

18153 WOODSTOCK Site No: 18153004 Location Site 4, Upper Campsfield Road, Woodstock (Signpost)

Wed 05-Nov-14 to Tue 11-Nov-14 Channel: Northbound

Time Period Total Vehicles 85%ile Speed Mean Speed Stand Dev. <11Mph 11-<16 16-<21 21-<26 26-<31 31-<36 36-<41 41-<46 46-<51 51-<56 56-<61 =>61

Fri 07-Nov-14

00:00	8	-	41	3.1	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
01:00	5	-	41.5	8.4	0	0	0	0	1	0	1	1	2	0	0	0	0	0	0
02:00	2	-	46	3.5	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
03:00	4	-	39.8	4.9	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0
04:00	10	46	42.5	4.2	0	0	0	0	0	4	4	2	0	0	0	0	0	0	0
05:00	35	45.4	41.1	5.1	0	0	0	0	1	3	13	14	3	1	0	0	0	0	0
06:00	174	44.8	39.7	5.1	0	0	0	0	3	31	83	40	15	0	2	0	0	0	0
07:00	463	44.3	39	5.2	0	0	1	3	14	95	211	104	30	5	0	0	0	0	0
08:00	462	41.4	36.1	6	2	1	1	22	36	151	175	57	16	1	0	0	0	0	0
09:00	325	43.4	37.8	5.6	1	1	0	1	28	75	139	65	13	2	0	0	0	0	0
10:00	259	44.5	39.1	6	0	0	1	0	17	46	110	66	15	0	0	0	0	0	4
11:00	306	44.3	38.7	6.3	0	0	2	3	13	71	136	52	22	2	0	0	0	0	5
12:00	329	45.1	40	5.5	0	0	0	1	7	60	129	100	25	5	0	0	0	0	2
13:00	345	44.5	38.9	5.4	0	0	0	1	16	76	147	76	25	3	0	0	0	0	1
14:00	436	44.2	38.7	5.9	0	1	0	5	28	87	173	119	15	5	0	0	0	0	3
15:00	500	44.5	39.2	6.1	2	0	1	1	17	110	202	130	21	10	1	0	0	0	5
16:00	475	44.4	39.1	5.9	2	0	1	9	14	77	209	136	22	2	0	0	0	0	3
17:00	382	44.7	39.4	5.4	0	0	0	4	16	57	171	104	24	4	0	0	0	0	0
18:00	276	45.4	40.9	5.1	0	0	0	0	3	33	107	104	19	8	2	0	0	0	0
19:00	158	45.4	40.6	6.2	0	1	2	1	0	19	59	59	12	3	1	0	0	0	1
20:00	84	48.2	41.7	6.3	0	0	0	0	1	10	34	22	9	6	2	0	0	0	0
21:00	95	46.1	41.6	4.7	0	0	0	0	0	10	32	38	14	1	0	0	0	0	0
22:00	53	45.7	41.4	6.1	0	0	0	1	1	5	16	23	4	2	1	0	0	0	0
23:00	39	47.4	42	6.6	0	0	0	1	0	6	7	17	6	1	0	0	0	0	0
12H,7-19	4558	44.4	38.8	5.8	7	3	7	50	209	938	1909	1113	247	47	5	23	0	0	0
16H,6-22	5069	44.5	39	5.8	7	4	9	51	213	1008	2117	1272	297	57	10	24	0	0	0
18H,6-24	5161	44.6	39.1	5.9	7	4	9	53	214	1019	2140	1312	307	60	12	24	0	0	0
24H,0-24	5225	44.6	39.1	5.9	7	4	9	53	216	1023	2163	1338	315	61	12	24	0	0	0



18153

Wed 05-Nov-14 to Tue 11-Nov-14

WOODSTOCK

Site No: 18153004

Channel: Northbound

Location Site 4, Upper Campsfield Road, Woodstock (Signpost

Time Period Total Vehicles 85%ile Speed Mean Speed Stand Dev. <11Mph 11-<16 16-<21 21-<26 26-<31 31-<36 36-<41 41-<46 46-<51 51-<56 56-<61 =>61

Sat 08-Nov-14

Time Period	Total Vehicles	85%ile Speed	Mean Speed	Stand Dev.	<11Mph	11-<16	16-<21	21-<26	26-<31	31-<36	36-<41	41-<46	46-<51	51-<56	56-<61	=>61
00:00	18	45.5	40.7	6.8	0	0	0	1	0	2	6	2	1	0	0	
01:00	8	-	45.4	6.6	0	0	0	0	0	0	3	1	2	2	0	
02:00	6	-	44.3	7.4	0	0	0	0	0	1	1	1	2	1	0	
03:00	9	-	42.4	8.7	0	0	0	0	0	1	4	3	0	0	1	
04:00	7	-	39.9	7.5	0	0	0	0	1	1	2	1	2	0	0	
05:00	15	44.1	38.2	6.5	0	0	0	0	3	1	7	2	2	0	0	
06:00	44	45.7	41.8	5.1	0	0	0	0	4	16	18	3	3	0	0	
07:00	85	45.4	40.1	6.1	1	0	0	0	3	8	37	26	9	1	0	
08:00	144	45.4	40.5	5	0	0	0	0	1	19	65	42	14	2	1	
09:00	249	45	39.7	5.4	0	0	1	1	3	48	106	66	17	7	0	
10:00	259	45.1	39.6	6	0	0	1	0	13	45	105	68	21	2	2	
11:00	289	44.9	39.8	5.5	0	1	0	2	6	39	142	70	20	7	2	
12:00	330	44.8	39.4	5.5	0	1	0	2	15	54	138	91	25	4	0	
13:00	254	45.2	40.4	5.2	0	1	0	0	1	31	125	68	19	8	1	
14:00	285	44.8	39.5	4.7	0	0	0	0	4	54	135	65	27	0	0	
15:00	255	44.2	39.6	4.4	0	0	0	0	5	34	131	72	11	2	0	
16:00	266	44.2	39.6	5.1	0	0	1	0	4	40	138	66	9	6	1	
17:00	276	44.2	39	5	0	0	0	3	6	55	124	73	12	3	0	
18:00	192	45.1	40.1	5.2	0	0	0	0	1	38	78	56	11	8	0	
19:00	73	48.1	41.9	5.7	0	0	0	0	1	8	25	22	13	4	0	
20:00	67	44.7	39.4	5.5	0	0	0	0	3	12	31	14	5	2	0	
21:00	49	45.2	38.8	7.2	0	0	2	0	4	6	19	12	5	1	0	
22:00	38	40.1	34.7	5.3	0	0	0	1	9	12	12	4	0	0	0	
23:00	66	40.8	37.5	5.4	0	0	0	2	2	18	35	4	4	1	0	
12H,7-19	2884	44.8	39.7	5.3	1	3	3	8	62	465	1324	763	195	50	7	
16H,6-22	3117	44.9	39.8	5.3	1	3	5	8	70	495	1415	829	221	60	7	
18H,6-24	3221	44.9	39.7	5.4	1	3	5	11	81	525	1462	837	225	61	7	
24H,0-24	3284	44.9	39.7	5.4	1	3	5	12	85	531	1485	851	235	65	7	



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Sun 09-Nov-14

00:00	27	44	38.9	5.4	0	0	0	0	0	10	7	9	0	0	1	0	0
01:00	11	45.3	41.7	6.9	0	0	0	0	0	1	6	2	1	0	0	1	0
02:00	10	46	39	6.6	0	0	0	0	0	5	1	2	2	0	0	0	0
03:00	6	-	40.2	5.3	0	0	0	0	0	1	3	1	1	0	0	0	0
04:00	7	-	40.6	3.1	0	0	0	0	0	0	4	3	0	0	0	0	0
05:00	8	-	41	3.1	0	0	0	0	0	0	4	4	0	0	0	0	0
06:00	23	47.1	42	4.6	0	0	0	0	0	1	10	7	5	0	0	0	0
07:00	49	44.9	40	5.3	0	0	0	0	0	10	21	13	4	0	1	0	0
08:00	67	45.5	40.9	4.7	0	0	0	0	2	4	29	24	8	0	0	0	0
09:00	121	44.5	39.3	5	0	0	0	0	7	20	47	41	6	0	0	0	0
10:00	213	43.5	38.6	5.2	0	1	2	1	1	46	104	51	4	3	0	0	0
11:00	232	44.6	39.3	5.7	0	1	2	0	0	54	102	52	15	4	2	0	0
12:00	217	44.8	39.9	5.1	0	0	2	0	4	28	97	69	14	3	0	0	0
13:00	250	45.5	39.9	5.7	0	0	1	1	4	40	122	49	26	4	2	1	0
14:00	225	44.5	39.3	5.6	0	1	0	0	7	41	108	48	12	7	1	0	0
15:00	292	44.8	39.5	5.1	0	0	2	0	1	59	133	70	24	3	0	0	0
16:00	327	44.6	39.6	4.9	0	0	0	0	7	62	136	100	17	5	0	0	0
17:00	264	44.4	39.2	4.9	0	0	0	0	4	58	128	50	21	3	0	0	0
18:00	182	43	38.4	4.5	0	0	0	1	3	43	93	36	5	1	0	0	0
19:00	122	43.7	39.1	4.2	0	0	0	0	1	23	64	28	6	0	0	0	0
20:00	66	44.5	40	4.3	0	0	0	0	0	12	24	28	2	0	0	0	0
21:00	68	46.7	40.8	5.9	0	0	0	1	1	7	31	16	10	1	1	0	0
22:00	25	45.1	40.1	5.3	0	0	0	0	2	1	12	7	3	0	0	0	0
23:00	21	45.5	43	4.1	0	0	0	0	0	1	3	15	1	1	0	0	0
12H,7-19	2439	44.6	39.4	5.2	0	3	9	3	40	465	1120	603	156	33	6	1	1
16H,6-22	2718	44.6	39.5	5.2	0	3	9	4	42	508	1249	682	179	34	7	1	1
18H,6-24	2764	44.7	39.5	5.2	0	3	9	4	44	510	1264	704	183	35	7	1	1
24H,0-24	2833	44.7	39.5	5.2	0	3	9	4	44	527	1289	725	187	36	8	1	1



18153

Wed 05-Nov-14 to Tue 11-Nov-14

WOODSTOCK

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Time Period Total Vehicles 85%ile Speed Mean Speed Stand Dev. <11Mph 11-<16 16-<21 21-<26 26-<31 31-<36 36-<41 41-<46 46-<51 51-<56 56-<61 =>61

