



DTPC

Report No. J319/TS
November 2013

**PROPOSED RESIDENTIAL DEVELOPMENT,
LANE END, PENLEY**

TRANSPORT STATEMENT

**PROPOSED RESIDENTIAL DEVELOPMENT,
LANE END, PENLEY**

CONTROLLED DOCUMENT

<i>DTPC No:</i>		J319/TS	
<i>Status:</i>	Final	<i>Copy No:</i>	
	<i>Name</i>	<i>Signature</i>	<i>Date</i>
<i>Approved:</i>	Alan Davies	AD	3 November 2013

<i>Revision Record</i>		
<i>Rev.</i>	<i>Date</i>	<i>Summary of Changes</i>
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**PROPOSED RESIDENTIAL DEVELOPMENT,
LANE END, PENLEY**

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1. INTRODUCTION

DTPC has been appointed by Greenspace Architects Ltd to provide transport and highway advice for the traffic and transportation implications associated with the proposed Residential Development at Lane End, Penley.

The application relates to a site located in the urban area, with access which will be developed for residential uses.

In order to advise the application, this report provides information on the scope of traffic and transport planning aspects of the development proposals, to assist in the determination of the future planning application.

It deals solely with the proposals as provided.

The TS discusses the following issues:

- Site and Local Area
- Existing Highway Conditions
- Development Proposals
- Government Planning and Transportation Policy
- Sustainability
- Access Considerations
- Summary & Conclusions.

This report has been prepared solely in connection with the proposed development as stated above. As such, no responsibility is accepted to any third party for all or any part of this report, or in connection with any other development.

2. NATIONAL AND LOCAL POLICY GUIDANCE

National Policy

Increasing travel choice and reducing dependency on car travel is an established aim across all areas of government policy development, documents and guidance alongside addressing climate change and reducing CO₂ emissions. Travel planning to date has focused on reducing single occupancy car use to specific destinations. Recent national guidance has broadened this, outlining the potential for Residential Travel Plans and addressing trips generated from individual origins (homes) to multiple and changing destinations. The Department for Transport (DfT) also published “Smarter Choices – Changing the Way We Travel” focusing on softer education and persuasive measures which are a key element of travel plans.

National planning policy ensuring that development plans and planning application decisions contribute to delivery of development that is sustainable. It states that development should ensure environmental, social and economic objectives will be achieved together over time.

It will also contribute to global sustainability, by addressing the causes and impacts of climate change, reducing energy use and emissions by encouraging development patterns that reduce the need to travel by car and impact of transporting goods as well as in making decisions in the location and design of development.

Future of Transport 2004

2004, Department for Transport (DfT) published a long-term strategy (*Future of Transport White Paper*) which examines the factors that will shape travel and transport over the next thirty years. It sets out how the Government will respond to the increasing demand for travel, maximising the benefits of transport while minimising the negative impact on people and the environment.

Central to the strategy is the need to bring transport costs under control, the importance of shared decision making at local, regional and national levels to ensure better transport delivery, and ***improvements in the management of the network to make the most of existing capacity***.

TAN 18 – Transport

Accessible housing development

Settlement policies and residential allocations in development plans should:

- promote housing development at locations with good access by walking and cycling to primary and secondary schools and public transport stops, and by all modes to employment, further and higher education, services, shopping and leisure, or where such access will be provided as part of the scheme;
- include policies and standards on density, and parking to achieve higher residential densities in places with good public transport accessibility and capacity;
- encourage residential layouts that incorporate traffic management proposals such as home zones, calming measures and 20 mph zones and where appropriate, layouts that allow public transport to pass through easily; and
- require layouts and densities, which maximise the opportunity for residents to walk and cycle to local facilities and public transport stops.

Local planning authorities should ensure that the design and density of new residential development facilitates viable and effective bus services.

Development plans and related SPG should outline the information required in residential applications or design statements to demonstrate appropriate levels of access by walking, cycling and public

transport for new residents and the wider community to local services. Developers should be able to demonstrate that:

- the development will facilitate access by new residents to public transport stops, local shops and facilities by walking and cycling;
- new or existing walking and cycling routes provide direct and safe links to public transport stops, local shops and facilities;
- any public transport routes through the development are suitably direct, are of a geometry to avoid obstructions and that any features that give buses priority (e.g. bus gates or bus only routes) are shown;
- where new public transport facilities or services are proposed, there are effective arrangements for maintaining facilities and funding services (e.g. will an initial or ongoing subsidy be required and how this will be secured);
- the walking, cycling, public transport and car routes through or adjacent to the site are integrated in accordance with expressed principles and in the context of their relationship with parking areas and public recreation spaces.

Parking

Maximum car parking standards should be used at regional and local level as a form of demand management. Turning minimum standards into maximum standards will not necessarily be appropriate. Therefore evidence based on the likely effects of different parking levels for each land use should be considered, including consideration of the relative locations of land uses and their consequent accessibility. Required parking for those with disabilities should be fully specified in any adopted parking strategy in terms of space dimensions and proportions of the total number of spaces.

In determining maximum car parking standards for new development, regard should be given to:

- public transport accessibility and opportunities or proposals for enhancement;
- targets and opportunities for walking and cycling;
- objectives for economic development including tourism;
- the availability in the general area of safe public on- and off- street parking provision; and
- potential for neighbouring or mixed use developments sharing parking spaces, for example at different times of the day or week.

Street design

Transport infrastructure should contribute to a sense of place and community within a development and the design of streets has a crucial role in this regard. A distinction can be made between roads and streets. Roads are essentially highways whose main function is accommodating the movement of traffic. Streets are typically lined with buildings and public spaces, and whilst movement is still a key function, the place function is the most important. Streets have five principle functions:

- place;
- movement;
- access;
- parking; and
- utilities (including drainage and street lighting).

Streets should be designed to:

- help to build the communities they serve;
- meet the needs of all, by embodying the principles of inclusive design;
- form part of a well-connected network;
- be attractive and have their own distinctive identity;
- be cost-effective to construct and maintain; and
- be safe.

Streets should not be:

- primarily designed to meet the needs of motor traffic;
- bland and unattractive;
- unsafe and unwelcoming to pedestrians and cyclists;
- difficult to serve by public transport; and

- poorly designed and constructed.

Streets should be designed to control vehicle speeds naturally rather than having to rely on traffic calming measures that involve vertical deflection.

New junctions must have adequate visibility

Walking

When preparing development plans, design guidance, master plans and in determining planning applications authorities should:

- ensure that new development encourages walking as a prime means for local journeys by giving careful consideration to location, access arrangements and design, including the siting of buildings close to the main footway, public transport stops and pedestrian desire lines;
- ensure that pedestrian routes provide a safe and fully inclusive pedestrian environment, particularly for routes to primary schools;
- ensure the adoption of suitable measures, such as wide pavements, adequate lighting, pedestrian friendly desire lines and road crossings, and traffic calming;
- promote the reallocation of road space to pedestrians;
- support the use of public rights of way for local journeys; and
- identify and protect existing and proposed routes suitable for the use of cyclists and walkers.

