

Our Ref: P683/JW/sjk
Date: 7th September 2011

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Dear Simon

**Outline Planning Application (Your Reference P/2011/0165) Residential Development,
Land at Imperial Commercials, Wrexham Road, Rhostyllen, Wrexham**

I refer to the above planning application and your previous dealings with my colleague, Claire Wingfield in respect of the residential planning application at the Imperial Commercial site. Please note that Claire has now left Harris Lamb for a new life in New Zealand and I will be your point of contact in respect of this matter.

I have received a briefing note from Claire which explains that a decision on the planning application was deferred by the Planning Committee on 4th July 2011. I understand that Members have raised concern in respect of highway and pedestrian safety.

We have, therefore, instructed our appointed highway consultant to reconsider the vehicle access arrangements for the site and whether pedestrians will be able to safely cross the Wrexham Road. Please find attached a technical note from DTA transport consultants which reassesses highways safety having regard to accident records and also the level of vehicle and pedestrian movements. The conclusion is that there is no justification for this scheme of 22 residential units to fund a signalised pedestrian crossing at the junction with the Wrexham Road or to provide vehicle traffic signals at this point. However, in order to accommodate pedestrian movements, our highway consultants advise that pedestrian refuges should be provided either side of the crossroads junction with Wrexham Road; this will facilitate pedestrian movements across that road providing access to Wrexham-bound bus services and also village facilities.

Paragraph B5 of circular 05/05 requires planning obligations to be fairly and reasonably relaxed in scale and kind to the proposed development. We consider that the provision of pedestrian refuges are reasonably related to the scale of development which is proposed for this site. We are aware that Wrexham Council House historically granted planning consent for a scheme of some 200 houses on land to the east (the National Trust land) and that major junction improvements are proposed as part of that planning consent. However, it would be unreasonable to expect a scheme of 22 dwellings on the Imperial Commercial site to deliver junction improvements on that scale and we draw the firm conclusion that our proposals are acceptable in highway terms. We note that the Infrastructure and Planning Manager wrote to

you on 14th April 2011 confirming his agreement to the transport assessment report which forms part of the submitted planning application and considers that the access arrangements are acceptable subject to agreeing the scheme for improving pedestrian movements. Planning conditions are proposed by the infrastructure and Planning Manager which we accept.

Could you please confirm the date on which the Planning Committee will now reconsider this matter and confirm that the contents of this letter will be reported to that meeting.

Please do not hesitate to contact me if I can be of further assistance.

Yours sincerely

A handwritten signature in black ink, appearing to read 'JP SKA'.

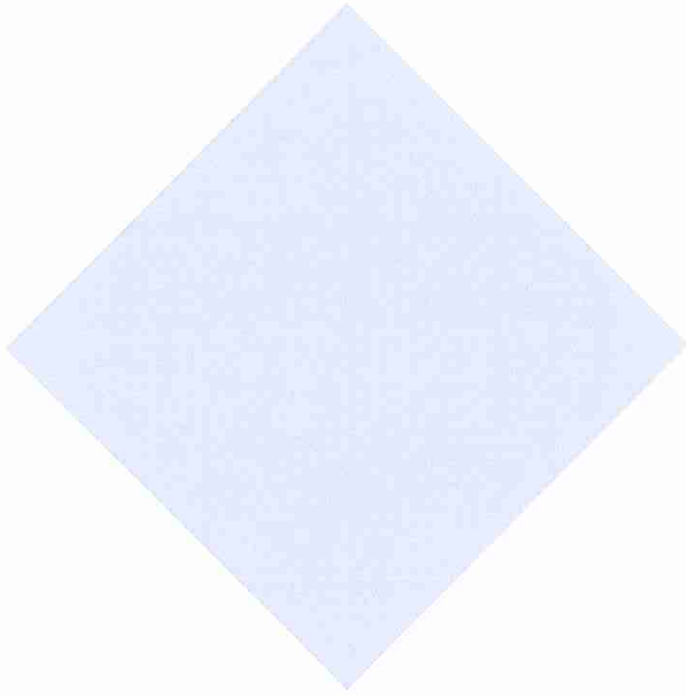
John Williams BA (Hons) MRTPI

Director

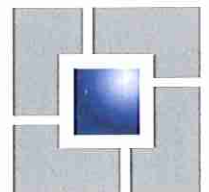
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Encs: DTA Technical Note



*Imperial Commercials, Wrexham
Technical Note*



david tucker associates
transport planning consultants



Imperial Commercials, Wrexham

Technical Note

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1.0 INTRODUCTION

- 1.1 This note has been produced on behalf of Harris Lamb in order to review the requirements for pedestrian crossing facilities on Wrexham Road to serve the proposed residential development at Imperial Commercials in Rhostyllen. The development will provide 22no. dwellings to the south of Wrexham Road.
- 1.2 The review considers concerns raised by members of the planning committee in respect of pedestrian safety.

2.0 Personal Injury Accidents

- 2.1 An assessment of the Personal Injury Accident (PIA) data was undertaken within the previous Transport Statement. The PIA data has been updated to provide a review to June 2011.
- 2.2 The data was obtained from Wrexham County Borough Council for the five year period from 16/06/06 to 15/06/11. The full details of the accident data including the study area are attached as **Appendix A**.
- 2.3 During this time period there were a total of 17 accidents within the search perimeter (**Figure 1**). Of the 17 accidents that occurred, 14 were classified as 'slight', 3 were classified as 'serious' and there were no 'fatal' accidents.
- 2.4 In summary, 3 accidents occurred before the AM peak, 5 during the inter peak hours and 6 during the evening. In terms of the peak hours, 1 accident occurred during the AM peak hour and 2 were recorded during the PM peak hour period. Of the 6 accidents that were recorded during the evening, 4 occurred between the hours 01:10 – 03:47. A summary of the accidents that occurred within the search area are provided in **Table 1** below.



