

Our ref: PS/MW/CMD/CA11862/001

Date: 29th January 2021

Digital ref:

Your ref:

Abigail Phillips
Housing Development
Cardiff Council
Room 412
County Hall
Atlantic Wharf
Cardiff
CF10 4UW

Dear Abigail,

Proposed Development off Waungron Road, Cardiff – Air Quality Screening Report

Wardell Armstrong LLP (WA) was instructed by Cardiff Council (CC) to undertake an air quality screening assessment to accompany a Full planning application for a mixed-use housing development comprising 44 no. 1 and 2 bedroom apartments, Office and Commercial Spaces, along with the provision of a new highway to accommodate a Bus Interchange, improved cycle and pedestrian access and associated works located off Waungron Road, Llandaff, Cardiff.

The site is currently occupied by the former Waungron Household Waste Centre. Adjacent to the northern boundary of the site lies Waungron Road, beyond which lie existing residential dwellings. To the east of the site lies the A48 Western Avenue, beyond which lie existing residential dwellings. To the south of the site lies a railway bridge crossing the A48. To the south west of the site lie the railway line and Waungron Park Station, beyond which lie existing residential dwellings.

Consultation



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An email containing the proposed methodology was sent to Mr Simon Thayer at CC on 28th January 2021 to agree an appropriate methodology for the air quality screening assessment. It is considered that a full air quality assessment, in respect of road traffic emissions, would not be required in this instance for the following reasons:

- The development is not located within an existing AQMA and is therefore not considered to be in an area of poor air quality.
- Existing local monitoring data and mapped background concentrations for the site, obtained from the 2018-based Defra default concentrations maps, illustrate that annual mean pollutant concentrations within the vicinity of the site are well below the respective annual mean objectives.
- The proposed development site is relatively small. It is therefore considered that the impact associated with dust from the construction phase, in accordance with the IAQM 'Guidance on the Assessment of Dust from Demolition and Construction (February 2014)', will be not significant with appropriate site mitigation in place. It is anticipated that mitigation measures will be detailed in a Construction and Environmental Management Plan or Dust Management Plan.
- Expected traffic generation resulting from the operation of the site will be well below the thresholds for a detailed assessment which are set out in the appropriate guidance, as the development has no parking provision and the bus services which will use the interchange are already on the network.

No response has been received as of 29th January 2021.

Local Air Quality

The proposed development site is located within the administrative area of Cardiff Council (CC), which is responsible for the management of local air quality. CC has declared four Air Quality Management Areas (AQMAs). The nearest AQMAs to the site are CC's *Ely Bridge AQMA* (470m south-west of the site) and *Llandaff AQMA* (850m north-east of the site), both declared for exceedance of the annual mean air quality objective for nitrogen dioxide (NO₂).

The 2020 Annual Progress Report details two air quality monitoring locations situated approximately 30 m north of the site. These are roadside NO₂ diffusion tubes 98 and 207,



located on Waungron Road and the Waungron Road/Western Avenue junction. The reported annual mean NO₂ concentrations at these two monitoring locations were 24.6 µg/m³ and 20.6 µg/m³ respectively in 2019. Extrapolating from this data infers that concentrations of NO₂ at the proposed development site should be well below the annual mean objective for NO₂ (40 ug/m³).

As no monitoring data is available for particulate matter (PM₁₀ and PM_{2.5}), background concentrations data has been obtained from the 2018-based default concentration maps provided by Defra on their Local Air Quality Management (LAQM) web pages (<http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>).

The background pollutant concentrations are detailed below in Table 1.

Table 1: Background Air Pollutant Concentrations for Particulate Matter Obtained from the 2018-Based Defra Default Concentration Maps		
Proposed Development Site Coordinates	2020 Pollutant Concentrations (µg/m ³)	
	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})
314500, 177500	13.02	8.74

The annual mean air quality objective for NO₂ and PM₁₀ concentrations is 40µg/m³ and the air quality standard for PM_{2.5} is 25µg/m³. The background concentrations for the site, as detailed in Table 1 and the monitoring data referenced above, are well below these objectives.

Construction Phase Impacts

A review of relevant guidance has been undertaken to consider the potential for significant effects during the construction phase of the proposed development. The review has taken into account the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction' (February 2014).



In accordance with the guidance, it is considered that there will be a 'not significant' effect associated with dust and fine particulate matter associated with activities during the construction phase, with appropriate site-specific mitigation measures in place.

Operational Phase Impacts

Given the small scale of the development, it is not expected that a detailed assessment of operational phase impacts on air quality should be required. Information has been sought through discussion with the appointed transport consultants to confirm the necessary level of assessment.

It has been confirmed that the development is to be car-free (no on-site parking provision), so trip generation will relate primarily to deliveries and servicing. Expected trip numbers are five deliveries per day for the residential development and three per day for the commercial development, with a further two trips per week as a result of refuse collections. These figures are well below the IAQM criteria for daily vehicle trips (AADT) that would require a detailed assessment (change of 500 AADT outside an AQMA, or 100 AADT inside)

It is anticipated that around 8 - 10 buses per hour may use the new interchange initially, and this could potentially rise to up to 40 depending on demand. It has been confirmed that the bus movements in question are not new trips but are already on the local network, comprising existing services that currently use Waungron Road and Western Avenue. It is not yet known which services will be diverted. In addition, it is expected that the provision of the interchange would lead to a significant reduction in the existing traffic on Waungron Road and Western Avenue. At present, insufficient information on bus schedules for the proposed interchange is available to enable detailed assessment of the effect of stopped or idling buses, so this is not proposed at this stage.

It is noted that the Cardiff – Pontypridd railway line lies adjacent to the western boundary of the site. The line is not among those listed in the LAQM TG(16) guidance as carrying high numbers of diesel passenger trains. As the background concentration of NO₂ is below 25 µg/m³, the guidance states that detailed assessment for NO₂ emissions from the railway is not required. It is further considered in line with LAQM TG(16) that assessment of the 15-



minute objective for sulphur dioxide (SO₂) for stationary trains is not required, as the residential areas of the development are more than 15 m from the platforms at Waungron Park station.

In accordance with the Environmental Protection UK (EPUK) and IAQM document 'Land-Use Planning and Development Control: Planning for Air Quality' (January 2017), the impact can be described as 'not significant'.

Summary

A review has been undertaken, in accordance with relevant guidance, to consider the potential for air quality impacts to occur during both the construction and operational phases of the proposed development. This review suggests that any effects should not be significant.

It is therefore considered not necessary to undertake a full air quality assessment.

Yours sincerely

for Wardell Armstrong LLP

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