Cycling

Development plans, design guidance, and master plans should include encourage cycling through:

- identification of new cycle routes utilising existing highway (including public rights of way where appropriate), disused railway lines, space alongside rivers and canals, parks and open space;
- ensuring that new development encourages cycling by giving careful consideration to location, design, access arrangements, travel 'desire lines' through a development, and integration with existing and potential off-site links;
- securing provision of secure cycle parking and changing facilities in all major employment developments, including retail and leisure uses, town centres, transport interchanges, educational and health institutions;
- securing provision of cycle routes and priority measures in all major developments;
- adopting minimum cycle parking standards within their parking strategies - for commercial premises these standards should include cycle parking for both employees and visitors; and
- ensuring new residential developments provide storage for bicycles so they are easily available for everyday use while secure enough to be left unattended for long periods of time.

Public Transport

When preparing development plans or supplementary planning guidance, and in determining planning applications, planning authorities should where appropriate:

- indicate where buses will be given priority and the measures which will be taken to support this;
- consider the potential, and identify any proposals, for new routes, including the new opening and reuse of rail lines, or creation of additional stations on existing lines, light rail or guided bus routes;
- establish and apply design principles for transport infrastructure and associated links that will ensure all can access the facilities and feel safe;
- establish and apply design principles to ensure buildings are sited to provide convenient access to local public transport whether walking or cycling;
- consider the need for better or new public transport access to new development areas;

Wrexham LDP emerging policies

The following policies are set out in the LDF and from the local transport objectives for the scheme.

Policy SP8: Improving Travel

An integrated transport network will be facilitated within the County Borough and wider North East Wales and West Cheshire sub-region by:

- maximising the use of the existing road and rail network;
- reducing Wrexham Town Centre congestion;
- supporting and enhancing public transport facilities including the removal/reduction of the capacity constraints of the single track between Wrexham and Chester and the electrification and increase in service frequency on the Wrexham to Bidston to Liverpool line;
- supporting and enhancing walking and cycling routes/facilities, park and ride facilities in the locality of key interchanges (e.g. rail/bus stations and major junctions on the A483(T)), integrated with existing and emerging public transport services and encouraging the use of travel plans;
- alleviating capacity constraints of the highways network, especially the A483 (T);
- maintaining and improving accessibility to and between principal residential, commercial, employment, health and education centres for all sections of the community; and
- promoting local road network management improvements.

Policy SP9: Development Proposals and Transport

Development proposals must demonstrate how they will:

- help minimise the need to travel;
- encourage the use of transport other than the private car;
- avoid increasing traffic to unacceptable levels; and
- avoid causing or exacerbating highway safety problems.

Transport assessments and Green Travel Plans will be required for developments likely to result in significant trip generation.

Manual for Streets

Manual for Streets published in 2007 and the subsequent publication of Manual for Streets 2 -Wider Application of the Principles in September 2010 provide design guidance around the philosophy of assigning higher priority to pedestrians and cyclists.

Manual for Streets sets out the following key objectives of the design of new residential neighbourhoods:

- Encouragement of low vehicle speeds;

- Creation of an environment in which pedestrians can walk, or stop to chat, without feeling intimidated by motor traffic;
- Make it easier for people to move around; and
- Promote social interaction

Manual for Streets 2 builds on the philosophies set out in Manual for Streets and demonstrates through guidance and case studies how they can be extended beyond residential streets to encompass both urban and rural situations, filling the perceived gap in design advice between Manual for Streets and Design Manual for Roads and Bridges (DMRB).

Summary

The overriding theme of national policy is that developments must be accessible by sustainable means of transport and accessible to all members of the local community. Local policy echoes the sustainability sentiment of national policy and provides more detail in terms of increased trips and safety.

The following chapters of this report will show that the proposed development is compliant with local and national policy in this respect.

The development is compliant with local and national policy for a number of reasons...

The proposed residential development is in the urban settlement area which makes it a sustainable use of land as well improving local amenity. Also, the development has good linkages which will promote sustainability by reducing the number of car trips to local facilities.

Furthermore, as set out in the following sustainability and parking section.

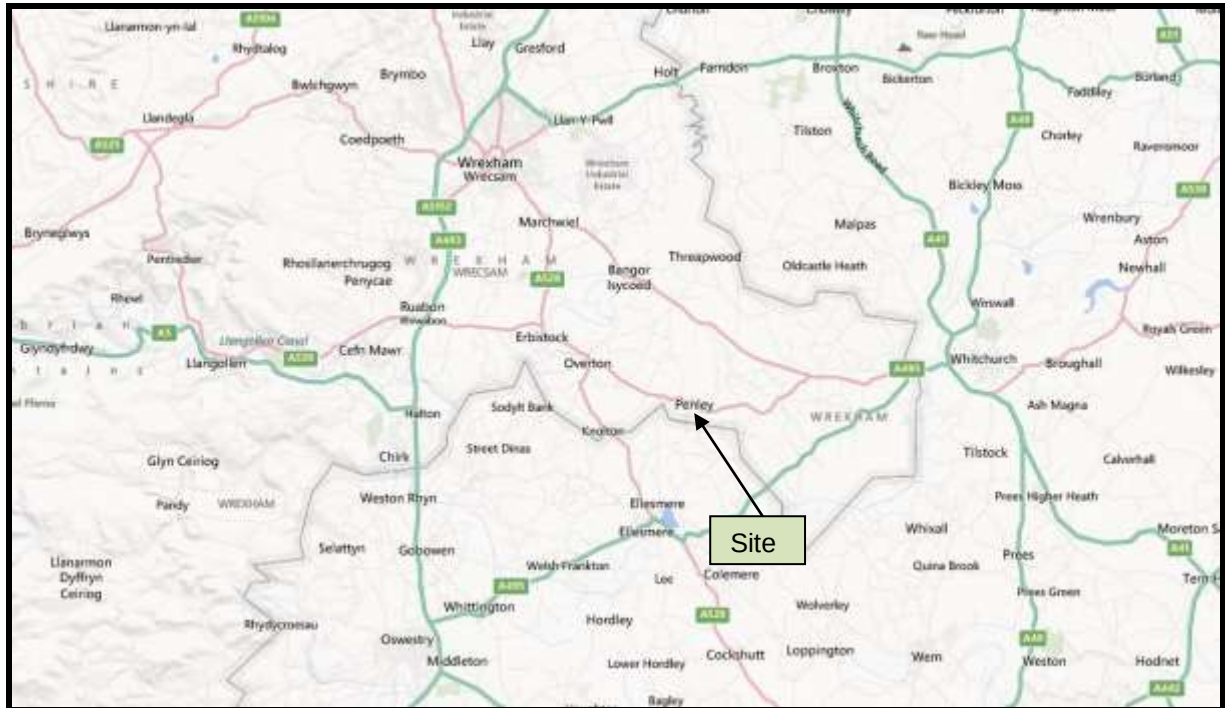
Good pedestrian and cycle linkages to a number of locations and facilities, frequent public transport services to major centres and interchanges, and policy led parking provision all ensure that this development is highly sustainable, as required in local and national policy.

