

**Town & Country Planning Act 1990
Section 78 Appeals**

Craig Yr Hesg Quarry

Evidence of:

**Katrina Early Hawkins
Smith Grant LLP**

AIR QUALITY

On behalf of: Hanson UK

Planning Inspectorate Reference: APP/L6940/A/20/3265358 (Extension Appeal)

Planning Inspectorate Reference: APP/L6940/A/21/3282880 (S73 Appeal)

Local Authority Reference: 15/0666/10 (Extension Appeal)

Local Authority Reference: 21/0720/15 (S73 Appeal)

May 2022

CRAIG YR HESG QUARRY

PROOF OF EVIDENCE: AIR QUALITY

For: Hanson UK

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1 Introduction

1.1 Experience and Qualifications

1.1.1 My name is Katrina Hawkins. I hold a First Class BSc (Hons) degree in Chemistry from the University of Nottingham and MSc degree in Environmental Pollution Control from the University of Leeds. I am a Chartered Environmentalist, a Member of the Institute of Air Quality Management, a Member of the Institute of Environmental Sciences and a Member of the Institute of Environmental Management and Auditing.

1.1.2 I have been in practice as an environmental consultant for over 25 years specialising in air, land and water pollution. I was employed as a Consultant, and later a Technical Director, by RPS Consultants Ltd for eleven years. I am currently Chairman of Smith Grant LLP (SGP), an environmental consultancy based in Wrexham, North Wales, having been a Partner of SGP since 2005.

1.1.3 SGP specialises in air quality and contaminated land investigation and remediation. I have undertaken an extensive number of dust and air quality assessments for a wide range of developments across the UK. Of particular relevance to this Appeal I have carried out numerous assessments of potential dust and other aerial emissions from mineral extraction facilities, including quarries, roadstone coating plants, along with other waste management and industrial activities.

1.2 Instructions and Scope of Evidence

1.2.1 My evidence has been prepared in relation to the refusal of planning permission by Rhondda Cynon Taff County Borough Council (RCT) for the planning applications submitted by Hanson UK ('the Appellant') in 2015 for a Western Extension to the existing Craig yr Hesg Quarry ('the Site') and in 2021 for a Section 73 application to extend the time period for the completion of quarrying and related operations at the Site.

1.2.2 Hanson UK is appealing both the refusals and these are referred to as the Extension Appeal (ref: APP/L6940/A/20/3265358) and the S73 Appeal (ref: APP/L6940/A/21/3282880).

1.2.3 Smith Grant LLP (SGP) has been involved with the Site since 2009 and was responsible for the Air Quality Assessment (AQA) undertaken as part of the EIA and Environmental Statement submitted to accompany the Environment Act ROMP Review application in 2010. SGP's involvement has continued including the on-going process of review with respect to PM₁₀ monitoring carried out at the Site. My colleague, Dr Anthony Smith, subsequently prepared the Air Quality Chapter for the Western Extension 2015 ES (hereafter referred to as the 'WE ES').

1.2.4 I have been actively involved at the Site since 2017 carrying out the regular review and assessment of the PM₁₀ monitoring and prepared the Air Quality Chapter for the Section 73 ES

(hereafter referred to as the 'S73 ES'). In preparing the Chapter I considered the potential impacts of aerial emissions from the current and proposed on-going operations of the quarry on sensitive development and landuses in the locality. I have subsequently continued involvement up to, and including, this Planning Inquiry with respect to both Appeals, including preparation of the Western Extension Supplementary ES (hereafter referred to as the 'WE SES').

1.2.5 In preparing this evidence I have reviewed the relevant documentation and guidance as set out in the Core Documents and appendices to my Proof(s).

1.2.6 As part of this preparation I myself have undertaken 5 visits to the site and / or surrounding area in 2021 / 2022.

1.2.7 This Proof deals solely with air quality matters where this relates to established air quality standards and should be read in conjunction with my separate proof on 'dust' where this relates to dust and potential impacts on amenity. Where there is a potential duplication in information, I have not sought to reproduce it here. Details on the planning application submission and other procedural information are included separately in my proof on dust and are therefore not reproduced here. Similarly, I have not reproduced here details on the site setting and proposed development.

