



## **APPENDICES**



## **APPENDIX TS1**

## Andrew Bell

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**From:** Andrew Bell  
**Sent:** 12 April 2016 14:58  
**To:** 'Taylor, Mike'  
**Subject:** Land at Harthill Road, Liverpool

Mike

### Land at Harthill Road, Liverpool

Further to our preliminary telephone conversations, Redrow Homes are currently looking at options to develop a number of parcels of land off Harthill Road, adjacent to Calderstones Park, for residential development. The location and nature of these land parcels is set out below, along with an indication of emerging thinking re: development quantum on each land parcel:

- LCC Harthill Depot site – 20 units – mix unknown but all c. 3 – 5 bedroom homes.
- Park View Land – 14 units - mix unknown but all c. 3 – 5 bedroom homes.
- Beechley Manor and Grounds:
  - Stables – 3 mews houses – 2 bedrooms
  - Coach House – 1 apartment – 2 bedrooms
  - Summer House – 1 apartment – 1 bedroom
  - Paddock – 4 houses – mix unknown but all 4 – 5 bedrooms
  - Beechley House – 8 apartments – 2 bedrooms

Whilst there is always the potential for the above development quantum to change slightly as the scheme evolves prior to a formal planning submission, I wouldn't expect any such changes to be significant in this case.

It is proposed that any planning application would be supported by a formal Transport Statement (TS) report, which would be prepared to cover those key transport assessment matters identified in NPPG "Travel plans, transport assessments and statements in decision-taking". With respect to the land at Harthill Road I would therefore propose that any formal TS would need to cover the following matters:

- *Review of site location & local network features* – including existing site conditions / land use, description of the local highway network with particular reference to the proximity to Calderstones School, and a review of historical personal injury accident data in the locale.
- *Sustainability appraisal* – audit of site accessibility by alternative travel modes to the private car, including a description of local public transport opportunities and accessibility to key local shops and services by non-car modes such as walking / cycling. Reference to the results of a completed LCC 'Ensuring Choice of Travel' SPD accessibility questionnaire exercise.
- *Review of development proposals* – including a description of the development scheme and the design and review of proposal site access arrangements with respect to prevailing local and national design standards. Assessment of proposed internal layout of the scheme where required, in terms of typical vehicle manoeuvres (using AutoCAD vehicle swept path software) and proposed car parking levels.
- *Review of traffic generation and distribution of traffic over the local network* – including a review of the anticipated vehicle trip generation of the development proposals and the local assignment of this traffic to immediate sections of the local highway network;
- *Appraisal of development traffic impact* – Review of the likely operational effects of the proposal site in terms of local link capacity and relevant link capacity thresholds.
- *Summary & Conclusions.*

I trust that the above scope of highway assessment work meets with your approval. Should you have any queries or comments regarding the proposed approach, please do not hesitate to contact me.

Regards

**Andrew Bell**  
Technical Director

The logo for 'axis' is a dark blue square with the word 'axis' in white lowercase letters.

**[andrewbell@axisped.co.uk](mailto:andrewbell@axisped.co.uk)**

T: 0844 8700 007\* | M: 07711 508 794 | F: 01244 661 432

Camellia House, 76 Water Lane, Wilmslow, Cheshire, SK9 5BB



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## **APPENDIX TS2**

## APPENDIX TS2

### PHOTOGRAPHS OF KEY EXISTING LOCAL HIGHWAY NETWORK FEATURES



Plate TS1 – Existing access road serving Harthill Depot (looking towards Depot site)



Plate TS2 – Existing access road serving Harthill Depot (looking towards Harthill Road)



Plates TS3 & TS4 – Existing available visibility at Harthill Depot access road connection to Harthill Road



Plate TS5 – Existing private car parking area dropped kerb access to Harthill Road



Plate TS6 – Existing Beechley Stables dropped kerb access to Harthill Road



Plate TS7 – Existing Beechley Manor access point to Harthill





Plate TS8 – Harthill Road approach to junction with Allerton Road



Plate TS9 & TS10 Visibility from Harthill Road to Allerton Road (southbound approach)



Plate TS11 – Entry to site frontage section of Harthill Road at junction with Allerton Road (looking north)



Plate TS12 – Harthill Road looking north towards Beechley Manor access point  
(note some on-street parking – photo taken outside of school drop off / pick up period)



Plate TS13 – Disabled parking bays on Harthill Road to the front of Beechley Stables



Plate TS14 – Existing yellow line parking restrictions in the vicinity of the Calderstones School southern access point.





Plate TS15 – Off-peak on street parking on the section of Harthill Road close to Calderstone School southern access



Plate TS16 & TS17 – Existing pedestrian connections from Calderstone Park to the Harthill Depot access road



Plate TS18 – Harthill Road looking north towards Calderstones School staff car park access



Plate TS19 – Calderstones School staff car park access



Plate TS20 – Calderstones School Sixth Form centre access



## **APPENDIX TS3**



Junction: A : Harthill Road (NE Arm) /Beechley Manor Access/Harthill Road (SW Arm)  
From: Harthill Road (NE Arm)  
Direction: Left Turn  
To: Beechley Manor Access

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
PM Total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Junction: A : Harthill Road (NE Arm) /Beechley Manor Access/Harthill Road (SW Arm)  
From: Harthill Road (NE Arm)  
Direction: Straight On  
To: Harthill Road (SW Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	5	1	0	0	0	0	0	6
07:45	12	1	2	0	0	0	1	16
08:00	29	1	3	0	0	0	0	33
08:15	37	0	0	0	0	0	2	39
08:30	90	1	0	0	0	0	0	91
08:45	34	2	1	0	0	0	0	37
09:00	15	2	1	0	0	0	0	18
09:15	6	0	1	1	0	0	0	8
AM Total	228	8	8	1	0	0	3	248
14:30	12	0	0	0	0	0	0	12
14:45	7	0	0	0	0	0	0	7
15:00	36	1	0	0	0	0	0	37
15:15	19	2	0	0	0	0	0	21
15:30	27	2	0	0	0	0	0	29
15:45	25	3	0	0	0	0	0	28
16:00	21	0	0	0	0	0	0	21
16:15	14	1	0	0	0	0	0	15
16:30	21	2	0	0	0	0	0	23
16:45	17	2	0	0	0	0	1	20
17:00	19	1	0	0	0	0	0	20
17:15	27	2	0	0	0	0	0	29
17:30	15	2	0	0	0	0	0	17
17:45	13	1	0	0	0	1	0	15
PM Total	273	19	0	0	0	1	1	294
Total	501	27	8	1	0	1	4	542

Junction: A : Harthill Road (NE Arm) /Beechley Manor Access/Harthill Road (SW Arm)  
From: Harthill Road (NE Arm)  
Direction: U-Turn  
To: Harthill Road (NE Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	1	1	0	0	0	0	0	2
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
PM Total	1	0	0	0	0	0	0	1
Total	1	0	0	0	0	0	0	1

Junction: A : Harthill Road (NE Arm) /Beechley Manor Access/Harthill Road (SW Arm)  
From: Beechley Manor Access  
Direction: Left Turn  
To: Harthill Road (SW Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	1	0	0	0	0	0	0	1
15:30	1	0	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
17:00	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
PM Total	3	0	0	0	0	0	0	3
Total	3	0	0	0	0	0	0	3

Junction: A : Harthill Road (NE Arm) /Beechley Manor Access/Harthill Road (SW Arm)  
From: Beechley Manor Access  
Direction: Right Turn  
To: Harthill Road (NE Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	1	0	0	0	0	0	0	1
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
PM Total	1	0	0	0	0	0	0	1
Total	1	0	0	0	0	0	0	1

Junction: A : Harthill Road (NE Arm) /Beechley Manor Access/Harthill Road (SW Arm)  
From: Beechley Manor Access  
Direction: U-Turn  
To: Beechley Manor Access

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
PM Total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Junction: A : Harthill Road (NE Arm) /Beechley Manor Access/Harthill Road (SW Arm)  
From: Harthill Road (SW Arm)  
Direction: Straight On  
To: Harthill Road (NE Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	11	1	0	0	0	0	0	12
07:45	21	0	1	0	0	0	0	22
08:00	34	2	0	0	0	0	0	36
08:15	55	0	1	0	0	0	1	57
08:30	89	1	0	0	0	0	0	90
08:45	34	3	1	0	0	0	0	38
09:00	17	1	0	1	0	0	1	20
09:15	11	0	0	0	0	0	0	11
AM Total	272	8	3	1	0	0	2	286
14:30	9	1	2	0	0	0	0	12
14:45	17	0	0	0	0	0	0	17
15:00	30	2	0	0	0	0	1	33
15:15	22	0	0	0	0	0	1	23
15:30	19	2	0	0	0	0	0	21
15:45	10	4	0	0	0	0	0	14
16:00	17	0	1	0	0	0	1	19
16:15	26	0	0	0	0	0	1	27
16:30	21	2	0	0	0	0	0	23
16:45	21	1	0	0	0	0	0	22
17:00	24	1	0	0	0	0	0	25
17:15	19	0	0	0	0	0	2	21
17:30	31	1	0	0	0	0	1	33
17:45	8	0	0	0	0	0	0	8
PM Total	274	14	3	0	0	0	7	298
Total	546	22	6	1	0	0	9	584

Junction: A : Harthill Road (NE Arm) /Beechley Manor Access/Harthill Road (SW Arm)  
From: Harthill Road (SW Arm)  
Direction: Right Turn  
To: Beechley Manor Access

