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REPORT ON DUST MONITORING

AT

GRANGEGORMAN CAMPUS CENTRAL & EAST QUAD, DUBLIN 7

INTERIM DUST MONITORING REPORT 15-03

26th September to 26th October 2018

Prepared by:

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1. SURVEY DETAILS

2. Dust Monitoring Survey

Glenside Environmental were commissioned by Sisk FCC GG PPP Joint Venture, to conduct dust monitoring during site development works at Grangegorman Campus Central & East Quad Dublin 7.

This report presents the results of dust monitoring at 3 locations, Location A; East Quad West Boundary Wall, Location B; Grangegorman Upper East Boundary Wall, and Location C; Grangegorman Upper North Boundary wall from 26th September to 26th October 2018. The locations are illustrated in Figure 1.

2.1.1. Sources of dust deposition

Within the site and due to the open ground conditions and exposed surfaces, dust can result from sources such as truck movements within the site, and wind-blown dust from both outside and within.

2.1.2. Meteorological Conditions

Meteorological conditions significantly affect the level of dust emissions and the deposition downwind of the source. The most significant meteorological elements affecting dust deposition are rainfall and wind-speed. Rain helps suppress the generation of dust due to the cohesive nature of water between dust particles. Wind lifts up particles into the air and transports them downwind. The worst-case dust deposition conditions typically occur during dry conditions with strong winds.

2.2. Sampling Method

Total dust deposition was measured at the site using the Bergerhoff gauges specified in the German Engineering Institute VDI 2119 document entitled "*Measurement of Dustfall using the Bergerhoff Instrument (Standard Method).*"

The containers were analysed by Eurofins Laboratories, Glanmire, Cork for total dust. The liquid was evaporated in a drying chamber and the dustfall residue weighed using a calibrated balance. The daily dust deposition rate was then calculated using information on the dustfall mass, the sampling period and the area of the collecting surface.

2.2.1. Sampling Locations

The dust gauges were set up at the location selected at positions A B and C. The locations are shown in Figure 1. The gauges were erected such that the containers were 1.8m above the ground surface and free from any obstruction. The containers were exposed from 26th September to 26th October 2018.

3. Results

Table 3.1 details the results of the dust monitoring.

Table 3.1: Results of dust deposition from 26th September to 26th October 2018.

Location	Dust Level mg/m^2/day	Typical Limit mg/m^2/day
A (East Quad West Boundary)	65.7	350
B (Upper East Boundary Wall)	86.3	350
C (Upper North Boundary Wall)	93.9	350

The dust deposition results indicate the commonly applied figure of 350mg/m^2/day was not exceeded at any of the 3 locations assessed. The highest levels recorded were at location C with a level of 93.9 mg/m^2/day.

Figure 1: Dust Monitoring Locations, A B and C.