

Appeal by Mrs Margaret Crewe

Planning Inspectorate Reference:

APP/H6955/A/16/3147116

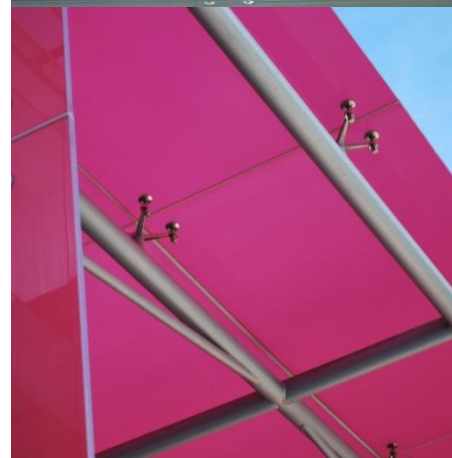
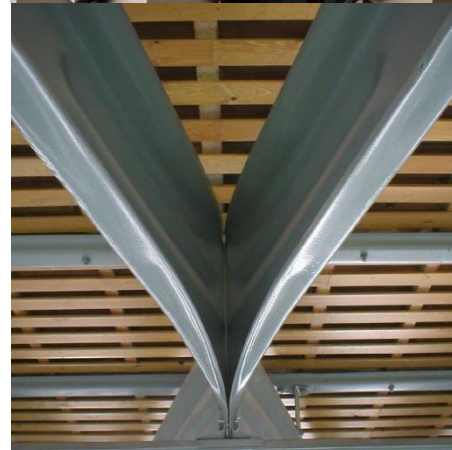
Planning Application Reference:

P/2014/0905

Home Farm, Gresford Road, Llay

Proof of Evidence – Alex Vogt
BSc, MSc, MCIHT, TPP

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Table of Contents

1.0	Qualifications and Experience	1
1.1	Alex Vogt BSc, MSc, MCIHT, TPP	1
2.0	Introduction	2
2.1	Introduction.....	2
2.2	Planning Background	2
2.3	Purpose and Structure of Evidence	5
3.0	Site Description and Existing Infrastructure	6
3.1	Site Location.....	6
3.2	Existing Use	6
3.3	Existing Access Arrangements	6
3.4	Surrounding Highway Network.....	6
4.0	Development Proposals	9
4.1	Introduction.....	9
4.2	Proposed Access	9
4.3	Servicing and Refuse Collection	11
4.4	Parking Provision	11
4.5	Public Transport and Bus Permeability	11
4.6	Interim Travel Plan	12
5.0	Transport Planning Policy.....	13
5.1	Introduction.....	13
5.2	Reason for Refusal.....	13
5.3	Other Material Considerations	13
5.4	Wrexham Unitary Development Plan	17
5.5	North Wales Joint Local Transport Plan 2015	18
6.0	Planning Conditions and Obligations	20
6.1	Introduction.....	20
6.2	Planning Conditions	20
6.3	The Crown Crossroads (Condition 13).....	21
6.4	Planning Obligations	26
7.0	Assessment of Proposals against Third Party Objections.....	27
7.1	Introduction.....	27
7.2	Sustainability of the Appeal Site.....	27
7.3	Traffic Generation.....	32
7.4	Increase in Traffic on Local Roads.....	33
7.5	Cumulative Increase in Traffic.....	34
7.6	Highway Safety	35
7.7	Third Party Objections Summary	37
8.0	Summary and Conclusions.....	38
8.1	Summary	38
8.2	Conclusions	39

Tables

Table 4.1 – Wrexham Parking Standards: C3 - Dwellings	11
Table 6.1 – Crown Crossroads Capacity – Do Nothing	24
Table 6.2 – Crown Crossroads Capacity – Physical Improvements Only	25
Table 6.3 – Crown Crossroads Capacity – Physical Improvements + MOVA	26
Table 7.1 – CIHT Recommended Walking Distances.....	27
Table 7.2 – Bus Services Local to the site	31
Table 7.3 – Development Trip Rates and Trip Generation (365 units).....	33

Appendices (Bound Separately)

Appendix AV A:	Post-determination Correspondence with WCBC Highways Land at Home Farm, Llay: Technical Note 01 – Curtins Reference TPMA5021/TN01 Email Correspondence Regarding the Crown Crossroads
Appendix AV B:	Location and Catchment Plans AV001 Site Location (Regional Perspective) AV002 Site Location (Local Perspective) AV003 Local Facilities and Pedestrian Catchment (up to 1,200m) AV004 Local Facilities and Pedestrian Catchment (up to 2,000m) AV005 Wrexham Facilities and Pedestrian Catchment (up to 400m) AV006 Cycle Routes and Cycle Catchment AV007 Bus Routes AV008 Public Transport Catchment (up to 30mins) AV009 Public Transport Catchment (up to 60mins)
Appendix AV C:	Indicative Masterplan Landscape Strategy Diagram (Produced by BCA Landscape)
Appendix AV D:	Initial Transport Assessment Access Drawings Drawing TPMA5021_004 – Proposed Site Access Overview Drawing TPMA5021_002 – Proposed Site Access 2 Drawing TPMA5021_003 – Proposed Site Access 3 Drawing TPMA5021_005 – Proposed Site Access 1
Appendix AV E:	Alternative Gresford Road Vehicular and Pedestrian Access Drawings Drawing TPMA5021_019 – 3 Arm Compact Roundabout Gresford Road Drawing TPMA5021_100_001 – Zebra Pedestrian Crossing Drawing TPMA5021_100_002 – Zebra Pedestrian Crossing
Appendix AV F:	Relevant Policy/Guidance Not Referenced within the Core Documents Wrexham UDP (Policy T9) North Wales Joint Local Transport Plan 2015 (Relevant Excerpts) Providing for Journeys on Foot (Relevant Excerpts) Guidelines for Planning for Public Transport in Development (Relevant Excerpts)

Appendix AV G:	Crown Crossroads Mitigation Drawing TPMA5021_102 – B5102 Gresford Rd: Proposed Alt. Signalised Junction Highway Boundary Extents Red Line Plan Traffic Advisory Leaflet 3/97 Crown Crossroads LinSig Outputs: Do Nothing Crown Crossroads LinSig Outputs: Physical Improvements Only Crown Crossroads LinSig Outputs: Physical Improvements + MOVA
Appendix AV H:	Bus Timetables and Traveline Data 28A Timetable 34 Timetable PC1 Timetable PC2 Timetable Table NTS0311
Appendix AV I:	TRICS Outputs Transport Assessment Trip Rates
Appendix AV J:	Highway Safety Data Welsh Interactive Road Accident Casualties Map (2009 – 2013) CrashMap Supplement (2014 – 2015)

1.0 Qualifications and Experience

1.1 Alex Vogt BSc, MSc, MCIHT, TPP

- 1.1.1 My name is Alex Vogt. I am a Technical Director at Curtins.
- 1.1.2 I have a Master's Degree in Transport Engineering and Planning and I am a Member of the Chartered Institution of Highways and Transportation (CIHT). I have also obtained the Transport Planning Professional (TPP) Qualification from the CIHT.
- 1.1.3 I have 15 years' experience of transport planning in the UK. In particular, my experience lies within the field of Transport Assessments for a wide range of private sector developments, including the housing sector.
- 1.1.4 I have visited the site and surrounding area on a number of occasions for the purposes of this Inquiry.
- 1.1.5 The evidence I am going to present has been prepared to consider highway, traffic and transportation matters.
- 1.1.6 I confirm that the opinions expressed are true and professional opinions.

2.0 Introduction

2.1 Introduction

- 2.1.1 This document is a Proof of Evidence that relates to the appeal made by Mrs Margaret Crewe (the Appellant) following the decision by Wrexham County Borough Council (WCBC) to refuse planning permission for;

“Outline application for 365 residential dwellings and erection of 300 square metre retail unit – all detailed matters reserved.”

2.2 Planning Background

- 2.2.1 The planning application, dated 2nd December 2014, was submitted on behalf of the appellant by Michael Cunningham Architects (MCA) (now part of the Mersey Design Group).

- 2.2.2 The planning application was accompanied by a Transport Assessment (TA) (Report Reference: TPMA5021/TA) and Interim Travel Plan (ITP) (Report Reference: TPMA5021/ITP), prepared by Curtins, both dated 2nd December 2014. These reports are provided in the Core Documents, and are to be read alongside my proof of evidence.

- 2.2.3 Following submission of the outline planning application, Curtins continued to liaise with Highway Officers at WCBC in order to address any outstanding concerns arising from their review of the TA and ITP. As a result of these discussions, it was agreed that a single compact roundabout on Gresford Road may be preferable to the two roundabouts proposed in the application.

- 2.2.4 On the 20th May 2015, WCBC Highways provided a formal response to the Head of Community Well-being and Development. The response offered no objection to the proposed development subject to the imposition of various planning conditions.

- 2.2.5 The Head of Community Wellbeing and Development provides a summary of traffic and transportation matters in the Report of The Head of Community Wellbeing and Development dated the 5th October 2015.

- 2.2.6 With regard to sustainability, the report states that:

“Llay benefits from a frequent bus service to and from Wrexham. The Llay Industrial Estate is also one of the key strategic employment sites in the County Borough. As such future occupiers will be able to access employment, leisure and other facilities without the need to travel by private car. In that regard the site can be considered to be in a broadly sustainable location.”

