12th September 2016

Helen Winsall
Principal Planning Officer
Rhondda Cynon Taf
Regeneration and Planning Division
Sardis House
Sardis Road
Pontypridd
CF37 1DU

Our Ref: 407.00027.00385
Your Ref: 15/0666/10

Dear Helen

CRAIG YR HESG QUARRY EXTENSION
RESPONSE TO HEALTH AND WELL BEING ISSUES

I refer to your e mail dated 10th August which sets out the responses you have received following the original planning application consultation, together with separate comments from Gareth Purnell on the report submitted in June 2016 as a response to 'Well-Being and Environmental Health Issues'.

We are in the process of collating a full response to the issues raised by consultees, and I will forward this to you under separate cover in the near future.

In the meantime, as suggested, we have prepared an updated version of the 'Well-Being and Environmental Health Issues' report which, where we deem appropriate, addresses the minor anomalies and requests for clarification referred to. I am enclosing two hard copies of the updated report together with an electronic copy which has been forwarded to you by email. The changes are relatively minor and we have retained the June 2016 date (albeit with now the correct date on the front cover). I would therefore be grateful if you regard this version as superseding that forwarded to you on 24th June and undertake consultations based upon this updated version.

In relation to consultations on this report, I note the approach you have suggested and the individuals and organisations you intend to consult, and I would be grateful if you could advise me as to when this consultation exercise will commence. No doubt you will let me know if the exercise raises any further issues upon which a response is required.

I therefore look forward to further progress with the application.

Yours Sincerely,
for SLR Consulting

Graham Jenkins
Technical Director

cc Mark Frampton

Hanson
HEIDELBERGCEMENT Group

CRAIG YR HESG QUARRY

Western Extension

Response to Public Consultation
Well Being and Environmental Health Issues

June 2016

Proposed Extension to Craig yr Hesg Quarry

Planning Application Ref 15/0666/10

Response to public consultation

Well being and Environmental Health issues

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CONTENTS

APPENDICES

1.0 INTRODUCTION

1.1 In May 2015 a planning application was submitted on behalf of Hanson UK to Rhondda Cynon Taff County Borough Council (RCT) which seeks planning permission for a western extension to Craig yr Hesg Quarry. The application also seeks permission to consolidate the current mineral planning permissions at Craig yr Hesg Quarry into one overall permission which would regulate quarrying, ancillary operations and restoration at the overall quarry site.

1.2 The application was accompanied by an Environmental Statement (ES) and technical appendices which set out the results of a comprehensive Environmental Impact Assessment (EIA). The scope of the EIA was defined by RCT as part of a pre application process whereby RCT confirmed the issues which should be addressed as part of the EIA. This was set out in a formal 'Scoping Opinion' (November 2014) and all issues set out in the Scoping Opinion were duly addressed as part of the EIA and included within the submitted ES.

1.3 The boundaries of the extension site are based upon proposals set out in the adopted RCT Local Development Plan (LDP) (March 2011) which identifies land to the west of Craig yr Hesg Quarry as a 'Preferred Area' for future extraction. This is the only 'preferred area' for future mineral extraction allocated in the LDP.

1.4 The LDP was subject to extensive public consultation from 2006, during which time the principle of an extension to the quarry was consulted upon by RCT. This culminated in a public examination of the draft LDP held between May and September 2010 which included a specific session on the Craig yr Hesg Quarry extension preferred area, and where members of the public attended and participated in the examination. Following a consideration of the representations, the Inspector concluded that the preferred area as identified was "pragmatic and sensible", the plan was sound, and that it should be adopted accordingly (reference Inspectors Report 7th February 2011, paragraph 12.4).

1.5 RCT as Planning Authority has undertaken wide ranging consultations with statutory bodies and other interested organisations on the May 2015 application, and via a press notice, site publicity and other community engagement measures they have invited comment on the application.

1.6 This has generated over 300 individual letters of objection, three letters of objection with multiple signatories; and a petition signed by 103 people. The objections raise a wide range of topics and issues relating to noise, blast vibration, particulate matter, dust, physical danger and general amenity concerns. In many cases the issues re-iterate the same general issues raised at a community consultation event held in March 2015 (discussed in section 2.0 below).

1.7 Following discussions between Hanson and RCT it has been agreed that Hanson should prepare a comprehensive response to the well being and environmental health issues which have been raised. The issues to be addressed have been informed by liaison between RCT, Public Health Wales, the Cwm Taf University Health Board, and representatives of Glyncoch (via Glyncoch Community Regeneration Ltd). This has culminated in the preparation of a schedule of themes, concerns and additional questions to which the Applicants have been asked to respond. The schedule is set out in a memorandum dated 24th February from the RCT Pollution and Public Health Manager. The memorandum is reproduced as **Appendix 1** to this Statement and this Statement provides the requested response.

1.8 The memorandum sets out a very comprehensive schedule of issues which the Applicants consider captures all issues which have been raised in the public responses to the planning application. In these circumstances, the Applicants have concluded that there would be no benefit in conducting a further programme of community consultation given that the views of those opposed to the development have already been fully articulated, and that it would now be more constructive to provide a formal response to assist RCT in their determination of the application.

1.9 However, Hanson has sought confirmation from the local community, via Glyncoch Community Regeneration Ltd, as to whether the schedule of themes and questions fully cover the issues of concern, or whether there are any additional issues which should be addressed. A letter dated 3rd March from Hanson's Planning Consultants SLR to Glyncoch Community Regeneration Ltd provided them with a copy of the 24th February RCT Memorandum and confirmed that Hanson were content to cooperate with the request to provide a response to the issues raised. The letter indicated that Hanson were keen to ensure that the response covered all issues of concern to the local community and thus sought confirmation as to whether the 24th February Memorandum covered all the issues or whether there were any other issues, themes or questions which should be addressed. The letter sought a response by 18th March to allow progress to be made and confirmed that in the absence of a reply it would be assumed that the issues set out in the RCT memorandum of 24th February could be regarded as an agreed basis for the requested response from the Applicants. A copy of the letter is produced as **Appendix 2**.

1.10 No reply was received and this Statement has been prepared on the understanding that all interested parties thus agree the issues to be addressed.

1.11 The underlying theme of the requested study is to develop the existing EIA and ES, which considers potential environmental and amenity impacts on the list of topics agreed via the EIA scoping exercise, into a wider study which focuses on the health and well being of the community. The study also provides a mechanism whereby the existing proposed mitigation measures can be drawn together into one document, and where any additional measures arising from the study which might further address concerns can be included in Hanson's proposals.

1.12 The Statement has thus been structured to:

(i) Summarise the community consultation which has been undertaken;

(ii) Detail the environmental controls, mitigation measures, monitoring proposals, and general environmental and amenity protection measures set out in the planning application and ES;

(iii) Highlight the amenity benefits of the scheme as set out in the application;

(iv) Provide a response to the themes, issues and questions set out in the RCT memorandum;

(v) Identify additional mitigation measures in response to the identified concerns; and

(v) Provide a holistic overview of the health and well being concerns and conclusions which can objectively be drawn.

2.0 COMMUNITY ENGAGEMENT

2.1 Prior to the submission of the May 2015 extension planning application, an exhibition of the draft scheme was held at the Glyncoch Community Centre on 31st March 2015. Letters were sent to key stakeholders inviting them to attend the exhibition, and a leaflet was distributed to all properties in Glyncoch setting out a summary of the draft development scheme, and publicising the exhibition date and time. The exhibition was attended by over 100 individuals who were able to discuss the scheme with representatives on Hanson.

2.2 The main themes expressed by those who attended the exhibition related to concerns regarding noise, blast vibration and dust. Discussions took place during the exhibition regarding these topics, where the Hanson representatives emphasised the measures which are in place at the existing quarry to minimise the identified impacts, and which would be available as part of the extension development. Other specific mitigation measures associated with the extension development were explained, as discussed further below.

2.3 It was emphasised at the public exhibition that there would be a further period of consultation following the submission of the planning application, and that members of the public would have the opportunity to express specific comments at that stage in the context of the detailed information which would be available in the planning application and ES.

2.4 A summary of the community engagement exercise is set out in chapter 9.0 of the Planning Application Statement (May 2015), which highlights the key issues raised at the exhibition, and the preliminary responses provided by Hanson.

COMMUNITY ENGAGEMENT 2

3.0 PLANNING APPLICATION AND EIA

3.1 The planning application was submitted in May 2015, accompanied by a Planning Application Statement which incorporated application plans illustrating the details of the proposed development; an Environmental Statement (ES) (Volume 1) setting out the results of the EIA; a volume of Technical Appendices to the ES (Volume 2); and a Non-Technical Summary of the ES (Volume 3).

3.2 As required by the RCT Scoping Opinion, the EIA and ES addressed the full range of potential environmental and amenity issues which might be associated with the development including, of relevance to this response report, the topics of noise, blast vibration and air quality, but also wider issues associated with health and wellbeing, including landscape enhancements, the provision of additional access to the countryside, and bio-diversity proposals.

3.3 A key element of the project design, and the principal component of the mitigation strategy, is the proposal to construct a landscaped screening landform around the eastern and northern boundaries of the extension area, prior to the commencement of extraction within the extension area. A soil screen bund would also be constructed along the western boundary of the extension area, again prior to the commencement of extraction within the extension area. This is designed to fully enclose the quarry operational area, and provide substantial noise and visual screening.

3.4 The approach to the technical studies of noise, blast vibration and air quality has been to assess whether the development could proceed in accordance with government advice and standards, notably:

1. **Noise**. For reasons explained in the ES, the recommended Mineral Technical Advise Note 1: Aggregates (MTAN1) limits for noise are achievable at all properties with the exception of Cefn Heulog, where a limit of 45dB$_{LAeq}$ was proposed. The Public Health and Protection Division of RCT has indicated that consistent with the advice in MTAN1, noise limits should be set at no higher than background noise levels plus 10dB irrespective of whether there are currently very low background noise levels, but the limit can be adjusted to ensure that a daytime limit is not lower than the recommended MTAN1 night-time limit of 42 dB$_{LAeq}$. If a planning condition is imposed with a limit of 42 dB$_{LAeq}$ at Cefn Heulog then the limits at all properties would be consistent with the limits recommended by MTAN1.

2. **Blast vibration**. The ES confirms that as is the case with the current quarry operations, the extension development could proceed in accordance with the recommended ground vibration limits set out in MTAN1.

3. **Air Quality**. The ES similarly confirms that the extension development could proceed well within the National Air Quality Objectives designed to protect public health, and within typical thresholds for dust deposition which might constitute a nuisance (albeit there are no UK statutory or recommended levels of dust deposition which constitute an acknowledged nuisance).

3.5 The respective ES studies conclude that, with mitigation measures in place (discussed in Section 4.0 below), the development could proceed:

1. In accordance with the noise limits which have been proposed in the ES, and which Hanson deem appropriate to protect residential amenity and activities

within Cefn Primary School, albeit, as noted above, RCT have suggested a lower limit at one property.

2. In accordance with the blast vibration limits which have been recommended, which are consistent with limits currently in force at the existing quarry, and where the ongoing operation has demonstrated its ability to adhere to the required limits, and indeed operate well within the limits, (as discussed in Section 8.3 below); and

3. In a way which would not give rise to unacceptable air quality or dust effects, noting that there have been no breaches in the air quality objectives as monitored at receptor monitoring stations in Glyncoch, and where mitigation measures are available to ensure that any effects associated with nuisance dust are minimised.

3.6 The planning policy requirement at the time of the submission of the planning application, as set out in the then extant Mineral Planning Policy Wales (MPPW), is now reiterated in Planning Policy Wales (PPW) (January 2016), namely that "*wherever possible any mineral working should avoid any adverse environmental or amenity impact: where this is not possible working needs to be carefully controlled and monitored so that any adverse effects on local communities and the environment are mitigated to acceptable limits"* (reference PPW paragraph 14.1.1).

3.7 PPW continues by emphasising that it is likely that society needs, and will continue to need for the foreseeable future a wide range of minerals. The essential role of Mineral Planning Authorities in relation to mineral working is to ensure that a proper balance is struck between that fundamental requirement...and the protection of existing amenity and the environment. It then sets a number of key principles, including to "*protect human health and safety by ensuring that environmental impacts caused by mineral extraction and transportation are within acceptable limits.....*" (reference PPW paragraph 14.1.2).

3.8 The requirement is thus not to eliminate impacts (which in practical terms would not be feasible with any mineral extraction development by virtue of the nature of the activity), but rather to ensure development proceeds "within acceptable limits" and in so doing, "protect human health".

3.9 The starting position is that the ES concludes that the development could proceed in accordance with the limits which have been proposed by Hanson, which are founded upon what Hanson consider to represent "acceptable limits" in the context of the policy advice set out above. This is re-enforced by the series of environmental control and commitments embedded in the ES as mitigation measures, but reproduced in Section 4.0 below for ease of reference.

3.10 The schedule catalogues the in built design mitigation measures, specific mitigation measures which have been recommended, existing mitigation measures in place at the current quarry which are deemed to work effectively, and a series of 'good practice measures' which are enshrined in Hanson company procedures. This serves to highlight the attention to detail in designing the development scheme and related mitigation measures, and the commitment of Hanson to ensuring that the development proceeds in a way which minimises impact.

4.0 ENVIRONMENTAL CONTROLS AND COMMITMENTS

4.1 The ES provides an assessment of the environmental effects of the development on a topic basis, with the respective chapters confirming the mitigation measures which would be employed to minimise the environmental and amenity effects of the development. The ES also highlights the positive amenity benefits associated with the landscape and countryside access proposals.

4.2 The chapters highlight a series of well-established and effective mitigation measures and commitments, the majority of which are already employed at the existing quarry as part of conventional good-practise measures. These issues have been brought together in a schedule of monitoring, mitigation measures and commitments summarised in Table 4.1 below.

4.3 If permission is granted for the development, then it is anticipated that RCT will wish to impose planning conditions, or if appropriate require a Section 106 Agreement, which will require the monitoring, mitigation and environmental commitments to be implemented as proposed.

4.4 Whilst the majority of the items are capable of being translated into planning conditions, certain items are controlled by separate legislation and requirements, and it would not be appropriate to impose planning conditions which duplicate controls relating to these issues. This applies in particular to the quarry and roadstone coating plant permit and the discharge consent permit.

4.5 In addition, a number of items relate to site management controls carried out independently by Hanson, but they are included in the schedule for completeness to demonstrate the attention to detail which has underpinned the development scheme, and the underlying objectives to minimise environmental and amenity effects.

4.4 Section 9.0 of this report itemises a additional commitments which stem from feedback on environmental health and wellbeing issues and which respond to specific concerns and suggestions which have been made as part of the public consultation response. These are identified separately to illustrate the positive response to the concerns which have been raised, and the way in which these could be addressed.

Table 4.1: Schedule of Mitigation Measures/ Environmental Commitments

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS
General Management Measures	
	(i) **Quality Management System and Environmental Management System** in place at the quarry, the latter accredited to the international standard ISO14001, which includes pro-active management systems to minimise environmental and amenity impacts and which require strict adherence to the terms of the planning permission and Permits. (ii) **Planning Conditions Monitoring**: there is provision in Regulations for a programme of regular monitoring visits to be undertaken by RCT Officers, at Hanson's cost, to check adherence to requirements of planning conditions.

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS
	(iii) **Quarry Plant Pollution Prevention and Control Permit Monitoring**: programme of regular monitoring in place by RCT Officers to check adherence to the requirements of the permit and assess the 'risk rating' of the installation.
Site Management Measures	
	(i) **Daily visual assessment of emissions,** on an internal Hanson pro-forma (**Appendix 3**) which includes the dust extractor stack; water sprays; process buildings; conveyors; dust shed; stockpiles; loading; haul roads, wheel wash, and entrance road / exit (including sprays), with a record of any action required, action taken, and date completed, all recorded daily.
	(ii) **Daily general site inspection checklist,** again on a Hanson pro-forma (**Appendix 4**) which includes inspections of haul roads, edge protection, emissions, site security, compliance with internal traffic management, and adherence to vehicle sheeting requirements, with a record of any action required, action taken, and date completed, all recorded daily.
	(iii) **Weekly general site inspection checklist,** again on a Hanson pro-forma (**Appendix 4**) which includes inspections of signs, condition of structures, and cleanliness of site entrance notice board with a record of any action required, action taken, and date completed.
	(iv) **Complaints Register:** all complaints are logged, investigated, actioned as appropriate, and the complainant notified of the outcome, with a full written record retained.
Landscape and Visual Effects	
	(i) Screening landform to be established along the eastern site and northern boundaries, to be tree-seeded which, together with natural recolonisation, would create a new woodland corridor linking with adjoining woodland.
	(ii) Soil screen bund to be established along western site boundary with natural woodland recolonisation forming an additional woodland corridor parallel to Darren Ddu Road.
	(iii) Screening landform and soil screen bund to be in place prior to the commencement in quarrying in the extension area.
	(iv) Use of stone from partly collapsed dry stone walls to create new drystone wall along north eastern side of site, linking with existing walls.
	(v) Placement of perimeter security palisade fence on the inner quarry side of the screening landform and soil bund to reduce the prominence of the fence
	(vi) Retention of corridor of land parallel to Darren Ddu Road to provide an enhanced woodland corridor
	(vii) Quarry extension scheme to progress in phases which would delay the development of the full footprint of the site.
	(viii) Hanson will endeavour to maintain the non-operational land in grazing until required for extraction, and Hanson will end any anti-social unauthorised use of this land (e.g. quad biking and motor bike

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS
	scrambling).
Countryside Amenity / Community Benefits	
	(i) Offer to dedicate 4.6 hectares of land to RCT south of the extension area as an extension to the Craig yr Hesg Local Nature Reserve
	(ii) This would follow the previous gift by Hanson in 1993 of 40 acres of land at Craig yr Hesg to the predecessor authority Taff Ely Borough Council which now comprises the Craig yr Hesg Local Nature Reserve.
	(iii) This would reinforce the amenity use of the additional area via the permissive paths which have been established which link to adjoining rights of way, and the access to a standing stone viewing point.
	(iv) Proposed woodland along northern and eastern boundaries of extension area would link with existing established woodland to provide new attractive woodland corridor.
	(v) New drystone wall would add landscape structure and character to the localised area.
	(vi) Proposed new right of way from Glyncoch westwards along northern site boundary to link with existing right of way at Darren Ddu Road and the network of footpaths beyond (no formal public access to the extension site/countryside beyond is presently available to the west of Glyncoch).
	(vii) Indirect link to Pontypridd circular walk.
Ecology	
	(i) Restoration strategy designed to improve biodiversity interest with a range of new habitats at the site to offset the loss of the relatively low value habitats within the extension area.
	(ii) Restoration strategy for extension area designed to complement the approved concept restoration scheme for the wider site, which includes: • Woodland creation on northern and eastern screening landform to create habitat linkage to adjoining woodland. • Natural woodland regeneration along western screen bund corridor to strengthen habitat associated with Craig yr Hesg wood and Darren Ddu Road corridor. • Regeneration/acid grassland around screening bunds using topsoils / turves from extension area; • Natural regeneration of pioneer vegetation and grassland communities on quarry benches; and • Habitat variety provided by bare rock / scree slopes.
	(iii) Small area of application site within Craig yr Hesg SINC (Site of Importance for Nature Conversation) excluded from extension operational area.
	(iv) Restoration land uses will provide enhanced habitats for bats and invertebrates.

ENVIRONMENTAL CONTROLS AND COMMITMENTS 4

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS
	(v) Reptile Mitigation Strategy to be implemented to capture and relocate reptiles.
	(vi) Vegetation removal to be undertaken outside bird nesting season (March to August)
	(vii) Watching brief to ensure no disturbance to Peregrine falcon within the existing quarry.
Agriculture and Soil Resources	
	(i) All soils to be retained on site and used sustainably for the proposed northern and eastern screening landform, western screen bund and amenity / nature conservation based restoration land uses.
	(ii) This will ensure that the proposals which are designed to deliver countryside enhancements and well being benefits are achievable and deliverable.
Hydrology and Hydrogeology	
	(i) Modern system of 8 x surface water settlement lagoons in place within plant site area.
	(ii) Discharge from lagoons regulated by NRW permit (reference AF4029191) which imposes limits on discharge rates at various flows, and on suspended solids.
	(iii) Detailed controls in place via current planning conditions to ensure no surface or groundwater contamination from fuel oil spillage (reference condition 35 of 08/1380/10)
	(iv) Drainage measures implemented on upgraded access road to ensure no surface water flow onto the public highway (reference conditions 9 and 10 of permission 13/1039/10).
	(v) Surface water and drainage plan proposed to accommodate water from the extension area.
Noise	
	(i) The plant compliment will be modern machinery designed to minimise noise levels during operations.
	(ii) The plant will also be properly maintained in accordance with the manufactures instructions.
	(iii) 'Smart' warbling or broadband reversing alarms will be fitted to all mobile plant, to avoid the use of reversing bleepers.
	(iv) Noise during the construction and removal of storage mounds will be reduced, wherever practicable, and the temporary operations during which noise levels may be elevated will be undertaken over a short period of time (maximum of 8 weeks).
	(v) The existing noise management plan for the current quarry will continue as part of the extension development as follows (a) Review the condition of plant cladding and repair/replace where

ENVIRONMENTAL CONTROLS AND COMMITMENTS 4

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS
Maintenance Items	necessary (b) Review the condition of the chute work and rubber lining and repair/replace where necessary (2 monthly) (c) Inspect all haul roads for potholes etc (monthly) (d) Review performance of the asphalt plant stack attenuator once operational (annually) (e) Quarry vehicle to have reversing warblers not bleepers.
Procedural items	**(vi)** Quarry primary crusher not to start before 0700
	(vii) Road sweeper not to be used on public highway at quarry entrance / exit before 0700
	(viii) Any noise complaints received must be recorded on the Hanson complaints log system
	(ix) Driver guidelines sheet to be regularly issued especially during any sustained operations for the production of coated roadstone outside the normal quarry operational hours (reference condition 14 of 08/1380/10)
	(x) Machines which are in intermittent use will be shut down in intervening periods, or throttled down to a minimum.
	(xi) Plant will be operated in an efficient and responsible manner with respect to the minimisation of noise emissions e.g. by minimising drop heights of materials when loading, and avoidance of unnecessary revving of engines etc.
	(xii) All internal hall roads will be kept well maintained with speed limits imposed to reduce vehicle speeds and minimise noise from e.g. "body slap" from empty vehicles.
	(xiii) Regard will be paid to the choice of rock drill to be used to ensure that the noise limits imposed can be adhered to.
	(xiv) Quarry benches to be maintained with a minimum face height of 7m (and the maximum of 15m) to provide a noise barrier.
	(xv) Planning conditions could be imposed to restrict the time for drilling on the uppermost rock head to 10.00 – 1600 Monday to Friday.
	(xvi) Screening landform and western soil bund to be constructed as a temporary operation over a maximum period of 8 weeks.
	(xvii) Existing noise monitoring scheme (ref condition 2 of 08/1380/10) to be updated to include monitoring at the following properties: • 36 Conway Close • 3 Pen y Bryn • 113 Garth Avenue • 1 Rogart Terrace • Cefn Heulog • Cefn Primary School (reference ES May 2015 Table 10 – 4).
Blast Vibration	

ENVIRONMENTAL CONTROLS AND COMMITMENTS 4

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS
	(i) All blasting to be designed to ensure adherence to the blast vibration limits set out in Condition 23 of 08/1380/10, namely blasting to be undertaken to ensure that ground vibration does not exceed a peak particle velocity (PPV) of 6mm per second in 95% of all blasts measured over any continuous 6 month period, with no single blast to exceed a PPV of 10mm per second.
	(ii) Separate vibration criteria levels have been set for utility services (water main) to ensure no loss of integrity, with blasting to be designed to comply with a limit of 75mm per second peak particle velocity.
	(iii) Maximum use to be made of electronic initiation system for blasting, which has been demonstrated at Craig yr Hesg to reduce ground vibration levels compared to historic blasting practice.
	(iv) All blasts to be designed with charge weights to ensure adherence to the blast vibration limits which are proposed.
	(v) Current air overpressure limit of 120dB imposed as Condition 24 of 08/1380/10 could be re-imposed for the extension development or alternatively a best practice scheme for the minimisation of air over pressure would be prepared and adopted which is the approach recommended in MTAN1.
	(vi) Blasting times (10.00 – 1400 are clearly advertised at the quarry)
	(vii) All blasts will continue to be designed to follow the advice in the DETR report on the environmental effects of production blasting from surface mineral workings, namely: 1. Making accurate surveys & recording of blast area as per the Quarries (Explosives) Regulations 1988. 2. Ensuring correct blast design including correct relationship between burden, spacing and hole diameter. 3. Ensuring accurate drilling, keeping sub-drill to the minimum required. 4. Making accurate surveys & recording of blast holes as per the Quarries (Explosives) Regulations 1988. If necessary, blast design would be revised in light of survey data. 5. Maximising use of free faces including by careful planning of delay sequences. 6. Optimising maximum instantaneous charge weight by: • Reducing number of holes; • Reducing instantaneous charge by decking charges (if necessary); • Reducing bench height or hole depth; • Reducing borehole diameter. 7. Optimising blast ratio in any changes to design. 8. Where practicable ensuring direction of detonation away from

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS	
		sensitive areas. 9. Wherever possible use of unconfined charges would be avoided particularly where fissures or broken ground or weaken of rock from previous blasting is known to be present. 10. Wherever possible the use of surface lines of detonating cord would be avoided. All surface detonators and explosives would be adequately covered with suitable material. 11. Stemming material would be of sufficient quality and quantity to confine adequately all explosives upon detonation. A coarse stemming material such as angular chippings should be considered. Drill fines would not be used. 12. Bottom initiation would be considered in preference to top initiation. 13. Misfire procedures would have due regard to under-burdened charges. 14. If air overpressure is found to be a potential problem consideration would be given to reducing blast panel area. 15. Blasting would be undertaken at regular times. 16. Ground and airborne vibration levels would be monitored regularly so that information may be employed into any necessary modifications of future blast designs.
	(viii)	All blasts will continue to be monitored at nearby sensitive properties.
	(ix)	Once blasting encroaches to within 80m of the water main, additional monitoring on top this pipeline should be commenced to provide practical data to aid future blast designs
Air Quality		
General Management	**(i)**	All operations to be conducted to reflect best practice guidelines appended to the Environmental Effects of Dust from Surface Mineral Workings (DOE 1995).
	(ii)	All operations associated with processing and secondary treatment of aggregate will be undertaken in accordance with the existing environmental permit conditions.
	(iii)	All operations will accord with the Hanson Environment Management System.
	(iv)	The Emissions Action Plan (reference ES May 2015 Appendix 12.1) to be fully implemented and monitored for effectiveness
	(v)	Hanson to liaise with RCT to deliver any other changes or improvements which can be made to minimise the impact of dust
Mitigation Measures Soil Handling and Restoration	**(vi)**	Soil handling to be undertaken during appropriate weather conditions

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS	
	(vii)	Soil handling particularly in the extension area closest to Conway Close will be suspended when wind conditions are likely to result in dust being carried off site.
	(viii)	Water Bower to be used on stripped surfaces or other areas of bare ground to minimise effects of wind blow
	(ix)	Screening landform to be seeded at the earliest opportunity to bind the surface
	(x)	Drop heights from excavator to be minimised
	(xi)	Dry surfaces at highest point of quarry to be treated as necessary with rain gun attached to water bowser
	(xii)	Material to be used to construct screening landform to be conditioned with water to avoid drying out and disturbance by wind
Haulage	(xiii)	Main access route to be conditioned as necessary by water bowser and / or emplaced fixed water sprays under dry conditions (noting that there are currently four fixed water sprays on the access road).
	(xiv)	Routes to be provided which avoid abrupt changes in horizontal and vertical alignment.
	(xv)	Regular compaction, grading and maintenance of haul routes.
	(xvi)	Speed limit of 10mph to be enforced.
	(xvii)	All site vehicles to be fitted with upswept exhausts and radiator fan shields.
	(xviii)	Dump trucks to be evenly loaded to prevent spillage.
Transportation		
	(i)	No changes proposed to recent/historic rates of output as a consequence of the extension development.
	(ii)	Historic quarry access closed (except for emergencies) and replaced by new two-way access/entrance which is now fully commissioned (reference planning permission 13/1039/10).
	(iii)	All HGVs to pass through wheel wash before exiting the site.
	(iv)	All loads carrying -75mm stone to be sheeted.
	(v)	Road sweeper to be utilised on quarry access / entrance road as required.
	(vi)	Surface water drainage arrangements on access / entrance road to be monitored and maintained as appropriate.
	(vii)	Areas of hardstand and paved roads within the site will be regularly cleaned to minimise the risk of dust leaving the site.
	(viii)	All surfaced site roadways will be kept clean or damp by means of a water bowser.

