

Technical Note – Land West of Chichester

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To: Darryl Hemmings

Copies: Design Team

Job No: 110013

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Date: 22nd September 2014

Job Title: Land West of Chichester

Introduction

1. Vectos are retained by Miller Homes and Linden Homes to provide traffic and transportation advice in relation to the proposed housing development on land to the west of Chichester.
2. As part of the strategic site allocation process, vehicular trip rates for each strategic site were agreed with West Sussex County Council (WSSC) and with the Highways Agency (HA). These agreed trip rates were used to undertake a transport study of strategic development options for the city and the impact of several sustainable transport measures. The report was commissioned by a collaborative working partnership between Chichester District Council, WSSC, the HA and several housing developers. This ensures a consistent approach between all of the potential housing sites under consideration.
3. Subsequently, it has been suggested by the Parklands Residents Association that the agreed vehicular trip rates do not represent vehicle traffic in residential areas in Chichester. The residents have requested that further evidence is provided to underpin the trip rate assumptions in the form of surveys at a representative housing development in Chichester.
4. It was agreed with WSSC that the housing area bounded by Oving Road to the north, the A27 to the east, Bognor Road to the south and Florence Road to the west would provide representative trip rates for Chichester as a whole and should be used to underpin the trip rate assumptions. It should be noted that the area does not contain local shops, employment or a local school and this would need to be considered when comparing trip rates for a new development that is likely to include internalisation of trips.
5. The area is shown in **Figure 1**.
6. The purpose of this Technical Note is to present the results of the survey data and provide a comparison with the agreed trip rates.

Surveyed Trip Rates

7. The survey data is included at **Appendix A**.
8. A summary of the associated vehicular trip rates (based on 847 units within the area) is shown in **Table 1**.

Table 1: Surveyed Trip Rates

	Weekday AM Peak			Weekday PM Peak		
	In	Out	Two Way	In	Out	Two Way
Vehicles	98	232	330	251	139	390
Trip Rates	0.116	0.274	0.390	0.296	0.164	0.460

9. As previously described, the area does not contain local shops, employment or a local school and this needs to be considered when comparing trip rates for a new development that is likely to include internalisation of trips.
10. Based on our previous experience it is reasonable to apply a 10% reduction factor to account for internalisation for a mixed use site that will include a primary school, local shops and employment. The site benefits from being extremely close to Bishop Luffa secondary school, which will also reduce the number of vehicle trips to/from the site. It should be noted that we have previously agreed up to a 17% reduction to account for internalisation at sites with a comparable mix of uses. Therefore a 10% reduction is robust.
11. A summary of the trip rates including the 10% reduction factor is shown in **Table 2**.

Table 2: Surveyed Trip Rates including 10% Internalisation Reduction

	Weekday AM Peak			Weekday PM Peak		
	In	Out	Two Way	In	Out	Two Way
Trip Rates	0.104	0.247	0.351	0.266	0.148	0.414

12. In addition, the development on the Land West of Chichester will include a residential Travel Plan that aims to reduce single occupancy car trips by the promotion of sustainable travel measures. The surveyed site does not have a Travel Plan. Therefore it is reasonable to apply a further 5% reduction to account for the sustainable measures that will be promoted through the Travel Plan.
13. A summary of the trip rates including the 5% reduction factor is shown in **Table 3**.

Table 3: Surveyed Trip Rates including 10% Internalisation and 5% Travel Plan Reduction

	Weekday AM Peak			Weekday PM Peak		
	In	Out	Two Way	In	Out	Two Way
Trip Rates	0.099	0.234	0.333	0.253	0.140	0.394

Comparison with Agreed Trip Rates

14. A comparison of the surveyed (including the internalisation and travel plan reductions) and agreed trip rates is provided in **Table 4**.

Table 4: Trip Rate Comparison

	Weekday AM Peak			Weekday PM Peak		
	In	Out	Two Way	In	Out	Two Way
Agreed Trip Rates	0.072	0.264	0.336	0.244	0.113	0.357
Surveyed Trip Rates	0.099	0.234	0.333	0.253	0.140	0.394
Difference	0.027	-0.030	-0.003	0.009	0.027	0.037

15. The comparison shows that the surveyed trip rates (including the internalisation and travel plan reductions) are marginally lower in the AM peak hour and marginally higher in the PM peak hour.
16. The associated vehicular trips for a development of 1,600 units is summarised in **Table 5**.