- 2.2.7 With regard to highway capacity, the report states that:

“Highways have not raised any concerns about the capacity of the local highway network to cater for the traffic generated by the development and I have no reason to conclude otherwise.”

2.2.8 Notwithstanding, the report goes on to state that there are existing deficiencies at the Crown Crossroads that can cause delays during peak periods and this could be exacerbated by the development traffic. The report therefore suggests a condition requiring the submission and implementation of a scheme of junction improvements at the Crown Crossroads prior to the development commencing.

2.2.9 With regard to access, the report states that:

“Whilst detailed access proposals are reserved for subsequent approval, the submitted plans confirm that the development will be accessed via roundabout junctions onto the Straight Mile and Gresford Road. I am satisfied that these will provide a safe means of access into the site and will not prejudice the continued safe use of the existing highway. Full details of the junctions will be submitted at reserved matters stage.”

2.2.10 With regard to pedestrian connectivity, the report states that:

“Highways have recommended that a new footway is provided along the full length of the site boundary to ensure the site is properly¹ integrated with the existing village. I agree that the development will need to provide footways to ensure that future occupiers can safely walk along the site frontage and/or cross Gresford Road, however, the footpath does not necessarily need to be constructed adjacent to the existing highway along the entire length of the Gresford Road frontage. Depending upon the layout of the development it may be appropriate to retain some existing boundary features and route the footway behind it. However, this is a matter that will need to be considered in more detail at reserved matters stage.”

2.2.11 With regard to the Travel Plan, the report states that;

“An interim travel plan has been submitted setting out measures that will be put in place to promote/facilitate walking, cycling and public transport use in order to encourage future occupiers to be less dependent on private car journeys... Final Travel Plans will be secured by condition.”

2.2.12 The report concludes that;

“I am satisfied that an acceptable form of development is achievable without prejudice to the amenity of the occupiers of neighbouring properties, highway safety and ecology.”

¹ properly?

2.2.13 The report goes on to recommend that the Council enters into an Obligation under Section 106 of the Town and Country Planning Act; and upon completion of this, that permission be granted subject to the imposition of various conditions.

2.2.14 It is now agreed that any obligations would be secured through a Unilateral Undertaking. From a traffic and transport perspective, this solely relates to a Travel Planning contribution.

2.2.15 Six traffic and transportation conditions were listed and these have been broadly summarised as:

- Condition 1d - The means of vehicular, pedestrian and cycle access, including the internal layout;
- Condition 13 - The Crown Crossroads mitigation;
- Condition 14 - Speed limit reductions on the Straight Mile;
- Condition 15 - Parking and loading arrangements for the proposed residential units;
- Condition 16 - Parking and loading arrangements for the proposed retail unit; and
- Condition 17 - The requirement for a Final Travel Plan.

2.2.16 Planning permission was refused by the Council's Planning Committee at its meeting on the 5th October 2015. This was against the recommendation of the Report of the Head of Community Wellbeing and Development.

2.2.17 No part of the reason for refusal or the policies referenced relate to traffic and transportation.

2.2.18 The appellant decided to appeal the decision and this was formally lodged on the 23rd March 2016.

2.2.19 In preparing for the Inquiry, a Planning Statement of Common Ground (PSoCG) has been prepared and under Section 5.6 'Transportation' it states:

"It is agreed between the parties that:

- *The application was supported by a Transport Assessment and Interim Travel Plan, the validity of which was not questioned by the Councils Highway Authority.*
- *The Council as Highway Authority raised no objection to the application, but recommended conditions be attached to any permission.*
- *Footways along Gresford Road and Straight Mile should be improved and that these could be routed within the site behind the hedgerow/wall in order to retain existing boundary features.*
- *The Council's parks, countryside and rights of way team raised no objection.*
- *The site is in a sustainable location, and that the proposed retail unit will contribute to the sustainability of the development and the eastern side of Llay.*
- *Transportation does not form part of the reason for refusal and the proposed development is not contrary to UDP policies GDP1 Development Objectives, of which objectives (d) and (e) relate*

to transportation, GDP2 Capacity of Infrastructure and Community facilities, or T8 Parking. The proposal is also not contrary to UDP Policy CLF6 Informal Recreation – Public Rights of Way.”

2.2.20 In preparing for the Inquiry Curtins has continued to liaise with Highways Officers at WCBC regarding the six traffic and transportation planning conditions and the planning obligations. This has included the production of a Technical Note dated 3rd August 2016 (reproduced in **Appendix AV A**) which focuses on mitigation at the Crown Crossroads and pedestrian connectivity to Llay centre.

2.3 Purpose and Structure of Evidence

2.3.1 I have written this Proof of Evidence in order to provide an update on traffic and transportation matters for the Inquiry.

2.3.2 The evidence I am going to present on behalf of the Appellant will specifically relate to third party concerns and the deliverability of the proposals for up to 365 dwellings and a 300 square metre retail unit in accordance with national and local transport planning policy.

2.3.3 Following this introduction, in Section 3, I describe the appeal site and the existing infrastructure in the vicinity of the site.

2.3.4 Section 4 then provides details of the development proposals and how the existing infrastructure will be enhanced to accommodate the development.

2.3.5 In Section 5, I make reference to the pertinent transportation planning policy relating to the appeal.

2.3.6 In Section 6, I consider the planning conditions and obligations.

2.3.7 In Section 7, I respond to relevant objections by third parties.

2.3.8 In Section 8, I present my summary and conclusions.

2.3.9 All plans and drawings referenced in my evidence are included in the Appendices, which are bound separately.

3.0 Site Description and Existing Infrastructure

3.1 Site Location

- 3.1.1 The Appeal Site is located to the north east of Llay, bound by the B1502 (The Straight Mile) to the north and the B5373 (Gresford Road) to the south west.
- 3.1.2 There are two residential properties immediately to the south of the site and the eastern boundary is bordered by open countryside. Public Right of Way (PRoW) LLA/5 runs adjacent to the eastern boundary.
- 3.1.3 The junction where the B5373 Gresford Road and the B5102 The Straight Mile meet is known as the Crown Crossroads.
- 3.1.4 The site is shown from a regional perspective in AV001 and a local perspective in AV002, contained in **Appendix AV B**.

3.2 Existing Use

- 3.2.1 The Appeal Site comprises 15.86ha of agricultural land, including cattle sheds and areas of hardstanding used to park farm vehicles. The site also comprises a series of fields with hedgerows and, in some instances, walls on their boundaries. A belt of trees is located on the site boundary along Gresford Road running north west from Home Farm.

3.3 Existing Access Arrangements

- 3.3.1 Vehicular access to the site is currently obtained from a gate and gap in the hedgerow along The Straight Mile, approximately 300m east of the Crown Crossroads.

3.4 Surrounding Highway Network

B5102 Straight Mile

- 3.4.1 The Straight Mile runs eastwards from a signalised junction at the north west corner of the site for approximately 1.5km until the carriageway continues as Croeshowell Hill.
- 3.4.2 In the vicinity of the site, The Straight Mile forms a single lane, two-way carriageway approximately 7m in width. There is a footway on the northern side of the road which is less than 1m wide. The carriageway has a speed limit of 60mph, and there is no street lighting present.

B5373 Gresford Road

- 3.4.3 Gresford Road runs southwards from a signalised junction at the north west corner of the site for approximately 2.5km until it forms a priority junction with the B5445 Chester Road. At the signalised

junction, there is a pedestrian refuge island to allow pedestrians to cross over the carriageway. Gresford Road forms the western site boundary.

- 3.4.4 In the vicinity of the site, Gresford Road forms a single lane, two-way carriageway approximately 6m in width. There is a footway on the southern side of the road which is approximately 2m wide. The carriageway has a speed limit of 30mph, and there is street lighting present.

B5012 Llay Road

- 3.4.5 Llay Road runs south west from the signalised junction at the north west corner of the site for approximately 2.5km until it forms a priority junction with the A541 Wrexham Road at Cefn-y-bedd. At the signalised junction, there is a pedestrian refuge island to allow pedestrians to cross over the carriageway.
- 3.4.6 Llay Road also forms a roundabout junction with Llay New Road and First Avenue approximately 450m south west of the signalised junction. Here, there are also refuge islands to allow pedestrians to cross the carriageway, as well as cyclists crossing between off-road cycle routes along Llay Road and Llay New Road. The crossing points have dropped kerbs and tactile paving.
- 3.4.7 In the wider vicinity of the site, the B5102 Llay Road forms a single lane, two-way carriageway approximately 7m in width. There are footways on both sides of the road which are approximately 1.5m – 2m wide. The carriageway has a speed limit of 40mph within Llay, although this is increased to 60mph west of the roundabout. There is street lighting present along the 40mph sections of carriageway.

B5373 Rackery Lane

- 3.4.8 Rackery Lane runs north west from the signalised junction at the north west corner of the site for approximately 1.5km until the B5373 continues once again named as Gresford Road at Caer-Estyn. At the signalised junction, there are pedestrian refuge islands to allow pedestrians to cross over the carriageway.
- 3.4.9 In the wider vicinity of the site, the B5373 Rackery Lane forms a single lane, two-way carriageway. The road is typically approximately 8m in width, although the carriageway does widen to provide a right-hand turning pocket to serve Miners Road, approximately 250m north west of the signalised junction. There is a footway on the southern side of the road, and an intermittent footway on the northern side. The footways are approximately 1.5m – 2m wide. The carriageway has a speed limit of 40mph, and there is street lighting present.

