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# APP10/1: Proof of Evidence Dr Andrew Buroni

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## Craig yr Hesg Quarry, Pontypridd

Town and Country Planning Act 1990: Section 78 Appeals

- (i) Proposed western extension and consolidation schen  
Appeal ref number APP/L6940/A/20/3265358
  
- (ii) 'Section 73' time extension request  
Appeal ref number APP/L6940/A/21/3282880

## Summary

My name is Dr Andrew Buroni. I am a Director within the Environment and Infrastructure team at Savills (UK) Ltd, responsible for Health and Social Impact Assessment Services. I hold a BSc with honours in Biological Sciences, an MSc in Environmental Impact Assessment (EIA), and a PhD in international Health Impact Assessment (HIA) methods and best practice. I have received formal training in Environmental Health Impact Assessment at the Caribbean Environmental Health Institute by the Pan American Health Organisation and Health Canada, and at the International Health Impact Assessment Consortium (IMPACT) at the University of Liverpool.

In the absence of any evidence of a health, amenity or wellbeing impact from the proposed development from any party; given that all tangible environmental parameters with the potential to impact upon health have been satisfactorily addressed; and that the Rhondda Cynon Taf Statement of Case lacks any mention of health or wellbeing (solely focusing on undefined amenity), the scope of my proof is limited to signposting as to how and where health has been assessed and addressed, and I will be available at the inquiry to respond to any health item.

In summary, and as already noted within the Officers Reports to the Planning Committee and the Statements of Case:

- All statutory requirements (subject to conditions) have been satisfied and all credible / tangible environmental and socio-economic aspects have been assessed and are not being challenged by any regulatory authority.
- No health impact or objection has been raised by any of the regulatory authorities or statutory consultees.
- No assessment gaps have been identified through wider community and interested party engagement.
- The current facility holds an Environmental Permit, demonstrating operational compliance to standards set to protect the environment and health to the satisfaction of Rhondda Cynon Taf Borough Council.
- Rhondda Cynon Taf has withdrawn health and wellbeing as reason for refusal, focusing on amenity, albeit undefined, unsupported and contrary to the evidence provided.

Overall, neither application presents any material risk to local health or wellbeing and are designed to minimise disruption to, or enjoyment of amenity, while maintaining direct, indirect and catalytic income and employment opportunities in an area displaying some of the highest socio-economic deprivation in Wales, and communities highly sensitive to changes in socio-economic circumstance.

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## 1 Introduction

### 1.1 Qualifications

- 1.1.1 My name is Dr Andrew Buroni. I am a Director within the Environment and Infrastructure team at Savills (UK) Ltd, responsible for Health and Social Impact Assessment Services. I hold a BSc with honours in Biological Sciences, an MSc in Environmental Impact Assessment (EIA), and a PhD in international Health Impact Assessment (HIA) methods and best practice. I have received formal training in Environmental Health Impact Assessment at the Caribbean Environmental Health Institute by the Pan American Health Organisation and Health Canada, and at the International Health Impact Assessment Consortium (IMPACT) at the University of Liverpool.
- 1.1.2 I am a Fellow of the Royal Society of Medicine and a Fellow of the Royal Society for Public Health, a Health Technical Advisor to the Environmental Protection Agency in Ireland and I also provide support as an independent technical advisor to Public Health Wales and the Wales HIA Support Unit on their Policy and International Health, WHO Collaborating Centre on Investment for Health & Wellbeing, and I am technical advisor to the WHO on waste management and the circular economy.
- 1.1.3 I sit on the Institute of Environmental Management and Assessment (IEMA) Health in EIA Working Group, and I am a guest lecturer at the Brighton and Sussex University Joint Medical School, providing training on driving Public Health through planning and EIA.