ISSUE	MONITORING / MITIGATION MEASURES / COMMITMENTS
	(ix) Access road / site entrance cleaned with a road sweeper when necessary and in response to any complaints regarding mud or other detritus on the public highway.
Cultural Heritage	
	No known heritage assets within the extension area, but archaeological monitoring to be undertaken in the form of an archaeological watching brief during soil stripping.

5.0 AMENITY BENEFITS

5.1 The consideration of the health and well being effects of the proposed development has a wider dimension than the potential negative effects for which operational and physical mitigation measures are required. There are also beneficial effects which can positively assist both health, via the encouragement of outdoor pursuits and access to the countryside for informal recreation and well being via positive landscape and biodiversity enhancements which can be included within development proposals.

5.2 In this instance, plan ref CYH/E6 which accompanied the application confirms a series of countryside amenity benefits which would be associated with the development. These include the possible dedication of some 4.6 hectares of land south of the extension area adjoining the north western boundary of the Craig yr Hesg Local Nature Reserve which could be gifted to RCT Council as an extension to the Nature Reserve. This would follow the previous gift by Hanson in 1993 of 40 acres of land at Craig yr Hesg to the predecessor authority Taff Ely Borough Council which now comprises the Craig yr Hesg Local Nature Reserve. The additional area lies within the boundaries of the Craig yr Hesg / Lan Wood Site of Importance for Nature Conservation and would form a logical extension to the adjoining Local Nature Reserve.

5.3 The plan also highlights the proposed woodland which would be established along the northern and western boundaries of the extension area which would link with existing established woodland to provide a new and attractive woodland corridor. This landscape enhancement would be supplemented by the creation of a new drystone wall along the outer edge of the screening landform which would link with existing drystone walls and add landscape structure and character to the localised area.

5.4 At present there is no formal access to the countryside to the west of Glyncoch, albeit it is recognised that members of the public do use the land for dog walking and occasionally for more disruptive uses such as motor bike scrambling etc. These uses are not authorised on private land but to positively facilitate controlled access, the proposals make provision for a new right of way from Glyncoch westwards to link with existing rights of way at Darren Ddu Road and the network of public footpaths beyond. This includes an indirect link to the Pontypridd Circular Walk, and would provide a valuable additional local amenity.

5.5 These are positive benefits which could encourage outdoor activity, assist in the undertaking of healthy pursuits, and provide a series of enhanced accessible local amenities.

AMENITY BENEFITS 5

6.0 ECONOMIC BENEFITS

6.1 At the community consultation, a number of attendees noted that the quarry was not a particularly large employer and that very few local residents were employed at the quarry. These points were acknowledged but the economic benefits need to be considered in a wider context than local employment.

6.2 Welsh Government Planning Policy, as set out in Planning Policy Wales (PPW) (8: 2016) confirms that "*it is essential to the economic health of the country that the construction industry is provided with an adequate supply of the minerals it needs*...(and)....*the importance to the UK of aggregates should be taken into account when planning applications are being considered*....(para 14.8.10). 'Economic health' thus needs to enter the overall balance as part of the decision making process, with PPW specifically requiring Local Planning Authorities "*to ensure that the economic benefits associated with a proposed development are understood and that these are given equal consideration with social and environmental issues in the decision making process, and should recognise that there will be occasions when the economic benefits will outweigh social and environmental considerations*" (re PPW para 7.2.2).

6.3 Craig yr Hesg Quarry directly employs 19 personnel with a further 10 indirect personnel associated with haulage, maintenance and servicing etc, with between 50 and 60 external hauliers collecting material from the quarry. The annual wage bill at the quarry is some £700,000 with expenditure on contractors of around £345,000 per annum. Expenditure on spares and repairs / maintenance etc amounts to an average of over £800,000, predominantly spent on businesses with Offices in South Wales. Expenditure on plant hire amounts to an average of over £130,000 per annum, again predominantly spent with businesses with Offices in South Wales. Business rates payable to RCT average £88,000 per annum. The quarry thus directly and indirectly injects over £2 million per annum into the local economy.

6.4 Sales of stone from the quarry attracts 'aggregate tax' which is paid to the exchequer at a rate of £2.00 per tonne, but where a proportion of the tax is made available to Welsh Government as an 'aggregate levy fund' which is used to finance local community projects in the general vicinity of quarries. The notable example at Craig yr Hesg is the £403,000 award from the aggregates levy fund which was used to assist the building of the Glyncoch Community Centre which is used for a wide variety of functions and classes (as discussed further in paragraph 8.8.14 below).

6.5 The Planning Application Statement which accompanies the application highlights the importance of the high specification aggregate at Craig yr Hesg, which is the only sandstone quarry in RCT, and one of a very small number of quarries in Wales and indeed the UK able to produce high specification aggregate capable of meeting exacting requirements for road construction and surfacing. For this reason, the aggregate is used not only on recent local projects such as the Porth By Pass, Church Village By Pass, A470 and M4 re-surfacing, but it is also transported over distance in South Wales, the Midlands and Southern England, emphasising the quality of the stone and the importance of the quarry in UK terms.

6.6 More generally, a recent research report by the Welsh Economic Research Unit of the Cardiff Business School highlights that the mineral industry in Wales provides direct employment to around 3,800 people, generating sales of £650m. It also indicates that a further 2000 people are indirectly employed supporting the sector. It plays a vital role in supporting the Welsh construction sector which has a turnover of £3 billion and provides 88,000 jobs. The study also notes that whilst Welsh mineral products support

local projects, some high value minerals are exported further afield across the UK. These include high polished stone value (PSV) sandstone used in road surfacing which, because of its skid resistance qualities, offers significant road safety benefits (such as those available at Craig yr Hesg). This reflects the importance of these minerals to the UK economy.

6.7 Craig yr Hesg Quarry thus plays an important part in providing high quality aggregate to construction projects and is acknowledged as a resource of UK importance. It also supports employment with direct and indirect employment, spending on services, and it makes an important direct contribution to local business rates, and an indirect contribution to the exchequer via taxation. These issues combine to indicate that, overall, the quarry delivers important economic benefits to which national planning policy affords equal weight as social and environmental issues.

7.0 PUBLIC RESPONSE TO PLANNING APPLICATION

7.1 At the time of drafting this statement, there have been some 320 individual objections to the development, with a number of standard letters signed by a number of individuals, a petition signed by 103 persons, and a series of individual letters raising a range of objections and concerns associated with noise, dust, air pollution, health implications, blast vibration, traffic, ecology, landscape/visual effects, as well as more general concerns.

7.2 The weight to be afforded to these objections will be a matter for RCT when it determines the application. However, the determination will need to be set in the context of (a) the allocation in the LDP of a preferred area for quarrying, where the principle of extraction has been accepted by the Authority and endorsed by an independent Inspector following a public examination of the LDP, and (b) the consideration of wider planning issues, including the amenity benefits and economic importance of the quarry, as highlighted in Sections 5.0 and 6.0 above.

7.3 Hanson takes issue with the objections which have been raised, which do not appear to pay regard to the mitigation measures which have been proposed, and where the proposed measures in part reflect issues raised in the community consultation exercise. Hanson remains of the view that the comprehensive suite of mitigation measures which are proposed (ref Table 4.1above) would be successful in mitigating the effects to within "acceptable limits" when measured against objective criteria.

7.4 This view is re-enforced by the outcome of the recent Environment Act ROMP Review (2013) of the planning conditions regulating operations at the existing Craig Yr Hesg Quarry (ref 08/1380/10, April 2013). The schedule of conditions issued by RCT includes 48 conditions which reflect up to date and modern controls over the full range of environmental and amenity issues associated with the ongoing operation. In drafting the final conditions, RCT were satisfied that the conditions, both individually and cumulatively were appropriate and sufficient to ensure that the operations continues with adequate safeguards regarding environmental, amenity and well being issues. These same conditions, which are deemed to be adequate to regulate operations at the existing quarry could, where relevant be imposed on an extension / consolidation permission supplemented by additional conditions where appropriate.

7.5 Thus, whilst Hanson consider that they have addressed the key issues via the EIA which has been undertaken (where, as noted above the issues to be addressed in the EIA were prescribed in advance in a formal scoping opinion from RCT), they are keen to respond to the issues in a constructive way which will hopefully assist RCT in the decision making process.

7.6 Following discussions with RCT, the main aspects of this approach are to:

(i) Draw all the mitigation measures together in one place to allow interested parties to view the commitments as a complete package;

(ii) Review all health and wellbeing issues, themes and additional questions which have been raised via a proportionate response which recognises perceptions, but ultimately provides a response in the context of objective criteria; and

(iii) Use the analysis positively to identify any further measures or initiatives which might further minimise effects and assist in allaying public concerns.

7.7 The exercise has been assisted by RCT who have engaged with the community via Glyncoch Community Regeneration, Public Health Wales, and Cwm Taf University Health Board in drawing up a comprehensive schedule of issues, themes and additional questions. These are addressed in turn in Section 8.0 below, with Section

9.0 drawing together the additional mitigation measures and commitments which stem from the response. A summary and overall conclusion is provided in Section 10.0.

8.0 PUBLIC HEALTH AND WELL BEING ISSUES

8.1 Introduction

8.1.1 The memorandum dated 24th February 2016 produced by RCT identifies a number of themes from the public consultation on the application, supplemented by further feedback from interested parties. The themes are amplified by reference to specific concerns under each of the theme headings and by a series of additional questions devised by the Officers of RCT which they consider should be addressed. These additional questions have not specifically been raised by member of the public, but the Officers consider that they represent helpful questions which when read in conjunction with the themes and issues might assist the response and prompt the identification of additional mitigation measures.

8.1.2 In that respect, one of the recurring aspects of the additional questions is the reference to possible measures to facilitate and improve communication with the local community, and extend the dissemination of information. Hanson has responded positively to this, and proposes to set up an enhanced Craig yr Hesg Quarry website which will allow the regular posting of information regarding operations at the quarry. This is referred to in a number of the subsections below, and together with other initiatives proposed, it is hoped that it will be of assistance in providing advanced notification of activities, and thereby avoid operations taking place which may give rise to concern simply because they are unannounced (albeit permitted as part of the quarry operation) In essence, the approach will be to seek to allow the community and quarry to co-exist with a greater flow of information between the two, and in a way designed to reduce anxiety founded on a lack of knowledge of the quarry and related activities.

8.1.3 The requested approach of the 24th February memorandum is to consider the relevant 'additional questions' alongside the identified themes and concerns in producing a theme (topic) based response, and then an overall impact response. The remaining sub-sections of this chapter have been drafted accordingly, using the theme order set out in the February 2016 memorandum.

8.2 Noise

8.2.1 The concerns are identified as general noise (disrupting vulnerable groups and older people); unpredictability of noise occurrence and duration; blasting noise adversely affecting vulnerable groups (i.e. residents with angina); blasting noise causing disturbance; and noise preventing use of outdoor space.

8.2.2 The additional questions seek consideration of the possibility of greater education and notification of when blasting will happen; when higher noise activities will take place (e.g. bund construction, top bench work etc.); additional practical measures to reduce noisy activities at more sensitive times (avoiding noisy work on weekends etc.); and a review of noise monitoring and feedback (including an effective complaints procedure) to enable continued improvement.

8.2.3 The noise study reported in Chapter 10.0 of the ES adopts a conventional approach to a noise assessment by measuring existing background noise levels; proposing noise limits for operations associated with the extension development; designing mitigation measures to ensure adherence to the proposed noise limits; and recommending planning conditions setting out the limits to be adhered to for normal and temporary operations undertaken in the extension area. Reference has also

been made to the current noise limits in place at the quarry, and the opportunity presented by the proposed eastern screening bund to recommend a lower noise limit at Conway Close (46 dB_{LAeq}) compared to the current noise limit of 49 dB_{LAeq} (reference Condition 18 of 08/1380/10).

8.2.4 The ES concludes that the recommended MTAN1 limits for noise are achievable at all properties with the exception of Cefn Heulog, where a limit of 45dB_{LAeq} was proposed. This recommended limit was based upon the fact that a site noise limit based upon average day time background noise levels (31dB_{LA90}) plus 10dB would provide a daytime noise limit of 41dB_{LAeq} which would be below the MTAN1 fixed night-time limit of 42dB_{LAeq}. It would also be below the lowest limit of 45 dB_{LAeq} for external teaching areas at the nearby Cefn Primary School (ref BB93 '*Guideline noise levels for external teaching areas*'). Nevertheless, the Public Health and Protection Division of RCT has indicated that noise limits should be set at no higher than background noise levels plus 10dB irrespective of whether there are currently very low background noise levels. They have however indicated that the limit can be adjusted to ensure that a daytime limit is not lower than the recommended MTAN1 night-time limit of 42 dB_{LAeq}. If a planning condition is imposed with a limit of 42 dB_{LAeq} at Cefn Heulog then the limits at all properties would be consistent with the limits recommended by MTAN1.

8.2.5 The proposed mitigation measures already embraces suggestions set out in the 'additional questions', notably the opportunity to restrict the time of drilling when working on the uppermost quarry level to between 10.00 and 16.00 (Mondays to Fridays). However, the suggestions in the additional questions are constructive, and in response Hanson propose further operational mitigation measures as follows:

(i) All blast dates and approximate times of blasting will be set out on the enhanced website (albeit the precise time of the blast will be subject to operational and safety factors);

(ii) Direct notification of blast times can be provided to the local community, either via Glyncoch Community Regeneration, or named concerned individuals via emails;

(iii) All complaints (whether noise or any other topic) are recorded, investigated, actioned, and the complainant notified. This follows established procedures, noting that there were no recorded noise complaints in the three year period up to the date of submission of the May 2015 application..

(iv) All new / unusual activities will be reported in advance on the website or, where the operator considers it appropriate, specific properties will be notified by letter, notably commencement of construction of the screening landform, and commencement of quarrying in the extension area.

(v) Notification will also be provided on the website of drilling operations on the upper bench when noise levels will be at their highest (albeit within the defined noise limits – see paragraph 8.2.3 above).

8.3 Blast Vibration

8.3.1 The concerns are identified as alleged vibration causing damage to private property and public facilities; lack of public understanding of the blasting process and associated monitoring practices; unpredictability of vibration occurrence heightening its perception and resulting disturbance; lack of investigation of alleged vibration damage to property; and subsidence damage to property and public facilities.

8.3.2 The additional questions query (i) whether there are ways to improve the robustness of vibration monitoring by targeting proactive and reactive monitoring exercises and engaging with the community so complaint procedures are understood and subsequent analysis is widely disseminated with a lay person commentary to allow scrutiny of the findings; and (ii) whether there are ways to analyse local blasting and vibration knowledge to identify areas of the community most likely to be affected as the quarry working plan is implemented, and to proactively assess whether any additional proportional measures (changing blasting technique, volumes worked, greater warning) are appropriate.

8.3.3 An example of pro active measures undertaken by Hanson includes circumstances where, in the period up to 2013, there had been a series of intermittent complaints regarding blast vibration. In response, a group of 9 local residents from Conway Close were invited to the quarry in January 2013 when they were given a presentation on blasting design, practice and controls. Reference at the meeting was also made to new research undertaken by EPC UK into the use of modelling of quarries to determine the ideal detonation time delay between blast holes and rows to minimise vibration levels.

8.3.4 The Quarry Manager committed to commissioning a modelling exercise for Craig yr Hesg Quarry and to visiting individual properties to witness at first hand the vibration levels they were experiencing (which proved to be acceptable during the visits).

8.3.5 EPC UK undertook a modelling exercise at the quarry in February 2013 using two test holes, with a subsequent report providing details of the ideal detonation intervals using electronic detonators (referred to in the ES as 'hotshots'). This revised blasting practice has been introduced, and the ES highlights the reductions in ground vibration which have been achieved using this revised practice (ref ES section 11.5 and Appendix 11.1).

8.3.6 The blast vibration study is reported in Chapter 11.0 of the ES and it is noted that there are no objective criticisms of the approach or the important conclusion that the extension development could proceed in accordance with the blast vibration limits which have been proposed, which are themselves founded upon Welsh Government advice regarding safe limits for blasting (with respect to possible damage to residential type structures) and acceptable limits in terms of public perception and amenity effect. A non technical summary of the ES provides a description of blasting operations and effects in lay person language.

8.3.7 Ground vibration arising from blasting is calculated in terms of 'peak particle velocity' (PPV), and is measured in millimetres per second (mms). Detailed research has determined that vibration levels in excess of 50 mms are necessary to produce structural damage to residential type properties. This is based upon detailed research in the UK and USA over a period since the 1970's. The research also notes that cosmetic damage could occur at lower levels but MTAN1 confirms that "*cosmetic damage, or hairline cracks in plaster or mortar joints, should not occur at vibration levels lower than 20mms…..and that vibration levels from production blasting measured at residential properties rarely, if ever, approach the levels necessary to cause even cosmetic damage but can have an impact on the amenity of the surrounding area*"(ref para 80).

8.3.8 Blast vibration at Craig yr Hesg has never given rise to ground vibration of this magnitude and it is thus not possible to attribute damage to property to activities at the quarry. It is noted that the 'concerns' include reference to subsidence, which is relevant in this area of the South Wales Coalfield but where any such subsidence is

more likely to be attributable to historic underground mining rather than surface quarrying.

8.3.9 People will generally become aware of vibration at levels of around 1.5 mms^{-1} and occasionally at levels as low as 0.5 mms^{-1}. Depending on the individual person, vibration perception can therefore lead to concerns, even at very safe levels of vibration simply because the effects of the blast have been experienced. Notwithstanding the fact that persons will experience ground vibration at these lower levels, Welsh Government Guidance does not advocate the setting of lower limits than those referred to below, on the basis that such limits, overall, represent 'acceptable limits'.

8.3.10 MTAN1 gives advice on suitable planning conditions to control the environmental impact of blasting operations at quarries which sets a limit considerably below a level which may give rise to structural or cosmetic damage and which is deemed acceptable in terms of amenity. This includes the advice that:

"Maximum level of ground vibration at sensitive locations: ground vibration as a result of blasting operations should not exceed a peak particle velocity of 6 mms^{-1} PPV in 95% of all blasts measured over any 6 month period, and no individual blast should exceed a peak particle velocity of 10 mms^{-1} PPV" (ref MTAN 1 paragraph 83).

The current planning conditions in place at Craig yr Hesg Quarry are consistent with these limits, and the same limits have been proposed by Hanson for quarrying in the extension area.

8.3.11 All blasts are monitored at Craig yr Hesg Quarry, and detailed records are maintained. These records confirm that the currently imposed ground vibration limits are being adhered to, and can continue to be adhered to as part of the extension development scheme. These findings and conclusions are not in dispute.

8.3.12 The underlying concern is thus perception, uncertainty, and unpredictability and based upon these concerns whether there are additional methods which can be employed (a) to assist the dissemination of information; (b) specifically to give advance warnings of blasting; and (c) to amend blasting practice to further minimise the effects arising from blasting. It is not part of Hanson's case that the effects of blast will not be experienced, but that they endeavour to minimise effects as far as is practicable, as discussed below.

8.3.13 All blasts are designed at Craig yr Hesg to ensure the lowest level of ground vibration which can practically be achieved in each given circumstance. It is thus not a case of simply adhering to the prescribed blast vibration limits, but rather seeking to ensure that ground vibration arising from blasting is maintained well within the limits. These individual blast designs take into account the 'good practice' guidance set out in Table 4.1 above.

8.3.14 As part of the blast vibration study, a review has been undertaken of blast vibration monitoring data recorded between January 2012 and April 2014, comprising a total of 30 No. blasting events. The blasting was undertaken with either traditional nonel (electric) detonating systems or more sophisticated "Hotshot" (electronic) detonating systems. The data is presented in Appendix 11.1 of Volume 2 of the ES which confirms that the electronic detonation system consistently produces lower PPVs than the equivalent blast using electric detonators, with recorded PPVs well below the criterion level of 6mms^{-1} PPV (in the general range of 1mms to 3mms but with

numerous instances where vibration was so limited that the vibrograph did not trigger). This was further confirmed by an analysis of 3 specific production blasts in 2014 using multiple items of monitoring equipment (seismographs).

8.3.15 Based upon his research, as noted above, Hanson now utilise electronic detonation in all production blasts (unless there are specific operational reasons for departing from this practice). It is also worthy of note that for any given blast it is very much in the operators interest to always reduce vibration, both ground and air borne to the minimum possible in that this substantially increases the efficiency and hence the economy of blasting operations.

8.3.16 Whilst all blasts are designed to ensure adherence to the ground vibration limits, there are other elements of the quarry development programme which can also serve to minimise vibration. Ground vibration is minimised when there is a 'free face' which essentially absorbs the vibration. In contrast, there have been a series of recent blast in the quarry floor, with no free faces, and where ground vibration levels have been higher (albeit within the limits). The progression of the quarry into the extension area will substantially reduce the need for blasting in the quarry floor. Slightly higher levels of vibration have also been recorded on faces with a particular orientation, and this knowledge now feeds into the design of future blasts.

8.3.17 In summary, Hanson is aware of its responsibilities to minimise the effects of ground vibration. It has responded positively by adopting new (more costly) blast vibration practices as a means of minimising vibration (demonstrated by the monitoring results) and by attention to the design of individual blasts. The issue is thus the means by which information on blasting can be monitored and disseminated.

8.3.18 All blast at Craig yr Hesg are monitored as a matter of routine. For every blast, RCT are notified in advance of the approximate time of the blast and the monitoring locations (with an opportunity for RCT to undertake separate independent monitoring). Following each blast the results of the blasts are e mailed to RCT, generally on the same day.

8.3.19 The discussion above focuses on the effects of ground vibration from blasting and the measures available to ensure that ground vibration does not exceed prescribed limits. However, each blast also generates airborne pressure waves, referred to as 'air overpressure'. Where there are perceptible effects from blasting these are more commonly associated with air overpressure rather than ground vibration, with instances of rattles of windows or crockery.

8.3.20 The advice in MTAN1 is that "*because air overpressure is transmitted through the atmosphere, meteorological conditions such as wind speed and direction, cloud cover and humidity will all affect the intensity of the impact. In view of this unpredictability, planning conditions to control air overpressure are unlikely to be enforceable….(but) ….careful blast design should be able to resolve excessive levels of air overpressure. Such details are controlled by quarry regulations which impose requirements relating to health and safety at quarries*" (ref NTAN1 paragraph 81).

8.3.21 It therefore recommends that "*planning conditions should provide for the approval of a scheme by which air overpressure is managed and mitigated through careful design of blasting operations*"(ref MTAN1 paragraph 83).

8.3.22 Notwithstanding this advice, RCT included a planning condition as part of the Environment Act ROMP Review of the planning conditions at the existing quarry which required that "*blasting shall be designed in such a manner that air*

overpressure resulting from any blast does not exceed 120dB at any residential property". In these circumstances, for consistency, Hanson would not object to the same condition being imposed on a permission for the extension development.

8.3.23 Consistent with the suggested additional measures set out in paragraph 8.2.4 above relating to noise, further operational mitigation measures relating to blast vibration (some of which are common to noise) are as follows:

(i) All blast dates and proposed times of blasting will be set out on the enhanced website (albeit the precise time of the blast will be subject to operational and safety factors);

(ii) Direct notification of blast times can be provided to the local community, either via Glyncoch Community Regeneration, or named concerned individuals via emails;

(iii) Any blast complaints are recorded, investigated, actioned where appropriate and the complainant notified. This follows established procedures, noting that, similar to the circumstances relating to noise, there have been increased incidents of complaints following the submission of the application which appear to be disproportionate and inconsistent with demonstrable reductions in ground vibration levels.

(iv) All new / unusual activities will be reported in advance on the website, notably any blasts on the quarry floor or in areas which the blast design predictions indicate may give rise to elevated levels of ground vibration or air overpressure (albeit within the prescribed limits).

(v) The enhanced web site will include a description of the blasting process and vibration limits to assist public understanding.

8.4 Air Quality

Airborne Particulate

8.4.1 The concerns identified relate to impact on lung health; impact on breathing disorders such as asthma, Chronic Obstructive Pulmonary Disease (COPD), pulmonary fibrosis etc.; impact on persons suffering from Tuberculosis (TB); any disproportionately greater adverse effect on the young and old; whether any increase in particulate matter may be harmful; whether the composition of particulate matter may be carcinogenic due to silica and roadstone coating sources; the breadth and availability of knowledge on likely emissions; and consideration of HGV exhaust fumes.