Table 1 – Summary of Personal Injury Accident Data

Location	Slight	Serious	Fatal	No. Involving Pedestrians /Cyclists
Church Street / Wrexham Road cross road	2	0	0	0
Wrexham Road	3	1	0	1
Eldon Grove and Wrexham Road	4	0	0	0
Old Farm Road and Wrexham Road	3	1	0	1
Other	2	1	0	0
Total	14	3	0	2

- 2.5 Three of the accidents that occurred within the search area were classified as 'serious', accident Ref's. 3, 8 and 14. Accident Ref. 3 involved two youths on a motorcycle who lost control of the vehicle when emerging from an alleyway on High Street. This occurred at 02:58, did not involve any other vehicles and was attributable to driver error. Accident Ref. 14 occurred when vehicle 1 pulled out from Old Farm Road in front of a motorcycle that was travelling along the Wrexham Road. This was attributable to driver error and a failure to adequately look. Accident Ref. 8 occurred on Wrexham Road approximately 50m west of Trinity Road and involved a pedestrian. The accident was attributable to the pedestrian stepping out into the carriageway.
- 2.6 Two of the recorded accidents have involved vulnerable road users, accidents Ref. 8 and 16. Accident Ref 8 has been discussed above. Accident Ref. 16 involved a pedal cyclist and occurred at the junction of Old Farm Road and Wrexham Road. The accident was attributable to the cyclist travelling on the wrong side of the road against the flow of traffic.
- 2.7 In terms of the cross road junction of Church Street and Wrexham Road there have been 2 accidents that have occurred (Ref. 5 and 6). Accident Ref. 5 was a rear end shunt while vehicles were waiting at the junction and Accident Ref. 6 involved a collision when a vehicle pulled out onto Wrexham Road.
- 2.8 There were no accidents involving pedestrians at either the cross road junction or the existing site access.



- 2.9 Three accidents occurred on the Wrexham Road to the east of the pedestrian crossing facility (7, 8 and 9). Accident Ref. 8 has been discussed above, accident Ref. 7 occurred at 03:47 and involved a single car losing control and colliding with a lamppost. Accident Ref. 9 involved a rear end shunt. These accidents were not attributable to highway design or layout.
- 2.10 The PIA analysis has highlighted a small cluster of accidents at the junctions of Eldon Grove and Wrexham Road and Old Farm Road and Wrexham Road. The nature of accidents that have occurred at these locations do not indicate a specific highway safety issue that would need to be addressed as part of these proposals.
- 2.11 Overall the accidents that were recorded within the search area were not attributable to road design or layout and it is therefore considered that there are no existing road safety issues that would warrant mitigation measures as a result of the current proposals.
- 2.12 In addition to this, there were no accidents involving pedestrians in the vicinity of the site, at the cross road junction of Church Street and Wrexham Road or at the existing pedestrian crossing facilities on Wrexham Road.

3.0 Pedestrian Demand

- 3.1 In order to establish the likely forecast trip generation from the proposed development, the TRICS database was interrogated for surveys of private residential houses from sites with between 10 and 60 dwellings. The resulting person trip rates and number of trips based on 24 units are shown in **Table 2** below. Full details of the selected TRICS sites are attached as **Appendix B**.

Table 2 - TRICS assessment for private residential houses based on per unit

	Person Trip Rate (per dwelling)			Person Trips (26 houses)		
	In	Out	Total	In	Out	Total
AM Peak (08:00 – 09:00)	0.313	1.019	1.332	7	22	29
PM Peak (17:00 – 18:00)	0.642	0.453	1.095	14	10	24
12 Hour (07:00 – 19:00)	5.170	5.296	10.466	114	117	230



- 3.2 To calculate the likely pedestrian demand from the proposed development, the person trips detailed in **Table 2** have been broken down for each mode of travel. This has been based on the average mode shares detailed in the National Travel Survey (NTS) 2010 contained within the National Travel Survey Statistical release 2011. This document was produced by the department for Transport (DfT) and presents information on personal travel in Great Britain during 2010.
- 3.3 A summary of the mode shares taken from the NTS 2010 and the likely pedestrian demand based on the person trips rates generated by the proposed development is given in **Table 2** below.

Table 2 – Breakdown of mode share based on NTS 2010 (two – way trips)

	NTS 2010 mode shares	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Car	42%	12	11
Car Passenger	22%	6	5
Bus	7%	2	2
Rail	3%	1	1
Cycle	2%	1	1
Walk	22%	6	5
Other	2%	1	1
Total	100%	29	26

- 3.4 The total pedestrian demand has been derived from the proportion of person trips which would be made on foot (walk) and those using public transport as these trips would also require an initial on-foot stage.
- 3.5 In summary there would be 10 and 9 two-way trips in the AM and PM peak hour periods respectively.

4.0 Pedestrian Crossing Facilities

- 4.1 There are two existing pedestrian crossing facilities in the vicinity of the site that cross the unnamed road and Wrexham Road. These crossing facilities consist of a dropped kerb crossing with a central refuse area for pedestrians between the keep left bollards.



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- 4.2 The pedestrian desire lines shown in **Figure 2** illustrate that the majority of the local services within Rhostyllen are located to the north and east of the proposed site.
- 4.3 In order to assess the most appropriate pedestrian crossing facility for the Wrexham Road in the vicinity of the site, Local Transport Note (LTN) 1/95 and 2/95 produced by the Department for Transport (DfT) have been used. In addition to this, the methodology contained within The Assessment and Designs of Pedestrian Crossings – Local Transport Notes 1/95 and 2/95 chapter of Volume 8 Section 5 Part 1 TA68/96 within the Design Manual for Roads and Bridges (DMRB) has been adhered to.
- 4.4 The DMRB summary outlines the numerical calculations that are necessary to establish the degree of conflict between pedestrians and vehicles. The conflict is quantified by PV^2 where P is the number of two-way pedestrian movements crossing the road within 50m either side of the site at busy times and V is the two-way hourly flow of vehicles.
- 4.5 Given the constraints of the school holiday period, DTA has not been able to commission an ATC on the Wrexham Road. Traffic flows have however been obtained from an Environmental Traffic Impact Assessment that was undertaken for the National Trust application located adjacent to the Wrexham Road to the east of the site.
- 4.6 This survey was undertaken in 2003 and indicated that the two-way weekday flows on the Wrexham Road in the vicinity of the site are between 600 – 700 vehicles for the AM and PM peaks respectively. These flows have been factored to 2011 using TEMPRO v6.2 datasets. In order to provide a robust assessment the 2003 base flows have been taken as 700 two-way movements.
- 4.7 The TEMPRO growth factors for the AM peak period (07:00 09:59) and the PM peak period (16:00 18:59) were 1.0576 and 1.0634 respectively. The resultant 2011 two-way flows for the Wrexham Road in the vicinity of the site are 740 and 744 two-way vehicle movements for the AM and PM peak periods.
- 4.8 The pedestrian demand from the proposed site has been established in **Table 2** as 11 and 9 two-way pedestrian trips in the AM and PM peak hour periods.