### 1.2 Experience

- 1.2.1 I am an internationally recognised expert with over 22 years of HIA experience within mainstream environmental and planning consultancy, and have designed, led and given health evidence at public inquiry and issue-specific hearings for projects ranging in scale from local planning to Nationally Significant Infrastructure Projects and Hybrid Bill.
- 1.2.2 I have an extensive catalogue of project experience ranging from airport expansions, waste and mineral development frameworks and oil and gas, through to new nuclear power stations; windfarms; gas fired and biomass power stations; national grid infrastructure and strategic planning associated with new town developments and urban expansions. This has included the development of sector specific HIA guidance and best practice, the development of a transport and health resource for the UK Department of Health and Department for Transport, and an electromagnetic field (EMF) health evidence base for EirGrid, peer reviewed by the inaugural chairman of the International Commission on Non-ionising Radiation (ICNIRP), and the former WHO EMF topic lead.
- 1.2.3 With specific regard to quarry and mining experience, I designed and led the Caerphilly Nant Llesg Surface Mine HIA and provided additional health support on the Ffos-y-Fran mine; I designed and led the HIA of the Curraghinalt Gold Mine in Northern Ireland; I led the generic UK nuclear geological disposal facility HIA; and further covered particulate matter exposure, asbestiform materials, zeolitic mineral and silicosis health risk on the ARC 21 waste management solution in the former quarry site near Mallusk. I also led the HS2 Phase 2b Lot 3 Health Assessment, the design of which included a number of borrow pits along the route section, and I am currently completing the Wasperton Quarry HIA.

## 2 Background

### 2.1 Context

2.1.1 My health proof of evidence covers both the Western Extension to Craig yr Hesg (APP/L6940/A/20/3265358), and the Section 73 application for extension to time limits at Craig yr Hesg (APP/L6940/A/21/3282880).

2.1.2 I was commissioned following the submission of the Western Extension application to review the submitted Well Being and Health Report, and further support the communication of how and where health has been assessed and addressed in both applications. I subsequently provided technical input to the Applicant's Statement of Case (SoC) and Statement of Common Ground (SoCG), and was retained as a technical advisor to expand upon the technical assessments inherently set to protect health (air quality, noise, transport, socio-economic etc.), and aid in responding to any residual health concerns raised during the public inquiry.

### 2.2 Original Reasons for Refusal

2.2.1 Despite being recommended for consent by the Planning Officer, each application was refused on a single yet differing reason.

2.2.2 The Western Extension application was refused on the following grounds:

*"Minerals Technical Advice Note (MTAN) 1: Aggregates (Paragraphs 70 and 71) identifies a suitable minimum distance between hard rock quarries and sensitive development is 200 metres, and states that any reduction from this distance should be evidenced by clear and justifiable reasons. The proposed quarry extension encroaches within 200m of sensitive development and the Council does not consider that the applicant has provided sufficient evidence of clear and justifiable reasons for reducing that minimum distance in this case".*

2.2.3 The Section 73 application was refused on the following grounds:

*"The additional period of 6 years proposed for the working of the quarry unacceptably extends the period of mineral operations within 200m of sensitive development within Glyncoch. Glyncoch is a deprived community, and such communities are acknowledged as being disproportionately affected by health problems. The continuation of quarrying within 200m of that community extends the impacts of quarrying (especially in terms of noise, dust, and air quality) to the detriment of the amenity and well-being of residents contrary to the well-being goal of a healthier Wales as set out in the Well-being of Future Generations (Wales) Act 2015. The need for the mineral does not outweigh the amenity and wellbeing impacts."*

2.2.4 While the Western Extension decision has no specific health, amenity or wellbeing reason for refusal, the Section 73 application makes reference to a detriment to amenity and wellbeing. However, in both cases, no evidence of a health impact was identified by any party; no justification was provided to rationalise a reason for refusal on health grounds; no statutory consultee objected on health grounds; all environmental objective thresholds protective of the environment and health were met; and the Planning Officer did not raise health as an issue in his committee report, recommending consent be granted.

2.2.5 Importantly, the underlying issue for the Section 73 application was not on that of adverse health impact, but amenity and wellbeing, albeit undefined and contrary to the submitted objective evidence. This means the underpinning reason for refusal was an unsupported risk perception and/or a fundamentally flawed understanding between hazard and risk.

