

Flintshire County Council

Village Road, Northop Hall

Highways & Transportation Review
06 July 2012

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Notice

This geotechnical report is intended for advice in respect of a planning application, this advice is based on a review of documents provided in conjunction with application No: 048855 lodged with Flintshire County Council.

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1. Introduction & Background

Atkins Limited (Atkins) were requested to provide geotechnical advice regarding the decision taken at a Planning and Development Control Committee meeting on 14th March 2012 to refuse planning application No: 048855 for four reasons, in summary:

- The ecological impact of the development on great crested newts and badgers
- Highway Safety issues to do with the capacity/design of the existing network (Village Road)
- Density of the development too high
- Lack of a geological survey

The officer recommendation was one of approval, largely on the basis that the application site is allocated for residential development in the newly adopted Unitary Development Plan (UDP) and the fact that issues surrounding the four reasons set out above had been addressed by the applicant and are covered in the report to committee (Appendix A: Report of Planning and Development Committee 14th March 2012).

A report by the Flintshire County Council Head of Planning to the planning committee seeking further consideration was submitted and considered in a meeting of the planning & development control committee on the 23rd May 2012; the purpose of this report was to seek guidance regarding the reasons for refusal to be attached to the decision.

An appeal against the non-determination of the application was submitted by the applicant at the same time (23rd May 2012). This appeal is to be considered at an inquiry (date to be determined).

This report draws on geotechnical advice reported by REFA Consulting Engineers who conducted a full ground investigation report.

1.1. Background

A full planning application (Council Ref: 048855) for residential development on land between and behind Maison De Reves and Cae Eithin, Village Road, Northop Hall, Mold, Flintshire was submitted to the Council on 18 July 2011. The application was validated on 20 July 2011. The Applicant is seeking planning permission for a residential development consisting of 51no. dwellings, new road and creation of mitigation land in relation to ecology.

The application was accompanied by various documents including, a Design & Access Statement and Car Park Survey. The application was not supported by a Transport Assessment.

The Application was presented to the Flintshire County Council Planning & Development Control Committee on 14 March 2012 with a recommendation for approval subject to the completion of a Section 106 legal agreement and conditions.

The Head of Assets and Transportation offered *“No objection subject to conditions and a S106 agreement for replacement traffic calming features to manage traffic speeds along the site frontage. This will become part of a wider traffic calming scheme for the village.”*

Local highway-related concerns in connection with this site are well documented both in terms of representation to the Unitary Development Plan process and to this application. For example, the following local highway-related concerns were raised in connection with this application:

- the links between housing and employment in the village are relatively poor resulting in high levels of car commuting;
- increase in traffic where roads are already used as a rat run;
- local roads are not sufficiently wide to accommodate more vehicles and parked cars make it difficult to emerge from side roads;
- the site entrance would be better from the south (old A55);
- increased use of poor pavements, where they exist; and
- it is already dangerous to walk through the village with a pushchair.

Indeed, such concerns formed part of deliberations taking account of by the Inspector at the UDP Inquiry as set out in the Inspector's Report:

11.82.5 Most of the objectors are concerned about the highway implications of the allocation/PC330. However, evidence from the Council's highways officer indicates that a safe access, in accord with the national standards set out in TAN18, can be achieved and that, despite the road configuration, the capacity is available to deal with the anticipated number of trips generated by the proposed allocations. Through the village I am told that further traffic calming can be undertaken and it seems to me that this would improve road safety. The road network to the east and west of the village has or will be improved. Therefore whilst I can appreciate objectors' concerns the evidence does not indicate that highway matters would preclude the allocation/proposed change. This conclusion is based on a combination of written, heard and visual evidence. It takes full account of pavement/road widths, traffic flows through the village and the like.

It is worth noting that the evidence presented by the Council's highways officer to the UPD inquiry was not set out in the Committee Report or in any of the material supporting the planning application.

At the Committee meeting debate focused, in part, upon the issue of the likely highway impacts arising from the additional traffic generated from the proposed development in view of the limited width in places, alignment and lack of footways along Village Road. Members were concerned that Village Road is currently used as a rat run and the proposed development would add more traffic, making the situation worse.

The resolution at the 14 March 2012 Planning & Development Control Committee was to refuse this application for the following reasons:

1. Ecological impact of development (newts and badgers).
2. Highway safety issues (capacity/ design of existing network).
3. Density of development too high.
4. Lack of geological survey.