Table 5: Vehicle Trip Comparison

	Weekday AM Peak			Weekday PM Peak		
	In	Out	Two Way	In	Out	Two Way
Agreed Vehicles	115	422	538	390	181	571
Surveyed Vehicles	158	375	533	405	225	630
Difference	43	-47	-5	15	44	59

17. The comparison shows that the use of the surveyed trips would result in 5 fewer trips two-way in the AM peak hour and 59 more trips two-way in the PM peak.
18. This demonstrates that the agreed trip rates are representative for Chichester and are acceptable for use in the assessment.
19. Notwithstanding the above, it is proposed to include a sensitivity test in the Transport Assessment using the surveyed residential trips for the weekday PM peak hour, as shown in Table 5.

Summary

20. The residential trip rates agreed with WSCC, the Highways Agency and the developers of the strategic sites have been queried by the Parklands Residents Association.
21. A survey has been undertaken at a representative housing area in Chichester which confirmed the agreed trip rates are acceptable for use.
22. Notwithstanding the above, it is proposed to include a sensitivity test in the Transport Assessment using the surveyed residential trips for the weekday PM peak.

FIGURES



Land West of Chichester

Miller Homes and Linden Homes

Survey Location Plan

Network Building, 97 Tottenham Court Road, London W1T 4TP
 Tel: 020 7580 7373 Email: london@vectos.co.uk www.vectos.co.uk

DRAWN: MM	CHECKED: ID	DATE: 27-05-14	SCALES:	DRAWING REFERENCE: Figure 1	REVISION:
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APPENDIX A