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- 2.2.6 Deprivation; associated health burden and heightened sensitivity were also raised in the Section 73 application to rationalise the reason for refusal. However, the refusal neglected to comment upon the nature of such deprivation, or the association and any causal mechanism relating to the burdens of poor health prevalent within the population. This detail is essential, as without an understanding behind the underlying cause of deprivation and poor health, it is very easy to draw incorrect conclusions on sensitivity to specific health determinants and pathways, and risk compounding existing health circumstance, as is the case in this instance.
- 2.2.7 To clarify, yes health in Rhondda Cynon Taff is broadly characterised as being typically worse than the Welsh average, where the majority of small areas in Rhondda Cynon Taff are deprived compared with the average for Wales.
- 2.2.8 The Welsh Index of Multiple Deprivation (WIMD)<sup>1</sup> is the most useful and commonly applied dataset to explore and improve clarity on the distribution of overall deprivation, but also the nature of such deprivation for small areas in Wales. It is a National Statistic and is produced by statisticians at the Welsh Government.
- 2.2.9 The WIMD ranks all small areas in Wales from 1 (the most deprived in Wales) to 1,909 (the least deprived in Wales), and can be mapped at the lowest geographic area possible, known as Lower Layer Super Output Areas (LSOAs). This geography is built from census data and represents small areas, each with a population of around 1,600 people.
- 2.2.10 When exploring relative sensitivity, it is important to consider not only overall deprivation, but the individual domains that make up the overall Index of Multiple Deprivation, as this provides greater insight as to underlying circumstance, and what factors might alleviate or compound existing circumstance.
- 2.2.11 The individual domains that inform the overall Index of Multiple Deprivation, comprise:
- i. **Income:** including data on income-related benefit claimants, tax credit recipients, supported asylum seekers, and people on universal credit;
  - ii. **Employment:** including data on Jobseeker's Allowance, Employment and Support Allowance, incapacity benefit, Universal Credit and those not in employment;
  - iii. **Health:** including data on GP-recorded chronic conditions, Limiting long-term illness, premature deaths, GP-recorded mental health conditions, Cancer incidence, Low birth weight, and children aged 4-5 who are obese;
  - iv. **Education:** including data on foundation phase, key stage 2, key stage 4, repeat absenteeism, proportion of key stage 4 leavers entering higher education and the number of adults aged 25-64 with no qualifications;
  - v. **Access to Services:** including data on access to pharmacy, food shop, GP, post office, broadband, primary school, public library, sports facility, secondary school and petrol station.
  - vi. **Housing:** including data on the percentage of people living in overcrowded and poor quality households;
  - vii. **Community Safety:** including data on police-recorded criminal damage, violent crime, anti-social behaviour, burglary, theft and fire incidents; and
  - viii. **Physical Environment:** including data on air quality (NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>), flood risk and green space.
- 2.2.12 To aid the inquiry, I have mapped out the overall 2019 WIMD, but also all of the individual domains for the communities in proximity to the site.

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<sup>1</sup> The 2019 WIMD data set is a National Statistic that is not readily amenable as a Core Document (covering all of Wales), the pertinent data and supporting information can therefore be obtained from - <https://gov.wales/welsh-index-multiple-deprivation-full-index-update-ranks-2019>