Chapel Lane

- 3.4.10 Chapel Lane runs north east from the signalised junction at the north west corner of the site for approximately 900m until a priority junction with Dark Lane and Lon Uchaf.

- 3.4.11 In the wider vicinity of the site, Chapel Lane forms a single lane, two-way carriageway approximately 5.5m in width. There is no footpath provision. The carriageway has a speed limit of 30mph, and there is intermittent street lighting present.

B5445 Chester Road

- 3.4.12 Chester Road can be accessed via Clappers Lane (accessed from Gresford Road), approximately 2.5km south of the site. Chester Road links the A483 to Gresford, forming the main route through to Marford.
- 3.4.13 Typically, the road is approximately 8m wide and there is footway provision along the length of the eastern side of the carriageway, and an intermittent footway is provided along the western side as the road progresses through Gresford. Northwards from the A483, the carriageway has an initial speed limit of 60mph, but this decreases to 30mph approximately 120m south of the priority junction with the B5373 Gresford Road. There is intermittent street lighting present along the carriageway.

Llay New Road

- 3.4.14 Llay New Road runs south from the roundabout with Llay Road and First Avenue for approximately 4km until it reaches Old Rhosrobin. Adjacent to the roundabout, there are dropped kerbs and tactile paving to aid pedestrians and cyclists crossing the carriageway. Approximately 70m south of the roundabout, there is also a pedestrian refuge island with dropped kerbs and tactile paving.
- 3.4.15 In the wider vicinity of the roundabout junction, Llay New Road forms a single lane, two-way carriageway approximately 6m in width. There is a footway on the eastern side of the road which is approximately 2m wide, and a shared footway/cycleway on the western side of the carriageway. Llay New Road has a speed limit of 30mph within Llay, and this is increased to 60mph approximately 1.2km south of the roundabout. There is street lighting present along the carriageway throughout Llay.

First Avenue

- 3.4.16 First Avenue runs south east from the roundabout with Llay Road and Llay New Road for approximately 400m until it reaches Fifth Avenue. Adjacent to the roundabout, there are dropped kerbs and tactile paving to aid pedestrians crossing the carriageway.

4.0 Development Proposals

4.1 Introduction

- 4.1.1 In this section of my evidence I describe the development proposals including the means of access.
- 4.1.2 The Appeal Site is approximately 15.86ha in size and the development proposals comprise up to 365 residential properties and a 300 square metre retail unit.
- 4.1.3 An indicative masterplan was submitted as part of the planning application. This identifies the various principles and parameters of the proposals, including the proposed means of access into the site. I have included the latest masterplan as **Appendix AV C**.

4.2 Proposed Access

- 4.2.1 There is currently no suitable vehicular access into the proposed site which could be utilised as part of the development proposals. It is therefore proposed that a new vehicular access strategy is provided as part of the development proposals.

Vehicular Access – Initial Transport Assessment Access Arrangement

- 4.2.2 Curtins provided an initial access strategy within the Transport Assessment submitted for planning, comprising the following:
- A compact roundabout providing access from The Straight Mile;
 - A mini-roundabout roundabout providing access from Gresford Road adjacent to the Oakfield Home Park Estate access; and
 - An additional mini-roundabout roundabout providing access from Gresford Road opposite Meadow Road.
- 4.2.3 These initial drawings for planning are contained within **Appendix AV D**. All access points are deliverable within a combination of adopted highway and land within the planning red-line.
- 4.2.4 Notwithstanding the above, an alternative vehicular access strategy was devised during post-application discussions with WCBC Highways.

Vehicular Access – Current Proposed Access Arrangement

- 4.2.5 Highways at WCBC stated a preference for one roundabout access from Gresford Road instead of two. This alternative vehicular access strategy therefore comprises:
- A compact roundabout providing access from The Straight Mile; and
 - A single compact roundabout providing access from Gresford Road opposite the Oakfield Home Park Estate.

- 4.2.6 The alternative drawing for the Gresford Road Access is illustrated in Drawing TPMA5021_019 contained within **Appendix AV E**. Both the Gresford Road and The Straight Mile site access points are deliverable within a combination of adopted highway land within the planning red-line.
- 4.2.7 The proposed Straight Mile access takes the form of a compact roundabout, with a central island of approximately 19.2m in diameter. In order to accommodate larger vehicles travelling along Straight Mile and to facilitate bus access and penetration through the site, a small kerbed central island of 4m is proposed with the remaining area comprising hatched markings and/or a differentiated surface.
- 4.2.8 It is also intended that the speed limit along Straight Mile would be reduced from 60mph to 30mph. This would be secured through an alteration to the existing Traffic Regulation Order (TRO).
- 4.2.9 The proposed Gresford Road access takes the form of a compact roundabout, with a central island of approximately 17.2m in diameter. In order to facilitate bus access and penetration through the site, a small kerbed central island of 4m is proposed with the remaining area of the island comprising hatched markings and/or a differentiated surface.
- 4.2.10 In summary, I concur with the below view expressed in the Report of the Head of Community Wellbeing and Development that suitable and safe vehicular access has been demonstrated as achievable; albeit full details are to be determined at a reserved matters stage:

“Whilst detailed access proposals are reserved for subsequent approval, the submitted plans confirm that the development will be accessed via roundabout junctions onto the Straight Mile and Gresford Road. I am satisfied that these will provide a safe means of access into the site and will not prejudice the continued safe use of the existing highway. Full details of the junctions will be submitted at reserved matters stage.”

Pedestrian and Cycle Access

- 4.2.11 As part of the development proposals a new footway/cycleway is proposed adjacent to Straight Mile, within the site. This would provide a publically accessible route that is adjacent to the road, yet screened from vehicular traffic. The footway would extend from PRoW LLA/5, along the northern boundary of the site and provide a connection to the existing footway adjacent to the Crown Crossroads junction.
- 4.2.12 Pedestrian access is also envisaged via Gresford Road from three locations. The first is at the north western corner of the site and consists of a new footway on Gresford Road and the introduction of a zebra crossing. The second is a new footway adjacent to the proposed vehicular access and a new zebra crossing. The third is located at the south eastern corner of the site and consists of a new footway.

- 4.2.13 Drawings TPMA5021_100_001 and TPMA5021_100_002 contained within **Appendix AV E** illustrate the proposed locations of the zebra crossings.
- 4.2.14 Pedestrian access is also proposed on the eastern boundary of the site to provide a connection to PRoW LLA/5.
- 4.2.15 The internal layout of the site is subject to a reserved matters application, although the pedestrian and cycle network will be designed in accordance with Manual for Streets principles.

4.3 Servicing and Refuse Collection

- 4.3.1 It is proposed that all dwellings and the retail unit would be accessed from the internal road network via the new site access junctions on Gresford Road and The Straight Mile.
- 4.3.2 The internal servicing arrangements would be agreed as a reserved matter.

4.4 Parking Provision

Car Parking

- 4.4.1 The Council has approved a series of Local Planning Guidance Notes (LPGNs) which compliment Development Plan policy. LPGN No.16 – Parking Standards is of particular relevance to the parking provision and Figure C of the LPGN illustrates the parking standards for residential dwellings as reproduced below:

Type of Development		Parking Standard	Cycle Parking Standard
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 parking areas.
	2 bedroom	2 car space per units	
	3/4 bedroom	3 car space per units	
	5 or more bedrooms	4 car space per units	

Table 4.1 – Wrexham Parking Standards: C3 - Dwellings

- 4.4.2 Detailed layout and design is for consideration at the reserved matters stage. Notwithstanding this, the indicative/illustrative plans demonstrate that the site can accommodate adequate parking in line with **Table 4.1**.

4.5 Public Transport and Bus Permeability

- 4.5.1 The site is well located adjacent to existing bus stops on Gresford Road and Llay Road. The vast majority of the site is well within 400m of these stops ensuring adequate access to public transport.
- 4.5.2 However, the indicative masterplan and access strategy has been designed to facilitate the re-routing of bus services through the site, should commercial operators consider this to be desirable.

- 4.5.3 A bus/emergency only route and bus stop has been identified in the centre of the site to demonstrate the intent of providing a direct service through the site without having to unnecessarily navigate other areas of the site. The bus link could also be controlled so as to prohibit rat running for general traffic.
- 4.5.4 Given the existing public transport accessibility of the site to bus stops, I don't consider the re-routing of services to be necessary to make the development acceptable; but it would offer enhancement.

4.6 Interim Travel Plan

- 4.6.1 The outline planning application was also supported by an Interim Travel Plan (ITP).
- 4.6.2 As the end users of this development are not yet known and no existing travel data exists for the site, an ITP has been prepared. Once surveys have been undertaken and travel patterns have been identified the ITP would become a Full Travel Plan.
- 4.6.3 Along with providing new residents with a Welcome Pack upon occupation, the ITP includes measures and initiatives to encourage walking, cycling, use of public transport and to reduce single occupancy car trips. Measures include but are not limited to;
- Raise awareness of the health benefits of walking;
 - Clear signing of pedestrian routes within and adjacent to the site;
 - Information on the local pedestrian routes, including public footpaths;
 - Local cycle clubs/forums to be invited to take part in travel plan promotional events to raise awareness of this mode;
 - Promotion of events such as "National Bike Week";
 - Setting up of a Bicycle User Group (BUG); and
 - To ensure that the maximum benefit is achieved for residents, public transport information will be distributed information showing links to local bus stops, routes and frequencies of buses.
- 4.6.4 To support the Travel Plan it has been agreed that a planning obligation is to be provided. The terms of this is set out in the Unilateral Undertaking.