Mon 10-Nov-14

00:00	6	-	40.2	3	0	0	0	0	0	0	4	2	0	0	0	0	0
01:00	3	-	41.8	5.9	0	0	0	0	0	0	2	0	1	0	0	0	0
02:00	3	-	43.5	5	0	0	0	0	0	0	1	1	1	0	0	0	0
03:00	4	-	39.8	11.1	0	0	0	0	1	1	0	1	0	1	0	0	0
04:00	3	-	43.5	8.8	0	0	0	0	0	0	2	0	0	1	0	0	0
05:00	29	46.2	41.9	4.7	0	0	0	0	0	1	13	10	4	1	0	0	0
06:00	177	45.8	41.1	5.5	0	1	0	0	1	22	64	64	19	6	0	0	0
07:00	511	44.9	39.8	6.1	1	1	0	0	20	81	221	142	30	4	4	7	0
08:00	487	42.5	36.5	6.9	5	1	0	14	57	138	177	71	17	1	2	4	0
09:00	366	44.2	37.8	6.4	0	1	2	11	31	84	126	87	20	4	0	0	0
10:00	283	44.7	37.8	7.1	1	1	3	3	33	63	95	56	21	6	0	1	0
11:00	270	44.5	38.8	5.6	0	1	0	0	17	62	95	77	16	2	0	0	0
12:00	273	45	39.7	5.8	0	0	0	2	8	54	107	75	18	6	3	0	0
13:00	266	44.4	38.7	5.2	0	0	0	0	9	76	99	62	18	2	0	0	0
14:00	331	44.2	38.5	6.3	2	1	0	4	14	78	133	77	16	3	1	2	0
15:00	389	44.2	38.2	5.9	3	1	1	0	17	103	150	87	26	1	0	0	0
16:00	446	44.7	39.3	5.5	1	0	1	0	15	91	183	120	27	7	1	0	0
17:00	437	44.9	39.7	6.5	1	0	0	1	15	80	200	94	32	2	1	11	0
18:00	313	45.7	39.8	6.2	0	1	2	1	9	54	134	69	27	15	1	0	0
19:00	148	45.9	40.4	5.8	0	1	0	0	3	19	66	37	17	5	0	0	0
20:00	72	44.9	40.4	5.2	0	0	0	0	2	9	30	25	3	3	0	0	0
21:00	56	45	40.3	5.1	0	0	0	0	3	7	17	25	4	0	0	0	0
22:00	62	44.8	40	5.2	0	0	0	0	1	12	24	20	3	2	0	0	0
23:00	22	44.2	39	6.3	0	0	0	0	0	3	11	5	2	0	0	0	0
12H,7-19	4372	44.5	38.7	6.3	14	8	9	36	245	964	1720	1017	268	53	13	25	25
16H,6-22	4825	44.7	38.9	6.2	14	10	9	36	254	1021	1897	1168	311	67	13	25	25
18H,6-24	4909	44.7	38.9	6.2	14	10	10	36	255	1036	1932	1193	316	69	13	25	25
24H,0-24	4957	44.7	38.9	6.2	14	10	10	36	256	1038	1954	1207	322	72	13	25	25



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Tue 11-Nov-14

00:00	13	46.9	43.5	3.8	0	0	0	0	0	0	3	7	3	0	0	0	0
01:00	5	-	42.5	2.6	0	0	0	0	0	0	1	4	0	0	0	0	0
02:00	2	-	41	3.5	0	0	0	0	0	0	1	1	0	0	0	0	0
03:00	5	-	43.5	3.7	0	0	0	0	0	0	1	3	1	0	0	0	0
04:00	3	-	41.8	7.6	0	0	0	0	0	0	1	1	1	0	0	0	0
05:00	33	46.5	41.8	4.5	0	0	0	0	0	2	13	12	6	0	0	0	0
06:00	176	44.1	38.2	6.1	1	0	3	1	7	39	70	45	10	0	0	0	0
07:00	529	42.9	38	4.8	1	0	0	0	21	141	247	101	15	3	0	0	0
08:00	513	43.2	38.1	5.6	1	1	2	10	18	112	248	97	17	7	0	0	0
09:00	408	43.4	38.4	4.9	0	0	0	0	18	98	196	71	23	1	1	0	0
10:00	216	44.2	38.7	5.5	0	0	0	0	16	45	88	53	9	5	0	0	0
11:00	286	43.2	38.2	4.8	0	0	0	2	12	69	135	56	11	1	0	0	0
12:00	252	44	38.8	5.1	0	0	0	1	13	51	109	66	9	3	0	0	0
13:00	298	43.6	38.3	4.9	0	0	0	0	16	76	127	64	15	0	0	0	0
14:00	319	44.1	39	4.8	0	1	0	0	6	67	142	89	13	1	0	0	0
15:00	382	44.3	39.3	4.8	0	0	0	0	12	66	184	93	24	3	0	0	0
16:00	451	43.5	38.3	5.4	4	0	0	0	15	104	214	93	20	1	0	0	0
17:00	428	44.1	39.1	4.7	0	0	0	3	6	85	200	111	20	3	0	0	0
18:00	265	45	39.7	5.2	0	0	0	0	3	55	120	59	20	8	0	0	0
19:00	178	45.8	41.3	5.4	0	0	0	0	1	24	60	69	17	4	3	0	0
20:00	95	47.9	41.6	6.8	0	0	0	0	0	16	39	21	11	2	5	1	1
21:00	69	48.8	41.8	6.9	0	0	0	0	0	13	24	15	11	3	2	1	1
22:00	79	47.7	41.6	6.3	0	0	0	1	1	11	23	27	11	4	1	0	0
23:00	27	47.5	42	5.3	0	0	0	0	0	3	9	5	1	0	0	0	0
12H,7-19	4347	43.8	38.6	5.1	6	2	2	16	156	969	2010	953	196	36	1	0	0
16H,6-22	4865	44.1	38.8	5.2	7	2	5	17	164	1061	2203	1103	245	45	11	2	2
18H,6-24	4971	44.2	38.8	5.3	7	2	5	18	165	1075	2235	1139	261	50	12	2	2
24H,0-24	5032	44.2	38.9	5.3	7	2	5	18	165	1078	2254	1167	272	50	12	2	2



18153

Wed 05-Nov-14 to Tue 11-Nov-14

WOODSTOCK

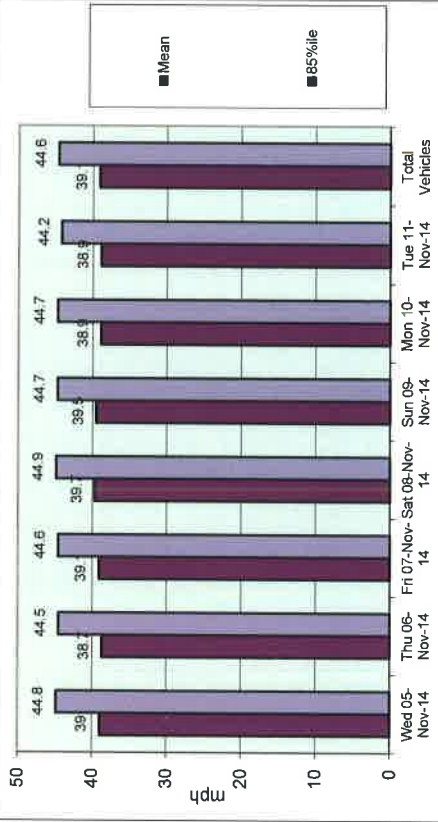
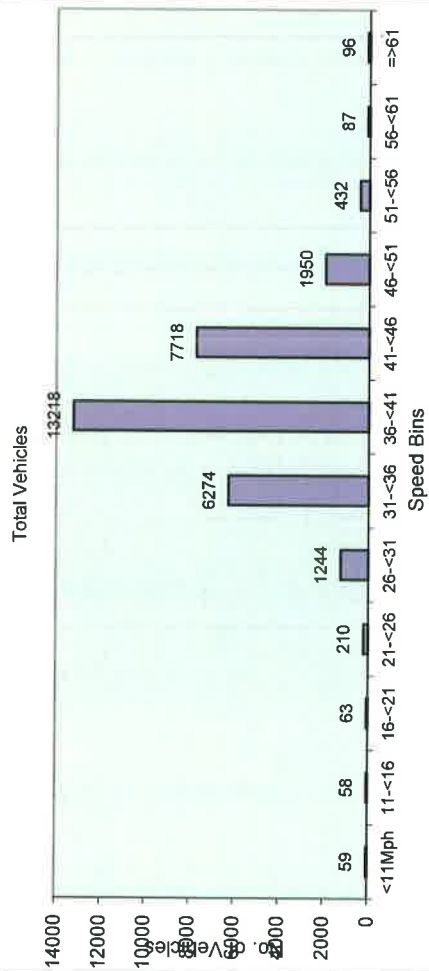
Site No: 18153004
Channel: Northbound

Location Site 4, Upper Campsfield Road, Woodstock (Signpost)

Time Period	Total Vehicles	85%ile Speed	Mean Speed	Stand Dev.	<11Mph	11-<16	16-<21	21-<26	26-<31	31-<36	36-<41	41-<46	46-<51	51-<56	56-<61	=>61
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Daily Totals

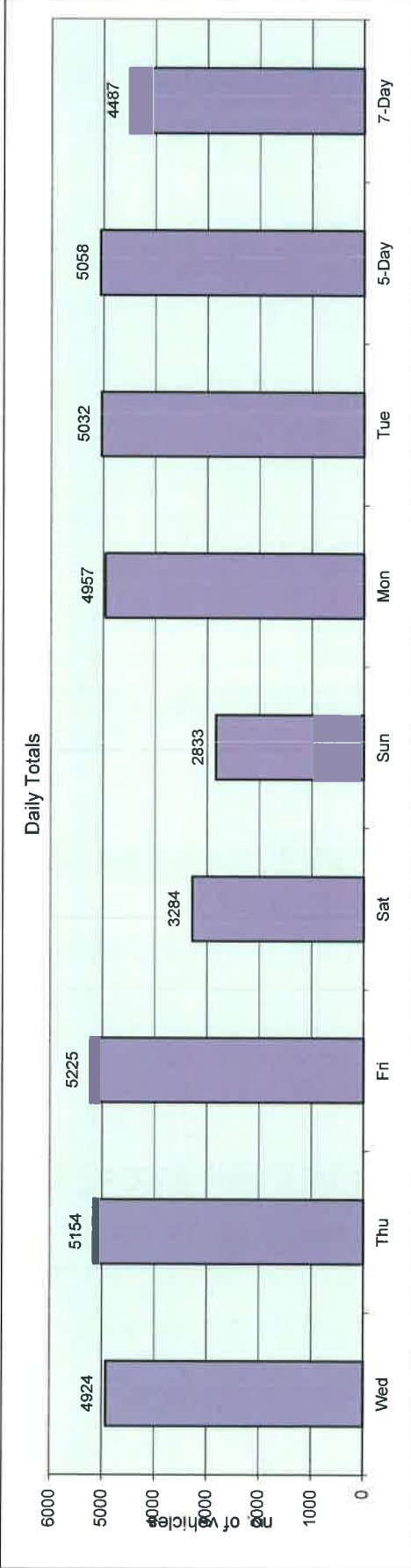
Wed 05-Nov-14	4924	44.8	39	6.3	15	13	11	34	244	1005	1948	1215	317	85	17	20
Thu 06-Nov-14	5154	44.5	38.7	6.2	15	23	14	53	234	1072	2125	1215	302	63	18	20
Fri 07-Nov-14	5225	44.6	39.1	5.9	7	4	9	53	216	1023	2163	1338	315	61	12	24
Sat 08-Nov-14	3284	44.9	39.7	5.4	1	3	5	12	85	531	1485	851	235	65	7	4
Sun 09-Nov-14	2833	44.7	39.5	5.2	0	3	9	4	44	527	1289	725	187	36	8	1
Mon 10-Nov-14	4957	44.7	38.9	6.2	14	10	10	36	256	1038	1954	1207	322	72	13	25
Tue 11-Nov-14	5032	44.2	38.9	5.3	7	2	5	18	165	1078	2254	1167	272	50	12	2
Total Vehicles	31409	44.6	39.1	5.8	59	58	63	210	1244	6274	13218	7718	1950	432	87	96