2. Existing Situation

2.1 Location

The application site is located on land between the B5125 Village Road and Chester Road (the old A55) at Northop Hall, as shown in Figure 2.1. Northop Hall is a large village near Mold, in Flintshire, Wales. Located to the east of Northop, and west of Ewloe, near the A55 North Wales Expressway, the village is largely residential in character. Situated approximately 5 miles from Mold and 10 miles from Chester, the village has good road links to North Wales and North West of England.

Figure 2.1: Location Plan



To the west of the application site is a dwelling called Maison de Reves and dwellings on St Mary's Drive; to the north are dwellings on the opposite side of Village Road; to the east is Cae Eithin beyond which are more dwellings facing Village Road and to the south are fields leading down to Chester Road (old A55) between Brookside, the A55 junction and the B5125 Stamford Way. Bordering the southern part of the eastern boundary are fields/ paddocks. The site slopes down from north to south, towards the A55. Northop Hall primary school is located on Llys Ben which is just east of the application site.

2.2 Existing Highway Network

In the vicinity of the application site access, the B5125 Village Road is a lit (telegraph pole mounted lighting) single two-lane carriageway road subject to a 30 mph speed limit which is substandard in terms of width and alignment in places. For example in the immediate vicinity of proposed site access the road varies between 6 and 7 metres, whereas it narrows to 4.3 metres a short distance east of the Llys Ben and to 4.2 metres at the Black Lion public house. Traffic calming features are in place on Village Road to control vehicle speeds, and for

pedestrian safety. Although there are footways on both sides of the road, these can be quite narrow in places (typically between 1m and 1.3m on south side of Village Road in the vicinity of site access and when boundary hedges are not maintained has the effect of reducing the usable space still further), and non-existent footway in other places (e.g. at the Black Lion public house).

Whilst many (but not all) of the residential properties on Village Road close to the site access, have off-street parking facilities, there are no traffic regulation orders in place to limit on-street parking, which has the effect of reducing the effective width of the road still further. On-street parking (and kerb mounted parking) is a regular feature on this section of Village Road, including directly opposite the proposed site access as shown in Figure 2.2.

Figure 2.2: Example of Existing On-street Parking on Village Road



Further to a Planning Update meeting with Council Officers on 12 July 2011, the applicant was requested to provide details on the existing car parking arrangements for residents directly opposite the proposed new junction. Two weekday car park surveys (between 8am to 9am and 5pm to 6pm) were carried out on Thursday 14th and Friday 15th July 2011, the results of which are detailed in the Car Park Survey report prepared by Anwyl Construction Company Limited, which concludes:

“The results of the car park survey have confirmed that the properties along Village Road within the car park survey area generally have good off-street parking facilities which are well used and in turn allows for minimum on-street parking. With this in mind we consider the on-street parking noted during the survey works would not affect the safe and satisfactory operation of the proposed junction.

The new development proposals provide adequate parking facilities within the development and consequently this should not increase the on-street parking along Village Road”

No evidence is presented with regards to the level of on-street parking at other times of the day (early morning, evening/ overnight), and at weekends when parking demand is likely to be higher, from residents and visitors alike. This is considered to be a significant deficiency in the evidence base with potential associated road safety concerns.

2.3 Existing Road Safety

No evidence is presented in the material supporting the planning application in relation to the existing accident record in the local area.

Accident data for the last 5 years has been provided by the Council, which includes three slight accidents on Village Road (see Figure 2.3), namely

- Village Road at Llys Ben – vehicle door mirror clipped the elbow of a pedestrian;
- Village Road (between Llys Ben and Black Lion public house) – rear end shunt as a result of following vehicle not seeing vehicle in front breaking to allow oncoming vehicle to pass; and
- Village Road at Black Lion public house – vehicle clipping the hand of a pedestrian.

Figure 2.3: Local Accident Record



All three accidents are a concern and reflect the substandard width of both road and footway (and indeed absence of footway) over this section of Village Road.