1.2.8 My evidence is therefore structured in the following sections:

- Section 2: outline of relevant legislation, planning policy and guidance (applicable to both Appeals);
- Section 3: Extension Appeal: appraisal of potential air quality impacts associated with the Proposed Development;
- Section 4: S73 Appeal: appraisal of potential air quality impacts associated with the Proposed Development;
- Section 5: summary and conclusions.

1.2.9 My evidence should also be read in conjunction with the other evidence provided as part of the Appeal, including the Statement of Cases and in particular the evidence on planning issues prepared by Mr Graham Jenkins of SLR.

1.3 Declaration

1.3.1 The evidence which I have prepared and provide for these Appeals is true to the best of my knowledge and I confirm that the opinions expressed are my true and professional opinions in the matters to which they refer.

2 Legislation, Planning Policy and Relevant Guidance

- 2.1 Mineral extraction, processing and handling operations may give rise to releases of airborne particulate matter (PM) or 'dust'. The nature and quantity of airborne PM released at any one time will depend on a wide variety of factors including, but not limited to, the nature and quantity of the material being handled, the handling processes incorporated and the weather conditions at the time of handling. Airborne PM is made up of condensed phase (solid or liquid) particles suspended in the atmosphere and comes from both man-made and natural sources. It ranges in size from a few nanometres to around 100µm and can give rise to both soiling effects through dust deposition and human health effects through suspended particles.
- 2.2 Dust soiling will arise from the deposition of particulate matter in all size fractions but will mostly be associated with particulate matter of diameter greater than 30µm. Particles below 10µm (referred to as PM₁₀) correspond to the inhalable fraction of particulate matter and, depending on the nature and concentrations of the particles, can be associated with health impacts. PM₁₀ includes both fine (those particles of diameter below 2.5µm; referred to as PM_{2.5}) and coarse (diameter between 2.5-10µm; PM_{2.5-10}) fractions of airborne particulate matter which normally arise from different sources.
- 2.3 Haulage transport to and from the Site and non-road mobile machinery (NRMM) will also result in emissions of, primarily, oxides of nitrogen (NO_x; comprises nitrogen dioxide (NO₂) and nitric oxide (NO)) and PM₁₀ / PM_{2.5}. NO itself is not considered harmful to human health. However, on release to the atmosphere it usually oxidises rapidly to NO₂ which is associated with adverse effect on human health, causing inflammation of the lungs at high concentrations. Long term exposure to NO₂ can affect lung function and respiratory symptoms.
- 2.4 This Proof is solely concerned with air quality matters and potential resulting impacts on health; potential dust deposition effects are considered separately (APP5/1).
- 2.5 Details of the relevant legislation, planning policy and guidance were provided in the Air Quality and Dust Chapters to the WE ES, WE SES and S73 ES. For ease the key relevant policies and documents are detailed below:
- 2.6 Legislation
- 2.6.1 Ambient air quality standards in the UK are established through the combination of transposition of European legislation and additional UK legislation and requirements. A series of Limit and Target Values have historically been established through the European legislation on the UK as a whole (referred to as AAD Limit and Target Values). Responsibility for meeting these was devolved to the national administrations; the Department for Environment, Food and Rural Affairs (Defra) co-ordinated assessment and quality plans for the UK as a whole.

2.6.2 Following the departure of the UK from the EU the air pollution limits established under EU requirements remain in place having been enshrined in UK law.

2.6.3 Under the Environment Act 1995 the UK Government and the devolved administrations are required to produce a national Air Quality Strategy (AQS). This was last reviewed and published in 2007 and sets out air quality objectives (AQOs) and policy options to improve air quality within the UK. The strategy sets AQOs for specific pollutants deemed to pose a risk for human health or other receptors, a number of which were derived from the EU limit and target values, although requirements for compliance vary. The UK AQS includes more exacting AQOs for some pollutants than those that were required by EU legislation.

2.6.4 In addition, Part IV of the Environment Act 1995 imposes a duty on local authorities in the UK to review existing and projected air quality in their area. Any location likely to exceed the UK AQOs must be declared an Air Quality Management Area (AQMA) and an Action Plan prepared and implemented, with the aim of achieving the objectives. This process is referred to as Local Air Quality Management (LAQM). The LAQM process is supported by national statutory policy, published by each country within the UK separately, and technical guidance provided by Defra.

