Case Study

Waste transfer station odours

Technology for a Sustainable Future

Application

Greenstar Ltd. who operate the large waste transfer station at Ballyogan needed to ensure working conditions inside the building were acceptable to the workforce and that the surrounding area did not suffer from odourous emissions. An early part of the design process called for an efficient extraction system to draw air from the Reception Hall and the Baling Hall to meet these objectives.

System Description

Ductwork network inside the building and at the key odour sources (baling machines), dust removal and collection unit, fan, dual media activated carbon filter and stack. The carbon filter contains two grades of carbon, each targeting different components in the odorous air to give a guaranteed low-odour discharge. The two-speed fan provides a lower night-time extraction flowrate in order to minimise power consumption and running costs.

Design gas flowrate 45,000 m^3/hr
Design inlet odour loading 4,000 ou_E/m^3
Design outlet odour loading <300 ou_E/m^3
Guaranteed outlet odour loading <500 ou_E/m^3
Guaranteed site boundary noise level <55 dB(A) (day-time)
<45 dB(A) (night-time)

Equipment Description

Painted carbon steel filter bag assembly with two-stage particulate filtration.

Painted carbon steel fan with duty/standby motors, dual speed.

Carbon filter vessel in painted carbon steel, 3.4m dia by 5.5m high containing 4.5 tonnes impregnated carbon and 5.5 tonnes activated carbon.

Successfully operating since 2005
Value: £225,000

ERG Air Pollution Control

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