

Memorandum

To	Faye Wright	Organisation	Forward Planning and Development Ltd
CC	-	Organisation	-
From	Hannah Lederer	Our ref	S3783-0030-0001HKL
Date	04/10/2022	Pages	3
Subject	Air quality note to support the planning application for the change of use at Unit 6 and 7, Link Orbital Industrial Estate, Hillingdon.		

Introduction

Forward Planning and Development are submitting a planning application to Hillingdon Borough Council for the change of use of the existing Units 6 and 7 within the Orbital Industrial Estate. This note has been written by Fichtner Consulting Engineers Ltd (Fichtner) to assess the potential impact of the change in use on local air quality.

Proposal

The units are currently consented as class B8 development. It is proposed to change the use to be both B8 and B2:

- Class B8 refers to 'use for storage or as a distribution centre'¹.
- Class B2 refers to 'use for the carrying on of an industrial process other than one falling within class B1 [uses which can be carried out in residential areas] above or within classes B3 to B7 [specific special industrial groups]'.

The previous (B8) use at the site was a sandwich preparation and distribution centre. Although the units have been vacated for approximately 1 year, the previous use of the units allowed for vehicles using the local road network. Therefore, there are already a small amount of traffic movements associated with the site. The units have a maximum of ~30 vehicle spaces, and no space on site for parking of Heavy Goods Vehicles (HGVs).

Existing air quality

This proposal relates to two small industrial units. The land in the immediate surroundings is used for similar purposes. There are residential areas to the north, west and south of the area of Orbital Industrial Estate. This is shown in Figure 1. The units have been previously used for sandwich preparation and distribution. Although the units have been vacated for approximately 1 year, the previous use of the units allowed for vehicles using the local road network.

Under Section 82 of the Environment Act (1995) (Part IV) local authorities are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). In Hillingdon, due to exceedences of annual mean nitrogen dioxide, an Air Quality Management Area (AQMA) has been declared across the southern section

¹ The Town and Country Planning (Use Classes) Order 1987, Schedule Part A.

of the borough, which includes the Orbital Industrial Estate. In addition, the Greater London Authority (GLA) has introduced the concept of Air Quality Focus Areas (AQFAs) across London. These were introduced by the Mayor of London at locations that not only exceed the annual mean AQAL for nitrogen dioxide but also locations with high human exposure. These were introduced to target improvements through the LAQM system in key areas. Although there are a number of AQFAs within the Borough of Hillingdon, the Orbital Industrial Estate does not fall within any of these. However, as shown in Figure 1, there is potential for vehicle movements associated with the project to travel within the nearby AQFAs, particularly the AQFA covering West Drayton, to the west, or the AQFA covering the section of the M4 to the south.

The latest London Borough of Hillingdon air quality annual status report was published online in May 2021. Although not yet published online, Fichtner has access to the latest monitoring results from 2021. The closest monitoring sites to the units are listed in Table 1, with the past 5 years monitoring results. HIL is an Automatic Urban and Rural Network (AURN) urban background site, HILL13 is a roadside diffusion tube site and the others listed are background diffusion tube sites.

Table 1: Nitrogen dioxide monitoring results

Site ID	Address	Monitored concentration of nitrogen dioxide ($\mu\text{g}/\text{m}^3$)				
		2017	2018	2019	2020	2021
HIL ¹	Sipson Road	53.0	46.0	45.0	28.0	25.0
HILL20 ²	1 Porters Way	37.9	36.6	36.6	31.6	33.7
HILL13 ³	31 Tavistock Road	26.9	29.5	27.9	19.9	21.6
HILL19 ²	Side of 104 Yiewsley High Street	37.0	35.0	34.6	27.1	24.1
HILL21 ²	5-7 Mulberry Crescent	34.7	34.9	32.3	23.4	23.8

Notes:

- 1) AURN background site
- 2) Diffusion tube background site
- 3) Diffusion tube roadside site

Source: London Borough of Hillingdon Air Quality Annual Status Report for 2020, May 2021 and data from 2021 monitoring.

This analysis has shown that in the local area background nitrogen dioxide concentrations have been slowly reducing, albeit the effects of the COVID-19 lockdowns and subsequent reduction in vehicle movements has had an effect on the 2020 and 2021 monitored concentrations. The roadside site (HILL13) has remained more consistent, excluding the 2020 and 2021 results impacted by the effects of the COVID-19 lockdowns.

Analysis

The proposed change does not require any construction activities, and does not introduce a new point source emission to air, such as a CHP. As such the only potential impact on air quality would be as a result of an increase in vehicle movements.

The Institute of Air Quality Management (IAQM)² states that an air quality assessment is required where a development would cause a “significant change” in Light Duty Vehicles < 3.5t (LDV) or Heavy Goods Vehicles >3.5 t (HGVs). The indicative criteria to progress to an assessment are:

- A change in LDV flows of:
 - more than 500 Annual Average Daily Traffic (AADT);
 - more than 100 Annual Average Daily Traffic (AADT) within or adjacent to an AQMA;
- A change in HDV flows of:
 - more than 100 AADT within or adjacent to an AQMA;
 - more than 25 AADT within or adjacent to an AQMA;

Where the change in numbers is less than these criteria, the impact is deemed to be negligible and further detailed analysis of the potential air quality impact is not required.

As detailed the units are located within the AQMA and there are a number of AQFAs in the local vicinity within the potential for associated vehicles to travel through. As such it is considered appropriate to consider the IAQM criteria for areas adjacent or within an AQMA. This approach recognises the sensitivity of the area to additional vehicle movements.