2.6.5 The standards and objectives relevant to the LAQM framework are prescribed through the Air Quality (Wales) Regulations 2000 and Air Quality (Wales)(Amendments) Regulations 2002.

2.6.6 The applicable air quality objectives and limit values currently applicable to the UK and relevant to the Site and Proposed Development with regards to the protection of human health, referred to in this Chapter as Air Quality Assessment levels (AQALs), are summarised in the table below:

Table 6.1: Relevant Air Quality Assessment Levels (AQALs)

Pollutant	AQAL	Averaging Period	Source
NO ₂	40 µg/m ³	annual mean	AAD Limit Value / AQO
	200 µg/m ³	hourly mean, not to be exceeded more than 18 times per annum	AAD Limit Value / AQO
PM ₁₀	40 µg/m ³	annual mean	AAD Limit Value / AQO
	50 µg/m ³	24 hour mean, not to be exceeded more than 35 times per annum	AAD Limit Value / AQO
PM _{2.5}	25 µg/m ³	annual mean	AAD Limit Value / AQO ¹
	% reduction relative to average exposure indicator (AEI), dependant on initial concentration; to at least 18 µg/m ³	annual mean	AAD Target Value / AQO ¹

1: PM_{2.5} – not regulated through the LAQM regime

2.6.7 Statutory objectives, limit and / or target values for NO₂, PM₁₀ and PM_{2.5} are provided in the regulations implementing the requirements of the EU Directives and the UK Air Quality Strategy.

The EU Directives impose stricter standards on PM_{2.5} than the Strategy. However, there are no regulatory standards for PM_{2.5} within the LAQM system, and PM_{2.5} is currently regulated at a national, rather than local, level. Local Authorities do not presently have an obligation to review and monitor PM_{2.5} but are expected to work towards reducing PM_{2.5} emissions and concentrations in their area as far as practicable.

2.6.8 For the purposes of the AQALs ambient air refers to the outdoor air and excludes workplaces where members of the public do not have regular access. Advice is given in Defra guidance as to where the UK AQOs should apply as summarised below; slightly different compliance requirements are provided for EU limit and target values:

Table 6.2: Summary of Where the AQOs Should Apply

Averaging Period	Locations where the objective should apply
annual mean	all locations where members of the public might be regularly exposed; including facades of residential properties, schools, hospitals, care homes etc
24-hour mean and 8-hr mean	all locations where the annual mean objectives apply together with hotels and gardens of residential properties
1-hr mean	all locations where the annual mean, 24-hour and 8-hour means apply; also kerbside sites, parts of car parks, bus stations and railway stations which are not fully enclosed and any outdoor locations where members of the public might reasonably be expected to spend 1 hour or longer.
15-min mean	all locations where members of the public may be reasonably exposed for a period of 15 minutes

2.6.9 In January 2019 Defra published the **Clean Air Strategy**. This sets out the UK Government's plans for dealing with all sources of air pollution. The strategy gives a detailed breakdown of the action that is required across the UK to meet the legally binding international targets to reduce emissions of NO_x and other pollutants. The strategy also supports the implementation and roll out of Clean Air Zones (CAZs) in the most polluted areas of the UK.

2.6.10 In August 2020 the Welsh Government published a **Clean Air Plan for Wales** which sets out the Welsh Government's plans for improving air quality over a 10-year pathway. This includes proposals for a new Clean Air Act for Wales to enhance existing legislation and introduce new powers to further tackle air pollution. A number of potential legislative proposals for inclusion in such a Clean Air Bill are set out in the recently published Welsh Government **White Paper** which is currently out for consultation. Proposals include for requiring reviews of a Clean Air Plan or Strategy every 5 years, for the Welsh Government to set air pollution targets, introduction of an air quality target setting framework in Wales including for PM_{2.5}, consolidation of existing legislative framework such as under LAQM and Smoke Control Areas, enhancement of the

existing LAQM regime and revisions to smoke control legislation. It is estimated that the drafting of the Bill would commence in 2022 with final legislation to follow.

