arm min-roundabout junction with the routes of Hope Street (to the southwest) High Street (to the northwest) and Glan-Llyn Road (to the northeast).

2.2.3 A further 250m to the west of this mini-roundabout junction Hope Street forms the eastern approach to a four-arm signalised interchange with the primary route of the A541 Mold Road, and the minor residential access road of Alyn Way. The A541 Mold Road serves as a key primary route to the northwest of Wrexham, providing onward connections to the A483

trunk road (Junction 5) and the centre of Wrexham to the south, and the A494 to the north, on the outskirts of Mold.

- 2.2.4 Approximately 700m to the southeast of the site Dodds Lane, having become Rhosrobin Road, forms the minor western approach to a priority-controlled give-way T-junction with the B5425. Just 50m to the north of this junction the route of the B5425 is subject to the National Speed Limit, whilst to the south it becomes a 30mph route, along with Rhosrobin Road. To the south the B5425 crosses the A483 and provides an onward link to the centre of Wrexham.

2.3 Existing Observed Traffic Demand

Network Demand

- 2.3.1 In 2014 a planning application was submitted to WCBC for a residential development in Rhosrobin, the site situated directly opposite the termination of Rhosrobin Road where it meets the B5425 Llay New Road. This planning application included a Transport Assessment undertaken by Axis and included reference to a traffic survey of the Rhosrobin Road/B5425 Llay New Road undertaken in March 2014.
- 2.3.2 Referencing the available information within this TA, it has been possible to identify base traffic flow patterns for the route of Dodds Lane/Rhosrobin Road. **Figure TS3** to this report summarises the traffic flows recorded on the Rhosrobin Road approach to its junction with the B5425 Llay New Road for the observed AM and PM network peak rush hour periods of 08:00-09:00 and 16:45-17:45 respectively.
- 2.3.3 Reference to the recorded peak hour traffic flows demonstrates that prevailing traffic levels illustrate a general tidal flow pattern with eastbound movement along Dodds Lane/Rhosrobin Road being more dominant during the AM period and westbound trips along this route being the peak demand during the PM peak. It is considered that this observed tidal flow reflects journey to work movements to/from the main centre of Wrexham to the south of the site – it is likely that many local commuters would route

via the B5425 Llay New Road to and from Wrexham, rather than via the busier route of the A541 Mold Road. Maximum two-way traffic flow is noted as occurring during the PM peak hour, with up to 551 two-way movements recorded along Dodds Lane/Rhosrobin Road. This figure falls to 519 two-way movements during the AM peak hour.

2.4 **Personal Injury Accident Records**

2.4.1 Personal Injury Accident data (PIA) for the local highway network in the immediate vicinity of the proposal site has been obtained using CrashMap.co.uk, which provides PIA data collected by the police. This data is approved by the National Statistics Authority and reported on by the Department for Transport each year. Data has been collected for the most recent five year period of 1 January 2013 – 30 June 2017. The results of this search are illustrated in **Figure TS4** to this report with full report data attached as **Appendix TS1**.

2.4.2 Review of **Figure TS4** shows that during the five year search period a total of 4 personal injury accident incidents have been recorded within the illustrated search area, one of which was classified as being slight in nature, and the remaining three classified as serious.

2.4.3 Review in greater detail identifies that the four incidents have occurred along Rhosrobin Road / Dodds Lane, with two to the north of the proposal site and two to the south.

2.4.4 Whilst Crashmap data does not provide detailed enough information to fully determine the causal nature of each recorded incident, it is clear from the information that is available that three of the incidents appear to have occurred as a result of pedestrians crossing the road into the path of oncoming vehicles. The remaining incident involved a vehicle crashing into parked cars in the early hours of the morning, either having lost control or as a result of inattention.

2.4.5 Overall it is considered that, based upon the above review of road traffic incident data, the nature of the local accident history does not call into

question any specific aspects of the local highway network, and so it is considered that there are no material highway safety issues within the vicinity of the site.

2.5 Sustainable Transport Connections

Walking and Cycling

2.5.1 The location of the proposal site is anticipated to allow for a range of everyday journeys to be undertaken on foot or by cycle. The Institute for Highways and Transportation (IHT) Document 'Providing for Journeys on Foot' identifies suitable walking distances to common facilities. This document identifies the following guidance on acceptable walking distances for access to key facilities:

- Desirable: 400m
- Acceptable: 800m
- Preferred Maximum: 1200m

2.5.2 **Figure TS5** to this report illustrates 800m and 1200m 'as the crow flies' local catchments as measured from the access point of the proposed Woodlands Farm residential redevelopment site. This analysis illustrates that Gwersyllt and the edge of Wrexham falls within an acceptable local walk catchment and, as such, the site's proximity to the following local everyday services should be noted:

- Gwersyllt County Primary School;
- Gwersyllt Support Centre;
- Gwersyllt Rail Station;
- Local food and convenience shops; and
- A dental surgery.