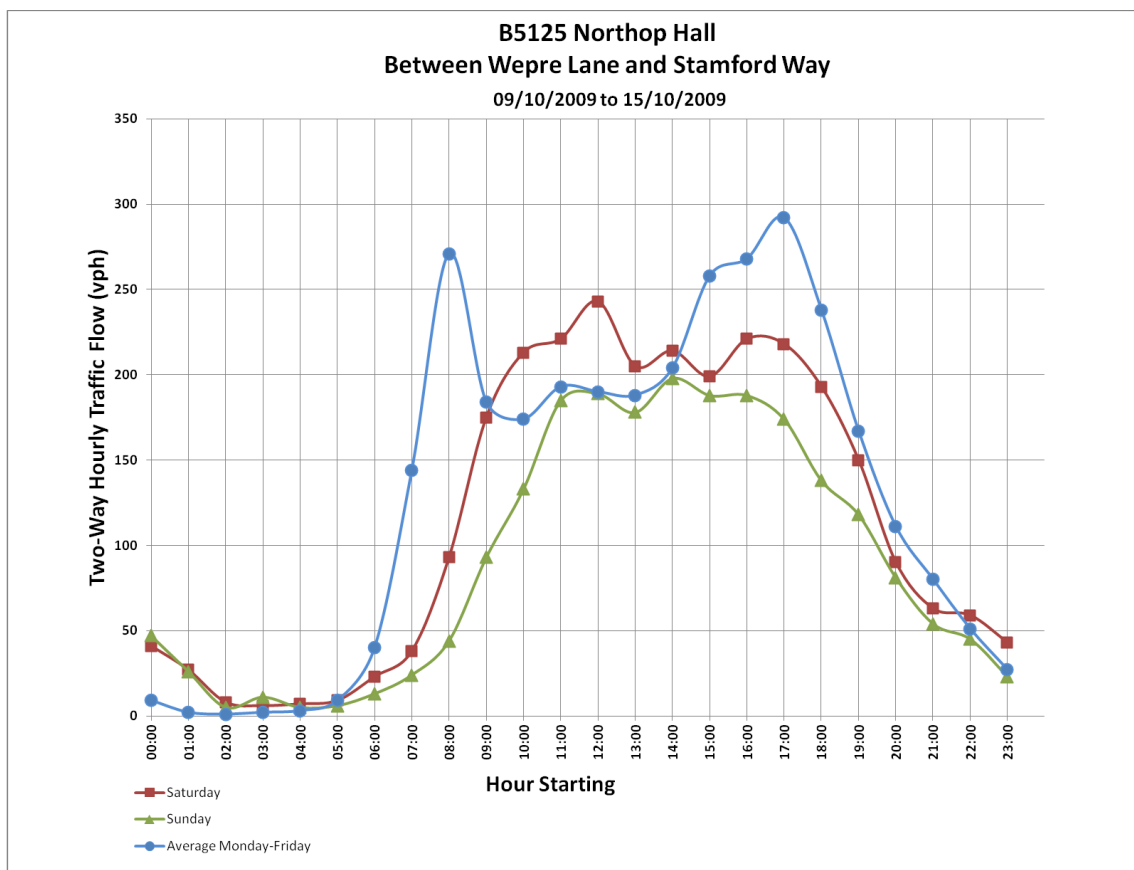
It is noted from evidence presented to the UDP Inquiry that the B5126/ Smithy Lane junction was designated by the Council as an “accident cluster site”. Notwithstanding that the impact of this application development traffic at this junction would be negligible, a junction improvement scheme has since been implemented to address this matter.

2.4 Existing Traffic Flows

No evidence is presented in the material supporting the planning application in relation to the existing traffic flows on the B5125 Village Road through Northop Hall.

The Council has provided some automatic traffic count (ATC) data collected on the B5125 between Wepre Lane and Stamford Way for a one week period 9th October to 15th October 2009. This data is presented in Figure 2.4.

Figure 2.4: Existing Traffic Data



The traffic data shows an evening peak (5pm to 6pm) two-way traffic flow of around 300 vehicles per hour (vph) on B5125, which is equivalent to 5 vehicles a minutes.

A further manual classified count (MCC) on Village Road was carried out by Andy Haxby Traffic Survey Consultancy Ltd on Friday 27th November 2009 on behalf of the Applicant. The traffic survey recorded traffic volumes by direction for the morning and evening peak periods which reproduced in Table 3.1 below.

Table 3.1: Traffic Volumes on Village Road

Time Period	Westbound					Eastbound				
	Car	LGV	HGV	PSV	Total	Car	LGV	HGV	PSV	Total
0800-0900	150	12	1	2	165	104	8	2	3	117
1545-1645	119	13	3	2	137	126	17	1	3	147

The traffic flows recorded on Village Road comparable favourably with those on the B5125 between Wepre Lane and Stamford Way.

There are suggestions from local residents that the B5215 Village Road is used by drivers as a ‘rat run’, including the use of Wepre Lane as an access route through to Connah’s Quay. This would not appear to be borne out by the traffic flow data and I would consider it more likely for traffic to/ from the A55 to use the old the A55 (Chester Road)/ Stamford Way in preference to Brookside/ Village Road, by virtue of the old A55 being derestricted.