2.7 Planning Policy

2.7.1 Full details of relevant policies and guidance are provided in my separate proof on dust and details are not replicated here. The key policies and documents are listed below:

National Planning Policy and Guidance

- Planning Policy Wales (PPW); Section 7 (extract provided in Appendix KEH1)
- Mineral Technical Advice Note (Wales) 1: Aggregates (MTAN1) (CD6.3; extract provided in Appendix KEH2) in paragraphs 74-75

Local Planning Policy and Guidance

- Policy AW10 – Environmental Protection and Public Health (CD7.1; extract provided in Appendix KEH3)

2.7.2 There are currently no national planning policy guidance documents in Wales that deal with air quality. Proposals are to produce a new TAN 11 covering air quality as well as soundscape and noise pollution in line with PPW. At the time of preparation of my Proof a draft has not been provided for external consultation. However, it is expected to be broad in scope and set out general expectations on air quality.

National Best Practice and Guidance

2.7.3 The IAQM Planning for Air Quality document (CD5.3) provides specific non-statutory guidance on air quality and the planning system for new development. The guidance clarifies when an air quality assessment is required, what it should contain and how impacts should be described and assessed. The guidance sets out a recommended approach to assess the significance of the air quality impacts and sets out suggested approaches to reducing emissions and impacts.

2.8 Key Policy Considerations

2.8.1 As detailed in my Proof on dust matters, I have in my evidence considered the risk of the Appeal proposals resulting in *unacceptable* impacts on air quality. In determining what defines an *unacceptable* level or *significant adverse* impact I have referred to the PPW and other relevant guidance as detailed above and discussed in the following sections. An adverse impact on its own does not necessarily result in an unacceptable impact or a significant adverse effect.

2.8.2 There is no specific planning guidance provided in relation to the assessment of ambient air pollution in the context of the planning regime. In determining what forms a significant adverse effect or unacceptable impact reference is therefore primarily made to available non-statutory guidance.

3 Extension Appeal: Quarry Activity PM₁₀ Emissions

3.1 Introduction

- 3.1.1 As discussed above particulate matter of less than 10µm can give rise to human health impacts. Some third-party representations have made reference to potential impacts of air quality and human health arising from emissions from the site and I have therefore considered the potential human health impacts due to PM₁₀ generated by the quarrying activities of the Proposed Development briefly below. Potential impacts on local air quality are not however referred to in the RCT SoC or Supplementary SoC.
- 3.1.2 As requested by RCT in their formal Scoping Opinion in relation to the WE application Chapter 12: Air Quality of the WE ES primarily considered potential changes in levels of local PM₁₀ and whether the proposals could influence future compliance with relevant Air Quality Objectives (AQOs) that have been established in relation to the protection of human health.
- 3.1.3 In 2009 RCT determined that indicative PM₁₀ monitoring that had been undertaken at Glyncoch identified a risk of breaching the 24-hour daily mean (short-term) AQO for PM₁₀ and that further in-depth monitoring was necessary to determine whether declaration of an Air Quality Management Area (AQMA) under their LAQM obligations was required. The WE ES therefore referred to on-site and off-site PM₁₀ monitoring that had been conducted since 2009 by both RCT and the Appellant. SGP concluded that it was unlikely that the 24-hour daily mean had been exceeded.
- 3.1.4 On-going PM₁₀ monitoring had since continued to be undertaken by both the Appellant and RCT since the preparation of the WE ES and had been subject to regular review and assessment by SGP. The results and conclusions were therefore presented in Chapter 4 of the WE SES and used to inform an updated risk assessment.
- 3.1.5 Of particular note in July 2014 RCT had established a continuous analyser (Site 130) at Garth Avenue which utilises an approved 'EU reference method' enabling direct comparison of results with the relevant long-term and short-term AQOs. At the time of preparation of the WE ES four months of data was available from this monitor. Previous monitoring techniques used by RCT and the Appellant had primarily used 'indicative methods'.
- 3.1.6 At the time of preparation of the WE SES data was available for review from the annual air quality progress reports prepared by RCT under its obligations under the Local Air Quality Management (LAQM) regime and, for 2020, from the Air Quality Wales website.

3.2 Baseline Conditions

3.2.1 The data available reported the annual average PM₁₀ concentrations at Garth Avenue for the period 2015-2020 to be in the range 13.45 to 25.1 µg/m³, well below the AQO of 40 µg/m³. The number of exceedances of the 24-hour mean AQO of 50 µg/m³ were in the range 2-13, again well below the AQO of 35. On the basis of the on-going monitoring results RCT had not progressed to declare an AQMA due to PM₁₀ concentrations at Glyncoch and the RCT Air Quality Progress reports state: *...concentrations of PM₁₀ throughout Rhonnda Cynon Taf are likely to be below the relevant AQOs, therefore no further action is required at this time* (extract provided in Appendix KEH4 Section 4.4).