2.5.3 In addition to walking connections, the pedal cycle has been identified as being an acceptable travel mode for journeys of up to 5km. **Figure TS6** to this report illustrates the 5km cycle catchment from the site, and

demonstrates that Wrexham lies entirely within an appropriate cycle distance, along with the outlying areas of Gresford and Llay.

- 2.5.4 Details of available local cycling routes and connections are illustrated in **Figure TS7** to this report and demonstrate that a number of traffic free cycle routes are available within a short cycle ride of the site.

Access to Buses

- 2.5.5 A number of existing local bus services operate within the vicinity of the Woodlands Farm proposal site. Bus stops are located on both sides of the Dodds Lane carriageway to both the north and south of the site. As such, all local stops lie within a 400m walk of the centre of the site, which is considered to represent an acceptable walking distance to bus services. Full service timetables for the existing bus routes serving the local stops are attached at **Appendix TS2** and summarised in **Table TS2.1** below. **Table TS2.1** demonstrates that regular connections are available to key local destinations such as Wrexham, Gwersyllt and Llay.

Table TS2.1 – Available Local Public Transport Connections

Route Number	Route Description	Pk hour frequency	Day Time Frequency
33	Wrexham – Gwersyllt – Llay	30 mins	30 mins
34	Wrexham – Gwersyllt – Trevalyn	-	3/day

Access to Rail

- 2.5.6 As illustrated in **Figure TS5**, Gwersyllt Rail Station lies within a 500m walk of the site, thereby providing access to local rail services. Review of the available information on the National Rail website identifies that Gwersyllt Rail Station is served by the Wrexham Central – Bidston service, which operates an hourly service in each direction throughout the day.

Summary

- 2.5.7 Overall it is concluded that the proposal site represents a sustainable location for a residential development, being located within an acceptable

walk/cycle catchment of key everyday destinations such as local shopping facilities and schools, and accessible by both bus and rail services to/from key local employment centres. These services are anticipated to reduce the need for residents at the site to utilise the car for everyday journeys.

3.0 DESCRIPTION OF THE DEVELOPMENT PROPOSALS

3.1 Overview

3.1.1 The Woodlands Farm proposal site is proposed to be developed to deliver up to 23 residential units. The development would comprise a mix of affordable homes, with 16 houses, 3 bungalows and 4 apartments as below:

- 10no. semi-detached 3 bed dwellings;
- 6no. semi-detached 2 bed dwellings;
- 1no. detached 2 bed bungalow;
- 2no. semi-detached 2 bed bungalow; and
- 4no. 1 bed flats.

3.1.2 A masterplan of the development scheme is provided at **Drawing C861.070P** to this report. The site masterplan also includes for appropriate levels of car parking, turning facilities for service vehicles and sustainable transport infrastructure (footways and cycle access).

3.2

Highway Access Arrangements

3.2.1

Access to the development site is proposed to be taken via a new priority-controlled T-junction with Dodds Lane, to the immediate southern site frontage (see **Drawing C861.070P**). The main site access spine route would be of a 5.5m width design, in accordance with current WCBC guidance, and is considered suitable to accommodate the additional traffic movements associated with the development site.

3.2.2

Visibility from the proposed site access would be available from a 2.4m x-distance setback to a y-distance of 43m in both the leading direction (to the west) and non-leading direction (to the east). This level of achievable visibility exceeds the required standard for a 20mph speed limit route, as outlined in Table A at Annex B of the Welsh Government guidance document “Technical Advice Note 18: Transport”.

3.3 **Vehicle Servicing**

- 3.3.1 The proposed site layout includes turning heads to the terminations of the internal routes within the development, which would enable the turning of large Refuse Collection Vehicles (RCVs). These turning heads have been designed in accordance with WCBC guidance in order to ensure that the site can be fully serviced by emergency and refuse collection vehicles. A swept path assessment of the site layout based on an RCV is attached as **Drawing 1957-01-ATR101B** to this report.

