

Truck repair facility

The client's objective was to obtain planning permission for a truck sales, repair and maintenance facility at the edge of an industrial estate. The local EHO required an environmental noise assessment to protect nearby residents as part of the application.

Most planned truck maintenance is conducted at night so that vehicles may be available for use during the day. Truck maintenance facilities therefore need to operate on a 24 hours/day basis. Demonstrating that the project could operate at night without causing annoyance was essential to ensure that planning permission would be secured.

Site operations were assessed using BS 4142: 1997 Method of Rating Industrial Noise Affecting Mixed Residential and Industrial Areas and World Health Organisation criteria.

A baseline survey was conducted over three nights to confirm the environmental performance requirements and these were subsequently agreed with the local Council.

Noise levels were measured at a similar existing facility. Noisy activities included fans, compressors, exhaust vents, and the usual bangs and clicks associated with metal bashing and grinding. The noisiest source was the road roller test equipment (105 dB L_{Aeq} 1 minute at 1m) and some of the kit had pronounced tonal characteristics. The operations would also generate some intermittent noise from service yard activity.

Highly conservative source estimates were used to predict the noise from the proposed development. A computer model was used to predict noise from fixed plant and breakout through the walls, roof and doors. The results from the prediction exercise were used to help assess the requirements for equipment procurement, building design, layout and construction measures. This included fast closing doors, high specification door, wall and roof panels; silencers on exhaust vents; and management controls to restrict the road roller and service yard activity. A substantial barrier around the edge of the site was also proposed to reduce the impact of noise from the service yard at night.

Based on these design proposals the local EHO accepted that noise complaints and sleep disturbance were unlikely and the development was granted planning permission.