3.2.2 The results of the on-going on-site monitoring carried out by the Appellant were also presented in the WE SES, the most recent report for 2019-2020 being included as Appendix 11-3, and compared to the data obtained for Site 130. The available data continued to show reasonable correlation between the site data and the nearby RCT monitoring station at Garth Avenue with neither data sets indicating actual or likely breaches of either the long-term annual mean or short-term 24-hour AQOs for PM₁₀.

3.3 PM₁₀ Assessment

3.3.1 The WE ES presented a PM₁₀ risk assessment following guidance provided by the relevant Defra LAQM guidance at the time in relation to the updating and screening assessment process for fugitive and uncontrolled releases such as from quarries. This considers the possible increases in PM₁₀ concentrations that may be experienced at receptors from the quarrying activities (compared to a scenario of 'no operations') and the resulting total concentrations. The assessment concluded there were potential predicted *negligible* impacts from PM₁₀ for human health at receptors surrounding the proposed extension area and *negligible* to possibly *slight adverse* at receptors near the continuing existing quarry operations and processing plant (when compared to a baseline of 'no operations').

3.3.2 The WE SES presented an updated and revised assessment based on both the additional available monitoring data, the guidance that had since been issued by IAQM in relation to mineral dust impacts and planning and the revised guidance issued by IAQM in relation to air quality and planning.

3.3.3 A possible contribution of 3.23 µg/m³ to the annual mean PM₁₀ concentrations was calculated at the closest part of Garth Avenue based on the available monitoring data. This would be 8% of the AQO, resulting in potentially *slight adverse* impacts (when compared to a baseline of 'no activities'). Potential contributions would be reduced away from the quarry and in particular for those receptors considered in relation to the proposed extension which are remote from the processing area. Potential impacts at these receptors closest to the proposed extension area would be *negligible*.

3.3.4 Of note however, the proposals do not include for any increases in throughput at the site and hence there would not be any expected increases in PM₁₀ emissions from the processing activities compared to presently. Monitoring carried out at the area within the Glyncoch Estate closest to this part of the site has demonstrated that PM₁₀ concentrations remain well below both the established short-term and long-term air quality objectives.

3.4 Update Status

3.4.1 On-site and off-site PM₁₀ monitoring has continued to be carried out by both RCT and the Appellant and is presently on-going. Data for the 2020 to 2021 period has also been reviewed and is presented in an annual summary report (provided as Appendix KEH5). The available data continues to indicate no actual or likely breaches of either the long-term annual mean or short-term 24-hour AQOs for PM₁₀.

3.5 Mitigation

3.5.1 As discussed separately in my Proof on dust, the existing processing activities, and directly associated activities, would continue to be operated in accordance with the requirements of the Environmental Permit. In addition, a Dust and Particulate Management Plan and Dust Monitoring Plan (DMMP; CDx/x) was submitted to RCT during determination of the WE application. This DMMP sought to draw together the management and monitoring measures that were to be implemented specifically in relation to fugitive nuisance dust taking into account the existing planning permission and Permit controls and included measures in relation to both the continuation of the existing quarrying activities and the proposed extension. The DMMP was to be required by way of Condition (as detailed in recommended Condition 15 of the February and July 2020 Officer's Reports) and includes for a formal review every 2 years from the date of planning permission. This enables the updating and / or amended on the Plan in agreement between the operator and LPA in response to any changes in circumstances or opportunities for additional air quality / dust mitigation measures.

3.6 Conclusions

3.6.1 The WE ES and SES concluded that the existing operations and proposed extension would not result in significant adverse impacts on local air quality due to PM₁₀ emissions, subject to the retention of the existing measures taken to manage fugitive dust, and hence also PM₁₀, emissions. On the basis the existing specified management and monitoring arrangements are to be maintained and applied to the proposed quarry extension then there are considered to be no long-term significant impacts for air quality.

3.6.2 The mitigation of PM₁₀ emissions would continue to be achieved primarily by the means of the standard mitigation measures for general dust along with the site-specific additional measures employed under the Permit in relation to the processing plant outlined above. Additional mitigation measures with respect to PM₁₀ are not deemed necessary.

