

**FELIXSTOWE BRANCH LINE AND IPSWICH YARD IMPROVEMENT
ORDER INQUIRY
EVIDENCE SUBMITTED BY IPSWICH BOROUGH COUNCIL
AIR QUALITY IMPACT**

SYNOPSIS:

Ipswich Borough Council has been monitoring air quality in pursuit of its statutory duty under Part IV of the Environment Act 1995.

In its ‘Air Quality Further Update Assessment and Progress Report’ in September 2005, the Council identified the refuelling point used by Freightliner at Ipswich Station was as requiring further examination to determine whether there was or would likely be a breach of the Air Quality Regulations 2000 (as amended) for the specified pollutants nitrogen dioxide and particulate matter.

Ipswich Borough Council has concerns that the local air quality impact of the proposed Felixstowe Branch Line and Ipswich Yard Improvement Order has been significantly understated in the applicant’s environmental statement in respect of the effect on operations at Ipswich Fuel Point and standing train pollution concentrations.

The applicant’s assessment has omitted to consider the stabling of diesel locomotives in sidings connected to the refuelling point and winterisation procedures for diesel engines.

INTRODUCTION

This evidence has been prepared by David Harrold MCIEH, an Environmental Health Officer employed by Ipswich Borough Council, responsible for conducting air quality assessments throughout the borough.

The application seeks approval to dual part of the branch line from Ipswich to Felixstowe, which will result in an increased capacity for the line and therefore an increase in train movements to and from Felixstowe Port. In order to cater for this increased number of rail movements it will be necessary for the operators of the freight trains, including Freightliner, to increase the number of locomotives they operate along the line.

This will lead to an intensification of use at the Ipswich Fuel Point, a facility operated by Freightliner.

The Ipswich fuel point is currently used for the re-fuelling of the existing fleet of locomotives, conducting basic checks and minor repairs. The facility is used for this purpose throughout the week and is open 24 hours per day. It is also used to stable locomotives overnight and at other times.

The information submitted to the Secretary of State by the applicants and their consultants has been examined and the methodology utilised for evaluating the impact of pollution on relevant receptors in Ipswich is of considerable concern. The Council considers that the methodology that has been used is incorrect and misrepresents the potential impact on local air quality.

CURRENT OPERATIONS

The Ipswich fuel point serves two purposes. In the first instance it is a facility for refuelling Freightliner's diesel locomotives from two pumping points and carrying out maintenance. Secondly and associated with this activity are sidings used to 'stable' locomotives with their engines idling whilst awaiting duty or shut down when not in use.

During periods of cold weather, Freightliner has a 'winterisation' procedure that dictates locomotives are left running to prevent pipe work from freezing. This includes both locomotives on the fuel point and stabled awaiting duty in the sidings. For locomotives that have been shut down, their engines are restarted for variable and prolonged periods of time in accordance with operating procedures.

Freightliner operate a number of different mainline locomotives and currently two classes of diesel locomotive are operated from the Ipswich fuel point, the Class 57 and 66. The Class 57 is an old locomotive built around 1965 as a class 47 and converted into a class 57 a few years ago by fitting a General Motors 645 two stroke power unit). From visual observation this type of locomotive produces more fume and particulate than the 66. The type 66 is the most modern locomotive and is at present the industry standard for rail freight operators in the UK.

During the week, a number of locomotives may be stabled at the fuel point awaiting collection by drivers, but the primary activity that occurs is the refuelling of engines, basic maintenance checks and minor repairs. Whilst a locomotive is being refuelled the engine is left to idle, partly to avoid potential problems in restarting and partly to facilitate maintenance checks.

Freightliner has advised that a typical range of activities on a weekday night would involve the refuelling of six locomotives and the starting from cold of two. This is in addition to any other locomotives that have been stabled overnight and may have their engines running.

IMPACT ON AIR QUALITY

Diesel locomotives produce large volumes of exhaust gasses due to the nature and size of their engines. Guidance to local authorities issued by the Department of Environment, Food and Rural Affairs in respect of air quality identifies emissions from diesel trains as having a potential to impact on air quality where there are large numbers of stationary, idling engines. The example of a depot or terminus is quoted, and that the impact of such emissions will extend for up to 50 metres (Local Air Quality Management Technical Guidance LAQM TG03 para 6.50.) If a greater number of locomotives are present in an area then clearly a larger volume of exhaust gases will be produced which will have a greater adverse impact on air quality. Where the local authority identifies a significant potential for exceedence of air quality objectives, such as a railway source, a more detailed review and assessment is required. This can comprise monitoring ambient air quality for an appropriate period of time or modelling air quality for present and future years using an approved and recognised air quality model programme.