8.4.2 The additional questions query whether there is available evidence to indicate if the composition or nature of the particulate matter emitted as a result of the proposal would create a greater risk to health than that represented by the relevant Air Quality Objectives either to the general public or specific vulnerable groups in Glyncoch (i.e. children including those attending the Primary School, the elderly, residents with existing ill health including breathing disorders, lung diseases and cancer) and those living in sensitive locations in close proximity to the extension?

8.4.3 The additional questions also seek confirmation of whether there is knowledge which could be drawn upon to compare emissions from the site to those observed elsewhere (are similar activities undertaken elsewhere in similar circumstances achieving similar or better emissions controls)?

8.4.4 Finally, the additional questions ask whether there are ways to improve the public dissemination of monitoring and performance information (including the reasoning

for methods used), scrutiny of findings and enable community and other stakeholder engagement in future proactive dynamic monitoring to ensure the site operates within its operating licences / permissions and to strive for continued improvement.

Impacts

8.4.5 The primary focus of the Air Quality study in Chapter 12.0 of the ES concerns the potential for impacts upon public health resulting from the development and operation of the proposed quarry extension, and the consequent extended life of the existing quarry operations. Given the proximity of the existing part of the quarry and processing plant to the community of Glyncoch, this has provided the main focus of attention with respect to public health and airborne emissions. Any such health impacts relate to the respirable fraction of particulate matter, which is defined as particles of less than 10 microns diameter (PM10). The public health effects of PM10 are generally well known by means of large population studies (epidemiology) relating morbidity (disease) and mortality (death) attributable to both short term and long term PM10 concentrations in the ambient air. These large scale studies are also supported by clinical studies and trials assessing the responses of human and animal subjects (toxicology) to particular PM10 concentrations. Increasingly, attention has also been given to the finer fraction P2.5 which is most likely to fully penetrate the lungs, particularly with respect to vehicle emissions in urban areas.

8.4.6 The potential health impacts have been assessed by comparing the current and predicted future ambient air quality adjacent to the site, in each case including quarry contributions, against the standards adopted by Government to protect the health of the public as a whole (the Air Quality Objectives, as most recently defined within the Air Quality Standards (Wales) Regulations 2010). This sets PM10 Objectives for an annual mean not to exceed 40 µg/m3, and for no more than 35 exceedences per annum of a 24 hour limit of 50 µg/m3. These are limits to be applied at all locations where members of the public might be regularly exposed including facades of residential properties and schools, and are based on EU Limit Values intended to represent zero or minimal risk to health (ref ES section 12.3.1).

8.4.7 It is known that the population exhibits a wide range of responses to PM10 concentrations, and that young children, old people and those with pre-existing illnesses are disproportionately susceptible to the effects of PM10 and PM2.5 inhalation. This has been taken into account in setting the Air Quality Objectives, and these are taken from the limits for PM10 and PM2.5 first set down in the European Council Directive 1999/30/EC of 22 April 1999, and subsequently in Directive 2008/50/EC; the standards in the directives were largely drawn from advice provided by the World Health Organisation, who are solely concerned with human health and well-being.

8.4.8 A key conclusion of the ES, is that the PM10 Objectives are being met within the community of Glyncoch adjacent to the quarry. There is no statutory requirement to monitor or assess PM2.5 at the local level, and therefore direct comparison with the Air Quality Objective is not possible. However, given that the annual average PM10 concentration at Glyncoch (which includes the PM2.5 fraction) is less than the Objective limit of 25 µg/m3 for PM2.5 there is no possibility of the PM2.5 Air Quality Objective being exceeded.

8.4.9 PM10s include a wide range of source materials, the majority of which are typically referred to as secondary particulates, dominated by sulphate and nitrate

compounds formed by reactions in the atmosphere between gases and aerosols. Other important sources include anthropogenic carbon-containing combustion particles (often referred to as soot) from vehicles, domestic and industrial sources, natural biological materials such as spores and pollen, sea salt, and crustal material, from natural or industrial sources.

8.4.10 In the context of Craig yr Hesg Quarry, the PM10 source of greatest interest in terms of potential contribution to the ambient air is crustal material (i.e. soil and rock-derived particulates derived from quarrying and mineral processing activities). More specifically, this will include respirable crystalline silica (RCS) and clay minerals.

8.4.11 The health effects of overall PM10 (and PM2.5) inhalation include a range of respiratory tract effects, including inflammation and asthma and cardio-vascular disease, with other health effects also emerging as a result of recent research (see "Review of evidence on health aspects of air pollution – REVIHAAP Project", World Health Organisation Technical Report for European Union, 2013). There is scientific consensus that increased long-term levels of PM10 and PM2.5 result in increased levels of population mortality due to respiratory and cardio-vascular diseases. Short-term episodes of elevated PM2.5, measured over periods of days, also result in increased mortality and morbidity.

8.4.12 In terms of health impacts, it is the scientific consensus that the fine fraction of particulates (PM2.5) is at least as harmful as the coarse fraction (PM2.5-10), but as most monitoring data and health studies have only considered PM10 (which includes PM2.5), and only more recently PM2.5, then evidence is more limited with respect to the coarse fraction PM10-2.5 alone. Nevertheless, it has been established that short term exposures to the coarse fraction do invoke proportionate responses in terms of raised morbidity and mortality. The mechanism for these responses is unclear, but naturally-occurring biological agents including pathogens and endotoxins associated with the coarse fractions may be responsible. It is generally understood that natural crustal material is less toxic than other anthropogenic forms of PM10 / PM2.5.

8.4.13 With reference to Chronic Obstructive Pulmonary Disease (COPD), particulates may be a contributory factor in the condition although smoking is the predominant cause (see http://www.nhs.uk/Conditions/Chronic-obstructive-pulmonary-disease/Pages/Causes.aspx).

8.4.14 Specific responses to RCS exposure include silicosis of the lungs (the development of fibrotic nodules, with related risk of lung cancer). Silicosis is associated with high levels of workplace exposure, and strict measures are enforced by HSE with respect to personal protection measures for workers and exposure control. The current workplace exposure limit for RCS is 0.1 mg/m3 as an 8 hr average.

8.4.15 As with other respiratory tract effects from particulates that cause inflammation and immune system impacts, there is an increased risk of the development of TB associated with exposure to air pollution, albeit this may be just one contributory factor amongst many and air quality is a reflection of particulate from all sources, not just the quarry. However TB remains a rare disease; Public Health Wales published its' latest report in March 2015 "Tuberculosis in Wales Annual Report 2014, Data to the end of 2013" providing information on recent incidences and trends in occurrence of the disease. The trend has remained relatively stable, with the 5yr average rate of occurrence in the Rhondda Cynon Taf area being 4.8 per

100,000 population, slightly less than the national average of 5.1. Details of TB occurrence on the local scale of Glyncoch Ward are not available, but based on the above rate, and the Office of National Statistic 2011 census population for the Ward given as 2,859, the incidence of TB at Glyncoch could be expected to be less than 0.2 cases per annum, allowing for normal statistical variation.

8.4.16 It is acknowledged therefore that the various natural and anthropogenic sources making up PM10 and PM2.5 have varying toxic effects when inhaled, but that there is insufficient evidence at present to propose a new general approach of separating the sources and applying varying exposure limits for each source type. The UK Committee on the Medical Effects of Air Pollutants (COMEAP) issued their "Statement on the Evidence for Differential Health Effects of Particulate Matter according to Source or Components" in March 2015 to this effect. Accordingly, legislation and guidance continue to specify acceptable PM10 and PM2.5 levels in total without attempting to separate out source types.

Effect of any Increase

8.4.17 No minimum concentration of PM10 or PM2.5 has been determined that has no health effect, with a linear trend of population exposure concentration to mortality or hospital admission rates being evident, at least until very high concentrations are reached where the responses flatten out. However it is not possible to conclude that there is no safe level of exposure to particulates because research at these low concentrations is lacking; it is plausible that humans have evolved mechanisms to deal with low non-anthropogenic levels of respirable dust just as we have evolved to deal with natural levels of radiation in the environment.

8.4.18 The ES predicts no overall change in existing PM10 emissions with the quarry extension based on current mitigation measures. With the extension in time of quarry operations, there could in the future be relatively higher particulate levels outside the site than if the quarry were to close following exhaustion of the existing mineral reserves. Based on previous monitoring and modelling data, the maximum predicted quarry contribution of mineral PM10 is 5.2 µg/m3 adjacent to the quarry boundary, of which PM2.5 would typically form less than 70% of the concentration. The area outside the site potentially affected by quarry emissions is likely to be limited to that part of the Glyncoch settlement adjacent to Garth Avenue. The relative risk factor applied on this basis is concluded to result in no significant changes to mortality or disease in the local population.

8.4.19 Moreover, the obligations to use best practicable means to further reduce particulate emissions in the future means that we could reasonably expect to continue the progressive improvements in emissions controls seen over recent years at the site, and perhaps improvements in ambient air quality outside the site (although this would also depend on other source reductions, in particular traffic emissions). In this respect it is noteworthy that the quarry PM10 monitoring undertaken in the vicinity of Garth Avenue has confirmed a reduction in the PM10 average from 20.97 µg/m^3 in the period November 2013 – November 2014, to 17.17 µg/m^3 in the period November 2014 to November 2015, and to 14.05 µg/m^3 in the period November 2015 to May 2016, the latter figure representing 35% of the Annual Air Quality Objective limit.

Carcinogenic Potential

8.4.20 Lung cancer risk can be associated with severe silicosis, however there is no evidence of increased cancer risk from silica in the absence of the silicosis disease.

On the basis that respirable crystalline silica (RCS) is controlled and maintained at low / background concentrations then no risk from silicosis or related cancer is anticipated.

8.4.21 Cancer risk can also be associated with the inhalation of certain substances that may be present within diesel fume, fumes from incomplete combustion of fuel oils in heaters for roadstone coating plants, and vapours from heated butumin. The risk is generally attributable to the presence of polyaromatic hydrocarbons (PAHs) that may be present in very low concentrations. Risks tend to be neligible as a result of atmospheric dispersion and are further controlled by means of limiting emissions from fixed and mobile plant; the cancer risks from these types of emissions are generally subsumed by the better known and quantified health risks from PM10s as a whole. The statutory guidance for roadstone coating (DEFRA PGN 3/15(12) only places emission limits on particulates, and notes that harm is unlikely to occur outside the site provided that odour impacts are low.

Knowledge of Emissions

8.4.22 There is a substantial and growing body of ambient air quality data in terms of PM10 monitoring at the quarry and in Glyncoch. This is considered to more than meet normal standards and guidelines for impact assessment and regulatory control, and should provide independent reassurance to the local community. Current air quality monitoring confirms an improving air quality trend, with the average PM10 concentration for November 2015 to May 2016 at 14.05 ug/m3 (compared to the Air Quality Objectives limit of 40 µg/m3), and no exceedances of the 50 ug/m3 limit.

HGV Exhaust Fumes

8.4.23 Heavy goods vehicles are involved in the transport of mineral to and from the site, utilising the site access road and public highways. No assessment of HGV emissions was required by the local planning authority as part of the EIA, and a brief re-consideration of the matter supports this conclusion. Environmental Protection UK and the Institute of Air Quality Management provide guidelines for determining whether a development is likely to be of sufficient scale to warrant an air quality assessment. With respect to HGV flows, it is suggested that a requirement for an assessment is only indicated where the development would lead to an increase of more than 25 vehicle movements per day through an Air Quality Management Area, or more than 100 vehicle movements elsewhere. Given that the proposals involve only an increase in the permitted reserve and where the increased reserve would not in itself result in a change to output and associated traffic movements, there is no basis for suspecting significant health impacts resulting from traffic movements.

8.4.24 Emissions from quarry plant movements are either remote from possible receptors (>200m distance), or are so infrequent in areas near to the site boundary that the effect on ambient air quality would be negligible (less than 5 dump truck movements on average per hour along the haul road to the primary crusher).

Character of emissions posing greater risks to the vulnerable

8.4.25 The character of emissions from the site is unlikely to pose any greater toxicological risk than that from PM10s in general, and will possibly be less. It is generally the case that quarry emissions in the PM10 size range tend to be mostly of coarse

mineral particulates (PM10-2.5); crustal material of this type is generally considered to be less harmful than other PM10 pollutants containing anthropogenic secondary particles, metals and soot. However, there will be RCS present within the fine particle fraction, particularly in relation to emissions from the Processing Plant. Whilst this is largely enclosed, with local exhaust ventilation incorporating filtration, there could be continued RCS emissions from the primary crusher for an extended period of time if the quarry extension is approved. Therefore, on balance, it is likely that emissions for the whole site will pose no greater risk than the anthropogenic (PM10) emissions for which the Air Quality Objectives have been designed and which are intended to be protective of the general population including the vulnerable.

8.4.26 The impact of PM10 on children attending Glyncoch Primary School is considered to be negligible given the distance of this location from the main sources in the processing plant. Previous monitoring at the western end of the existing void recorded rural background levels of PM10, and it is likely that similar conditions will be present at the northwestern boundary of the extension site if consent is granted.

Comparison with Other Sites

8.4.27 There is limited information available regarding PM10 emissions at other sites, but where problems have been experienced, mitigation measures such as improved enclosure, dust suppression and filtration have been successfully deployed. To this extent, existing measures at the site supported by monitoring achieve industry standards for good practice. There will be scope for improvements in emissions management as the quarry develops in the future, and in particular associated with developing the new void and access via the existing void and at greater distance from the majority of houses in Glyncoch.

Public Information

8.4.28 Current ambient air particulate monitoring at Glyncoch is available to the public via the Air Quality in Wales web-site (http://www.welshairquality.co.uk/index.php). Information from site monitoring is reported at intervals to the local authority, which in turn is available for public scrutiny

8.5 Dust

8.5.1 The concerns identified are impact of nuisance dust on blast days; dust nuisance affecting property enjoyment; variability of dust impact (increase in emissions during start-up, periods of dry weather); and adequacy of existing abatement technology (wheel wash facilities, dust suppression on drilling rigs etc.)

8.5.2 The additional questions ask whether there are specific proportionate measures (including intangible measures such as greater education), posting on the website of blasting date and time of when blasting will happen, monitoring (videoing a blast) of nuisance dust production, etc. which could be adopted which could reduce the impact of sudden short lived disturbances (i.e. noise from blasting, dust from blasting) produced during normal quarry operations?

8.5.3 They also query whether consideration can be given to the principle of post determination monitoring of particulate matter and dust at "at risk locations" to confirm the predictions of the ES and enable empirical analysis to support possible continued improvement in their control?

8.5.4 Finally, the additional questions seek comment on whether there are ways to extend best practice in the monitoring and recording of emissions from parts of the site to the remaining areas (the recording of the effectiveness of dust control measures in regards to the Environmental Permit extended to cover quarry face activities).

8.5.6 The ES provides an assessment of the likelihood of nuisance dust affecting receptors, and takes account of blasting as a significant but short-duration dust source. Modern blasting techniques are designed to minimise the energy, and hence dust-raising, associated with the blast. It is broadly estimated that once the void is developed, around 90% of dust generated remains inside, and given the infrequency and very short duration of blasting, dispersion and settling of the dust cloud, blasting is not usually found to be a significant cause of dust nuisance (as compared to site haulage).

8.5.7 For dust to be recognised as a nuisance it has to reach noticeable levels and be persistent over time. It is therefore the cumulative effect of nuisance dust that most causes upset and annoyance to the public. As noted in Minerals Planning guidance there is no reason why, given proper site management, nuisance dust should be experienced outside the site. Various measures are currently implemented at the site designed to control and minimise dust emissions. These have been proven to work generally effectively, and in the 4 year period April 2012 – June 2016, there have been only 11 recorded dust complaints. These are summarised in Table 8.1 below, with confirmation of the action taken (details drawn from the 'complaints register' referred to in Table 4.1 above).

Table 8.1 Recorded Dust Complaints April 2012 - June 2016

Date	Complaint	Action
23/4/12	Dust – not specified	Check made to confirm that all dust control measures operating effectively
31/10/12	Aggregate on access road	Contractor swept road
08/7/13	Dust on entrance road	Water bowser deployed
08/8/14	Dust on public highway	Contractor swept road
03/6/15	Dust on public highway	Water bowser deployed and contractor swept road
30/7/15	Dust on public highway	Contractor swept road
14/10/15	Dust from processing plant	Plant malfunction investigated and rectified
03/3/16	Dust from asphalt plant	Plant malfunction investigated and rectified
20/4/16	Dust on (new) access road	Water bowser deployed and contractor swept road

09/5/16	General increase in dust	All plant inspected for possible sources of dust (none identified). Road sweeper despatched. New timings set for sprays on access road (running for 1 minute every 30 minutes)
01/6/16	Dust on access road to pre coated chippings (PCC) storage area	New sprays to be installed along the PCC access road, with regular inspections to assess the need for road sweeper and water bowser.

8.5.8 Important points to note from this schedule are the relatively limited number of complaints (11) over a period of over 4 years, but also the nature of the complaints where the main issue relates to dust on the access road / public highway. The action taken has quickly rectified the issue, but the potential for a recurrence of such complaints has been significantly reduced via the construction of the new fully surfaced two way entrance access road, with the use of a new wheel wash, and with water sprays on the surface of the access road and a regular programme of road sweeping.

8.5.9 Additionally, it is noteworthy that the complaints relate to issues at the plant site and access / public highway rather than the operational quarry area. These issues, whilst relevant to the overall quarry operation are not directly applicable to the development within the proposed extension area. There is no reason to expect this situation to change in the future given the minimum 175m stand-off from the proposed extension working areas to the nearest adjacent residential properties. It is sometimes the case that a local population becomes habituated to nuisance dust levels, or fails to complain for various reasons. It is these situations that the quarry liaison group is intended to address, however there are also responsibilities on the quarry manager and Environmental Health team to carry out inspections so as to ensure that unreported problems are not developing. This is the case via the daily and weekly routine inspections referred to in Table 4.1.

8.5.10 The ES concludes that with the mitigation measures in place, the potential for nuisance dust impact from quarry sources on properties outside the site is generally slight to negligible. However variable levels of dust deposition are a normal phenomenon depending on wind directions and dryness of the environment. It would be unreasonable to claim that there could never be a dust event that occurred in spite of the best efforts of the quarry management, however the aim of the existing dust controls, and any that would be implemented as conditions of a planning consent to extend the quarry, would be to manage all emissions to acceptable levels. This means that in the event of adverse conditions developing that cause or risk causing visible dust to escape the site, then additional measures would be immediately implemented. These could include immediate suspension of any activities causing the dust, and damping down of surfaces etc, as confirmed in the schedule produced within Section 4.0 of this Statement.

8.5.11 Given the absence of outstanding requirements from planning or Environmental Regulation staff to implement new dust controls it may be concluded that existing arrangements are considered to be acceptable. However, the Environmental Permit and Hanson Environmental Management System reiterate the need for continued improvement where practicable in response to developments in best

practice and control technologies. These matters are also dealt with via Planning and Permit conditions and are subject to review and updating.

8.5.12 A fugitive dust deposition monitoring exercise was undertaken as part of the ES Air Quality study involving the placement of 4 x dust deposition gauges in locations around the existing quarry boundary (including one adjoining the primary crusher) and to the north of the proposed quarry extension area. The station adjoining the primary crusher haul road indicated elevated levels of localised dust deposition but with little or no dust on the adjoining vegetation. The monitoring location to the north of the extension area recorded typical low rural background levels. The stations on the northern and southern boundaries of the current quarry working area showed no evidence of significant dust deposition from the quarry or other sources.

8.5.13 In these circumstances, it is concluded that conventional mitigation measures (ref table 4.1 above) can continue to regulate nuisance dust to within acceptable levels.

8.6 Physical Danger

8.6.1 The concerns are identified as potential escape of blasting debris (fly rock) with lessons learnt from the Brayford fly rock incident; unsecured loads of aggregate escaping on the public highway; use of the old quarry exit; lorries travelling too fast along public highway; heavy vehicles using the local highway network which may not have been designed for such use; and pedestrian safety from narrow footpaths which may reduce accessibility of various groups and may discourage modal shift.

8.6.2 The additional questions again pose a general question as to whether there are ways to disseminate information on current practice to the public, but more specifically whether consideration can be given to instruction/ procedures / protocols or a code of practice including preferred haulage routes and inappropriate local routes; conduct in accessing the site (queue waiting procedure); rules to be obeyed on site to minimise neighbourhood disturbance; the investigation of non compliance, complaints procedure and sanctions; and the adoption of a code of conduct to be signed up to by road hauliers.

8.6.3 The Brayford fly rock incident occurred at a quarry in Devon in February 2011 when a quarry blast sent rocks outside the designated blast danger zone onto a public road. The circumstances of the blast were fully investigated by the Health and Safety Executive (HSE) who noted that the blast design and specification was flawed with migration of the explosive charge resulting in the blast holes being over charged. The incident was widely reported, successful prosecutions were brought by the HSE, and procedures have been revised to avoid re-occurrences. This includes more control over the blasting contractor, specific attention to the amount of explosives used compared to the amount specified in the blast design, photographing the respective steps, and the filming of blasting operations. There have been no re-occurrences at that quarry, and importantly no examples of such fly rock incidents at Craig yr Hesg Quarry.

8.6.4 The other concerns raised relate to various elements of the use of the local highway network by HGVs used to transport aggregate from the quarry. A Traffic Impact Assessment was undertaken as part of the EIA and is reported in Chapter 13.0 of the ES. This confirms, inter alia, that:

- During the weekday working hours of the quarry the 5 day average flow on the B4273 south of the quarry access in a 5 day survey in 2012 was 9222 vehicles of which 742 (8%) were HGV's;

- A traffic survey in 2013 recorded a HGV portion of 847 vehicles per day (7.3% of flow);

- The percentage of HGVs attributable to Craig yr Hesg Quarry (some 140 vehicles per day) is approximately 16.5% of the total (847);
- The B4273 is operating well within its design capacity; and

- There have been no recorded collisions involving HGV's on the local road network in the past 5 years.

8.6.5 The Traffic Impact Assessment noted that there are receptors associated with properties adjacent to the access road and along the access route described (B4273 to Pontypridd and then the A470 / A4223), but that the routes are already permitted to carry traffic from the quarry and where that traffic is a relatively small proportion of overall vehicular flows.

8.6.6 The Pollution Prevention and Control Permit in place at the quarry (ref PPC/09-3.5 HQPEL/0104D) requires that with the exception of loads carrying clean stone with a diameter of +75mm, road vehicles shall be effectively sheeted as soon as possible after loading and before leaving the quarry, and vehicles delivering aggregate or sand to the quarry (for use in the asphalt plant) shall be effectively sheeted before being admitted (ref condition 95). These requirements are rigorously enforced at the quarry.

8.6.7 The safety concerns expressed regarding the use of the historic quarry exit onto the B4273 (also raised separately by the Local Ward Member of RCT) have been acknowledged by Hanson who have taken the initiative to promote and implement an access improvement scheme. In October 2013 Hanson submitted a planning application for the improvement (widening) of the existing entrance to the quarry to provide a two way entrance and exit to and from the quarry. The intention was that this would then become the sole HGV (and light vehicle) entrance into and exit from the quarry, and the existing quarry exit would then become redundant, other than for use as an 'emergency' access / exit.

8.6.8 Planning permission for the improved entrance / exit was granted in March 2014, and the scheme has been successfully implemented. It has delivered:

(i) Kerb realignment at the junction with the B4273 Ynysybwl Road;

(ii) Widening of the access road in the vicinity of the existing bellmouth;

(iii) Provision of appropriate visibility splays at the site exit which meet design standards;

(iv) Resurfacing / reconstruction of the access road for its entire length from the public highway to the plant site entrance to create a road with a consistent width of 7.4m;

(v) Replacement of the retaining wall along the western side of the road by constructing a new timber 'permacrib' wall which tapers up from ground

level at the southern side, some 19m back from the public highway, rising gently to a maximum height of 5.28m but averaging 4m in height, before tapering down to ground level some 14m south of the plant site entrance;

(vi) Installation of new/replacement signage; and

(vii) Surface water drainage arrangement / manholes within the new road.

8.6.9 There have been no changes to the operations within the quarry, the rate or volume of output, or the total number of vehicle movements associated with site's output as a consequence of the new access arrangements. However, the development has ensured that vehicle movements to and from the quarry continue in a way which is inherently safer.

8.6.10 Concerns have been expressed that lorries are travelling too fast along the public highway and that they are using a local highway network which may not have been designed for such use. The national speed limit applies along the B4273 along the site frontage but southbound this reduces to 30mph immediately south of the railway bridge where the road becomes more urban in character with terraced housing and on street parking on the west side of the carriageway which reduces the effective width of the carriageway. These circumstances, together with the alignment of the road (notably the bend at the railway bridge) serve to reduce vehicle speeds and physically constrain any substantive exeedence of speed limits. A speed camera is in place along the highway towards Pontypridd to re-enforce adherence to the speed limit.

8.6.11 However, speed restrictions are of universal application to all motorists who need to abide by the speed limits which are enforced by the Police. Notably, there are no known prosecutions of quarry HGV drivers along the defined route to Pontypridd. Similarly, it is acknowledged that the public highway to Glyncoch was constructed in a different era when traffic flows and conditions were different, but this applies to effectively all public highways and the issue is not unique to the B4275. The important issue is that traffic flows on the highway function adequately in recognition of the physical circumstances; the road has spare capacity in highway engineering terms; and there have been no recorded accidents involving HGV's along this route in the last 5 years used for the purpose of the traffic impact assessment (ref ES Chapter 13.0). This suggests that there are no material issues relating to speed or safety associated with the use of the local highway network by quarry traffic which itself represents a relatively small percentage of overall HGV flow on the highway.

8.6.12 Finally, reference has been made to pedestrian safety associated with the use of narrow footpaths which it is claimed may reduce accessibility of various groups and may discourage a modal shift (to greater use of footpaths). There are footways along the B4275 of varying width, but they are intermittent in places, notably at the railway bridge. However, these issues reflect more general circumstances associated with the B4275 (and numerous other routes in similar locations), and are not solely related to the potential amenity effects of HGV traffic from the quarry. As noted above, average weekday flow along the B4275 is 9222 vehicles, with 847 HGVs (7.3%). The quarry HGV traffic averages 140 movements per day which is approximately 16.5% of the total HGV component (847) and 1.5% of overall movements. If there are perceived to be issues with the local footway network then this is a wider matter for RCT to address since quarry traffic is only a small a small

component of the traffic flow and should not be subject to disproportionate attention compared to other road users.