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- 2.2.13 As shown in Figure 1 of my appendices, the Lower Super Output Area (LSOA) of Glyncoch 1 (where the quarry is located), has an overall Index of Multiple Deprivation score that places it amongst the 10% most deprived LSOAs in all of Wales.
- 2.2.14 However, when exploring the individual domains, the overall deprivation is largely a feature of socio-economic deprivation, where, as shown in Figures 2 to 5, the individual domains for income, employment, health, and education all place Glyncoch 1 within the 10% most deprived areas in Wales. This groups the domains, indicating some degree of association, and would indicate a high sensitivity to any change in socio-economic circumstance (positively and negatively).
- 2.2.15 As shown in Figure 6, Glyncoch 1 is also placed within decile 2 with reference to areas for access to services (i.e. the 20% most deprived area in Wales). This is reflective of the semi-rural nature of the surrounding area, and would indicate sensitivity to any impact upon, or barrier to amenities, services and facilities.
- 2.2.16 As shown in Figure 8, Glyncoch 1 placed in decile 4 for community safety (i.e. 40% most deprived area in Wales). This would indicate that opportunistic crime and anti-social behaviour are close to median score in Wales; does not indicate a high pocket of deprivation and is not representative of heightened sensitivity.
- 2.2.17 Importantly, and contrary to the rationale underpinning the reason for refusal, as shown in Figure 9, Glyncoch 1 placed within decile 8 (i.e. the 30% least deprived area in all of Wales) for physical environment. The domain itself places a high weighting on environmental quality, including NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations. This demonstrates good environmental circumstance, a low level of environmental deprivation; and an equally low sensitivity to changes in environmental circumstance.
- 2.2.18 The deprivation data also indicates that existing burdens of poor health and relative sensitivity are not strongly associated with a poor quality environment, but are more closely associated with socio-economic circumstance and education deprivation. This is an important distinction, as neither application represents a significant impact on air quality or noise. Refusal will however, result in the loss of direct, indirect and catalytic income and employment in an area displaying some of the highest socio-economic deprivation in Wales, closely linked to existing burdens of poor health, and where the Welsh Government's official measure of relative deprivation for small areas would indicate communities are highly sensitive to changes in socio-economic circumstance.
- 2.2.19 The use of deprivation and associated high burdens of poor health out of context to denote community sensitivity to rationalise a reason for refusal on insignificant air quality and noise grounds, is therefore not only incorrect, but masks the underlying cause for such deprivation and health burden, and encourages a decision that would compound local circumstance, deprivation and health inequality.

### 2.3 Amended Reasons for Refusal

- 2.3.1 Given the applications were refused contrary to officer advice, the LPA subsequently engaged the services of an independent external planning consultancy.
- 2.3.2 It is understood that the Planning Authority now seeks to contend that:
- (i) there was insufficient evidence that the continuation of existing site operations, could be undertaken without adverse effects on the amenity in the immediate proximity of the site in respect of noise and dust (para 3.49 of the SoC);

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- (ii) there was insufficient noise evidence, particularly as to background monitoring (para 3.50 of the SoC);
- (iii) there was insufficient dust evidence (para 3.51 of the SoC); and
- (iv) the adverse impacts are contrary to policies CS10, AW5, AW10 of the LDP.

2.3.3 The main change is a move away from any reference to health as a reason for refusal for the Section 73 application, replaced instead with the term amenity. The change is notable, as it would infer agreement that there is no measurable or significant risk to public health from what is proposed, only the potential or perceived change to amenity with respect to noise and dust. The magnitude and significance of this is undefined in the amended reason for refusal, and contrary to the objective evidence already provided, and the expert opinion of the Planning Officer.

2.3.4 The other notable change is the inconsistent justification for refusal. In the original reason for refusal, only the Section 73 application was refused on the basis of a detrimental impact on amenity and wellbeing, inferring evidence of an objective impact. However, the new reason for refusal to both the Western Extension and Section 73 applications is now on insufficient evidence from the applicant on both applications to demonstrate the absence of an impact on amenity.

2.3.5 On the above basis, the reason for refusal now steps back from any reference to health or wellbeing, and focuses solely on a lack of evidence demonstrating the absence of an impact on undefined amenity due to dust or noise, despite compliance with all environmental standards protective of the environment and health, and contrary to the Planning Officer's expert opinion and recommendation for consent.