4.0 DEVELOPMENT TRIP GENERATION

4.1 Introduction

4.1.1 As noted in section 3, the proposal scheme seeks to deliver a residential redevelopment of the existing site to deliver up to 23 dwellings. The development would comprise a mix of affordable housing.

4.1.2 Trip rates for the proposed residential redevelopment scheme have been derived from the TRICS database of development trip rates. TRICS is a widely accepted national database of historical trip demand information and contains observed traffic data for a large number of development sites. As such, it can be considered to produce reliable trip rate estimates. It should be noted that TRICS provides outputs in hourly intervals (e.g. 17:00-18:00) and not for intervening hourly periods such as that being considered for the PM peak in this assessment 16:45-17:45. For the purposes of this assessment the TRICS information has been applied to the assess peak hour regardless, in order to ensure the most robust assessment.

4.1.3 Trip rate estimates for “mixed private/affordable housing” residential sites suggest peak hour average trip rates as outlined in **Table TS4.1** below (detailed TRICS printouts are provided in **Appendix TS3** to this report).

Table TS4.1: Average Residential Development Trip Rates

Trip Rates (per dwelling)	Arrivals	Departures	Total
Residential – Average			
AM Peak (08:00-09:00)	0.129	0.312	0.441
PM Peak (17:00-18:00)	0.318	0.188	0.506

4.1.4 Application of these trip rates to the proposed maximum development size of 23 dwellings at the Woodlands Farm site, provides the following estimate of trip demand:

Table TS4.2: Predicted Average Development Trip Demand

Trip Total	Arrivals	Departures	Total
Residential – Average			
AM Peak (08:00-09:00)	3	7	10

PM Peak (17:00-18:00)	7	5	12
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- 4.1.5 The above analysis demonstrates that the proposal scheme is not anticipated to generate a substantive level of peak hour travel demand, with maximum two-way vehicle movements being just 12 vehicles per hour. Such levels of traffic are the equivalent of 1 vehicle movement every 5 minutes and are unlikely to result in any noticeable impact upon local network operating conditions. Indeed, setting the above flows into the context of their proportional effect on prevailing flows along the route of Dodds Lane identifies the following:

Table TS4.3: Proportional Impact of Development Trip Demand

	2014 Background Traffic	Development traffic	Proportional Impact
AM Peak (08:00-09:00)	519	10	1.9%
PM Peak (16:45-17:45)	531	12	2.3%

- 4.1.6 Review of **Table TS4.3** identifies that, when set against the observed 2014 background traffic flows, the proportional impact of the proposed residential development would stand at just 1.9-2.3%. It is therefore considered that the proposed residential development would not give rise to any material impact on the existing local highway network.

5.0 SUMMARY

5.1 Introduction

5.1.1 This Transport Statement has been prepared by Axis in support of a planning application made by Wales and West Housing for the development of up to 23 affordable residential dwellings on land at Woodlands Farm, off Dodds Lane, Wrexham.

5.1.2 This report includes a review of existing local conditions, consideration of the development scheme, review of the proposed site access strategy and an analysis of the likely trip generation of the development.

5.2 Site Location & Existing Highway Conditions

5.2.1 The Woodlands Farm proposal site forms a broadly rectangular shaped parcel land lying to the immediate north of the route of Dodds Lane, and more strategically, lying to the north of the A483(T) and Wrexham Town Centre.

5.2.2 Dodds Lane serves as a local distributor route between the settlements of Rhosrobin, to the southeast, and Gwersyllt, to the northwest. Approximately 500m to the northwest of the site the local distributor route of Hope Street forms a signalised junction with the primary route of the A541 Mold Road.

Existing Observed Traffic Demand

5.2.3 Background traffic levels on the local highway network have been established through the review of traffic survey data submitted in support of a planning application on land at Rhosrobin in 2014. Classified turning count surveys were carried out at the junction of Rhosrobin Road/A5425 Llay New Road during March 2014, and identify that movements peaked during the traditional AM and PM periods (observed as 08:00-09:00 & 16:45-17:45)

- 5.2.4 Prevailing traffic levels illustrate a general tidal flow pattern eastbound movement along Dodds Lane/Rhosrobin Road being more dominant during the AM period and westbound trips along this route being the peak demand during the PM peak. It is considered that this observed tidal flow reflects journey to work movements to/from the main centre of Wrexham to the south of the site. Maximum two-way traffic flow is noted as occurring during the PM peak hour, with up to 551 two-way movements recorded along Dodds Lane/Rhosrobin Road. This figure falls to 519 two-way movements during the AM peak hour.