Time</
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Junction: E : Harthill Road (NE Arm) /Allotment Area Access /Harthill Road (SW Arm) /School Emerge From: Harthill Road (NE Arm) Direction: Left Turn To: Allotment Area Access									Junction: E : Harthill Road (NE Arm) /Allotment Area Access /Harthill Road (SW Arm) /School Emerge From: Harthill Road (NE Arm) Direction: Straight On To: Harthill Road (SW Arm)									Junction: E : Harthill Road (NE Arm) /Allotment Area Access /Harthill Road (SW Arm) /School Emerge From: Harthill Road (NE Arm) Direction: Right Turn To: School Emergency Access									Junction: E : Harthill Road (NE Arm) /Allotment Area Access /Harthill Road (SW Arm) /School Emerge From: Harthill Road (NE Arm) Direction: U-Turn To: Harthill Road (NE Arm)									
Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:30	0	0	0	0	0	0	0	0	07:30	10	1	0	0	0	0	0	11	07:30	0	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	07:45	16	1	2	0	0	0	1	20	07:45	0	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	08:00	28	1	3	0	0	0	0	32	08:00	0	0	0	0	0	0	0	0	0	08:00	3	0	0	0	0	0	0	0
08:15	1	0	0	0	0	0	0	1	08:15	34	0	0	0	0	0	2	36	08:15	0	0	0	0	0	0	0	0	0	08:15	3	0	0	0	0	0	0	3
08:30	0	0	1	1	0	0	0	2	08:30	85	1	0	0	0	0	0	86	08:30	0	0	0	0	0	0	0	0	0	08:30	2	0	0	0	0	0	0	2
08:45	0	0	1	0	0	0	0	1	08:45	32	1	0	0	0	0	0	33	08:45	0	0	0	0	0	0	0	0	0	08:45	1	0	0	0	0	0	0	1
09:00	0	0	0	0	0	0	0	0	09:00	15	2	1	0	0	0	0	18	09:00	0	0	0	0	0	0	0	0	0	09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	09:15	7	0	1	1	0	0	0	9	09:15	0	0	0	0	0	0	0	0	0	09:15	0	0	0	0	0	0	0	0
AM Total	1	0	2	0	0	0	0	3	AM Total	227	7	7	1	0	0	0	245	AM Total	0	0	0	0	0	0	0	0	0	AM Total	6	0	0	0	0	0	0	6
14:30	0	1	1	0	0	0	0	2	14:30	15	0	0	0	0	0	0	15	14:30	0	0	0	0	0	0	0	0	0	14:30	1	0	0	0	0	0	0	1
14:45	0	0	0	0	0	0	0	0	14:45	10	0	0	0	0	0	0	10	14:45	0	0	0	0	0	0	0	0	0	14:45	1	0	0	0	0	0	0	1
15:00	2	0	0	0	0	0	0	2	15:00	20	1	0	0	0	0	0	21	15:00	0	0	0	0	0	0	0	0	0	15:00	1	0	0	0	0	0	0	1
15:15	1	0	0	0	0	0	0	1	15:15	14	3	0	0	0	0	0	17	15:15	0	0	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	15:30	23	2	0	0	0	0	0	25	15:30	0	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	15:45	24	3	0	0	0	0	0	27	15:45	0	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	1	1	16:00	23	0	0	0	0	0	0	23	16:00	0	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	0
16:15	1	0	0	0	0	0	0	1	16:15	10	1	0	0	0	0	0	11	16:15	0	0	0	0	0	0	0	0	0	16:15	1	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	16:30	18	3	0	0	0	0	0	21	16:30	0	0	0	0	0	0	0	0	0	16:30	1	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	16:45	17	2	0	0	0	0	1	20	16:45	0	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	17:00	20	2	0	0	0	0	0	22	17:00	0	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	17:15	22	1	0	0	0	0	0	23	17:15	0	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	17:30	20	2	0	0	0	0	0	22	17:30	0	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	17:45	16	1	0	0	0	1	0	18	17:45	0	0	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	0
PM Total	4	1	1	0	0	0	1	7	PM Total	252	21	0	0	0	0	1	275	PM Total	0	0	0	0	0	0	0	0	0	PM Total	5	0	0	0	0	0	0	5
Total	11	1	3	0	0	0	1	16	Total	479	28	7	1	0	0	1	520	Total	0	0	0	0	0	0	0	0	0	Total	11	0	0	0	0	0	0	11

Junction: E : Harthill Road (NE Arm) /Allotment Area Access /Harthill Road (SW Arm) /School Emergency Access										Junction: E : Harthill Road (NE Arm) /Allotment Area Access /Harthill Road (SW Arm) /School Emergency Access										Junction: E : Harthill Road (NE Arm) /Allotment Area Access /Harthill Road (SW Arm) /School Emergency Access										Junction: E : Harthill Road (NE Arm) /Allotment Area Access /Harthill Road (SW Arm) /School Emergency Access									
From: Allotment Area Access Direction: Left Turn To: Harthill Road (SW Arm)										From: Allotment Area Access Direction: Straight On To: School Emergency Access										From: Allotment Area Access Direction: Right Turn To: Harthill Road (NE Arm)										From: Allotment Area Access Direction: U-Turn To: Allotment Area Access									
Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total				
07:30	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0			
07:45	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0			
08:00	0	0	0	0	0	0	0	0	08:00	0	0	0	0	0	0	0	0	08:00	0	0	0	0	0	0	0	0	0	08:00	0	0	0	0	0	0	0	0			
08:15	0	0	0	0	0	0	0	0	08:15	0	0	0	0	0	0	0	0	08:15	1	0	0	0	0	0	0	0	1	08:15	0	0	0	0	0	0	0	0			
08:30	2	0	0	0	0	0	0	2	08:30	0	0	0	0	0	0	0	0	08:30	3	0	0	0	0	0	0	0	3	08:30	0	0	0	0	0	0	0	0			
08:45	0	1	1	0	0	0	0	2	08:45	0	0	0	0	0	0	0	0	08:45	1	0	0	0	0	0	0	0	1	08:45	0	0	0	0	0	0	0	0			
09:00	1	0	0	0	0	0	0	1	09:00	0	0	0	0	0	0	0	0	09:00	0	0	0	0	0	0	0	0	0	09:00	0	0	0	0	0	0	0	0			
09:15	0	0	0	0	0	0	0	0	09:15	0	0	0	0	0	0	0	0	09:15	0	0	1	0	0	0	0	0	1	09:15	0	0	0	0	0	0	0	0			
AM Total	3	1	1	0	0	0	0	5	AM Total	0	0	0	0	0	0	0	0	AM Total	5	0	1	0	0	0	0	0	6	AM Total	0	0	0	0	0	0	0	0			
14:30	0	0	0	0	0	0	1	1	14:30	0	0	0	0	0	0	0	0	14:30	0	1	5	0	0	0	0	0	6	14:30	0	0	0	0	0	0	0	0			
14:45	0	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	0	14:45	0	0	1	0	0	0	0	0	1	14:45	0	0	0	0	0	0	0	0			
15:00	1	0	0	0	0	0	0	1	15:00	0	0	0	0	0	0	0	0	15:00	2	0	0	0	0	0	0	0	2	15:00	0	0	0	0	0	0	0	0			
15:15	1	0	0	0	0	0	0	1	15:15	0	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0	0			
15:30	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	0			
15:45	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	0			
16:00	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	0			
16:15	0	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	0			
16:30	0	0	0	0	0	0	1	1	16:30	0	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0	0	1	16:30	0	0	0	0	0	0	0	0			
16:45	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0			
17:00	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0			
17:15	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0			
17:30	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0			
17:45	0	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	0			
PM Total	3	0	0	0	0	0	1	4	PM Total	0	0	0	0	0	0	0	0	PM Total	2	1	6	0	0	0	0	1	10	PM Total	0	0	0	0	0	0	0	0			
Total	6	1	1	0	0	0	1	9	Total	0	0	0	0	0	0	0	0	Total	7	1	7	0	0	0	0	1	16	Total	0	0	0	0	0	0	0	0			

Junction: B : Beechley Stable Access  
 From: Harthill Road (NE Arm)  
 Direction: Left In  
 To: Beechley Stable Access

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0	AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	1	1	14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	0
PM Total	0	0	0	0	0	0	1	1	PM Total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	Total	0	0	0	0	0	0	0	0

Junction: B : Beechley Stable Access  
 From: Beechley Stable Access  
 Direction: Left Out  
 To: Harthill Road (SW Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0	AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	1	1	1
16:00	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	0
PM Total	0	0	0	0	0	0	0	0	PM Total	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	Total	0	0	0	0	0	0	1	1

Junction: C : Small Car Park Access  
 From: Harthill Road (NE Arm)  
 Direction: Left In  
 To: Small Car Park Access

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0	AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	0
16:00	1	0	0	0	0	0	0	1	16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0
17:45	2	0	0	0	0	0	0	2	17:45	0	0	0	0	0	0	0	0
PM Total	3	0	0	0	0	0	0	3	PM Total	0	0	0	0	0	0	0	0
Total	3	0	0	0	0	0	0	3	Total	0	0	0	0	0	0	0	0

Junction: C : Small Car Park Access  
 From: Small Car Park Access  
 Direction: Left Out  
 To: Harthill Road (SW Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total	Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0	AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	0
16:00	1	0	0	0	0	0	0	1	16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	17:45	1	0	0	0	0	0	0	1
PM Total	1	0	0	0	0	0	0	1	PM Total	1	0	0	0	0	0	0	1
Total	1	0	0	0	0	0	0	1	Total	1	0	0	0	0	0	0	1

Junction: D : Calderstones School Access  
 From: Harthill Road (SW Arm)  
 Direction: Left In  
 To: Calderstones School Access

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	1	0	0	0	0	0	0	1
07:45	2	0	0	0	0	0	0	2
08:00	1	0	0	0	0	0	0	1
08:15	3	0	0	0	0	0	0	3
08:30	1	0	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0
09:00	1	0	0	0	0	0	0	1
09:15	0	0	0	0	0	0	0	0
AM Total	9	0	0	0	0	0	0	9
14:30	1	0	0	0	0	0	0	1
14:45	2	0	0	0	0	0	0	2
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	1	0	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	1	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
PM Total	5	0	0	0	0	0	0	5
Total	14	0	0	0	0	0	0	14

Junction: D : Calderstones School Access  
 From: Harthill Road (NE Arm)  
 Direction: Right In  
 To: Calderstones School Access

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	4	0	0	0	0	0	0	4
07:45	3	0	0	0	0	0	0	3
08:00	3	0	0	0	0	0	0	3
08:15	0	0	0	0	0	0	0	0
08:30	3	0	0	0	0	0	0	3
08:45	1	0	0	0	0	0	0	1
09:00	0	0	0	0	0	0	0	0
09:15	2	0	0	0	0	0	0	2
AM Total	16	0	0	0	0	0	0	16
14:30	1	0	0	0	0	0	0	1
14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	0	1	0	0	0	0	0	1
15:30	0	1	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0
16:00	1	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0
16:30	1	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	2	0	0	0	0	0	0	2
17:45	1	0	0	0	0	0	0	1
PM Total	6	2	0	0	0	0	0	8
Total	22	2	0	0	0	0	0	24

Junction: D : Calderstones School Access  
 From: Calderstones School Access  
 Direction: Left Out  
 To: Harthill Road (NE Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
AM Total	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
15:00	2	0	0	0	0	0	0	2
15:15	0	1	0	0	0	0	0	1
15:30	1	0	0	0	0	0	0	1
15:45	0	1	0	0	0	0	0	1
16:00	3	0	0	0	0	0	0	3
16:15	2	0	0	0	0	0	0	2
16:30	1	0	0	0	0	0	0	1
16:45	1	0	0	0	0	0	0	1
17:00	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	1	0	0	0	0	0	0	1
PM Total	12	2	0	0	0	0	0	14
Total	12	2	0	0	0	0	0	14

Junction: D : Calderstones School Access  
 From: Calderstones School Access  
 Direction: Right Out  
 To: Harthill Road (SW Arm)

Time	Cars	LGV	OGV1	OGV2	PSV	MC	PC	Total
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	1	0	0	0	0	0	0	1
AM Total	1	0	0	0	0	0	0	1
14:30	0	0	0	0	0	0	0	0
14:45	2	0	0	0	0	0	0	2
15:00	2	0	0	0	0	0	0	2
15:15	0	0	0	0	0	0	0	0
15:30	0	1	0	0	0	0	0	1
15:45	2	0	0	0	0	0	0	2
16:00	1	0	0	0	0	0	0	1
16:15	1	0	0	0	0	0	0	1
16:30	1	0	0	0	0	0	0	1
16:45	1	0	0	0	0	0	0	1
17:00	2	0	0	0	0	0	0	2
17:15	2	0	0	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0
17:45	2	0	0	0	0	0	0	2
PM Total	16	1	0	0	0	0	0	17
Total	17	1	0	0	0	0	0	18