- 4.9 In terms of assessing the most appropriate pedestrian crossing for the site, paragraph 2.6 of TA 68/95 states that the criterion against which the requirement for a pedestrian crossing will be assessed is if the PV^2 value exceeds 10^8 .
- 4.10 Taking the higher pedestrian demand during the AM peak (9) and the 2011 two-way base flow traffic for the AM peak (740), the degree of conflict between pedestrians and vehicles is 6,023,600. This is considerably below the threshold criterion of 10^8 detailed within TA 68/96.
- 4.11 In order to exceed this criterion with a traffic flow of 740 two-way movements, a pedestrian demand of 183 two-way peak hour movements is required. This is an order of magnitude greater than the pedestrian demand generated by the proposed site. In addition to this, the pedestrian demand of 11 two-way pedestrian movements generated by the proposals would require a two-way peak hour vehicle flow of 3,015. This would far exceed the capacity of the Wrexham Road.
- 4.12 The calculation has demonstrated that the conflict between pedestrians and vehicles is not great enough to require a formal signalised crossing facility.
- 4.13 It is however acknowledged that pedestrian routes from the new development will involve crossing Wrexham Road and in order to assist this, it is proposed that pedestrian refuges are provided each side of the crossroad junction. An indicative layout is attached as **Appendix C**.

5.0 Conclusions

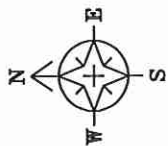
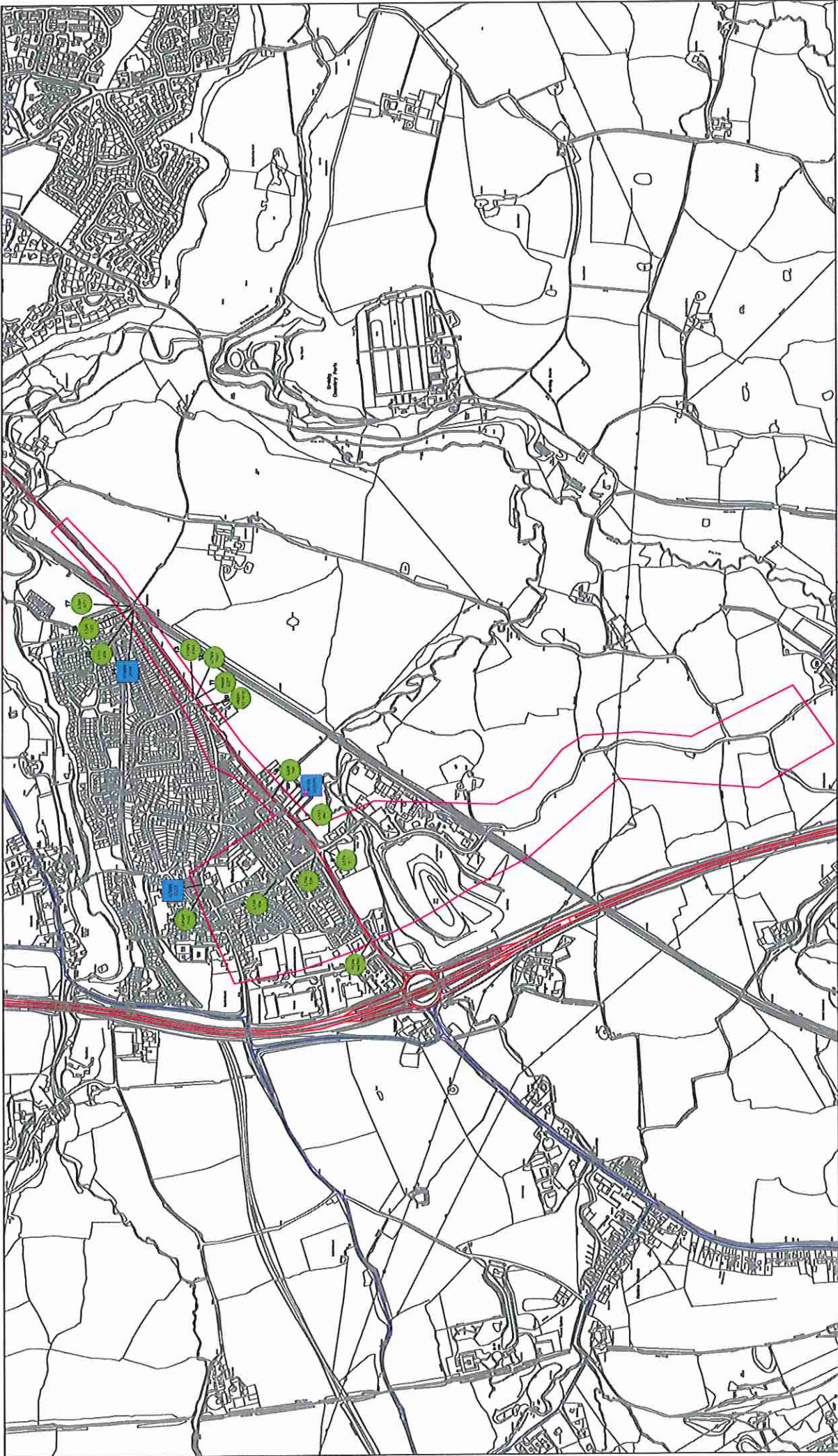
- 5.1 The existing review of personal injury accidents has been extended to provide details up until 2011. This data has been analysed and it is concluded that there are no existing highway safety issues which need to be addressed in respect of the development proposals. Furthermore there were no accidents involving pedestrians in the vicinity of the site, at the cross road junction of Church Street and Wrexham Road or at the existing pedestrian crossing facilities on Wrexham Road.



