

M25 junction 10/A3 Wisley interchange

TR010030

9.69 Revised nitrogen deposition rates within the Thames Basin Heaths SPA

Rule 8(1)(k)

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

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Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010 (as amended)

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Development Consent Order 202[x]

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1. Revised nitrogen deposition velocities within the Thames Basin Heaths SPA

- 1.1.1 This document provides an update to Table 8 of the SIAA [APP-043]. Since Table 8 in APP-043 was prepared, nitrogen deposition rates have been revised to take into account: revised nitrogen deposition velocities that were released into DMRB guidance after the air quality assessment was undertaken; and traffic travelling to and from RHS Wisley and the A3 to the south using the signposted route, which is assumed by the traffic model to route via Ripley.
- 1.1.2 This table merges these two changes, which were previously presented separately in REP2-022.
- 1.1.3 It should be noted that the calculations for the RHS Wisley traffic using the signposted route (affecting transects 3, 4, 5 and 6), are overestimates, as the traffic data on which they are based represent a special event on a weekday (as documented in REP2-011 and REP1-010) and are not representative of a full year.
- 1.1.4 As explained in paragraph 7.2.51 of the SIAA [APP-043] and again in Point 11 of REP4-005 (pages 10-16), the established woodland that separates the A3 and M25 from the heathland habitats of the SPA acts as a buffer and does not support the qualifying SPA species. For each of the transects within the SPA, the heathland habitats occur at a distance of 150 m or greater, and therefore, any points closer than 150 m fall within the woodland buffer. For completeness, nitrogen deposition rates have been added to this version of the table for transect distances of 150 m and 200 m in the table below, in order to enable a full understanding of the changes in nitrogen deposition at the distances at which the heathland occurs.
- 1.1.5 It can clearly be seen in the table that the revised nitrogen deposition rates at the distance at which the habitat that supports the qualifying SPA species occurs (150 m at the closest point), fall well below 1% of the lower range of the critical load for heathland. Therefore, even after taking into account the revised nitrogen deposition rates, the Scheme will still not lead to an adverse effect on the SPA as a result of air quality impacts.

Table 8: Changes in nitrogen deposition when comparing the operational Scheme against no Scheme (calculations estimated for the year 2022, excluding overall reductions predicted)

Transect	Distance from road edge	2015 existing baseline	2022 no Scheme	2022 operational Scheme	2022: no Scheme vs operational Scheme	
					Change in N dep rate	Change as % of Lower Range of Critical Load
Transect1: running south from M25 at A3 northbound off-slip (at M25 J10, to west of A3)	5 m	25.24	23.16	22.99	-0.17	-1.7%
	10 m	24.06	21.22	21.31	+0.09	+0.9%
	25 m	21.84	18.81	18.96	+0.15	+1.5%
	50 m	19.97	17.07	17.16	+0.09	+0.9%
	75 m	18.95	16.14	16.20	+0.06	+0.6%
	100 m	18.30	15.56	15.62	+0.06	+0.6%
	150 m	17.51	14.90	14.90	<0.01	<0.1%
	200 m	17.05	14.49	14.49	<0.01	<0.1%
Transect 2: Running south from M25 at the A3 southbound on-slip (at M25 J10, to east of A3)	12 m	23.64	20.03	20.09	+0.06	+0.6%
	25 m	21.85	18.43	18.41	-0.02	-0.2%
	50 m	20.13	16.98	16.93	-0.05	-0.5%
	75 m	19.21	16.20	16.17	-0.03	-0.3%
	100 m	18.41	15.53	15.54	+0.01	+0.1%
	150 m	17.69	14.93	14.90	-0.03	-0.3%
	200 m	17.27	14.58	14.55	-0.03	-0.3%
Transect 3: running west from A3 at the A3 northbound off-slip (at M25 J10)	7 m	24.83	20.84	21.28	+0.44	+4.4%
	10 m	23.74	19.62	19.92	+0.30	+3.0%
	25 m	20.90	17.27	17.36	+0.09	+0.9%
	50 m	19.12	15.94	15.94	<0.01	<0.1%
	75 m	18.29	15.30	15.27	-0.03	-0.3%
	100 m	17.89	15.04	15.01	-0.03	-0.3%
	150 m	17.34	14.64	14.64	<0.01	<0.1%
	200 m	17.05	14.40	14.40	<0.01	<0.1%
Transect 4: running east from A3 at the A3 southbound on-slip (at M25 J10)	5 m	32.29	23.77	24.38	+0.61	+6.1%
	12 m	28.58	22.18	22.64	+0.46	+4.6%
	25 m	23.99	18.99	19.18	+0.19	+1.9%
	50 m	21.06	17.07	17.16	+0.09	+0.9%
	75 m	19.67	16.14	16.20	+0.06	+0.6%
	100 m	18.73	15.51	15.51	<0.1	<0.1%

Transect	Distance from road edge	2015 existing baseline	2022 no Scheme	2022 operational Scheme	2022: no Scheme vs operational Scheme	
					Change in N dep rate	Change as % of Lower Range of Critical Load
	150 m	17.77	14.84	14.81	-0.03	-0.3%
	200 m	17.23	14.46	14.46	<0.1	<0.1%
Transect 5: The A3 northbound, to the south of J10 (adjacent to Bolder Mere, to west of A3)	8 m	26.38	22.90	22.38	-0.52	-5.2%
	10 m	24.99	21.71	21.24	-0.47	-4.7%
	25 m	20.79	18.03	17.71	-0.32	-3.2%
	50 m	18.46	15.85	15.68	-0.17	-1.7%
	75 m	17.47	14.95	14.84	-0.11	-1.1%
	100 m	16.91	14.43	14.32	-0.11	-1.1%
	150 m	16.32	13.88	13.85	-0.03	-0.3%
	200 m	16.01	13.59	13.56	-0.03	-0.3%
Transect 6: The A3 southbound, to the south of J10 (adjacent to Bolder Mere, to east of A3)	10 m	26.84	24.87	23.80	-1.07	-10.7%
	25 m	22.35	19.97	19.42	-0.55	-5.5%
	50 m	19.58	17.10	16.81	-0.29	-2.9%
	75 m	18.35	15.85	15.68	-0.17	-1.7%
	100 m	17.63	15.16	15.01	-0.15	-1.5%
	150 m	16.80	14.35	14.29	-0.06	-0.6%
	200 m	16.33	13.91	13.85	-0.06	-0.6%

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