## **APPENDIX TS4**

# Harthill Road, Liverpool - Speed Survey (Thursday 4th February 2016)

## Weather Conditions - Fine & Cloudy/Road Conditions - Dry

### Northbound

23	19	22	24	21	25	20	16	22	15
25	23	13	25	20	22	16	24	21	17
22	16	14	21	23	17	18	30	16	19
22	18	24	22	19	24	17	23	19	25
16	19	17	21	15	28	24	14	25	21
18	16	19	24	18	21	24	27	20	16
17	20	15	18	23	20	16	19	22	15
19	16	23	18	20	28	20	14	23	18
15	18	26	20	15	24	21	19	25	18
15	17	19	24	21	19	26	18	22	19
25	16	21	24	20	17	20	14	22	17
22	18	14	23	19	17	24	18	21	17
19	23	18	26	15	21	24	15	13	23
17	27	22	18	17	15	26	23	18	21
31	21	17	20	25	19	24	19	24	22
24	21	17	24	30	21	14	20	17	27
23	21	15	24	17	21	17	19	21	19
20	21	26	15	19	22	19	30	20	22
22	31	15	23	20	15	22	20	17	20
16	22	20	17	13	20	19	16	25	22

Max - 31

Min - 13

85% - 24

Ave - 20

Sp. Limit - 20

Calculated Dry Weather Speeds:

Ave = 17.5

85th % = 21.5

Red values = HGV

# Harthill Road, Liverpool - Speed Survey (Thursday 4th February 2016)

## Weather Conditions - Fine & Cloudy/Road Conditions - Dry

### Southbound

20	17	22	13	19	17	23	18	13	26
19	23	20	16	19	21	17	21	17	15
16	21	17	21	16	24	20	17	19	21
21	19	16	18	15	13	16	20	17	22
16	19	22	18	21	19	16	19	21	16
16	18	15	18	20	17	20	18	16	18
17	23	18	19	17	20	18	21	24	17
21	14	19	23	16	25	18	20	18	22
18	24	19	21	19	14	19	16	18	19
18	20	22	19	22	14	18	16	24	17
25	19	20	18	13	22	19	21	19	21
15	25	19	23	19	17	20	18	22	19
19	18	22	27	17	24	14	19	24	15
22	19	20	17	19	16	13	19	20	17
16	13	18	22	17	20	21	18	16	22
19	16	20	17	20	18	22	19	16	19
17	21	17	20	20	17	22	17	19	22
16	17	23	21	23	17	20	22	18	17
18	21	15	18	16	19	16	21	18	14
17	23	16	18	20	15	21	15	17	20

Max - 27

Min - 13

85% - 22

Ave - 19

Sp. Limit - 20

Calculated Dry Weather Speeds:

Ave = 16.5

85th % = 19.5

Red values = HGV



## HARTHILL ROAD, LIVERPOOL

### Revised formula for calculating sight stopping distance (SSD)

#### Northbound

Manual for Streets 2 (Page 73 & 74)

$$SSD = vt + v^2 / 2(d+0.1a)$$

v = speed (m/s)  
t = driver perception - reaction time (secs)  
d = deceleration (m/s<sup>2</sup>)  
a = longitudinal gradient (%)

Observed 85th percentile 'Wet weather' speed

19.5 mph      31.4 kph

#### ***Traditional TD 9/93 SSD Values***

##### Absolute Minimum SSD

v =	<span style="color: red;">8.717042</span>	m/s
t =	2	secs
d =	3.68	(m/s <sup>2</sup> )
a =	0	%

SSD = 27.75838 m

#### ***MfS 2 SSD values for cars***

##### Minimum SSD

v =	<span style="color: red;">8.717042</span>	m/s
t =	1.5	secs
d =	4.41	(m/s <sup>2</sup> )
a =	0	%

SSD = 21.7 m  
SSD+adjust = 24.1 m

##### Desirable Minimum SSD

v =	<span style="color: red;">8.717042</span>	m/s
t =	2	secs
d =	2.45	(m/s <sup>2</sup> )
a =	0	%

SSD = 32.9416 m

#### ***MfS 2 SSD values for HGVs***

##### Minimum SSD

v =	<span style="color: red;">8.717042</span>	m/s
t =	1.5	secs
d =	3.68	(m/s <sup>2</sup> )
a =	0	%

SSD = 23.4 m  
SSD+adjust = 25.8 m

## HARTHILL ROAD, LIVERPOOL

### Revised formula for calculating sight stopping distance (SSD)

#### Southbound

Manual for Streets 2 (Page 73 & 74)

$$SSD = vt + v^2 / 2(d+0.1a)$$

v = speed (m/s)  
t = driver perception - reaction time (secs)  
d = deceleration (m/s<sup>2</sup>)  
a = longitudinal gradient (%)

Observed 85th percentile 'Wet weather' speed

mph       kph

#### **Traditional TD 9/93 SSD Values**

##### Absolute Minimum SSD

v =  m/s  
t =  secs  
d =  (m/s<sup>2</sup>)  
a =  %

SSD =  m

##### Desirable Minimum SSD

v =  m/s  
t =  secs  
d =  (m/s<sup>2</sup>)  
a =  %

SSD =  m

#### **MfS 2 SSD values for cars**

##### Minimum SSD

v =  m/s  
t =  secs  
d =  (m/s<sup>2</sup>)  
a =  %

SSD =  m  
SSD+adjust =  m

#### **MfS 2 SSD values for HGVs**

##### Minimum SSD

v =  m/s  
t =  secs  
d =  (m/s<sup>2</sup>)  
a =  %

SSD =  m  
SSD+adjust =  m



## **APPENDIX TS5**

Address: <b>Land @ Harthill Road</b>			
Completed By: <b>Axis</b>			
<b>Access Diagram</b>			
Has a diagram been submitted which shows how people move to and through the development and how this links to the surrounding roads, footpaths and sight lines? (This can be included within the Design and Access Statement, see Section 2.25.) If a diagram has not been submitted your application may not be processed.			<input checked="" type="radio"/> Yes <input type="radio"/> No
<b>Access on Foot</b>			<b>Points</b>
<b>Safety</b>			<b>Score</b>
Safety	Is there safe pedestrian access to and within the site, and for pedestrians passing the site (2m minimum width footpath on both sides of the road)? If no your application must address safe pedestrian access.		<input checked="" type="radio"/> Yes <input type="radio"/> No
Location	Housing Development: Is the development within 500m of a district or local centre (see Accessibility Map 1 in Appendix F)	Yes	2
	Other development: Is the density of existing local housing (i.e. within 800m) more than 50 houses per hectare (see Accessibility Map 4 in Appendix F)	No	0
		<i>A significant local shopping + services area lies within 750m</i>	
Internal Layout	Does 'circulation' and access inside the sites reflect direct, safe and easy to use pedestrian routes for all; with priority given to pedestrians when they have to cross roads or cycle routes?	Yes	1
		No	0
External Layout	Are there barriers between site and local facilities or housing which restrict pedestrian access? (see Merseyside Code of Practice on Access and Mobility) e.g. <ul style="list-style-type: none"> <li>No dropped kerbs at crossings or on desire lines;</li> <li>Steep gradients;</li> <li>A lack of a formal crossing where there is heavy traffic;</li> <li>Security concerns, e.g. lack of lighting.</li> </ul>	There are barriers	-2
		There are no barriers	1
Other	The development links to identified recreational walking network (see Accessibility Map 1). If no, please provide reasons why not.		<input checked="" type="radio"/> Yes <input type="radio"/> No
<b>Total (B)</b>			<b>2</b>
Summary	Box A: Minimum Standard (from Table 3.1)	<b>4</b>	Comments or action needed to correct any shortfall  <i>Ensure good walking + cycling connections.</i>  <i>Provide new residents with welcome pack identifying location of local services.</i>
	Box B: Actual Score	<b>2</b>	

<b>Access by Cycle</b>			<b>Points</b>	<b>Score</b>
Safety	Are there safety issues for cyclists either turning into or out of the site or a road junctions within 400m of the site (e.g. dangerous right turns for cyclists due to the level of traffic)? If yes, you must address safety issues in your application.			Yes / <b>(No)</b>
Cycle Parking	Does the development meet cycle parking standards, in a secure location with natural surveillance, or where appropriate contribute to communal cycle parking facilities? If no, you must address cycle parking standards and cycle parking facilities.			<b>(Yes)</b> No
Location	<u>Housing Development</u> : Is the development within 1 mile of a district or local centre (see Accessibility Map 1)	Yes	<b>(2)</b>	
	<u>Other Development</u> : Is the density of local housing (e.g. within 1 mile) more than 50 houses per hectare (see Accessibility Map 4 in Appendix F)	No	0	
Internal layout	Does 'circulation' and access inside the site reflect direct and safe cycle routes; with priority given to cyclists where they meet motor vehicles?	Yes	<b>(1)</b>	
		No	0	
External Access	The development is within 400m of an existing or proposed cycle route (see Accessibility Map 1 in Appendix F) and / or proposes to create a link to a cycle route, or develop a route?		<b>(1)</b>	
	The development is not within 400m of an existing or proposed cycle route (see Accessibility Map 1 in Appendix F)		-1	
Other	Development includes shower facilities and lockers for cyclists	Yes	<b>(1)</b>	<i>Cycle Storage</i>
		No	0	
			<b>Total (B)</b>	<b>5</b>
Summary	Box A: <b>Minimum Standard</b> (From Table 3.1)	<b>5</b>	<b>Comments or action needed to correct any shortfall</b>	



	Box B: Actual Score	5	Provide cycle storage on site. Provide linkage to local cycle routes.	
Access by Public Transport			Points	Score
Location and access to public transport	Is the site within a 200m safe and convenient walking distance of a bus stop, and/or within 400m of a rail station? (See Accessibility Map 2 in Appendix F).	Yes	2	
		No	(0)	
	Are there barriers on direct and safe pedestrian routes to bus stops or rail stations i.e. • A lack of dropped kerbs; • Pavements less than 2m wide; • A lack of formal crossings where there is heavy traffic; or • Bus access kerbs.	There are barriers	0	
		There are no barriers	(1)	
Frequency	High (four or more bus services or trains an hour)		(2)	eabc
	Medium (two or three bus services or trains an hour)		1	
	Low (less than two bus services or trains an hour)		0	
Other	The proposal contributes to bus priority measures serving the site		1	
	The proposal contributes to bus stops, bus interchange or bus or rail stations in the vicinity and/or provides bus stops or bus interchange in the site		1	
	The proposal contributes to an existing or new bus service		1	
Total (B):				3