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- 5.2 Furthermore, there is no evidence of an existing highway safety concern relating specifically to pedestrians on Wrexham Road within Rhostyllen.
- 5.3 The number of pedestrian movements generated by the proposed development is estimated to be low reflecting the limited number of residential units being developed. The principle routes used by pedestrians do however involve crossing Wrexham road in order to access village facilities or public transport services.
- 5.4 The appropriate crossing facilities for the location has been considered within the context of DfT Guidance and further guidelines provided within DRMB. This assessment concludes that the number of pedestrian movements is not sufficient to warrant a signalled crossing facility.
- 5.5 In order to accommodate the pedestrian desire lines the provision of pedestrian refuges either side of the crossroads junction with Wrexham Road is however proposed. This provides for access to Wrexham-bound bus services and village facilities.

AVS/JB 12161-02_Technical Note
7th September 2011

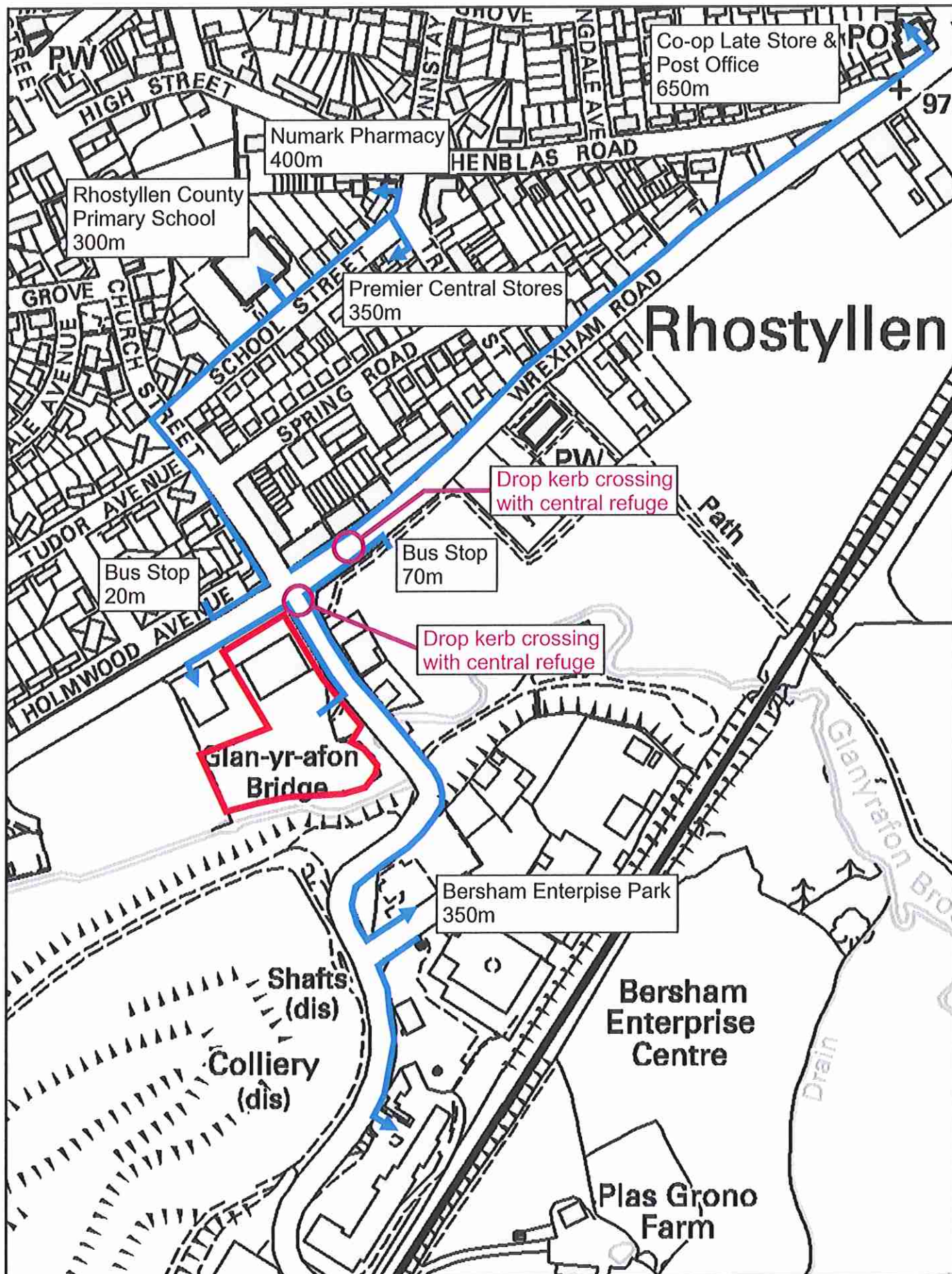
Figures



**WREXHAM COUNTY
BOROUGH COUNCIL**
ABBAY ROAD SOUTH,
WREXHAM INDUSTRIAL ESTATE
WREXHAM LL13 9PW
JOHN BRADBURY
CHIEF ENVIRONMENT OFFICER



JOB NO:		SCHEME TITLE: A5152 Wrexham Road Rhostyllen	
DIVISION:	TRAFFIC	DRAWING TITLE:	Recorded Personal Injury Accidents
SCALES:	N.T.S.	GRID REF:	331590 348660
DRAWN BY:	J. SMITH	CHECKED BY:	
STATUS:	SUMMARY		
			DRAWING No.
			DATE



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Figure 2
 Drawing Title
 Job Title
 Client

Drawing No : 12161-09
 Pedestrian Desire Lines
 Imperial Commercials, Wrexham
 Harris Lamb

Scale : NTS

NORTH

Appendices

A5152 Wrexham Road Rhostyllen 16/06/2006 - 15/06/2011

Area L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street				
725	RC08144995	Slight	Friday	01/08/2008	01:10	331125/348330						
Location: A5152, WREXHAM ROAD NEAR CROESFOEL IND EST, WREXHAM 1st Rd: A5152 2nd Rd: U												
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard			
30MPH	Single c'way	T/Stag Give	Dark/lights lit	Fine	Dry	None	None	None	None			
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age B
1	Car	No	Going ahead	SW	NE	On main	Junt appr	Yes	Bollard	Offside	None	Male 22 +
Cas NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil			
1	1	Passenger	Male	23	Slight	Front	Not ped	Not ped	Not ped			

Description: VEHICLE 1 LOSES CONTROL AND COLLIDES WITH BOLLARD AND COMES TO REST BY THE GARAGE.