18153		WOODSTOCK		Site No: 18153004		Location		Site 4, Upper Campsfield Road, Woodstock (Signpost)	
		Channel: Northbound							
TIME PERIOD	05/11/14	06/11/14	07/11/14	08/11/14	09/11/14	10/11/14	11/11/14	5-Day AV	7-Day AV
Week Begin: 05-Nov-14	Wed	Thu	Fri	Sat	Sun	Mon	Tue		
00:00	11	7	8	18	27	6	13	9	13
01:00	3	5	5	8	11	3	5	4	6
02:00	3	3	2	6	10	3	2	3	4
03:00	5	3	4	9	6	4	5	4	5
04:00	4	4	10	7	7	3	3	5	5
05:00	33	34	35	15	8	29	33	33	27
06:00	183	212	174	44	23	177	176	184	141
07:00	509	513	463	85	49	511	529	505	380
08:00	471	535	462	144	67	487	513	494	383
09:00	352	406	325	249	121	366	408	371	318
10:00	266	297	259	259	213	283	216	264	256
11:00	258	273	306	289	232	270	286	279	273
12:00	257	250	329	330	217	273	252	272	273
13:00	278	260	345	254	250	266	298	289	279
14:00	324	340	436	285	225	331	319	350	323
15:00	402	353	500	255	292	389	382	405	368
16:00	468	459	475	266	327	446	451	460	413
17:00	419	402	382	276	264	437	428	414	373
18:00	314	307	276	192	182	313	265	295	264
19:00	148	194	158	73	122	148	178	165	146
20:00	74	120	84	67	66	72	95	89	83
21:00	60	82	95	49	68	56	69	72	68
22:00	59	63	53	38	25	62	79	63	54
23:00	23	32	39	66	21	22	27	29	33
12H,7-19	4318	4395	4558	2884	2439	4372	4347	4398	3902
16H,6-22	4783	5003	5069	3117	2718	4825	4865	4909	4340
18H,6-24	4865	5098	5161	3221	2764	4909	4971	5001	4427
24H,0-24	4924	5154	5225	3284	2633	4957	5032	5058	4487
Am	07:00	08:00	07:00	11:00	11:00	07:00	07:00	-	-
Peak	509	535	463	289	232	511	529	509	438
Pm	16:00	16:00	15:00	12:00	16:00	16:00	16:00	-	-
Peak	468	459	500	330	327	446	451	465	426



18153	WOODSTOCK	Site No: 18153004	Location	Site 4, Upper Campsfield Road, Woodstock (Signpost)					
		Channel: Northbound							
TIME PERIOD	Wed	Thu	Fri	Sat	Sun	Mon	Tue	5-Day	7-Day
	05/11/14	06/11/14	07/11/14	08/11/14	09/11/14	10/11/14	11/11/14	Av	Av



TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	MOTOR-CYCLES%	CARS	CARS %	LGV	LGV %	HGV	HGV %	BUS	BUS %
Wed 05-Nov-14											
00:00	9	0	0.0	8	88.9	1	11.1	0	0.0	0	0.0
01:00	3	0	0.0	2	66.7	1	33.3	0	0.0	0	0.0
02:00	2	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0
03:00	9	0	0.0	8	88.9	0	0.0	1	11.1	0	0.0
04:00	15	1	6.7	14	93.3	0	0.0	0	0.0	0	0.0
05:00	32	0	0.0	26	81.3	4	12.5	2	6.3	0	0.0
06:00	205	2	1.0	153	74.6	34	16.6	15	7.3	1	0.5
07:00	441	3	0.7	350	79.4	67	15.2	19	4.3	2	0.5
08:00	524	11	2.1	441	84.2	30	5.7	33	6.3	9	1.7
09:00	361	1	0.3	280	77.6	53	14.7	25	6.9	2	0.6
10:00	274	3	1.1	225	82.1	32	11.7	13	4.7	1	0.4
11:00	275	0	0.0	210	76.4	47	17.1	17	6.2	1	0.4
12:00	266	3	1.1	205	77.1	41	15.4	16	6.0	1	0.4
13:00	313	1	0.3	247	78.9	45	14.4	18	5.8	2	0.6
14:00	331	2	0.6	266	80.4	46	13.9	16	4.8	1	0.3
15:00	351	0	0.0	273	77.8	55	15.7	17	4.8	6	1.7
16:00	485	3	0.6	390	80.4	77	15.9	14	2.9	1	0.2
17:00	513	3	0.6	445	86.7	52	10.1	10	2.0	3	0.6
18:00	387	5	1.3	340	87.9	36	9.3	5	1.3	1	0.3
19:00	165	1	0.6	146	88.5	15	9.1	2	1.2	1	0.6
20:00	69	0	0.0	62	89.9	5	7.3	1	1.5	1	1.5
21:00	73	1	1.4	66	90.4	5	6.9	1	1.4	0	0.0
22:00	32	0	0.0	30	93.8	2	6.3	0	0.0	0	0.0
23:00	19	1	5.3	17	89.5	0	0.0	1	5.3	0	0.0
12H,7-19	4521	35	0.8	3672	81.2	581	12.9	203	4.5	30	0.7
16H,6-22	5033	39	0.8	4099	81.4	640	12.7	222	4.4	33	0.7
18H,6-24	5084	40	0.8	4146	81.6	642	12.6	223	4.4	33	0.7
24H,0-24	5154	41	0.8	4204	81.6	648	12.6	227	4.4	34	0.7



18153 WOODSTOCK Site No: 18153004 Location Site 4, Upper Campsfield Road, Woodstock (Signpost)

Wed 05-Nov-14 to Tue 11-Nov-14

Channel: Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	MOTOR-CYCLES%	CARS	CARS %	LGV	LGV %	HGV	HGV %	BUS	BUS %
Thu 06-Nov-14											
00:00	7	0	0.0	5	71.4	1	14.3	0	0.0	1	14.3
01:00	2	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0
02:00	3	0	0.0	2	66.7	0	0.0	0	0.0	1	33.3
03:00	8	0	0.0	5	62.5	1	12.5	1	12.5	1	12.5
04:00	15	0	0.0	13	86.7	2	13.3	0	0.0	0	0.0
05:00	38	1	2.6	28	73.7	5	13.2	4	10.5	0	0.0
06:00	186	1	0.5	142	76.3	33	17.7	8	4.3	2	1.1
07:00	435	7	1.6	348	80.0	63	14.5	15	3.5	2	0.5
08:00	450	2	0.4	363	80.7	62	13.8	22	4.9	1	0.2
09:00	360	1	0.3	286	79.4	50	13.9	22	6.1	1	0.3
10:00	269	0	0.0	199	74.0	43	16.0	25	9.3	2	0.7
11:00	253	3	1.2	188	74.3	42	16.6	19	7.5	1	0.4
12:00	257	1	0.4	188	73.2	43	16.7	25	9.7	0	0.0
13:00	254	1	0.4	194	76.4	43	16.9	16	6.3	0	0.0
14:00	318	2	0.6	231	72.6	66	20.8	17	5.4	2	0.6
15:00	364	1	0.3	276	75.8	63	17.3	20	5.5	4	1.1
16:00	507	1	0.2	399	78.7	90	17.8	16	3.2	1	0.2
17:00	498	2	0.4	418	83.9	64	12.9	14	2.8	0	0.0
18:00	318	1	0.3	277	87.1	39	12.3	1	0.3	0	0.0
19:00	171	0	0.0	147	86.0	22	12.9	2	1.2	0	0.0
20:00	78	1	1.3	69	88.5	7	9.0	1	1.3	0	0.0
21:00	47	1	2.1	42	89.4	3	6.4	1	2.1	0	0.0
22:00	57	0	0.0	53	93.0	4	7.0	0	0.0	0	0.0
23:00	19	1	5.3	15	79.0	3	15.8	0	0.0	0	0.0
12H,7-19	4283	22	0.5	3367	78.6	668	15.6	212	5.0	14	0.3
16H,6-22	4765	25	0.5	3767	79.1	733	15.4	224	4.7	16	0.3
18H,6-24	4841	26	0.5	3835	79.2	740	15.3	224	4.6	16	0.3
24H,0-24	4914	27	0.6	3889	79.1	750	15.3	229	4.7	19	0.4

18153 WOODSTOCK Site No: 18153004 Location Site 4, Upper Campsfield Road, Woodstock (Signpost)
 Wed 05-Nov-14 to Tue 11-Nov-14 Channel: Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	MOTOR-CYCLES%	CARS	CARS %	LGV	LGV %	HGV	HGV %	BUS	BUS %
Fri 07-Nov-14											
00:00	7	0	0.0	6	85.7	1	14.3	0	0.0	0	0.0
01:00	4	0	0.0	3	75.0	1	25.0	0	0.0	0	0.0
02:00	4	0	0.0	1	25.0	3	75.0	0	0.0	0	0.0
03:00	13	0	0.0	9	69.2	2	15.4	1	7.7	1	7.7
04:00	13	0	0.0	11	84.6	2	15.4	0	0.0	0	0.0
05:00	25	0	0.0	21	84.0	3	12.0	1	4.0	0	0.0
06:00	181	1	0.6	147	81.2	21	11.6	12	6.6	0	0.0
07:00	416	4	1.0	321	77.2	73	17.6	14	3.4	4	1.0
08:00	451	7	1.6	357	79.2	38	8.4	43	9.5	6	1.3
09:00	413	2	0.5	303	73.4	75	18.2	31	7.5	2	0.5
10:00	263	1	0.4	201	76.4	48	18.3	13	4.9	0	0.0
11:00	299	1	0.3	229	76.6	45	15.1	21	7.0	3	1.0
12:00	305	0	0.0	237	77.7	51	16.7	16	5.3	1	0.3
13:00	320	0	0.0	250	78.1	62	19.4	8	2.5	0	0.0
14:00	380	1	0.3	275	72.4	72	19.0	30	7.9	2	0.5
15:00	421	2	0.5	330	78.4	69	16.4	18	4.3	2	0.5
16:00	515	5	1.0	424	82.3	77	15.0	9	1.8	0	0.0
17:00	443	2	0.5	382	86.2	51	11.5	8	1.8	0	0.0
18:00	379	2	0.5	338	89.2	37	9.8	2	0.5	0	0.0
19:00	160	0	0.0	146	91.3	12	7.5	2	1.3	0	0.0
20:00	70	1	1.4	60	85.7	9	12.9	0	0.0	0	0.0
21:00	39	0	0.0	37	94.9	2	5.1	0	0.0	0	0.0
22:00	42	0	0.0	38	90.5	4	9.5	0	0.0	0	0.0
23:00	24	0	0.0	22	91.7	2	8.3	0	0.0	0	0.0
12H,7-19	4605	27	0.6	3647	79.2	698	15.2	213	4.6	20	0.4
16H,6-22	5055	29	0.6	4037	79.9	742	14.7	227	4.5	20	0.4
18H,6-24	5121	29	0.6	4097	80.0	748	14.6	227	4.4	20	0.4
24H,0-24	5187	29	0.6	4148	80.0	760	14.7	229	4.4	21	0.4



1 Introduction

This report describes a Stage 1 Road Safety Audit carried out on two site accesses for the proposed Woodstock East development. The development includes approximately 1,500 dwellings, a primary school, retail space, employment space, public spaces, and a public transport interchange. A priority controlled junction will be provided on the A44 Oxford Road whilst an at-grade 3-arm roundabout will be installed on the A4095 Campsfield Road.