Traffic Survey Data

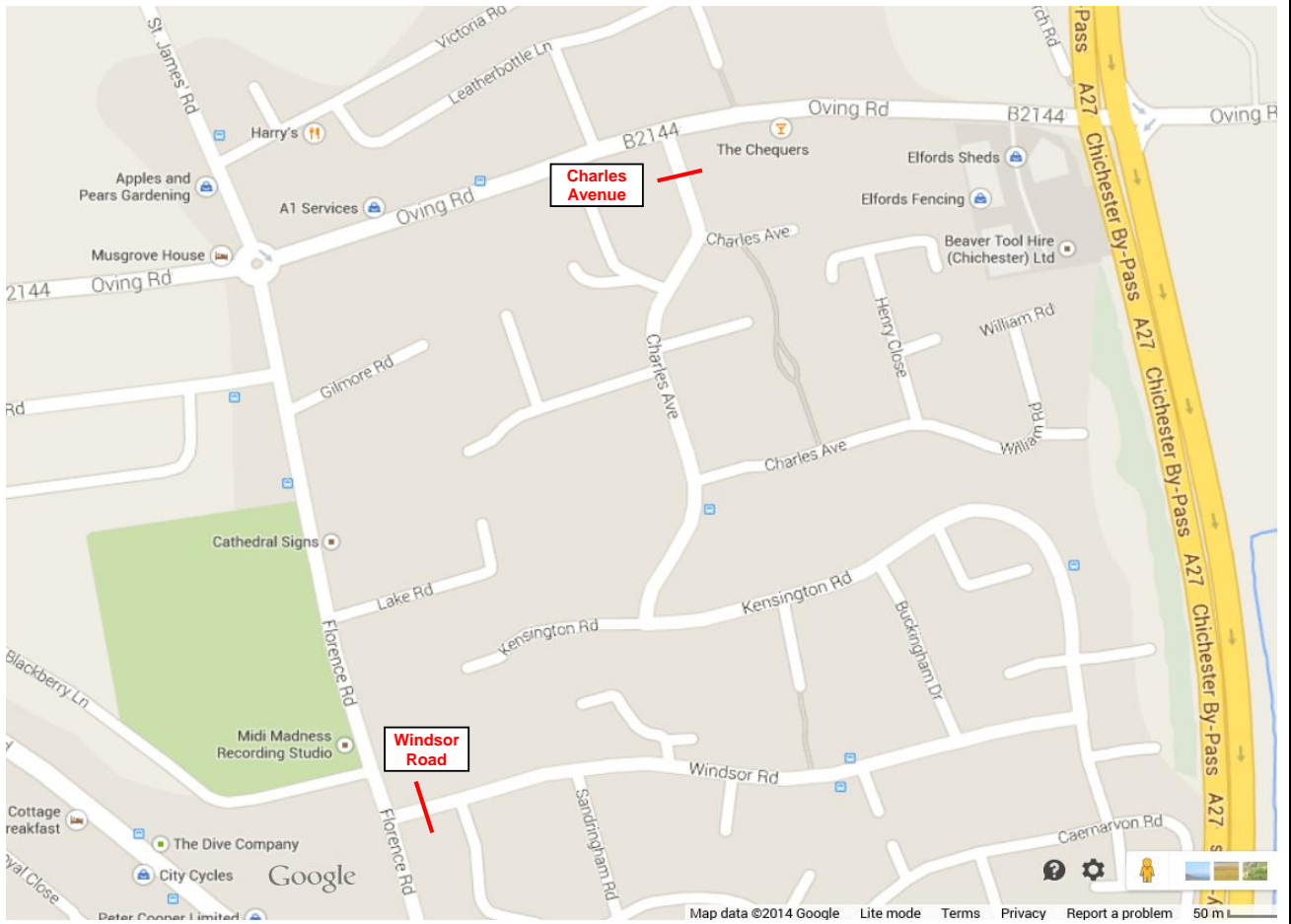


Sky High

Count On Us

Client : Vectos

Project : L0806KS Chichester Date : Thursday 03 July 2014





Sky High

Count On Us

Client: Vectos
 Project: L0806KS Chichester
 Site: Charles Avenue
 Date: Thursday 03 July 2014

Charles Avenue

	Northbound							Total	Southbound							Total
	Car	Lgv	Ogv1	Ogv2	Psv	Mc	Pc		Car	Lgv	Ogv1	Ogv2	Psv	Mc	Pc	
07:00	11	1	1	0	0	0	3	16	4	0	0	0	0	0	0	4
07:15	14	3	0	0	0	0	1	18	6	2	0	0	1	0	0	9
07:30	21	2	1	0	0	1	1	26	7	0	0	0	0	0	1	8
07:45	20	2	1	0	0	0	0	23	1	1	1	0	0	0	0	3
H/Total	66	8	3	0	0	1	5	83	18	3	1	0	1	0	1	24
08:00	22	1	2	0	0	0	1	26	8	0	0	0	0	0	0	8
08:15	21	1	0	0	0	0	2	24	16	2	1	0	0	0	1	20
08:30	27	1	1	0	0	1	3	33	6	0	0	0	1	0	0	7
08:45	20	1	0	0	0	0	3	24	11	0	0	0	0	0	2	13
H/Total	90	4	3	0	0	1	9	107	41	2	1	0	1	0	3	48
09:00	13	4	0	0	0	0	0	17	12	2	0	0	0	0	1	15
09:15	9	2	0	0	0	1	3	15	11	3	0	0	0	0	1	15
09:30	9	3	0	0	0	0	2	14	9	2	0	0	0	0	1	12
09:45	13	0	0	0	0	1	1	15	6	3	1	0	0	0	2	12
H/Total	44	9	0	0	0	2	6	61	38	10	1	0	0	0	5	54
10:00	10	0	0	0	0	1	3	14	11	1	2	0	1	0	2	17
10:15	11	1	0	0	0	0	1	13	9	1	0	0	0	1	1	12
10:30	15	3	0	0	0	0	1	19	13	3	0	0	0	0	1	17
10:45	13	2	2	0	0	0	0	17	4	2	1	0	0	0	0	7
H/Total	49	6	2	0	0	1	5	63	37	7	3	0	1	1	4	53
11:00	11	2	0	0	0	1	1	15	8	0	0	0	1	0	1	10
11:15	9	1	0	0	0	0	1	11	14	1	0	0	0	0	0	15
11:30	11	0	1	0	0	0	1	13	9	3	1	0	0	1	2	16
11:45	9	0	1	0	0	0	2	12	12	0	1	0	0	1	0	14
H/Total	40	3	2	0	0	1	5	51	43	4	2	0	1	2	3	55
12:00	13	1	0	0	0	1	0	15	9	0	0	0	0	1	1	11