5.0 Transport Planning Policy

5.1 Introduction

- 5.1.1 This section provides a summary of the planning policy which has been identified by WCBC and that I consider to be pertinent to this appeal.

5.2 Reason for Refusal

- 5.2.1 The reason for refusal makes reference to policies PS1, PS2 and H5 of the Wrexham Unitary Development Plan (UDP), which was adopted in 2005 to cover the period 1996-2011.

- 5.2.2 Under section 4.9 of the PSoCG it states:

“It is...agreed between the main parties that the proposed development is not contrary to any other local policies or supplementary planning guidance.”

5.3 Other Material Considerations

- 5.3.1 Whilst not referenced in the reason for refusal, it is agreed between the main parties that the Council's Local Planning Guidance Notes (LPGN's) may be considered of relevance and given weight.

- 5.3.2 It is also agreed that the following national policies and guidance are of relevance:

- Planning Policy Wales (PPW) Edition 8 2016;
- Technical Advice Notes (TANs); and
- Welsh Government/Office/National Assembly Circulars.

- 5.3.3 Whilst the above are not solely traffic and transport policies, they do contain traffic and transport policy that is of relevance and is therefore discussed below.

PPW Chapter 4: Planning for Sustainability

- 5.3.4 Chapter 4 of PPW relates to sustainability with key extracts provided below:

Para 4.1.2;

“The Welsh Government remains one of the few administrations in the world to have a distinctive statutory duty in relation to sustainable development. This duty, under the Government of Wales Act 2006 (Section 79) requires Welsh Ministers to make a scheme setting out how they propose, in the exercise of their functions, to promote sustainable development....”

Para 4.1.3;

“Our scheme confirms that sustainable development will be the central organising principle (my emphasis) of the Welsh Government.”

Para 4.2.1;

“The planning system is necessary and central to achieving sustainable development in Wales.”

Para 4.2.2;

“The planning system provides for a presumption in favour of sustainable development (my emphasis) to ensure that social, economic and environmental issues are balanced and integrated, at the same time, by the decision-taker when:

- *Preparing a development plan... and*
- *In taking decisions on individual planning applications....”*

5.3.5 Section 4.4 sets out the key sustainability objectives and a number of these relate to traffic and transportation as summarised below:

Para 4.4.3 (bullet 2);

“Locate developments so as to minimise the demand for travel, especially by private car.”

Para 4.4.3 (bullet 12 and 13);

“Foster improvements to transport facilities and services which maintain or improve accessibility to services and facilities, secure employment, economic and environmental objectives, and improve safety and amenity. In general, developments likely to support the achievement of an integrated transport system should be encouraged.”

5.3.6 The proposed development site is located adjacent to existing established residential areas, and there are links to areas such as Llay Industrial Estate and the centre of Llay. I consider the site to be in accordance with PPW Chapter 4, and this is recognised within the Report of the Head of Community Wellbeing and Development:

‘...the site can be considered to be in a broadly sustainable location.’

PPW Chapter 8: Transport

5.3.7 PPW chapter 8 specifically relates to transport and sets out the aim of extending choice in transport to extend accessibility in a way which supports sustainable development.

5.3.8 Para 8.1.1 states that:

“The Welsh Government aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle the causes of climate change by: encouraging a more effective and efficient transport system, with greater use of the more sustainable and healthy forms of travel, and minimising the need to travel.”

5.3.9 In para 8.1.4 PPW recognises that land use planning can help to achieve the above objective through the following:

- *“Reducing the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling;*
- *Locating development near other related uses to encourage multi-purpose trips and reduce the length of journeys;*
- *Improving accessibility by walking, cycling and public transport;*
- *Ensuring that transport is accessible to all, taking into account the needs of disabled and other less mobile people;*
- *Promoting walking and cycling;*
- *Supporting the provision of high quality public transport;*
- *Supporting traffic management measures;*
- *Supporting sustainable travel options in rural areas;*
- *Supporting necessary infrastructure improvements; and*
- *Ensuring that, as far as possible, transport infrastructure does not contribute to land take, urban sprawl or neighbourhood severance.”*

5.3.10 The site is situated within a sustainable location. The proposed development provides opportunity for bus penetration and includes a retail element on-site; which would enhance sustainability. Further improvements in regard to pedestrian connectivity are also proposed along Gresford Road, linking the site to Llay. I consider the proposals to be in accordance with PPW Chapter 8.

Planning Policy Wales, Technical Advice Note 18: Transport

5.3.11 Chapter 8 of PPW is supplemented by Technical Advisory Note (TAN) 18 which provides detailed guidance on implementing the transport objectives contained in PPW Chapter 8.

5.3.12 Paragraph 2.3 of TAN 18 focuses on integrating land use planning and transport and suggests that integration can help in achieving wider sustainability objectives by:

- *“Promoting resource and travel efficient settlement patterns;*
- *Ensuring new development is located where there is, or will be, good access by public transport, walking and cycling thereby minimising the need for travel and fostering social inclusion;*
- *Managing parking provision;*
- *Ensuring that new development and major alterations to existing developments include appropriate provision for pedestrians (including those with special access and mobility requirements), cycling, public transport, and traffic management and parking/servicing;*

- *Encouraging the location of development near other related uses to encourage multi-purpose trips;*
- *Promoting cycling and walking;*
- *Supporting the provision of high quality, inclusive public transport;*
- *Supporting provision of a reliable and efficient freight network;*
- *Promoting the location of warehousing and manufacturing developments to facilitate the use of rail and sea transport for freight;*
- *Encouraging good quality design of streets that provide a safe public realm and a distinct sense of place; and*
- *Ensuring that transport infrastructure or service improvements necessary to serve new development allow existing transport networks to continue to perform their identified functions.”*

5.3.13 Para 3.4 of TAN 18 focuses on accessible housing development and states that:

“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); and*
- *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.*

5.3.14 Chapter 9 and Annex D of TAN 18 refer to the preparation of Transport Assessments in relation to development and paragraph D.2 outlines the following aims of producing a TA:

- *“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 secure through planning conditions or obligations; and*

- *Maximise the accessibility of the development by non-car modes.*

5.3.15 TAN 18 also outlines the importance of producing a “Transport Implementation Strategy” (TIS) as an output of the TA. The document summarises the requirements of the TIS as follows:

“[The TIS] should set objectives and targets relating to managing travel demand for the development and set out the infrastructure, demand management measures and financial contributions necessary to achieve them. The TIS should set a framework for monitoring the objectives and targets, including the future modal split of transport to development sites.”

5.3.16 As part of the planning submission, a Transport Implementation Strategy (TIS) and Travel Plan (TP) was provided which outlined mitigation measures and initiatives to encourage sustainable travel. I consider the site and proposed development to be in accordance with TAN18, and this is recognised within the Report of the Head of Community Wellbeing and Development:

‘An Interim Travel Plan has been submitted setting out measures that will be put in place to promote/facilitate walking, cycling and public transport use in order encourage future occupiers to be less dependant on private car journeys....Final travel plans will be secured by condition.’

5.4 Wrexham Unitary Development Plan

5.4.1 The Wrexham UDP 1996 - 2011 was adopted by WCBC on the 14th February 2005. The two relevant transport policies contained in the UDP comprise Policy T8 and Policy T9. These are discussed in greater detail below:

5.4.2 UDP Policy T8 states:

“Development granted planning permission will be required to provide vehicle parking spaces either on site or nearby, in accordance with the Council's current parking standards. Special regard will be paid to the following factors, as appropriate:-

- a) the availability of public transport nearby,*
- b) proximity to public car parking,*
- c) proximity to local services and facilities,*
- d) road safety hazards and amenity considerations arising from on-street parking in the vicinity of the site.*

Where implementation difficulties arise in making parking provision on-site or nearby, the Council will require a developer to make financial contributions for measures to assist public transport, or walking and cycling as appropriate.”

- 5.4.3 UDP Policy T9 has not been referenced by WCBC. Notwithstanding this, I consider the policy to be relevant to the proposed development, and so I have included the policy within **Appendix AV F**. The policy states:

“Development proposals will be required to provide walking and cycling routes, where feasible and appropriate, that link with existing or proposed walking and cycling routes, and integrate with the public transport system. Opportunities for horse riding along these routes will be secured where appropriate.”

- 5.4.4 UDP Policy GDP1 also refers to traffic and transportation:

“d) Ensure safe and convenient pedestrian and vehicular access to and from development sites, both on site and in the nearby locality.

e) Ensure that built development is located where it has convenient access to public transport facilities, and is well related to pedestrian and cycle routes wherever possible.”

- 5.4.5 The proposed development provides pedestrian routes and links to Gresford Road in the form of zebra crossings. I consider the application of Home Zone design principles will encourage low vehicle speeds and, in turn, will provide an environment conducive to cycling. Access to public transport services is available along Gresford Road and Llay Road, and the site could accommodate re-routed or extended bus services.

- 5.4.6 I consider the site and proposed development to be in accordance with relevant policies within the Wrexham UDP. It is recognised within the Report of the Head of Community Wellbeing and Development that suitable car parking provision could be accommodated on-site:

“I am satisfied that it will be possible to meet the parking needs of the development within the site and that and that the proposals will not add or increase on-street parking on the existing roads bounding the site.”