3. SITE DESCRIPTION

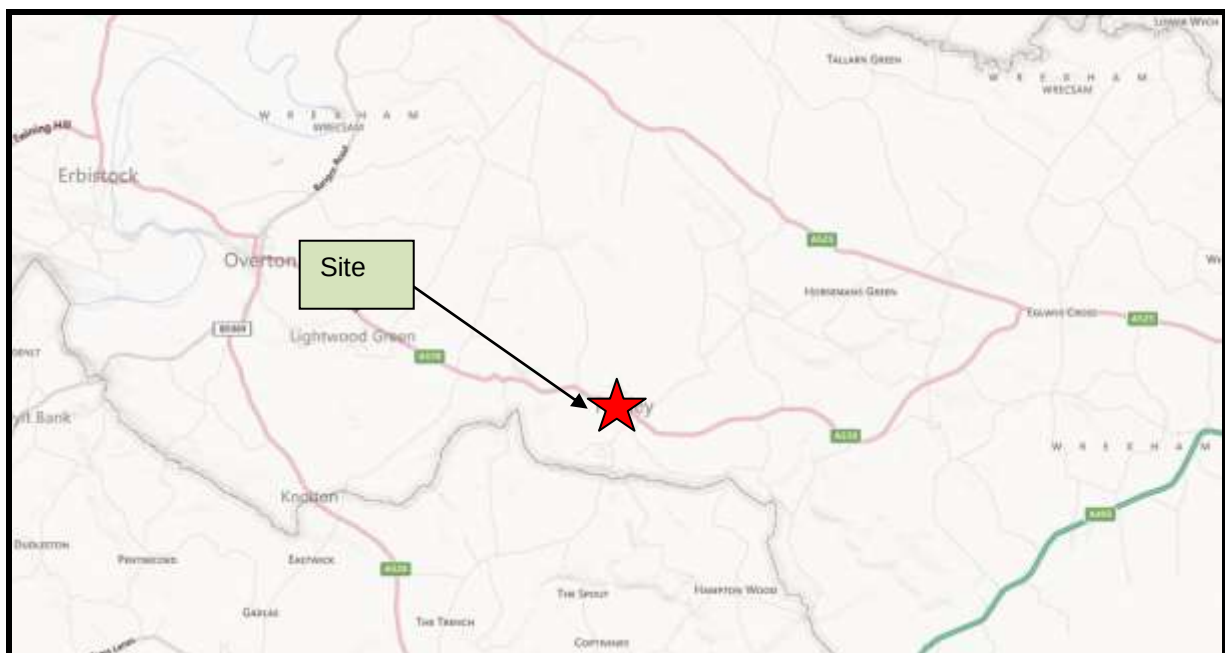
Site location context

The site forms a small area of previously undeveloped land in the urban area that will be developed to the south of the village area along the A539 corridor.

It will be accessed for vehicles from the existing access point from The A539 mini roundabout with the school drop off area and to the NW Dymock Place which will be developed for a residential use with associated car parking and landscaping.



Wider and local area context



The site location next to the A539 bus route, employment and residential uses is shown below.



The site forms part of a mainly residential use area wrapping around the Maelor High School with associated parking spaces.

The above image shows the local setting and the highway network that lies around the site.

Local Highway Provision and parking

All the roads in the area are of a standard carriageway width appropriate for their usage and locally are all 30 mph.

Lane End leads from the A539 southerly arm of the mini roundabout to the school and runs south east giving access to four existing houses.

The A539 runs from Llangollen in the west to the A525 in the east where it links to Whitchurch.



The above shows the approach to the mini roundabout as you exit Lane End.



School access.



View west and east along the A539.

The image shows parked cars in the roundabout area waiting for school to close and pick up pupils. Little abuse took place to the east side of the roundabout.



View of lay-by area to the SE of the school

The lay-by was well used but had spare capacity at the PM pick up time.



View east and west approaches

The well managed use of the lay-by compared to the ad hoc parking along the westerly section is clear to see.



Existing refuge

The pedestrian refuge to the west of the site was well used by pupils crossing to walk home or be picked up in Dymock Place.



Approach into and out of the Lane

The route equates to a single track road/shared drive.



Views along the route/shared area

The route is constrained but does have local widening where the drives join the route.



View into site and out of site



Highway 15 minutes after school closed

The parking for pick up quickly discharged and within 15 minutes of the school closing there was little or no parking or pupil movements. It should be noted as shown overleaf that the majority of pupils arrive/leave via the extensive school bus services accommodated in the bus pick up area.



School bus pick up area.

The new bus area can accommodate 8 full size buses and 8 midi buses.



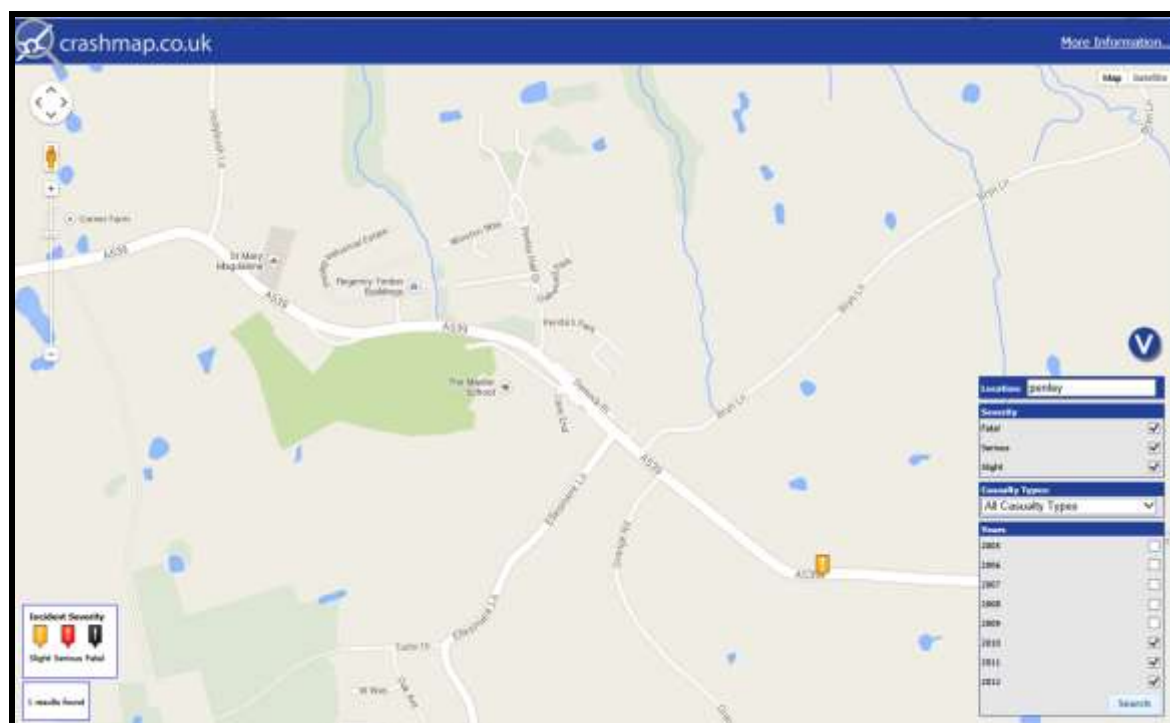
Overhead image of the site and access

Safety review

The national CrashMap accident record site uses data collected by the police about road traffic crashes occurring on British roads where someone is injured.

