Summary Proof Volume 5/2

5th September 2014

THE METROPOLITAN BOROUGH OF STOCKPORT (HAZEL GROVE (A6) TO MANCHESTER AIRPORT A555 CLASSIFIED ROAD) COMPULSORY PURCHASE ORDER 2013

THE METROPOLITAN BOROUGH OF STOCKPORT (HAZEL GROVE (A6) TO MANCHESTER AIRPORT A555 CLASSIFIED ROAD) (SIDE ROADS) ORDER 2013

THE HIGHWAYS ACT 1980

-and-

THE ACQUISITION OF LAND ACT 1981

THE HIGHWAYS (INQUIRIES PROCEDURE) RULES 1994

COMPULSORY PURCHASE (INQUIRIES PROCEDURE) RULES 2007

REFERENCE: LAO/NW/SRO/2013/40 and LAO/NW/CPO/2013/41

A proof of evidence relating to the AIRQUALITY aspect of the

A6 to Manchester Airport Relief Road

-of-

Paul Colclough

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on behalf of

The Metropolitan Borough Council of Stockport

acting on its behalf and on behalf

-of-

Manchester City Council

-and-

Cheshire East Borough Council

VOLUME 2 – SUMMARY PROOF

1. Introduction

1.1. My name is Paul Colclough and I am Team Leader in Mouchel's Infrastructure Services business unit with specific responsibilities relating to Air Quality.

1.2. I was responsible for the monitoring, modelling and assessment of the effects on ambient air quality of the A6 to Manchester Airport Relief Road.

1.3. I will set out the Council's case in relation to concerns raised in objections to the CPO relating to construction dust, local air quality once the proposed scheme is open, and whether the scheme breaches the Air Quality Directive.

2. Scheme Assessment Methodology

2.1. The Air Quality assessment in the ES was undertaken in accordance with the Highways Agency's Design Manual for Roads and Bridges guidance and Interim Advice Notes. The Interim Advice Notes on long term NO_2 trends (IAN 170/12), the significance of the local exposure (IAN 174/13); and a risk assessment of the compliance with the Ambient Air Quality Directive (IAN 175/13) were applied.

2.2. The potential impact of construction was undertaken using Institute of Air Quality Managements "*Assessment of the Impacts of Construction on Air Quality and Determination of their Significance*".

2.3. The scheme was assessed against current EU and UK legislation and best practice guidance.

3. Air Quality Assessment Presented in the ES

3.1. The air quality assessment presented in the ES indicated that the scheme produced a net reduction of 844 sensitive receptors exceeding the annual mean NO_2 objective value of 40 $\mu g/m^3$, in the study area, with the scheme when compared to without the scheme. No exceedences of annual mean or short term PM_{10} objectives were predicted either with or without the proposed scheme.

3.2. The proposed scheme would reduce the annual mean concentration of NOx at the Cotteril Clough (E & W) ecologically designated sites. The ecologically sensitive site at Lindow Common remained unaffected.

3.3. While the scheme provided significant impacts both adverse and beneficial as defined by IAN174/13, overall there would be a 23 fold number of receptors which would benefit in air quality terms from the implementation of the proposed scheme compared with those adversely affected by it. Consequently, it was considered that there would be a significant net air quality benefit to sensitive receptors in the study area as a result of the implementation of the proposed scheme.

3.4. No significant impacts associated with construction operations were anticipated.

4. Scheme Mitigation

4.1. Cheshire East in its Planning Consent have required “a package of mitigation measures (intended to alleviate and manage traffic flow increases, at locations identified and to levels indicated through enhanced mitigation” as part of a planning condition for the approved planning application.

4.2. Air quality modelling was therefore undertaken with the aim of evaluating the impact on air quality in the Disley AQMA of enhanced mitigation to constrain traffic growth in the A6 corridor using current air quality guidance.

4.3. Traffic model predictions provided for the ES indicated a potential 30% growth in traffic along the A6 in Disley associated with the A6MARR scheme. The enhanced mitigation provided a predicted traffic growth of between 11% and 16%, but with reduced traffic speeds. Reduced traffic speeds in Disley could increase NOx emissions by up to 20%.