12:15	15	2	0	0	0	1	0	18	14	2	0	0	1	0	2	19
12:30	10	4	0	0	0	0	0	14	10	1	0	0	0	1	2	14
12:45	4	0	0	0	0	0	0	4	9	3	0	0	0	2	1	15
H/Total	42	7	0	0	0	2	0	51	42	6	0	0	1	4	6	59
13:00	7	1	0	0	0	0	0	8	9	3	0	0	0	0	1	13
13:15	8	2	0	0	0	0	2	12	11	1	0	0	0	0	1	13
13:30	12	1	2	0	0	0	1	16	9	1	1	0	1	0	1	13
13:45	11	2	0	0	0	1	0	14	14	1	0	0	0	0	1	16
H/Total	38	6	2	0	0	1	3	50	43	6	1	0	1	0	4	55
14:00	8	1	0	0	0	1	0	10	7	2	0	0	0	0	2	11
14:15	9	1	0	0	0	0	2	12	15	1	1	0	0	1	1	19
14:30	17	2	1	0	0	0	0	20	15	1	0	0	1	0	0	17
14:45	20	2	0	0	0	0	3	25	10	2	0	0	0	1	1	14
H/Total	54	6	1	0	0	1	5	67	47	6	1	0	1	2	4	61
15:00	10	0	0	0	0	1	1	12	10	2	0	0	0	0	1	13
15:15	8	3	0	0	0	0	1	12	13	0	1	0	0	0	2	16
15:30	14	2	2	0	0	1	1	20	14	2	0	0	0	0	1	17
15:45	19	2	0	0	0	0	1	22	19	1	0	0	0	0	2	22
H/Total	51	7	2	0	0	2	4	66	56	5	1	0	0	0	6	68
16:00	14	2	0	0	0	0	1	17	15	0	0	0	1	1	3	20
16:15	12	2	0	0	0	0	0	14	11	3	0	0	0	1	2	17
16:30	13	2	0	0	0	0	0	15	17	7	0	0	0	1	1	26
16:45	9	1	0	0	0	0	0	10	17	4	1	0	0	0	2	24
H/Total	48	7	0	0	0	0	1	56	60	14	1	0	1	3	8	87
17:00	9	3	0	0	0	1	2	15	19	3	0	0	1	0	1	24
17:15	10	1	0	0	0	0	2	13	22	6	0	0	0	1	5	34
17:30	20	2	0	0	0	1	0	23	20	3	0	0	0	0	0	23
17:45	17	2	0	0	0	0	2	21	30	1	0	0	0	1	1	33
H/Total	56	8	0	0	0	2	6	72	91	13	0	0	1	2	7	114
18:00	17	0	0	0	0	1	3	21	22	2	0	0	0	0	2	26
18:15	19	1	0	0	0	0	0	20	24	2	0	0	1	0	1	28
18:30	18	0	0	0	0	0	2	20	11	2	0	0	0	1	2	16
18:45	13	2	0	0	0	0	2	17	18	3	0	0	0	0	2	23
H/Total	67	3	0	0	0	1	7	78	75	9	0	0	1	1	7	93
Total	645	74	15	0	0	15	56	805	591	85	12	0	10	15	58	771