8.6.13 The 'additional questions' include the possibility of introducing instructions / procedures / protocols or a code of practice including preferred haulage routes and inappropriate local routes; conduct in accessing the site (queue waiting procedure); rules to be obeyed on site to minimise neighbourhood disturbance; the investigation of non compliance, complaints procedure and sanctions; and the adoption of a code of conduct to be signed up to by road hauliers.

8.6.14 The established complaints recording and investigation procedure has been referred to earlier in this Report, and applies equally to any issues associated with safety and vehicle movements / neighbourhood disturbance. A historical issue of HGV queuing has been addressed partly by the implementation of the improved access / entrance arrangement, and partly by internal protocols which provide that aggregate vehicles are not loaded before 07.00.

8.6.15 There is only one route available for HGV's to approach and leave the quarry, i.e. the B4275 to Pontypridd and then the A470 and A4223. There is thus no question of vehicles using 'inappropriate routes' since these are not available (notably the 'White Bridge' over the River Taff which has an 18 tonne gross weight restriction).

8.6.16 A Code of Conduct for HGV drivers is already in place via the Hanson Hauliers Rules and Procedures, Issue 3 May 2013, **produced as Appendix 5**. This provides comprehensive instructions to drivers regarding vehicle loading, sheeting, the need to abide by defined vehicle routing, and driver courtesy. All haulier companies / hauliers are required to sign a declaration of compliance with the Rules and Procedures as a condition of being retained as an approved haulier, and all hauliers are thus bound by the rules and procedures set out. Hanson thus consider that these issues are already in place and enforced by established rules, but the request has provided a opportunity to draw this to the attention of the public. Any transgressions are recorded and actioned, including a recent example of a haulier being refused access to the quarry until a problem with a tail gate on a tipper truck was rectified.

8.6.17 This is re-enforced by the fact that the entire Hanson haulage fleet has achieved a 'gold standard award' under the Fleet Operator Recognition Scheme (FORS). This scheme is aimed at ensuring that operators work lawfully and to best practice, and covers staff training, incident and collision rates, road safety, relationships between commercial vehicles and other road users. In view of the best practice standards which are enshrined in the scheme, local authorities and major contractors often specify the use of FORS accredited companies for their supply chains.

8.7 Water

8.7.1 The concerns are identified as a risk of contamination to mains water supply from disturbance to the mains network in proximity to the quarry extension; the loss of the green space may reduce the control of surface waters and increase the risk of flooding; and water run-off from the access road is affecting the performance of highway drainage.

8.7.2 The additional questions seek consideration of whether there is a mechanism to ensure ways for proactive working with other relevant agencies to assess (continuous review of surface water controls) and if necessary reduce the impact of surface water drainage affecting neighbouring properties and the public highway.

8.7.3 These issues have been addressed comprehensively within the EIA, ES and supporting appendices (notably the Surface Water and Drainage Assessment produced as Appendix 9.3 which includes a copy of the existing Quarry Discharge Permit).

8.7.4 There is no question of contamination to water supplies arising from the required diversion of the Welsh Water mains. This will be a routine and conventional operation, undertaken under the auspices of Welsh Water, which will simply divert the water main and re-connect into existing infrastructure, and where Welsh Water will retain an obligation to maintain a water supply.

8.7.5 The effect of the removal of part of the surface water catchment and the loss of the green space as a result of the quarry development has been fully assessed as part of the hydrological impact assessment (ref ES chapter 9.0 and accompanying appendices). In summary this concludes that the additional water which would enter the quarry void would be dealt with via soakage into the base of the void, as at present. During extreme storm events there may be water accumulations in the base of the quarry which would be allowed to soak into the ground or be addressed by pumping to the existing processing area surface water management system (lagoons) within the existing design capacity. Discharge from the existing lagoons will continue to be regulated by NRW under the terms of the Discharge Consent.

8.7.6 The new access road has accommodated the previous surface water drainage arrangement, with an additional cut off drain installed close to the junction with the public highway. These works have been approved by RCT pursuant to requirements of the planning permission for the improved access road (ref condition 9 of 13/1039/10), and there is no evidence that this arrangement is not working effectively.

8.7.7 In terms of the additional questions and the suggestion of pro active working to ensure that surface water issues do not arise, mechanisms are already in place via the Discharge Licence which in addition to setting limits for discharge (volume and quality) imposes a more general requirement for the Operator to take appropriate measures to minimise polluting effects, for monitoring and reporting to take place, and for the NRW to be notified without delay in the event of any malfunction of equipment which has caused or may cause a polluting event, a breach in the discharge limits or any other significant adverse effect. This is re-enforced by requirements of the planning conditions for the existing quarry which places a general obligation on the Operator to neither impair the flow nor render less effective drainage onto and from adjoining land (ref condition 36 of 08/1380/10).

8.7.8 Issues associated with surface water drainage have thus been fully assessed as part of the EIA and effective controls are in place to regulate potential effects.

8.8 Amenity

8.8.1 The concerns raised under the general heading 'amenity' are numerous, but they focus exclusively on what might be regarded as negative issues without reference to any of the positive amenity benefits which the development would bring (as discussed in Section 5.0 above). The responses below should therefore be read in that context with the overall issue of amenity returned to in the concluding section of this Report.

8.8.2 In view of the numerous issues which are raised, the points are listed below with a brief response provided.

'Is the quarry secure enough from trespass?'

8.8.3 All Quarry Operators have a responsibility under Mines and Quarries legislation to provide adequate security fencing around quarries. Craig yr Hesg Quarry has suffered historical problems from vandalism, and this, coupled with the legislative requirements has lead to the erection of a 2.4m high palisade security fence around the boundary of the quarry. This fencing would be continued around the boundary of the extension area, on the inside of the screening landform and western screen bund, as described in the Planning Application Statement (ref section 6.2.8) and shown on the application plans. The fencing would be maintained for the duration of the extraction and restoration operations and is considered to be adequate and functional for the stated purpose.

'Will the roadstone plant operate unsociable hours?'

8.8.4 The hours of working are prescribed by the current planning conditions in place at Craig yr Hesg Quarry and no changes are proposed as a consequence of the extension development (ref condition 14 of 08/1380/10). There are no hours of working restrictions on the operation of the roadstone plant, and as was the case historically, it will operate at times to suite the requirements of particular contracts which often require material to be delivered outside normal daytime operational hours. The development will however continue to be subject to the night-time noise limits which have been prescribed by RCT (ref condition 19 of 08/1380/10).

'Will larger 60 tonne vehicles ultimately be used to haul material from the site?'

8.8.5 The current limit on HGV size is 44 tonnes. This will be a matter for the Government in terms of any changes to future carrying capacity but Hanson will adhere to the maximum carrying capacity limits as prescribed.

'Volume of traffic along Berw Road [B4275] and suitability of road for larger vehicles reducing the usability of the road for the community'

8.8.6 This issue has been discussed in section 8.7 above which has highlighted the relatively small proportion of HGV traffic from the quarry within the overall traffic and wider HGV flows. The highway carries substantial spare capacity in highway terms and the circumstances of the competing demands made on the highway are by no means unique to Berw Road. All public highways, and certainly highways in the South Wales Valleys are inherently constrained by adjoining land uses and topography, but they function adequately notwithstanding these constraints.

'Difficulty in insuring property'

8.8.7 Hanson is unaware of any evidence that the presence of the quarry has directly resulted in Insurance Companies refusing to insure property.

'Close proximity of quarry to an urban area causing property blight'

8.8.8 The Glyncoch settlement was established as a post Second World War 'Council House' community, which has developed subsequently via changes in property ownership and the development of private housing on the fringes of the original settlement. The settlement post dates the establishment of Craig yr Hesg Quarry by many decades, with the earliest recorded quarrying at Craig yr Hesg dating back to 1873, but with substantial quarrying operations from the early part of the 20th Century. The earliest planning permission dates back to 1949 for quarrying within what is now the processing plant site.

8.8.9 The settlement was thus developed in full recognition of the presence of the quarry on immediately adjoining land, with properties built in close proximity to the quarry boundary. It is thus not the case that the quarry has been introduced to an area and that as a consequence it has given rise to property blight since the quarry and properties have co-existed for many decades. Planning permissions have been granted for extensions to the existing quarry (in 1965, 1970 and 1993) when the Planning Authority took the view that the quarrying operations could proceed without undue detriment to the amenity of nearby properties. The current proposed extension scheme follows this historical context and has been designed with substantive mitigation measures designed to minimise impact on the settlement of Glyncoch.

'Loss of recreational area as a result of expansion (and perceived loss of heritage from extension either directly or preventing access)'

8.8.10 There would be no loss of a recreational area since the extension area comprises private land with no public access. In contrast the development scheme makes provision for a new right of way across the northern side of the site which would link with existing public rights of way and provide access to the adjoining countryside and a range of amenities (ref Section 5.0 above).

'Loss of ecological area as a result of expansion'

8.8.11 The majority of the extension area comprises species poor grassland and is not assessed as having any particularly high habitat value. It is currently being used for unauthorised quad biking and motorbike scrambling. In contrast, potential exist for the establishment of a range of woodland and higher quality grassland habits which would more than offset the loss of the habitats within the extension area.

'Economic impact of disruption from road haulage traffic to commercial area of Pontypridd'

8.8.12 This issue has been indirectly addressed in section 8.7 above which has noted the relatively limited contribution to overall and HGV traffic flows attributable to the quarry. If there is an issue of road haulage traffic in Pontypridd then this is a wider issue not solely related to quarry traffic, noting as an example that the quarry traffic on the B4275 enters Pontypridd at the A4223 junction adjoining the Pontypridd Bus Depot.

'Never ending development with no ultimate cessation'

8.8.13 All quarries will at some stage reach a natural and logical limit in terms of expansion, and this is the case with the proposed Craig yr Hesg western extension.

Beyond the limits of extraction which have been defined, there are no obvious opportunities for further extensions given the presence of properties to the north and east (and the screening landform which would have been established along the extension boundary), and the woodland to the west and south. The proposed western extension will thus be the final quarry development at Craig yr Hesg and quarrying will then cease.

'Resentment from perceived lack of local community benefit from development'

8.8.14 The amenity and economic benefits of the development have been discussed in sections 5.0 and 6.0 above but in terms of specific community benefits, reference has been made to the 'aggregate levy fund' administered by the Welsh Government with contributions from the aggregate industry. This fund is used to finance local community projects in the vicinity of quarries. The notable example at Craig yr Hesg is the £403,000 award from the aggregates levy fund which was used to assist the building of the Glyncoch Community Centre which is used for a wide variety of functions and classes etc. The finance for this project would not have been available without the presence of Craig yr Hesg Quarry.

'Impact on legacy of the area once the development is completed'

8.8.15 The scheme makes provision for the comprehensive restoration of the quarry to a nature conservation oriented amenity after use which builds upon the principles of the approved restoration scheme for the existing quarry. This will create a positive legacy which recognises the importance of Craig yr Hesg quarry to the history of Pontypridd / Glyncoch, but which creates an attractive and valuable restored site which will be an asset to the area and future generations.

8.8.16 The application makes provision for the possible dedication of some 4.6 hectares of land south of the extension area adjoining the north western boundary of the Craig yr Hesg Local Nature Reserve which could be gifted to RCT Council as an extension to the Nature Reserve. This would follow the previous gift by Hanson in 1993 of 40 acres of land at Craig yr Hesg to the predecessor authority Taff Ely Borough Council which now comprises the Craig yr Hesg Local Nature Reserve. The additional area lies within the boundaries of the Craig yr Hesg / Lan Wood Site of Importance for Nature Conservation and would form a logical extension to the adjoining Local Nature Reserve.

8.8.17 The 'additional questions' relating to legacy focus on whether there are ways to improve communication and engagement with the local community. This would be designed to minimise the future risk of trespass (particularly by young people); disseminate information on working hours for the coating plant; additional engagement to highlight the measures to improve public access, mitigate visual impact, provide countryside access, and mitigate ecological loss; and measures to highlight ecological and landscape protection carried forward from previous phases of development.

8.8.18 The additional questions also query whether there are ways to engage with the community to demonstrate previous support (aggregates levy etc) and the opportunities for further support during the operational lifespan of the quarry (again aggregate levy, local contracting etc), together with potential community engagement during the restoration of the quarry.

8.8.19 Hanson is amenable in principle to all of these suggestions. Subject to cooperation from others, they are happy to arrange visits by the local schools to explain the work which is undertaken at the quarry, the importance of it, and, the safety issues and hazards which exist.

8.8.20 They are also happy to provide information on the proposed enhanced web site regarding the working hours of the roadstone plant if these hours are intermittent rather than routine.

8.8.21 The wider issues raised regarding the measures proposed to mitigate impact and the benefits of the scheme etc should be apparent from the application documents and from the content of this report, but Hanson is committed to attempting to re-establish a Quarry Liaison Group where these issues can be regularly reviewed and discussed (as referred to further below).

8.9 Trust

8.9.1 The concerns raised under the generic heading of 'trust' apply as much to the regulatory bodies (notably RCT) as they do to Hanson. In essence, the concerns express mistrust of the results of noise, air quality and blast vibration monitoring; a lack of trust in the stakeholders (regulators) to protect the public; a lack of effective enforcement with inflexibility in adapting to community feedback; a more general rhetorical question as to what happens of the conclusions of the EIA / ES are incorrect; and a related concern that the accumulation of potential impacts may unduly impact upon the general quality of life.

8.9.2 RCT as the regulatory body currently undertake a minimum of one full inspection and 2 x check inspections of the aggregates processing plant, asphalt plant and related operations which are regulated by an Environmental Permit. This frequency can be changed dependent on the established risk rating of the installation. Air Quality is monitored by Hanson as a requirement of the ROMP Review schedule of conditions and Hanson has voluntarily agreed to continue the air quality monitoring for a further 12 month period to November 2016. The results are made available to RCT for scrutiny. All blast monitoring data is provided to RCT generally on the day of the blast, preceded by advance notification of the date and approximate time of the blast. RCT are able to undertake monitoring of compliance with planning conditions via site inspections where Regulations provide for the cost of the inspections to be borne by Hanson. Separate inspections are undertaken by the Mines and Quarries Inspectorate. The operations at the quarry are thus fully regulated and controlled by well established procedures.

8.9.3 The additional questions highlight a number of opportunities for additional community engagement, dissemination of information, review of monitoring data, and continued improvements etc. Hanson has no difficulty with the principle of these initiatives.

8.9.4 However, Hanson consider that the most effective way to approach these concerns is via constructive dialogue with representatives of the Local Community via the re-establishment of a Quarry Liaison Group, which would also include representatives of RCT. This would provide a forum for issues and concerns to be discussed, for information to be provided on progress with the quarrying operations, for any site improvements to be explained, for monitoring records to be reviewed, and for any remedial or pro active measures to be discussed. This would also provide an opportunity for Hanson to explain the mechanics of ISO14001 (referred to above)

which requires constant assessment and improvement separate to the planning regulatory process which is more geared to compliance with existing requirements and standards.

8.9.5 Hanson has made firm proposals to the local community for the re-establishment of the Quarry Liaison Group but they have not received a positive response. A meeting was held in June 2015 with the objective of agreeing terms of reference for the Liaison Group and membership of the Group (which is to include Planning and Environmental Health Officers from RCT; the local RCT Ward Member and named community representatives). However, the local community representatives confirmed that they were unwilling to participate while the current planning application remains undetermined. The Liaison Group has thus not been re-established, but Hanson hopes that a more positive attitude will prevail post any positive determination of the application. Ultimately, dialogue is a two-way process and Hanson cannot take positive initiatives to involve the community without the cooperation of the community.

8.9.6 Finally, the Mineral Products Association (MPA) of which Hanson is a member is developing a Charter aimed at raising standards and improving perceptions. A key element of the initiative is to engage fully with local communities and to strive to be good neighbours. This is to be actioned by a commitment that all quarries will prepare and implement a Community Engagement Plan. Hanson, as a MPA member will respond positively to this initiative, but again, community engagement is a two way process and its success will depend upon the cooperation of the local community.

PUBLIC HEALTH AND WELL BEING ISSUES 8

9.0 SUMMARY OF RESPONSES AND ADDITIONAL COMMITMENTS

9.1 The preceding sections have provided a detailed response to the concerns which have been raised by respondents to the planning application and to the additional questions posed by the RCT Officers which have been drafted with the objective of facilitating the response.

9.2 The responses are preceded by a schedule of existing environmental commitments (Section 4) which draws together the comprehensive range of mitigation measures set out in the ES and which serves to underline the attention to detail inherent in the design of the development scheme.

9.3 However, the responses to the concerns raised and additional questions have also highlighted a number of positive additional measures and commitments which could be introduced which it is hoped will allay some of the concerns raised and which collectively are designed to improve communication between Hanson and the community.

9.4 The following thus presents a summary and aide memoire of the additional commitments referred to above:

(1) Enhanced Craig yr Hesg Web site

Hanson proposes to set up an enhanced Craig yr Hesg Quarry website which will allow the regular posting of information regarding operations at the quarry. It is hoped that it will be of assistance in providing advanced notification of activities, and thereby avoid operations taking place which may give rise to concern simply because they are unannounced (albeit permitted as part of the quarry operation) In essence, the approach will be to seek to allow the community and quarry to co-exist with a greater flow of information between the two, and in a way designed to reduce anxiety founded on a lack of knowledge of the quarry and related activities.

(2) Additional Noise Mitigation Measures

(i) All blast dates and proposed times of blasting will be set out on the enhanced website (albeit the precise time of the blast will be subject to operational and safety factors);

(ii) Direct notification of blast times can be provided to the local community, either via Glyncoch Community Regeneration, or named concerned individuals via emails;

(iii) All complaints (whether noise or any other topic) are recorded, investigated, actioned, and the complainant notified. This follows established procedures, noting that there were no recorded noise complaints in the three year period up to the date of submission of the May 2015 application,.

(iv) All new / unusual activities will be reported in advance on the website, notably commencement of construction of the screening landform, and commencement of quarrying in the extension area.

(v) Notification will also be provided on the website of drilling operations on the upper bench when noise levels will be at their highest (albeit within the defined noise limits).

(3) Additional Blast Vibration Mitigation Measures

Consistent with the suggested additional noise mitigation measures, further operational mitigation measures relating to blast vibration (some of which are common to noise) are as follows:

(i) All blast dates and proposed times of blasting will be set out on the enhanced website (albeit the precise time of the blast will be subject to operational and safety factors);

(ii) Direct notification of blast times can be provided to the local community, either via Glyncoch Community Regeneration, or named concerned individuals via emails;

(iii) Any blast complaints are recorded, investigated, actioned where appropriate and the complainant notified.

(iv) All new / unusual activities will be reported in advance on the website, notably any blasts on the quarry floor or in areas which the blast design predictions indicate may give rise to elevated levels of ground vibration or air overpressure (albeit within the prescribed limits).

(v) The enhanced web site will include a description of the blasting process and vibration limits to assist public understanding.

(4) Dust and Particulate

Based on the findings to date from the current air quality monitoring exercise being carried out under the ROMP conditions (for a 24 month period to November 2016), which is designed, inter alia, to assess the effectiveness of the dust mitigation measures at the site, the opportunity will be taken to review the findings with RCT and consider the need to implement any further mitigation measures.

(5) Traffic and Safety

Consistent with the current arrangements, all hauliers will be required to abide by the Hanson 'Hauliers Rules and Procedures' which, inter alia, provides comprehensive instructions to drivers regarding vehicle loading, sheeting, the need to abide by defined vehicle routing, and standards of driver courtesy. Hanson consider that these issues are already in place and enforced by established rules, but the request has provided a opportunity to draw this to the attention of the public, and they will continue to respond positively to any transgressions which they identify or which are brought to their attention.

(6) Amenity

(i) Subject to cooperation for others, Hanson are happy to arrange visits by local schools to explain the work which is undertaken at the quarry, the importance of it, and, the safety issues and hazards which exist.

(ii) They are also happy to provide information on the proposed enhanced web site regarding the working hours of the roadstone plant if these hours are intermittent rather than routine.

(iii) Via a Quarry Liaison Group (discussed in item (7) below), Hanson is committed to engaging with the community to demonstrate previous support (aggregates levy etc)

and the opportunities for further support during the operational lifespan of the quarry (again aggregate levy, local contracting etc).

(iv) Hanson would also be willing to consider the views of the local community at the restoration stage when final details of the restoration proposals are prepared (and which will require to be submitted as a condition of a planning permission, similar to the requirements of the current restoration planning conditions).

(7) Quarry Liaison Group

Hanson has made firm proposals to the local community for the re-establishment of a Quarry Liaison Group and it is hoped that this can be re-established, subject to cooperation from RCT and the Local Community. This would provide a forum for issues and concerns to be discussed, for information to be provided on progress with the quarrying operations, for any site improvements to be explained, for monitoring records to be reviewed, and for any remedial or pro active measures to be discussed.

RESPONSE AND ADDITIONAL COMMITMENTS 9

10.0 CONCLUSIONS

10.1 This Report provides a response to the well being and environmental health issues which have been raised by respondents to the Craig yr Hesg extension and consolidation planning application.

10.2 The comments which have been submitted raise a wide range of topics and issues which in many cases re-iterate issues raised at a community consultation event held in March 2015. A common theme of the comments is concern relating to well being and public health.

10.3 Following discussions between the Applicants and RCT it has been agreed that the Applicants will prepare a comprehensive response to the well being and public health issues which have been raised. The issues to be addressed have been informed by liaison between RCT, Public Health Wales, the Cwm Taf University Health Board, and representatives of Glyncoch (via Glyncoch Community Regeneration Ltd). This has culminated in the preparation of a schedule of themes, concerns and additional questions to which the Applicants have been asked to respond. The schedule is set out in a memorandum dated 24th February from the RCT Pollution and Public Health Manager and this Statement provides the requested response.

10.4 The underlying theme of the requested response is to develop the existing EIA and ES, which considers potential environmental and amenity impacts on the list of topics agreed via the EIA scoping exercise, into a wider study which focuses on the health and well being of the community. This in turn provides a mechanism whereby the existing proposed mitigation measures can be drawn together into one document, and where any additional measures arising from the study which might further address concerns can be included.

10.5 The resulting Report provides a detailed schedule of the comprehensive mitigation and monitoring measures proposed as part of the EIA and ES (ref Section 4.0 of this Report) which highlights the attention to detail in devising the proposals but also the substantial measures which are available to regulate and minimise the effects of the development. In the majority of cases these represent existing well established measures which are proven to be effective. Other measures are specific to the project, most notably the visual and noise attenuation benefits which would be provided by the eastern and northern screening landform.

10.6 The amenity and community benefits of the scheme are highlighted (sections 5.0 and 6.0) as a balance against the concerns which are catalogued in Section 7.0. Section 8.0 provides a detailed response to the concerns raised and the additional questions posed by RCT, in a way which is intended to be constructive and positive in recognising the concerns and which seeks to address the concerns in a sympathetic way.

10.7 This has resulted in the identification of a series of additional measures and proposals designed to generally improve communication with the local community, and to disseminate information in a pro active and helpful way. The respective additional measures are described in Section 8.0 and are drawn together in Section 9.0, with these measures to be read alongside the suite of existing proposed measures set out in Section 4.0.

10.8 The core community concern is the potential risk of changes in air quality. Following a review of published literature, and based upon extensive monitoring data, it is concluded that the development could proceed in a way which would ensure that

concentrations of PM10 and PM2.5 from quarry sources would be of minor significance. Total concentrations would remain well within the air quality standards set to protect public health and would not be of a magnitude sufficient to cause any significant adverse health outcome during the quarrying and related operations.

10.9 All other regulatory standards set to protect public health are similarly predicted to be achieved as part of the extension development in terms of the noise and blast vibration limits which have been recommended in the ES. The one exception to this relates to the noise limit that has been recommended at Cefn Heulog, but that is capable of being addressed by a more restrictive noise limit condition if RCT consider that to be necessary and reasonable (ref paragraph 8.2.4 above).

10.10 The similar noise and blast vibration limits which are in place at the existing quarry have been demonstrated by monitoring to be consistently achieved.

10.11 The study undertaken in producing this response thus concludes that on the basis of objective evidence, the effects of the ongoing development upon existing burdens of health would not be sufficient to create any adverse health outcome.

10.12 Nevertheless, the study addresses concerns, and proposes a series of measures which seek to address perceptions, assist in the dissemination of information regarding operational procedures and issues, and which makes commitments to generally improving community liaison (subject to cooperation from the community).

APPENDICES

1. **Memorandum dated 24th February from the RCT Pollution and Public Health Manager.**

APPENDICES

STRONG HERITAGE | STRONG FUTURE
RHONDDA CYNON TAF
TREFTADAETH GADARN | DYFODOL SICR

Iechyd a Diogelwch y Cyhoedd
Public Health & Protection
Tŷ Elái, Dinas Isaf Dwyrain/Dinas Isaf East,
Williamstown, Tonypandy, CF40 1NY
Ffôn/Tel: 01443 425001, Ffacs/Fax: 01443 425580

Community and Children's Services
Public Health and Protection Department
Dinas Isaf East, Williamstown,
Tonypandy , CF40 1NY

Tel: (01443) 425001
Fax: (01443) 425301

Date:	**24th February 2016**	**From:**	Community and Children's Services Public Health and Protection Division Pollution & Public Health Team
My Ref:	**NJP/474782**	**To:** **FAO:**	Development Control Phil Bristow
Your Ref:	**15/0666/10**		

Proposal: Western extension to existing quarry

Location: Land at Craig Yr Hesg Quarry, Berw Rd, Pontypridd, CF37 3BG

Further to my memo of the 3rd February 2016 and the additional public health and wellbeing information requested to enable the consideration of the Environmental Statement submitted in connection with the proposal. A number of Themes have been identified from the recent public consultation, with revisions undertaken to take account of further feedback provided, which may have a bearing on the impact of the proposal upon the health and wellbeing of the local community. These Themes are outlined in the table below and should be considered by the applicant in determining the overall impact of the proposal and the necessity and scope of any relevant additional mitigation or off-setting measures.

