

To:	Eric Pincemin	From:	Matt Sugden
Company:	BYUK	Pages:	3 + 1
cc:	Valentine Audren-Daures – BYUK Andy Robbins – RVT Group	Date:	06 September 2022
		Ref:	AS12666.220803.TN1.3
Project:	Oriol, St Pancras Hospital Site		
Subject:	Proposals for Environmental Monitoring		

Following our site visit on 3<sup>rd</sup> August 2022, we confirm our recommendations for noise, vibration and dust monitoring as follows.

HMRC's Council Tax Band database confirms the following premises as residential:

- Goldington Buildings;
- 3 St Pancras Way;
- 5 St Pancras Way;
- 7/7A St Pancras Way;
- 9 St Pancras Way;
- Unite Students, St Pancras Way;
- 1 Granary Street.

These premises are key in the identification of monitoring sites. Also considered are the need to guard against damage of subterranean utilities that are understood to pass close to site boundaries and susceptible buildings on the St Pancras site.

Figure AS12666.220803.SP1 attached shows proposed monitoring locations for baseline and works stages.

### **Dust Monitoring – 3 Month Baseline and Works Stages**

The Air Quality Assessment prepared for the development concluded that works during the demolition and reconstruction stages could be described as medium to high risk with regard to dust soiling, but low risk in terms of human health impacts. Monitoring of dust was suggested within the AQA under appropriate mitigation measures.

The Control of Dust and Emissions During Construction and Demolition' SPG recommends monitoring is undertaken as follows:

*Determine prevailing wind direction, as for medium risk sites, or by setting up a weather station on site to measure local wind direction and speed;*

- *If measuring along a line:*

*Set up a line across the site according to the direction of the prevailing wind; and*

*Operate a minimum of two automatic particulate monitors to measure PM10 levels at either end of the transect – either inside or outside the site boundary. These instruments should provide data that can be downloaded in real-time by the local authority; and*

- *The LPA may also require monitoring at sensitive receptors, if this is the case:*




*Identify which location(s) need to be monitored and set up an automatic particulate monitor at each of these to measure representative PM10 levels. These instruments should provide data that can be downloaded in real-time by the local authority; ...*


The prevailing wind direction is understood to be from the SW.

As such, it is proposed to place monitors at the up- and downwind ends of an approximation of the SW-NE transect. These locations are also considered appropriate as proxy locations in order to monitor dust levels at receptors at the southern end of St Pancras Way and apartments at 1 Granary Street, respectively.

A third dust monitor will be installed at the NW corner of the site in order to monitor dust levels at receptors within the Unite Students building on St Pancras Way,

Dust monitors will be appropriate to measure and report PM10 levels over consecutive 15-minute periods. Installation details at exposed positions are described below:

Monitor	Location Description	Image
D1	Flat roof area of hospital gatehouse building, or equivalent; dust collector positioned so as not to be shielded by the gatehouse building	
D2	SW corner of North Wing building (Renal Unit)	
D3	On masonry pillar at end of boundary wall NE of Bloomsbury Building. To be relocated to NW corner of site following demolition of the building.	

D4	Corner or north façade of Huntley Building (9)	
----	--	--

**Noise Monitoring – 1 Week Baseline and Works Stages**

4 no. Class-1 noise monitors will be installed in order to monitor noise propagation in the direction of residential receptors. The instrumentation will be fully calibrated by the manufacturer, or other approved body, as required by the British Standard, with current calibration certificates.

Monitors will be appropriate to measure and report  $L_{Aeq,T}$  noise levels over appropriate consecutive time periods (T) in order to record the 10h average level, i.e.  $L_{Aeq,10h}$  08:00h – 16:00h weekdays, and the 5h average between 08:00h and 13:00h Saturdays. The system will also be able to issue an SMS/text alert to key staff should the forward-predicted  $L_{Aeq}$  values exceed the adopted limit.

Installation details at exposed positions are as described for dust monitoring above. It will be ensured that microphones are in an exposed location and at least 2m from any reflecting surface.

Measurements and adopted noise limits will in accordance BS 5228: Part 1: 2009 *Code of practice for noise and vibration control on construction and open sites - Part 1: Noise*.

**Vibration Monitoring – Initial Works Stages (to Superstructure)**

2 no. vibration logging equipment will be installed in order to monitor effects on subterranean utilities and susceptible buildings on the hospital site that are currently showing crack formation due to unknown causes.

Logging equipment will be appropriate to measure and report vibration as peak particle velocity (PPV) in real time over three orthogonal axes. ‘Soft’ and ‘hard’ trigger levels will be agreed following guidance given in BS 7385: Part 2: 1993 *Evaluation and Measurement for Vibration in Buildings. Guide to damage levels from groundborne vibration* or as identified by the relevant utilities provider(s).