This audit also considers a proposed coach park facility for Marlborough School located on Sipton Road.

The audit was carried out at the request of David Tucker Associates.

The audit took place at the Birmingham office of Mott MacDonald and consisted of a detailed examination of the submitted documentation and drawings listed in **Appendix A**.

A visit to the site was completed on Tuesday 24th March 2015 commencing at 12.30 hours. During the site visit, the weather conditions were dry with sunny intervals and the road surface was dry.

It is confirmed that this is a Stage 1 Road Safety Audit and that the audit was undertaken upon completion of the preliminary design works.

It is also confirmed that the audit was carried out in accordance with the Departmental Standard HD19/03.

The Audit Team consisted of:

T Blaney BSc (Hons), CMILT, MCIHT, MSoRSA (Team Leader)
Mott MacDonald

R Collins BA (Hons), MSc (Team Member)
Mott MacDonald

The comments and suggestions for road safety improvements made in this report seek to address matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme or the appropriateness of the design. Consequently the auditors accept no responsibility for the design or construction of the scheme.

All of the issues raised in this report are considered to be required for action. The comments contained in the report are based on safety related concerns and as such the design engineer will need to consider carefully how to respond to each of the issues. The Designer's response to the audit should be kept on file for future reference.

A comprehensive Transport Assessment providing accident data and traffic flow information has been provided to the Audit Team.

A Key Plan indicating the location of any identified safety related issues is provided in **Appendix B**.

2 Items Raised at this Stage 1 Audit

This section describes road safety related issues identified by the Audit Team that are associated with the scheme as presented in **Appendix A**.

2.1 A44 Oxford Road Priority Controlled Junction

2.1.1 Problem 2.1.2

Location: Proposed priority controlled junction.

Summary: Vehicles may travel at inappropriate speeds.

The proposed priority controlled junction is within a 50mph speed limit, approximately 150m from a gateway feature (village signing and dragons teeth markings) and speed limit of 30mph. The introduction of the junction will result in an increase in vehicle turning movements and pedestrian trips. The retention of the 50mph speed limit may result in vehicles travelling at inappropriate speeds past the site access and turning motorists may misjudge the speed of vehicles approaching from the northwest increasing the risk of collisions.

Recommendation

It is recommended that the 30mph speed limit is extended to south-east of the proposed junction.

Note: It would be beneficial to undertake an area wide review of speed limits on the road network surrounding the proposed development.

2.2 A4095 Campsfield Road 3-arm Roundabout

2.2.1 Problem 2.2.1

Location: Proposed roundabout.

Summary: Vehicles may travel at inappropriate speeds.

The proposed roundabout is located within a 60mph speed limit situated between Bladon Roundabout to the west and a 50mph speed limit to the east. Vehicles may approach the roundabout at inappropriate speeds due to accelerating away from the Bladon Roundabout or out of the 50mph speed limit. This may result in an increased risk of vehicle loss of control or conflicts on the roundabout circulatory carriageway.

Recommendation

It is recommended that the 50mph speed limit is extended to south-west of the proposed junction.

Note: It would be beneficial to undertake an area wide review of speed limits on the road network surrounding the proposed development.

2.3 The Marlborough School Coach Park on Shipton Road

2.3.1 Problem 2.3.1

Location: Shipton Road proposed coach park.

Summary: Poor location of access points.

There are a number of issues associated with the access points to the proposed coach park:

- The road layouts at both access points are unclear and drivers may mistake the coach parking access as the alignment of the main road.
- Both accesses into / out of the coach park are located at sharp bends and chevron signing is currently present to warn of the bend (the southernmost sign has already been hit).
- The proposals do not show the re-location of the chevron signing necessary to highlight the bend.
- Visibility for drivers exiting the southernmost access will be restricted to their right, which could be impeded by the current hedge.

The above factors will combine to create driver hesitancy and drivers may misjudge the alignment of the main road altogether, resulting in them leaving the carriageway.

Recommendation

It is recommended that the locations of the two access points to the coach park are reviewed and re-located if possible.

Clear signing and marking of the coach park will be required along with the re-location of the chevron signing to highlight the severity of bend. Bend ahead warning signs may also be required.

3 Audit Team Statement

I certify that this audit has been carried out in accordance with the Highways Agency Departmental Standard HD 19/03.

Audit Team Leader

T J Blaney BSc (Hons), CMILT, MCIHT, MSoRSA

Signed:



Date: 27th March 2015

Senior Road Safety Engineer
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Audit Team Member

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Appendices

Appendix A. List of Documents Reviewed	8
Appendix B. Location Plan	9

Appendix A. List of Documents Reviewed

A.1. Drawings

Drawings Reviewed by Audit Team

Drawing	Rev	Title
15291-21	A	Proposed 45m roundabout access
15291-23	-	Marlborough School Coach Park
P100	A	Detailed Site Area

