

Air quality Impact from Biomass Project

Macphie of Glenbervie Limited operate three food processing plants at their manufacturing site at Glenbervie, in north east Scotland. The Airshed was appointed by Sgurr Energy to conduct the air quality impact assessment for a new biomass fired boiler plant to serve the steam requirements for the site.

The nearest receptors were within 100m of the stack and included housing and sensitive ecosystems. Macphie wished to minimise the visual intrusion of the stack whilst ensuring the development would not adversely affect local air quality.

A preliminary assessment was conducted for two stack location options, at either end of the proposed biomass project building. This concluded either location would be acceptable provided the stack was $\geq 12\text{m}$ high.

A model sensitivity analysis was conducted to consider the effects of different stack heights, terrain, meteorological data, surface roughness and other variables.

Based on this analysis, the predicted emissions from a 12m stack were considered to be acceptable in terms of air quality objectives.

The study found that the new biomass boiler would result in a slight reduction in short term ground level concentrations at the nearest receptor, due to improved dispersion compared to the existing boiler plant.

The proposed installation development is highly unlikely to cause any Air Quality Objective or Limit Value to be exceeded and unlikely to affect the adjacent ancient woodland.