Summary	Box A: Minimum Standard (from Table 3.1)	5	Comments or action needed to correct any shortfall  Site located within 500m of GBC providing very high frequency of bus services. This high level of provision is expected to help overcome slightly longer walk distance to bus stops.	
	Box B: Total Score	3		
Vehicle Access and Parking			Points	Score
Vehicle access and circulation	Is there safe access to and from the road? If no, you must address safety issues.			Yes/ No
	Can the site be adequately serviced? If no, you must address service issues.			Yes/ No
	Is the safety and convenience of other users (pedestrians, cyclists and public transport) affected by the proposal? If yes, you must address safety issues.			Yes / No
	Has access for the emergency services been provided? If no, you must provide emergency service provision.			Yes/ No
	For development which generates significant freight movements, is the site easily accessed from the road or rail freight route networks (i.e. minimising the impact of traffic on local roads and neighbourhoods) (see Accessibility Map 3 in Appendix F)? If no, please provide an explanation.			Yes / No N/A
Parking	The off-street parking provided is more than advised in Section 4 for that development type. If yes, parking provision must be reassessed.			Yes / No

	The off-street parking provided is as advised in Section 4 for that development type	1	<input checked="" type="radio"/> Yes / No
	The off-street parking provided is less than 75% of the amount advised in Section 4 for that development type (or shares parking provision with another development)	2	Yes / No
	For development in controlled parking zones:	<i>N/A</i>	Yes / No
	• Is it a car free development?	1	Yes / No
	• Supports the control or removal of on-street parking spaces (inc provision of disabled spaces), or contributes to other identified measures in the local parking strategy (including car clubs)	1	Yes / No
Total (B):			1
Summary	Box A:  <b>Minimum Standard</b>  (From Table 3.1)		<b>Comments or action needed to correct any shortfall. If conditions are appropriate for the reduced level of parking (see section 4), but this has not been provided, please explain why.</b>





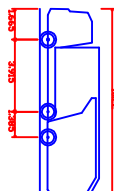
## **APPENDIX TS6**

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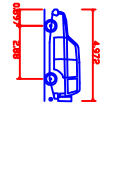
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C	desc	date c	
D	desc	date d	
E	desc	date e	
F	desc	date f	
G	desc	date g	
H	desc	date h	
I	desc	date i	
J	desc	date j	



Phoenix 2-20V (with Elite 2 6x4 chassis)  
Overall Length 10120mm  
Overall Width 2500mm  
Wheelbase 2500mm  
Front Overhang 1500mm  
Rear Overhang 1500mm  
Min Body Ground Clearance 3450mm  
Min Body Lock to Lock Time 9.450m  
Kerb to Kerb Turning Radius 9.450m



Luxon 4x4 (2006)  
Overall Length 4372mm  
Overall Width 2500mm  
Wheelbase 2500mm  
Front Overhang 1500mm  
Rear Overhang 1500mm  
Min Body Ground Clearance 3450mm  
Min Body Lock to Lock Time 9.450m  
Kerb to Kerb Turning Radius 9.450m

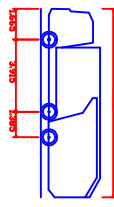
<i>Chester Office:</i> Wall House Barns Chester CH4 0DH		<i>South Manchester Office:</i> Carnellia House 76 Water Lane Wilmslow SK9 5BB		<b>axis</b>
0844 8700 007 - <a href="http://www.axisped.co.uk">www.axisped.co.uk</a>				
<b>client:</b>  Redrow Homes				
<b>project:</b>  Harthill Road, Liverpool				
<b>drawing title:</b>  Vehicle Swept Path Assessment Depot Access Connection to Harthill Road (Large RCV and Luxury 4x4 vehicle)				
<b>scale(s):</b> 1:500	<b>date:</b> 29/07/16	<b>drawn by:</b> APB	<b>checked:</b>	
<b>drawing number:</b> Appendix T56(i)	<b>status:</b> Information		<b>rev:</b> -	
<b>xrefs:</b>				
planning environment design				

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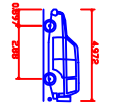
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Revision History		Date
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B	desc	date b
C	desc	date c
D	desc	date d
E	desc	date e
F	desc	date f
G	desc	date g
H	desc	date h
I	desc	date i
J	desc	date j



Phoenix 2-20V (with Elite 2 6x4 chassis)  
Overall Length 4352mm  
Overall Width 1812mm  
Min Body Ground Clearance 321mm  
Min Body Ground Clearance 321mm  
Lock to Lock Time 9.450m



Luxon 4x4 (2006)  
Overall Length 4372mm  
Overall Width 1812mm  
Max Track Width 1584mm  
Lock to Lock Time 9.450m

<i>Chester Office:</i> Well House Burns Chester CH4 0DH		<i>South Manchester Office:</i> Canella House 76 Wilmslow SK9 5BB		axis
0844 8700 007 - <a href="http://www.axisped.co.uk">www.axisped.co.uk</a>				
client:  Redrow Homes				
project:  Hartmill Road, Liverpool				
drawing title:  Vehicle Swept Path Assessment Beechley House Connection to Hartmill Road (Large RCV and Luxury 4x4 vehicle)				
scale(s): 1:500	date: 29/07/16	drawn by:	checked:	
drawing number: Appendix T56(i)		ARB		
xrefs:		status: Information		
		rev: -		
planning environment design				

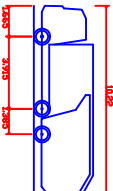


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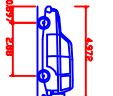
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Revision History		Date	
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D	desc	date d	
E	desc	date e	
F	desc	date f	
G	desc	date g	
H	desc	date h	
I	desc	date i	
J	desc	date j	



Phoenix 2-20V (with Elite 2 6x4 chassis)  
Overall Length 1012mm  
Overall Width 1565mm  
Overall Body Height 1265mm  
Overall Body Depth 1265mm  
Overall Body Radius 1265mm  
Overall Body Clearance 1265mm  
Overall Body Lock to Lock Time 1265mm  
Overall Body Lock to Kerb Turning Radius 1265mm



Luxon 4x4 (2006)  
Overall Length 4372mm  
Overall Width 2503mm  
Overall Body Height 2503mm  
Overall Body Depth 2503mm  
Overall Body Radius 2503mm  
Overall Body Clearance 2503mm  
Overall Body Lock to Lock Time 2503mm  
Overall Body Lock to Kerb Turning Radius 2503mm

Client: Redrow Homes		axis	
Project: Harthill Road, Liverpool			
Drawing title: Vehicle Swept Path Assessment Key Internal Movements (Depot Site & Park View) (Large RCV and Luxury 4x4 vehicle)			
scale(s): 1:500	date: 29/07/16	drawn by: APB	checked:
drawing number: Appendix T56(iii)		status: Information	
xfbs:		rev: -	
planning environment design			



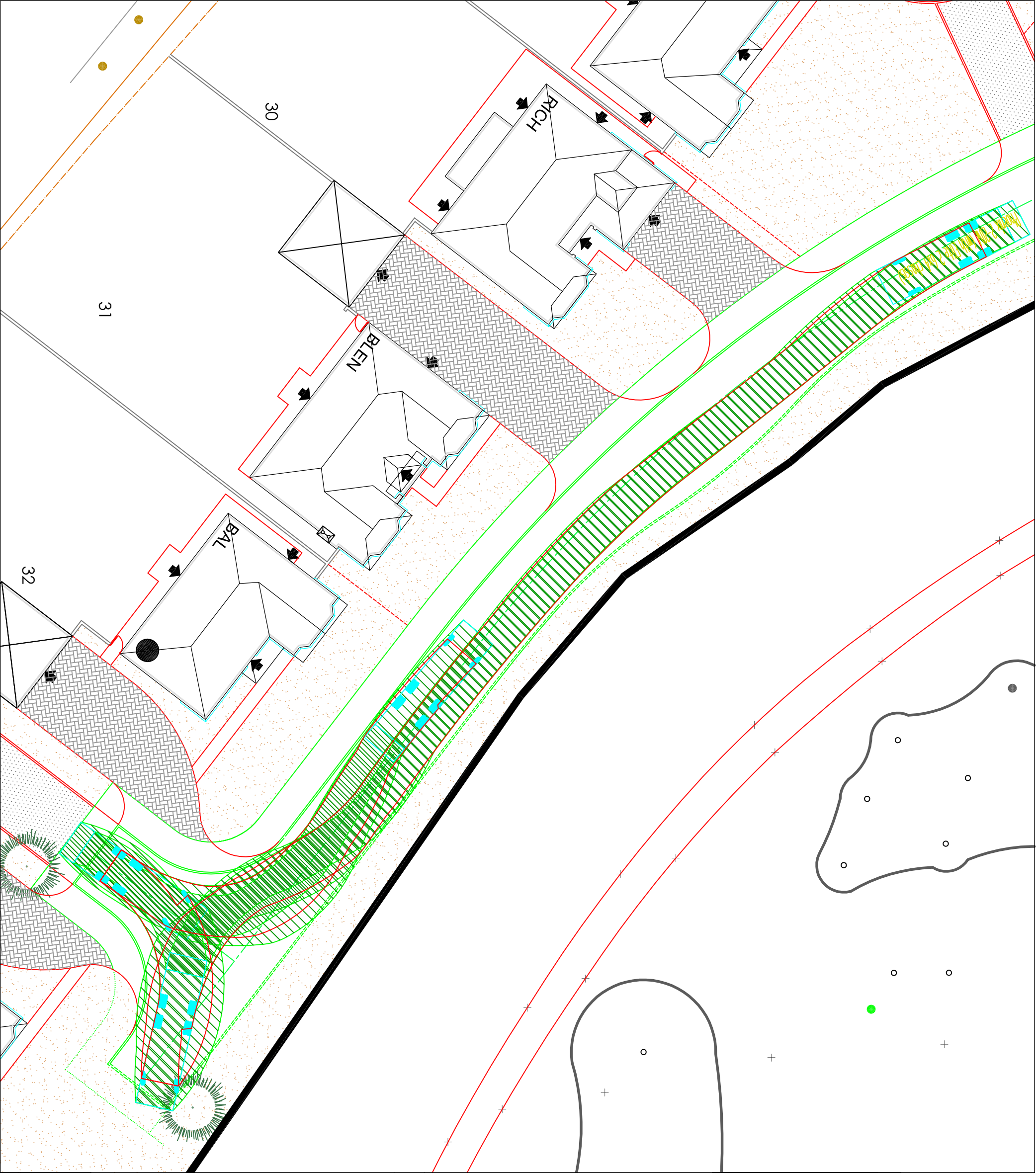
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Revision History		Date	
A	desc	date a	
B	desc	date b	
C	desc	date c	
D	desc	date d	
E	desc	date e	
F	desc	date f	
G	desc	date g	
H	desc	date h	
I	desc	date i	
J	desc	date j	

Phoenix 2-20V (with Elite 2 6x4 chassis)  
Overall Length 1612mm  
Overall Width 1265mm  
Overall Height 1265mm  
Body Height 1265mm  
Body Width 1265mm  
Body Depth 1265mm  
Body Ground Clearance 1265mm  
Body Lock to Lock Time 1265mm  
Body Turning Radius 1265mm



Client Office:  
Well Breton  
Chester  
CH4 0DH

South Manchester Office:  
76 Water Lane  
Wilmslow  
SK9 5BB

0844 8700 007 - [www.axisped.co.uk](http://www.axisped.co.uk)

axis

client:  
Redrow Homes

project:  
Hartmill Road, Liverpool

drawing title:  
Vehicle Swept Path Assessment  
Key Internal Movements (Park View)  
(Large RCV)

scale(s): 1:250  
drawing number: Appendix T56(iv)  
xrefs:

date: 29/07/16  
drawn by: APB  
status: Information  
rev: -

checked:

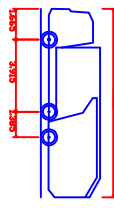
planning environment design

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Follow any figured dimensions - do not scale. IF IN DOUBT ASK.