A.2. Documents

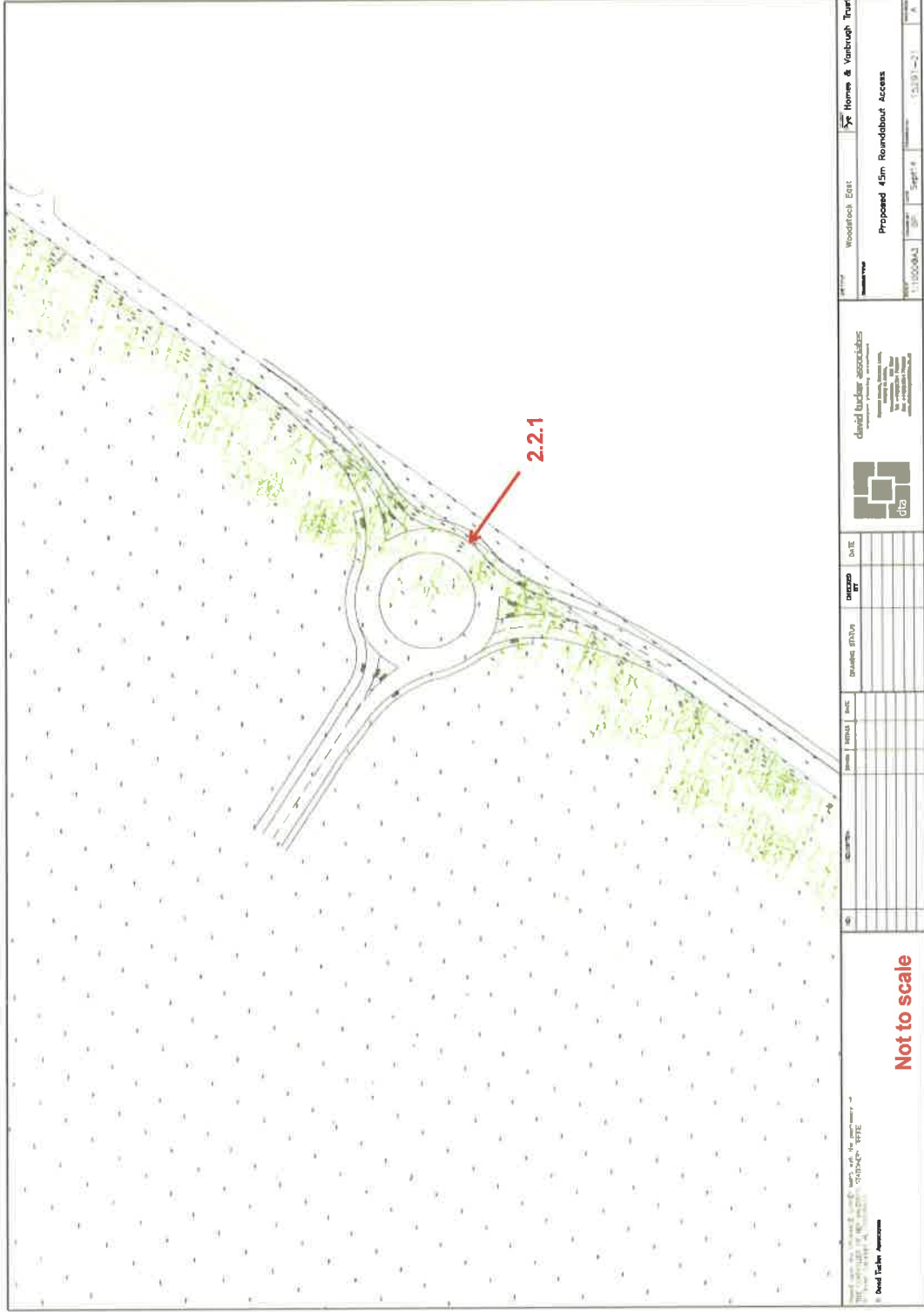
Documents Reviewed by Audit Team

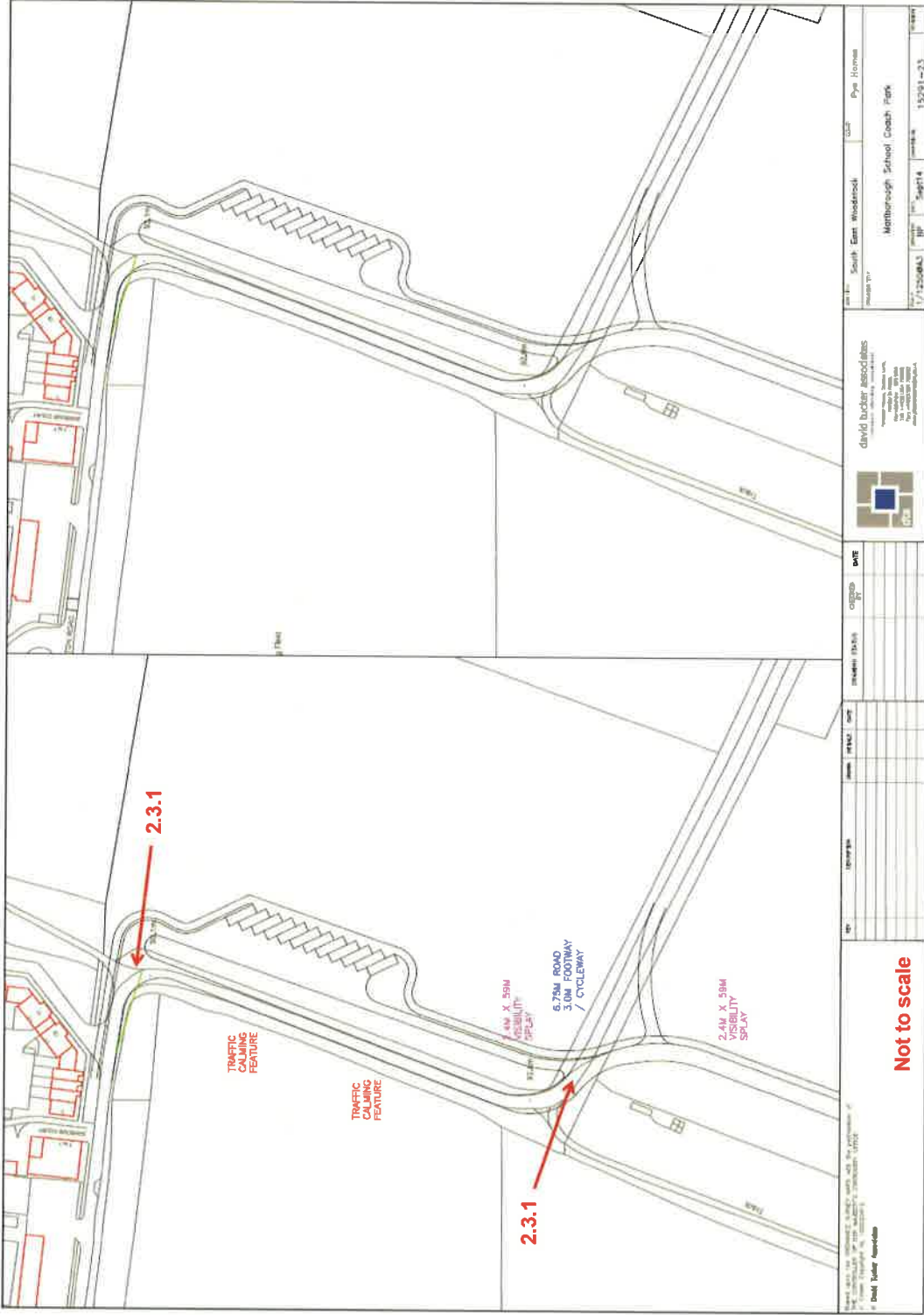
Document	Rev	Title
15291-02	-	Woodstock East, Oxfordshire Transport Assessment

Appendix B. Location Plan

Not to scale









Appendix C

Correspondence between WSP and Natural England

Date: 26 March 2015
Our ref: 141852
Your ref: 14/02004/HYBRID & 14/02063/OUT



Tracey Morrissey
Cherwell District Council
Bodicote House
Bodicote
Banbury
Oxfordshire
OX15 4AA

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

Catherine Tetlow
West Oxfordshire District Council
New Yatt Road
Witney
Oxfordshire
OX28 1PB

BY EMAIL ONLY

Dear Ms. Morrissey / Ms. Tetlow

Planning consultation: OUTLINE:- Up to 1500 dwellings, including affordable housing and up to a 150 unit care village (C2) with associated publicly accessible ancillary facilities; site for a new primary school; up to 930sqm of retail space; up to 7,500sqm locally led employment (B1/B2/B8) including link and ride; site for a football association step 5 football facility with publicly accessible ancillary facilities; public open space, associated infrastructure, engineering and ancillary works, (all matters reserved except for means of access to the development); and Full Planning:- development of Phase 1 at the south western corner of the site for the erection of 29 residential dwellings (29 or the 1500 described above) with associated open space, parking and landscaping; with vehicular access provided from Upper Campsfield Road (A4095), Shipton Road and Oxford Road (A44)

Location: Land South Of Perdiswell Farm Shipton Road Shipton On Cherwell

Natural England received further information from WSP on the 12th March 2015 relating to the objection letter sent to yourselves by Natural England on the 16th February 2015.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Conservation of Habitats and Species Regulations 2010 (as amended) Wildlife and Countryside Act 1981 (as amended)

Withdrawal of objection

Following receipt of the further information from the applicant Natural England is satisfied that the proposed development will not have a significant effect on nitrogen deposition or annual mean NO_x concentrations at Oxford Meadows Special Area of Conservation (SAC). The further information



Your ref: 141852
Our ref: 70004428/L01JG



11 March 2015

Marc Turner
Natural England
Thames Valley Team

Mountbatten House
Basing View
Basingstoke
RG21 4HJ

Tel: +44 1256 318 800
www.wspgroup.co.uk

VIA EMAIL to consultations@naturalengland.org.uk

Dear Marc

PROPOSED DEVELOPMENT ON LAND SE OF WOODSTOCK (PLANNING APPLICATION REFS: 14/02004/Hybrid & 14/02063/OUT) - AIR QUALITY EFFECTS ON DESIGNATED SITES

We write with regard to your letter dated 16th February containing your consultation response to both Cherwell District Council and West Oxfordshire District Council on the above development and specifically the impact of traffic generated by the proposals on nitrogen deposition rates and annual mean NO_x concentrations on the Oxford Meadows SAC and Blenheim Park SSSI. This letter provides our response to your comments and objection, providing additional information to that included in the Environmental Statement (ES) for Air Quality, which we trust will provide clarification.

Significance Criteria

With regard to the significance of changes in nitrogen deposition rates on the designated ecological sites, an impact is considered to be significant where there is a change in Process Contribution (PC) of over 1% of a long term critical load for the ecological site under consideration.

In terms of the Oxford Meadows SAC the long term critical load taken for the feature present in the SAC that is the most sensitive to nitrogen deposition is 20-30 kg N/ha/year and for Blenheim Park SSSI it is 15-20 kg N/ha/year (data from the APIS website).

The percentage changes presented in our ES chapter were the percentage change in nitrogen dry deposition rates due to the proposed development i.e. they were not percentage changes in the critical load as a result of the development.

In terms of annual mean NO_x concentrations, the 1% criterion described above does not apply. The significance criteria that do apply are given on page 10 of the Interim Advice Note 174/13¹ (published by the Highways Agency for DMRB users). These relate to the magnitude of change in annual mean NO_x concentrations due to a proposal, and whether or not there are predicted exceedences of the UK Air Quality Strategy objective for this pollutant and averaging period. Set for the protection of vegetation and ecosystems, of 30µg/m³.

These criteria are as follows:

'Where NO_x concentrations are assessed to be below their objective then significant effects are not anticipated.

If the objective is exceeded, then significant effects may occur, and further consideration should be given to the magnitude of change. The exception to this is where changes are less than 0.4µg/m³, then effects are considered to be imperceptible and unlikely to be significant.

¹ Interim Advice Note 174/13 Evaluation of Significant Local air Quality Effects (June, 2013)

Where changes in NO_x concentrations are greater than 0.4µg/m³ then this information along with changes in nutrient nitrogen deposition should be provided to the scheme ecologist to determine the significance of effects based on their professional judgement.'

The criteria presented above have been applied to the discussion of annual mean NO_x results provided below.

Nitrogen Deposition

Tables 1 and 2 below show the predicted nitrogen deposition rates on the Oxford Meadows SAC and Blenheim Park SSSI for the 2033 with and without development scenarios. These were not presented in the ES Chapter for Air Quality, where only the maximum change in nitrogen deposition rates was discussed in the text.

Table 1: Predicted Nitrogen Dry Deposition Rates for Oxford Meadows SAC

Receptor Names	Distance from road centre (m)	2033 Without Development Total Deposition (kg N/ha/yr)	2033 With Development Total Deposition (kg N/ha/yr)	Process Contribution (kg N/ha/yr)	Minimum Critical Load (kg N/ha/yr)	Percentage of Critical Load (%)
Predicted Dry Deposition Rates with distance away from the centre of the A34						
Oxf Mead A34 T3 KERB	10	26.7	26.7	0.007	20	0.03
Oxf Mead A34 T4	15	23.8	23.8	0.005	20	0.02
Oxf Mead A34 T5	20	22.4	22.4	0.004	20	0.02
Oxf Mead A34 T6	25	21.7	21.7	0.004	20	0.02
Oxf Mead A34 T7	30	21.1	21.1	0.003	20	0.02
Oxf Mead A34 T8	35	20.7	20.7	0.003	20	0.02
Oxf Mead A34 T9	40	20.3	20.3	0.003	20	0.02
Oxf Mead A34 T10	60	19.5	19.5	0.002	20	0.01
Oxf Mead A34 T11	80	19.0	19.1	0.002	20	0.01
Oxf Mead A34 T12	100	18.8	18.8	0.001	20	0.00
Oxf Mead A34 T13	120	18.5	18.5	0.001	20	0.00
Oxf Mead A34 T14	140	18.4	18.4	0.001	20	0.01
Oxf Mead A34 T15	160	18.3	18.3	0.001	20	0.01
Oxf Mead A34 T16	180	18.2	18.2	0.000	20	0.00
Oxf Mead A34 T17	200	18.2	18.2	0.000	20	0.00
Predicted Dry Deposition Rates with distance away from the centre of the A40						
Oxf Mead A40 T3 KERB	10	22.3	22.3	0.001	20	0.01
Oxf Mead A40 T4	15	21.1	21.1	0.000	20	0.00
Oxf Mead A40 T5	20	20.5	20.5	0.000	20	0.00
Oxf Mead A40 T6	25	20.1	20.1	0.000	20	0.00
Oxf Mead A40 T7	30	19.7	19.7	0.000	20	0.00
Oxf Mead A40 T8	35	19.4	19.4	0.000	20	0.00
Oxf Mead A40 T9	40	19.2	19.2	0.000	20	0.00
Oxf Mead A40 T10	60	18.7	18.7	0.001	20	0.01
Oxf Mead A40 T11	80	18.5	18.5	0.000	20	0.00
Oxf Mead A40 T12	100	18.3	18.3	0.000	20	0.00
Oxf Mead A40 T13	120	18.2	18.2	0.000	20	0.00
Oxf Mead A40 T14	140	18.1	18.1	0.000	20	0.00
Oxf Mead A40 T15	160	18.1	18.1	0.000	20	0.00
Oxf Mead A40 T16	180	18.0	18.0	0.001	20	0.01
Oxf Mead A40 T17	200	18.0	18.0	0.000	20	0.00

The results in Table 1 show that the minimum critical load for the Oxford Meadows SAC of 20 kg N/ha/yr is exceeded at a distance of up to 30m from the edge of the A34 and up to 15m from the edge of the A40 both with and without the development. The proposed development does not cause any exceedences. However, all predicted nitrogen deposition rates are below the maximum critical load for this site of 30 kg N/ha/yr. The PC at the receptors located with increasing distance away from the A40 show generally no PC because there is predicted to be no change in traffic flows along this road as a result of the proposed development.