2.5 Existing Traffic Speeds

No evidence is presented in the material supporting the planning application in relation to the existing traffic speeds on the B5215 Village Road through Northop Hall.

Traffic speed surveys on Village Road were however, carried out by Andy Haxby Traffic Survey Consultancy Ltd on Friday 27th November 2009 on behalf of the Applicant. A summary of the survey is reproduced in Table 3.2 below.

Table 3.2: Traffic Speeds on Village Road

	Westbound	Eastbound
Speed Limit	30 (48)	30 (48)
Maximum Speed	45 (72)	38 (61)
Minimum Speed	19 (31)	18 (29)
Average Speed	30 (48)	28 (45)
85 th Percentile Speed	34 (55)	31 (50)
Adjusted 85th Percentile Wet Weather Speed¹	31.5 (51)	28.5 (46)

Speeds mph (kph)

- 1.1.1 The recorded traffic speeds show that the traffic calming features do provide some assistance in managing the prevailing 30mph speed limit.

¹ TA 22/81 “Vehicle Speed Measurement on All Purpose Roads” advises that adjusted wet weather speeds can be derived through application of a 2.5 mph (4 kph) reduction from observed dry-weather speeds for an all-purpose single carriageway route.

3. Development Proposals

3.1 Proposals

The application site measures 5.56 hectares and is undeveloped, green field land fronting onto Village Road, to which there is an existing vehicular field access. The proposal includes the following:

- 51 dwellings comprising a mix of detached, semi and semi/mews dwellings and total provision for 155 car park spaces;
- new priority control access to Village Road with 2.4m x 43m visibility splays;
- a new 2 metre wide footpath across the site frontage; and
- new access roads through the development comprises 5.5 metre wide highways with a footway along each side.

3.2 Traffic Calming Scheme

Through consultation with Council Highway officers the development was deemed to be acceptable subject to conditions and a S106 agreement for replacement traffic calming features to manage traffic speeds along the site frontage.

Policy AC14 in the adopted UDP sets out its requirement for Traffic Calming:

In all new developments where there is potential concern for the road safety of pedestrians, cyclists and vehicular traffic either within the development or on surrounding streets, the County Council will require appropriate traffic calming measures to be implemented.

It is proposed that the traffic calming scheme will replace the existing calming features and is designed to manage traffic speeds along the development site frontage. It will then become part of a wider traffic calming scheme for the village.

The proposed traffic calming scheme, to be part of the S106 agreement, comprises:

- a 65mm high, 3.4m long x 1.7m wide speed cushion on Village Road in front of the Black Lion public house to the east of the site. This will stipulate vehicle alignment whilst aiding pedestrian safety with the creation of a 0.5m 'Exclusion Zone' on either side of existing carriageway;
- a traffic calming feature on the highway immediately east of the new access;
- 'Give Way' lines and associated build-out to facilitate vehicle movements whilst entering and departing from properties 'Amon' and 'Lynwood', east of the site; and
- 'Road Narrows' Warning Signs erected at suitable locations.

It is considered that the introduction of traffic calming scheme of this nature would provide a more formal controlled arrangement of traffic movements through the existing narrower sections of highway which in conjunction a new 2 metre wide footpath across the site frontage would result in a level of betterment to the existing highway network. Indeed such measures would further reduce the "attractiveness" of Village Road as a potential rat-run between the A55 and Connah's Quay.

The report by the Head of Planning to the Planning & Development Control Committee of 14 March 2012 refers to a S106 agreement payment of £10,500.00 towards the cost of implementation of offsite highway improvement works comprising a Traffic Calming Scheme.

No details are provided of the total cost of the Traffic Calming Scheme and whether the Council has funds secured to deliver the Scheme. Clarification from the Council is sought on this matter.

3.3 Proposed Site Access Junction

The original assessment of the site in 2002 conclude that the highway frontage was of inadequate length to be able to achieve the standard of visibility recommended by the then requirements of Planning Policy Wales Technical Advice Note 18: Transport (TAN 18) i.e. 4.5m x 90m in both directions to the nearside edge of the

carriageway. It was also concluded that as the site had more than ample depth it may be possible to accommodate the installation of a three-arm mini-roundabout off-set into the site to overcome the lack of visibility.