This data is approved by the National Statistics Authority and reported on by the Department for Transport each year. This site uses data obtained directly from official sources but compiled in to an easy to use format showing each incident on a map. Incidents are plotted to within 10 metres of their location and as such, can sometimes appear to be off the carriageway.

Whilst any accident is regrettable incidents of this nature and number would not indicate a safety issue arising from the operation of the network at the site access area.



The mini roundabout was surveyed in the AM and PM periods as shown below AM, school close 15.15 and PM peak overleaf.

A539/PARK VILLAS/MAELOR SCHOOL ACCESS, PENLEY - THURSDAY 5 SEPTEMBER (08:00-09:00)

A - A539 Whitcomb

B - Park Villas

C - Maelor School Access

To B		B-A	B-D	B-C	Total
0	Cars	16	8	5	29
0	LGV	3	2	0	5
0	OGV1	0	0	0	0
0	DGV2	0	0	0	0
0	PIC	0	0	0	0
0	MHC	0	0	0	0
0	PSV	0	0	0	0
0	Total	19	10	5	34

To C		C-B	C-A	C-D	Total
GB	Cars	0	6	7	13
0	LGV	0	0	0	0
0	OGV1	0	0	0	0
0	DGV2	0	0	0	0
0	PIC	0	0	0	0
2	MHC	0	0	0	0
0	PSV	0	0	0	0
TG	Total	0	6	7	13

A-B	0	0	0	0	0	0	0	0
A-C	16	0	0	0	0	0	0	16
A-D	102	18	6	2	1	2	5	136
Total	118	18	6	2	1	2	5	152
	Cars	LGV	OGV1	OGV2	PIC	MHC	PSV	Total
To A	101	13	2	0	0	1	2	119

117	20	6	2	1	2	5	153	To D
Cars	LGV	OGV1	OGV2	PIC	MHC	PSV	Total	
47	0	0	0	0	2	0	49	D-C
0	0	0	0	0	0	0	0	D-B
79	10	2	0	0	1	2	94	D-A
126	10	2	0	0	3	2	143	Total

D - A539 Roabon

A539/PARK VILLAS/MAELOR SCHOOL ACCESS, PENLEY - THURSDAY 5 SEPTEMBER (15:15-16:15)

A - A539 Whitechurch

B - Park Villas

C - Maelor School Access

To B	B-A	B-D	B-C	Total
0	Cars 16	10	0	26
0	LGV 1	0	0	1
0	OGV1 0	0	0	0
0	OGV2 0	0	0	0
0	PIC 0	0	0	0
0	MIC 0	0	0	0
0	PSV 0	0	0	0
0	Total 17	10	0	27

To C	C-B	C-A	C-D	Total
7	Cars 0	11	12	23
0	LGV 0	0	0	0
0	OGV1 0	0	0	0
0	OGV2 0	0	0	0
0	PIC 0	1	0	1
0	MIC 0	0	1	1
0	PSV 0	0	0	0
7	Total 0	12	13	25

A-B	0	0	0	0	0	0	0	0
A-C	2	0	0	0	0	0	0	2
A-D	70	8	1	1	0	2	0	82
Total	72	8	1	1	0	2	0	84
	Cars	LGV	OGV1	OGV2	PIC	MIC	PSV	Total

92	8	1	1	0	3	0	105	To D
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Cars	LGV	OGV1	OGV2	PIC	MIC	PSV	Total	
5	0	0	0	0	0	0	5	D-C
0	0	0	0	0	0	0	0	D-B
82	17	0	1	2	5	3	110	D-A
87	17	0	1	2	5	3	115	Total

D - A539 Ruabon

0	1	1	Cars
0	0	0	LGV
0	0	0	OGV1
0	0	0	OGV2
0	0	0	P/C
0	0	0	M/C
0	0	0	PSV
0	1	1	Total
B - C	B - A	Total	

B - Lane End

0	0	0	Cars
0	0	0	LGV
0	0	0	OGV1
0	0	0	OGV2
0	0	0	P/C
0	0	0	M/C
0	0	0	PSV
0	0	0	Total
To B	B - C	B - A	Total

B - Lane End

0	0	2	2	Cars
0	0	0	0	LGV
0	0	0	0	OGV1
0	0	0	0	OGV2
0	0	1	1	P/C
0	0	0	0	M/C
0	0	0	0	PSV
0	0	3	3	Total
To B	B - C	B - A	Total	

B - Lane End

4
0
0
0
1
0
0
5
To B

The survey shows for vehicles in the AM 1 out and 0 in, in the school peak no movements and in the PM 2 out and 4 in.

Link capacity

Reference to DMRB TA79/99 sets out the road types and peak hour capacities. The main network would equate to UAP3 to be robust the UAP4 category has been used.

Feature	ROAD TYPE				
	Urban Motorway	Urban All-purpose			
	UM	UAP1	UAP2	UAP3	UAP4
General Description	Through route with grade separated junctions, hardshoulders or hardstrips, and motorway restrictions.	High standard single/dual carriageway road carrying predominantly through traffic with limited access.	Good standard single/dual carriageway road with frontage access and more than two side roads per km.	Variable standard road carrying mixed traffic with frontage access, side roads, bus stops and at-grade pedestrian crossings.	Busy high street carrying predominantly local traffic with frontage activity including loading and unloading.
Speed Limit	60mph or less	40 to 60 mph for dual, & generally 40mph for single carriageway	Generally 40 mph	30 mph to 40 mph	30mph
Side Roads	None	0 to 2 per km	more than 2 per km	more than 2 per km	more than 2 per km
Access to roadside development	None. Grade separated for major only.	limited access	access to residential properties	frontage access	unlimited access to houses, shops & businesses
Parking and loading	none	restricted	restricted	unrestricted	unrestricted
Pedestrian crossings	grade separated	mostly grade separated	some at-grade	some at-grade	frequent at-grade
Bus stops	none	in lay-bys	at kerbside	at kerbside	at kerbside

Table 1 Types of Urban roads and the features that distinguish them

Using the designation above and the flows indicated the following assessment has been undertaken.

		Two-way Single Carriageway- Busiest direction flow (Assumes a 60/40 directional split)									Dual Carriageway			
		Total number of Lanes									Number of Lanes in each direction			
		2				2-3	3	3-4	4	4+	2		3	4
Carriageway width		6.1m	6.75m	7.3m	9.0m	10.0m	12.3m	13.5m	14.6m	18.0m	6.75m	7.3m	11.0m	14.6m
Road type	UM	Not applicable										4000	5600	7200
	UAP1	1020	1320	1590	1860	2010	2550	2800	3050	3300	3350	3600	5200	*
	UAP2	1020	1260	1470	1550	1650	1700	1900	2100	2700	2950	3200	4800	*
	UAP3	900	1110	1300	1530	1620	*	*	*	*	2300	2600	3300	*
	UAP4	750	900	1140	1320	1410	*	*	*	*	*	*	*	*

Table 2 Capacities of Urban Roads
One-way hourly flows in each direction

A UAP4 6.1m carriageway would have a one way flow capacity of 1020, the highest two way flow is 153. The road clearly has no capacity issues.