4.4. The reduced traffic flows and reduced traffic speeds associated with the enhanced mitigation increased the number of annual mean NO_2 objective exceedences in the Disley AQMA using the projection factors provided in LAQM TG(09) and Defra’s current emission factors (EFTv6.01) from 40 without the scheme to 67 with the proposed scheme.

4.5. Using the current Gap Analysis methodology (IAN170/12v3), annual

mean NO_2 exceedences in the Disley AQMA increased from 66 to 78 with the scheme.

4.6. Enhanced mitigation presented a marginal increase in the number of annual mean NO_2 exceedences, despite a reduction in the number of vehicles travelling through Disley, probably attributed to the predicted reduction in traffic speeds moving through Disley from 41kph to 26kph.

4.7. The influence of traffic speeds on annual mean NO_2 objective exceedences in the Disley AQMA is illustrated in Figure 1 of the Main Proof.

4.8. In designing a mitigation scheme for Disley, the design team will need to bear in mind the impact on road traffic emissions of reduced speeds through the Disley AQMA .The mitigation scheme designed to discharge the Planning Condition should therefore have the twin objective of reducing the forecast increase in traffic on the A6, but without any significant reduction in traffic speed through the Disley AQMA.

4.9. Given the preliminary findings of enhanced mitigation along the A6 corridor, the conclusions provided in the ES will remain. No new zones and agglomerations will brought into exceedence as a result of the enhanced mitigation zone, and that the compliance date identified by Defra would not be affected by the proposals.

5. Objector concerns

5.1. Objections to the CPO have been received relating to construction dust, local air quality, and whether the scheme breaches the Air Quality Directive.

Construction related dust

5.2. The assessment of construction related dust reported in the ES identified that those most susceptible would be receptors within 50m and to the north / north-west, namely downwind of the works. However, mitigation measures routinely adopted for major road construction and the provision and implementation of a formalised Construction Environmental Management Plan are not anticipated to generate significant impacts on people, property and activities located in the

vicinity of the required works.

Increased Traffic pollution

5.3. Of the objections raised related to increased traffic pollution associated with the operation of the proposed scheme, one objector is predicted to experience an improvement in air quality while the remainder will experience a predicted deterioration in air quality but remain well below air quality objectives.

Breach of EU Directive

5.4. Directives are addressed to member states, and are legally binding upon the states themselves. While the Directive sets the framework, the practical details of implementation are left for the member states to decide.

5.5. The Air Quality Directive (2008/50/EC) sets ambient air quality limit values and target values; provides common monitoring methodologies and criteria; allows public access to information; and aims to maintain air quality where it is good and improving it in other cases.

5.6. The Directive recognises that Member States will sometimes fail to meet air quality objectives, and so requires that where, in any zone or agglomeration, a limit value or target value is exceeded, the Member State must prepare an air quality plan in order to achieve the limit value or target value "*so that the exceedence period can be kept as short as possible*". However, the Directive does not define how long "as short as possible" might be.

5.7. *A risk assessment of compliance with EU Directive on ambient Air quality; for users of DMRB Volume 11, Section 3, Part 1 'Air Quality'* (IAN 175/13) was carried out in accordance with best practice and the requirements of Article 23 of the Directive and its findings reported in the ES. The assessment determined that no new zones and agglomerations were brought into exceedence as a result of the proposed scheme, and that the compliance date identified by Defra would not be affected by the proposed scheme. Consequently, it was deemed that the proposed scheme would not affect the UK's ability to comply with the Air Quality

Directive.

6. Conclusion

6.1. In this evidence I have described the existing and projected local air quality assessments associated with the proposed scheme which have been included as part of the approved A6MARR planning application.

6.2. I have responded to concerns raised in objections in respect of nuisance dust during construction, increased traffic pollution once the scheme is operational and the alleged breach of the Air Quality Directive (2008/50/EC).

6.3. It is my view that the environmental impact of the proposed scheme has been appropriately assessed, that the construction of the scheme will not impact significantly on local sensitive receptors, that the scheme will provide overall air quality benefits to the study area and that the obligation to comply with the EU Air Quality Directive is not affected.