TAN 18 was revised in March 2007, including advice relating to visibility splays at priority junctions which enable drivers and other road users to see one another at points of conflict, and comprising two right-angled triangles of X and Y dimensions, where:

- **X-distance** is the distance back along the minor arm of a junction. It is generally measured from the give way line (or the point where the line would be placed if no line markings are actually provided). The X-distance is normally measured at the centreline of the minor arm; and
- **Y-distance** represents the distance that a driver who is about to exit from the minor arm can see to the left and right along the main alignment. For simplicity it is measured along the nearside kerb line of the main arm, although vehicles will normally be travelling a distance from the kerb line of the main arm.

Current advice is that a minimum X-distance of 2.4 metres should normally be used in most situations, as this represents a reasonable maximum distance between the front of the car and the driver's eye.

Requirements for Y-distance should be based on stopping sight distance (SSD) criteria. SSD is defined as the minimum distance that drivers need to be able to see ahead of themselves, in order to stop if confronted by a hazard. SSD is usually related to the actual (for existing streets) or design (for new streets) 85th percentile wet weather speed of vehicles on the major link (which in this case would be Village Road). Recommended SSD are included in Tables A and B in TAN18 Annex B. Table B is designed for roads in built up areas where actual or design speeds are 60km/h or below (not applicable to trunk roads). Figures in Table B may be interpolated from this table or calculated as in Manual for Streets.

A 2.4m x 43m visibility splays would equate to an 85th percentile wet weather speed of 50 kph (31 mph), which is in line with the traffic speed survey carried out on Friday 27th November 2009 and given the proposals for additional traffic calming measures on Village Road is considered appropriate.

That said, we feel further consideration perhaps could have been given to a mini-roundabout solution as this would in itself have a traffic calming effect, with through traffic on Village Road having to slow to give way to traffic wishing to access/ egress the application site. It is noted that some local residents made reference to the proposed mini-roundabout access arrangement as being "stupid" or "madness" as part of their objections at the UDP Inquiry.

3.4 Potential Alternative Access Arrangement

Direct access from south to the old A55 (Chester Road), which is a derestricted single two lane carriageway road, would in principle appear to offer from a purely transportation perspective an attractive potential alternative road access arrangement (with pedestrian/ cycle and emergency access only from Village Road). Such an access option would allay any road safety related concerns associated with Village Road and from site observations Chester Road would seem to be lightly trafficked.

It would be helpful if further details are required to explain the justification for ruling out this access option bearing in mind that costs alone would not necessarily be a valid planning reason for dismissing such alternatives. It is recognised that the fields comprising the southern part of the application site is not allocated for housing and that ground falls quite significantly from north to south towards the old A55. It would be useful to understand whether allocation of the southern part of the application site for housing was considered as part of the UDP process.

4. Transport Assessment

The application was accompanied by various documents including, a Design & Access Statement and Car Park Survey. The application was not supported by a Transport Assessment.

4.1 UDP Requirements

Policy AC13 in the adopted UDP sets out its requirement for Access and Traffic Impact:

Development proposals will be permitted only if:

- a. approach roads to the site are of an adequate standard to accommodate the traffic likely to be generated by the development without compromising public safety, health and amenity; and*
- b. safe vehicular access can be provided by the developer both to and from the main highway network.*

Where considered necessary, the Council will require a transport assessment, incorporating a traffic impact assessment.

10.55 In order to ensure that new development does not create increased risk of injury, ill health or nuisance it will be essential that the likely implications of additional traffic generation are fully assessed. Not only must safe access directly to and from the site be capable of being provided by the developer, but care must be taken to ensure that additional vehicular journeys to and from the site do not create congestion or unacceptable disturbance further afield. Consideration will be given to traffic speeds, the adequacy of visibility splays, proximity to junctions, parking controls and other relevant factors.

10.56 Where it is considered that a proposal would necessitate the construction of new road capacity the developer will be expected to provide the additional infrastructure needed. With larger developments the submission of a transport assessment may be required with a proposal. This would need to assess the impact of traffic generated by the development and the adequacy of any mitigation measures put forward as part of the proposal.

4.2 TAN18 Guidance

While TAN18 provides in Annex D “*suggested thresholds above which a Transport Assessment should be required except where planning authorities set out in SPG2 different ‘scale of development’ triggers that are locally sensitive, or where they highlight particular locations in the plan area where the transport network is particularly sensitive and consequently thresholds for requirement assessments will be lower.*”

The threshold set out in TAN18 Annex D for housing is more than 100 dwellings.