3.1 Summary

The existing network has low flows and no recorded accidents. It has no operational issues that would give rise to concern.

Some ad hoc parking occurs in the mini roundabout west bound exit are that would benefit from no waiting restrictions to be promoted.

4. EXISTING SUSTAINABLE TRAVEL OPTIONS TO THE SITE

It is important to recognise that national Government guidance encourages accessibility to new developments by non-car travel modes. New proposals should attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non car modes, thus assisting in meeting the aspirations of current national and local planning policy.

The accessibility of the proposed development sites by the following modes of transport has, therefore, been considered:

1. accessibility on foot;
2. accessibility by cycle;
3. accessibility by public transport;

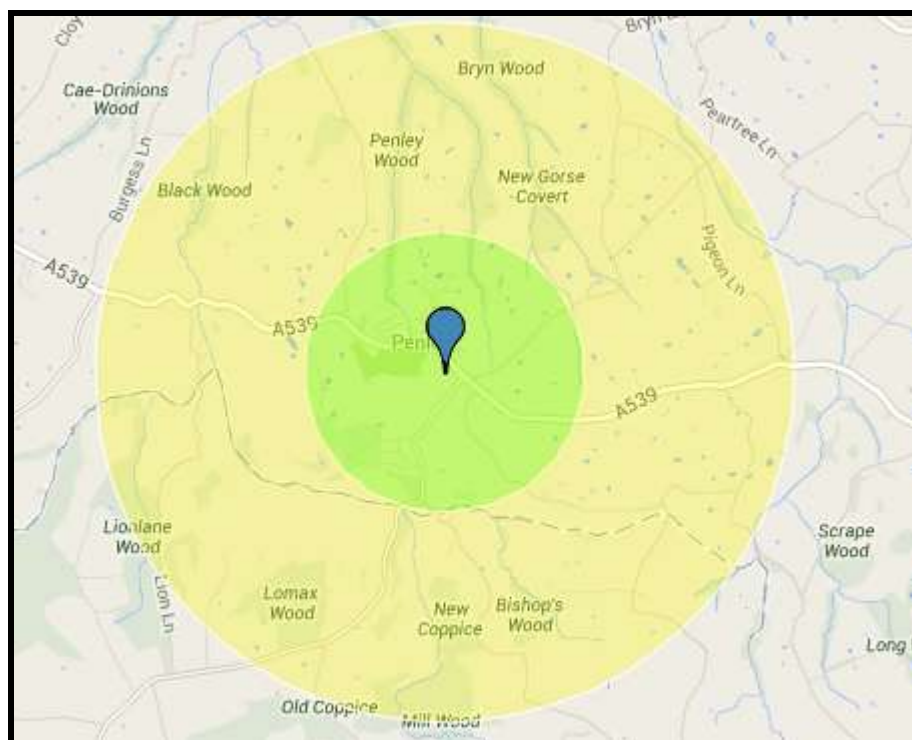
Walking and cycling

The proposed development site is located within an existing urban area with a range of local land uses, services and facilities.

The site lies well within the 400m/5min walk distance to a public transport facility on the A539.

Experience from good practice in Travel Planning development generally suggests that pedestrians are prepared to walk up to 2kms between home and workplace, provided that accessible footway routes are identified.

The pedestrian catchment area for the proposed development site extends to cover the local bus routes and services indicated for the site. The 800m and 2km walk areas are shown below in green and yellow as the crow flies images.



0.8km - 2km walk distance

The CIHT report provides guidance about journeys on foot. It does not provide a definitive view on distances, but does suggest a preferred maximum distance of 2000m for walk commuting trips this extends to cover a considerable part of the urban area.

This is supported by the now superseded PPG 13 and the National Travel Survey which suggests that most walking distances are within 1.6km thus accepted guidance states that walking is the most important mode of travel at the local level supporting the above statement.

The DfT identify that 78% of walk trips are less than 1km in length, (DfT Transport Statistics GB). Importantly, the 2km walk catchment also extends to cover the residential area. There are, therefore, significant opportunities for travel on foot.

There are existing pedestrian routes in the vicinity of the site which will assist the accessibility of the site for pedestrians.

In conclusion, the proposed application site can be considered as being accessible on foot.

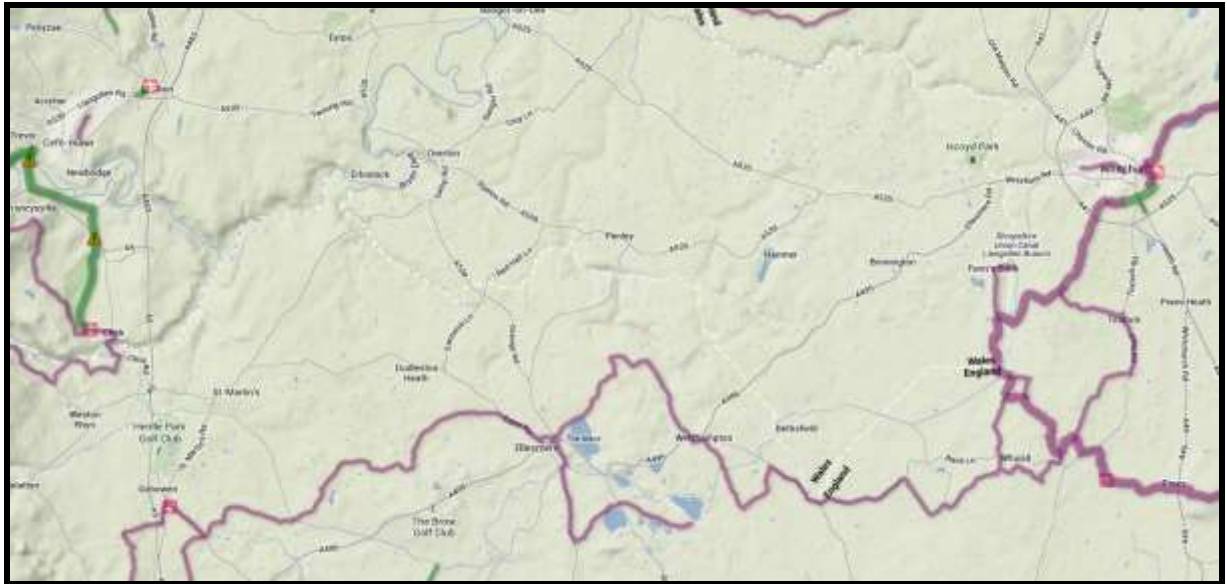
The National Travel Survey NTS (undertaken by the DfT) has identified that a mean distance of between 5 – 10 kilometres is considered a reasonable travel distance between home and workplace by bicycle dependant on the topography. For the purposes of this report the national guidance of 5km will be used.

As described in historic guidance, 'Cycling also has the potential to substitute for short car trips, particularly those under 5 km, and form part of longer journeys by public transport'. The 10km distance will cover a substantial area. The 5 km distance is indicated by the yellow area on the figure below.



Cycle Catchment

The plan shows that a wide rural catchment area within the 5km cycling distance a journey of around 25 minutes using a leisurely cycle speed of 12 kilometres per hour of the site.