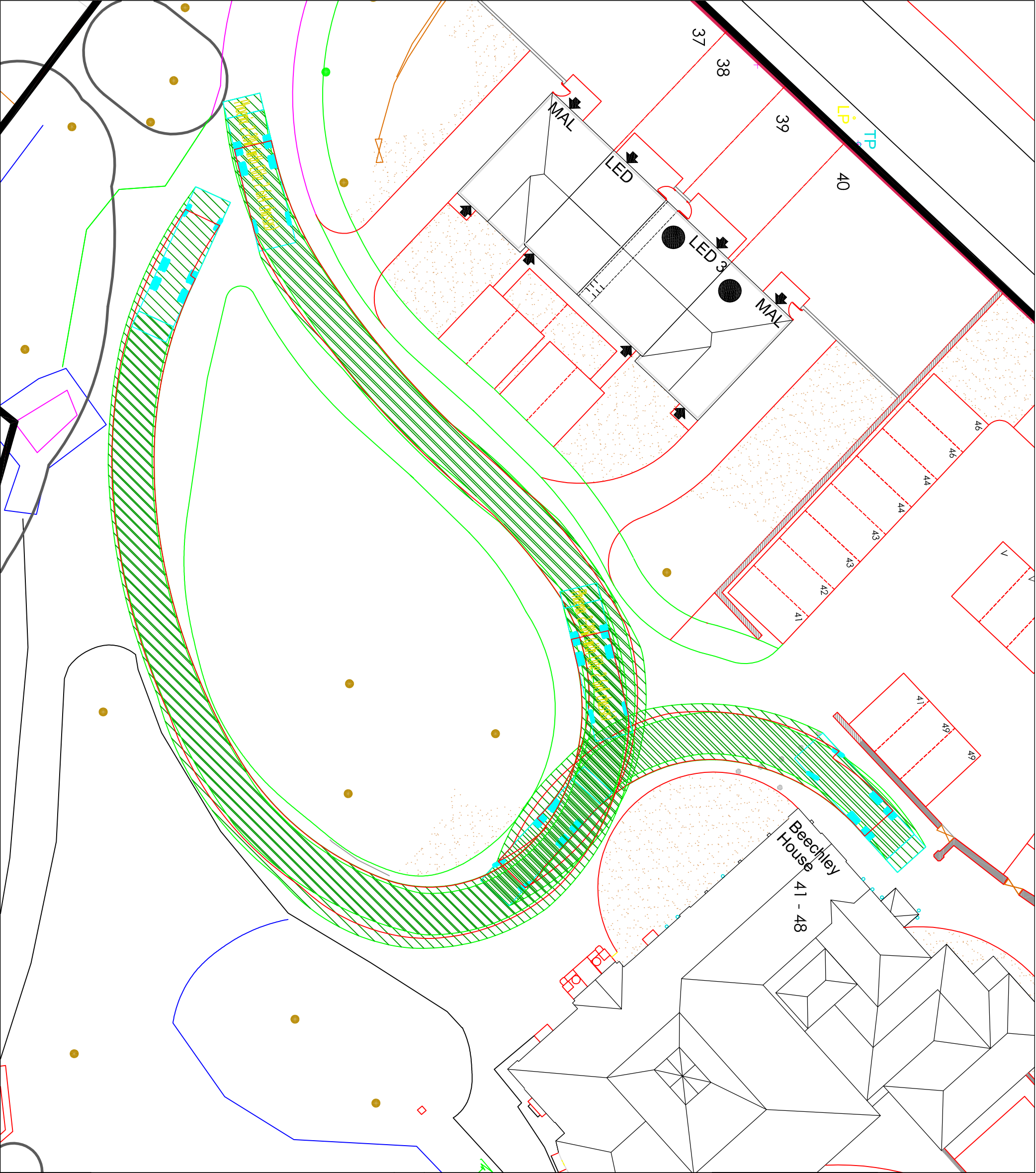
This drawing has been prepared for feasibility purposes and does not represent a construction plan. All design aspects to be confirmed at the appropriate detailed design stage.

Revision History		Date	
A	desc	date a	
B	desc	date b	
C	desc	date c	
D	desc	date d	
E	desc	date e	
F	desc	date f	
G	desc	date g	
H	desc	date h	
I	desc	date i	
J	desc	date j	



Phoenix 2-20V (with Elite 2 6x4 chassis)  
Overall Length 1012mm  
Wheelbase 3505mm  
Front Overhang 1565mm  
Rear Overhang 1865mm  
Front Body Ground Clearance 1505mm  
Rear Body Ground Clearance 1505mm  
Lock to Lock Time 9.450m  
Kerb to Kerb Turning Radius 9.450m

Cheshire Office: Well House Barns Chester CH4 0DH		South Manchester Office: Carnallia House 76 Water Lane Wilmslow SK9 5BB		axis
0844 87200 007 - <a href="http://www.axisped.co.uk">www.axisped.co.uk</a>				
client:  Redrow Homes				
project:  Harthill Road, Liverpool				
drawing title:  Vehicle Swept Path Assessment Beechley House / Beechley Stable Servicing (large RCV)				
scale(s): 1:250	date: 29/07/16	drawn by:	checked:	
drawing number: Appendix T56(V)	APB			
xrefs:	status: Information			
	rev: -			
planning environment design				





## **APPENDIX TS7**

## PREDICTED RESIDENTIAL DEVELOPMENT TRAFFIC DEMAND

Prop Re-devel Site **52** dwellings

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

Calculation Factor: 1 DWELLS

Count Type: **VEHICLES**

Time Range	Survey Days	Ave. Dwellings	Rates per dwelling			Trip Demand - Average Trip Rates		
			Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate	Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate
00:00-01:00	0	0	0	0	0	0	0	0
01:00-02:00	0	0	0	0	0	0	0	0
02:00-03:00	0	0	0	0	0	0	0	0
03:00-04:00	0	0	0	0	0	0	0	0
04:00-05:00	0	0	0	0	0	0	0	0
05:00-06:00	0	0	0	0	0	0	0	0
06:00-07:00	0	0	0	0	0	0	0	0
07:00-08:00	11	27	0.081	0.336	0.417	4	17	22
08:00-09:00	11	27	0.156	0.495	0.651	8	26	34
09:00-10:00	11	27	0.139	0.163	0.302	7	8	16
10:00-11:00	11	27	0.125	0.108	0.233	7	6	12
11:00-12:00	11	27	0.122	0.18	0.302	6	9	16
12:00-13:00	11	27	0.173	0.119	0.292	9	6	15
13:00-14:00	11	27	0.142	0.125	0.267	7	7	14
14:00-15:00	11	27	0.139	0.19	0.329	7	10	17
15:00-16:00	11	27	0.278	0.2	0.478	14	10	25
16:00-17:00	11	27	0.356	0.146	0.502	19	8	26
17:00-18:00	11	27	0.414	0.149	0.563	22	8	29
18:00-19:00	11	27	0.264	0.159	0.423	14	8	22
19:00-20:00	0	0	0	0	0	0	0	0
20:00-21:00	0	0	0	0	0	0	0	0
21:00-22:00	0	0	0	0	0	0	0	0
22:00-23:00	0	0	0	0	0	0	0	0
23:00-24:00	0	0	0	0	0	0	0	0
12hr (07:00-19:00)			<b>2.389</b>	<b>2.37</b>	<b>4.759</b>	<b>124</b>	<b>123</b>	<b>247</b>

Sites: Not including Eire or Gt London  
15 - 50 dwellings  
Suburban or Edge of Town Locations  
No Bungalow or Terraced Sites

### Average Trip Rates

	In	Out	Total
AM Peak	0.156	0.495	0.651
PM Peak	0.414	0.149	0.563
12hr (7-7)	2.389	2.370	4.759
School Pk	0.278	0.200	0.478
	In	Out	Total
AM Peak	8	26	34
PM Peak	22	8	29
12hr (7-7)	124	123	247
School Pk	14	10	25

### 85th Percentile Trip Rates

	In	Out	Total
AM Peak	0.233	0.674	0.907
PM Peak	0.542	0.246	0.788
School Pk	0.400	0.348	0.748
	In	Out	Total
AM Peak	12	35	47
PM Peak	28	13	41
School Pk	21	18	39

AM In	AM Out	PM In	PM Out	Sch Pk In	Sch Pk Out
0.400	0.933	0.667	0.179	0.500	0.321
0.138	0.759	0.353	0.412	0.353	0.412
0.235	0.588	0.609	0.130	0.313	0.375
0.225	0.450	0.475	0.250	0.400	0.250
0.188	0.438	0.414	0.241	0.400	0.133
0.069	0.552	0.448	0.103	0.261	0.261
0.231	0.359	0.438	0.063	0.241	0.207
0.000	0.565	0.200	0.200	0.179	0.128
0.179	0.321	0.351	0.000	0.136	0.136
0.081	0.405	0.273	0.045	0.243	0.027
0.045	0.364	0.107	0.071	0.103	0.138
0.233	0.674	0.542	0.246	0.400	0.348



## PREDICTED RESIDENTIAL DEVELOPMENT TRAFFIC DEMAND - DEPOT SITE

Prop Re-devel Site 20 dwellings

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

Calculation Factor: 1 DWELLS

Count Type: **VEHICLES**

Time Range	Survey Days	Ave. Dwellings	Rates per dwelling			Trip Demand - Average Trip Rates		
			Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate	Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate
00:00-01:00	0	0	0	0	0	0	0	0
01:00-02:00	0	0	0	0	0	0	0	0
02:00-03:00	0	0	0	0	0	0	0	0
03:00-04:00	0	0	0	0	0	0	0	0
04:00-05:00	0	0	0	0	0	0	0	0
05:00-06:00	0	0	0	0	0	0	0	0
06:00-07:00	0	0	0	0	0	0	0	0
07:00-08:00	11	27	0.081	0.336	0.417	2	7	8
08:00-09:00	11	27	0.156	0.495	0.651	3	10	13
09:00-10:00	11	27	0.139	0.163	0.302	3	3	6
10:00-11:00	11	27	0.125	0.108	0.233	3	2	5
11:00-12:00	11	27	0.122	0.18	0.302	2	4	6
12:00-13:00	11	27	0.173	0.119	0.292	3	2	6
13:00-14:00	11	27	0.142	0.125	0.267	3	3	5
14:00-15:00	11	27	0.139	0.19	0.329	3	4	7
15:00-16:00	11	27	0.278	0.2	0.478	6	4	10
16:00-17:00	11	27	0.356	0.146	0.502	7	3	10
17:00-18:00	11	27	0.414	0.149	0.563	8	3	11
18:00-19:00	11	27	0.264	0.159	0.423	5	3	8
19:00-20:00	0	0	0	0	0	0	0	0
20:00-21:00	0	0	0	0	0	0	0	0
21:00-22:00	0	0	0	0	0	0	0	0
22:00-23:00	0	0	0	0	0	0	0	0
23:00-24:00	0	0	0	0	0	0	0	0
12hr (07:00-19:00)			<b>2.389</b>	<b>2.37</b>	<b>4.759</b>	<b>48</b>	<b>47</b>	<b>95</b>