Personal Injury Accident Records

- 5.2.5 Personal Injury Accident data (PIA) for the local highway network to the site has been obtained for the most recent five-year period of 1 January 2013 – 30 June 2017. Review of this information has identified a total of just 4 personal injury accident incidents have been recorded within the illustrated search area, all of which were classified as being slight in nature except one, which was serious. Overall, however, it has been concluded that the review of road traffic incident data has demonstrated that there are no material highway safety issues within the vicinity of the site.

Site Accessibility

- 5.2.6 The location of the proposal site is anticipated to allow for a range of everyday journeys to be undertaken on foot or by cycle. Analysis of the local catchment area identifies that the site would fall within an acceptable walking distance of a range of key facilities, including local primary schools, and local convenience stores. In addition, the site lies within a 5km cycle distance of the main local centre of Wrexham.
- 5.2.7 In addition to walking and cycling opportunities, the site is located within acceptable walking distance of local bus and rail services, which provide frequent onward connections to key local destination which include Wrexham, Llay, Neston and Bidston.

5.3 Description of the Development Proposals

- 5.3.1 The Woodlands Farm proposal site is proposed to be developed for up to 23 affordable residential units. The site masterplan also includes for appropriate levels of car parking and turning facilities for service vehicles. Access to the development site is proposed to be taken via a new priority-controlled T-junction with the route of Dodds Lane to the site's southern frontage. The main internal spine route of the site would be of 5.5m width, in accordance with current WCBC guidance. Visibility from the site access would be in accordance with Welsh Government guidance TAN18 for a 30mph speed limit route.

5.4 Development Trip Generation

- 5.4.1 Trip rates for the proposed residential redevelopment scheme have been derived from the TRICS database of development trip rates. TRICS is a widely accepted national database of historical trip demand information and contains observed traffic data for a large number of development sites. As such, it can be considered to produce reliable trip rate estimates.
- 5.4.2 Trip rate estimates for "mixed private/affordable housing" sites suggest peak hour trip rates which would equate to the following level of trip generation from a development of 23 dwellings:

Table TS5.1: Predicted Average Development Trip Demand

Trip Total	Arrivals	Departures	Total
Residential – Average			
AM Peak (08:00-09:00)	3	7	10
PM Peak (17:00-18:00)	7	5	12

- 5.4.3 The analysis of trip generation demonstrates that the proposal scheme is not anticipated to generate a substantive level of peak hour traffic, with maximum two-way vehicle movements being just 12 vehicles per hour. Such levels of traffic are the equivalent of 1 vehicle movements every 5 minutes and are unlikely to result in any noticeable impact upon local network operating conditions.

5.4.4 Indeed, further consideration of the development generated traffic in the context of prevailing traffic flows along Dodds Lane has identified that the proportional increase in traffic along Dodds Lane, as a result of the proposed residential redevelopment, would stand at just 1.9-2.3%. It is therefore considered that the proposed residential development would not give rise to any material impact on the existing local highway network.

5.5 **Conclusions**

5.5.1 It is concluded that the development of land at Woodlands Farm, off Dodds Lane in Gwersyllt, Wrexham, to deliver up to 23 residential dwellings would not result in a detrimental impact on the local highway network, either in operational or highway safety terms.