Theme	Concern	Additional Questions
Noise	General noise disrupting vulnerable groups and older people	A+B
	Unpredictability of noise occurrence and duration heightening its impact	A+B
	Blasting noise adversely affecting vulnerable groups (i.e. residents with angina)	A
	Blasting noise causing disturbance	A
	Noise preventing use of outdoor spaces	B
Vibration	Vibration damage to private property and public facilities	C+M
	Lack of public understanding of the blasting process and associated monitoring practices and oversight	D
	Unpredictability of vibration occurrence heightening its perception and resultant disturbance	C+D

Paul Mee
Cyfarwyddwr Gwasanaeth Iechyd a Diogelwch y Cyhoedd | Service Director, Public Health and Protection

	Lack of investigation (including prior surveys) of alleged vibration damage to property	$C+M+D_1$
	Subsidence damage to property and public facilities	C+M
Particulate	Impact on lung health	E+M
	Impact on breathing disorders (asthma, COPD, pulmonary fibrosis, ect)	E
	Impact on those suffering TB (TB inoculation)	E
	Disproportionally greater adverse affect on the young and old	E
	Any Increase in particulate matter maybe harmful	F
	Composition of Particulate Matter may be carcinogenic due to silica and roadstone coating sources	E
	Breadth and availability of knowledge on likely emissions	E_1+M
	Consideration of HGV exhaust fumes	-
Dust	Impact of nuisance dust on blast days	A+F
	Dust nuisance affecting property enjoyment (preventing the opening of windows, etc)	F
	Variability of dust impact (increase in emissions during start-up, periods of dry weather)	F_1
	Adequacy of existing abatement technology (wheel wash facilities, dust suppression on drilling rigs, etc)	F_1
Physical Danger	Escape of blasting debris (lessons learnt from the 'Brayford fly rock incident')	D
	Unsecured loads of aggregate escaping on the public highway	G
	Use of old exit road and safety	-
	Lorries travelling to fast along public highway	G
	Heavy vehicles utilising local highway network which may not have been designed for such use	G
	Pedestrian safety from narrow footpaths may reduce accessibility of various groups and may discourage modal shift	G
Water	Risk of contamination to mains water supply from disturbance to mains network in proximity	-
	The lost green space may reduce the control of surface waters and increase the risk of flooding	-
	Water runoff from access road affecting performance of highway drainage	G_1
Amenity	Is the quarry secure enough from trespass	H
	Will the roadstone coating plant operate 'unsociable hours'	I
	Will larger 60 tonne vehicles ultimately be used to haul material from site	G
	Volume of traffic along Berw Rd and suitability of road for larger vehicles reducing the usability of the road for the community	G
	Difficulty in insuring property	-

	Close proximity of quarry to an urban area causing property blight	-
	Loss of recreational area as a result of expansion	J
	Loss of ecological area as a result of expansion	J
	Economic impact of disruption from road haulage traffic to commercial area of Pontypridd	-
	Never ending development with no ultimate cessation	-
	Resentment from perceived lack of local community benefit from development	J+K
	Perceived loss of heritage from extension either directly or preventing access	K
	Impact on legacy of the area once the development is completed	L
Trust	Trust in the monitoring of noise, particulate, dust and particularly vibration (both method, frequency and people undertaking it)	M
	Lack of awareness of proactive and reactive actions taken to protect public health and the environment	$M+N_1+N_2$
	Lack of trust in stakeholders to protect the public	N+O
	Lack of effective enforcement when control measures fail	N
	Inflexibility in adapting to community feedback	O
	What if the EIA or ES is incorrect	M+N+O+F
	The accumulation of potential impacts may unduly impact upon the general 'quality of life'	P

To assist in the interpretation of the Themes a number of Additional Questions have also been produced. If possible the applicant should consider these Themes as well as provide responses to the Additional Questions and any other responses which the applicant considers could evaluate and where necessary address these Themes or other known relevant public health and wellbeing concerns.

Additional Questions

A. Are there specific proportionate measures (inc. intangible measures such as greater education (posting on website of blast date and time) of when blasting will happen, monitoring (videoing a blast) of nuisance dust production, etc) which could be adopted which could reduce the impact of sudden short lived disturbances (i.e. noise of blasting, dust from blasting) produced during normal quarry operations.
B. Are there proportionate measures to inform people when higher noise activities (i.e. bund construction, top bench work, etc) will take place and practical measures which can be put in place to feasibly reduce noisy activities at more sensitive times (avoiding noisy work on weekends, etc) and an ability to review future noise monitoring and feedback from the community (effective complaints process) to enable continued improvement
C. Are there ways to improve the robustness of vibration (including overpressure) monitoring by targeting proactive and reactive monitoring exercises and engaging with the community so complaint procedures are understood and

subsequent analysis widely disseminated and accompanied with a lay-person appropriate commentary.

C_1. Are there ways to analyse local blasting and vibration knowledge to identify areas of the community most likely to be affected as the quarry working plan is implemented (taking account blasting depth, material composition, blasting technique), and proactively assess if additional proportionate measures (changing blasting technique, volumes worked, greater warning) are appropriate depending upon the circumstances

D. Are there ways to clearly disseminate to the public the current methods and practices used and the reasoning for there selection, accompanied with a lay-person appropriate commentary, to maintain safety and reduce as far as practicable the impact of blasting on the local community.

D_1.Are there ways to analyse and disseminate, accompanied with a lay-person appropriate commentary, the performance of blasting techniques used, the resultant potential disturbance reported and identify possible trends (if blast energy or other factors are linked to community disturbance) and improvements to best practice tailored to local circumstances

E. Is there available evidence to indicate if the composition or nature of the particulate matter emitted as a result of the proposal would create a greater risk to health than that represented by the relevant Air Quality Objectives, either to the general public or specific vulnerable groups in Glyncoch (i.e. children (including those attending the Primary School), the elderly, residents with existing ill health (including breathing disorders, lung diseases and cancer) and those living in sensitive locations in close proximity to the extension

E_1. Is there knowledge which could be drawn upon to compare emissions from the site to those observed elsewhere (are similar activities undertaken elsewhere in similar circumstances achieving similar or better emission controls).

F. Consideration of the principal of post determination monitoring of particulate matter and dust at 'at risk locations' to confirm the predictions of the ES and enable empirical analysis to support possible continued improvement in their control.

F_1. Are there ways to extend best practice in the monitoring and recording of emissions from parts of the site to the remaining areas (the recording of the effectiveness of dust control measures in regards to the Environmental Permit extended to cover quarry face activities)

G. Consideration of instruction/procedures/protocols or code of practice (including details or preferred local haulage routes (or highlighting inappropriate local routing) to site (including highlighting awareness of any specific risks), conduct in accessing the site (opening hours/que waiting procedure), rules to be obeyed on site to minimise neighbourhood disturbance, the investigation of non-compliance, accessibility of complaints procedure and any sanctions for non-compliance, etc) provided to road hauliers using the site (adoption of a code of conduct to be signed up to by road hauliers, etc).

G_1. Is there a mechanism to ensure ways for proactive working with other relevant agencies to assess (continuous review of surface water controls) and if necessary reduce the impact of surface water drainage affecting neighbouring properties and the public highway.

H. Are there ways to engage (school engagement, etc) with community groups or organisations which would minimise the future risk of trespass (especially by younger people)

I. Are there ways to clearly disseminate to the public any future working of the roadstone coating plant (including maintenance) during unsociable hours and to inform the community of any complaint procedure.

J. Are there ways to engage with the community to demonstrate the measures being taken to improve accessibility and/or mitigate visual impacts and/or offset countryside access and/or ecological loss, including continued measures from previous phases of development to demonstrate consistent regard to ecological and landscape protection.

K. Are there ways to engage with the community to demonstrate previous community support (charitable undertakings, aggregate levy, etc) and proportionate mechanisms in place to consider future community support during the operational lifespan of the quarry (aggregate levy, local contracting, etc)

L. Consideration of potential community engagement during the restoration of the quarry post operational completion to explore possible community expectations and, where reasonable, to adapt current plans accordingly.

M. Are there ways to improve the public dissemination of monitoring and performance information (including the reasoning for methods used), scrutiny of findings and enable community and other stakeholder engagement in future proactive dynamic monitoring to ensure the site operates within its operating licences/permissions and to strive for continued improvement.

N. Is it possible to reassess the options for regular formal community engagement either involving regular meetings with nominated community members and stakeholders or, if not practicable, with relevant community workers (e.g. regularised meetings between the operator and a 'community first' representative and/or locally elected member who may be able to convey community concerns).

N_1. Is it possible to consider the options for disseminating to a wide audience ongoing improvements made to the operation and control of the quarry (report published on website)

N_2. Is it possible for the publication (webpage) of regular mandated monitoring (extractive monitoring, PCME, vibration results) accompanied with lay-person appropriate commentary to assist in its interpretation.

O. Are there mechanisms which can be adopted which can allow regular review of monitoring data and ongoing processes to enable continued improvement (regular review of noise/dust/vibration plans, ROMP review, etc)

P. In reviewing the available data within the EIA and any subsequent additional submissions are there any synergistic or accumulative impacts which could give rise to an undue impact upon the quality of life of local residents.

In regards to the meaning of "proportionate" consideration should be given to, inter alia, the scale of the proposed action and the scale of its potential impacts, its adoption/acceptance within the wider industrial sector, its viability at this site (including any impact upon permitted/licensed operations), the cost of implementation and the accessibility of the action to the applicant as well as the gain or benefit in undertaking the action.

Further discussions can be arranged should the applicant require additional clarification.

Neil Pilliner
Pollution & Public Health Manager
Pollution & Public Health
Public Health and Protection

2. **Letter dated 3rd March from Hanson's Planning Consultants SLR to Glyncoch Community Regeneration Ltd.**

APPENDICES

3rd March 2016

Chairman
Glyncoch Community Regeneration Ltd
56 Garth Avenue
Glyncoch
Pontypridd
CF37 3AA

Our Ref: 407.00027.00385

Dear Sir

CRAIG YR HESG QUARRY EXTENSION

We have been instructed by Hanson UK to prepare a supplementary report in response to issues and concerns which have been raised by members of the Glyncoch community in response to the planning application submitted by Hanson UK for an extension to Craig yr Hesg Quarry. Officers at Rhondda Cynon Taf (RCT) have assembled a schedule of themes, concerns and questions drawn from letters of objection which have been submitted, and with input from other interested bodies, including Public Health Wales. I also understand that discussions have been held with representatives of Glyncoch Communities Regeneration (GCR) in devising the schedule of issues.

Hanson has confirmed that they are content to cooperate with the request to provide further information in response to these issues, and they have been provided with the aforementioned schedule of themes, concerns and questions, as set out in a letter dated 24th February from the RCT Pollution and Public Health Manager (copy enclosed).

We consider that the schedule is very comprehensive and encapsulates all issues identified as being of concern to the community, and we will thus produce a report which addresses each of the issues. The report will be the subject of further consultation which will allow GCR and other interested parties to comment on the report before a decision is made on the planning application.

Whilst we consider that there are unlikely to be any additional issues which have been omitted from the schedule, we are keen to ensure that the forthcoming study covers all issues of concern to the community. We would therefore welcome your advice as to whether there are any additional issues, themes or questions which should be addressed, or whether you agree that the schedule as drafted covers the issues of concern. Clearly, at this stage we are simply seeking to agree the list of issues rather than debate or pre-empt the findings and content of the subsequent report.

I would be grateful if you could respond by 18th March, and in order that we can make progress with this, I will assume that in the absence of a response that the issues as set out in the attached letter are agreed as a basis for the study.

Yours Sincerely,
for SLR Consulting

Graham Jenkins
Technical Director

3. Daily visual assessment of emissions: Inspection Checklist.

APPENDICES

Inspection Checklist

Hanson
HEIDELBERGCEMENT Group

Activity: Craig Yr Hesg Quarry **Delegated Responsibility:**

SITE: **Visual Assessment of Emissions** **Week Commencing:** _____

	Item No.	Item Inspected	M	Tu	W	Th	F	S	Su
DAILY	1	Torver Dust Extractor Stack							
	2	Water Sprays							
	3	PCME Monitor							
	4	Process Buildings							
	5	Conveyors							
	6	Dust Shed							
	7	Stockpiles							
	8	Loading							
	9	Haul Roads							
	10	Wheel Wash							
	11	Entrance/Exit road (Inc Sprays)							

COMMENTS

Key		
AB	**Satisfactory**	*Initials of inspecting person indicates this item is satisfactory at the time of inspection*
X	**Action Required**	*If you have found it necessary to place a 'X' in any of the boxes above or have any other defects/comments would you now detail overleaf and report to your supervisor*
*	**Starred Items at Managers discretion**	*Should an "X" be placed by a starred item the plant must not be started, or if started should be stopped, until the condition is rectified, e.g. *1*
	Not Checked	*If you have not carried out this check please leave the box blank.*

Item No	Comments/reported to	Action Taken	Date Completed

EMPLOYEE PARTICIPATION

I have the following suggestions / comments on health, safety, environmental and quality matters (including reporting dangerous occurrences, risk taking situations and near hit incidents):

Signature of persons carrying out inspections: _____

Counter signature of Responsible Manager (or appropriate person in the management structure)

_____ Date: - _____

Manager's comments: -

4. Daily and weekly general site inspection checklist.

APPENDICES

Hanson
HEIDELBERGCEMENT Group

Delegated Responsibility:

SITE _____ **Week Commencing** _____

	Item No.	Item Inspected	M	Tu	W	Th	F	S	Su
DAILY	1	Are haul roads and quarry faces in a suitable condition for work to commence							
	2	Is edge protection to the required standard on all working haul roads and plant accessed stockpiles							
	3	Were all persons seen to be wearing the appropriate items of protective clothing/equipment during the inspection							
	4	Are emissions visually acceptable (water discharge, dust, gaseous, odour etc)							
	5	Is all environmental control and monitoring equipment working satisfactorily/water bowser in a serviceable condition							
	6	Does control of waste comply with procedures							
	7	Are all storage facilities in good condition / properly labeled							
	8	Are all barriers adequate to discourage trespass							
	9	Is site security suitably addressed							
	10	Is traffic management system being complied with							
	11	Is vehicle sheeting policy being adhered to							
WEEKLY	12	Have all mobile / static plant inspection sheets been completed and defects addressed							
	13	Are all signs positioned as necessary							
	14	Is drillers safety equipment being used (harnesses, barriers etc)							
	15	Was maintenance work being carried out safely (lock-off, safe working practices, permit to work etc)							
	16	Is rescue, first aid and safety equipment available and serviceable							
	17	Condition of structures including all building floors							
	18	Are P.P.E signs positioned as necessary							
	19	Is the site entrance notice board clean & legible including Responsible Manager's details and emergency contact number							
	20	Are the welfare / washing / office facilities adequate and clean							
	21	Are electrical switch rooms / substations clear of debris / dust							
	22	Can the site be secured							

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Key		
AB	**Satisfactory**	*Initials of inspecting person indicates this item is satisfactory at the time of inspection*
X	**Action Required**	*If you have found it necessary to place a 'X' in any of the boxes above or have any other defects/comments would you now detail overleaf and report to your supervisor*
*	**Starred Items at Managers discretion**	*Should an "X" be placed by a starred item operations must not be started, or if started should be stopped, until the condition is rectified e.g. *1*
	Not Checked	*If you have not carried out this check please leave the box blank.*

Item No	Comments/reported to	Action Taken	Date Completed

EMPLOYEE PARTICIPATION

I have the following suggestions / comments on health, safety (including reporting dangerous occurrences, risk taking situations and near hit incidents), environmental and quality matters:

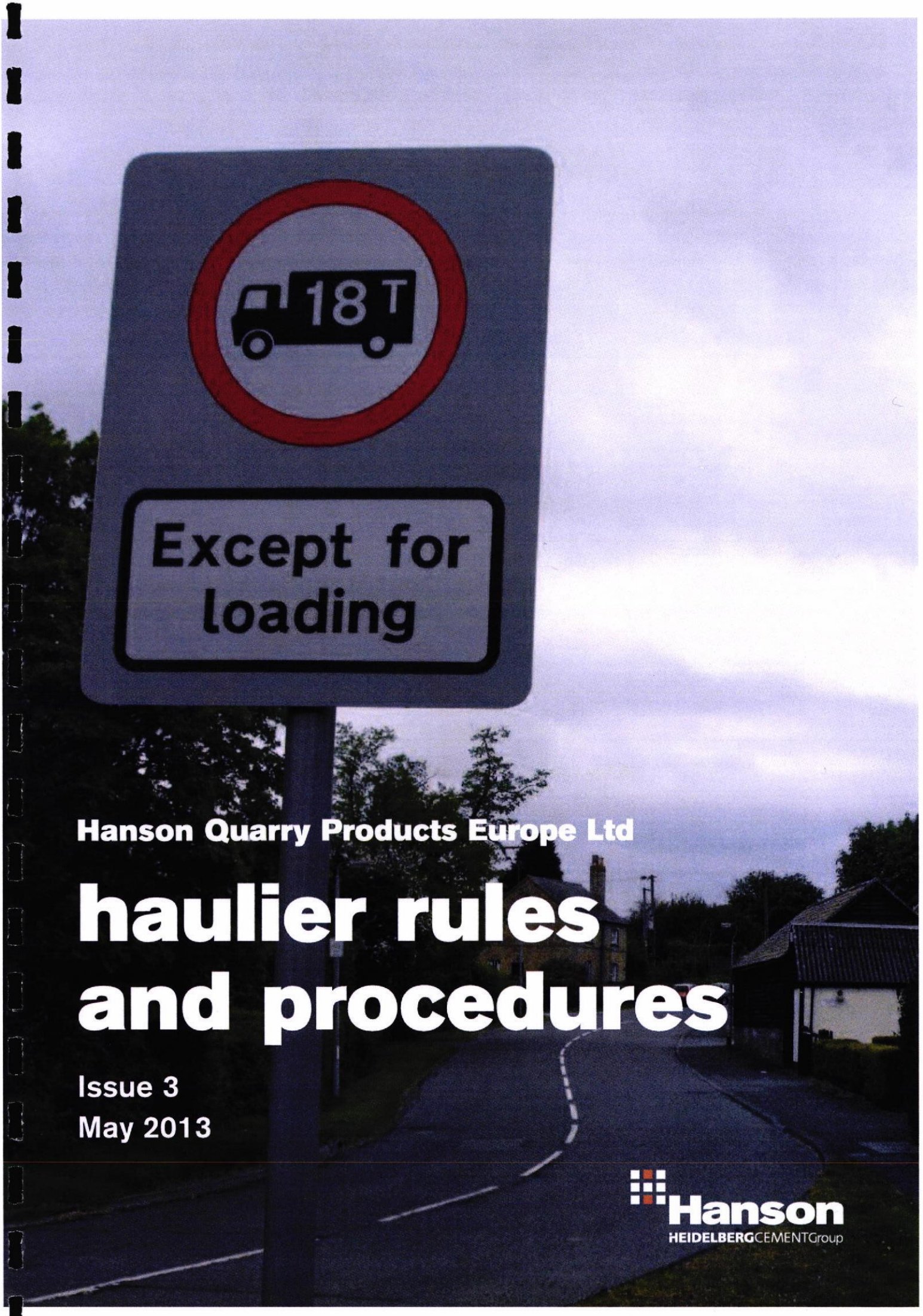
Signature of persons carrying out inspections: _____

Counter signature of Responsible Manager (or appropriate person in the management structure)

_____ Date: - _____

Manager's comments: -

5. Hanson Hauliers Rules and Procedures, Issue 3 May 2013



Hanson Quarry Products Europe Ltd

haulier rules and procedures

Issue 3
May 2013

Hanson
HEIDELBERGCEMENTGroup

Hanson Quarry Products Europe Ltd

Haulier rules and procedures

contents

1 Introduction

This manual sets out the rules and procedures with which all Hanson hauliers (franchisee/contract/hired/company) must comply. The document is not intended to be exhaustive, detailing all aspects and potential events. It is anticipated, however, that by issuing these procedures, all hauliers will have an improved understanding and awareness of the standards required when operating for Hanson and delivering to its customers.

If any problems or situations arise which are not dealt with specifically in this manual, or if there is any doubt whatsoever, **STOP** and refer to a Hanson manager (or a customer representative if on a customer site) and complete a risk assessment before proceeding.

All accidents and incidents must be reported to a Hanson manager (and to a customer representative if on a customer site) and recorded in the site accident book.

Drivers have an important role in maintaining and improving health and safety and environmental performance. Any unsafe acts or near hits witnessed must be reported to a Hanson manager (and to a customer representative if on a customer site). Do not ignore them – they may help prevent accidents in future.

It is intended to review compliance regularly against the requirements in this manual. Non-compliance could result in approved haulier status being withdrawn for an individual or company. The company attaches the greatest importance to responsible practices and expects all hauliers to do the same. Accordingly, the company requires all hauliers to conduct themselves in a safe and responsible manner at all times and to comply fully with the company's sustainability policy and manager's rules.

The company requires that all policies and rules applicable to the company's or customer's premises must be understood and followed by all personnel engaged by the haulier. Particular attention should be given when a vehicle is being moved, loaded or unloaded. A copy of the Hanson UK sustainability policy is available along with the manager's rules at each company site. All hauliers must take all steps to familiarise themselves with these procedures.

The company will, from time to time, require attendance at meetings to discuss health and safety issues and other matters as requested. Where attendance is required, the haulier will receive due notification from the company.

All contractors (which includes franchises and hired hauliers) must be aware of current legislation and their obligations to ensure compliance. This includes providing Hanson with relevant compliance documentation when requested.

Nothing in this manual shall over-ride the franchisee/contract haulier agreement with the company or the company's terms of haulage. In the event of any conflict, the terms of the franchisee/contract haulier agreement or terms of haulage shall take precedence (applicable to franchisee and contract hauliers only). Amendments or additions to this manual will be issued as and when necessary.

2 Vehicle condition

It is a company requirement that vehicles are maintained in a safe, roadworthy condition in compliance with all relevant legislation. In addition, the company requires hauliers to ensure vehicles are:

- Appropriately maintained to minimise noise and dust generation.
- Maintained and checked to prevent leakage of fuel, hydraulic oil or lubricants.
- Fitted with adequate wheel spray reduction.
- Fitted with operational reversing cameras, cab mounted 360° visibility orange flashing beacons and rear flashing strobe lights in accordance with the Highways Agency, Chapter 8 specification, where required.

In addition,

- Vehicles must display "Highway Maintenance" signs where appropriate as well as yellow and red chevrons marker boards in accordance with the Highways Agency, Chapter 8 specification.
- As a minimum, tailgates must be fitted with Hex Nut tailgate operation; ideally an automatic gate is preferred. Articulated trailer gates which operate by either gravity or pressure are acceptable.
- Exhaust outlets should be vertical discharge to avoid dust generation.
- Truck mixers must have a spring loaded access bar or chain to the ladder platform, an anti-pinch finger device to the rear chute and a correctly functioning and calibrated water meter fitted.

All Hanson franchised and third party vehicles must comply with the company's basic specification for tippers and truck mixers and will be subject to Hanson inspections.

3 Personal protective equipment (PPE)

There are legal requirements contained in the PPE at Work regulations that you provide adequate PPE for yourself and any persons you employ.

Long-sleeved high visibility jackets/tops and trousers to EN 471 Class 3 approved, safety helmet, eye protection, safety specs or goggles, gloves and lace-up boots with steel midsole protection are mandatory on all Hanson operating sites and all customer delivery sites.

Additional PPE must also be carried for use if required, by each delivery driver when attending any Hanson operational site, and for use on specific customer contracts where the requirements will be notified to you. This includes:

- Ear defenders or plugs.
- An appropriate dust mask.
- Helmet torches.

To reduce the risk of ankle injuries, Hanson prohibits the use of rigger boots.

4 Mobile phones

It is illegal to drive while using a hand-held mobile phone. It is also Hanson policy that hand-held mobile phones are not used by drivers on company or customer sites. Any use of a mobile phone by the driver must be hands-free. No mobile phone should be used by a driver unless it can be properly and securely positioned without obscuring driving instruments.

It is also recommended that calls should not be lengthy – even with hands-free, research has shown that reaction times are considerably lengthened when drivers are engaged in telephone conversations. There is no company requirement for extended telephone conversations while driving. For urgent matters, a short call to acknowledge should be followed by the driver safely parking and returning the call once stationary.

All of the above requirements apply to the use of CB radio, data phones and satellite navigation devices. In addition, under no circumstances should drivers attempt to read or send text messages or e-mail while their vehicle is in motion.

If you are in any doubt as to the safety of calls from a hands-free mobile phone, STOP and call when parked in a safe position. Do not use a mobile phone (even hands-free) while manoeuvring the vehicle when under the supervision of a banksman.

5 Hanson site rules

The following generic rules apply at all Hanson and customer sites. You or your employees must also familiarise themselves with the requirements of Hanson site specific or manager's rules:

- Drivers must have an acceptable level of the English language in order to understand warning instructions and directions to and from site.
- Always report your arrival on site to a weighbridge/batcher/site management or foreman as appropriate.
- Obey all instructions issued.
- Under no circumstances should children or pets travel in the cab of any vehicle undertaking work on behalf of Hanson Quarry Products Europe or collecting from or delivering to our sites. A child is defined as a person less than 18 years old. Prior to entering site, permission must be sought to allow an adult passenger to enter even if they do not get out of the cab. The permission may include the wearing of the appropriate PPE and being inducted on site safety rules. Any infringement of this rule could lead to the driver being turned away.
- Always use orange flashing beacons when on site; these are mandatory unless otherwise agreed by local site rules.
- Only enter and exit construction works areas via the designated entry and exit points.
- Always adhere to site speed limit signs whenever these are posted. If no speed limit signs are posted then the vehicle should travel at no more than a

recommended 10 mph unless site conditions dictate otherwise. Obey all traffic signs and keep to designated traffic routes and haul roads unless instructed otherwise.

- Give way to pedestrians and cyclists.
- Give way to quarry or mobile plant (dumpers, loading shovels etc). Stop and wait before proceeding, and be particularly aware of small vehicles.
- Slow down when approaching people and working machines and make sure they are aware of your presence.
- When manoeuvring on site, check that the intended path of the vehicle is free from obstructions and that the route is suitable. Watch for hazards such as overhead power cables, lightweight manhole covers, soft ground, debris and deep excavations.
- Do not reverse until you have checked it is safe to do so. If in doubt, ask for supervision or a banksman.
- All tipper bodies must be fully lowered after discharge is complete and must remain so while on site.
- Hauliers must familiarise themselves with, and adhere to, the site emergency procedures.
- The use of CB radios is forbidden at some quarries. Hanson management will give specific permission.
- No activities shall take place that could cause, or are likely to cause pollution.
- No waste can be deposited on site without the authorisation of the site manager.
- Returned loads should be tipped in the designated area as authorised by the site manager.
- No returned materials shall be tipped out of hours without prior approval of the site manager and then only in designated areas within the site boundary.
- Vehicle washing may only take place in designated areas as authorised by the site manager.
- Hanson encourages that everyone stops to "Take One" – a one minute risk assessment – to assess a routine task before it is carried out. Think safety and environment.
- If you see something wrong or a near hit, report it to a site manager, it could save someone's life, prevent injury or environmental incident.
- It is the law to wear seat belts on the road; it is also a requirement when on site.
- Daily vehicle inspection sheets must be completed prior to the vehicle being utilised and be available for inspection at any time by a Hanson representative. This should include both chassis cab and body.
- All mobile plant, including LGV vehicles that enter a Hanson site must provide evidence that they are maintained to the

correct standard before starting work.