The predicted PCs to the minimum nitrogen deposition critical load are all less than 1% and therefore, the proposed development will not have a significant effect on nitrogen deposition at the SAC.

As such we would suggest that the competent authority can safely conclude that there is no need to go beyond a Stage 1 HRA screening assessment as there is unlikely to be a significant effect on the special interest of the Oxford Meadows SAC arising from nitrogen deposition generated by the proposed development at Woodstock.

Table 2: Predicted Nitrogen Dry Deposition Rates for Blenheim Park SSSI

Receptor Names	Distance from road centre (m)	2033 Without Development Total Deposition (kg N/ha/yr)	2033 With Development Total Deposition (kg N/ha/yr)	Process Contribution (kg N/ha/yr)	Minimum Critical Load (kg N/ha/yr)	Percentage of Critical Load (%)
Predicted Dry Deposition Rates with distance away from centre of Park Street						
BP Park Street T3 KERB	10	37.2	37.3	0.04	15	0.25
BP Park Street T4	15	36.6	36.6	0.03	15	0.19
BP Park Street T5	20	36.3	36.3	0.02	15	0.16
BP Park Street T6	25	36.0	36.0	0.02	15	0.13
BP Park Street T7	30	35.8	35.9	0.02	15	0.12
BP Park Street T8	35	35.7	35.7	0.02	15	0.11
BP Park Street T9	40	35.6	35.6	0.01	15	0.09
BP Park St T10	60	35.4	35.4	0.01	15	0.07
BP Park St T11	80	35.2	35.2	0.01	15	0.05
BP Park St T12	100	35.2	35.2	0.01	15	0.05
BP Park St T13	120	35.1	35.1	0.01	15	0.04
BP Park St T14	140	35.1	35.1	0.01	15	0.03
BP Park St T15	160	35.0	35.0	0.00	15	0.03
BP Park St T16	180	35.0	35.0	0.00	15	0.03
BP Park St T17	200	35.0	35.0	0.00	15	0.03
Predicted Dry Deposition Rates with distance away from the centre of Oxford Road						
BP Oxford Rd T3 KERB	10	36.3	36.3	0.00	15	0.02
BP Oxford Rd T4	15	35.9	35.9	0.00	15	0.01
BP Oxford Rd T5	20	35.7	35.7	0.00	15	0.01
BP Oxford Rd T6	25	35.5	35.5	0.00	15	0.01
BP Oxford Rd T7	30	35.4	35.4	0.00	15	0.01
BP Oxford Rd T8	35	35.3	35.3	0.00	15	0.01
BP Oxford Rd T9	40	35.3	35.3	0.00	15	0.01
BP Oxford Rd T10	60	35.1	35.1	0.00	15	0.01
BP Oxford Rd T11	80	35.1	35.1	0.00	15	0.01
BP Oxford Rd T12	100	35.0	35.0	0.00	15	0.01
BP Oxford Rd T13	120	35.0	35.0	0.00	15	0.01

BP Oxford Rd T14	140	35.0	35.0	0.00	15	0.01
BP Oxford Rd T15	160	34.9	34.9	0.00	15	0.01
BP Oxford Rd T16	180	34.9	34.9	0.00	15	0.01
BP Oxford Rd T17	200	34.9	34.9	0.00	15	0.01

The results in Table 2 show that the minimum and maximum critical loads for the Blenheim Park SSSI of 15 kg N/ha/yr and 20 kg N/ha/yr respectively are exceeded at all receptors adjacent to both Park Street and Oxford Road. The proposed development does not cause any new exceedences.

The predicted PCs to the minimum nitrogen deposition critical load are all less than 1% and therefore, the proposed development will not have a significant effect on nitrogen deposition rates at the SSSI.

Therefore, we conclude that there is not likely to be a significant effect on the special interest of the SSSI arising from an increase in nitrogen deposition generated by the proposed development at Woodstock.

Annual Mean NO_x Concentrations

Tables 3 and 4 below show the predicted annual mean NO_x concentrations for the Oxford Meadows SAC and Blenheim Park SSSI for the 2033 with and without development scenarios. These were not presented in the ES Chapter for Air Quality, where only a discussion of results was presented in the text.

Table 3: Predicted Annual Mean NO_x Concentrations for Oxford Meadows SAC

Receptor Names	Distance from road centre (m)	2033 Without Development Annual Mean NO _x concentration (µg/m ³)	2033 With Development Annual Mean NO _x concentration (µg/m ³)	Change due to development (µg/m ³)
Predicted Annual Mean NO_x Concentrations with distance away from the centre of the A34				
Oxf Mead A34 T3 KERB	10	318.7	319.0	0.3
Oxf Mead A34 T4	15	202.7	202.9	0.2
Oxf Mead A34 T5	20	153.3	153.5	0.1
Oxf Mead A34 T6	25	127.4	127.5	0.1
Oxf Mead A34 T7	30	109.2	109.3	0.1
Oxf Mead A34 T8	35	96.6	96.7	0.1
Oxf Mead A34 T9	40	86.8	86.8	0.1
Oxf Mead A34 T10	60	65.9	65.9	0.0
Oxf Mead A34 T11	80	54.6	54.7	0.1
Oxf Mead A34 T12	100	48.0	48.0	0.0
Oxf Mead A34 T13	120	43.6	43.6	0.0
Oxf Mead A34 T14	140	40.6	40.6	0.0
Oxf Mead A34 T15	160	38.3	38.4	0.1
Oxf Mead A34 T16	180	36.7	36.7	0.0
Oxf Mead A34 T17	200	35.4	35.4	0.0
Predicted Annual Mean NO_x Concentrations with distance away from the centre of the A40				
Oxf Mead A40 T3 KERB	10	146.7	146.7	0.0
Oxf Mead A40 T4	15	109.3	109.3	0.0
Oxf Mead A40 T5	20	90.6	90.6	0.0
Oxf Mead A40 T6	25	78.9	78.9	0.0
Oxf Mead A40 T7	30	69.8	69.8	0.0
Oxf Mead A40 T8	35	63.7	63.7	0.0

Oxf Mead A40 T9	40	59.0	59.0	0.0
Oxf Mead A40 T10	60	47.7	47.7	0.0
Oxf Mead A40 T11	80	41.9	41.9	0.0
Oxf Mead A40 T12	100	38.5	38.5	0.0
Oxf Mead A40 T13	120	36.3	36.3	0.0
Oxf Mead A40 T14	140	34.7	34.7	0.0
Oxf Mead A40 T15	160	33.5	33.5	0.0
Oxf Mead A40 T16	180	32.7	32.7	0.0
Oxf Mead A40 T17	200	32.0	32.0	0.0

The results in Table 3 show that there are exceedences of the UK Air Quality Strategy objective for annual mean NO_x concentrations of 30µg/m³ at all receptors in the A34 and A40 transects both with and without development. The proposed development does not cause any new exceedences. The change in concentrations due to the development proposals is <0.4µg/m³ at all of the receptors located away from the road edge.

Therefore, the proposed development will not have a significant effect on annual mean NO_x concentrations at the SAC.

Therefore, we believe that the competent authority can safely conclude that there is no need to go beyond a stage 1 HRA screening assessment as it can be determined that there is unlikely to be a significant effect on the special interest of the Oxford Meadows SAC arising from increases in annual mean NO_x concentrations as a result of the proposed development at Woodstock.

Table 4: Predicted Annual Mean NO_x Concentrations for Blenheim Park SSSI

Receptor Names	Distance from road centre (m)	2033 Without Development Annual Mean NO _x concentration (µg/m ³)	2033 With Development Annual Mean NO _x concentration (µg/m ³)	Change due to development (µg/m ³)
Predicted Annual Mean NO_x Concentrations with distance away from centre of Park Street				
BP Park Street T3 KERB	10	67.5	68.4	0.92
BP Park Street T4	15	52.6	53.3	0.67
BP Park Street T5	20	44.4	44.9	0.53
BP Park Street T6	25	39.1	39.5	0.44
BP Park Street T7	30	35.5	35.8	0.37
BP Park Street T8	35	32.8	33.1	0.3
BP Park Street T9	40	30.8	31.1	0.3
BP Park St T10	60	25.9	26.1	0.2
BP Park St T11	80	23.4	23.5	0.2
BP Park St T12	100	21.8	21.9	0.1
BP Park St T13	120	20.7	20.8	0.1
BP Park St T14	140	20.0	20.1	0.1
BP Park St T15	160	19.4	19.5	0.1
BP Park St T16	180	18.9	19.0	0.1
BP Park St T17	200	18.5	18.6	0.1
Predicted Annual Mean NO_x Concentrations with distance away from centre of Oxford Road				
BP Oxford Rd T3 KERB	10	44.9	44.9	0.1
BP Oxford Rd T4	15	36.4	36.5	0.1
BP Oxford Rd T5	20	31.7	31.8	0.0

BP Oxford Rd T6	25	28.8	28.8	0.0
BP Oxford Rd T7	30	26.7	26.8	0.0
BP Oxford Rd T8	35	25.2	25.3	0.0
BP Oxford Rd T9	40	24.0	24.1	0.0
BP Oxford Rd T10	60	21.3	21.3	0.0
BP Oxford Rd T11	80	19.9	19.9	0.0
BP Oxford Rd T12	100	19.0	19.0	0.0
BP Oxford Rd T13	120	18.4	18.4	0.0
BP Oxford Rd T14	140	18.0	18.0	0.0
BP Oxford Rd T15	160	17.6	17.7	0.0
BP Oxford Rd T16	180	17.4	17.4	0.0
BP Oxford Rd T17	200	17.2	17.2	0.0

The results in Table 4 show that there are exceedences of the UK Air Quality Strategy objective for annual mean NO_x concentrations of 30µg/m³ at all receptors in the Park Street transect located up to 30m from the kerb both with and without development. The proposed development does not cause any new exceedences. The change in concentrations due to the development proposals is >0.4µg/m³ (highlighted in bold) at the four receptors located at distances of up to 15m from the edge of Park Street (into the SSSI).

As this is considered to be a significant change, an assessment of the potential impacts upon the special interest of the SSSI has been undertaken by Dr Peter Shepherd of BSG Ecology (the project ecologist) and is presented below.

Blenheim Park SSSI citation states:

'Blenheim Park contains one of the finest areas of ancient oak-dominated pasture woodland in the country and is descended from a twelfth century deer park and Anglo-Saxon chase. The lakes, which were excavated and landscaped in the early eighteenth century, are some of the largest areas of open water in Oxfordshire and are of regional importance for breeding and wintering birds. Some of the ancient, stag-headed oak pollards of the park may be direct lineal descendants of those recorded in the Domesday Book. Over half of the site consists of pasture woodland dominated by oak Quercus robur and a wide range of age classes are present from ancient trees at least four hundred years old to young, naturally regenerated saplings.