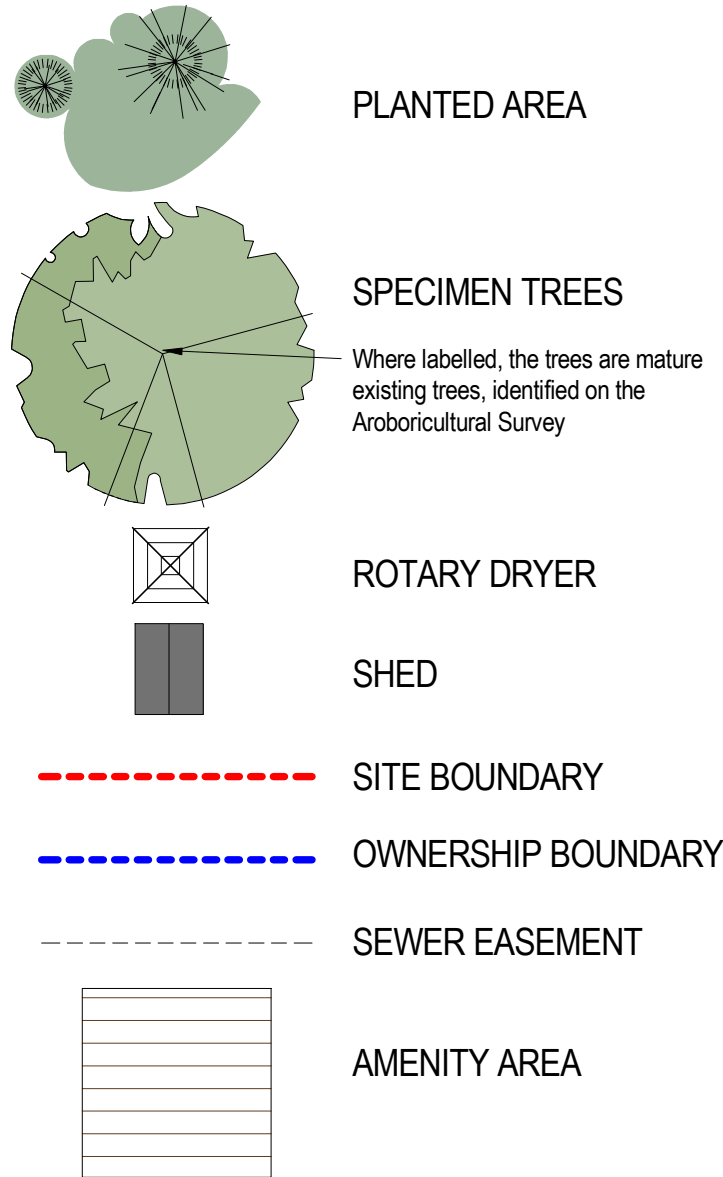
DRAWINGS

	PLOTS
TYPE 1 - 4P2B HOUSE	14, 15, 16, 17, 18 & 19
TYPE 2 - 5P3B HOUSE	20, 21, 22 & 23
TYPE 3 - BUNGALOW	7, 8 & 9
TYPE 4 - 5P3B LCHO	1, 2, 3, 4, 5 & 6
TYPE 5 - WUF	10 - 13



PROPOSED LAYOUT AND MASTERPLAN

1 : 500



P	ROOF PEDIMENTS OMITTED TO PLOTS 8, 9, 10-13, 20 & 23	21/11/18	DP
N	BOUNDARY AMENDED TO INCLUDE SEWER EASEMENT	19/11/18	DP
M	PARKING AMENDED TO COMPLY WITH HIGHWAYS COMMENTS	19/10/18	DP
L	PARKING AMENDMENTS TO PLOTS 7 & 14	11/10/18	DP
K	ISSUED FOR PLANNING	16/08/18	IO
J	LCHO HOUSE TYPE CHANGED. PATHS AND GARDEN LEVELS CHANGED	13/08/18	IO
H	BOUNDARY AMENDED TO INCLUDE LINKING HEDGEROW. SPEED BUMPS OMITTED. ADDITIONAL TREES AND HEDGE ADDED TO EASTERN BOUNDARY	20/07/18	DP
G	ADDITIONAL PLOT ADDED, APARTMENT PARKING ALTERED, SPEED BUMPS ADDED	06/07/18	DP
F	SEWER EASEMENT ADJUSTED TO ALIGN WITH SURVEY. HOUSES/PLATS ADJUSTED TO SUIT EASEMENT	25/06/18	DP
E	LAYOUT AMENDED AS PER CLIENT MEETING REQUESTS ON 11/05/18	24/05/18	DP
D	LAYOUT AMENDED AS PER REVISED CLIENT BRIEF RECEIVED 16/04/18	04/05/18	DP
C	APARTMENT PARKING AMENDED. ROAD AMENDED TO 5.5m	20/03/18	DP
B	PARKING LAYOUT CHANGED AROUND PLOTS 18-22	14/03/18	MR
A	RADIUS OF ROAD UPDATED, PAVEMENT ALONG DODDS LANE & AMENITY SPACE AREA REDUCED	28/02/18	MR
REV	DESCRIPTION	DATE	BY

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PROJECT
**WOODLANDS FARM,
DODDS LANE
for WWHa**

DRAWING TITLE
PROPOSED SITE LAYOUT

SCALE	DATE	DRAWN	CHECKED
As@A1	26/02/18	MR	DP/SV
Indicated STATUS	PLANNING		
JOB No	DRAWING No	REVISION	
C861	070	P	

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