

Air Quality Inchinnan

AS Homes Ltd made application to Renfrewshire Council to develop the site of the former Renfrew Football Club Western Park stadium for residential use. The local authority (Renfrewshire Council) advised that an air quality impact assessment (AQIA) would be required as the Council was in the process of declaring an air quality management area (AQMA) in Renfrew town centre due to concerns that levels of nitrogen dioxide (NO₂) were at risk of exceeding the European Council (EC) annual mean Limit Value of 40 ug/m³.

The Airshed was appointed by the applicant to conduct the AQIA. Baseline flows on Inchinnan Road were predicted to be ~17,500 AADT two way flow. The transport consultants for the project (Transport Planning Ltd) estimated that the proposed scheme would generate up to 289 additional vehicle movements per day. Three traffic Scenarios were used to assess local air quality: Scenario 1 - Surveyed traffic (2016); Scenario 2 - Baseline traffic for 2018; and Scenario 3 - Baseline and Scheme traffic (2018).

Renfrewshire Council conducts monitoring at 8 sites within the study area, using diffusion tubes which provide an indication of annual mean exposure to NO₂. These indicated that the annual mean NO₂ complied with the EC annual mean Limit Value at most locations in the town centre, with the exception of a short section of Inchinnan Road near the junction with Paisley Road.

A computer based dispersion model (ADMS Roads) was used to predict road traffic emissions. The results from the model were compared with Renfrewshire Council's measured levels. The initial model predictions were generally in very poor agreement with the measured diffusion tube levels. Accordingly the predicted levels of road source contribution were adjusted in accordance with the methods set out in the Scottish Government's Technical Guidance (TG16).

Baseline 2018 levels of NO₂ were predicted to comply with the annual mean Limit Value of 40 ug/m³ at all receptors except within the street 'canyon' in Inchinnan Road, near the junction with Paisley Road. The predicted impact from exposure to NO₂ as a consequence of the proposed scheme was of moderate adverse significance at this location and of negligible significance at all other sensitive receptors. The predicted increase in particle exposure (both PM₁₀ and PM_{2.5}) as a consequence of the scheme was of negligible significance at all sensitive receptors. The findings of the AQIA were accepted by the Council.