3.6.3 The Appellant has also agreed to entering a Section 106 Agreement which would include the payment of a contribution to the setting up or and future air quality monitoring of particulate matter in the local community.

3.6.4 The above conclusions are consistent with the February and July 2020 Officer's Reports which noted:

- *'following consultation and liaison with the Council's Public Health, Protection & Community Services and Public Health Wales it is now considered that sufficient information has been submitted to provide evidence that processes can be managed to ensure a limited impact upon the level of air quality and neighbour amenity in respect of particulate matter and therefore the application is considered to be acceptable in this respect. In particular Public Health Wales and Cwm Taf University Health Board have indicated that based on current levels of activity adverse air quality impacts and consequently human health impacts are unlikely.'*
- *In addition, Council's Public Health, Protection & Community Services consider that processes at the quarry can be managed to ensure a limited impact upon the level of air quality and neighbour amenity in respect of particulate matter and therefore the application is considered to be acceptable in this respect.*

4 Extension Appeal: Other Aerial Emissions

4.1 Vehicle Exhaust Emissions

- 4.1.1 The HGV movements to and from the Proposed Development would result in NO_x / NO₂ and PM₁₀ emissions and hence impacts on local air quality. RCT did not require any assessment of such emissions and potential impacts as part of the 2014 WE application, or during the subsequent determination, on the basis the Proposed Development would not result in any changes to HGV movements to those already experienced. For completeness, further information was presented in the WE SES.
- 4.1.2 Almost all HGVs travelling to / from the Site do so via the B4273 to the south and Bridge Street / Ceridwen Terrace to / from the A470. Thereafter the majority distribute towards the south. As such the majority of HGV traffic travelling to and from the quarry passes through a small area of the Pontypridd AQMA (junction of B4273 and Bridge Street) that had been established in 2007 due to potential or existing breaches of the long-term NO₂ AQO.
- 4.1.3 Information was presented in Chapter 4 of the WE SES on available RCT monitoring data within Pontypridd, from both within and outside the AQMA. The latest RCT Air Quality progress report available at the time (for data up until the end of 2020) noted that the annual mean levels of NO₂ have consistently reduced within the Pontypridd Town Centre AQMA with only a small part of the existing AQMA showing a current breach of the annual mean AQO for NO₂. The 2020 Report concluded that, dependent upon the outcome of prior consultation, RCT proposes to reduce the current extent of the AQMA.
- 4.1.4 The Pontypridd Town Centre AQMA has since been amended as proposed (revised AQMA plan provided in Appendix KEH6) although the B4273 / Bridge Street junction remains within the AQMA.
- 4.1.5 Although the short stretch of AQMA through which the Site-related HGV movements travel remains there is no indication that this is associated with HGV movements in the area. The RCT reports note that the characteristics deemed of importance to the Pontypridd Town Centre AQMA and that may have a cause in, or exacerbate, the need for the AQMA is the traffic volume and buses, a bus station being on the nearby Morgan Street and multi-storey car park between Morgan Street and the B4273.
- 4.1.6 Further information presented in the S73 ES, but also of relevance to the WE application, is that traffic counts carried out on the B4273 Berw Road show HGVs to be present in the range 2.8-7.5% of total vehicle flows on that highway (different %s calculated for different surveys and across 3 day to 7 day survey periods). The quarry-related HGV flows are in the range 13.7%-23% of the total HGV flows, and hence 0.3-1.7% of the total vehicle flows. Site-related HGVs would form an even smaller % of total vehicle flows on Bridge Street and the wider local road

network. On this basis it is considered that the contribution of existing quarry related HGV exhaust emissions to the local air quality is not significant. This is consistent with the fact that assessment of HGV emissions was not required by RCT in relation to the Western Extension planning application.

4.1.7 The only stretch of road along which the quarry-related HGVs travel for which NO₂ monitoring data is available is Ceridwen Terrace (monitoring ref: 83). Annual mean NO₂ concentrations at Ceridwen Terrace have remained well below the long-term AQO of 40 µg/m³ since 2016 at 31.5-34.8 µg/m³ and this area is not located within the AQMA.