Sites: Not including Eire or Gt London  
 15 - 50 dwellings  
 Suburban or Edge of Town Locations  
 No Bungalow or Terraced Sites

### Average Trip Rates

	In	Out	Total
AM Peak	0.156	0.495	0.651
PM Peak	0.414	0.149	0.563
12hr (7-7)	2.389	2.370	4.759
School Pk	0.278	0.200	0.478
	In	Out	Total
AM Peak	3	10	13
PM Peak	8	3	11
12hr (7-7)	48	47	95
School Pk	6	4	10

### 85th Percentile Trip Rates

	In	Out	Total
AM Peak	0.233	0.674	0.907
PM Peak	0.542	0.246	0.788
School Pk	0.400	0.348	0.748
	In	Out	Total
AM Peak	5	13	18
PM Peak	11	5	16
School Pk	8	7	15

AM In	AM Out	PM In	PM Out	Sch Pk In	Sch Pk Out
0.400	0.933	0.667	0.179	0.500	0.321
0.138	0.759	0.353	0.412	0.353	0.412
0.235	0.588	0.609	0.130	0.313	0.375
0.225	0.450	0.475	0.250	0.400	0.250
0.188	0.438	0.414	0.241	0.400	0.133
0.069	0.552	0.448	0.103	0.261	0.261
0.231	0.359	0.438	0.063	0.241	0.207
0.000	0.565	0.200	0.200	0.179	0.128
0.179	0.321	0.351	0.000	0.136	0.136
0.081	0.405	0.273	0.045	0.243	0.027
0.045	0.364	0.107	0.071	0.103	0.138
0.233	0.674	0.542	0.246	0.400	0.348

## PREDICTED RESIDENTIAL DEVELOPMENT TRAFFIC DEMAND - PARK VIEW SITE

Prop Re-devel Site **15** dwellings

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

Calculation Factor: 1 DWELLS

Count Type: **VEHICLES**

Time Range	Survey Days	Ave. Dwellings	Rates per dwelling			Trip Demand - Average Trip Rates		
			Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate	Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate
00:00-01:00	0	0	0	0	0	0	0	0
01:00-02:00	0	0	0	0	0	0	0	0
02:00-03:00	0	0	0	0	0	0	0	0
03:00-04:00	0	0	0	0	0	0	0	0
04:00-05:00	0	0	0	0	0	0	0	0
05:00-06:00	0	0	0	0	0	0	0	0
06:00-07:00	0	0	0	0	0	0	0	0
07:00-08:00	11	27	0.081	0.336	0.417	1	5	6
08:00-09:00	11	27	0.156	0.495	0.651	2	7	10
09:00-10:00	11	27	0.139	0.163	0.302	2	2	5
10:00-11:00	11	27	0.125	0.108	0.233	2	2	3
11:00-12:00	11	27	0.122	0.18	0.302	2	3	5
12:00-13:00	11	27	0.173	0.119	0.292	3	2	4
13:00-14:00	11	27	0.142	0.125	0.267	2	2	4
14:00-15:00	11	27	0.139	0.19	0.329	2	3	5
15:00-16:00	11	27	0.278	0.2	0.478	4	3	7
16:00-17:00	11	27	0.356	0.146	0.502	5	2	8
17:00-18:00	11	27	0.414	0.149	0.563	6	2	8
18:00-19:00	11	27	0.264	0.159	0.423	4	2	6
19:00-20:00	0	0	0	0	0	0	0	0
20:00-21:00	0	0	0	0	0	0	0	0
21:00-22:00	0	0	0	0	0	0	0	0
22:00-23:00	0	0	0	0	0	0	0	0
23:00-24:00	0	0	0	0	0	0	0	0
12hr (07:00-19:00)			<b>2.389</b>	<b>2.37</b>	<b>4.759</b>	<b>36</b>	<b>36</b>	<b>71</b>

Sites: Not including Eire or Gt London  
15 - 50 dwellings  
Suburban or Edge of Town Locations  
No Bungalow or Terraced Sites

### Average Trip Rates

	In	Out	Total
AM Peak	0.156	0.495	0.651
PM Peak	0.414	0.149	0.563
12hr (7-7)	2.389	2.370	4.759
School Pk	0.278	0.200	0.478
	In	Out	Total
AM Peak	2	7	10
PM Peak	6	2	8
12hr (7-7)	36	36	71
School Pk	4	3	7

### 85th Percentile Trip Rates

	In	Out	Total
AM Peak	0.233	0.674	0.907
PM Peak	0.542	0.246	0.788
School Pk	0.400	0.348	0.748
	In	Out	Total
AM Peak	3	10	14
PM Peak	8	4	12
School Pk	6	5	11

AM In	AM Out	PM In	PM Out	Sch Pk In	Sch Pk Out
0.400	0.933	0.667	0.179	0.500	0.321
0.138	0.759	0.353	0.412	0.353	0.412
0.235	0.588	0.609	0.130	0.313	0.375
0.225	0.450	0.475	0.250	0.400	0.250
0.188	0.438	0.414	0.241	0.400	0.133
0.069	0.552	0.448	0.103	0.261	0.261
0.231	0.359	0.438	0.063	0.241	0.207
0.000	0.565	0.200	0.200	0.179	0.128
0.179	0.321	0.351	0.000	0.136	0.136
0.081	0.405	0.273	0.045	0.243	0.027
0.045	0.364	0.107	0.071	0.103	0.138
0.233	0.674	0.542	0.246	0.400	0.348

# PREDICTED RESIDENTIAL DEVELOPMENT TRAFFIC DEMAND - BEECHLEY MANOR

Prop Re-devel Site **13** dwellings

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

Calculation Factor: 1 DWELLS

Count Type: **VEHICLES**

Time Range	Survey Days	Ave. Dwellings	Rates per dwelling			Trip Demand - Average Trip Rates		
			Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate	Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate
00:00-01:00	0	0	0	0	0	0	0	0
01:00-02:00	0	0	0	0	0	0	0	0
02:00-03:00	0	0	0	0	0	0	0	0
03:00-04:00	0	0	0	0	0	0	0	0
04:00-05:00	0	0	0	0	0	0	0	0
05:00-06:00	0	0	0	0	0	0	0	0
06:00-07:00	0	0	0	0	0	0	0	0
07:00-08:00	11	27	0.081	0.336	0.417	1	4	5
08:00-09:00	11	27	0.156	0.495	0.651	2	6	8
09:00-10:00	11	27	0.139	0.163	0.302	2	2	4
10:00-11:00	11	27	0.125	0.108	0.233	2	1	3
11:00-12:00	11	27	0.122	0.18	0.302	2	2	4
12:00-13:00	11	27	0.173	0.119	0.292	2	2	4
13:00-14:00	11	27	0.142	0.125	0.267	2	2	3
14:00-15:00	11	27	0.139	0.19	0.329	2	2	4
15:00-16:00	11	27	0.278	0.2	0.478	4	3	6
16:00-17:00	11	27	0.356	0.146	0.502	5	2	7
17:00-18:00	11	27	0.414	0.149	0.563	5	2	7
18:00-19:00	11	27	0.264	0.159	0.423	3	2	5
19:00-20:00	0	0	0	0	0	0	0	0
20:00-21:00	0	0	0	0	0	0	0	0
21:00-22:00	0	0	0	0	0	0	0	0
22:00-23:00	0	0	0	0	0	0	0	0
23:00-24:00	0	0	0	0	0	0	0	0
12hr (07:00-19:00)			<b>2.389</b>	<b>2.37</b>	<b>4.759</b>	<b>31</b>	<b>31</b>	<b>62</b>

Sites: Not including Eire or Gt London  
15 - 50 dwellings  
Suburban or Edge of Town Locations  
No Bungalow or Terraced Sites

## Average Trip Rates

	In	Out	Total
AM Peak	0.156	0.495	0.651
PM Peak	0.414	0.149	0.563
12hr (7-7)	2.389	2.370	4.759
School Pk	0.278	0.200	0.478
	In	Out	Total
AM Peak	2	6	8
PM Peak	5	2	7
12hr (7-7)	31	31	62
School Pk	4	3	6

## 85th Percentile Trip Rates

	In	Out	Total
AM Peak	0.233	0.674	0.907
PM Peak	0.542	0.246	0.788
School Pk	0.400	0.348	0.748
	In	Out	Total
AM Peak	3	9	12
PM Peak	7	3	10
School Pk	5	5	10

AM In	AM Out	PM In	PM Out	Sch Pk In	Sch Pk Out
0.400	0.933	0.667	0.179	0.500	0.321
0.138	0.759	0.353	0.412	0.353	0.412
0.235	0.588	0.609	0.130	0.313	0.375
0.225	0.450	0.475	0.250	0.400	0.250
0.188	0.438	0.414	0.241	0.400	0.133
0.069	0.552	0.448	0.103	0.261	0.261
0.231	0.359	0.438	0.063	0.241	0.207
0.000	0.565	0.200	0.200	0.179	0.128
0.179	0.321	0.351	0.000	0.136	0.136
0.081	0.405	0.273	0.045	0.243	0.027
0.045	0.364	0.107	0.071	0.103	0.138

85th Percentile Value	<b>0.233</b>	<b>0.674</b>	<b>0.542</b>	<b>0.246</b>	<b>0.400</b>	<b>0.348</b>
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# PREDICTED RESIDENTIAL DEVELOPMENT TRAFFIC DEMAND - BEECHLEY MANOR