## 2.4 Consultee Responses

2.4.1 I have further considered the consultee responses with regard to potential health impacts. Upon a review, it is noted that:

- (i) Cwm Taff health Board note that nuisance caused by noise, vibration and visible dust are the primary concerns, and whilst it is very unlikely that these issues will have a direct impacts on the health of individuals or communities living locally, it is possible that quality of life and wellbeing could be adversely affected as a consequence.
- (ii) The Public Health and Protection Division of the Environmental Services Group summarises the air quality assessment, and confirms no further information is required for the assessment of NO<sub>2</sub> and PM<sub>10</sub> (both compliant with air quality objectives protective of health). Further clarification was requested on nuisance dust, and indicated that the Dust Management Plan would be best to remain dynamic and periodically reviewed to prevent nuisance. The sole reference to PM<sub>2.5</sub> was that additional narrative may be beneficial to address any perceived impact (not actual). A HIA was also suggested as a way of responding to the wider health concerns raised, but this was addressed through the submitted Wellbeing and Health Report.
- (iii) Public Health Wales outline that the trigger for a HIA through MTAN 1 does not apply to existing quarries, but they reinforce the value of commissioning a HIA. They do not raise an objection.
- (iv) Highways raise no objections, subject to the developer entering into a legal agreement to provide a financial contribution towards the cost of additional maintenance.
- (v) Natural Resource Wales raise no objections.



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- (vi) Caerphilly Borough Council raise no objections, and “*recognises the strategic importance of the quarry as a supplier of High Specification Aggregate*”.
- (vii) Pontypridd Town Council expressed concern and a subsequent objection regarding the potential effect on the community by way of environmental impact, dust and transport safety, and also queried if a community gain fund could be granted to support the Glyncoch/Pontypridd community.

- 2.4.2 Third party representations (community and interested parties) raise a number of concerns, including property damage from blasting, dust, noise and transport impacts, but also highlight local circumstance and existing burdens of poor health. These concerns reinforce the scope and focus of potential hazards that have already been addressed through the regulatory planning process, and those covered by the Planning Officer and Statutory Consultees in their deliberation. The third party representations do not identify any assessment gap or unresolved issue.
- 2.4.3 The Inspector’s Assessment of completeness of the Environmental Statements made it clear that all tangible environmental parameters with the potential to impact upon health have been satisfactorily addressed.
- 2.4.4 On the above basis, and as also noted in the Planning Officers report, no evidence of any tangible health risk has been raised by any party; no health objection has been raised by any statutory consultee, and the requested HIA was addressed through the submission of the Wellbeing and Health Report.

## 2.5 Scope of Evidence

- 2.5.1 In the absence of any evidence of a health, amenity or wellbeing impact from the proposed applications from any party; given that all tangible environmental parameters with the potential to impact upon health have been satisfactorily addressed; and that the Rhondda Cynon Taf Statement of Case lacks any mention of health or wellbeing (solely focusing on undefined amenity), the scope of my proof in relation to health is limited to signposting as to how and where health has been assessed and addressed, and where appropriate, provides additional narrative to the representations received since, or questions raised during the appeal process.

## 3 Health Assessment

### 3.1 Overview

- 3.1.1 This section of my proof of evidence signposts to the assessment performed, repeats the conclusions drawn, and offers additional context to address wider health concerns and residual risk perceptions.
- 3.1.2 As detailed below, the ES and Wellbeing and Health Report considered all the tangible changes directly attributable to key activities with the potential to influence health (both adversely and beneficially), including:
- (i) the potential health risk from changes in emissions to air;
  - (ii) the potential for community disruption from noise and vibration (including blasting); and
  - (iii) the potential health risk from road movements.