Local cycle mapping

Therefore, there are opportunities to travel by cycle and the ability to connect to the local cycle network as shown above.

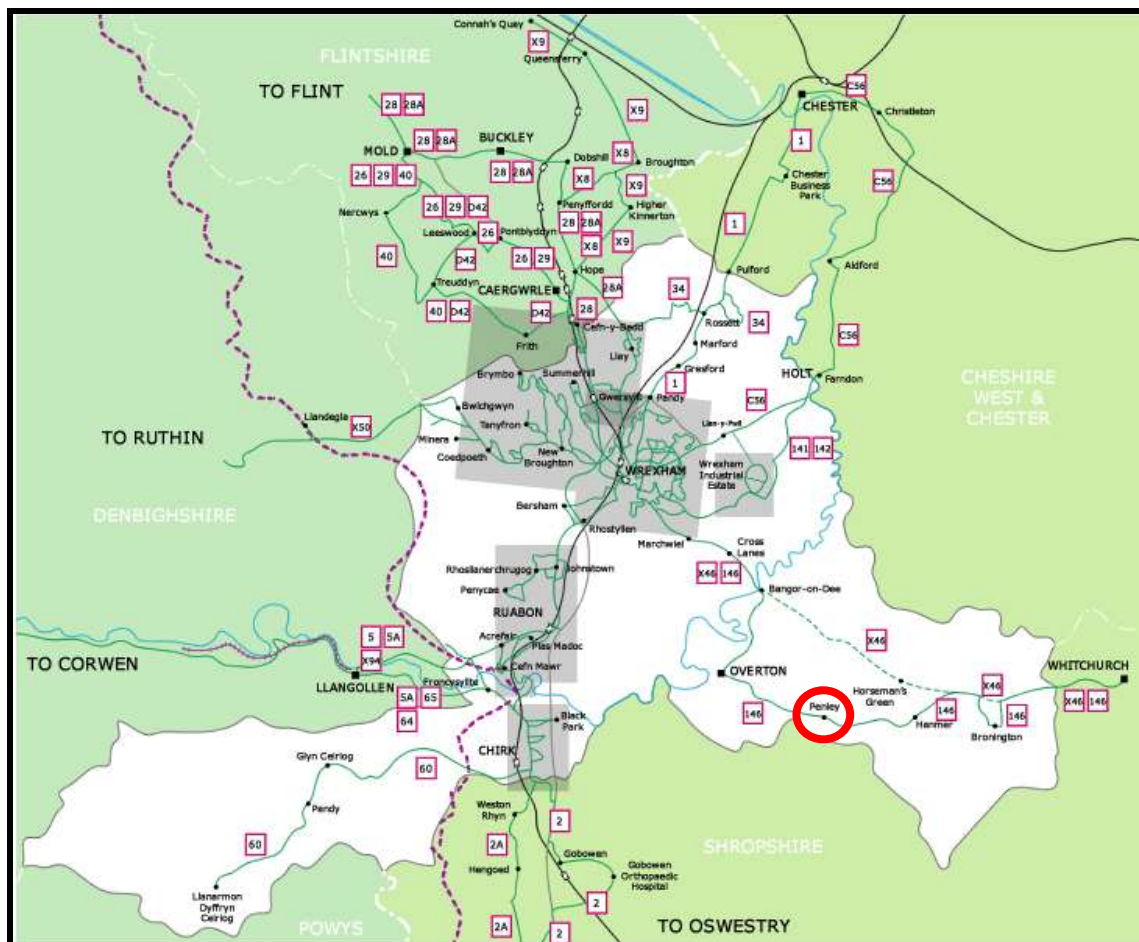
In conclusion, the proposed application site can be considered as being well served by the cycle network and is accessible by cycle.

Travel by public transport

An effective public transport system is essential in providing good accessibility for large parts of the population to opportunities for work, education, shopping, leisure and healthcare.

The nearest bus stops are all within 400m of the site, shown below and the local bus map.





Bus route, services in the wider area.

146 Wrexham - Marchwiell - Penley - Whitchurch **31 Wrexham - Marchwiell**

Mon to Sat (not Bank Hols)

Service No. / Rhif Gwasanaeth:	146	31	146	146	146	146	146	146	146	146	146	146	146
Days / Dyddiau:			SDO	SDO	SSH				SSH	SDO	SSH	SDO	
Wrexham, Bus Station [2]	0645	0706	0810	....	0845	0945	45		1445	1445	1545	1615	1645
Market Street	0649	0708	0816	....	0849	0949	49		1449	1449	1549	1619	1649
Hightown, Farmfoods	0655	0714	0820	....	0855	0955	55		1455	1455	1555	1625	1655
Marchwiell, Piercy Avenue	0659	0723	0824	....	0859	0959	59		1459	1459	1559	1629	1659
Cross Lanes	0701	....	0826	....	0901	1001	01	minutes	1501	1501	1601	1631	1701
Bangor on Dee	0704	....	0829	....	0904	1004	04	past	1504	1504	1604	1634	1704
Bangor on Dee Racecourse	0708	....	0833	....	0908	1008	08	each	1508	1508	1608	1638	1708
Overton	0711	....	0836	....	0911	1011	11	hour	1511	1511	1611	1641	1711
Lightwood Green	0714	....	0841	....	0914	1014	14	until	1514	1514	1614	1644	1714
Penley	0718	....	0845	0918	0918	1018	18		1518	1518	1618	1648	1718
Hanmer	0725	....	....	0925	0925	1025	25		1525	....	1625	1655	1725
Bronington	0730	....	....	0930	0930	1030	30		1530	....	1630	1700	1730
Whitchurch	0740	....	....	0940	0940	1040	40		1540	....	1640	1710	1740

Service No. / Rhif Gwasanaeth:	146	146	146	146
Wrexham, Bus Station [2]	1745	1845	2045	2245
Market Street	1749	1849	2049	2249
Hightown, Farmfoods	1755	1855	2055	2255
Marchwiell, Piercy Avenue	1759	1859	2059	2259
Cross Lanes	1801	1901	2101	2301
Bangor on Dee	1804	1904	2104	2304
Bangor on Dee Racecourse	1808	1908	2108	2308
Overton	1811	1911	2111	2311
Lightwood Green	1814	1914	2114	....
Penley	1818	1918	2118	....
Hanmer	1825	1925	2125	....
Bronington	1830	1930	2130	....
Whitchurch	1840	1940	2140	....