5.5 North Wales Joint Local Transport Plan 2015

- 5.5.1 The North Wales Joint Local Transport Plan was adopted on 30th January 2015, accounting for the detailed period of 2015 – 2020 and a framework for schemes up until 2030. The document was jointly prepared by the six Local Authorities across North Wales with a vision to:

“...remove barriers by delivering safe, sustainable, affordable and effective transport networks”.

- 5.5.2 I have reproduced Relevant excerpts of the Joint Local Transport Plan in **Appendix AV F**. The Joint document identifies *“Improved Access to Llay Industrial Estate”* as a scheme:

“To improve the overall accessibility of Llay Industrial Estate, whilst mitigating as far as is practicable the impacts of HGV movements on local communities. Measures will include:

- New infrastructure connecting the estate with the existing wider network walking and cycling network.*
- Improvements to the existing Crown Crossroads junction to improve capacity and provision for sustainable walking and cycling movements.*
- Traffic and speed management measures to mitigate the impacts on local communities of HGV movements between the estate and strategic network.”*

5.5.3 The proposed physical improvements of an additional lane along Straight Mile and the introduction of MOVA would result in an increase in capacity at the Crown Crossroads.

5.5.4 Vehicle speeds would be managed along Straight Mile by a reduction in the speed limit from 60 mph to 30mph.

5.5.5 I consider the site and proposed development to be in accordance with the relevant schemes and overarching principles of the North Wales Joint Local Transport Plan.

6.0 Planning Conditions and Obligations

6.1 Introduction

Planning Conditions

- 6.1.1 Planning conditions are used to secure the measures and facilities that provide an improvement to the development and/or surrounding area. PPW8 states:

“Conditions on a planning permission can enable many development proposals to proceed where it would otherwise be necessary to refuse planning permission. The proper use of conditions can improve the quality of development and enhance public confidence in the outputs of the planning system.”

- 6.1.2 TAN 18 also recognises:

“Planning conditions may legitimately be imposed on the grant of planning permission to secure transport measures and facilities as part of the proposed development. All conditions must be clearly justified and be in accordance with the policy tests” (in line with the Welsh Office Circular 35/95 at the time of publication of TAN 18, and as maintained in Welsh Office Circular 016/2014).

- 6.1.3 In this section of my evidence I consider the six planning conditions relating to traffic and transportation. These conditions have all been agreed as set out in the PSoCG, and are discussed throughout this section in accordance with the above excerpts.

Planning Obligations

- 6.1.4 Planning obligations are often used to secure a financial contribution towards mitigating wider impacts on the surrounding area. PPW8 states:

“Planning obligations are useful arrangements to overcome obstacles which may otherwise prevent planning permission from being granted. Contributions from developers may be used to offset negative consequences of development, to help meet local needs, or to secure benefits which will make development more sustainable.”

- 6.1.5 In this section of my evidence I consider the single planning obligation that relates to traffic and transportation. The obligation has been agreed as set out in the PSoCG, and are discussed throughout this section in accordance with the above excerpts.

6.2 Planning Conditions

- 6.2.1 As set out in Section 2 there are six traffic and transport planning conditions that are broadly summarised as follows:

- Condition 1d - The means of vehicular, pedestrian and cycle access, including the internal layout;
- Condition 13 - The Crown Crossroads mitigation;
- Condition 14 - Speed limit reductions on the Straight Mile;
- Condition 15 - Parking and loading arrangements for the proposed residential units;
- Condition 16 - Parking and loading arrangements for the proposed retail unit; and
- Condition 17 - The requirement for a Final Travel Plan.

6.2.2 Condition 1d is a well-defined condition that requires the means of access, internal estate roads, pedestrian footways and cycleways, within a particular phase to be approved by the local planning authority prior to commencement of that phase. I consider this to be a standard condition and as all matters are reserved it be addressed at the reserved matters stage.

6.2.3 Notwithstanding the above, access details were submitted with the planning application and The Report of The Head of Community Wellbeing and Development states that:

“the submitted plans confirm that the development will be accessed via roundabout junctions onto the Straight Mile and Gresford Road. I am satisfied that these will provide a safe means of access into the site and will not prejudice the continued safe use of the existing highway.

6.2.4 Condition 14 requires the design and implementation of a Traffic Regulation Order to reduce speeds on the Straight Mile. I consider this to be an appropriately worded and standard condition to secure a speed reduction via a Traffic Regulation Order. It will be addressed at the reserved matters stage.

6.2.5 Conditions 15 and 16 relate to the internal parking and servicing arrangements. As all matters are reserved this will be addressed at the reserved matters stage. Notwithstanding this, The Report of The Head of Community Wellbeing and Development states that:

“The indicative plan does not show where off-street parking will be provided for each dwelling. I am however satisfied that it will be possible to provide adequate parking areas within the curtilages of each plot and/or within communal parking areas.”

6.2.6 Condition 17 requires a final Travel Plan prior to the occupation of a particular phase of development. I consider this to be a standard condition and it will again be addressed at the reserved matters stage.

6.2.7 Following a review of the proposed traffic and transport Planning Conditions, I consider Conditions 1d, 14, 15, 16 and 17 to be appropriate and deliverable.

6.3 The Crown Crossroads (Condition 13)

6.3.1 Condition 13 relates to mitigation at the Crown Crossroads and for ease I have reproduced the condition below:

“No part of the development shall commence until a scheme of improvements for the junction of the B5102, the b5373 and Chapel Lane has been implemented in full in strict accordance with a scheme that shall first have been submitted to and approved in writing by the Local Planning Authority.”

6.3.2 Condition 13 is not as well defined as the other conditions and therefore in preparing for the Inquiry Curtins has continued to liaise with Highways Officers at WCBC regarding mitigation. A summary of all matters relating to the Crown Crossroads is provided below.

Initial Capacity Assessments

6.3.3 The TA that supported the planning application included capacity assessments at five junctions as agreed during pre-application scoping discussions with Highways Officers at WCBC.

6.3.4 Industry standard modelling software was used throughout all assessments, and traffic generation, traffic growth, committed development and traffic distribution methodologies were agreed by Highways Officers at WCBC.

6.3.5 The five junctions to be assessed were agreed as follows:

- Crown crossroads B5102 / B5373 junction;
- B5102 / B5425 roundabout at Llay Miners institute;
- A483 Rossett Interchange / B5102 junction;
- B5373 Gresford Road junction with B5445 at Gresford; and
- Rhosrobin Road / Llay New Road proposed roundabout junction (proposed as access to a committed development site).

6.3.6 The TA concluded that four out of the five junctions would continue to operate within capacity; and therefore no mitigation was proposed at these junctions.

6.3.7 The Crown Crossroads was forecast to operate within capacity throughout the vast majority of the day, albeit with some delay at peak times.

Development Impact and Initial Mitigation (Transport Assessment)

6.3.8 The TA contained information which demonstrated that the proposals may result in approximately 84 and 98 trips through the junction during the AM and PM peak periods. This translates to approximately 1 – 2 vehicles per minute through the junction, or an impact of approximately 5.0% and 5.7% on 2014 observed traffic in the AM and PM peak periods.

6.3.9 On this basis, the perceptible impact on the Crown Crossroads junction can be considered relatively small.

6.3.10 Notwithstanding this, it was suggested within the TA that a mitigation measure in the form of the installation of Microprocessor Optimised Vehicle Actuation (MOVA) technology could be installed at

the junction. This would have an improvement in junction performance through the software's constant assessing, modifying and updating of the signal times afforded to each arm of the junction to ensure that it operates at peak efficiency.

6.3.11 Along with a review and optimisation of signal timings, the Transport Assessment concluded a solution close to nil-detriment situation would be achieved. The junction mitigation could also potentially provide an improvement beyond the current baseline conditions.

6.3.12 I support the conclusion that the installation of MOVA technology would mitigate the impacts of the proposed development, and could provide a solution close to nil-detriment or even an improvement on baseline conditions.

Development Impact and Current Mitigation (Post-submission Technical Note and Discussions)

6.3.13 Notwithstanding the above assessment and mitigation proposed in the Transport Assessment, WCBC Highways requested a condition regarding mitigation at the Crown Crossroads. Curtins has therefore worked with WCBC Highways post-submission to consider physical improvements at the junction.

6.3.14 These discussions were formalised through a Technical Note submitted on 03/08/16, and subsequent email correspondence. Highways Officers at WCBC agreed that the impact of the development traffic would be fully mitigated, but requested that further detailed information be provided.

6.3.15 I consider further detail and information to be a matter for a reserved matters application. Nevertheless, a resultant mitigation scheme (Drawing Drawing TPMA5021_102) and relevant details have been developed and reproduced in **Appendix AV G**.

6.3.16 The following subsections provide a summary of development impact for the following scenarios:

- Do nothing;
- Physical improvements only; and
- Physical improvements + MOVA.

6.3.17 All scenarios have been assessed using the industry standard modelling software LinSig.

6.3.18 LinSig results refer to the Degree of Saturation (DoS) and Mean Maximum Queue (MMQ) predicted in each lane of the junction. A DoS of 100% indicates that the lane in question is operating at its theoretical capacity (point of saturation), whilst a DoS of 90% or less indicates that the lane is operating within its practical capacity.