At this stage it is not possible to determine the exact number of vehicles as this would depend upon the occupants. However, it can be confirmed that there would be no change to the existing parking arrangements and there would continue to be a maximum of ~30 available parking spaces, and no parking for HGVs. The units are currently used for B8 use and as such there have already been some vehicle movements on the local road network associated with these units. It is unlikely that the change in use would result in additional vehicles which would exceed the IAQM screening criteria and the potential impact of vehicles emissions on air quality is deemed to be negligible.

Yours sincerely

FICHTNER Consulting Engineers Limited



Hannah Lederer

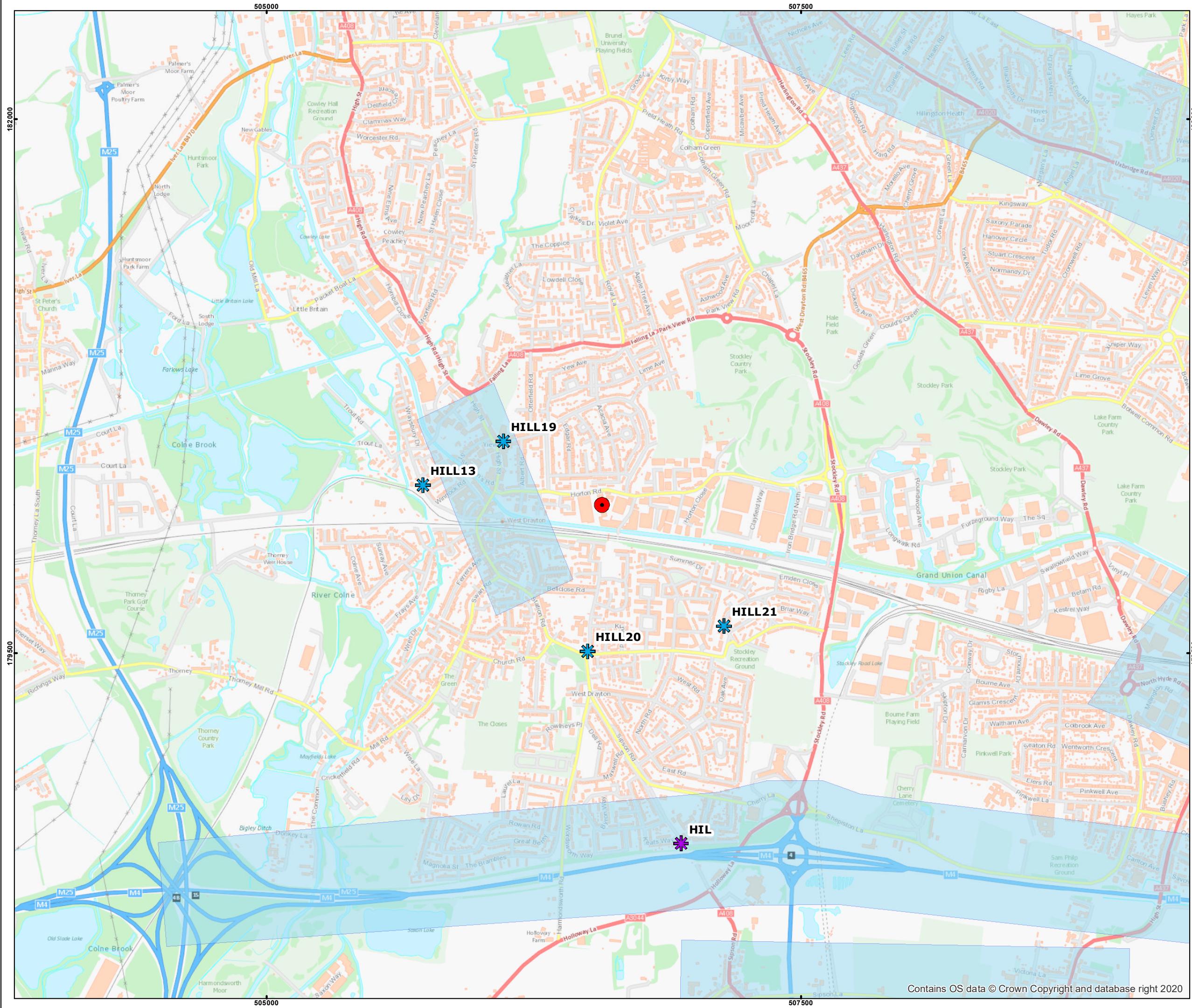
Environmental Scientist



Rosalind Flavell

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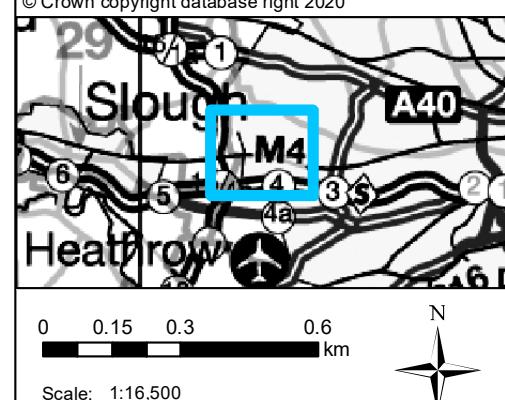
² Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017



Client: Forward Planning and Development Ltd
Site: Unit 6 and 7, Orbital Industrial Park
Project: 3783

Title:
Figure 1 - Site location and local air quality management

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