- Safety critical defects must be rectified prior to using the vehicle.
- Any vehicle left running and unattended should be, as far as is practical, secured by locking the doors.

You should stay with your vehicle when on site – there may be hazards of which you are not aware. When you do have to get in and out of your vehicle, always use the steps and grab handles, maintain three points of contact, check ground conditions and never jump.

6 Control of substances hazardous to health (COSHH)

The company has important legal obligations under the COSHH regulations to prevent the exposure of its employees and others to hazardous substances. The company may not carry on any work likely to expose any employees or others to any substances hazardous to health unless it has made a suitable and sufficient assessment of the risks to their health and of the steps necessary to meet the requirements of the regulations. Such exposure must either be prevented or, where this is not reasonably practicable, adequately controlled. Hazardous substance information sheets are available at all company sites.

All hauliers should familiarise themselves with the relevant COSHH site risk assessment. Advice can be sought from the manager. No hazardous substances should be brought onto company premises without the knowledge and approval of a Hanson manager or supervisor.

7 Parking on company premises

Vehicles may only be parked on company premises with permission from the site manager. They are parked entirely at the haulier's risk. Overnight parking of haulage vehicles and daytime parking of personal transport will only be allowed in the designated areas specified by the responsible manager.

- All vehicles must be reversed parked. Where required, spare keys for the emergency removal of vehicles should be lodged in a place nominated by the responsible manager.
- Sleeping in cabs can only take place with prior permission of the site manager.

8 Maintenance while on Hanson sites

Maintenance or repair work must not be carried out on any Hanson site without the written authorisation of the site manager. You must agree a method statement and risk assessment for any authorised maintenance work as requested by Hanson management.

- The internal inspection and cleaning of drum mixers may only be carried out in strict accordance with the safe working practice guide on the Hanson UK Integrated Management System (IMS) which can be accessed via the site manager.
- Never carry out any authorised maintenance while alone on site.
- All waste materials resulting from maintenance must be disposed of in

accordance with the waste duty of care, including waste oils and tyres.

- Under no circumstances should any contractor or haulier carry out any maintenance work under an un-propped tipper body.

9 Vehicle loading general

- Prior to loading the driver must advise the plant supervisor, despatch office or weighbridge of any intended statutory breaks planned to be taken.

- All loading will be under the direction of site management. You must ensure the cleanliness and integrity of the mixer drum or tipper body before loading, establish loading instructions on arrival at site and observe legal requirements with regard to the loading of road vehicles.

- Drivers must ensure that loads are kept within the legal axle and gross vehicle weight limits. Trimming of loads and/or disposing of surplus material may only be carried out in designated areas agreed by site management.

- Tippers drivers are required to inspect their load to ensure it has been loaded centrally within the body. If a load is found to be loaded off centre or too much to the front or rear, contact local management to instigate controlled rectification. It is the drivers responsibility to ensure that the load is secure and loaded correctly.

- Material should be checked for uniform colour and consistency to ensure it matches the material description on the delivery docket.

- The delivery address must be checked prior to departure.

Tippers

- ☐ Never enter the body while it is parked in a position where there is a possibility of the vehicle being loaded.

- ☐ Only specified final product specific release agents can be used prior to loading with asphalt. These are detailed at each weighbridge along with the approved method of application.

- ☐ Remain in the cab while the vehicle is being loaded or stand in a safe designated area.

- ☐ If loading from a chute or hopper, refer to site management for site specific rules.

- ☐ After the vehicle has been loaded and sheeted, check for loose material.

- ☐ It is strictly forbidden to climb onto a loaded vehicle or stand on top of the load.

- ☐ Inspection of the load can only take place in designated areas for inspection. This should be via the purpose made platform/access system. If this is not available then access can be made via the body ladder and handles, maintaining three points of contact at all times.

- ☐ If access to a load is absolutely necessary, you must agree a risk assessment and method statement as requested by Hanson management. You

cannot proceed until you receive written authorisation from the site manager.

- ☐ Always ensure the tailboard is locked into position before moving off.

Mixers

- ☐ Drivers must have read and understood the requirements of the 'Right first time' initiative. Ask your plant supervisor for a copy.
- ☐ No residual water is allowed in the drum prior to loading. Drums must be spun empty before loading begins.
- ☐ A drum wash-out may be required if previous deliveries included pigments, foaming agent or other special admixtures.
- ☐ The receiving hopper of the mixer should be kept free from material build up to ensure ease of loading and prevent spillage.
- ☐ The minimum loading speed of the mixer drum is 12 revolutions per minute.
- ☐ Minimum mixing time after final material addition is 3 minutes at minimum 12 rpm before consistence is assessed. This may be extended where special admixtures are required or on request of the plant supervisor or technical representative.
- ☐ If you leave your vehicle prior to loading and retire to a safe place, do not re-enter the loading bay while the vehicle is being loaded.
- ☐ All mixer water taps must be securely turned off to avoid uncontrolled leakage and water addition.
- ☐ If water is added prior to leaving the plant, drivers must inform the plant supervisor of the amount.

10 Load inspection

Drivers must present vehicles for load inspections and sampling as directed by Hanson staff at sheeting bays or sampling points. While sampling procedures are taking place, drivers must:

- ■ Apply the parking brake.
- ■ Switch off the engine and remove ignition key (applicable to tippers) even when sampling from a sheeting bay platform with sampling point.
- ■ Keep those carrying out the inspection in full view at all times.
- ■ Do not replace the ignition key until told the inspection is complete (applicable to tippers).
- ■ Check that all persons are clear of the vehicle and body before restarting the engine.

11 Load security

Mixers

After loading, always check the discharge chute and vehicle chassis for any loose materials or stones and wash down before leaving the plant. Also check the security of discharge chutes and extensions to ensure they cannot fall from the vehicle while travelling to site.

Tippers

Vehicles delivering or collecting on behalf of Hanson must be equipped with a mechanical sheeting system that enables the load to be sheeted and un-sheeted from ground level, the driver's cab or a specific designed location behind the driver's cab. Vehicles must be fully sheeted whenever delivering or collecting on behalf of Hanson unless specific dispensations apply. Always use the sheeting facilities provided to sheet the vehicle properly and safely. The vehicle must be sheeted as soon as possible after loading and always before leaving the site.

Sheeting must be made of an impervious material and shall be capable of totally enclosing the load at all times, preventing ingress of water, loss of temperature and generation of airborne dust. Always check the vehicle body is free from any loose materials after sheeting.

Check the integrity of the body and tailgate to ensure materials cannot fall from the vehicle. Once sheeted, and unless impracticable, the load should remain covered while being unloaded.

Sheeting of vehicles on Hanson sites must only be carried out in designated areas and in accordance with the safe working procedure provided.

12 General requirements for sheeting/un-sheeting

Ensure your vehicle is parked on level ground where possible, in a safe place away from passing traffic, within a designated sheeting area or sheeting bay and with the parking brake on.

- Stop the engine, remove the ignition key and keep it with you at all times.
- Wear the required site PPE when sheeting.
- Consider the weather before sheeting, particularly high winds or slippery, wet surfaces. If necessary, seek advice from local management.
- Ropes and straps can break, so do not lean backwards when pulling, and always have one foot behind you to avoid overbalancing. Inspect straps and ropes daily and replace them if there are signs of wear.
- If replacement ropes are required, switch to straps.
- Sheets and ropes can cause tripping hazards. Always take extra care when near the back or side of a load.
- If you have to throw the 'pull rope/strap' over the load, ensure it will not strike anyone on the other side of the vehicle. Retrieve the rope/strap and with one foot behind the other and carefully pull the sheet over ensuring it is tight and secured into the sheet hooks.

13 Mechanical sheeting

- Ensure the sheet will clear the apex of the load.
- If the sheet is likely to be obstructed by the load, or spillage interferes with the mechanism, it may be necessary to trim the load or clear the mechanism.

- Load trimming must be done from a designated sheeting platform, using designated tools. If this is not possible you should seek advice from local management.

14 Manual sheeting *(not the preferred method)*

Manual sheeting can be a hazardous activity. Never stand on the load to sheet.

- Local management must be informed.
- Permission from site management must be received before starting.
- A specific risk assessment and safe system of work must be followed.

15 Cleaning out tipper bodies

Material remaining in the tipper body, and adhering to the floor or sides, should be removed in a safe manner prior to reloading to avoid contaminating subsequent loads. Safety helmets, boots, eye protection and gloves must be worn at all times and cleaning must only take place in the designated clean-out area, whether on a Hanson site or a customer site.

Park the vehicle on level ground in the designated clean-out area with the parking brake on. Ensure the body is fully lowered and the tailgate is locked shut. Stop the engine, remove the keys and lock the door.

Access to the body must be via the body ladder and handles, maintaining three points of contact.

Shovel or sweep remaining material towards the rear of the body then leave vehicle body using fitted steps and handles maintaining three points of contact.

Open the tailgate, restart the engine and raise vehicle body to tip loosened material onto the ground. Never enter or work in a raised vehicle body.

When using a wash-out stand, the body can be raised to a maximum height of three ram sections to enable cleaning with a hosed water supply. The engine must be switched off and cab locked.

Diesel oil must not be used for cleaning out the tipper body or tailgate area. Only specified final product release agents can be used prior to loading with asphalt. These are detailed at each weighbridge along with the approved method of application.

16 Inspection and cleaning of truck mixer drums

It is necessary to enter the drum of a truck mixer on occasions to inspect the cleanliness of the drum, carry out any repairs necessary to the blades and to break-off and remove any accumulated hardened concrete.

Safe working practice for the removal of semi-hardened or hardened concrete

- ☐ The removal of hardened concrete from inside the drum is strictly prohibited on Hanson sites unless there is an approved drum entry platform specifically installed for this purpose, or the truck mixer drum hatch has been modified to the new quick release "Maxi" hatch design with an access/egress platform with handrails fitted to the

vehicle. Your district operations manager and plant supervisor can advise on the controls to be followed and the location of approved platforms.

- ☐ Drum entry is controlled under strict procedures and safe working methods and could/will involve additional personnel. Safe working procedures have been created to control this task and will be issued by the plant supervisor or a nominated responsible person. All works within a drum are controlled through a permit to work, risk assessment and safe working practice.

- ☐ Without the relevant permit being issued, access into the drum is not permitted. A permit must be issued for every drum entry. It will last for one shift only, and cover only the work for which it was issued.

17 External cleaning of truck mixer

a) Use of acid for cleaning

The procedures to be followed when using acid solutions for cleaning are set out in the plant health and safety procedure. You must follow these procedures carefully and ensure appropriate PPE is worn at all times as detailed in the site rules and safe working practices document.

The maximum strength of acid stored on site should not exceed 32% ww. The maximum strength of acid diluted with water USED for the removal of cement dust build up should be 16% ww or 5% ww for general cleaning.

b) Use of other cleaning solutions

The procedures to be followed when using alternative solutions to aid cleaning (e.g. Crete Beater) are set out in the plant health and safety procedures. You must follow these procedures carefully and ensure appropriate PPE is worn at all times as detailed in the site rules and safe working practices. In some cases a high pressure washing device is used to supplement cleaning; controls will be managed by the plant supervisor or a responsible person.

18 Concrete delivery

At the plant

- Ensure your mixer drum is clean, in good condition and free of residual water.

- Do not add any water other than that which has been metered and recorded by the supervisor.

- Allow a minimum three minutes mixing at 12 revs a minute prior to leaving the plant.

- Inspect the load for normal appearance before leaving – if it doesn't look right, tell the supervisor.

- Check the delivery ticket for site details – do not assume the destination

- During transit, ensure the drum rotates slowly to keep the mix agitated. Never add water.

On site

- Rotate the drum for two minutes at 12 drum revs a minute to ensure complete remixing before discharge.

- You can add water to bring the consistency to mid-point, but you must not go beyond this point, or exceed the maximum allowable amount stated on the delivery ticket, without signed authority from the customer. Always measure and record the amount of water added.

- If there is an obvious problem with the concrete, stop the discharge and contact the plant supervisor.

- Make sure all relevant sections of the delivery ticket are completed.

- Immediately report to the plant supervisor any issues that may impact on quality or customer service.

- Be courteous at all times.

19 Cement burns

On all concrete delivery tickets the warning "Wet Concrete Burns" is overprinted on the front with "Cement Burns" on the back. To avoid harm to sensitive skins, you must avoid contact with wet cement or concrete by wearing protective clothing. Where contact occurs, whether directly or through saturated clothing, wash affected areas thoroughly.

This warning should be pointed out to customers, particularly those who are not directly associated with the construction industry and may be unfamiliar with the potentially harmful properties of cement and concrete.

The company has a printed leaflet warning of the danger that fresh, wet concrete, mortar or screeds can cause, including serious burns. You can obtain this leaflet from your Hanson manager to give to customers before you discharge your load.

20 Vehicle routing

Many production units and contracts have specific defined routes or route restrictions which form part of their planning consent. These shall be enforced to minimise disturbance to local residents, or other road users. These restrictions will be provided by the weighbridge/batcher/site management or foreman and must be observed. Instructions will be given by weighbridge/batcher staff of any other special routing requirements where necessary. Customer delivery site access points and routing arrangements must also be strictly observed.

21 Travel to, from and on site

Care must be taken to drive in a manner which minimises noise, particularly during early mornings, evenings or night journeys, when driving through built-up areas and/or in the vicinity of neighbours to the site.

- Ensure the tailgate is fully locked when empty.

- All concrete irrespective of load size, must be fully agitated in transit unless otherwise directed by a technician.

- Never park where it will cause inconvenience or disturbance.

- Convoying or grouping of vehicles is strictly prohibited.

- Never drive aggressively or intimidate other road users.

- Vehicles should be driven to maximise fuel economy.
- Minimise reversing distance to limit the use of reversing bleepers.
- Use your horn only while your vehicle is moving and you need to warn other road users of your presence. Never sound your horn aggressively.
- You must not use your horn (except when another road user poses and/or is in danger):
  - ☐ while stationary on the road.
  - ☐ when driving in a built-up area between the hours of 11.30pm and 7.00am.
- Take care when driving over speed bumps to prevent rattling and banging of the vehicle body.
- Always use the wheel wash and/or vehicle cleaning facilities provided.
- Never leave a vehicle unattended with the engine running unless it is needed to drive ancillary equipment or it is detrimental to the vehicle.
- If stopped on the public highway, either delivering or broken down, use appropriate measures to advise other road users of the hazard.
- Inform relevant Hanson and haulier company management for advice and assistance of any problems experienced with vehicle or load while travelling to and from a delivery site.
- Pay particular attention to the protection of vulnerable road users, including cyclists.

22 Discharge of load

General

- If there is improper or inadequate access available, or potential to damage pavement/kerbs/drives etc, contact the site representative to voice your concerns. If it cannot be resolved, contact your Hanson despatch office, plant supervisor or weighbridge clerk for guidance before leaving the public highway.
- Should you be asked to discharge the load into site machinery in an unsafe manner STOP and seek advice as above.
- Do not discharge in an area where work is taking place overhead.
- Never position your vehicle parallel to a trench when discharging into deep excavation. It must always be square on to the excavation.
- Never stand or let others stand at the rear of your vehicle while discharging and never stand or let others stand between the rear of your vehicle and an approaching vehicle into which you are to discharge your load or part of it.
- Never discharge your load anywhere other than within the area specified to you on arrival.
- Never discharge if you believe conditions are not safe to do so. This should include site and weather conditions.
- You should check the ground conditions

before you begin to discharge. Make sure the vehicle is on firm, level ground from side to side and, if possible, not facing downhill.

- Great care should be taken when considering the need to cross open excavations.

Discharge

- Make sure the vehicle will remain level if you have to move forward during discharge.
- Never tip where there is any possibility that any part of the body may come into contact with overhead cables. If you fail to see a power cable and the vehicle's body comes into contact with it, stay in the cab if you are unhurt.
- If there is a danger of fire, leave the vehicle by JUMPING clear. Do not make contact with the ground and the vehicle at the same time, as this would complete the electrical circuit through the human body. Prevent anyone else from coming into contact with the vehicle while it is touching any power cable. Always follow site rules in this and every other respect.
- If you think there is a danger of the vehicle overturning, stop discharging immediately then investigate the cause. If you are in the cab and the vehicle begins to overturn, brace yourself against the back of the driver's seat and hold firmly onto the steering wheel. Never try to jump out of a lorry that is in danger of overturning.
- Never discharge directly over a sheer face, and always seek site supervision.
- Discharge the vehicle at a rate suitable for the customer's use.
- Do not deposit any waste or surplus material on the site after discharging unless authorised.
- Stop tipping if pedestrians, plant and equipment enter the immediate area.

Mixer specific

- The mix description is to be checked with site/customer prior to discharge to ensure the correct mix is supplied to the correct location within the works.
- Any water added must be via the calibrated meter and not a wash down hosepipe.
- Any water added on site at a customer's request must be recorded on the delivery docket in the box labelled "Added at Customer Request".
- Concrete must be thoroughly mixed prior to discharge; a minimum of three minutes at full mixing speed.
- Any additional materials added on site by the customer must be fully detailed on the delivery ticket.
- All required time details must be recorded, irrespective of waiting time incurred (time on site, start and finish time of discharge).
- Use the comments box to record anything relevant such as bad site practice or unusual demands. Report these comments to the supervisor when you return to the plant.

- Inform plant supervisor of any customer test results at the site, (consistence test, flow test, air test) and any levels of water addition on site.

Tipper specific

- Always release the tailgate (except when using "tar hatches") before raising the body to tip, but do not release the tailgate while standing on grid bars or tipping bins or standing in the pan of a paver. If the load does not discharge smoothly when the body is raised, lower the body and investigate. When "tar hatches" are used ensure the tailgate locking bar is located as per the manufacturer's instructions.

- Beware of loads that are likely to freeze or compact and stick during transit. If the load sticks at the front, the centre of gravity is raised making the vehicle unstable.

- Remain in the cab with the door closed while the body is fully or partially raised. The only exception to this rule is if the tipping controls are mounted externally, in which case vehicle specific rules must be agreed with the manager. If it is necessary to drive forward to clear the discharged load, partially lower the body before moving. Only move the minimum distance necessary to clear the load before stopping and lowering the body completely. Never drive off with the body raised and ensure you:

  - ☐ Do not reach under a raised body unless it is adequately propped.

  - ☐ Do not drive a vehicle with its tipper body in a raised position.

  - ☐ Always look out for overhead cables as detection equipment may fail.

- Articulated vehicles should always be discharged with the tractor and trailer in a straight line. If you have been instructed that an exclusion zone must be maintained around your vehicle while you are discharging, it is your responsibility to ensure this is done.

  - ☐ Never start to tip until all persons are clear of the exclusion zone.

  - ☐ Stop tipping or discharging and lower the body immediately if any person enters the exclusion zone while you are tipping.

  - ☐ Only restart tipping when the exclusion zone is clear.

- For hand-lay procedures see the MPA advisory document *Day-work and Hand-Lay Asphalt for Hauliers*, which is available from your Hanson manager.

- Unstable loads Hanson sites – if a driver identifies an unstable load then it must be reported to the weighbridge/ responsible supervisor before permission is given to discharge.

- Unstable loads non Hanson sites – if a driver identifies an unstable load then it must be reported to the site responsible manager, despatch office or weighbridge before attempting to discharge. Discharge must only take place once suitable and sufficient controls are in place to eliminate the risk of tipper roll over as far as is reasonably practicable.

23 Customer requirements

You should comply with customer's site health and safety and vehicle access requirements, wear appropriate PPE as required by Hanson and provide your own risk assessment or that required by the customer.

24 Insurance

The minimum levels of insurance cover required are:

- Employer's liability – £10 million
- Public liability – £10million

No deliveries must be undertaken to airside locations unless specific airside insurance cover of £50 million is in place.

25 Hanson UK sustainability policy

You must read and comply with the Hanson UK sustainability policy (see below) and understand your responsibilities in relation to it.

Hanson UK considers effective management of safety, health, environment, quality and responsible sourcing to be of prime importance to the sustained success of the business. We take an integrated approach to all our business processes and have a single sustainability policy, which is regularly reviewed for continuing suitability and appropriateness.

We communicate our policy to all employees and contractors and seek to ensure it is understood and implemented. Our policy is made available to our supply chain and other interested parties to inform and promote wider adoption of responsible practices. As a minimum, we comply with the law and other regulatory requirements applicable to our business.

Management systems for continual improvement

We adopt a systematic and integrated approach to all aspects of our business and are committed to compliance with the requirements of BES 6001, ISO 9001, ISO 14001, BS18001 and the CE certification marking schemes relevant to our products. We are also committed to continually improve performance and to develop our integrated management system processes and activities. We maintain a documented framework for setting, implementing and reviewing objectives to drive forward this improvement.

We incorporate high standards of safety, health, environment, quality and responsible sourcing in the following business processes:

- design, selection and installation of plant
- management of suppliers and services
- identification of customer needs
- supply of products and services to meet or exceed customer expectation
- development of rules, standards and procedures
- provision of information and assistance to those who distribute, use, recycle or dispose of our products
- recruitment, induction and development of skilled, competent employees, contractors and suppliers

- consultation and involvement of employees, their representatives, contractors and suppliers
- reporting and investigation of incidents, near misses, hazards and non conformances
- operation and maintenance of plant and processes
- provision of welfare facilities
- development and testing of emergency procedures
- management and supervision of practices and performance

We routinely audit the performance of our business in accordance with recognised standards and methods. We review the credentials of our supply chain for constituent materials in accordance with the principles of responsible sourcing. We respond to non-conformances against our standards. And we implement a thorough management review process to ensure we meet our objectives.

Creating sustainable communities

We strive for the prevention of injury and ill health in the workplace. We value our workforce and by recruitment, selection and development of employees, contractors and suppliers, ensure that they are appropriately skilled and competent to carry out their roles. We strive for the fair treatment of our employees and everyone in our supply chain.

We provide employment and economic activity and build our business on the basis of responsible practices. We empower our employees, contractors and supply chain to operate in accordance with these practices and we actively engage with our customers, communities and other stakeholders to promote their wider adoption.

We identify and consult with local community stakeholders affected by our operations. We inform our customers about the functional, environmental and safety performance of our products. We engage with our stakeholders to encourage innovative development of our products and manufacturing systems to continually improve sustainable performance throughout the product lifecycle and build a profitable and sustainable business.

Climate protection

We set targets for the reduction of carbon emissions and aim to reduce our use of fossil fuels by seeking alternative and renewable energy sources. We promote best practices in sustainable construction, including use of a life-cycle approach.

Sustainable consumption and production

We strive for the prevention of pollution and the minimisation of environmental harm. We use resources appropriately and sustainably and, where appropriate, substitute primary resources with alternative materials. We adopt the waste reduction hierarchy of waste prevention, reuse of materials, recycling, and energy recovery to minimise waste disposal and maximise productivity. We develop products that improve the quality and sustainability of the built environment and we seek to eliminate all non-conforming products.

Natural resources and enhancing the environment

We are committed to the principles of environmental stewardship and seek to apply these throughout our operations and our supply chain. We manage and restore sites to ensure land remains valued in its local environment, protecting and enhancing biodiversity and safeguarding geodiversity where appropriate. We respect and protect our national heritage and we optimise our distribution operations to minimise social and environmental impacts. We use water efficiently and recognise that we must safeguard this resource by recycling where possible to reduce consumption and protect water quality in the natural environment.

The resourcing and implementation of this policy is the responsibility of our management team. Co-operation in the effective implementation of the policy is a condition of employment, partnership and supply.

26 MPQC (EPIC) driver skills card and SAFED training

All drivers must have a current valid MPQC (EPIC) Driver skills card, demonstrating successful completion of the MPQC (EPIC) Site Safety Awareness and Safe Behaviour for Road Hauliers courses. The skill card or copy of the certificate must be carried at all times. It is highly recommended and encouraged that all drivers undertake the SAFED and defensive driving courses.

27 Hanson UK drugs and alcohol policy

Hanson operates a drugs and alcohol policy which is available for inspection at each plant. In summary:

- Drugs, drink and work do not work.
- 35 per cent of all fatal accidents are related to drink or drug abuse.
- Five pints of beer between 9pm and midnight will not clear until 10am next day. Strong beer will take longer. Alcohol affects different people in different ways so this should be taken as a guide only.
- It is against the law to be under the influence of alcohol or drugs while operating machinery.
- The company reserves the right to test an employee or contractor, (which includes franchisees and hired hauliers), at any time for the following reasons:
  - An incident that involves injury to an employee or contractor that may lead to that individual having time off work.
  - Any incident that could have resulted in serious injury or harm to an employee, contractor or member of the public.
  - It is suspected that an employee, or contractor, is under the influence of either drugs or alcohol.
- If a franchisee or hired haulier has a drugs and alcohol policy, it must be pre-approved by Hanson and followed in the event of an incident.
- Results of any tests carried out under these policies must be reported to Hanson transport management.

28 Hanson UK smoking policy

Smoking is prohibited for employees, contractors, hauliers, customers and visitors throughout the entire workplace other than in designated outdoor smoking areas or in company-owned or funded vehicles (cars or vans) when in sole occupancy. Smoking in company-owned light and heavy goods vehicles, crew buses or mobile plant is banned at all times.

It is strongly advised that owners of multiple driver vehicles enforce the no smoking rule to comply with the Smoking at Work 2007 regulations.

29 Control of vehicle

It is not against the law to eat and drink whilst driving however you are legally obliged to have full control of your vehicle at all times. Therefore it is advised that you refrain from eating and drinking whilst driving.