SDO: Schooldays Only

SSH: Saturday & School Holiday

146 Whitchurch - Penley - Marchwiell - Wrexham **31 Marchwiell - Wrexham**

Mon to Sat (not Bank Hols)

Service No. / Rhif Gwasanaeth:	31	146	146	146	146		146		146	146	146	146	146	
Days / Dyddiau:		SDO	SSH						SSH	SDO	SDO	SSH	SSH	SDO
Whitchurch	....	0740	0745	....	0945		45		1445	1445	....	1545	1645	1715
Bronington	....	0751	0755	....	0955		55		1455	1455	....	1555	1655	1725
Hanmer	....	0757	0800	0900	1000		00		1500	1500	....	1600	1700	1730
Penley, Maelor School	....	0805	0807	0907	1007		07		1507	1507	1535	1607	1707	1737
Lightwood Green	....	0806	0808	0908	1008		08	minutes	1508	....	1536	1608	1708	1738
Overton	....	0813	0814	0914	1014	and	14	past	1514	....	1542	1614	1714	1744
Bangor On Dee Racecourse	....	0817	0818	0918	1018	then	18	each	1518	....	1546	1618	1718	1748
Bangor on Dee	....	0821	0822	0922	1022	at	22	hour	1522	....	1550	1622	1722	1752
Cross Lanes	....	0823	0824	0924	1024	every	24	until	1524	....	1552	1624	1724	1754
Marchwiell, Piercy Avenue	0727	0826	0826	0926	1026		26		1526	....	1554	1626	1726	1756
Hightown, Farmfoods	0738	0830	0830	0930	1030		30		1530	....	1558	1630	1730	1800
Salop Road	0741	0834	0834	0934	1034		34		1534	....	1602	1634	1734	1804
Market Street	0744	0836	0836	0936	1036		36		1536	....	1604	1636	1736	1806
Wrexham, Bus Station [2]	0746	0844	0840	0940	1040		40		1540	....	1608	1640	1740	1810

Service No. / Rhif Gwasanaeth:	146	146	146	146
Whitchurch	1745	1845	1945	2145
Bronington	1755	1855	1955	2155
Hanmer	1800	1900	2000	2200
Penley, Maelor School	1807	1907	2007	2207
Lightwood Green	1808	1908	2008	2208
Overton	1814	1914	2014	2214
Bangor On Dee Racecourse	1818	1918	2018	2218
Bangor on Dee	1822	1922	2022	2222
Cross Lanes	1824	1924	2024	2224
Marchwiell, Piercy Avenue	1826	1926	2026	2226
Hightown, Farmfoods	1830	1930	2030	2230
Salop Road	1834	1934	2034	2234
Market Street	1836	1936	2036	2236
Wrexham, Bus Station	1840	1940	2040	2240

SDO: Schooldays Only

SSH: Saturday & School Holiday

146 Wrexham - Marchwiell - Penley - Whitchurch					146 Whitchurch - Penley - Marchwiell - Wrexham				
X46 Wrexham - Whitchurch					Sundays & Bank Holidays : Suliau a Gwyliau Cyhoeddus				
Sundays & Bank Holidays : Suliau a Gwyliau Cyhoeddus					Sundays & Bank Holidays : Suliau a Gwyliau Cyhoeddus				
Wrexham, Bus Station [2]	0945	1145	1445	1645	Whitchurch	1045	1245	1545	1745
Market Street	0949	1149	1449	1649	Bronington	1055	1255	1555	1755
Hightown, Farmfoods	0955	1155	1455	1655	Hanmer	1100	1300	1600	1800
Marchwiell, Piercy Avenue	0959	1159	1459	1659	Penley, Maelor School	1107	1307	1607	1807
Cross Lanes	1001	1201	1501	1701	Lightwood Green	1108	1308	1608	1808
Bangor on Dee	1004	1204	1504	1704	Overton	1114	1314	1614	1814
Bangor on Dee Racecourse	1008	1208	1508	1708	Bangor On Dee Racecourse	1118	1318	1618	1818
Overton	1011	1211	1511	1711	Bangor on Dee	1122	1322	1622	1822
Lightwood Green	1014	1214	1514	1714	Cross Lanes	1124	1324	1624	1824
Penley	1018	1218	1518	1718	Marchwiell, Piercy Avenue	1126	1326	1626	1826
Hanmer	1025	1225	1525	1725	Hightown, Farmfoods	1130	1330	1630	1830
Bronington	1030	1230	1530	1730	Salop Road	1134	1334	1634	1834
Whitchurch	1040	1240	1540	1740	Market Street	1136	1336	1636	1836
					Wrexham, Bus Station	1140	1340	1640	1840

The proposed development site is therefore conveniently located close to bus stops that regularly serve a number of communities in the vicinity of the site. These services provide the opportunity for residents to travel to work or other attractions, or use the proposed development site to travel via public transport.

The proposed application site is therefore considered as being accessible by bus.

Summary

In summary, therefore, the application site can be considered as having the potential to be accessible by public transport in accordance with planning policy guidance related to rural areas.

5. ASSESSMENT OF THE LANE

Existing unit numbers - There are 4 units along the Lane plus an agreed 3 units currently not used but acknowledged as part of the capacity of the route.

Trip levels - The Department for Transport's publication entitled "Guidance on Transport Assessment" (GTA) dated March 2007 sets out the criteria for assessing new development. At Appendix B of the GTA it is confirmed that developments under 50 residential units do not need to be assessed. At paragraph 4.92 GTA states that

"...the 1994 Guidance regarding the assessment thresholds of 10 percent and 5 percent levels of development traffic relative to background traffic is no longer an acceptable mechanism....".

The above notwithstanding GTA does suggest that threshold of 30 two-way trips may be appropriate for identifying the level of impact below which the need for a formal assessment may not be required. Indeed, it is generally the HA's approach to apply the 30 two-way trips threshold as that below which operational assessments are not required for the trunk road network.

The likely number of trips that will be generated by the residential uses based on the above would be well below the 30 two way vehicle trips threshold, as defined in the GTA, in either of the weekday traditional peak hours, the impact will be de minimus.

In addition the councils threshold for residential schemes is for 50 units and above.

Given this it is concluded that the need for the development to be assessed in terms of its impact on the capacity and delay of the network is not required.

Safety - The safety review showed no local safety issues along the route or at the mini roundabout.

Sight lines – The junction has acceptable sight lines/inter visibility between the approach arms.



View showing no issues with sight lines as both links connect to the mini roundabout.

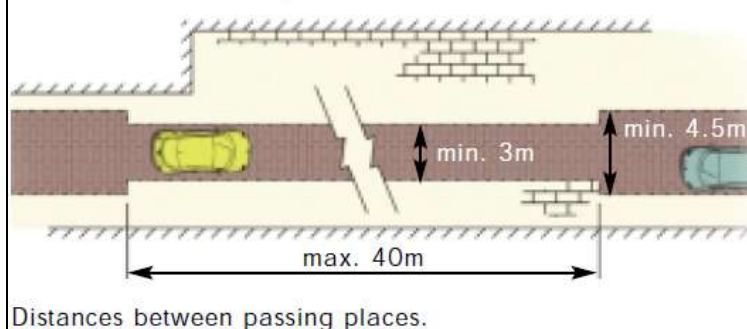
MFS and Homezones

The latest design guidance sets out shared space for low speed routes and removes the need for separate footpaths etc.

Reference to Manual for Streets (MFS), Traffic Advisory Leaflet 2/04 and homezone guidance for narrow sections with passing bays is provided below.

G6. Home Zone streets should have traffic flows of no more than about 100 vehicles in the afternoon peak hour. This is usually the time of day when there is most conflict between vehicles and people, including children playing.

3.5.19 On two-way streets, some sections of vehicle track can be clearly designed for one-way "shuttle" use – ie, too narrow for two light vehicles to pass. This approach will help to reduce speeds and make drivers take particular care. In such layouts, standards in the Netherlands suggest that the track should be widened to 4.5m wide at least every 40m to enable two vehicles to pass.