Prop Re-devel Site 4 dwellings

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

Calculation Factor: 1 DWELLS

Count Type: **VEHICLES**

Time Range	Survey Days	Ave. Dwellings	Rates per dwelling			Trip Demand - Average Trip Rates		
			Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate	Arrivals Trip Rate	Departures Trip Rate	Total Trip Rate
00:00-01:00	0	0	0	0	0	0	0	0
01:00-02:00	0	0	0	0	0	0	0	0
02:00-03:00	0	0	0	0	0	0	0	0
03:00-04:00	0	0	0	0	0	0	0	0
04:00-05:00	0	0	0	0	0	0	0	0
05:00-06:00	0	0	0	0	0	0	0	0
06:00-07:00	0	0	0	0	0	0	0	0
07:00-08:00	11	27	0.081	0.336	0.417	0	1	2
08:00-09:00	11	27	0.156	0.495	0.651	1	2	3
09:00-10:00	11	27	0.139	0.163	0.302	1	1	1
10:00-11:00	11	27	0.125	0.108	0.233	1	0	1
11:00-12:00	11	27	0.122	0.18	0.302	0	1	1
12:00-13:00	11	27	0.173	0.119	0.292	1	0	1
13:00-14:00	11	27	0.142	0.125	0.267	1	1	1
14:00-15:00	11	27	0.139	0.19	0.329	1	1	1
15:00-16:00	11	27	0.278	0.2	0.478	1	1	2
16:00-17:00	11	27	0.356	0.146	0.502	1	1	2
17:00-18:00	11	27	0.414	0.149	0.563	2	1	2
18:00-19:00	11	27	0.264	0.159	0.423	1	1	2
19:00-20:00	0	0	0	0	0	0	0	0
20:00-21:00	0	0	0	0	0	0	0	0
21:00-22:00	0	0	0	0	0	0	0	0
22:00-23:00	0	0	0	0	0	0	0	0
23:00-24:00	0	0	0	0	0	0	0	0
12hr (07:00-19:00)			<b>2.389</b>	<b>2.37</b>	<b>4.759</b>	<b>10</b>	<b>9</b>	<b>19</b>

Sites: Not including Eire or Gt London  
 15 - 50 dwellings  
 Suburban or Edge of Town Locations  
 No Bungalow or Terraced Sites

## Average Trip Rates

	In	Out	Total
AM Peak	0.156	0.495	0.651
PM Peak	0.414	0.149	0.563
12hr (7-7)	2.389	2.370	4.759
School Pk	0.278	0.200	0.478
	In	Out	Total
AM Peak	1	2	3
PM Peak	2	1	2
12hr (7-7)	10	9	19
School Pk	1	1	2

## 85th Percentile Trip Rates

	In	Out	Total
AM Peak	0.233	0.674	0.907
PM Peak	0.542	0.246	0.788
School Pk	0.400	0.348	0.748
	In	Out	Total
AM Peak	1	3	4
PM Peak	2	1	3
School Pk	2	1	3

AM In	AM Out	PM In	PM Out	Sch Pk In	Sch Pk Out
0.400	0.933	0.667	0.179	0.500	0.321
0.138	0.759	0.353	0.412	0.353	0.412
0.235	0.588	0.609	0.130	0.313	0.375
0.225	0.450	0.475	0.250	0.400	0.250
0.188	0.438	0.414	0.241	0.400	0.133
0.069	0.552	0.448	0.103	0.261	0.261
0.231	0.359	0.438	0.063	0.241	0.207
0.000	0.565	0.200	0.200	0.179	0.128
0.179	0.321	0.351	0.000	0.136	0.136
0.081	0.405	0.273	0.045	0.243	0.027
0.045	0.364	0.107	0.071	0.103	0.138
0.233	0.674	0.542	0.246	0.400	0.348

Calculation Reference: AUDIT-339901-160308-0322

## TRIP RATE CALCULATION SELECTION PARAMETERS:

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

### MULTI-MODAL VEHICLES

#### Selected regions and areas:

<b>02 SOUTH EAST</b>	
ES EAST SUSSEX	1 days
<b>05 EAST MIDLANDS</b>	
LN LINCOLNSHIRE	1 days
<b>07 YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>	
NY NORTH YORKSHIRE	1 days
<b>08 NORTH WEST</b>	
CH CHESHIRE	1 days
GM GREATER MANCHESTER	1 days
MS MERSEYSIDE	1 days
<b>09 NORTH</b>	
CB CUMBRIA	1 days
TW TYNE & WEAR	1 days
<b>10 WALES</b>	
CF CARDIFF	1 days
PS POWYS	1 days
<b>11 SCOTLAND</b>	
EA EAST AYRSHIRE	1 days

*This section displays the number of survey days per TRICS® sub-region in the selected set*

## Filtering Stage 2 selection:

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: Number of dwellings  
 Actual Range: 15 to 40 (units: )  
 Range Selected by User: 15 to 50 (units: )

#### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 12/11/15

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

#### Selected survey days:

Monday	3 days
Tuesday	2 days
Wednesday	2 days
Thursday	2 days
Friday	2 days

*This data displays the number of selected surveys by day of the week.*

#### Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*

#### Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	6

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

**Filtering Stage 3 selection:**

Use Class:

C3

11 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	3 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days
25,001 to 50,000	2 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*

Population within 5 miles:

5,001 to 25,000	2 days
75,001 to 100,000	4 days
100,001 to 125,000	1 days
250,001 to 500,000	3 days
500,001 or More	1 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	6 days

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Travel Plan:

Yes	1 days
No	10 days

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CB-03-A-03</b>	<b>SEMI DETACHED</b>		<b>CUMBRIA</b>
	HAWKSHEAD AVENUE			
	WORKINGTON			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	40		
	Survey date: THURSDAY	20/11/08		Survey Type: MANUAL
<b>2</b>	<b>CF-03-A-03</b>	<b>DETACHED</b>		<b>CARDIFF</b>
	LLANTRISANT ROAD			
	CARDIFF			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	29		
	Survey date: MONDAY	08/10/07		Survey Type: MANUAL
<b>3</b>	<b>CH-03-A-05</b>	<b>DETACHED</b>		<b>CHESHIRE</b>
	SYDNEY ROAD			
	SYDNEY			
	CREWE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	17		
	Survey date: TUESDAY	14/10/08		Survey Type: MANUAL
<b>4</b>	<b>EA-03-A-01</b>	<b>DETACHED</b>		<b>EAST AYRSHIRE</b>
	TALISKER AVENUE			
	KILMARNOCK			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	39		
	Survey date: THURSDAY	05/06/08		Survey Type: MANUAL
<b>5</b>	<b>ES-03-A-02</b>	<b>PRIVATE HOUSING</b>		<b>EAST SUSSEX</b>
	SOUTH COAST ROAD			
	PEACEHAVEN			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	37		
	Survey date: FRIDAY	18/11/11		Survey Type: MANUAL
<b>6</b>	<b>GM-03-A-10</b>	<b>DETACHED/SEMI</b>		<b>GREATER MANCHESTER</b>
	BUTT HILL DRIVE			
	PRESTWICH			
	MANCHESTER			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	29		
	Survey date: WEDNESDAY	12/10/11		Survey Type: MANUAL
<b>7</b>	<b>LN-03-A-03</b>	<b>SEMI DETACHED</b>		<b>LINCOLNSHIRE</b>
	ROOKERY LANE			
	BOULTHAM			
	LINCOLN			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	22		
	Survey date: TUESDAY	18/09/12		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<b>8</b>	<b>MS-03-A-03</b>	<b>DETACHED</b>	<b>MERSEYSIDE</b>
	BEMPTON ROAD		
	OTTERSPOOL		
	LIVERPOOL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	15	
	Survey date: FRIDAY	21/06/13	Survey Type: MANUAL
<b>9</b>	<b>NY-03-A-11</b>	<b>PRIVATE HOUSING</b>	<b>NORTH YORKSHIRE</b>
	HORSEFAIR		
	BOROUGHBRIDGE		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	23	
	Survey date: WEDNESDAY	18/09/13	Survey Type: MANUAL
<b>10</b>	<b>PS-03-A-02</b>	<b>DETACHED/SEMI-DETACHED</b>	<b>POWYS</b>
	GUNROG ROAD		
	WELSHPOOL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	28	
	Survey date: MONDAY	11/05/15	Survey Type: MANUAL
<b>11</b>	<b>TW-03-A-02</b>	<b>SEMI-DETACHED</b>	<b>TYNE &amp; WEAR</b>
	WEST PARK ROAD		
	GATESHEAD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	16	
	Survey date: MONDAY	07/10/13	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
DC-03-A-08	Bungalow Development
FA-03-A-01	Includes Terraced
HC-03-A-17	Includes Flats
NF-03-A-01	Includes Bungalows
NY-03-A-08	Terraced Housing
PK-03-A-01	Includes Bungalows
SH-03-A-06	Bungalow Development
WK-03-A-02	Bungalow Development



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

# **MULTI-MODAL VEHICLES**

**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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	27	0.081	11	27	0.336	11	27	0.417
08:00 - 09:00	11	27	0.156	<b>11</b>	<b>27</b>	<b>0.495</b>	<b>11</b>	<b>27</b>	<b>0.651</b>
09:00 - 10:00	11	27	0.139	11	27	0.163	11	27	0.302
10:00 - 11:00	11	27	0.125	11	27	0.108	11	27	0.233
11:00 - 12:00	11	27	0.122	11	27	0.180	11	27	0.302
12:00 - 13:00	11	27	0.173	11	27	0.119	11	27	0.292
13:00 - 14:00	11	27	0.142	11	27	0.125	11	27	0.267
14:00 - 15:00	11	27	0.139	11	27	0.190	11	27	0.329
15:00 - 16:00	11	27	0.278	11	27	0.200	11	27	0.478
16:00 - 17:00	11	27	0.356	11	27	0.146	11	27	0.502
17:00 - 18:00	<b>11</b>	<b>27</b>	<b>0.414</b>	11	27	0.149	11	27	0.563
18:00 - 19:00	11	27	0.264	11	27	0.159	11	27	0.423
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.389			2.370			4.759

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.

## **Parameter summary**

Trip rate parameter range selected: 15 - 40 (units: )  
 Survey date range: 01/01/07 - 12/11/15  
 Number of weekdays (Monday-Friday): 11  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 8

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

## 85th Percentile Ranking of Selected TRICS Residential Sites

### AM Peak Period 08:00-09:00

TRICS 7.2.4

Trip Rate Parameter: Number of dwellings

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

Ranking Type: TOTALS Time Range: 08:00-09:00

85th/15th Percentile Survey Not Highlighted

Rank	Site Ref	Description	Town/City	DWELLS	Day	Date	Arrivals	Departures	Totals
1	MS-03-A-03	DETACHED	LIVERPOOL	15	Friday	21/06/2013	0.4	0.933	1.333
2	GM-03-A-10	DETACHED/SEMI	MANCHESTER	29	Wednesday	12/10/2011	0.138	0.759	0.897
3	CH-03-A-05	DETACHED	CREWE	17	Tuesday	14/10/2008	0.235	0.588	0.823
4	CB-03-A-03	SEMI DETACHED	WORKINGTON	40	Thursday	20/11/2008	0.225	0.45	0.675
5	TW-03-A-02	SEMI-DETACHED	GATESHEAD	16	Monday	07/10/2013	0.188	0.438	0.626
6	CF-03-A-03	DETACHED	CARDIFF	29	Monday	08/10/2007	0.069	0.552	0.621
7	EA-03-A-01	DETACHED	KILMARNOCK	39	Thursday	05/06/2008	0.231	0.359	0.59
8	NY-03-A-11	PRIVATE HOUSING	BOROUGHBRIDGE	23	Wednesday	18/09/2013	0	0.565	0.565
9	PS-03-A-02	DETACHED/SEMI-DETACHED	WELSHPOOL	28	Monday	11/05/2015	0.179	0.321	0.5
10	ES-03-A-02	PRIVATE HOUSING	PEACEHAVEN	37	Friday	18/11/2011	0.081	0.405	0.486
11	LN-03-A-03	SEMI DETACHED	LINCOLN	22	Tuesday	18/09/2012	0.045	0.364	0.409