With residential properties within 50 metres of the fuel point and the proposed intensification of this activity identified by the council in September 2005 in a report submitted to DEFRA (the Ipswich Borough Council Air quality Further Update Assessment and Progress report), the need for an air quality assessment was identified.

In September 2006 a continuous real time ambient air quality monitoring station was set up outside 39 Ancaster Road, (Ramsey Park). The monitoring station measures current levels of nitrogen dioxide and particulate matter continuously.

Provisional data for September, October, November and December 2006 is attached to this statement. This data although screened, scaled and checked has yet to be formally ratified. Unfortunately only limited data for January is available because of a failure of the equipment to capture data during most of the month.

The data for September to December indicates at present that the objectives for the pollutant nitrogen dioxide have not been exceeded. The particulate objective has been exceeded on 4 days. However the daily particulate objective may be exceeded on 35 occasions before there is a breach in objective levels specified in the Air Quality Regulations 2000. Further work also is necessary to evaluate these exceedences against regional and national data to determine that this was solely due to a local episode of pollution and not as part of a larger regional event. However, no firm conclusions can yet be drawn. This is because monitoring has only been carried out for a relatively short period of time. Technical guidance from DEFRA recommends that monitoring should be carried out for 12 months. Further, the monitoring results so far obtained cover the period September to December in an unusually warm year. In the absence of a full year's monitoring data, a more robust modelling exercise is required.

ENVIRONMENTAL IMPACT ASSESSMENT

The environmental impact assessment carried out on behalf of the applicant was based on predictive dispersion modelling of the relevant pollutant emissions from the existing and projected rail movements, and concentrations evaluated in respect of the closest receptor

location. This assessment concentrated, in the main, on moving locomotives along the line and waiting at signals.

The only part of the assessment which related to the Ipswich fuel point was made for a single standing train type 66 with its engine at idle for one hour, as the worst case scenario. Predictive dispersion modelling was used to determine 1-hour mean values for nitrogen dioxide and sulphur dioxide. These values did not, on this basis, exceed health based air quality standards.

However, as stated above, Ipswich fuel point has two pumping points and sidings with significant numbers of locomotives stabled and at weekends left idling for long periods of time. This aspect of the operation together the proposed intensification of the facility and winterisation procedures has not been taken into account in the modelling exercise and there has been no measurement of particulate emissions.

The applicant should arrange for modelling of the baseline position to be carried out, based on 13 class 66 locomotives idling at the fuel point (on the assumption that Freightliner's assertion that the class 57 locomotives will be have been phased out).

The applicant then needs to model the impact of the works on air quality by showing the impact of an additional by modelling the impact of an additional 6, 9 and 12 locomotives (ie by modelling a total of 19, 22 and 25 locomotives) – this will allow for a sensitivity analysis covering the different outcomes showing how much work Freightliner will win.

CONCLUSION

Ipswich Borough Council has a duty to assess air quality and is currently monitoring for the two pollutants nitrogen dioxide and particulate to determine whether there are currently any breaches of air quality standards. This monitoring is ongoing and will continue until April when the results will be evaluated and a decision taken on the need for further monitoring or action.

The increase in activity caused by the proposed expansion of the Felixstowe to Ipswich line will have a further adverse affect on local air quality at Ramsey Park and any other nearby residential premises such as in Gippeswyk Road. This has not been properly assessed in the Environmental Statement submitted by the applicant.

Should air quality standards be breached the Council will be under a statutory duty to declare an Air Quality Management Area and develop an action plan to ensure that air quality is improved to an extent that meets national air quality standards prescribed by the regulations.

The Environmental Statement in respect of the Ipswich Fuel point is misleading and does not take into account the actual impact of air quality of the activity at present or intensification due to the development proposal. No firm conclusions can be drawn in respect of breaching air quality standards from the modelling exercise of one train idling at the fuel point.

A further assessment of air quality should be carried out modelling standing train emissions from the associated sidings together with refuelling and maintenance activities reasonably to be expected due to the intensification of the proposed development. Such assessment should consider pollutants such as nitrogen dioxide and particulate matter as specified in the Air Quality Regulations 2000 and whether there will be a breach of any standards as detailed therein.

The Council has entered into discussion with the applicant's air quality consultants to produce a more complete study but have not yet reached agreement. The inquiry will be kept informed of progress on this and I reserve the right to comment upon any additional work which the applicants undertake.