

High Speed Rail (Crewe – Manchester)

Background information and data

Air quality

BID AQ-002-OR002

Off-route works: Carlisle Station

Additional data used in the air quality
assessment

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Department
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1 Introduction

- 1.1.1 This report presents additional data used in the air quality assessment for the Proposed Scheme off-route works at Carlisle Station and comprises:
- relevant policies and guidance; and
 - baseline air quality data.
- 1.1.2 This report should be read in conjunction with Volume 4, Off-route effects and Volume 5, Appendices¹.

¹ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

2 Relevant policies and guidance

2.1.1 The Carlisle Station area lies within the administrative area of Carlisle City Council (CaCC).

2.2 Carlisle City Council

- 2.2.1 The Carlisle District Local Plan 2015 – 2030² sets out a long-term spatial vision and strategic objectives to support the development of Carlisle District and policies to achieve ‘...growth in a positive, managed...way, whilst ensuring the timely delivery of infrastructure necessary to support growth’.
- 2.2.2 Policy SP9 (Healthy and Thriving Communities) states that CaCC will proactively improve the health and wellbeing of the district population by ensuring that all development contributes to enhanced health and wellbeing outcomes. Measures to achieve this include: encouraging development that maximise opportunities for walking and cycling and provide convenient public transport facilities; and requiring developments to provide high quality design which minimise and mitigate against air pollution.
- 2.2.3 Policy CM5 (Environmental and Amenity Protection) states that development will only be supported where it would not lead to an adverse impact on the environment or amenity of future or existing occupiers. Development would be refused where ‘...it would generate or result in exposure to, either during construction or on completion, unacceptable levels of pollution (from contaminated substances, odour, dust...) ...which cannot be satisfactorily mitigated within the development proposal or by means of compliance with planning conditions’.

² Carlisle City Council (2016), *Carlisle District Local Plan 2015-2030*. Available online at: <https://www.carlisle.gov.uk/planning-policy/Adopted-Plans/Carlisle-District-Local-Plan-2015-2030>.

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3 Baseline air quality data

3.1 Local air quality monitoring data

3.1.1 Table 1 to Table 3 present the monitoring data from the continuous monitors and diffusion tube sites within the Carlisle Station area. No exceedances of the hourly mean NO₂ standard were recorded at the continuous monitoring site.

Table 1: Annual mean pollutant concentrations recorded at continuous monitoring sites

Pollutant	Annual mean concentrations (µg/m ³)				
	2014	2015	2016	2017	2018
Paddy's Market / Carlisle Roadside (339467, 555974)					
NO ₂	26.9	25.1	27.6	23.3	22.1
PM ₁₀	15.0	17.3	13.6	14.6	16.2
PM _{2.5}	11.0	10.0	10.0	9.0	8.6

Table 2: Number of days when daily mean PM₁₀ concentrations exceed 50µg/m³ at continuous monitoring sites

Site ³	Number of exceedances of daily mean PM ₁₀ standard				
	2014	2015	2016	2017	2018
Paddy's Market / Carlisle Roadside	2	5	0	1	0

Table 3: Annual mean NO₂ concentrations recorded at diffusion tube monitoring sites

Site ⁴	Ordnance Survey coordinates	Annual mean NO ₂ concentrations (µg/m ³)				
		2014	2015	2016	2017	2018
Dalston Road	339434, 555638	44.8	41.0	40.0	39.9	35.8
12 Currock Street	340205, 555198	36.8	36.5	37.7	37.0	35.2
Lowther Street	340216, 556131	31.8	27.6	27.9	27.2	27.4
Tourist Info	340069, 555955	24.0	17.9	18.7	19.3	20.2
Devonshire Street	340218, 555768	31.8	29.3	29.5	25.5	24.4
Post Office	340307, 555718	38.6	36.1	36.8	34.4	30.4
Finkle Street	339834, 556137	33.4	30.9	31.5	30.5	29.1
3 Wigton Road	339225, 555821	36.1	34.0	35.7	33.5	31.9
22 Wigton Road	339091, 555736	31.0	29.8	32.0	30.2	28.4
Jovial Sailor	339141, 555900	34.9	30.4	32.7	31.4	31.7
49 Wigton Road	338953, 555610	38.2	33.0	34.8	31.5	30.6

³ 90.4th percentile of daily mean PM₁₀ concentrations in brackets (µg/m³).

⁴ Carlisle City Council (2020), 2020 Air Quality Annual Status Report (ASR). Available online at: <https://www.carlisle.gov.uk/LinkClick.aspx?fileticket=4IT4kuSURMU%3d&tabid=729&portalid=0&mid=2838>.

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Site ⁴	Ordnance Survey coordinates	Annual mean NO ₂ concentrations (µg/m ³)				
		2014	2015	2016	2017	2018
Paddy's Market (co-location)	339467, 555974	30.6	29.4	29.0	27.4	28.3
Bridge Street	339516, 556024	44.5	41.2	41.5	44.9	40.8
24 London Road	340708, 555240	35.3	35.5	34.1	33.8	32.2
129 London Road	341099, 554931	32.1	29.0	32.4	30.4	30.3

3.2 Industrial emission sources

3.2.1 Table 4 presents the industrial installations (regulated by the Environment Agency) with permits for emissions to air within the Carlisle Station area.

Table 4: Industrial installations with permits for emissions to air

Operator	Permit number	Process
United Biscuits (UK) Ltd	BO7830IF	Animal vegetable and food; treating / vegetable raw materials for food >300 tonnes per day.

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Carlisle City Council (2020), *2020 Air Quality Annual Status Report (ASR)*. Available online at: <https://www.carlisle.gov.uk/LinkClick.aspx?fileticket=4IT4kuSUrMU%3d&tabid=729&portalid=0&mid=2838>.

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