### 3.2 Air Quality

- 3.2.1 As detailed in the ES, the Wellbeing and Health Report, the Air Quality Proof of Evidence (APP6/1) and further noted by both the Planning Officer and the Public Health and Protection Division of the Environmental Services Group, current air quality remains well within air quality objective thresholds protective of health, and both applications can continue to operate well within objective thresholds protective of health.
- 3.2.2 Given the concerns raised, including local deprivation and associated sensitivity, a quantitative exposure response assessment was considered, where the Committee for the Medical Effects of Air Pollution offers exposure response coefficients for PM<sub>10</sub> and PM<sub>2.5</sub>. However, even when considering the maximum PM<sub>10</sub> annual mean process contribution at any receptor, assuming all PM<sub>10</sub> is PM<sub>2.5</sub> (applying the higher quantitative exposure response risk coefficient), and considering the highest burden of poor health in the region as a constant for all residents, the changes in emission concentration and exposure at any location remains orders of magnitude lower than is required to quantify any adverse health outcome.
- 3.2.3 Such a result is to be expected for an existing operation that has demonstrated that it would continue to remain significantly within air quality objective thresholds set to be protective of the environment and health, and coincides with the conclusions drawn by the Planning Officer, the Public Health and Protection Division of the Environmental Services Group and the Cwm Taff Health Board.
- 3.2.4 No party or individual has contested the findings of the air quality assessment demonstrating this, and no party has provided any evidence to the contrary. On this basis, I consider the assessment to be proportionate and robust.

### 3.3 Noise and Vibration

- 3.3.1 As detailed in Section 10 of the ES, following mitigation, the daytime noise impacts from typical activities would be below the suggested noise limits at all receptors. Temporary operations (including formation of screening landform) will comply with MTAN 1, and will not exceed 67 dB(A) for periods of up to 8 weeks in a year at noise sensitive receptors, and are largely constrained to daytime activity only.

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- 3.3.2 With regard to blasting, current operations comply with MTAN 1 and do not present a significant risk of ground vibration or air overpressure levels sufficient to constitute any discernible adverse health outcome, and are constrained to specific operational hours to minimise disruption and/or shock.
- 3.3.3 On the above basis, the potential impacts of noise and vibration from the proposed applications, are not of a sufficient nature, timing or magnitude to quantify any measurable adverse health outcome, or materially impact students at Cefn Primary School.
- 3.3.4 No party or individual has contested the findings of the assessment or presented any evidence to the contrary. On this basis, I consider the assessment to be proportionate and robust.

### 3.4 Road Safety

- 3.4.1 As detailed in the transport assessment (Chapter 13 of the ES), neither of the applications would materially alter current traffic flow rates, and of the accidents recorded in the last five years, none were associated with HGVs from the quarry.
- 3.4.2 The conclusion states that the proposed development would not result in a material impact on the existing and future operation of the immediate surrounding local highway network. Neither of the applications are anticipated to result in a material increase in traffic, with key immediate local links and junctions capable of safely continuing to accommodate the movements.
- 3.4.3 Risk of accident and injury is equally low, and does not necessitate mitigation in the form of highway safety improvements. This conclusion is mirrored in the Planning Officer's Report and by the local authority Highways Department, with the exception of the latter seeking a contribution towards road maintenance costs due to the extended period of operations at the site.
- 3.4.4 No party or individual has contested the findings of the assessment, presented any evidence to the contrary. I consider the assessment proportionate and robust.

### 3.5 Health Assessment Conclusion

- 3.5.1 All credible health concerns raised have been addressed and assessed in the original applications, where the sole remaining health issue is a perception of health risk, and an undefined amenity impact.

## 4 Conclusion

- 4.1.1 As already noted within the Officer's Reports to the Planning Committee and the Authority's Statements of Case:
- (i) All statutory requirements (subject to conditions) have been satisfied and all credible / tangible environmental and socio-economic aspects have been assessed without challenge by any regulatory authority.
  - (ii) No health objection has been raised by any of the regulatory authorities or statutory consultees.
  - (iii) No assessment gaps have been identified through wider community and interested party engagement.
  - (iv) The current facility holds an Environmental Permit, demonstrating operational compliance to standards set to protect the environment and health to the satisfaction of Rhondda Cynon Taf Borough Council.
  - (v) Rhondda Cynon Taf has withdrawn health and wellbeing as reasons for refusal, focusing on amenity, albeit undefined, unsupported and contrary to the evidence provided.
- 4.1.2 Overall, neither application presents any material risk to local health or wellbeing and are designed to minimise disruption to, or enjoyment of amenity, while maintaining direct, indirect and catalytic income and employment opportunities in an area displaying some of the highest socio-economic deprivation in Wales, and communities highly sensitive to changes in socio-economic circumstance.