IHIE Homezone guidance

CONSIDERATIONS WHEN PLANNING A SINGLE TRACK WITH PASSING PLACES SCHEME

- To prevent excessive delay to vehicles, it is recommended that maximum two-way flow should not exceed 300 vehicles per hour. A certain equality of flow is important in order to achieve speed reductions and help prevent vehicles travelling in one direction forcing all others to give way.
- Passing places should have a minimum length of 3 cars. Ideally each passing place should be clearly visible from the last, with spacing no greater than 60m (research shows this is sufficient for vehicle flows of up to 300 vehicles per hour).

TAL abstract

There is anecdotal evidence that similar routes can achieve 500 two way flow per day without causing undue stress where there are passing bays. Furthermore, TAL guidance suggests that 300 vehicles per hour are acceptable. The layout of the Lane with two way at the junction and at the site is

comparable with passing bays as a maximum which indicates it is capable of safely accommodating much higher flows of traffic than might be generated by the proposal

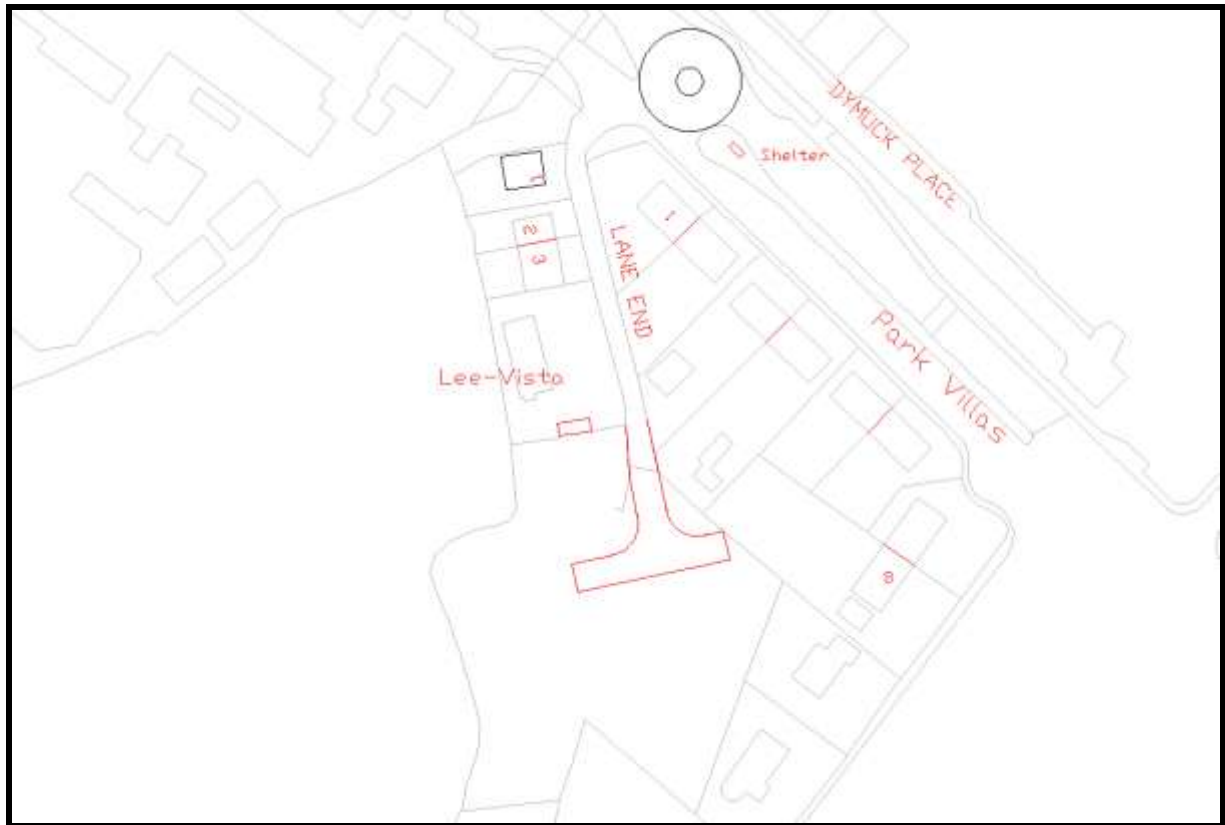
Clearly the flows are significantly less than the above as such capacity issues would not arise other than the occasional give and take.

School interaction – As shown in the surveys the school does have some parking issues but none that affect the access from the mini roundabout, the time period for the interaction is in itself limited to 30 minutes in the AM and 15 minutes in the PM, good visibility is provide between all movements and no safety issues are recorded.

6. THE DEVELOPMENT PROPOSALS AND LAYOUT

Development Proposals

It is proposed to provide ?? units with parking spaces. The internal access will be constructed to adopted highway standards but retained as a private street. The site layout is illustrated on below (see architect drawing for full details).



SITE PLAN

Car parking

Type of Development		Parking Standard	Cycle Parking Standard
C1 Hotels, boarding houses and guest houses.		1 car space per bedroom. For hotels that have function suites, please refer to the parking standard for A3 uses.	1 cycle space per 10 bed spaces, and 1 cycle space per 10 employees
C2 Residential Institutions Care/nursing homes, hospitals.		1 car space per 2 bed spaces	1 cycle space per 10 bed spaces, and 1 cycle space per 10 employees
C3 Dwellings	1 bedroom	1.5 car space per unit	Sufficient space to provide at least 2 secure cycle parking spaces per dwelling. In the case of flats, this should be provided via safe and secure communal cycle parking areas.
	2 bedrooms	2 car spaces per unit	
	3/4 bedrooms	3 car spaces per unit	
	5 or more bedrooms	4 car spaces per unit	
Notes:			
1 An area suitable for ambulance / service vehicles to load/unload and turn within the site will normally be required for C1 and C2 uses, particularly for sites accessed from a classified road. Any extensions should not result in the loss of this loading/unloading/turning spaces unless an adequate alternative can be provided within the site.			
2 Driveways should be wide enough to allow pedestrian access alongside parked cars (including wheelchair access).			
3 Garages will not be counted as contributing towards on-site parking provision.			
4 The parking provision for housing developments does not always need to be located within the curtilage of individual dwellings. Communal parking areas/courtyards may be an appropriate way to provide some/all of the parking spaces for dwellings, particularly smaller properties.			

The scheme will provide accordance in line with policy as shown above.

Impact during Construction

The development of the site will provide an element of HGV traffic during construction. Whilst this is unavoidable, movements will be restricted, where appropriate, to hours that would not cause undue disturbance to the local area.

7. SUMMARY

The scheme accords with local and national policy to site development adjacent to very good transport linkages and other attractions to minimise trips and share trip movements.

The site has a sustainable location and the layout accords with good practice.

Movements have been assessed for up to date levels, the location has no capacity issues based on a robust view of the flows and no capacity or safety issues are expected to arise with the adjacent route to the site.

As such the scheme would have little or no impact on the local network

As such it is considered that there are no substantive reasons why the scheme should not be approved from a transportation point of view.