Do Nothing Scenario

6.3.19 The 'Do Nothing' Scenario relates to no mitigation whatsoever. In this case, the proposed development would have the following impact summarised in **Table 6.1**:

Approach	AM Peak				PM Peak			
	2026 Base + Com.		2026 Base + Com. + Dev		2026 Base + Com.		2026 Base + Com. + Dev	
	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)
B5102 Straight Mile	102.4%	20	120.9%	48	104.1%	28	112.6%	50
B5373 Gresford Road	103.9%	27	120.7%	60	103.7%	19	111.1%	29
Llay Road	106.0%	61	91.0%	31	77.4%	14	80.4%	16
Rackery Lane	105.1%	41	121.9%	92	105.4%	51	112.7%	92
Chapel Lane	27.5%	1	27.5%	1	17.2%	1	17.2%	1

Table 6.1 – Crown Crossroads Capacity – Do Nothing

6.3.20 The above **Table 6.1** demonstrates that, if there was to be no mitigation at the junction, the proposed development would result in some additional queuing and vehicle delay at peak times.

6.3.21 Full LinSig Outputs are provided in **Appendix AV G**.

6.3.22 In light of the above, junction improvements are considered appropriate to mitigate the development impact.

Physical Improvements Only

6.3.23 The primary focus of highway capacity mitigation at The Crown junction is upon improving the width of Straight Mile on approach to the stop-line. The widening scheme will create an additional lane on Straight Mile, for a length of approximately 40 metres. These proposals will involve marking the nearside lane for ahead and left turning movements, with the offside lane exclusively for right turning vehicles.

6.3.24 Land associated with the civil engineering works required to deliver proposed mitigation is a combination of adopted highway and land within the planning red line.

6.3.25 Capacity assessments using the industry standard modelling package LinSig summarised in **Table 6.2** demonstrate that the impact of the traffic generated by the development.

Approach	AM Peak				PM Peak			
	2026 Base + Com.		2026 Base + Com. + Dev + Junction Improvement		2026 Base + Com.		2026 Base + Com. + Dev + Junction Improvement	
	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)
B5102 Straight Mile	102.4%	20	107.7%	28	104.1%	28	104.0%	22
B5373 Gresford Road	103.9%	27	107.8%	37	103.7%	19	102.3%	21
Llay Road	106.0%	61	110.2%	76	77.4%	14	103.5%	40

Approach	AM Peak				PM Peak			
	2026 Base + Com.		2026 Base + Com. + Dev + Junction Improvement		2026 Base + Com.		2026 Base + Com. + Dev + Junction Improvement	
	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)
Rackery Lane	105.1%	41	109.7%	56	105.4%	51	104.4%	51
Chapel Lane	27.5%	1	28.9%	1	17.2%	1	18.8%	1

Table 6.2 – Crown Crossroads Capacity – Physical Improvements Only

6.3.26 Physical mitigation only (in the form of a left-turn lane provided along Straight Mile) would have a general reduction in queuing at the junction when compared to the ‘Do Nothing’ scenario presented in **Table 6.1**.

6.3.27 Full LinSig Outputs are provided in **Appendix AV G**.

6.3.28 It is my professional opinion that the above junction performance illustrated within **Table 6.2** will be significantly enhanced by the introduction of MOVA in comparison to the existing System D Vehicle Actuated (VA) vehicle detection system currently in operation. Research by Transport Research Laboratory (TRL) and the Department for Transport (DfT) supports this, with Traffic Advisory Leaflet 3/97 stating:

‘TRL/Department of Transport (DOT) trials have shown that MOVA reduces delays by an average of 13% compared to the earlier, vehicle actuated system. Benefits are likely to be largest when compared with vehicle actuated signal control that has not been recently validated.’

6.3.29 The relevant advisory leaflet excerpt is included within **Appendix AV G**.

Physical Improvements + MOVA

6.3.30 On this basis, additional junction modelling has been undertaken to reflect the benefits of MOVA. By increasing the saturation flows at the junction by 8%, a conservative estimate (in accordance with TRL guidance of 8 – 13% benefit on junction saturation) of the benefits of MOVA can be established.

6.3.31 **Table 6.3** provides a summary of the outputs:

Approach	AM Peak				PM Peak			
	2026 Base + Com.		2026 Base + Com. + Dev + Junction Improvement + MOVA		2026 Base + Com.		2026 Base + Com. + Dev + Junction Improvement + MOVA	
	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)
B5102 Straight Mile	102.4%	20	100.3%	16	104.1%	28	97.4%	21
B5373 Gresford Road	103.9%	27	102.6%	27	103.7%	19	97.2%	15

Approach	AM Peak				PM Peak			
	2026 Base + Com.		2026 Base + Com. + Dev + Junction Improvement + MOVA		2026 Base + Com.		2026 Base + Com. + Dev + Junction Improvement + MOVA	
	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)	DoS	Mean Max Queue (PCU)
Llay Road	106.0%	61	103.9%	53	77.4%	14	98.4%	26
Rackery Lane	105.1%	41	103.5%	37	105.4%	51	98.1%	29
Chapel Lane	27.5%	1	26.6%	1	17.2%	1	18.6%	1

Table 6.3 – Crown Crossroads Capacity – Physical Improvements + MOVA

- 6.3.32 The above **Table 6.3** demonstrates that, if there was to be physical mitigation (in the form of a left-turn lane provided along Straight Mile) and the installation of MOVA, there could be a beneficial impact on the operation of the junction with a reduction in queuing along all arms except Llay Road in the PM peak period. Full LinSig Outputs are provided in **Appendix AV G**.
- 6.3.33 Considering the above, it is my professional opinion that the introduction of MOVA and improvements at the Crown Crossroads junction would fully mitigate, or even improve, the baseline conditions at the junction.
- 6.3.34 As an example, potential benefits to the junction include a decrease of approximately four vehicles queuing along Straight Mile in the AM Peak, and a decrease of approximately 22 vehicles queuing along Rackery Lane in the PM Peak
- 6.3.35 In light of the above, I consider Condition 13 to be deliverable and appropriate.

6.4 Planning Obligations

- 6.4.1 From a traffic and transportation perspective, there is only one planning obligation relating to the development and monitoring of Travel Plans.
- 6.4.2 The terms of this is set out in the Unilateral Undertaking.

7.0 Assessment of Proposals against Third Party Objections

7.1 Introduction

- 7.1.1 I have obtained and reviewed representations made by third parties during the formal planning application consultation and during the preparation of the Inquiry.
- 7.1.2 The relevant highway reasons for objecting to the proposed residential development are consistent and I have therefore set out below my response to each pertinent issue in order to address third party concerns.

7.2 Sustainability of the Appeal Site

- 7.2.1 The Report of the Head of Community Wellbeing and Development dated the 5th October 2015 states that:

“Llay benefits from a frequent bus service to and from Wrexham. The Llay Industrial Estate is also one of the key strategic employment sites in the County Borough. As such future occupiers will be able to access employment, leisure and other facilities without the need to travel by private car. In that regard the site can be considered to be in a broadly sustainable location.”

- 7.2.2 I concur with the above view that the site is situated within a sustainable location. Notwithstanding this measures have been proposed to enhance accessibility across and within the site, and connectivity between the site and the centre of Llay.
- 7.2.3 I have included a further assessment of accessibility by sustainable modes of travel considering existing conditions and proposed enhancements within the subsections below.

Accessibility by Walking

- 7.2.4 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The Chartered Institution for Highways and Transportation (CIHT) document entitled ‘*Providing for Journeys on Foot*’ suggests walking distances which are relevant to this planning application. These are reproduced in **Table 7.1** below.

CIHT Category	Town Centres (m)	Commuting/School/ Sightseeing (m)	Elsewhere/Local Services (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Table 7.1 – CIHT Recommended Walking Distances

7.2.5 The guidance goes on to state that:

“an average walking speed of approximately 1.4m/s can be assumed, which equates to approximately 400m in five minutes.”

7.2.6 Relevant excerpts from the CIHT guidance are provided in **Appendix AV F**. To assist in summarising the accessibility of the site by foot, indicative pedestrian catchment plans demonstrating key facilities and amenities has been produced and is included as AV003 and AV004 in **Appendix AV B**.

Elsewhere/Local Services Trips

7.2.7 Plan AV003 considers local service trips and trips elsewhere. The drawing demonstrates that key local services and amenities such as a convenience store, post office, pharmacy, take-away, public house, resource centre, church, café and Miners Institute are all located within the 1,200m catchment that is considered the *‘preferred maximum’* when accessing local services.

7.2.8 Notwithstanding the above which demonstrates the site is situated within a sustainable location, it is my opinion that this position would be further enhanced by an on-site retail facility; such as the one currently proposed. This was recognised within the Report of the Head of Community Wellbeing and Development which states that:

“The proposed retail unit will be easily accessible on foot from the development as well as dwellings on Gresford Road and the eastern side of Llay. The retail unit will therefore be sustainably located and will promote more sustainable access to local retail facilities.”

7.2.9 The proposed retail element would be situated within the 400m ‘Desirable’ catchment of the vast majority of the proposed dwellings. I therefore consider this to be an appropriate enhancement of the sites’ sustainability.

7.2.10 Additionally, the retail element could provide benefit to existing residents along Gresford Road.

Commuting/School Trips

7.2.11 Plan AV004 considers commuting and school trips. Park Community Primary School is located within the 1,000m catchment considered to be the *‘acceptable’* walking distance for education trips. The school offers facilities from Nursery to Year 2; and from Year 3 to Year 6. The journey time to the school would equate to approximately 12 minutes.

7.2.12 The full extent of Llay Industrial Estate is within the 2,000m catchment considered to be the *‘preferred maximum’* distance set out by the CIHT when commuting. The industrial estate is a significant employment facility within the wider Wrexham area, and includes facilities relating to the following industries amongst others:

- Automotive;
- Manufacturing (such as agricultural and electrical);
- Wholesale retail;
- Storage;
- Distribution; and
- Aerospace.

