

Appendix 9. 11 – Construction Phase Traffic

This appendix outlines the predicted impact of construction traffic associated with the Proposed Development on air quality.

Traffic inputs were based on the *Construction traffic methodology report* (Chapter 12).

In this report it was estimated that Year 2 would be the worst-case year in terms of HGV and LGV movements. During Year 2 it is estimated that an average of 171 daily one-way HGV movements would visit the site, with 39 daily one-way LGV movements. No heavy construction traffic would, however, be permitted to use the A508 to the south of the Main Site and delivery vehicles would be routed via the principal and strategic road network to avoid effects on local residential areas.

As such, it was estimated that construction traffic would be split three ways between the A45, the M1 North and the M1 south.

For construction workers, when taken in total, the busiest period for car and van movements would also be Year 2. 109 daily trips were anticipated on the A45, 50 daily trips on the M1 South and 47 daily trips on the M1 North.

The increase in AADT flows on the M1 and A45 is outlined in the table below:

Table A9.11.1: Construction traffic

Road	AADT	HGV	LDV
M1 North	187	114	73
A45	249	114	109

The impact of Construction traffic on air quality was predicted at Collingtree AQMA No.1 and Wootton AQMA No.5, which are adjacent to the M1 north and A45, respectively, in 2021. The tables below outline the predicted impact on annual mean NO₂ and PM₁₀, respectively.

Table A9.11.2: Impact of Construction traffic on annual mean NO₂ concentrations (2021)

Name	Without	Without 2021 + Construction	With - Without	% Change of AQS	Significance
Wootton AQMA no.5					
W1	17.9	18.0	0.1	0.2	Negligible
W2	23.4	23.6	0.2	0.4	Negligible
W3	20.0	20.1	0.1	0.2	Negligible
W4	23.9	24.0	0.1	0.4	Negligible
W5	20.8	21.0	0.1	0.3	Negligible
Collingtree AQMA no.1					
C1	34.8	34.9	0.1	0.1	Negligible
C2	33.5	33.6	0.1	0.2	Negligible
C3	32.1	32.2	0.1	0.2	Negligible
C4	30.8	30.8	0.1	0.1	Negligible
C5	25.0	25.1	0.0	0.1	Negligible
C6	27.8	27.8	0.0	0.1	Negligible
C7	26.3	26.4	0.1	0.1	Negligible
C8	28.7	28.7	0.1	0.1	Negligible
C9	28.7	28.7	0.0	0.1	Negligible
C10	28.7	28.7	0.1	0.1	Negligible
C11	28.6	28.7	0.1	0.1	Negligible
C12	28.6	28.7	0.1	0.1	Negligible
C13	30.3	30.4	0.1	0.1	Negligible
C14	30.3	30.3	0.1	0.1	Negligible
C15	30.1	30.2	0.1	0.1	Negligible
C16	34.3	34.4	0.1	0.2	Negligible
C17	30.0	30.0	0.1	0.1	Negligible
NSSUE1	23.2	23.3	0.0	0.1	Negligible
NSSUE2	25.4	25.5	0.1	0.1	Negligible
NSSUE3	24.7	24.7	0.0	0.1	Negligible

Table A9.11.3: Impact of Construction traffic on annual mean PM₁₀ concentrations (2021)

Name	Without	Without 2021 + Construction	With - Without	% Change of AQS	Significance
Wootton AQMA no.5					
W1	17.9	18.0	0.1	0.2	Negligible
W2	23.4	23.6	0.2	0.4	Negligible
W3	20.0	20.1	0.1	0.2	Negligible
W4	23.9	24.0	0.1	0.4	Negligible
W5	20.8	21.0	0.1	0.3	Negligible
Collingtree AQMA no.1					
C1	34.8	34.9	0.1	0.1	Negligible
C2	33.5	33.6	0.1	0.2	Negligible
C3	32.1	32.2	0.1	0.2	Negligible
C4	30.8	30.8	0.1	0.1	Negligible
C5	25.0	25.1	0.0	0.1	Negligible
C6	27.8	27.8	0.0	0.1	Negligible
C7	26.3	26.4	0.1	0.1	Negligible
C8	28.7	28.7	0.1	0.1	Negligible
C9	28.7	28.7	0.0	0.1	Negligible
C10	28.7	28.7	0.1	0.1	Negligible
C11	28.6	28.7	0.1	0.1	Negligible
C12	28.6	28.7	0.1	0.1	Negligible
C13	30.3	30.4	0.1	0.1	Negligible
C14	30.3	30.3	0.1	0.1	Negligible
C15	30.1	30.2	0.1	0.1	Negligible
C16	34.3	34.4	0.1	0.2	Negligible
C17	30.0	30.0	0.1	0.1	Negligible
NSSUE1	23.2	23.3	0.0	0.1	Negligible
NSSUE2	25.4	25.5	0.1	0.1	Negligible
NSSUE3	24.7	24.7	0.0	0.1	Negligible

The impact of NO₂ and PM₁₀ emissions associated with traffic from the construction phase of the Proposed Development was predicted to be **Negligible** at all assessed receptors.

Considering the above, the construction of the Proposed Development is expected to have an overall **Negligible** impact.