4.3 This Application

Whilst this application for 51 dwellings is some way below the TAN18 threshold of 100 dwellings, it is important to remember that the application site forms part of a larger allocated site for housing with an indicative yield of 93 units. Whilst it is recognised that this application is for part rather than the whole of the site allocated in the UDP, no consideration has been given to the cumulative impact of development. It is noted that planning application ref. 048373 (withdrawn July 2011) assumed that 72 dwellings would all be taken from the currently proposed junction access and was not supported by a Transport Assessment (or for that matter a car park survey).

Under these circumstances, and given the well documented concerns of local residents, it would seem entirely reasonable for a Transport Assessment to have been undertaken to:

² SPG Supplementary Planning Guidance

- understand the transport impacts of the development;
- clearly communicate the impacts to assist the decision making process;
- demonstrate the development is sited in a location that will produce a desired and predicted output (for example in terms of target modal split);
- mitigate negative transport impacts through the design process and secured through planning conditions or obligations;
- maximise the accessibility of the development by non-car modes; and
- contribute to relevant development plan and Regional Transport Plan objectives relating to accessibility of services and modal share.

Although no transport assessment was submitted to support this planning application, the Applicant's transport consultants Axis did engage in consultation with the Council in connection with UDP site allocation, notably in a letter to the Council dated 7th December 2009. A response from the Council was provided on 7th January 2010. A copy of the correspondence is provided in Appendix A.

4.4 Traffic Generation

No evidence is presented in the material supporting the planning application of the likely traffic generation associated with the development proposals. It is clear that with over three car spaces per dwelling the proposals will be a predominantly car-based development for work, leisure and shopping.

In a letter to the Council dated 7th December 2009, Axis (transport consultants acting on behalf of the Applicant) estimate³ that 90 dwellings would generate 656 vehicles per day (two-way).

On the basis of traffic surveys carried out by the Council on the B5125 between Wepre Lane and Stamford Way for a one week period 9th October to 15th October 2009, the average daily traffic is currently around 2900 vehicles (two-way). An increase of 656 vehicles per day (two-way) represents a significant 22.5% increase in traffic volumes.

4.5 Traffic Impact

No evidence is presented in the material supporting the planning application of the likely traffic impact associated with the development proposals.

However, junction analysis⁴ carried out by Axis in relating the UDP site allocation development of 90 dwellings shows that proposed priority control junction access arrangement would have sufficient capacity to accommodate development traffic.

³ Using data from the industry standard TRICS database (2009b)

⁴ Carried out using the TRL software package PICADY (for assessing priority control junctions)

5. Conclusion

Local highway-related concerns in connection with the application site are well documented both in terms of representation to the Unitary Development Plan process and to this application.

It is surprising therefore that neither this application nor previous application for the site sought to allay these local concerns through a Transport Assessment. A transport assessment would have set out in clear terms the extent of any existing problems on the local highway network (such as road safety, traffic speed, rat running and congestion), the impact of the development proposals, the cumulative impact of the whole allocated site and how the access and mitigation proposals put forward address these issues.

That said, the Applicant's transport consultants Axis did engage in consultation with the Council in connection with UDP site allocation, it would have been helpful if the details of this consultation had been provided as background supporting material to this application, and at least referred to in the Officer's Committee Report.

Based on our review of all available data and on-site observations it would be helpful if further details are provided on the following aspects:

- more comprehensive on-street car parking surveys during times most likely to generate peak parking demand from residents and visitors alike;
- the potential traffic calming benefits of mini-roundabout access arrangement; and
- confirmation that the proposed traffic calming scheme for the village has committed funds and will be implemented prior to first occupation.

Notwithstanding, it is our professional judgement that this development accompanied by appropriate highway access arrangements and mitigation is not likely to result in a detrimental impact to the safe and efficient operation of the local highway network.

Indeed the introduction of the proposed traffic calming scheme would provide a more formal controlled arrangement of traffic movements through the existing narrower sections of highway which in conjunction a new 2 metre wide footpath across the site frontage would result in a level of betterment to the existing highway network. Furthermore, such measures would further reduce the "attractiveness" of Village Road as a potential rat-run between the A55 and Connah's Quay.

Contrary to our professional judgement should a refusal on highways ground be pursued we would suggest that the reason should be worded accordingly:

Reason: The proposed development will lead to additional traffic being generated onto the existing road, Village Road, which is substandard in terms of width and alignment in places, to the detriment of highway safety, pedestrians and local residents, and is therefore contrary to Policy Gen 1 (f) of the UDP.