7.2.13 There is also office space at Hamilton House and Harrison House accessible from Rackery Lane, and a Garden Centre accessible from Llay Road.

Pedestrian Accessibility and Proposed Enhancement

7.2.14 It is my professional opinion that all of the above facilities are accessible on foot, via existing pedestrian infrastructure. This includes existing footways on Gresford Road, Llay Road, Rackery Lane and First Avenue. In addition to these routes, PRoW LLA/6 and LLA/7 provide alternative east/west connections to key local facilities.

7.2.15 Furthermore, the masterplan proposes a significant network of new pedestrian infrastructure within the site including new footways adjacent to Gresford Road and The Straight Mile. Two pedestrian zebra crossings are also proposed on Gresford Road.

7.2.16 The first new Zebra crossing point would be located approximately 70m from The Crown Crossroads, and the second proposed crossing point would be incorporated within the northern arm of the proposed site access roundabout on Gresford Road.

7.2.17 Again, I consider this to be an appropriate enhancement of the site that would contribute towards enhanced sustainability.

Accessibility by Cycle

7.2.18 It is widely accepted that cycling has the greatest potential to replace short car journeys, particularly those under 5 kilometres. On this basis plan AV006 in **Appendix AV B** sets out a 5km catchment area. The 5km catchment includes all of Llay and incorporates surrounding areas such as Rossett, Marford, Gresford, Cefn-y-bedd, Caergwrle and Hope. The cycle catchment also includes northern areas of Wrexham town.

7.2.19 Cefn-y-bedd, Caergwrle and Hope (Flintshire) Railway Stations are also within the 5km cycle catchment, and it is considered that future residents could cycle to a station as part of a multi-modal trip involving rail.

- 7.2.20 With regard to formal cycle facilities, there is a designated local cycle route along Llay New Road which links the previously described roundabout with Llay Road and First Avenue with New Rhosrobin. Adjacent to the Fore Golf leisure facility, the route also branches to the west into woodland area adjacent to the River Alyn. The cycle route is formed almost entirely of a designated off-road cycle provision, with just a short section of approximately 180m in Llay being on the road itself.
- 7.2.21 In addition to the defined cycle network, the highway network linking the Appeal Site with local areas and facilities is of sufficient standard to accommodate cyclists. Although these routes will also carry vehicular traffic, the majority of the surrounding highway network linking the site provides two-way routes that can accommodate cyclists alongside vehicular traffic.
- 7.2.22 I consider cycling to be a realistic mode of travel for some residents wanting to access local services, in addition to residents who want to travel further afield as either a commuting or leisure based trip. A multi-modal trip involving rail could also be a viable option for some future residents.

Accessibility by Rail

- 7.2.23 The closest Railway Station to the development is Cefn-y-bedd, located approximately 2.9km to the north west of the site. It offers hourly services to Wrexham Central and Bidston railway stations.
- 7.2.24 These services call at Caergwrle and Hope (Flintshire) railway stations as previously mentioned, in addition to a number of other stations along the Borderlands Line including Shotton, Buckley and Wrexham General.
- 7.2.25 Wrexham General offers additional services to destinations across Wales and the UK, including Llanelli, Holyhead and Birmingham International.
- 7.2.26 Although outside of a typical walking catchment, it is considered Cefn-y-bedd or Wrexham General stations could be utilised as part of a multi-modal trip.

Accessibility by Bus

- 7.2.27 Guidance from the Chartered Institution of Highways and Transportation (CIHT) document '*Guidelines for Planning for Public Transport in Development*' suggests that a bus stop should be located within 400m of a new development, albeit "*direct and simple*" routes are more important than walking distance for some people.
- 7.2.28 Furthermore, the CIHT guidance recognises that 400m is merely quoted as guidance for walking distances to bus stops and goes on to state at paragraph 6.20 that they "*should not be followed slavishly*". Relevant excerpts from the CIHT guidance are provided in **Appendix AV F**.

7.2.29 There are a number of bus stops located along Gresford Road at the western boundary of the site. In addition, there are stops located along Llay Road which may be even more accessible for some future residents, particularly with the proposed pedestrian links and zebra crossing. The vast majority of dwellings are well within 400m of the existing bus stops, although some dwellings may fall just outside this distances.

7.2.30 Plan AV007 in **Appendix AV B** illustrates the surrounding bus infrastructure and routing, with a summary of the services provided in **Table 7.2**:

Service	Stop Location	Route	Frequency		
			Weekday	Saturdays	Sun/Hols
28A	Llay Road	Wrexham – Flint (via Llay, Hope, Penyffordd, Buckley and Mold)	6 Services a day	6 Services a day	-
34	Gresford Road & Llay Road	Wrexham – Trevalyn (via Pandy, Gwersyllt, Bradley, Llay Gresford Road and Burton)	3 Services a day	3 Services a day	-
PC1	Llay Road	Coedpoeth – Brynteg – Gwersyllt – Bradley – Llay Industrial Estate	1 AM and PM Peak Service	-	-
PC2	Llay Road	Gatewen – Wrexham – Hightown – Rhosrobin – Llay Industrial Estate	1 AM and PM Peak Service	-	-

Table 7.2 – Bus Services Local to the site

7.2.31 There are a total of four services which call at stops adjacent to the site.

7.2.32 Information obtained from Traveline indicates that the number 28A in particular provides a relatively regular service into Wrexham, a journey which takes approximately 11 minutes from the Crown Crossroads. The timetables for all services have been reproduced in **Appendix AV H**.

7.2.33 To further establish the adequacy of bus service 28A as a viable travel option, I have referred to the National Travel Survey (NTS). The NTS is the primary source of data on personal travel patterns in Great Britain. The NTS is an established household survey which has been running continuously since 1988. It is designed to monitor long-term trends in personal travel and to inform the development of policy.

7.2.34 The survey collects information on how, why, when and where people travel as well as factors which affect personal travel such as car availability, driving licence holding and access to key services.

7.2.35 Table NTS0311 from NTS provides a summary of the average trip time by main mode of travel across Great Britain from 1995/97 to 2015 (Up to 2012 for England and Wales). I have included a copy of the table as **Appendix AV H** for ease of reference.

- 7.2.36 It can clearly be seen from Table NTS0311 that for local bus journeys outside of London the average trip duration in 2012 was 35 minutes. It can therefore be concluded that an 11 minute bus journey on the number 28A is less than the national average.
- 7.2.37 Plan AV005 in **Appendix AV B** illustrates the number of amenities and facilities within a 400m walk of Wrexham Bus Station; the terminus of service 28A.
- 7.2.38 The plan demonstrates that the number 28A provides access to a significant number of opportunities for accessing healthcare, educational, retail, leisure/cultural, food/drink, and places of worship amenities and facilities.
- 7.2.39 Whilst I consider the site to be accessible by public transport and improvements are not necessary to make the site sustainable, the masterplan proposes internal infrastructure to facilitate the re-routing of buses through the site, should commercial operators wish to do so. I consider that any re-routing of bus services to be an enhancement of the attractiveness of travelling by bus.

Sustainability Summary

- 7.2.40 In summary, the site is located in a position to benefit from existing pedestrian, cycle and public infrastructure. There are a range of facilities, substantial employment opportunities and other residential areas within the vicinity of the site; and areas such as Wrexham are readily accessible by public transport.
- 7.2.41 In order to illustrate this point further, I have included Plans AV008 and AV009 in **Appendix AV B** to demonstrate the areas accessible within 10, 20, 30 and 60 minutes from the centre of the site.
- 7.2.42 The appellant has proposed accessibility enhancements. I consider the incorporation of a retail facility, addition of two Zebra crossing points and inclusion of pedestrian and bus links/infrastructure throughout the site would have a beneficial impact on the accessibility and associated sustainability of the development and surrounding area.

7.3 Traffic Generation

- 7.3.1 The Transport Assessment contained a review of traffic generation using the TRICS database; the industry recognised tool for calculating the anticipated future trip demand of a proposed development.
- 7.3.2 The database contains multi-modal surveys of varying land uses in multiple destinations across the UK including residential uses. The outputs of the TRICS assessment referenced within the Transport Assessment have been reproduced in **Appendix AV I** for ease of referral.
- 7.3.3 The commercial element has not been considered as, at a maximum of 300m², this is a relatively small ancillary use. Furthermore it is envisaged the vast majority of any vehicular trips would either be

contained on-site, or would take the form of 'pass-by' or 'diverted' trips. In these cases vehicles are already present and would simply turn into the site or make a small diversion; and would therefore already be on the surrounding highway network.

7.3.4 I consider the TRICS assessment to be an appropriate forecast of development traffic. No concerns were raised by WCBC Highways Officers regarding traffic generation and trip rates at planning.

7.3.5 **Table 7.3** shows TRICS AM and PM peak trip rates for houses (privately owned) and the associated trip generations for a 365 unit development. All trip rates are per single residential unit:

TRICS – Private Housing	Average Trip Rates					
	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Trip Rate	0.140	0.413	0.553	0.387	0.246	0.633
Total Trips	51	151	202	141	90	231

Table 7.3 – Development Trip Rates and Trip Generation (365 units)

7.3.6 **Table 7.3** demonstrates that the proposed development is anticipated to generate in the region of 202 and 231 two-way trips at its peak in the AM and PM respectively.