4.1.8 On the basis that there would not be any increases in existing HGV movements due to the Proposed Development, the overall effect of quarry vehicle emissions on local air quality during the proposed physical extension and extended time of operations at the quarry therefore is deemed **not significant**. Furthermore, on-going improvements in HGV exhaust emissions would serve to reduce the contribution of site-related traffic emissions to local ambient air pollution.

5 S73 Appeal: Quarry Activity PM₁₀ Emissions

5.1 PM₁₀ Assessment

5.1.1 Chapter 4 of the S73 ES similarly considered potential changes in concentrations of local PM₁₀ and whether the proposals could influence future compliance with relevant Air Quality Objectives (AQOs) that have been established in relation to the protection of human health.

5.1.2 As for the WE ES and WE SES the S73 ES presented the available on-site and off-site PM₁₀ data obtained from monitoring conducted by both RCT and the Appellant since 2009. Concentrations of PM₁₀ within Glyncoch are below both long-term and short-term objectives established for the protection of human health. RCT has not declared an AQMA due to PM₁₀.

5.1.3 The PM₁₀ risk assessment for the S73 application followed the same approach as that for the WE SES. It concluded that there were *negligible* to possibly *slight adverse* effects at receptors near the continuing existing quarry operations and processing plant, when compared to a baseline of 'no operations'.

5.1.4 As noted above however, the proposals do not include for any increases in throughput at the site and hence there would not actually be any expected increases in PM₁₀ emissions in relation to the S73 proposals.

5.2 Mitigation

3.6.5 As for the WE ES application, the existing processing activities, and directly associated activities, would continue to be operated in accordance with the requirements of the Environmental Permit. In addition, a Dust and Particulate Management Plan and Dust Monitoring Plan (DMMP; CDx/x) was submitted to RCT with the S73 planning application detailing measures in relation to the wider quarrying activities which had historically been specified within conditions in the existing planning permission. The DMMP was again to be required by way of Condition (as detailed in recommended Condition 12 of the August and October 2021 Officer's Reports) and includes for a formal review every 2 years from the date of planning permission enabling the updating and / or amendment of the Plan in agreement between the operator and LPA in response to any changes in circumstances or opportunities for additional air quality / dust mitigation measures.

5.3 Conclusions

5.3.1 The S73 ES concluded that continuation of the existing operations would not result in significant adverse impacts on local air quality due to PM₁₀ emissions, subject to the retention of the existing measures taken to manage fugitive dust, and hence also PM₁₀, emissions. It remained concluded that assuming the specified management and monitoring arrangements are maintained then there are considered to be no long-term significant impacts for air quality.

5.3.2 The mitigation of PM₁₀ emissions would continue to be achieved primarily by the means of the standard mitigation measures for general dust along with the site-specific additional measures employed under the Permit in relation to the processing plant outlined above. Additional mitigation measures with respect to PM₁₀ are not deemed necessary.

5.3.3 The Appellant has also agreed to entering a Section 106 Agreement which would include the payment of a contribution to the setting up or and future air quality monitoring of particulate matter in the local community.

3.6.6 The above conclusions are consistent with the August and October 2021 Officer's Reports which noted:

- *It has been acknowledged that, due to its nature, location and scale the winning and processing of mineral at Craig Yr Hesg Quarry will inevitably have an influence, to some degree, on environmental noise and the risk of annoyance dust. Local engagement, undertaken as part of the application, suggest that the perception of the above environmental factors may support increased anxiety and concern within the local community. This may be further exacerbated about certain inherent uncertainties often associated with the evaluation of well-being impacts. It is possible these additional wellbeing impacts can, if not successfully mitigated by robust control mechanisms, monitoring and oversight, result in a reduction of local community amenity compounded by a lack of community confidence hindering possible mitigation. **However, these robust control mechanisms can be imposed within suitable planning conditions and within any Environmental Permit issued for the plant.***

6 S73 Appeal: Other Aerial Emissions

6.1 Vehicle Exhaust Emissions

- 6.1.1 The S73 ES presented similar information on quarry related traffic movements and potential impacts of associated exhaust emissions as the WE SES.
- 6.1.2 As for the proposed Western Extension development, the S73 extension of time proposals would not result in any additional HGV movements on the local road network to those currently experienced.
- 6.1.3 On the basis that there would not be any increases in existing HGV movements due to the Proposed Development, the overall effect of quarry vehicle emissions on local air quality during an extended period of operations at the quarry therefore is deemed **not significant**. Furthermore, on-going improvements in HGV exhaust emissions would serve to reduce the contribution of site-related traffic emissions to local ambient air pollution.

