Lea Green

Detailed air quality assessment for a multi-storey car park

Further Information

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Background

The Lea Green train station has car parking availability for 160 vehicles which are provided in a surface level car park to the north of the station.

A 440-parking space multi storey car park and reconfiguration of the existing surface level was proposed. This would result in a net increase of 280 parking spaces at Lea Green train station and a 1st floor open-to-air parking level.

Proposition

Miller Goodall was appointed to undertake a detailed air quality assessment using the air dispersion model ADMS-Roads to accompany the planning application. Three assessments were completed:

- A construction phase assessment, with mitigation outlined.
- Assessment of vehicular emission impacts to existing residents from vehicles entering and leaving the car park into the local road network.
- Assessment of vehicular emissions from vehicles using the car park and the air quality change to surrounding residents overlooking the car park.

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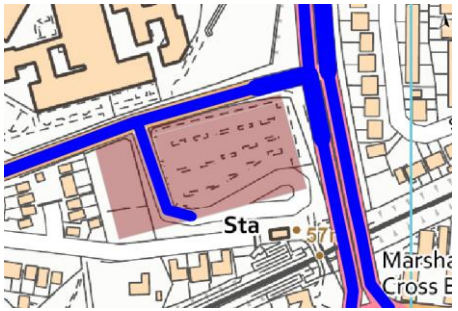
ACOUSTICS - AIR QUALITY - LIGHTING

Investigation

An air quality assessment was prepared detailing the findings of all three impact assessments. Cold start emissions are the term that refers to the increased emissions that result from running the vehicle engine outside of the optimal operating temperature. This is common from vehicles that have parked, and the engine has cooled down. The inclusion of cold start emissions was built into our model.

The 1st storey is elevated 4 m above ground level and was included as such in the air quality model.



Action and Outcome

An air quality assessment report was produced for the planning application which presented the findings of the air quality modeling predictions. Negligible impacts to existing local residents were concluded to arise from vehicle emissions and appropriate dust mitigation was recommended to control the generation and transport of dust during the construction phase.

The planning application was granted planning permission on 15th November 2021.