Sky High

Count On Us

Client: Vectos
 Project: L0806KS Chichester
 Site: Windsor Road
 Date: Thursday 03 July 2014

Windsor Road

	Eastbound							Total	Westbound							Total
	Car	Lgv	Ogv1	Ogv2	Psv	Mc	Pc		Car	Lgv	Ogv1	Ogv2	Psv	Mc	Pc	
07:00	4	3	0	0	0	0	0	7	9	6	1	0	0	1	0	17
07:15	6	1	0	0	0	0	1	8	18	2	0	0	1	1	1	23
07:30	2	0	0	0	0	1	1	4	21	1	0	0	0	0	3	25
07:45	4	1	0	0	0	0	0	5	23	4	0	0	0	0	6	33
H/Total	16	5	0	0	0	1	2	24	71	13	1	0	1	2	10	98
08:00	9	3	0	0	0	0	0	12	19	1	0	0	0	0	5	25
08:15	17	0	0	0	0	1	0	18	28	3	0	0	0	0	1	32
08:30	5	1	0	0	0	0	0	6	36	0	0	0	1	1	7	45
08:45	13	1	0	0	0	0	0	14	14	1	0	0	0	0	8	23
H/Total	44	5	0	0	0	1	0	50	97	5	0	0	1	1	21	125
09:00	9	0	1	0	0	1	3	14	14	2	0	0	0	0	1	17
09:15	7	3	0	0	0	0	1	11	9	1	0	1	0	0	4	15
09:30	7	1	0	0	0	0	1	9	14	1	0	0	0	0	0	15
09:45	6	1	1	0	0	0	1	9	12	2	0	0	0	0	3	17
H/Total	29	5	2	0	0	1	6	43	49	6	0	1	0	0	8	64
10:00	9	0	1	0	0	1	0	11	12	1	3	0	1	0	2	19
10:15	13	2	0	0	0	0	0	15	16	1	1	0	0	0	0	18
10:30	10	4	0	0	0	0	1	15	9	0	0	0	0	1	2	12
10:45	16	0	0	0	0	0	0	16	7	2	0	0	0	0	1	10
H/Total	48	6	1	0	0	1	1	57	44	4	4	0	1	1	5	59
11:00	9	2	0	0	0	0	0	11	6	3	0	0	1	0	1	11
11:15	4	1	0	0	0	0	2	7	7	0	0	0	0	0	1	8
11:30	14	0	0	0	0	0	2	16	12	3	1	0	0	0	1	17
11:45	12	0	2	0	0	0	2	16	10	4	1	0	0	0	0	15
H/Total	39	3	2	0	0	0	6	50	35	10	2	0	1	0	3	51
12:00	12	1	0	0	0	0	0	13	11	1	0	0	0	0	0	12
12:15	9	3	0	0	0	0	0	12	15	1	0	0	1	0	0	17
12:30	9	1	0	0	0	0	1	11	11	1	0	0	0	0	1	13
12:45	10	1	0	1	0	0	0	12	5	1	0	1	0	1	2	10
H/Total	40	6	0	1	0	0	1	48	42	4	0	1	1	1	3	52
13:00	12	1	1	0	0	0	1	15	3	1	0	0	0	0	1	5
13:15	13	1	0	0	0	0	0	14	8	1	0	0	0	0	1	10
13:30	13	2	0	0	0	0	1	16	11	1	0	0	1	1	2	16
13:45	12	3	0	0	0	0	2	17	11	3	0	0	0	1	0	15
H/Total	50	7	1	0	0	0	4	62	33	6	0	0	1	2	4	46
14:00	6	1	0	0	0	0	0	7	10	3	0	0	0	0	1	14
14:15	15	3	0	0	0	0	2	20	9	1	1	0	0	0	0	11
14:30	14	2	0	0	0	0	0	16	12	2	0	0	1	1	0	16
14:45	9	4	0	1	0	1	1	16	16	2	0	0	0	0	1	19
H/Total	44	10	0	1	0	1	3	59	47	8	1	0	1	1	2	60
15:00	10	2	0	0	0	0	2	14	13	2	0	0	0	0	0	15
15:15	17	2	1	0	0	0	5	25	8	3	0	0	0	1	0	12
15:30	19	1	0	0	0	0	1	21	13	2	0	0	0	0	1	16
15:45	16	1	2	0	0	1	1	21	9	2	0	0	0	0	0	11
H/Total	62	6	3	0	0	1	9	81	43	9	0	0	0	1	1	54
16:00	9	3	1	0	0	0	2	15	16	1	0	0	1	0	1	19
16:15	24	1	0	0	0	0	4	29	9	1	0	0	0	0	2	12
16:30	25	4	1	0	0	0	1	31	6	2	1	0	0	0	0	9
16:45	20	4	1	0	0	0	1	26	12	0	1	0	0	0	2	15
H/Total	78	12	3	0	0	0	8	101	43	4	2	0	1	0	5	55
17:00	26	4	0	0	0	2	4	36	16	3	0	0	1	2	3	25
17:15	24	2	0	0	0	0	7	33	17	2	0	0	0	0	1	20
17:30	35	2	0	0	0	0	4	41	9	1	0	0	0	0	0	10
17:45	20	2	0	0	0	0	5	27	10	2	0	0	0	0	0	12
H/Total	105	10	0	0	0	2	20	137	52	8	0	0	1	2	4	67
18:00	28	1	0	0	0	0	2	31	25	3	0	0	0	0	2	30
18:15	18	3	0	0	0	0	1	22	19	2	0	0	0	0	1	22
18:30	15	3	0	0	0	1	1	20	16	1	0	0	1	0	1	19
18:45	15	1	0	0	0	1	0	17	18	3	0	0	0	0	0	21
H/Total	76	8	0	0	0	2	4	90	78	9	0	0	1	0	4	92
Total	631	83	12	2	0	10	64	802	634	86	10	2	10	11	70	823