7 Overall Conclusions

7.1 Western Extension Appeal

- 7.1.1 Air quality is not cited as a reason for refusal of the planning permission in the decision notice and is not stated as forming part of the Council's case.
- 7.1.2 In preparing this Proof I have reviewed the original air quality assessment that was included within the ES submitted with the planning application; the subsequent correspondence between RCT and the Appellant, including the written Response to Public Consultation: Wellbeing and Environmental Health Issues; and the revised air quality assessment included within the Supplementary ES.
- 7.1.3 The air quality assessments primarily considered potential changes in levels of local PM₁₀ and whether the proposals could influence future compliance with relevant Air Quality Objectives (AQOs) that have been established in relation to the protection of human health. The assessments were informed through the detailed review of PM₁₀ monitoring that had been undertaken by both RCT and the Appellant since at least 2009.
- 7.1.4 I have also reviewed the PM₁₀ monitoring results available since preparation of the WE SES to further inform my proof. The on-site and off-site PM₁₀ monitoring continues to demonstrate no actual or likely breaches of either the long-term or short-term AQOs for PM₁₀ in the area of the Site.
- 7.1.5 The PM₁₀ risk assessments considered this extensive monitoring dataset, along with potential additional contributions of ambient PM₁₀ that may arise from the proposed development.
- 7.1.6 I conclude that the Appeal proposals would not result in significant adverse impacts on local air quality due to PM₁₀ emissions, subject to the retention of the existing measures taken to manage fugitive dust and hence also PM₁₀ emissions. I therefore concur with the conclusions of the RCT Officer's Report that the effects of the proposal can be mitigated and managed and would not result in unacceptable impacts.
- 7.1.7 The facility would continue to be operated in accordance with conditions relating to dust / particulate matter contained within both the planning permission and the Environmental Permit. These controls would continue to require the appropriate management and mitigation of fugitive dust, and hence PM₁₀ emissions, through a range of procedures. Included within the recommended conditions is the requirement to operate the facility in accordance with an agreed Dust Management and Monitoring Plan (DMMP).

7.1.8 Other potential aerial emissions associated with the proposals such as on-road vehicle exhaust emissions are also not predicted to result in significant adverse impacts.

7.1.9 Overall, from my review of the information and results of the assessment, I conclude that, with the incorporation of appropriate mitigation as already employed at the site, the proposed development complies with the relevant national and local planning policies in relation to air quality.

7.2 S73 Appeal

7.2.1 Air quality is cited as a reason for refusal of the planning permission in the decision notice, but is not cited in the RCT Statement of Case.

7.2.2 In preparing this Proof I have reviewed the air quality assessment that was included within the ES submitted with the planning application. As for the WE and WE SES the air quality impact assessment primarily considered potential changes in levels of local PM₁₀ and whether the proposals could influence future compliance with relevant Air Quality Objectives (AQOs) that have been established in relation to the protection of human health.

7.2.3 Again, as for the WE ES and WE SES, the assessment was informed through the detailed review of PM₁₀ monitoring that had been undertaken by both RCT and the Appellant since at least 2009.

7.2.4 I conclude that the Appeal proposals would not result in significant adverse impacts on local air quality due to PM₁₀ emissions, subject to the retention of the existing measures taken to manage fugitive dust and hence also PM₁₀ emissions. I therefore concur with the conclusions of the RCT Officer's Report that the effects of the proposal can be mitigated and managed and would not result in unacceptable impacts.

7.2.5 The facility would continue to be operated in accordance with conditions relating to dust / particulate matter contained within both the planning permission and the Environmental Permit. These controls would continue to require the appropriate management and mitigation of fugitive dust, and hence PM₁₀ emissions, through a range of procedures. Included within the recommended conditions is the requirement to operate the facility in accordance with an agreed Dust Management and Monitoring Plan (DMMP).

7.2.6 Other potential aerial emissions associated with the proposals such as on-road vehicle exhaust emissions are also not predicted to result in significant adverse impacts.

7.2.7 Overall, from my review of the information and results of the assessment, I conclude that, with the incorporation of appropriate mitigation as already employed at the site, the proposed

development complies with the relevant national and local planning policies in relation to air quality.