The vibration transducer will be firmly attached to a structure deemed to be in good cohesion with the surrounding geology and in which vibration levels can be considered representative of those within the structures of interest.

Proposed installation details are described below:

Monitor	Location Description	
V1	Alongside Boiler House (Building 8).	To monitor impact of works on chimney and water tower structures
V2	At base of East Wing building north wall	

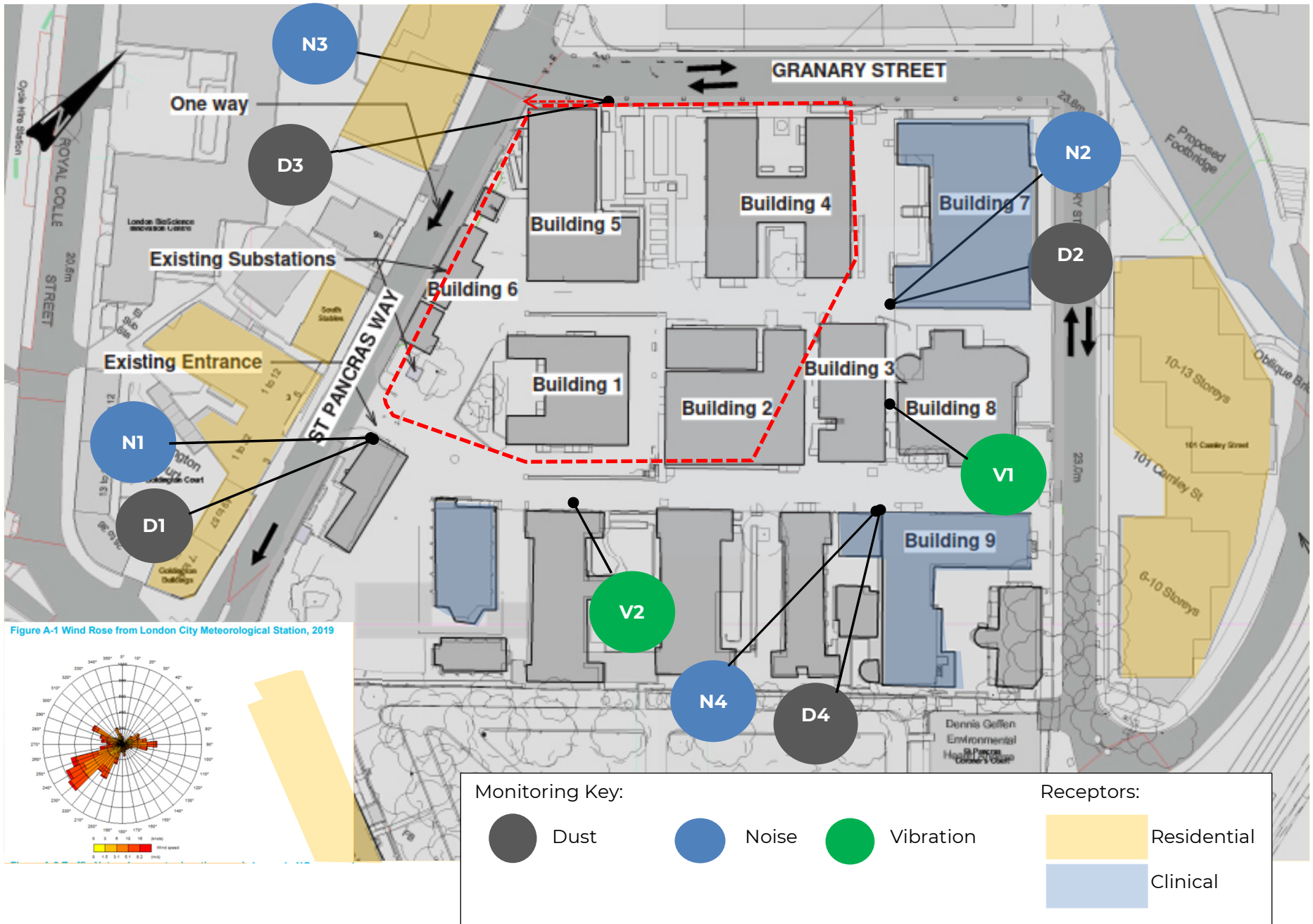


Figure A-1 Wind Rose from London City Meteorological Station, 2019

Monitoring Key:			Receptors:		
	Dust		Noise		Residential
			Vibration		Clinical