User Information:

Contributory Factors: 501 410

725	08WR1058	Slight	Tuesday	19/02/2008	08:50	331269/348794						
Location: O/SIDE 10 HIGH STREET, RHOSTYLLEN 1st Rd: U 2nd Rd:												
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather		Rd Surf	PedX - Human	- Phy Fac	Special	Hazard		
30MPH	Single c'way	NotJCT	Light/with lights	Fine		Ice	None	None	None	None		
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age B
1	Car	No	Start	E W	On main	Not at	No	None		None	Male	68 -
2	M/c 125-500cc	No	Going ahead	W E	On main	Not at	No	None		None	Male	45 -
Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School	Pupil	
1	2	Drv/Rider	Male	45	Slight	No	Not ped	Not ped	Not ped			

Description: VEH 2 TRAV ON HIGH STREET IN DIRECTION OF WREXHAM. AS IT RODE PAST SOME PARKED VEHICLES, VEH 1 WAS MOVING OUT ONTO THE ROAD FROM IT'S PARKED POSITION & COLLIDED WITH VEH 2.

User Information:

Contributory Factors: 405 509 710

725	07WR2033	Serious	Tuesday	29/05/2007	02:58	331279/348799						
Location: O/SIDE 14 HIGH STREET, RHOSTYLLEN, WREXHAM 1st Rd: U 2nd Rd:												
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard			
30MPH	Single c'way	NotJCT	Dark/lights lit	Fine	Wet	None	None	None	None			
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age B
1	M/c 125-500cc	No	Going ahead	N S	On main	Not at	No	None		None	Male	22 +
2	Taxi	No	Parked	P P	On main	Not at	No	None		None	Male	43 N
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil		
1	1	Drv/Rider	Male	22	Serious	No	Not ped	Not ped	Not ped			
2	1	Passenger	Male	16	Slight	No	Not ped	Not ped	Not ped			

Description: VEH 1 (UNREGISTERED) IN NORTHWEST DIRECTION FROM AN ALLEYWAY LOST CONTROL ON MAIN ROAD THROWING BOTH RIDER & PILLION PASSENGER OFF VEHICLE. RIDER SLID UNDERNEATH VEH 2 WHICH WAS PARKED FACING WEST.

User Information:

Contributory Factors: 501 410 605 307

725	L120094	Slight	Friday	02/07/2010	16:35	331285/348596						
Location: CHURCH STREET AT J/W SCHOOL STREET, RHOSTYLLEN 1st Rd: U 2nd Rd: U												
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard			
30MPH	Single c'way	T/Stag Give	Light/with lights	Fine	Dry	None	None	None	None			
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age B
1	Car	No	Right turn	NE	NW	On main	Enter main	No	None	None	Male	47 N
2	Bus or Coach	No	Going ahead	NW	SE	On main	Junt appr	No	None	None	Male	50 N
Cas NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil			
1	2	Passenger	Female	17	Slight	No	Not ped	Not ped	Not ped			
2	2	Passenger	Female	29	Slight	No	Not ped	Not ped	Not ped			

Description: V1 HAS PULLED OUT AT JUNCTION FORCING V2 TO BRAKE SHARPLY AND PASSENGERS ON V2 TO FALL.

User Information:

Contributory Factors: 406 405 602

A5152 Wrexham Road Rhostyllen 16/06/2006 - 15/06/2011

Area L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street										
725	L196538	Slight	Thursday	21/10/2010	19:50	331360/348485												
Location: A5152 WREXHAM ROAD J/W CHURCH STREET, RHOSTYLLEN 1st Rd: A5152 2nd Rd: U																		
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard									
30MPH	Single c'way	T/Stage	Give	Light/with lights	Fine	Dry	None	None	None									
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age						
1	Car	No	Going ahead	NW	SE On main	Junt appr	No	None		None	Male	28	N					
2	Car	No	Waiting		NW SE On main	Junt appr	No	None		None	Female	28	N					
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil								
1	2	Drv/Rider	Female	28	Slight	No	Not ped	Not ped	Not ped									
2	2	Passenger	Male	7	Slight	Rear	Not ped	Not ped	Not ped									
Description: V2 WAITING AT JUNCTION OF CHURCH STREET TO ENTER MAIN ROAD, WHEN V1 COLLIDED WITH REAR OF V2.																		
User Information: Contributory Factors: 405 406																		

725	L173311	Slight	Thursday	16/09/2010	10:48	331370/348460												
Location: A5152 WREXHAM ROAD J/W HAFOD ROAD, RHOSTYLLEN 1st Rd: A5152 2nd Rd: U																		
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard									
30MPH	Single c'way	Multi	Give	Light/with lights	Fine	Wet	None	None	None									
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age						
1	Goods < 3.5t	No	Going ahead	SE	NW On main	Enter main	No	None		None	Male	62	N					
2	Car	No	Going ahead	SW	NE On main	Junt appr	Yes	None		None	Female	30	N					
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil								
1	2	Drv/Rider	Female	30	Slight	No	Not ped	Not ped	Not ped									
Description: V1 HAS PULLED OUT AT JUNCTION INTO PATH OF V2 CAUSING A COLLISION.																		
User Information: Contributory Factors: 405 706																		

725	L193861	Slight	Monday	18/10/2010	03:47	331447/348538												
Location: A5152 WREXHAM ROAD, RHOSTYLLEN, WREXHAM 1st Rd: A5152 2nd Rd:																		
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard									
40MPH	Single c'way	NotJCT		Dark/lights lit	Fine	Wet	None	None	None									
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age						
1	Car	No	Going ahead	NE	SW On main	Not at	Yes	Kerb	Nearside	Lamp	Male	22	-					
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil								
1	1	Drv/Rider	Male	22	Slight	No	Not ped	Not ped	Not ped									
Description: V1 HAS LOST CONTROL AND COLLIDED WITH NEARSIDE LAMPOST.																		
User Information: Contributory Factors: 410 603																		

725	RC09059175	Serious	Friday	03/04/2009	17:40	331474/348561												
Location: A5152 WREXHAM ROAD AT BUS STOP, RHOSTYLLEN 1st Rd: A5152 2nd Rd:																		
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard									
30MPH	Single c'way	NotJCT		Light/with lights	Fine	Dry	None	None	None									
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age						
1	Car	No	Going ahead	SW	NE On main	Not at	No	None		None	Female	58	-					
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil								
1	1	Pedestrian	Male	15	Serious	No	South east	Nearside	In c'way									
Description: CAS 1 STEPS OUT INTO PATH OF VEH 1.																		
User Information: Contributory Factors: 802 808																		