GENERIC VEHICLE INSPECTION SHEET	
Registration number	
Odometer reading	
Week commencing	

Not applicable	N/A	
Defect - action required (record in comments box)	X	
All in order	✓	

WALK ROUND CHECKS	M	T	W	T	F	S	S
LAMPS/REFLECTORS/STOPLIGHTS							
REFLECTORS/MARKERS WARNING DEVICES							
BATTERY SECURITY - CONDITION							
MIRRORS CONDITION SECURITY							
BRAKES - PRESSURE OPERATION & LEAKS							
BRAKES WARNING DEVISES AND INSTRUMENTS							
DRIVING CONTROLS/STEERING WEAR & OPERATION							
TYRES INFLATION DAMAGE & WEAR							
WHEELS CONDITION ./ SECURITY							
BODY/GUARDS/WINGS/SPRAY SUPPRESSION							
BODY CONDITION AND ANCILLARIES SECURE							
NUMBER PLATES CONDITION/SECURITY							
HORN/WIPERS/WASHERS ñ OPERATION							
ENGINE OIL/WATER/FUEL LEVELS & LEAKS							
EXHAUST CONDITION SMOKE EMMSSION							
TACHOGRAPHS / SPEEDOMETER - OPERATION							
SPEED LIMITER ñ OPERATION							
TRAILER COUPLING OPERATION - CONDITION							
TRAILER CONECTION - FUNCTION LEAKS							
TRAILER LANDING LEGS - CONDITION OPERATION							
ANCILLARY EQUIPMENT - LOADING AIDS ETC							
FLASHING BEACON & STROBES							
WINDOW SCREEN - DRIVERS UNHINDERED VIEW							
CAB STEPS/HAND RAILS - FIXED AND SECURE							
SAFETY SIGNAGE IN PLACE & CLEARLY DISPLAYED							
AUXILIARY EQUIPMENT	**M**	**T**	**W**	**T**	**F**	**S**	**S**
WORKING LIGHTS (tippers and mixers)							
REVERSING CAMERA (tippers and mixers							
REVERSING BLEEPER (tippers and mixers)							
LADDERS - CONDITION (tippers and mixers)							
CROWíS NEST - SAFETY BAR (mixers)							
FINGER TRAP DEVICE (mixers)							
WATER METER - OPERATIONAL (mixers)							
HEX NUT & BAR - OPERATIONAL (tippers)							
CHUTES / LOADING HOPPER SECURITY (mixers)							

Comments: Record date of defect and date of rectification

Acknowledgement and declaration of compliance (HAULIER COPY TO BE SIGNED AND KEPT IN CAB)

Receipt of this document and agreement to comply with its requirements will ensure your company gains approved haulier status, allowing you to carry materials for Hanson.

It is your responsibility to ensure that all drivers engaged by you the franchisee/contracted/hired haulier fully understand this document. Similarly you must ensure drivers have received sufficient training to fully comply with the processes, procedures and requirements of this document. Each driver must have a copy of these procedures with them at all times.

By signing and returning the attached confirmation of receipt you will be confirming full compliance by all drivers with the requirements of this document, which will enable us to include your company on our approved haulier database.

Hanson Quarry Products Europe Ltd
Haulier rules and procedures
Issue date: March 2013

I hereby confirm my understanding, agreement and compliance with the Hauliers rules and procedures applicable to all LGV drivers undertaking deliveries or collections for and on behalf of Hanson Quarry Products Europe Limited.

I hereby confirm that before any driver engaged by ourselves enters a Hanson site they will confirm their understanding, agreement and compliance to the rules and procedures.

Driver's name (print name): .....

Authorised by (print name): .....
(Owner/Director Only)

Owner/director signature: .....

Date: .....

Issued by: Hanson Quarry Products Europe Ltd

Hanson
HEIDELBERGCEMENTGroup

Acknowledgement and declaration of compliance (SIGN AND RETURN TO HANSON)

Receipt of this document and agreement to comply with it requirements will ensure your company gains approved haulier status, allowing you to carry materials for Hanson.

It is your responsibility to ensure that all drivers engaged by you the franchisee/contracted/ hired haulier fully understand this document. Similarly you must ensure drivers have received sufficient training to fully comply with the processes, procedures and requirements of this document. **Each driver must have a copy of these procedures with them at all times.**

By signing and returning the attached confirmation of receipt you will be confirming full compliance by all drivers with the requirements of this document, which will enable us to include your company on our approved haulier database.

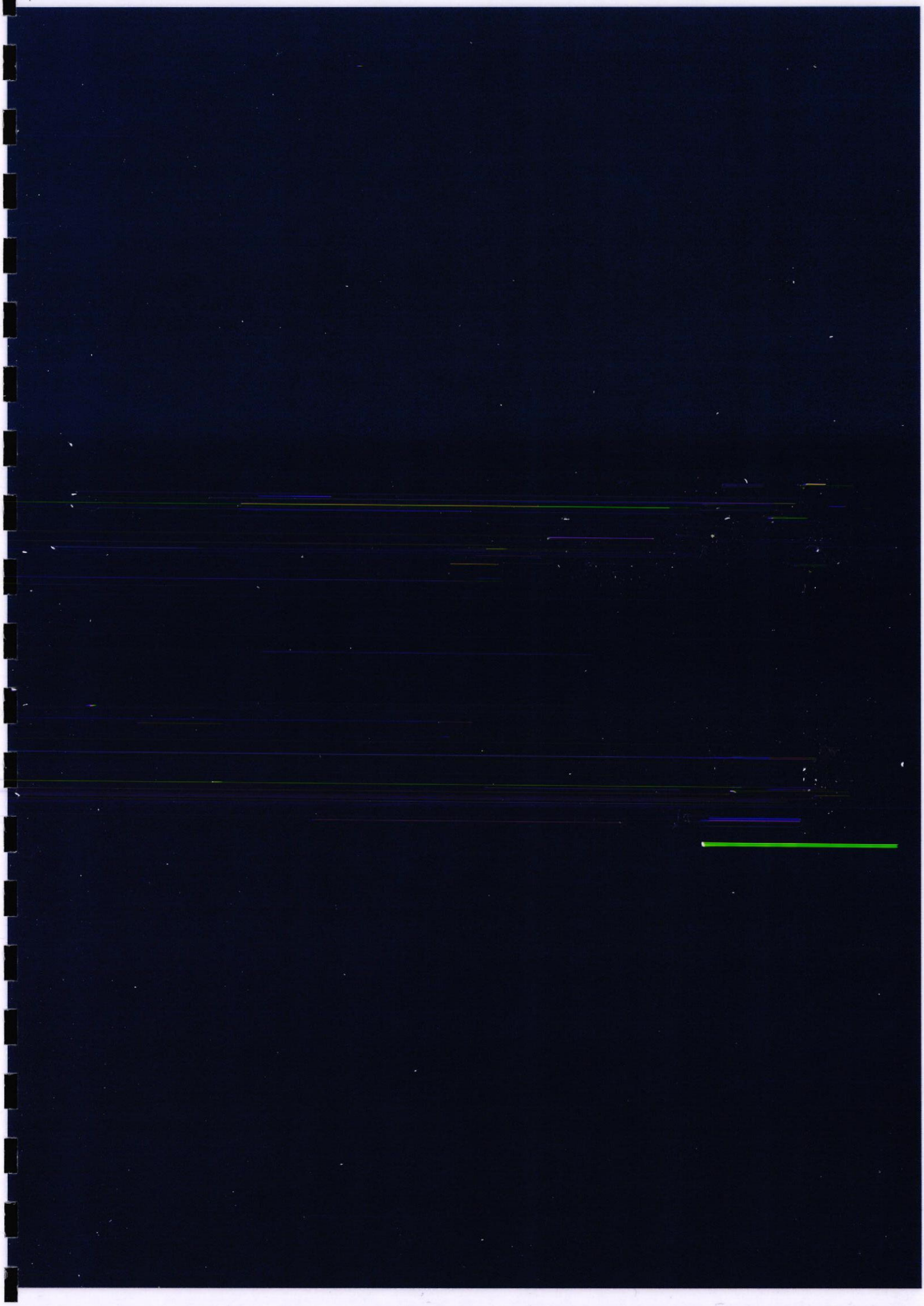
Hanson Quarry Products Europe Ltd
Haulier rules and procedures
Issue date: March 2013

I hereby confirm my understanding, agreement and compliance with the Haulier rules and procedures applicable to all LGV drivers undertaking deliveries or collections for and on behalf of Hanson Quarry Products Europe Ltd. The owner/director must sign below on behalf of their company giving their undertaking of full compliance. In addition:

I hereby confirm that before any driver engaged by ourselves enters a Hanson site, they will have been issued with a copy of these procedures. The driver must sign below confirming his understanding, agreement and compliance to the rules and procedures. This page must be immediately returned to the transport manager at your regional office.

Company name:	Driver's name *(please print)*:
Position within company *(owner/director)*:	
Signed *Dated*	*Signed* *Dated*

Hanson
HEIDELBERGCEMENTGroup




Hanson
HEIDELBERGCEMENTGroup

15th September 2016

COPY

Helen Winsall
Principal Planning Officer
Rhondda Cynon Taf
Regeneration and Planning Division
Sardis House
Sardis Road
Pontypridd
CF37 1DU

Our Ref: 407.00027.00385
Your Ref: 15/0666/10

Dear Helen

CRAIG YR HESG QUARRY EXTENSION
RESPONSE TO HEALTH AND WELL BEING ISSUES

As promised in my letter dated 12th September, I am pleased to attach a response to issues raised by consultees, as summarised in your e mail dated 10th August.

The response is structured in a way which reproduces the consultee comments from your e mail (in blue italics), with our response below the comment, and I hope that you find this to be helpful.

In the meantime, I look forward to progress with the additional consultation on the separate response to 'Well-Being and Environmental Health Issues' via the updated version of that report accompanying my letter dated 12th September, and no doubt we can discuss matters further as the application progresses towards a determination.

Yours Sincerely,
for SLR Consulting

Graham Jenkins
Technical Director

cc Mark Frampton

CRAIG YR HESG QUARRY WESTERN EXTENSION

RESPONSE TO CONSULTEE COMMENTS

Introduction

In May 2015 a planning application was submitted on behalf of Hanson UK to Rhondda Cynon Taff County Borough Council (RCT) which seeks planning permission for a western extension to Craig yr Hesg Quarry. The application also seeks permission to consolidate the current mineral planning permissions at Craig yr Hesg Quarry into one overall permission which would regulate quarrying, ancillary operations and restoration for the whole quarry site.

The context to the application is provided by the Environment Act ROMP Review, determined by RCT in April 2013 (ref 08/1380/10). This has resulted in a schedule of 49 detailed conditions which is comprehensive in terms of its coverage of environmental issues, with conditions regulating the working scheme; hours of working, including restricted hours of working for rock drilling and blasting; noise limits for normal and temporary operations; limits on ground and airborne vibration from blasting; detailed controls and requirements designed to minimise dust emissions; requirements for noise, blast vibration and dust (PM10) monitoring; measures to minimise the potential for ground and surface water contamination; measures to protect ecological / wildlife interests within the site; requirements for interim restoration and woodland planting; and a requirement to implement a detailed restoration scheme for the overall quarry.

These conditions are deemed by RCT to represent adequate controls over operations at the existing quarry, supplemented by additional detailed emission mitigation and monitoring requirements imposed by the processing plant and roadstone plant permit.

The conditions provide an important context for the extension application in that they provide a template for controls which could reasonably be imposed on a planning permission for the extension development. In addition, given that such up to date controls are in place at the exiting quarry, it was concluded that the focus of the EIA undertaken in relation to the extension development should be on the environmental and amenity issues associated with the extension development, and the way in which the identified environmental and amenity effects of the extension development can be mitigated.

Nevertheless, as noted above, the boundary of the planning application site has been drawn to include the existing quarry and the extension areas within a 'consolidation application'. This was to ensure that those elements of the existing quarry which will be relied upon as parts of the extension development were included within the development scheme (e.g. the processing plant and access), and were considered as part of the overall EIA. It should not, however, be necessary to fundamentally revisit those issues associated with the existing quarry that are already adequately dealt with by existing planning condition and permitting controls.

RCT as Planning Authority has undertaken wide ranging consultations with statutory bodies and other interested organisations on the content of the extension /consolidation application. The comments received from consultees have been summarised and where appropriate copied in full into an e mail dated 10th August from RCT to Hanson.

This document provides a response to each of the issues which have been raised. In order to assist cross referencing, the document summarises or reproduces the text of the RCT e mail in bold italics, followed by Hanson's response.

Hanson response to Consultee Comments

Rights of Way

.... Have you had any contact with .....the Public Rights of way Officer....?

We have had no specific contact with the Rights of Way officer since the proposed development would not affect any existing rights of way. However, the proposed development includes a proposal to establish a 'permissive path' which would provide a link to the public rights of way network, and we look forward to receiving feedback on this proposal.

Archaeology

....Glamorgan Gwent Archaeological Trust have asked for an archaeological investigation condition.

Noted, but in accordance with the conclusions and recommendations of the ES, this should take the form of an archaeological watching brief during soil stripping operations (ref ES Section 14.9). It is noted that a 'watching brief' is referred to in the formal response from GGAT dated 2nd July 2015, and no doubt a planning condition could be phrased accordingly

Public Health- Public Health Wales

Public Health Wales have commented that they wanted to see long term management arrangements for the quarry and an environmental management plan as part of a Section 106 Agreement attached to any planning permission. Details of this have not been specified, but I would imagine it would be to ensure there is an enforceable plan in place to address the issues covered off in the latest health work. Do you have any thoughts on what issue such a plan would cover?

The environmental health and amenity issues of relevance can be addressed via conventional planning conditions without the need for a Section 106 Agreement. As you are aware, a Section 106 Agreement only becomes relevant when there are issues to be regulated which cannot lawfully be imposed as planning conditions. This is not the case with issues such as noise, blast vibration, dust control etc, which can appropriately be dealt with by planning conditions, and indeed, as noted above, are already in place via conditions imposed via the ROMP Review schedule of conditions approved in April 2013. An 'environmental management plan' would simply duplicate such conditions and is unnecessary.

Public Health- Public Health and Protection Service

Noise

- ***Since the noise monitoring was undertaken in July 2014 there has been a change in traffic management at the site which has resulted in two way traffic along the road***

at the rear of Rogart Terrace. This should be considered in the report and additional monitoring may be required to reflect existing circumstances

The quarry access road is subject to a separate free standing planning permission (ref 13/1039/10) which is not directly relevant to the quarry extension development. However, noise monitoring pursuant to the ROMP conditions (ref condition 21 of 08/1380/10) has confirmed that the development, with the new two way access road, is continuing in accordance with the noise limits imposed in ROMP condition 18 at Rogart Terrace (ref Noise Monitoring Technical Report ref 4106/6, dated 11th July 2016). In these circumstances no further specific monitoring of noise levels on the access road is required.

- ***There is no assessment of the potential noise impact from the new Roadstone Coating Plant. This should be considered to assess if there are any impacts on the stipulated noise levels and whether or not additional mitigation is required;***

Noise limits have been set via condition 18 of the ROMP schedule of conditions which relate to all operations at the site, including the asphalt plant recently installed under permitted development rights. The ongoing development, with the asphalt plant, will thus need to continue in accordance with the defined noise limits. The asphalt plant was not operating at the time of the most recent noise monitoring survey in June 2016, but Hanson will ensure that it is operating at the time of the next (and final) scheduled annual survey under ROMP condition 20 in June 2017.

- ***For locations nearest the proposed extension area, where the average noise levels are below 35 dB LA90 the suggested site noise limit is 45dB LAeq, the report states the imposition of site limits below 45dB LAeq would impose unreasonable burdens on the mineral Operator. There are no provisions in MTAN 1 to increase site noise limits at sites with low background noise levels. Therefore to achieve compliance with MTAN 1, for background noise levels less than 45 dB, noise limits should be defined as background noise levels plus 10dB(A). This would mean the site noise limit for Cefn Heulog should be 41 rather than 45 (N.B. I understand from Public Health separately that it has actually been agreed now that a 42dB limit is acceptable- please confirm this is your understanding);***

The position reached is that for the reasons set out in the ES (ref Section 10.6) the noise study proposed a noise limit of 45 dB_{LAeq} at Cefn Heulog. This recognised the advise in MTAN1, but also highlighted the overarching advice set out in TAN11 (ref paragraph 3) regarding "*unreasonable restrictions*". RCT Public Health have accepted that it would not be reasonable to impose a day time noise limit lower that a night-time limit (implicitly acknowledging that there is some flexibility available in defining noise limits), but they have nevertheless suggested that a night-time noise limit of 42 dB_{LAeq} should be imposed as a day time limit at Cefn Heulog.

Hanson's position remains that a limit of 45 dB_{LAeq} at Cefn Heulog is appropriate in all the circumstances. However, RCT has the prerogative to impose a lower limit (42 dB_{LAeq}) if they are comfortable that such a condition meets the tests of being necessary and reasonable. If such a condition is imposed then Hanson will need to manage the development to comply with this lower limit. However, it is relevant to note that operations will not advance to their position of closest proximity to Cefn Heulog for circa 20 years, during which time there will be ample opportunity to assess working practices and noise levels.

- ***The request to revise the measurement location and lower the noise limit set at Conway Close is agreed in principle. However please could a map be provided highlighting the locations of the noise monitoring locations;***

Such a plan is included in ES Volume 2, Appendix 10-3. The noise monitoring location at Conway Close is described in the text of the ES (Section 10.6) as "land owned by the authority at the rear garden boundary (west) of No 36 Conway Close." We hope that this will be sufficient clarification of the location, but an additional plan can be prepared if required.

Air Quality

- ***The ES identifies a relative lack of information in regards to current nuisance dust impacts and in response provides results of a three month monitoring study of current nuisance dust deposition levels at several locations. The monitoring results highlight the low levels of nuisance dust deposition within the semi-rural areas of the local community, as represented by monitoring at 'Station 4' near Conway Close. It also identifies a significantly greater deposition rate at 'Station 1', a location in proximity to the primary crusher and associated haulage road. The ES acknowledges a level of uncertainty with some of the results, including missing data and possible influences confounding at 'Station 1'. However, it is clear that there is potential for high levels of nuisance dust deposition within proximity to the site should stated assumptions on local metrology be inaccurate or that certain mitigation measure be less effective than expected or should their effectiveness change over the lifespan of the site. Therefore, it may be appropriate for greater detail by to be provided by the ES as to the possible structure of future validation and surveillance arrangements for nuisance dust as well as the process for continuous appraisal to enable any necessary proactive improvements. With regards to continued surveillance, consideration could be given to the appropriateness of in situ deposit gauge monitoring during the lifetime of the site at the worse case locations where an impact is likely, for instance Conway Close and Garth Avenue (receptors 4 & 13 in Table 12-16) or other vulnerable locations where it is subsequently identified as appropriate. The appropriateness of the continued monitoring could be considered with regards to setting future intervention triggers and the possible need to maintain a dynamic and periodically reviewable site Dust Management Plan;***

The 'relative lack of information' relating to nuisance dust impacts reflects the approach to the ES Dust / Air Quality study agreed as part of the scoping exercise, where the main focus of the study was on PM10 air quality. However, the results of the dust deposition monitoring are set out in Section 12.14 of the ES (and Appendix 12.2). As noted above, with the exception of 'Station 1' located in close proximity to the primary crusher, the results indicate low typically rural background dust levels, with the conclusion that dust emissions from the quarry are low and unlikely to cause a nuisance outside the site. It is thus not accepted that "*it is clear that there is potential for high levels of nuisance dust deposition*" since this is not consistent with the evidence gathered, or the ES conclusions reached, particularly at Station 4 Conway Close. (As noted in the ES, the dust monitoring gauge at Station 3 was stolen after the first monthly monitoring period).

In addition, we consider that there is no reason to assume that the mitigation measures would be less effective than expected or that their effectiveness might change. Detailed

mitigation measures are already in place via condition 30 of the ROMP schedule of conditions, and the quarry and roadstone coating plant permit, and the conventional principle is that where conditions are enforceable then it should be assumed that they would be applied and implemented as required. This is the case at Craig yr Hesg.

In relation to *''continued surveillance*", this is already in place via the daily and weekly inspections highlighted in the response to Well-being and Health Issues report (ref Appendices 3 and 4 of that document).

The requirement for a Dust Management Plan is noted, and this was considered at the time of preparing the updated planning conditions to be imposed on the ROMP schedule of conditions. However, RCT concluded that it would be more appropriate to set out specific prescriptive dust control conditions within the schedule of conditions, and this was translated into condition 30 which sets out detailed dust control measures. We consider that this approach could appropriately be followed for the extension development.

Finally, in relation to further monitoring, notwithstanding the conclusions of the ES regarding IAQM guidance of a lack of need for further dust deposition monitoring (ref ES 12.9.6), and the routine visual site inspection monitoring which is undertaken, if RCT consider that further monitoring would be appropriate then we consider that in view of the results obtained to date, it would be appropriate to confine such monitoring to 'Station 1' in the vicinity of the primary crusher. This could take the form of a nuisance dust monitoring exercise for a period to be agreed, where the results could be used to inform whether additional mitigation measures might be appropriate in the vicinity of the primary crusher, but noting the dust control measures which have already been implemented in that area (ref ES Appendix 12.1).

- ***The ES includes vegetation screening as a critical element of nuisance dust management. To determine the practicality of reliance upon existing vegetation it would be pertinent to understand which vegetation relied upon as screening, is within the area encompassed by the application and under the control of the applicant and if there are any other areas of vegetation providing screening which are outside the area of the application and/or not under the current control of the applicant. This additional information would be used to determine the appropriateness of the potential type of Planning Conditions which could be used to safeguard this mitigation measure;***

The areas of woodland within the 'red line' planning application site boundary are illustrated on plan ref CYH/E6, with additional areas of woodland outside the red line boundary, but in the control of the Applicants, shown within the 'blue line' on plan CYH/E1.

- ***The ES highlights that the initial preparation and extraction of minerals from phase 1 and 2 poses a potential risk of nuisance dust to the surrounding community, most particularly at Conway Close, as the working area is at its highest and there will be an absence of vegetation at the northern bund. It is noted that the ES has identified established vegetation as an important element at other locations but that the method of vegetation of the northern bund appears to be reliant upon tree seeding to establish vegetation cover. To further understand the action and possible alternatives considered it would be pertinent to provide the timeframe in which a suitable vegetation barrier produced by tree seeding and capable of effectively screening nuisance dust would fully establish. Furthermore, to appreciate the reasonable alternatives considered it would be pertinent to provide the timeframe in which a suitable vegetation barrier capable of effectively***

screening nuisance dust would fully establish should sapling planting be considered as an alternative;

The application, as submitted, proposed that tree establishment of the outer flank of the screening bund would be secured via tree seeding. This was partly to avoid potential problems of vandalism where in the early establishment period tree seeding would be less visually apparent than conventional planting with stakes and spiral guards etc. However, in the context of feedback on the proposal, and the importance of establishing tree cover (for both visual and dust attenuation reasons), the Applicants have reflected on this further. It is now proposed that following completion of the final profiles of the bund, and the placement of soil and overburden, the outer slope of the bund would be subject to a conventional tree planting programme using native species and traditional methods of planting using forestry transplants and root trainers. The species composition would be based upon the 'restoration planting' schedule set out in Section 7.3 of the Planning Statement. It is proposed that this could be made the subject of a planning condition requiring the submission of a scheme of woodland planting and management for the approval of the Planning Authority and the implementation of the approved scheme within a defined time period.

For security reasons, and to ensure the success of the planting, such a scheme would require a consequential change to the location of the perimeter palisade fence. This revised location on the outside of the screen bund is shown on amended plan ref CYH/E4/a (enclosed). Once LPA officers have commented on the change, updates to plan ref numbers CYH/E6/a, CYH/E8/a, CYH/E9/a and CYH/E10/a can be prepared and submitted for consistency. The updated plan also confirms a proposal to plant a new hedgerow on the inner side of the palisade fence, along the north eastern toe of the screening landform which would soften the appearance of the fence (which itself would be powder coated brown at this location, or other colour to be agreed with the Planning Authority).

- ***The ES states that the northern bund will be constructed from a substantive core of unused waste extraction material, sandstone fines, derived from the current site. The ES considers this material corresponds to a "Medium Scale" magnitude derived from inference of the IAQM "Guidance on the assessment of dust from demolition and construction". The department would like to seek clarification as to the potential nuisance dust potential of this material and if this potential dusty material would warrant a higher categorisation;***

The sandstone fines are currently stockpiled with the quarry (in large quantities), and such material has been a consistent element of production at Craig yr Hesg Quarry for many decades. There is no basis for assuming that the material constitutes a higher dust risk than set out in the ES, and the ES concludes that any (short term) impacts associated with the handling of this material can be mitigated by dust suppression. The reference above to 'medium scale' emission magnitude is also quoted out of context. This refers to assessing potential dust impact, but the analysis then continues by noting the absence of receptors within 100m of the bund, with thus a 'low sensitivity', leading to a 'low risk' of dust impact (ref ES Section 12.7.3). It should also be noted that the proposal involves the creation of the core of the bund with sandstone fines, but then the covering of the core with overburden and soils stripped from the phase 1 extension area at the earliest opportunity as part of the overall works. This will ensure that there would be no prolonged period during which the sandstone fines would be exposed.

- ***In determining the minimum distance of affected receptors of nuisance dust it would be appropriate to clarify if the determined distances have had regard to the gardens of residential properties as well as any open spaces within the curtilage of***

Cefn Primary School and utilised frequently for the purpose of education or learning.

The distances are based upon the façade of the respective properties. However, in relation to the school it is noteworthy that dust monitoring Station 4, in proximity to the school, recorded low levels of dust, with no evidence of dust deposition from the quarry. There would also be a substantial screen bund and vegetation which would further mitigate nuisance dust.

- ***The ES also makes reliance upon wind direction in determining the likely impact of nuisance dust during construction of the northern bund. It is noted that southerly, south westerly and westerly wind directions would likely increase the risk of nuisance dust whereas northerly to easterly wind directions and persistent precipitation would likely significantly decrease the risk of nuisance dust levels. As such it may be relevant for the ES to consider if there is a difference in risk associated with the bund construction during the summer to winter periods and if it would be appropriate and proportionate to restrict the construction of the northern bund to periods of the year which would most likely represent the desirable weather conditions;***

The ES confirms that the bund would be constructed as a 'temporary operation' over a maximum period of 8 weeks. Any dust impacts would thus be temporary and of a short duration. The works will need to take place during appropriate weather conditions so as to maintain the soils in a friable condition, but where any dust impacts will be capable of being mitigated, as set out in the ES, with, inter alia, confirmation that operations will be suspended when wind conditions are likely to result in dust being carried off-site (ref ES Section 12.9).