### School Pick Up Period 15:00-16:00

TRICS 7.2.4

Trip Rate Parameter: Number of dwellings

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

Ranking Type: TOTALS Time Range: 15:00-16:00

85th/15th Percentile Survey Not Highlighted

Rank	Site Ref	Description	Town/City	DWELLS	Day	Date	Arrivals	Departures	Totals
1	PS-03-A-02	DETACHED/SEMI-DETACHED	WELSHPOOL	28	Monday	11/05/2015	0.5	0.321	0.821
2	CH-03-A-05	DETACHED	CREWE	17	Tuesday	14/10/2008	0.353	0.412	0.765
3	TW-03-A-02	SEMI-DETACHED	GATESHEAD	16	Monday	07/10/2013	0.313	0.375	0.687
4	CB-03-A-03	SEMI DETACHED	WORKINGTON	40	Thursday	20/11/2008	0.4	0.25	0.65
5	MS-03-A-03	DETACHED	LIVERPOOL	15	Friday	21/06/2013	0.4	0.133	0.533
6	NY-03-A-11	PRIVATE HOUSING	BOROUGHBRIDGE	23	Wednesday	18/09/2013	0.261	0.261	0.522
7	CF-03-A-03	DETACHED	CARDIFF	29	Monday	08/10/2007	0.241	0.207	0.448
8	EA-03-A-01	DETACHED	KILMARNOCK	39	Thursday	05/06/2008	0.179	0.128	0.307
9	LN-03-A-03	SEMI DETACHED	LINCOLN	22	Tuesday	18/09/2012	0.136	0.136	0.272
10	ES-03-A-02	PRIVATE HOUSING	PEACEHAVEN	37	Friday	18/11/2011	0.243	0.027	0.27
11	GM-03-A-10	DETACHED/SEMI	MANCHESTER	29	Wednesday	12/10/2011	0.103	0.138	0.241

### PM Peak Period 17:00-18:00

TRICS 7.2.4

Trip Rate Parameter: Number of dwellings

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

Ranking Type: TOTALS Time Range: 17:00-18:00

85th/15th Percentile Survey Not Highlighted

Rank	Site Ref	Description	Town/City	DWELLS	Day	Date	Arrivals	Departures	Totals
1	EA-03-A-01	DETACHED	KILMARNOCK	39	Thursday	05/06/2008	0.667	0.179	0.846
2	CH-03-A-05	DETACHED	CREWE	17	Tuesday	14/10/2008	0.353	0.412	0.765
3	NY-03-A-11	PRIVATE HOUSING	BOROUGHBRIDGE	23	Wednesday	18/09/2013	0.609	0.13	0.739
4	CB-03-A-03	SEMI DETACHED	WORKINGTON	40	Thursday	20/11/2008	0.475	0.25	0.725
5	CF-03-A-03	DETACHED	CARDIFF	29	Monday	08/10/2007	0.414	0.241	0.655
6	GM-03-A-10	DETACHED/SEMI	MANCHESTER	29	Wednesday	12/10/2011	0.448	0.103	0.551
7	TW-03-A-02	SEMI-DETACHED	GATESHEAD	16	Monday	07/10/2013	0.438	0.063	0.5
8	MS-03-A-03	DETACHED	LIVERPOOL	15	Friday	21/06/2013	0.2	0.2	0.4
9	ES-03-A-02	PRIVATE HOUSING	PEACEHAVEN	37	Friday	18/11/2011	0.351	0	0.351
10	LN-03-A-03	SEMI DETACHED	LINCOLN	22	Tuesday	18/09/2012	0.273	0.045	0.318
11	PS-03-A-02	DETACHED/SEMI-DETACHED	WELSHPOOL	28	Monday	11/05/2015	0.107	0.071	0.178



## **APPENDIX TS8**

## Appendix TS8: Calculation of TEMPRO Growth Factors

2016 – 2019 AM Peak

TEMPRO main form

**Data selections**

**Trip end selections**

**Trip end by time period selections**

Select time period:  
Weekday AM peak period (0700 - 0959)

**Trip end type**

☐ Production/Attraction  
☒ Origin/Destination

Reset Selections

**Select data type**

☒ Growth factors  
☐ Future year minus base year  
☐ Base year data  
☐ Future year data

**Results**

Area Description	Name	Origin	Destination
Level			
Region	NW	1.0131	1.0131
00BY1	Liverpool(main)	1.0199	1.0068

**NTM Traffic Growth Calculations**

**1: Select NTM Dataset:**

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

**2: Select Areas to make up the geographic region:**

☒ NW  
☒ Liverpool(main) (00BY1)

**3: Select area type:**

☐ Urban  
☐ Rural  
☒ All

**4: Select road type:**

☐ Motorway  
☐ Trunk  
☐ Principal  
☐ Minor  
☒ All

**5: Select which area it serves:**

☒ Region  
☐ England

Calculate the adjusted local growth figure

**Results**

Level	Area	Local Growth Figure
Region	NW	1.0411
00BY1	Liverpool(main)	1.0454

2016 – 2019 PM Peak

TEMPRO main form

**Data selections**

**Trip end selections**

**Trip end by time period selections**

Select time period:  
Weekday PM peak period (1600 - 1859)

**Trip end type**

☐ Production/Attraction  
☒ Origin/Destination

Reset Selections

**Select data type**

☒ Growth factors  
☐ Future year minus base year  
☐ Base year data  
☐ Future year data

**Results**

Area Description	Name	Origin	Destination
Level			
Region	NW	1.0136	1.0136
00BY1	Liverpool(main)	1.009	1.017

**NTM Traffic Growth Calculations**

**1: Select NTM Dataset:**

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

**2: Select Areas to make up the geographic region:**

☒ NW  
☒ Liverpool(main) (00BY1)

**3: Select area type:**

☐ Urban  
☐ Rural  
☒ All

**4: Select road type:**

☐ Motorway  
☐ Trunk  
☐ Principal  
☐ Minor  
☒ All

**5: Select which area it serves:**

☒ Region  
☐ England

Calculate the adjusted local growth figure

**Results**

Level	Area	Local Growth Figure
Region	NW	1.0436
00BY1	Liverpool(main)	1.0430

## 2016 – 2019 Inter peak

TEMPRO main form

**Data selections**

Trip end selections

Trip end by time period selections

Select time period:

Weekday Inter peak period (1000 - 1...

**Trip end type**

☐ Production/Attraction

☒ Origin/Destination

**Select data type**

☐ Growth factors

☐ Future year minus base year

☐ Base year data

☐ Future year data

**Results**

Area Description	Name	Origin	Destination
Level			
Region	NW	1.0169	1.0169
00BY1	Liverpool(main)	1.0134	1.0142

**NTM Traffic Growth Calculations**

**1: Select NTM Dataset:**

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2015
NTM AF08 Dataset	2003	2025

**2: Select Areas to make up the geographic region:**

☒ NW

☒ Liverpool(main) (00BY1)

**3: Select area type:**

☐ Urban

☐ Rural

☒ All

**4: Select road type:**

☐ Motorway

☐ Trunk

☐ Principal

☐ Minor

☒ All

**5: Select which area it serves:**

☐ Region

☐ England

**Calculate the adjusted local growth figure**

**Results**

Level	Area	Local Growth Figure
Region	NW	1.0479
00BY1	Liverpool(main)	1.0439

Reset Selections

## 2016 – 2023 AM Peak

TEMPRO main form

**Data selections**

Trip end selections

Trip end by time period selections

Select time period:

Weekday AM peak period (0700 - 0959)

**Trip end type**

☐ Production/Attraction

☒ Origin/Destination

**Select data type**

☐ Growth factors

☐ Future year minus base year

☐ Base year data

☐ Future year data

**Results**

Area Description	Name	Origin	Destination
Level			
Region	NW	1.0308	1.0308
00BY1	Liverpool(main)	1.0444	1.0251

**NTM Traffic Growth Calculations**

**1: Select NTM Dataset:**

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2015
NTM AF08 Dataset	2003	2025

**2: Select Areas to make up the geographic region:**

☒ NW

☒ Liverpool(main) (00BY1)

**3: Select area type:**

☐ Urban

☐ Rural

☒ All

**4: Select road type:**

☐ Motorway

☐ Trunk

☐ Principal

☐ Minor

☒ All

**5: Select which area it serves:**

☐ Region

☐ England

**Calculate the adjusted local growth figure**

**Results**

Level	Area	Local Growth Figure
Region	NW	1.1001
00BY1	Liverpool(main)	1.0990

Reset Selections

2016 – 2023 PM Peak

TEMPRO main form

**Data selections**

Trip end selections

Trip end by time period selections

Select time period:

Weekday PM peak period (1600 - 1859)

**Trip end type**

☐ Production/Attraction

☒ Origin/Destination

**Select data type**

☒ Growth factors

☐ Future year minus base year

☐ Base year data

☐ Future year data

**Reset Selections**

**Results**

Car Driver Combined Modes

Area Description	Name	Origin	Destination
Level			
Region	NW	1.0321	1.0321
00BY1	Liverpool(main)	1.0205	1.0383

**NTM Traffic Growth Calculations**

**1: Select NTM Dataset:**

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

**2: Select Areas to make up the geographic region:**

☒ NW

☒ Liverpool(main) (00BY1)

**3: Select area type:**

☐ Urban

☐ Rural

☒ All

**4: Select road type:**

☐ Motorway

☐ Trunk

☐ Principal

☐ Minor

☒ All

**5: Select which area it serves:**

☒ Region

☐ England

**Calculate the adjusted local growth figure**

**Results**

Level	Area	Local Growth Figure
Region	NW	1.1015
00BY1	Liverpool(main)	1.0986

2016 – 2023 Inter peak

TEMPRO main form

**Data selections**

Trip end selections

Trip end by time period selections

Select time period:

Weekday Inter peak period (1000 - 1...

**Trip end type**

☐ Production/Attraction

☒ Origin/Destination

**Reset Selections**

**Select data type**

☒ Growth factors

☐ Future year minus base year

☐ Base year data

☐ Future year data

**Results**

Car Driver Combined Modes

Area Description	Name	Origin	Destination
Level			
Region	NW	1.0405	1.0405
00BY1	Liverpool(main)	1.031	1.0329

**NTM Traffic Growth Calculations**

**1: Select NTM Dataset:**

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

**2: Select Areas to make up the geographic region:**

☒ NW

☒ Liverpool(main) (00BY1)

**3: Select area type:**

☐ Urban

☐ Rural

☒ All

**4: Select road type:**

☐ Motorway

☐ Trunk

☐ Principal

☐ Minor

☒ All

**5: Select which area it serves:**

☒ Region

☐ England

**Calculate the adjusted local growth figure**

**Results**

Level	Area	Local Growth Figure
Region	NW	1.1105
00BY1	Liverpool(main)	1.1014