725	L204188	Slight	Tuesday	02/11/2010	09:45	331513/348606												
Location: A5152 WREXHAM ROAD J/W TRINITY STREET, RHOSTYLLEN, WREXHAM 1st Rd: A5152 2nd Rd: U																		
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard									
30MPH	Single c'way	X-Rds	Give	Light/with lights	Fine	Dry	None	None	None									
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age						
1	Car	No	Stop	E	W On main	Junt appr	No	None		None	Male	60	N					
2	Car	No	Waiting		E W On main	Junt appr	No	None		None	Male	49	N					
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil								
1	2	Drv/Rider	Male	49	Slight	No	Not ped	Not ped	Not ped									
Description: VEH 2 WAS TRAVELLING ALONG WREXHAM ROAD TOWARDS A483. VEH 1 WAS TRAVELLING BEHIND VEH 2. VEH 2 SLOWED TO ALLOW VEH 1 IN FRONT TO TURN RIGHT. VEH 1 THEN COLLIDED WITH REAR OF VEH 2.																		
User Information: Contributory Factors: 306 308 406 503 510																		

A5152 Wrexham Road Rhostyllen 16/06/2006 - 15/06/2011

Area L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street				
725	RM09011813	Slight	Thursday	07/05/2009	07:45	331767/348799						
Location: A5152 WREXHAM ROAD O/S POST OFFICE 10 METRES EAST OF ELDON GROVE, RHOSTYLLEN, WREXHAM 1st Rd: A5152 2nd Rd: U												
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard			
30MPH	Single c'way	Other Give	Light/with lights	Unknown	Dry	None	None	None	None			
Veh	Vehicle	type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in Left cway	Hit obj off Sex	Age	B
1	Car		No	Going ahead	SW NE	On main	Junt cleared	No		None	Female	50 N
2	Car		No	Waiting	SW NE	On main	Junt cleared	No		None	Male	49 N
Cas	NoVeh	ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil	
1	2		Drv/Rider	Male	49	Slight	No	Not ped	Not ped	Not ped		

Description: VEH1 FAILED TO STOP IN TIME AND COLLIDED WITH REAR OF VEH2.

User Information:

Contributory Factors: 405

725	06WR2087	Slight	Friday	10/11/2006	17:28	331789/348816						
Location: A5152 WREXHAM ROAD AT J/W ELDON GROVE, RHOSTYLLEN, WREXHAM 1st Rd: A5152 2nd Rd: U												
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard			
30MPH	Single	c'way T/Stag Give	Dark/lights lit	Rain	Wet	None	None	None	None			
Veh	Vehicle	type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex
1	Goods < 3.5t	No	Going ahead	NE SW	On main	Junt appr	No	None			None	Male
2	Car	No	Waiting	NE SW	On main	Junt appr	No	None			None	Male
3	Car	No	Waiting	NE SW	On main	Junt appr	No	None			None	Male
Cas	NoVeh	ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School	Pupil
1	2		Drv/Rider	Male	42	Slight	No	Not ped	Not ped	Not ped		

Description: V1 COLLIDES WITH REAR OF V2 WHICH IN TURN COLLIDES WITH V3

User Information:

Contributory Factors: 308 307 103

725	07WR1091	Slight	Tuesday	20/03/2007	07:35	331791/348816							
Location: A5152 WREXHAM ROAD AT J/W ELDON GROVE , WREXHAM, 1st Rd: A5152 2nd Rd: U													
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard				
30 MPH	Single c'way	T/Stag Give	Light/with lights	Fine	Dry	None	None	None	None				
Veh	Vehicle	type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	
1	Goods < 3.5t	No	Stop	NE SW	On main	Junt appr	No	None			None	Male	
2	Car	No	Right turn	NE SW	On main	Junt appr	No	None			None	Male	
Cas	NoVeh	ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School	Pupil	
1	2		Drv/Rider	Male	35	Slight	No	Not ped	Not ped	Not ped			

Description: V2 HAS BEEN TRAVELLING TOWARDS RHOSTYLLEN AND HAD STOPPED AT JUNCTION OF WREXHAM ROAD, RHOSTYLLEN AND ELDON GROVE INDICATES TO TURN RIGHT V1 HAS BEEN TRAVELLING BEHIND V2 FOR APPROX 1 MILE V1 HAS FAILED TO STOP THEREFORE COLLIDING WITH REAR OF V2

User Information:

Contributory Factors: 706 802 405 602 801 801

725	07WR2003	Slight	Sunday	21/01/2007	13:18	331806/348823						
Location: A5152 WREXHAM ROAD NEAR J/W ELDON GROVE, RHOSTYLLEN, WREXHAM 1st Rd: A5152 2nd Rd: U												
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard			
30MPH	Single	c'way T/Stag Give	Light/with lights	Fine	Dry	None	None	None	None			
Veh	Vehicle	type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex
1	Car		No	Going ahead	SW NE	On main	Mid junction	No			None	Male
2	Car		No	Going ahead	NE SW	On main	Mid junction	No			None	Male
Cas	NoVeh	ref	Cas	Class	Sex	Age	Severity	Car	Pass	Ped	Direction	Ped
1	1		Drv/Rider		Male	41	Slight	No		Not ped		Movement
2	2		Drv/Rider		Male	70	Slight	No		Not ped		Ped location
												School Pupil

Description: V1 AND V2 TRAVELLING IN OPPOSITE DIRECTIONS. FOR UNKNOWN REASON, V1 CROSSES CENTRE OF CARRIAGEWAY AND COLLIDES WITH V2.