7.4 Increase in Traffic on Local Roads

7.4.1 The Report of the Head of Community Wellbeing and Development noted that the site was well served by the local highway network, stating that development traffic would be able to disperse in a number of directions. The report summarised:

'Highways have not raised any concerns about the capacity of the local highway network to cater for the traffic generated by the development and I have no reason to conclude otherwise.'

7.4.2 I concur with the above view that the site is situated within an area well served by the surrounding highway network.

7.4.3 Based on an understanding of the local highway network and a professional appreciation of highway capacity, I believe that the development could be accommodated without significant highway impact.

7.4.4 This view was expressed within the Transport Assessment at planning, which considered capacity at the following four junctions:

- Crown crossroads B5102 / B5373 junction;
- B5102 / B5425 roundabout at Llay Miners institute;
- A483 Rossett Interchange / B5102 junction; and
- B5373 Gresford Road junction with B5445 at Gresford.

7.4.5 In addition, the following junction was also considered as a committed development. It is proposed as part of a separate residential development to deliver 117 dwellings in Rhosrobin:

- Rhosrobin Road / Llay New Road proposed roundabout junction.

7.4.6 The Transport Assessment concluded that the assessed junctions could accommodate the proposed development, albeit a mitigation measure in the form of installation of MOVA at the Crown Crossroads was proposed.

7.4.7 Highways Officers at WCBC raised no objection to the capacity assessment undertaken, and this was recognised within the Report of the Head of Community Wellbeing and Development:

“Highways have not raised any concerns about the capacity of the local highway network to cater for the traffic generated by the development and I have no reason to conclude otherwise.”

7.5 Cumulative Increase in Traffic

Cumulative Traffic Capacity – Planning

7.5.1 During pre-application discussions with WCBC Highways Officers, it was agreed that consideration would be given to the cumulative impact of the development site and a committed development known as “Land off New Road, Rhosrobin.”

7.5.2 The capacity assessments presented in the TA were inclusive of the proposed development traffic at Rhosrobin. Additionally, background traffic growth factors derived from TEMPRO accounted for any other traffic growth up until the application year plus 10 (2024).

Cumulative Traffic – Capacity Post-application

7.5.3 In preparing for this Inquiry, Curtins worked with WCBC Highways Officers to identify additional mitigation at the Crown Crossroads. In preparing this mitigation, it was agreed that consideration should be given to the cumulative impact of the development site and a committed development at the proposed “North Wales Police Eastern Command and Custody Facility” on Davy Way, Llay.

7.5.4 The capacity assessments presented in the Technical Note submitted to WCBC on the 03/08/16 were inclusive of the proposed development traffic at the proposed police facility. Additionally, background traffic growth factors derived from TEMPRO accounted for any other traffic growth up until the year of Inquiry plus 10 (2026).

Cumulative Parking Impact

7.5.5 As the planning application was for outline planning permission with all matters reserved, no plans were submitted detailing parking provision within the site.

7.5.6 Notwithstanding this the Transport Assessment referenced the Wrexham Local Planning Guidance Note Number 16; and its associated residential parking standards. It was stated within the Transport Assessment that the development would provide appropriate parking in accordance with the Guidance Note.

7.5.7 The provision of off-street parking was recognised within Report of the Head of Community Wellbeing and Development, along with the acknowledgement that there is sufficient scope to add off-street parking:

‘The indicative plan does not show where off-street parking will be provided for each dwelling. I am however satisfied that it will be possible to provide adequate parking areas within the curtilages of each plot and/or within communal parking areas.’

7.5.8 Furthermore, The Report of the Head of Community Wellbeing and Development recognised that the development would not result in overspill of parking onto the surrounding highway network:

‘I am satisfied that it will be possible to meet the parking needs of the development within the site and that the proposals will not add or increase on-street parking on the existing roads bounding the site.’

7.5.9 I concur with the above assessment.

Cumulative Traffic Summary

7.5.10 It is my professional opinion that the residual cumulative impact of the development and surrounding traffic would be minimal.

7.5.11 Future traffic growth and specific committed developments have been considered throughout the highways capacity assessments at the request of WCBC. As appropriate on-site parking will be provided (in accordance with WCBC parking standards), it is not envisaged the proposed development will result in any overspill onto the surrounding highway network.

7.6 Highway Safety

Highway Safety Analysis

7.6.1 It was agreed with Highways Officers at WCBC during pre-planning scoping discussions that the TA should include an assessment of Personal Injury Accident (PIA) data in the immediate vicinity of the site, for the most recent five-year period.

7.6.2 The TA therefore included a review of all accidents at the Crown Crossroads and along Gresford Road for a five-year period from 2009 to 2013. This indicated that there had been six accidents all of which resulted in ‘slight’ injuries. It was concluded the accident records do not indicate any unusual

existing road safety problems on the surrounding highway network which would be exacerbated by the proposed development.

7.6.3 The interactive Road Accident Casualties Map which is used by WCBC does not contain any additional data past 2013. Therefore, for this Proof of Evidence, I have undertaken a review of the same study area using the 'CrashMap' database in order to supplement the initial data contained within the TA. The search results for both sources are included in **Appendix AV J**.

7.6.4 A review of accidents in 2014 and 2015 indicates that there was one accident at the Crown Crossroads which resulted in a 'slight' injury. In light of this, I conclude there is no reason to believe any adverse change to highway safety in the surrounding area since the submission of the Transport Assessment for planning.

Highway Safety Impact

7.6.5 Rather than the development resulting in an adverse impact, it is my professional opinion that mitigation measures associated with the proposed development could improve highway safety in the vicinity of the site.

7.6.6 The two proposed site access points comprising compact roundabout junctions at Straight Mile and Gresford Road have been designed with an appropriate degree of deflection to encourage lower speeds as vehicles access and egress. It is considered this could provide a safety benefit to the existing situation, as they would naturally reduce vehicle speeds.

7.6.7 Additionally, in relation to vehicle speeds, the Planning Condition 14 would secure a reduction in vehicle speeds along Straight Mile by way of an alteration to an existing Traffic Regulation Order (TRO):

'No dwelling shall be occupied until a Traffic Regulation Order in respect of speed limit reductions along the B5102 Straight Mile has been implemented in accordance with details that shall first have been submitted to and approved in writing by the Local Planning Authority.'

7.6.8 Following discussions with Highways Officers at WCBC, it is intended that the speed limit along the road be reduced from 60mph to 30mph. Street Lighting would also be provided along Straight Mile, resulting in an increased sense of a "built-up" area, encouraging lower vehicle speeds.

7.6.9 Furthermore, I believe pedestrian safety would be enhanced by the proposed zebra crossings on Gresford Road.

Highway Safety Summary

7.6.10 A review of PIA data for the surrounding area has demonstrated that there is no reason to believe there are any existing highway safety concerns. Furthermore, I consider that highway safety in the

surrounding area could be improved by the proposed development through natural traffic calming, speed reduction and pedestrian crossing enhancements.

7.7 Third Party Objections Summary

- 7.7.1 It is my view that the contents of the supporting highways and transportation information prepared as part of the planning application, and the contents of my own evidence adequately addresses the concerns of local residents and confirms that the proposed residential development is accessible by sustainable modes of travel and can be accessed in a safe manner without significant detriment to the local highway network.

8.0 Summary and Conclusions

8.1 Summary

- 8.1.1 My name is Alex Vogt. I am a Technical Director at Curtins. The evidence presented within this Proof of Evidence has been prepared to consider highway, traffic and transportation matters associated with the refusal of:

“Outline application for 365 residential dwellings and erection of 300 square metre retail unit – all detailed matters reserved.”

- 8.1.2 No part of the reason for refusal or the policies referenced relate to traffic and transportation. I confirm that the opinions expressed throughout this Proof of Evidence are true and professional opinions.
- 8.1.3 A summary of the key areas is provided below.

Proposed Development Access

- 8.1.4 It is envisaged that the development would be accessed at two main locations; via a compact roundabout along Straight Mile, and a compact roundabout or two mini-roundabouts along Gresford Road. I have demonstrated suitable and safe vehicular access to the site is achievable; albeit full details are to be determined at a reserved matters stage.
- 8.1.5 Pedestrian and cycle access would be provided at the vehicular access locations, in addition to enhanced pedestrian permeability along Gresford Road and improvements to existing pedestrian infrastructure in the surrounding area.

Local and National Planning Policy/Guidance

- 8.1.6 I have demonstrated that the proposed development accords with relevant local and national planning policy and guidance.

Planning Conditions

- 8.1.7 I have reviewed the six relevant Planning Conditions as proposed by Wrexham County Borough Council. I consider all traffic and transport conditions to be appropriate and deliverable, and have provided additional evidence in relation to Condition 13 (The Crown Crossroads) to demonstrate this.

Planning Obligations

- 8.1.8 An Interim Travel Plan has been produced at the planning stage in order to provide initiatives and measures to encourage sustainable travel at the site. To support the Travel Plan it has been agreed that a planning obligation is to be provided. The terms of this is set out in the Unilateral Undertaking.

Consideration of Third Party Representations

8.1.9 I have obtained, reviewed and thoroughly considered representations made by third parties during the formal planning application consultation and during the preparation of the Inquiry. Particular consideration was given to matters of sustainability/accessibility, traffic generation, increase in traffic (both locally and cumulatively) and highway safety.

8.1.10 I consider that the contents of my own evidence adequately address the concerns of local residents.

8.2 Conclusions

8.2.1 From a traffic and transportation perspective, I conclude that the appeal should be upheld.

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