- ***In determining the nuisance dust control measures to be used in relation to the northern bund construction it has been stated that a water bowser with rain gun could be deployed during any periods of unfavourable weather. This department recognises that the application of water, and when appropriate with additional potential enhancing additives, can in certain circumstances be an effective measure in controlling nuisance dust. The department would seek clarification as to if the deployed bowser and rain gun to be present throughout the period of construction of the northern bund, is to be in addition to the existing bowser arrangements on site so that existing resources are not compromised;***

Yes, arrangements would be put in place to ensure that dust suppression is in place for both the bund construction and for ongoing mitigation within the existing quarry.

- ***The ES indicates that the emission of nuisance dust from machinery used within the extension area would be negligible. It may be informative for the ES to confirm that mobile crushing and screening plant would not be operated within the extension area;***

The main focus of crushing and screening will continue to be the fixed processing plant. However, whilst it is not anticipated that there will be a need for the installation of temporary mobile plant within the quarry, in order to cater for breakdowns or other processing requirements, this contingency cannot be discounted. Such plant enjoys the benefit of 'permitted development' rights in planning terms, and these rights are in place at the existing

quarry. If such plant is required, then it would be sited at a low level within the quarry void and there is no reason to assume that it would give rise to any substantive additional dust impact.

- ***It is noted that Table 12.18 of the ES has reference to the long term AQO for PM10, it may also be useful to provide, if possible, a tabulated reference to the short term AQO for PM10;***

Table 12-18 considers the potential effects of the quarry operations (extension area and processing plant operations) on annual mean PM10 concentrations using a conservative worst case assumption in relation to the processing plant contribution. In all cases the contributions are limit in actual terms and as a percentage of the National Air Quality Objective annual mean. The short term higher 24 hour mean, not to be exceeded on more than 35 occasions per annum is a separate analysis which is dealt with in Section 12.5.2 of the ES.

- ***It is appreciated that direct comparison to determine compliance to the short term AQO for PM10 has been difficult. However, the ES appears to suggest that the short term AQO of PM10 is not at present being breached and that the extension is unlikely to influence this situation. Nevertheless, the ES acknowledges several factors which could influence the conclusion of future compliance, including local weather patterns and the 'real' impact of the roadstone coating operations. In examining the most recently available evidence (up to the 30th June 2015) the Local Authority considers that it suggests that the short term AQO of PM10 is not at present being breached within Glyncoch but that, due to the uncertainties associated with various factors, a potential future risk to compliance (due to uncertainties associated with future emissions and prevailing weather patterns) cannot be as yet dismissed. As it is unlikely that these factors, which are dependent upon future influences, can be readily resolved it may be appropriate for the ES to consider in greater detail the possible structure of future validation and surveillance arrangements for PM10 as well as the process for continuous appraisal to enable any necessary proactive improvements. Any future monitoring may need to have consideration to confirming the findings of the ES both at the worse case location at proximity to the existing site and an additional location at proximity to the extension area. In this regard this department may be able to partly facilitate suitable arrangements;***

This issue is catered for via condition 32 of the ROMP schedule of conditions which requires a further study of PM10 at Craig yr Hesg. The current 12 month study is a continuation of a study over the preceding 12 month period, and will capture data over a 24 month period to November 2016. Ongoing monitoring of the data confirms that there are no material changes to the range of PM10 averages set out in the ES, and nothing to cast doubt on the veracity of the conclusions reached by the ES. Condition 32 makes provision for the results to be formally reported to the Authority and for the need to continue monitoring beyond the current study period to be reviewed by the LPA with the operator following submission of the report.

The ES examines the potential magnitude of impact of emissions from the site upon the prevalence of PM10 within the community. The ES draws upon published data and research to suggest the maximum contribution of emissions from the site to the levels of PM10 experienced in the local community is approximately 5.2µgm-3 of the annual mean.

This department considers that there remains a level of uncertainty around this estimation and that it is possible that the actual magnitude maybe different. However, further apportionment work at this stage may not be proportionate as the indicative value provides a basis of the scale of magnitude the site has on the local prevalence of PM10. Nonetheless, consideration of future validation monitoring may wish to include consideration of measures which could improve the understanding of the apportionment of PM10 (i.e. the need for continued weather monitoring);

Noted, and discussed in the response above. However, it should be emphasised that the 5.2 μgm^3 figure referred to in the ES is a worst case conservative figure, and that other studies of air quality around large quarries have typical found a less than $2\mu gm^3$ increase in PM10 concentrations attributable to the quarry operations (ref ES Section 12.8.2).

- ***It is noted that due to future uncertainties associated with emissions from the site it will likely be necessary for the Local Authority to continue to monitor local air quality. As such any extension to the lifespan of the site may (if not accounted for within the development control process) result in a further cost to the local authority due to the need to continue this monitoring programme for longer than originally envisaged;***

Noted, but this can be considered in the context of the results and conclusions of the current 'condition 32' study. If the Authority considers it necessary to undertake additional monitoring then this is simply a component of their statutory monitoring functions under Local Air Quality Management Legislation.

- ***The ES identifies PM2.5 as a relevant consideration but does not seem to state any specific conclusions. Therefore, it may be beneficial for the ES to provide a narrative as to any perceived impact of the proposal to PM2.5;***

A key conclusion of the ES is that the PM10 Objectives are being met within the community of Glyncoch adjacent to the quarry. There is no statutory requirement to monitor or assess PM2.5 at the local level, and therefore direct comparison with the Air Quality Objective is not possible. However, given that the annual average PM10 concentration at Glyncoch, which includes the PM2.5 fraction, is less than the Objective limit of 25 µg/m3 for PM2.5 there is no possibility of the PM2.5 Air Quality Objective being exceeded (see paragraph. 8.4.15 of the recently submitted Wellbeing and Environmental Health Issues Report, June 2106).

- ***It is noted that paragraph 12.9.5 of the ES states that only clean water will be used for dust suppression activities. It would be beneficial to confirm if clean water includes water abstracted from any onsite settlement lagoons;***

The water to be used for dust suppression will include water from the settlement lagoons, which itself is 'clean' to meet the requirements of the discharge consent licence.

- ***It is noted with the ES that a PM10 Emission Action Plan was originally produced as a consequence of the ROMP process and is exhibited as an appendix. It may be beneficial for the ES to confirm if all the measures within this plan have now been completed.***

The 2009 PM10 Emissions Action Plan is reproduced as Appendix 12.1. All mitigation actions referred to in the Action Plan have been implemented.

Highways:

Highways have requested a legal agreement for road maintenance- either the provision of 5p per tonne of aggregate extracted or a joint annual condition survey of the B4273 and the provision of compensation where this identifies it as appropriate. This is due to concerns regarding the impact of the heavy trucks on the highway Please can you let me know your views on this?

This issue was discussed at a meeting with the Authority on 14th August 2014. Hanson's position confirmed then, and reiterated now (and in a more recent meeting on 24th November 2015) is that there is no basis for this request for a tonnage levy. The ES notes that HGV traffic associated with the quarry represents (only) 16.5% of HGV flows on the B4273 Berw Road, with reserve capacity on the network. There have been no recorded accidents involving HGV's during the more recent 5 year period assessed. None of the findings or conclusions of the ES Traffic Study have been disputed by the Highways Authority.

In the event that 'extraordinary damage' to the public highway can be proven to be attributable to quarry HGV vehicles, then the Highway Authority has powers under Section 59 of the Highways Act to recover the cost of maintenance from Hanson. However, it should be noted that Hanson pay an annual sum in the form of Business Rates to RCT (£84,564.00 for the 2015 – 2016 Rates year), which itself is a substantial contribution to the finance of RCT and indirectly to the RCT Highways budget.

Welsh Water:

DCWW's letter does not object but says that "it may be possible" for the water main crossing the site to be diverted. I understood from our previous conversation on site that this had been agreed with Welsh Water. Do you have any correspondence from them agreeing this in principle? If so can you either forward it, or if we have it already, advise me where it is the planning submission?

Correspondence with Welsh Water took place in 2012 (ref Andrew Davies, Developer Services of Welsh Water) when Welsh Water provided a plan showing a suggested route for the water main diversion (copy plan, Project Code BCD020033 enclosed), together with a quotation for the costs of implementing the works. The principle of the diversion has thus been agreed, and this is reflected in the diversion route illustrated on the plans accompanying the application (ref plan CYH/E4).

Drainage:

I have no correspondence on file from our Drainage Engineers. Have you had any contact with them? If so, who with?

We have had no direct contact with your Drainage Engineers on the extension application since the issue of site drainage was fully explored as part of the ROMP application, and circumstances would not change with the extension development. The existing settlement ponds within the plant site deal with surface water at the plant site. All surface water within the quarry void (and extension area) will be dealt with via soakage into the ground (ref ES Appendix 9.3: Surface Water and Drainage Assessment).

Natural Resources Wales:

They have advised that they would like to limit the quarry depth to 100m AOD via a condition.

Noted, and proposed as part of the development.

Ecology:

As a preface to the response to the comments below on ecology it is noted that there is no dispute regarding the findings of the Phase 1 Habitat Survey or the Phase 2 Botanical survey; the conclusion that the site consists of predominantly species-poor MG6 grassland; the habitats are of no more than local importance (noting that they have been excluded from the adjoining SINC designation); no significant adverse ecological impacts have been predicted; and the proposed nature conservation based restoration would provide a net gain for biodiversity in the long term.

It should also be recognised that quarrying at Craig-yr-Hesg is a temporary use of land and even though permission for the quarry extension would increase the life of the site by some 25 years, the long term mitigation of ecological impact will be through the eventual restoration and aftercare of the site, creating new species rich grassland within a more diverse ecological environment.

The findings and conclusions of the ES are important in placing the comments and responses below into context.

- ***While the restoration plans identify a long-term potential to allow some natural regeneration of grassland on quarry floor and berms, no short or medium term mitigation measures are put forward to off-set compensate for the loss of the 7 hectares of semi-improved grassland habitat;***

There would be a loss of some 7 hectares of grassland habitat (comprising some 5.52 hectares within the proposed new mineral extraction area and some 2.1 hectares within the northern screening landform area), but this grassland is of limited quality, and where the loss would be phased over the duration of the development. Whilst the scheme does not propose the direct mitigation / replacement of grassland, there would be important early mitigation works associated with the substantial tree planting on the northern screen bund, and the facilitation of natural woodland regeneration along and in the vicinity of the western bund.

- ***It is clear that these pasture are not as floriferous as would be expected of well managed and maintained wildflower rich grassland, but the site evidence suggests that this large area of grassland may have a higher potential ecological value than perhaps its present condition might suggest. So while, I don't fundamentally disagree with much of the baseline assessment of these grassland areas, I am of the opinion that these grassland do deserve some ecological consideration. In my opinion the site supports heavily grazed semi-improved grassland in which species diversity and vegetation structure has been suppressed by the heavy horse grazing. I am not saying that these grasslands are currently of SINC value, but I think they have a high potential (with relaxed management) to become much more species rich. So I think we should expect this application to provide some greater mitigation for this loss of 7 hectares of grassland. Within the redline boundary of the site areas of pasture will be retained and I think these should be managed to***

maximise their ecological value and to develop a wildflower rich fringe/perimeter to the quarry site. Also, given the phased nature of the quarry extension, areas of grassland which be lost in future phases could also receive a similar management (as short term mitigation) until needed for operational reasons. So I'd suggest , as a S106 Agreement, a long-term Habitat Management Plan (HMP) needs to provide for enhancement management of permanently and temporarily retained grassland areas (to be achieved either via controlled cattle or pony grazing or annual/biennial hay cuts);

The approach to an environmental impact assessment is to describe the baseline existing conditions and assess the effect of the proposed development against those baseline conditions. It is not the function of an EIA to speculate as to what the baseline conditions might be with a change in land management, although the ES does briefly consider ecological processes and trends.

The ' heavy horse grazing ' referred to above was under the local authority's stewardship as owners of the extension area, and since the termination of the grazing licence the land has been badly affected by trespassing motorbike scramblers.

It is not correct to indicate that areas of pasture will be retained within the red line boundary: all that would remain are areas of remnant grassland around the fringes of the extension area, although it is agreed that these areas could be managed to enhance their biodiversity potential.

This issue was in part dealt with in the ROMP review via a planning condition requiring the submission and approval of a 'Wildlife Protection Plan' (ref condition 42). Such a Plan has been submitted to the Authority but it has been agreed to hold the determination of the Plan in temporary abeyance pending the determination of the extension development scheme which would alter the content of the Plan. However, it is apparent from this approach that the issue of ecological mitigation and enhancement through a Habitat Management Plan is readily capable of being addressed by planning condition, and a Section 106 Agreement is both inappropriate and unnecessary.

- ***The proposed quarrying extension appears not to directly affect woodland cover or mature trees. However clearly quarrying works will have the potential to cause disruption, and habitat disturbance to adjacent areas of woodland, and the excavation of the quarried bowl will (at least in the short to medium term) affect habitat connectivity around the site. It is clear that woodland (see W1 areas on CYH E6A.dwg) is distributed around the site within the ownership of the planning applicant. While these are being retained there is no mitigation management proposals linked to their long-term future. I think these W1 areas should be subject to more detailed management consideration as part of the mitigation of the Scheme, and as compensation management for any disturbance impacts of the quarry development. Again, I think a S106 agreement HMP needs to be required and to include management of W1 areas;***

Similarly, there is no need to contemplate a Section 106 Agreement to deal with the management of woodland around the fringes of the quarry: this can be addressed via a planning condition, noting that ROMP condition 42 includes reference to the protection of existing landscaping and woodland areas to be retained, and condition 48 requires the submission of a Habitat Management Plan within an aftercare scheme for an amenity after use that promotes the use of the site for nature conservation following final restoration. It is

also incorrect to imply that the extension development will affect habitat connectivity: the scheme expressly proposes the creation of substantial areas of woodland around the eastern, northern and western sides of the extension area as landscape and wildlife corridor links to existing areas of woodland.

- ***The quarry proposals include a proposed offer to RCT of the adoption of 4.6 hectares of land adjacent to Craig Yr Hesg LNR. There is a need to discuss this offer further, but it is noted that there are no proposals for commuted sums or management contributions to be made available for RCT to manage those areas of 'new' land. Perhaps a preferable treatment would be for this 4.6 hectares to be included in the woodland management proposals linked into area W1, as such adoption by the Council may not necessarily be needed, but through a S106 with a formal agreement that these areas won't be quarried in future, an agreed Habitat Management scheme could delivered on these areas as mitigation for the quarry extension. That management could complement the adjacent LNR and include public access to the 4.6 hectare area, but the land would remain in the ownership and management responsibility of the planning applicant. So grassland mitigation, woodland (W1 areas) management and the care of the 4.6 hectare area adjacent to the LNR should, in my opinion, be the subject of an agreed Habitat Management plan, secured via a S106 agreement and funded by the planning applicant. As with other HMPs I think a Management Committee needs to oversee the HMP within invitation to RCT for membership on that Committee;***

The offer to dedicate the 4.6 hectares of land to RCT as an extension to the existing nature reserve has been made by the Applicants in good faith, and it requires a considered corporate response from RCT. In the event that RCT make an informed decision that they do not wish to receive the land, then the land will remain in the ownership of Hanson, and the management of the area can be covered by planning condition, noting that provision has already been made for public access to the area via the permissive paths which have been created (ref plan CYH/E6).

- ***In terms of the long-term restoration of the new quarry bowl and benches, I think details of the restoration should be subject to future review and agreement: again I would suggest the HMP S106 Management Committee should have a role agreeing the detailed components of that restoration strategy. However, I would strongly recommend that where tree planting is proposed either in the quarry or on the landscaping bunds around the new quarry, those plantings should be of a narrower range of species than that recommended in the restoration strategy. Based on ecological principles if that planting was of hazel, and hawthorn (from local Welsh provenance) with perhaps some rowan and silver birch, the plantings would not only provide a visual buffer, but also a nursery area into which oak and tree species could seed (from the abundant local seedbank). In the long-term the woodland forming in those areas would be more natural and therefore more valuable as habitat;***

The long term restoration of the site is currently catered for via ROMP conditions 45 and 48, which, inter alia, requires the submission of details of native tree and shrub planting, and which includes a requirement to submit an aftercare scheme which will include a Habitat Management Plan (refer to comments above). Such a condition could readily be imposed on a permission for the extension / consolidation development. The Authority will have a duty to

review the submitted details, recommend additions / alternatives if appropriate, and approve a final scheme as a straightforward development control exercise without the added complexity of a 'Management Committee.'

- ***The Ecology Report states that no construction or operation lighting would need, however if it transpires that site lighting is needed we should condition bat friendly lighting provisions;***

Noted

- ***In terms of the long-term restoration I would like to see opportunities to secure long-term nesting provision for peregrine falcons identified as a design objective, with nesting ledge construction offering safe long-term security for nesting birds. I think that should form part of the long-term restoration plan.***

Noted and covered by ROMP conditions 42 and 48.

In addition, a Species, Habitat and Tree Protection Plan for Construction and Landscape Management Plans have been recommended..... Suggested heads of terms for the s106 are as follows:

Each of these issues have been referred to above, and are already covered by ROMP conditions 42, 45 and 48. It would be perfectly appropriate for similar conditions to be re-imposed on a planning permission for the extension / consolidation development, and there is no necessity to consider a Section 106 Agreement. The established legal principle is that planning agreements should only be used where it is not possible to address issues through the imposition of planning conditions. Plainly this does not apply in this case where conditions regulating issues of wildlife protection, restoration, implementation, management etc are already dealt with by up to date ROMP planning conditions at Craig yr Hesg.

Full details of the Habitat Management Plan for the life time of the quarry extension and restoration period. These measures should include:

a) A plan showing the location of the Management Area and areas of habitat management, mitigation and monitoring;

b) Details of a habitat management, restoration, creation and monitoring programme;

c) Details of ecological or hydrological assessment work to advise the HMP;

d) Details of Site management, habitat and hydrology restoration and creation, access infrastructure and interpretation;

e) Establishment of a HMP Committee (to include invitations to RCT);

f) Details of the process and procedure of reviewing and up-dating the Management Plan;

g) Details of habitat and hydrology monitoring;

h) No cultivation, drainage, fertiliser or herbicide application to the Management Area without prior agreement of the Council;

i) Invasive plant treatment and eradication;

j) Stock proof fencing and field gate provision and maintenance;

k) Preparation of a work schedule (including a 5 year project register, an annual work plan and the means by which the plan will be rolled forward annually);

l) Personnel responsible for implementation of the plan and the details and confirmation of provision of the Environmental Liaison Officer position and post;

m) Remedial measures triggered by monitoring (including annual monitoring and update reports to Management Committee);

n) Details of any species licensing requirements from the Welsh Government.

The works shall be implemented in accordance with the approved details and timing of works, unless otherwise approved in writing by the local planning authority.

See comments above, and an extant requirement to submit a Habitat Management Plan via ROMP condition 48. Hanson would, in principle, be willing to accept a planning condition which provides for a Habitats Management / Wildlife Protection Scheme for the operational phase of the development, to be submitted for the approval of the LPA. The requirements of any approved scheme would be enforceable by the LPA.

Spatial Planning

Owen Jones has given me his comments submitted for the scoping opinion. I need to go back through the file to check how far these have been addressed in the submission. The pertinent points from this are as follows, and I would be grateful for any comments you have on these:

That the location of a screening bund outside designation SSA 25 needs to be justified;

Where will the crushing plant and other plant associated with this be located?;

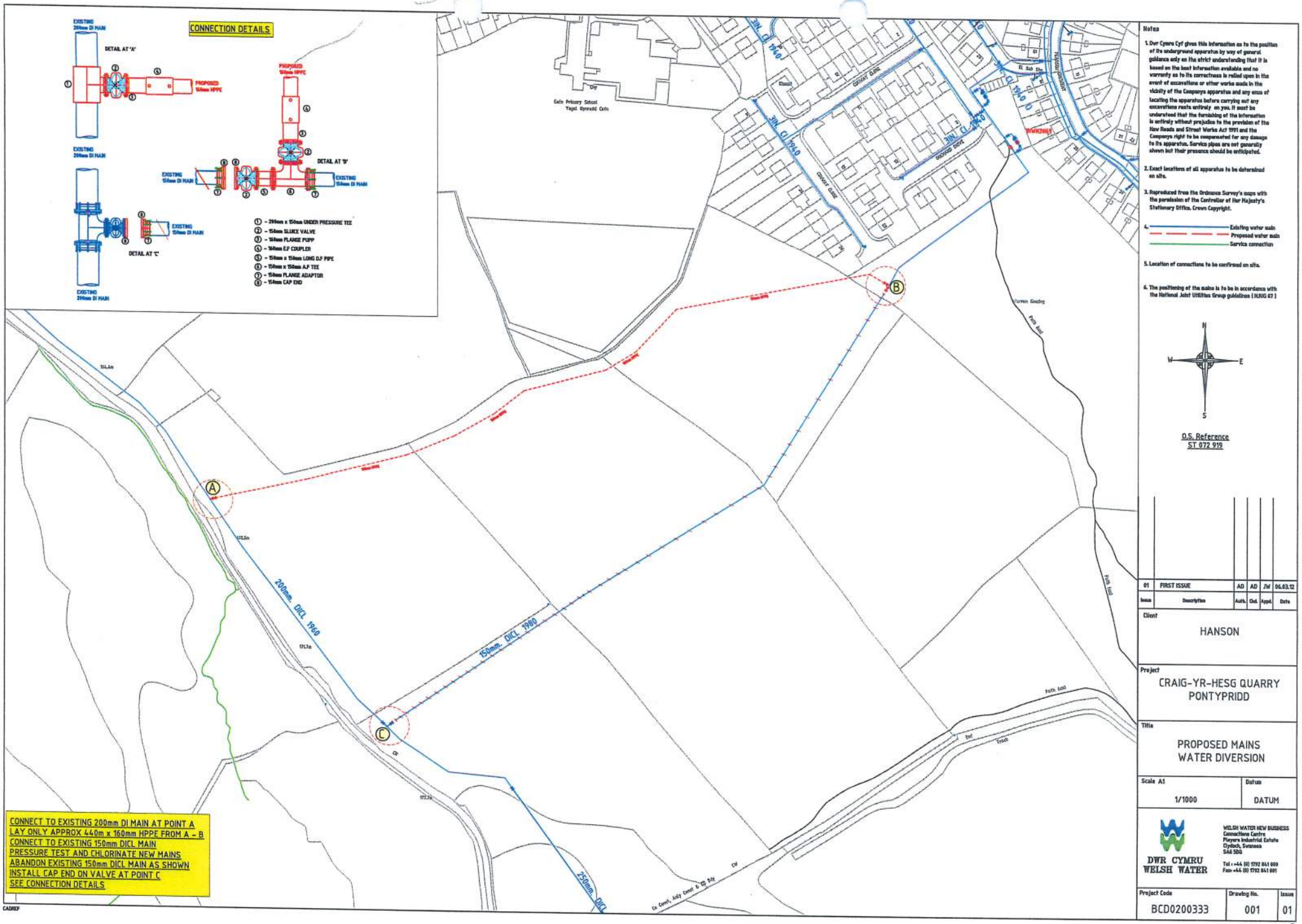
There needs to be a "special case" made in the submission regarding why this material is needed.

It is noted that the comments above were made at the scoping stage and do not relate to the application and accompanying documents as submitted. However, briefly:

- The SSA25 preferred area of known resources' refers to a potential extraction area, not to mitigation screening measures:
- The main processing plant will remain in its current location; and
- The need for the extraction of additional reserves of high specification aggregate, and the associated 'special case' is set out in Sections 8.4.1 and 8.5 of the Planning Statement.

Responses to latest work on Public Health Concerns

As you know the points raised by Gareth Purnell have been considered and, where appropriate, addressed in a revised version of the report on Wellbeing and Environmental Health Issues forwarded to the Authority on 12th August.


CONNECTION DETAILS
DETAIL AT 'A'
DETAIL AT 'B'
DETAIL AT 'C'
EXISTING 200mm DI MAIN
PROPOSED 160mm HPPE
EXISTING 150mm DI MAIN
① - 200mm x 150mm UNDER PRESSURE TEE
② - 150mm SLUICE VALVE
③ - 160mm FLANGE PUPP
④ - 160mm EJ COUPLER
⑤ - 150mm x 150mm LONG DJ PIPE
⑥ - 150mm x 150mm AJ TEE
⑦ - 150mm FLANGE ADAPTOR
⑧ - 150mm CAP END
A
B
C
200mm. DICL 1960
150mm. DICL 1980
250mm. DICL
CONNECT TO EXISTING 200mm DI MAIN AT POINT A
LAY ONLY APPROX 440m x 160mm HPPE FROM A - B
CONNECT TO EXISTING 150mm DICL MAIN
PRESSURE TEST AND CHLORINATE NEW MAINS
ABANDON EXISTING 150mm DICL MAIN AS SHOWN
INSTALL CAP END ON VALVE AT POINT C
SEE CONNECTION DETAILS
Notes
1. Dwr Cymru Cyf gives this information as to the position of its underground apparatus by way of general guidance only on the strict understanding that it is based on the best information available and no warranty as to its correctness is relied upon in the event of excavations or other works made in the vicinity of the Companys apparatus and any onus of locating the apparatus before carrying out any excavations rests entirely on you. It must be understood that the furnishing of the information is entirely without prejudice to the provision of the New Roads and Street Works Act 1991 and the Companys right to be compensated for any damage to its apparatus. Service pipes are not generally shown but their presence should be anticipated.
2. Exact locations of all apparatus to be determined on site.
3. Reproduced from the Ordinance Survey's maps with the permission of the Controller of Her Majesty's Stationery Office. Crown Copyright.
4. Existing water main
Proposed water main
Service connection
5. Location of connections to be confirmed on site.
6. The positioning of the mains is to be in accordance with the National Joint Utilities Group guidelines (NJUG 67)
O.S. Reference
ST 072 919
01 FIRST ISSUE AD AD JW 06.03.12
Issue Description Auth. Chd. Appd. Date
Client
HANSON
Project
CRAIG-YR-HESG QUARRY
PONTYPRIDD
Title
PROPOSED MAINS
WATER DIVERSION
Scale A1
1/1000
Datum
DATUM
DWR CYMRU
WELSH WATER
WELSH WATER NEW BUSINESS
Connections Centre
Players Industrial Estate
Clydach, Swansea
SA6 5BQ
Tel: +44 (0) 1792 841 000
Fax: +44 (0) 1792 841 001
Project Code
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