User Information:

Contributory Factors: 410

A5152 Wrexham Road Rhostyllen 16/06/2006 - 15/06/2011

Area L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street										
725	07WR2018	Serious	Friday	30/03/2007	07:45	332032/348988												
Location: A5152 WREXHAM ROAD NEAR J/W OLD FARM ROAD, RHOSTYLLEN, WREXHAM 1st Rd: A5152 2nd Rd: U																		
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather		Rd Surf	PedX - Human	- Phy	Fac	Special	Hazard							
30MPH	Single c'way	T/Stag Give	Light/with lights	Fine		Wet	None	None	None	None	None							
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age						
1	Car	No	Right turn	NW SW	On main	Mid junction	No	None		None	Untra.	? N						
2	M/c 50-125cc	No	Going ahead	SW NE	On main	Junt appr	No	None		None	Male	46						
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped	Direction	Ped Movement	Ped location	School	Pupil						
1	2	Drv/Rider	Male	46	Serious	No	Not ped	Not ped	Not ped	Not ped								

Description: V2 TRAVELLING ALONG A5152 THROUGH RHOSTYLLEN TOWARDS WREXHAM. V1 PULLED OUT FROM OLD FARM ROAD FROM THE NEAR SIDE INTO THE PATH OF V2 CAUSING V2 TO BRAKE HARD LOSE CONTROL AND FALL OVER BICYCLE. V1 THEN LEFT THE SCENE WITHOUT STOPPING!

User Information: Contributory Factors: 405 601

725	L111460	Slight	Tuesday	22/06/2010	01:50	332035/348988							
Location: A5152 WREXHAM ROAD NEAR OLD FARM ROAD, RHOSTYLLEN, WREXHAM 1st Rd: A5152 2nd Rd: U													
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy	Fac	Special	Hazard			
30MPH	Single c'way	T/Stag Give	Dark/lights lit	Fine	Dry	None		None	None	Animal			
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	
1	Car	No	Going ahead	SW NE	On main	Junt appr	No	None	Nearside	Other	Female	42	
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped	Direction	Ped Movement	Ped location	School	Pupil	
1	1	Drv/Rider	Female	42	Slight	No	Not ped		Not ped	Not ped			

Description: V1 HAS SWERVED TO AVOID A FOX IN THE ROAD, MOUNTED THE PAVEMENT AND COLLIDED WITH A WALL.

User Information: Contributory Factors: 201 109

725	L128123	Slight	Wednesday	14/07/2010	18:55	332039/348994									
Location: A5152 WREXHAM ROAD AT J/W ESLESS/ OLD FARM ROAD, WREXHAM 1st Rd: A5152 2nd Rd: U															
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather		Rd Surf	PedX - Human	- Phy	Fac	Special	Hazard				
30MPH	Single c'way	T/Stag Give	Light/with lights	Fine		Dry	None	None	None	None	None				
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age B			
1	Pedal Cycle	No	Going ahead	NE SW	On main	Junt appr	No	None		None	Male	20 N			
2	Car	No	Left turn	NW NE	On main	Enter main	No	None		None	Male	33 N			
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped	Direction	Ped Movement	Ped location	School	Pupil			
1	1	Drv/Rider	Male	20	Slight	No	Not ped	Not ped	Not ped	Not ped					

Description: V2, A BICYCLE, TRAVELLING IN THE WRONG LANE AGAINST THE TRAFFIC HAS COLLIDED WITH V1 AS IT PULLED OUT OF A JUNCTION.

User Information: Contributory Factors: 305 405

725	L029671	Slight	Saturday	20/02/2010	16:30	332045/348997							
Location: A5152 WREXHAM ROAD AT J/W OLD FARM ROAD, RHOSTYLLEN							1st Rd: A5152 2nd Rd: U						
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather		Rd Surf	PedX - Human	- Phy	Fac	Special	Hazard		
30MPH	Single c'way	T/Stag Give	Light/with lights	Fine		Dry	None	None	None	None	None		
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	
1	Car	No	Right turn	NW SW	On main	Enter main	No	None		None	Male	22	
2	Car	No	Going ahead	SW NE	On main	Junt appr	Yes	None		None	Male	19	
Cas	NoVeh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped	Direction	Ped Movement	Ped location	School	Pupil	
1	2	Drv/Rider	Male	19	Slight	No	Not ped		Not ped	Not ped			
2	1	Passenger	Female	19	Slight	Front	Not ped		Not ped	Not ped			

Description: V1, IN ORDER TO TURN RIGHT AT JUNCTION, PULLS INTO THE PATH OF V2 CAUSING A COLLISION.

User Information: Contributory Factors: 405 406

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

03 SOUTH WEST	
CW CORNWALL	1 days
05 EAST MIDLANDS	
DS DERBYSHIRE	1 days
LE LEICESTERSHIRE	1 days
06 WEST MIDLANDS	
SH SHROPSHIRE	1 days
ST STAFFORDSHIRE	1 days
WM WEST MIDLANDS	1 days
WO WORCESTERSHIRE	2 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	
NY NORTH YORKSHIRE	2 days
08 NORTH WEST	
CH CHESHIRE	1 days
09 NORTH	
CB CUMBRIA	2 days
10 WALES	
CF CARDIFF	1 days
CP CAERPHILLY	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 10 to 52 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/03 to 05/09/10

Selected survey days:

Monday	4 days
Tuesday	4 days
Wednesday	2 days
Thursday	4 days
Friday	1 days

Selected survey types:

Manual count	15 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	7
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Residential Zone	12
No Sub Category	3

Filtering Stage 3 selection:

Use Class:

C3 15 days

Population within 1 mile:

1,001 to 5,000 2 days

5,001 to 10,000 2 days

10,001 to 15,000 6 days

15,001 to 20,000 3 days

20,001 to 25,000 1 days

25,001 to 50,000 1 days

Population within 5 miles:

5,001 to 25,000 3 days

25,001 to 50,000 2 days

50,001 to 75,000 1 days

75,001 to 100,000 3 days

100,001 to 125,000 2 days

250,001 to 500,000 4 days

Car ownership within 5 miles:

0.6 to 1.0 7 days

1.1 to 1.5 7 days

1.6 to 2.0 1 days

Travel Plan:

No 15 days

LIST OF SITES relevant to selection parameters

- | | | |
|---|---|--|
| 1 | CB-03-A-02 SEMI DETACHED, WORKINGTON
HAWKSHEAD AVENUE

WORKINGTON
Edge of Town
Residential Zone
Total Number of dwellings: 40
Survey date: MONDAY 20/06/05 | CUMBRIA

Survey Type: MANUAL |
| 2 | CB-03-A-03 SEMI DETACHED, WORKINGTON
HAWKSHEAD AVENUE

WORKINGTON
Edge of Town
Residential Zone
Total Number of dwellings: 40
Survey date: THURSDAY 20/11/08 | CUMBRIA