Parts of the site have been planted with blocks of woodland, including conifers, and sycamore is also establishing locally. At least twelve species of the vascular plant flora, including meadow saffron Colchicum autumnale and sixteen species of epiphytic lichens are largely confined to undisturbed ancient woodland in southern England. The ground flora, which varies from bracken heath to damp acidic grassland with local areas of calcareous grassland, reflect the varied underlying Jurassic rocks of Oxford clay and limestone.

The invertebrate fauna contains several species associated with dead and decaying wood. These include three beetles listed in the British Red Data Book of Invertebrates, Rhizophagus oblongicollis, Plectophloeus nitidus and Aelates atomarius, together with other notable species such as Anapsis schilskyana and Pediacus dermestoides. The Park is a notable site for pseudo-scorpions, and supports one of the four known British populations of Dendrochernes cyrneus.*

The lakes are of regional importance for breeding wildfowl and are of county importance for wintering wildfowl. Forty two species of wildfowl are recorded of which fourteen are regular visitors or breeding residents. The lakes have supported over 1% of the total British wintering population of gadwall since 1977 and have the largest breeding population of great crested grebe in Oxfordshire. Other waterfowl which are present in significant numbers are pochard, tufted duck, mallard, shoveler and teal. The lake margins and River Glyme are of interest for passage waders. The fringing reed swamp dominated by common reed Phragmites australis is particularly extensive, and the water violet Hottonia palustris is locally frequent.'

The special interest of the Park can therefore be summarised as comprising: (a) ancient oak pasture woodland and associated lichen and vascular plants confined to such woodland; (b) the ancient oak trees; (c) the invertebrate fauna associated with dead and dying wood; (d) the large area of lakes; (e) the wintering wetland bird assemblage, (f) the breeding wetland bird community; and (g) the River Glyme as a habitat for passage waders and marginal plants.

The modelling of annual mean NO_x concentrations by WSP indicates that the southern-most part of the SSSI will be affected as a result of the proposed development up to 15 metres into the SSSI from the edge of Park Street. It is therefore considered that the area of the SSSI that may be affected is limited to the 15 metre margin of the SSSI where it abuts Park Street, a distance of some 453 m, giving an area of 0.67 ha. This represents a very small area of the SSSI as a whole (0.3%) and is limited to the boundary of the site.

This part of the SSSI is known as Little London and is in SSSI unit number 3, which is considered by Natural England to currently be in Favourable Condition. It comprises plantation broadleaved woodland with a water course running through it. The proposed management for this area set out in the park management plan (March 2014) and the forestry plan is to thin the woodland by 30% and to undertake some conservation work to the water course. This part of the SSSI (unit 3), which includes much of the area known as The Lince, does support ancient oaks and ancient pasture woodland, but neither the ancient trees or pasture woodland occur within the area affected by the predicted increase in annual mean NO_x concentrations due to the development.

The watercourse within Little London Plantation is located 34 metres from Park Street at its nearest point and the River Glyme is some 90 metres at its nearest point. The areas of ancient pasture woodland and the lakes are all located well away from the area of the SSSI that will be affected by the predicted increase in annual mean NO_x concentrations and as such will not be affected

The area of the SSSI that will be affected by an increase in annual mean NO_x concentrations of more than 4µg/m³ is already subject to exceedences of the UK Air Quality Strategy objective for annual mean NO_x concentrations. However, this part of the SSSI is assessed as being in Favourable Condition and there is no mention in the condition assessment of apparent adverse effects arising from elevated annual mean NO_x concentrations.

The proposed development will also not increase the extent of the woodland within the SSSI that will be subject to annual mean NO_x concentrations above the 30µg/m³ objective. With and without the proposed development it is predicted that annual mean NO_x concentrations will fall below 30µg/m³ at a distance of 50 metres from the edge of Park Street (see Table 4 above).

The increase in annual mean NO_x concentrations due to the proposed development in the peripheral areas of the SSSI is minimal (at most 1.2%) and given the current assessment of the condition of unit 3 as favourable it is considered that this increase will have a negligible effect on the condition status of the SSSI and its features of special interest. This assessment is based upon: (a) the small area of the SSSI that will be affected by an increase in annual mean NO_x concentrations of more than 0.4µg/m³, (b) the area impacted is already subject to annual mean NO_x concentrations that exceed the UK Air Quality Strategy objective of 30µg/m³, yet this part of the SSSI is assessed as being in a Favourable condition, (c) the proposed development will result in a minor increase of up to 1.2% in annual mean NO_x concentrations, (d) there will be no increase in the area of the SSSI is subject to annual mean NO_x concentrations above 30µg/m³ and (e) the area affected is a broadleaved plantation which provides a valuable screen to the SSSI, but does not contain ancient oak trees, ancient pasture woodland or wetland that makes up the special interest of the site.

With regard to the Oxford Road transect there are exceedences of the UK Air Quality Strategy objective for annual mean NO_x concentrations of 30µg/m³ predicted at the receptors located up to 10m away from the kerb. The proposed development does not cause any new exceedences. The



change in concentrations due to the development proposals is $<0.4\mu\text{g}/\text{m}^3$ at the all of the receptors.

Therefore, the proposed development will not have a significant effect on annual mean NO_x concentrations at the SSSI.

Summary

Traffic associated with the proposed development is will not have a significant effect on nitrogen dry deposition rates or annual mean NO_x concentrations at the Oxford Meadows SAC and therefore we believe that the competent authority can conclude that there unlikely to be a significant effect on the special interest of the SAC. Furthermore, we conclude that there is no requirement for an Appropriate Assessment.

With regard to the Blenheim Park SSSI, the results show that the proposed development will not have a significant effect on nitrogen dry deposition rates. There will be an increase in annual mean NO_x concentrations due to the development above the $0.4\mu\text{g}/\text{m}^3$ criteria at a distance of up to 15 metres from the edge of Park Street. This increase, in terms of the potential impacts on the SSSI, has been assessed by the project ecologist who concluded that there will be a negligible effect on the condition status of the SSSI and its features of special interest.

It should also be remembered that predicted concentrations for 2033 were made on the very worst case assumption that vehicle emissions and background pollutant concentrations would not reduce at all with time from 2013. This is because there is uncertainty on the rate of improvement in air quality with time. In reality there will be a reduction in both vehicle emissions and background pollutant concentrations between now and 2033, and therefore both the total nitrogen deposition rates and annual mean NO_x concentrations, and the change in them due to the proposed development, will be much less than predicted.

We hope that the above provides the clarification required, in order that you may remove your objection to the proposed development. Should you require any further information please do not hesitate to contact the undersigned.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Chloe Fellows', written over a circular stamp.

Fellows, Chloe
2015.03.11

Chloe Fellows
Senior Air Quality Consultant

provided has shown that the projected percentage of Process Contributions (PC) of the proposal for the above pollutants will be <1% for the relevant critical level and load.

Natural England is also satisfied that the proposed development will not cause significant harm to the features for which Blenheim Park Site of Special Scientific Interest (SSSI) is designated.

Natural England would recommend that a monitoring and mitigation package is conditioned to record any changes in the SSSI vegetation as a result of the increased NO_x, and to mitigate for any changes that may occur.

The withdrawal of Natural England's objection to this application does not necessarily mean that all natural environment issues have been adequately addressed, but that we are satisfied that the specific issues that we have raised in previous correspondence relating to this development has been met. Natural England, as stated in previous correspondence, is not in a position to give a view on issues such as local sites, local landscape character or the impacts of the development on species or habitats of biodiversity importance in a local context.

We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us.

For any queries relating to the specific advice in this letter only please contact Charlotte Frizzell on 07824 597885. For any new consultations, or to provide further information on this consultation please send your correspondences to consultations@naturalengland.org.uk.

We really value your feedback to help us improve the service we offer. We have attached a feedback form to this letter and welcome any comments you might have about our service.

Yours sincerely

Charlotte Frizzell
Lead Adviser
Thames Valley Team
Sustainable Development and Regulation



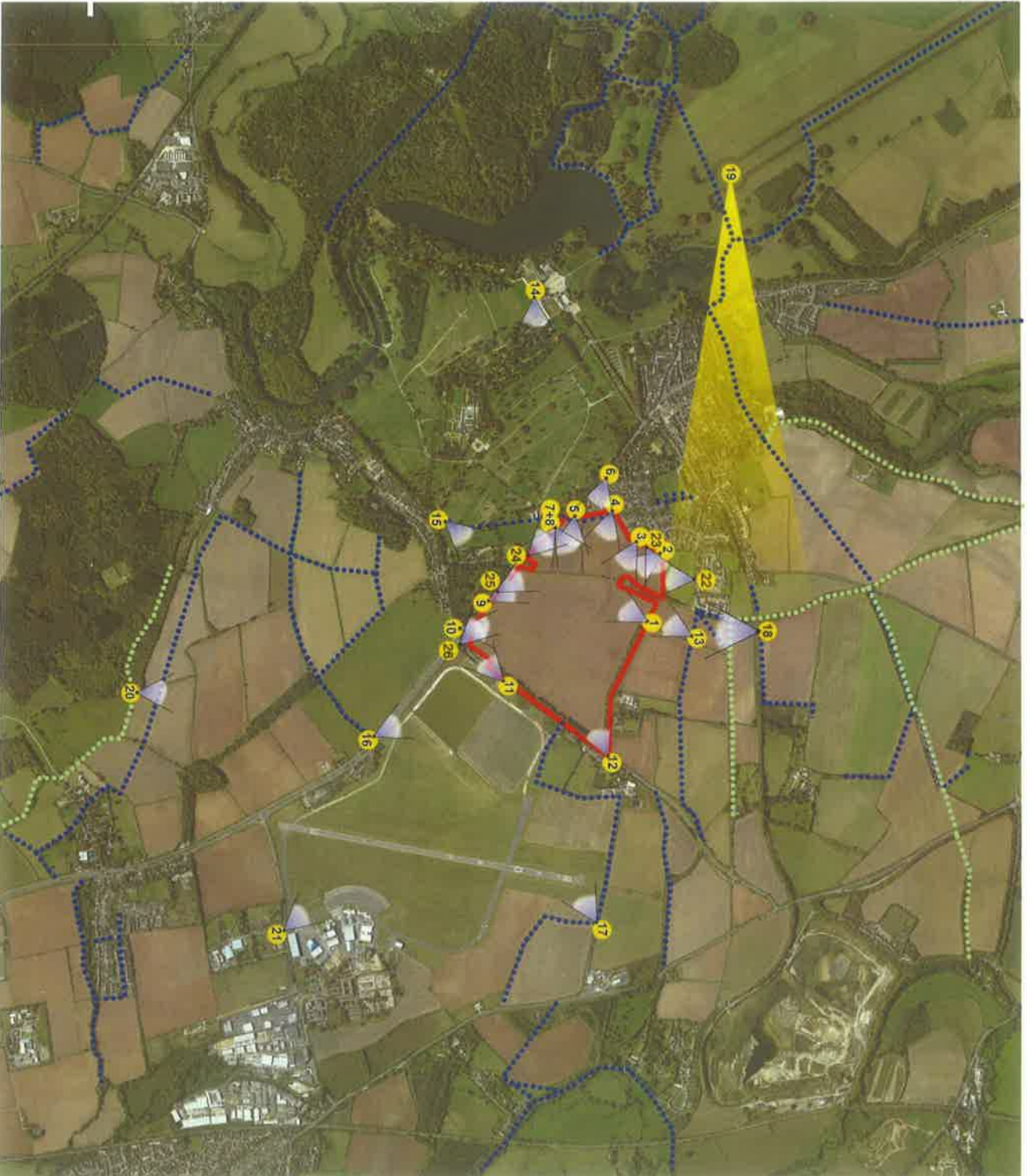
Appendix D

1: LVIA Summer-Winter views

2: LVIA World Heritage Site views

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Key:

-  Site Boundary
-  Viewpoint Location
-  Bridleway
-  Footpath

 Monument View Cone

DATE: 10/1/10
 DRAWN BY: JMM
 CHECKED BY: JMM

aspect landscape planning

TITLE
 Land South East of Woodstock
 Viewpoint Location Plan

CLIENT

SCALE: Not to Scale
 DRAWING NUMBER: 55110_VLP_001
 DATE: SEPT 2014 JMM
 REVISION:



Viewpoint 1 - Summer



Viewpoint 1 - Winter



Viewpoint 2 - Summer



Viewpoint 2 - Winter

N 8 IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a digital equivalent of a 35mm camera with 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view of 60° and when printed at A3, should be viewed at a distance of 300mm curved through the same radius, in order to correctly illustrate the existing landscape context. To ensure considered judgements are accurately assessed, images should not be substituted for visiting the viewpoint.



Viewpoint 3 - Summer



Viewpoint 3 - Winter



Viewpoint 4 - Summer



Viewpoint 4 - Winter

N 3 IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a digital equivalent of a 35mm camera with 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view of 90° and when printed at A3 should be viewed at a distance of 230mm (curved through the same radius) in order to correctly illustrate the existing landscape context. To ensure considered judgements are accurately assessed images should not be substituted for visiting the viewpoint.



Viewpoint 5 - Summer



Viewpoint 5 - Winter



Viewpoint 6 - Summer



Viewpoint 6 - Winter



Viewpoint 7 - Summer



Viewpoint 7 - Winter

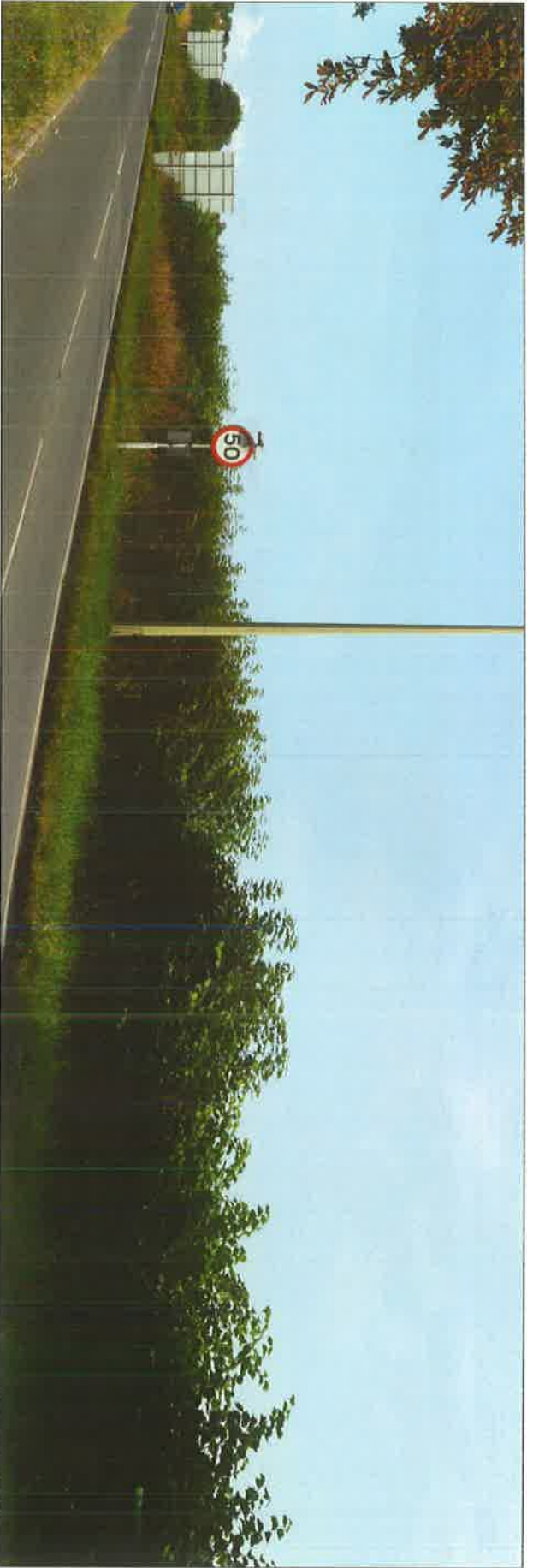
N.B. IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a combination of a 35mm camera with 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view of the site and surrounding area. Images are not intended to be used through the same lens in order to correctly illustrate the existing landscape context. To ensure considered judgements are accurately assessed, images should not be substituted for visiting the viewpoint.



Viewpoint 8 - Summer



Viewpoint 8 - Winter



Viewpoint 9 - Summer



Viewpoint 9 - Winter



Viewpoint 10 - Summer



Viewpoint 10 - Winter

N.B. IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a digital equivalent of a 35mm camera with 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view of 95° and when printed at A3 should be viewed at a distance of 30mm curved through the same radius in order to correctly illustrate the existing landscape context. To ensure considered judgments are accurately assessed, images should not be substituted for visiting the viewpoint.



Viewpoint 11 - Summer



Viewpoint 11 - Winter



Viewpoint 12 - Summer

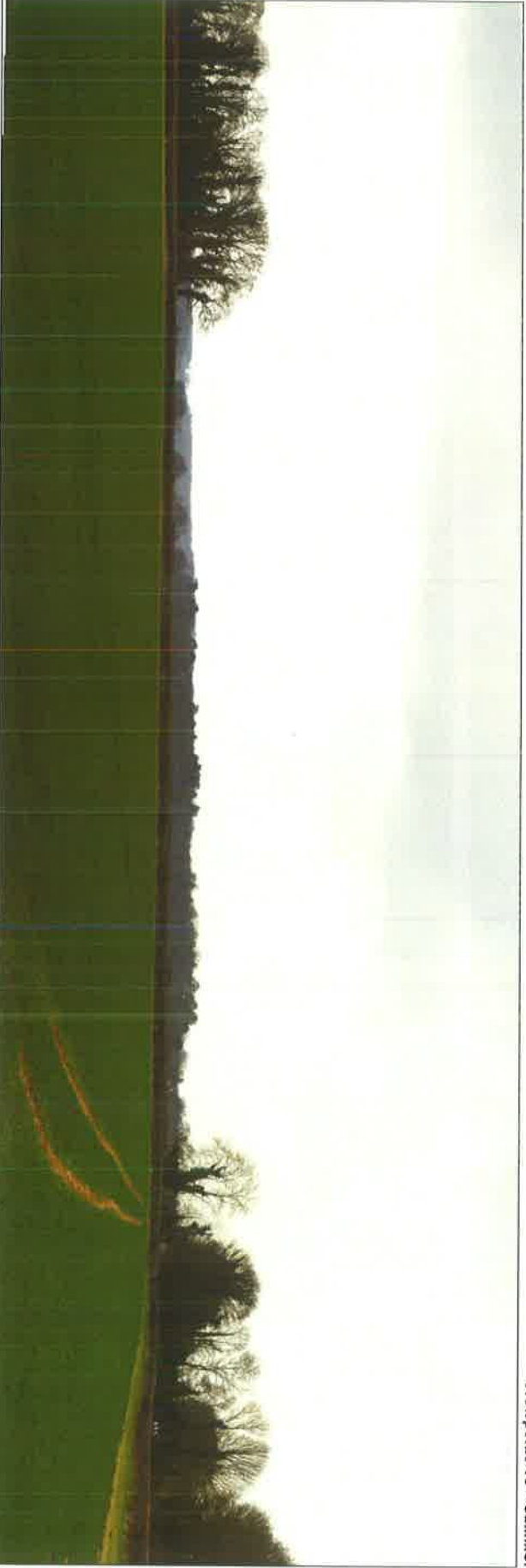


Viewpoint 12 - Winter

N.B. IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a digital equivalent of a 35mm camera with 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view of 66° and when printed at A3, should be viewed at a distance of 330mm curved through the same radius in order to correctly illustrate the existing landscape context. To ensure considered judgements are accurately assessed, images should not be substituted for visiting the viewpoint.



Viewpoint 13 - Summer



Viewpoint 13 - Winter

N.B. IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a 360 degree camera with 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view of 180 degrees and when combined with a 360 degree camera can be used to create a 360 degree panoramic view of the landscape context. To ensure considered judgements are accurately assessed, images should not be substituted for visiting the viewpoint.



Viewpoint 14 - Summer



Viewpoint 14 - Winter

N.B. IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a digital equivalent of a 35mm camera with 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view, and when printed at 100 should be viewed at a distance of 300mm. Images are created through the same process as described for the existing landscape context. To ensure considered judgements are accurately assessed, images should not be substituted by visiting the viewpoint.



Viewpoint 15 - Summer



Viewpoint 15 - Winter

N 2 IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a wide-angle lens in line with best practice and current guidance. Images illustrate a horizontal field of view of 80° and when printed at A3 should be viewed through the same frame in order to correctly illustrate the existing landscape context. To ensure considered judgements are accurately assessed, images should not be substituted for visiting the viewpoint.



Viewpoint 16 - Summer



Viewpoint 16 - Winter

N.B. IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a digital equivalent of a 35mm camera with 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view of 60° and when printed at A3 should be viewed at a distance of 330mm curved through the same radius in order to correctly illustrate the existing landscape context. To ensure considered judgements are accurately assessed, images should not be substituted for visiting the viewpoint.



Viewpoint 17 - Summer



Viewpoint 17 - Winter



Viewpoint 18 - Summer



Viewpoint 18 - Winter



Viewpoint 19 - Summer



Viewpoint 19 - Winter

N.B. IMAGES TO ILLUSTRATE THE EXISTING LANDSCAPE CONTEXT ONLY. Panoramas are created from multiple photographs taken using a digital zoom amount of x 2.5 from a height of 50mm lens in line with best practice and current guidance. Images illustrate a horizontal field of view of 180 degrees. All images should be viewed at a distance of 300mm (curved through the same radius, in order to correctly illustrate the existing landscape context. To ensure sound design judgments are accurately assessed, images should not be substituted for visiting the viewpoint.