

**C012/ E2014**

### **C3.7: Noise**

#### **C3.7.1: The main sources of noise and vibration**

##### UTA-01 (Air Handling Unit):

The main source of noise is from the air supply fan located inside AHU (UTA-01). This unit will be installed outside the plant on the office's roof.

##### EXP-01 & EXP-02 (Air Expel Units):

The main sources of noise are from the air return fans located in two different positions:

- VEX-01 will be installed just next to UTA-01
- VEX-02 will be installed inside Small Production Plant at the last floor not far from plant roof

#### **C3.7.2: The proposed techniques and measures for control of noise**

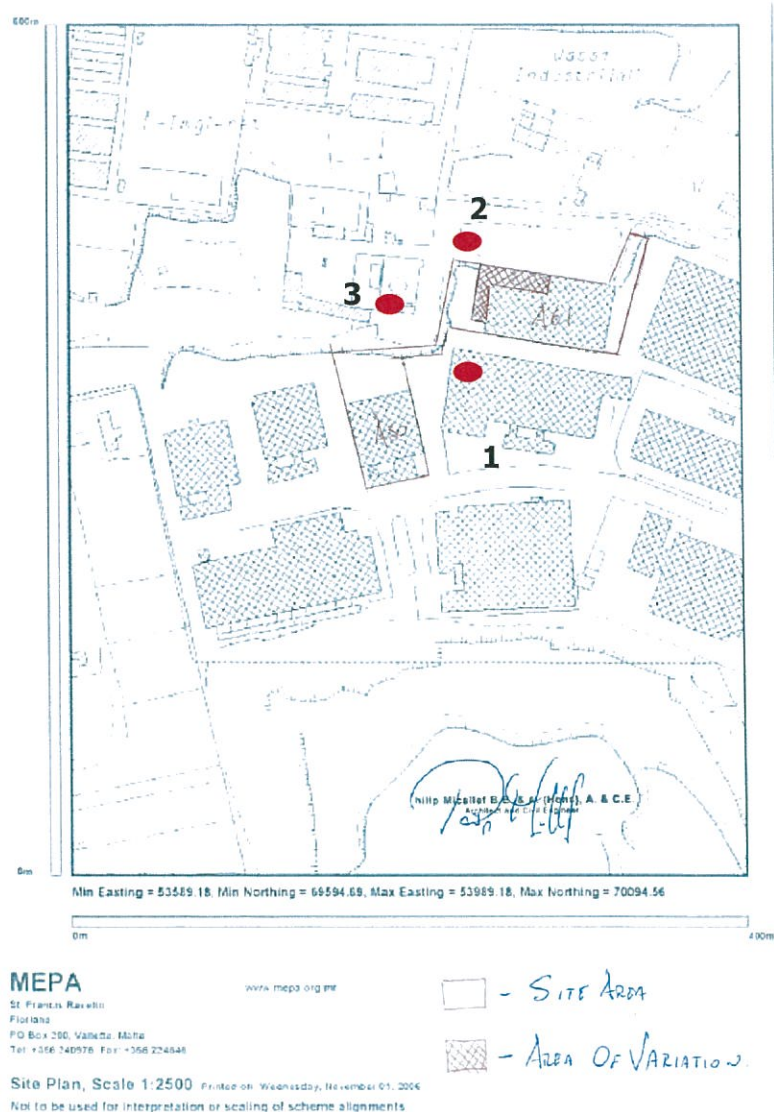
##### UTA-01 (Air Treatment Unit):

The fan is located inside UTA-01 unit and has its own sound canopy (increased thickness of the panels 50 mm; insulation made up with injected polyurethane that show a higher sound absorption grade).

##### EXP-01 & EXP-02 (Air Expel Units):

Both VEX-01 and VEX-02 are located inside Air Expel Units and have their sound canopy (increased thickness of the panels 50 mm; insulation made up with injected polyurethane that show a higher sound absorption grade).

### C3.7.3: The nearest noise sensitive locations and distance away from the site



● On the map indicates the nearest sensitive locations

Distance away from site

Point 1: 37.24 m

Point 2: 49.96 m

Point 3: 41.80 m

*Note: Distances calculated from MEPA maps available online.*

### C3.7.4: Relevant environmental noise measurement survey

This measurement cannot be taken at the moment since the equipment needs to be installed onsite and placed into function to allow measurement.

#### UTA-01 (Air Treatment Unit):

A table of indicative noise generation of air supply fan inside its sound canopy has been supplied by Corporate Engineering Group at project level:

Sound power level = 91.6 dB(A)								
Frequency [Hz]	63	125	250	500	1000	2000	4000	8000
Noise [dB]	94	96	92	91	87	79	73	66

#### EXP-01 & EXP-02 (Air Expel Units):

A table of indicative noise generation of air supply fan inside its sound canopy has been supplied by Corporate Engineering Group at project level:

VEX-01: Sound power level = 83.9 dB(A)
VEX-02: Sound power level = 80.9 dB(A)