Survey Type: MANUAL |
| 3 | CF-03-A-03 DETACHED, CARDIFF
LLANTRISANT ROAD

CARDIFF
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 29
Survey date: MONDAY 08/10/07 | CARDIFF

Survey Type: MANUAL |
| 4 | CH-03-A-05 DETACHED, CREWE
SYDNEY ROAD
SYDNEY
CREWE
Edge of Town
Residential Zone
Total Number of dwellings: 17
Survey date: TUESDAY 14/10/08 | CHESHIRE

Survey Type: MANUAL |
| 5 | CP-03-A-02 SEMI DETACHED, PENGAM
THE RISE

PENGAM
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 41
Survey date: MONDAY 05/09/05 | CAERPHILLY

Survey Type: MANUAL |
| 6 | CW-03-A-01 TERRACED, PENZANCE
ALVERTON ROAD

PENZANCE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 13
Survey date: THURSDAY 30/06/05 | CORNWALL

Survey Type: MANUAL |
| 7 | DS-03-A-01 SEMI D./TERRACED, DRONFIELD
THE AVENUE
HOLMESDALE
DRONFIELD
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 20
Survey date: THURSDAY 22/06/06 | DERBYSHIRE

Survey Type: MANUAL |

LIST OF SITES relevant to selection parameters (Cont.)

8	LE-03-A-01	DETACHED, MELTON MOWBRAY	LEICESTERSHIRE
	REDWOOD AVENUE		
	MELTON MOWBRAY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:		11
	Survey date: TUESDAY		03/05/05
			Survey Type: MANUAL
9	NY-03-A-01	MIXED HOUSES, NORTHALLERTON	NORTH YORKSHIRE
	GRAMMAR SCHOOL LANE		
	NORTHALLERTON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:		52
	Survey date: TUESDAY		25/09/07
			Survey Type: MANUAL
10	NY-03-A-03	PRIVATE HOUSING, BOROUGHBRIDGE	NORTH YORKSHIRE
	NEW ROW		
	BOROUGHBRIDGE		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:		14
	Survey date: MONDAY		15/09/08
			Survey Type: MANUAL
11	SH-03-A-03	DETACHED, SHREWSBURY	SHROPSHIRE
	SOMERBY DRIVE		
	BICTON HEATH		
	SHREWSBURY		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:		10
	Survey date: FRIDAY		26/06/09
			Survey Type: MANUAL
12	ST-03-A-05	TERRACED/DETACHED, STOKE	STAFFORDSHIRE
	WATERMEET GROVE		
	ETRURIA		
	STOKE-ON-TRENT		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:		14
	Survey date: WEDNESDAY		26/11/08
			Survey Type: MANUAL
13	WM-03-A-02	DETACHED/SEMI D., STRBRIDGE	WEST MIDLANDS
	HEATH STREET		
	STOURBRIDGE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:		12
	Survey date: WEDNESDAY		26/04/06
			Survey Type: MANUAL
14	WO-03-A-01	DETACHED, BROMSGROVE	WORCESTERSHIRE
	MARLBOROUGH AVENUE		
	ASTON FIELDS		
	BROMSGROVE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:		10
	Survey date: THURSDAY		23/06/05
			Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	WO-03-A-02	SEMI DETACHED, REDDITCH	WORCESTERSHIRE
	MEADOWHILL ROAD		
	REDDITCH		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	48	
	Survey date: TUESDAY	02/05/06	Survey Type: MANUAL

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	15	25	0.140	15	25	0.313	15	25	0.453
08:00 - 09:00	15	25	0.313	15	25	1.019	15	25	1.332
09:00 - 10:00	15	25	0.337	15	25	0.431	15	25	0.768
10:00 - 11:00	15	25	0.283	15	25	0.461	15	25	0.744
11:00 - 12:00	15	25	0.385	15	25	0.399	15	25	0.784
12:00 - 13:00	15	25	0.385	15	25	0.288	15	25	0.673
13:00 - 14:00	15	25	0.356	15	25	0.369	15	25	0.725
14:00 - 15:00	15	25	0.394	15	25	0.369	15	25	0.763
15:00 - 16:00	15	25	0.760	15	25	0.402	15	25	1.162
16:00 - 17:00	15	25	0.736	15	25	0.477	15	25	1.213
17:00 - 18:00	15	25	0.642	15	25	0.453	15	25	1.095
18:00 - 19:00	15	25	0.439	15	25	0.315	15	25	0.754
19:00 - 20:00	1	29	0.069	1	29	0.034	1	29	0.103
20:00 - 21:00	1	29	0.034	1	29	0.000	1	29	0.034
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			5.273			5.330			10.603

Parameter summary

Trip rate parameter range selected: 10 - 52 (units:)
Survey date range: 01/01/03 - 05/09/10
Number of weekdays (Monday-Friday): 15
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

APPENDIX C

PROPOSED PEDESTRIAN CROSSING IMPROVEMENTS

CLIENT: Imperial Concreals, Vretham

DRAWING TITLE: Proposed Pedestrian Crossing Improvements

SCALE: 1:500

DATE: Sept11

DRIVER: JB

REVISION: 12/16/11

KEY:

NO.	DESCRIPTION	DATE	INITIALS	CHECKED BY
1	NEW PEDESTRIAN CROSSING POINT			
2	IMPROVED PEDESTRIAN CROSSING POINT			
3	PEDESTRIAN LINK			

DAVID TUCKER ASSOCIATES
 CONSULTING ENGINEERS & ARCHITECTS
 10000 Highway 100, Suite 100
 Houston, TX 77055
 Tel: (281) 440-1100
 Fax: (281) 440-1101
 www.davidtuckerassociates.com

IMPROVED
PEDESTRIAN
CROSSING
POINT

NEW
PEDESTRIAN
CROSSING
POINT

PEDESTRIAN
LINK

david tucker associates



Former House, Doctors Lane,
Hurdley in Arden,
Warwickshire B95 5AW
Tel: +44(0)1564 793588
Fax: +44(0)1564 793983
www.datatransposition.co.uk

Harris Lamb

Imperial Comercials, Wrexham

Proposed Pedestrian Crossing Improvements

SCALE
1:5002A3

DATE	Sept 11	DIAPYCNUS PALL
RAISED BY	JB	

12161-11

APPROVAL: