APPENDIX 3

Determination of Overarching Methodology in ES

TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 ('THE EIA REGULATIONS')

PROPOSED BOURBLES QUARRY on Land off Bourbles Lane, Lancashire

PLANNING APPEAL REF: 6002168

1. Significance of effect and overarching methodology for significance

The appellant is requested to provide information as to how the significance of effect was determined for all topics.

Reason: The overarching methodology provided within the main ES does not set out a description of what effects are significant for the purposes of the EIA.

2. Applicant Response - Overarching Methodology:

The following sections provide amendments and addenda intended to clarify the overarching methodology. They replace Section 1.7 of the ES (dated July 2023) and add Section 1.8. Sections discussing the various topics covered by the ES are presented later in this document.

1.7 Assessment Methodology and Significance Criteria

1.7.1 The establishment of the existing baseline environmental conditions is a critical part of the assessment process as it provides a measure against which the potential environmental effects of the proposed development can be assessed.

1.7.2 The assessment and significance criteria used are discussed within the technical reports presented in Appendices 2-13 of the ES. The assessment of the significance of any impact identified is determined by its magnitude (i.e. how far the impact deviates from the established baseline conditions) and the sensitivity of the receptor or receptors that it acts upon. The following factors are also of relevance: whether the impact is direct or indirect; the value of the resource (international, national, regional and local level importance); the duration involved (short, medium or long-term); the permanence or reversibility of the effect; and the number of receptors, including whether the impact occurs in isolation or is cumulative or interactive.

1.7.3 Assessment of the significance of impact effects has been undertaken using appropriate national quality standards where available, as detailed in the technical reports. Where no such standards exist, the Generic Significance criteria adopted are identified in the tables overleaf.

Methodology for Determining Impact Magnitude

Impact magnitude/probability/ reversibility	Assessment criteria examples
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.
Low	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Medium	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed.
High	Total loss or major/substantial alteration to key elements/features of the baseline (pre-development) conditions such that the post development character/composition/attributes will be fundamentally changed.

Methodology for Determining Sensitivity

Receptor sensitivity/value/ importance	Assessment criteria examples
Low	The receptor/resource is tolerant of change without detriment to its character, or is of low or local importance.
Medium	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of moderate/high importance.
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.

Impact Significance Matrix

Impact / Receptor	Negligible	Low	Medium	High
Low	Negligible	Negligible to Minor	Minor	Minor to Moderate
Medium	Negligible	Minor	Minor to Moderate	Moderate to Major
High	Negligible	Minor to Moderate	Moderate to Major	Major

NB - The effects of impacts can be adverse, beneficial or neutral

1.7.4 Where the various studies have identified an adverse impact or impacts as significant for the purposes of the EIA within the criteria of that study, these have been considered as significant adverse impacts within the ES. Where the generic criteria have been adopted, any identified permanent adverse impacts of major impact significance have been considered as significant for the purposes of the EIA, whilst adverse effects of minor to moderate impact significance or above have been considered as potentially significant. The duration and reversibility of the impact has also been considered in assessing significance, with long-term and permanent impacts having greater significance than short- or medium-term impacts.

1.8 Mitigation Measures

1.8.1 One of the main aims of the EIA process is to develop mitigation measures to avoid, reduce or compensate for any significant adverse effects of a project. Where the various studies have identified significant adverse effects, the mitigation measures that would be implemented to avoid or ameliorate potential adverse impacts and enhance the potential beneficial impacts of the development are described.

1.8.2 In some cases, mitigation measures are inherent within the proposed development (either through design or operational measures) whereby potentially significant adverse impacts are avoided, whilst in other cases additional mitigation measures are proposed to reduce or compensate for these.

1.8.3 The extent of the mitigation measures and details of when and how the mitigation measures will be carried out are given. Proposed enhancement measures are also discussed, and any residual effects.

3 Applicant Response - Topic-specific significance of effect methodology:

The following sections provide a brief summary of the methodology used under particular topic areas of the ES to assess the significance of effects identified. They are intended to be supplementary to the July 2023 ES document. For each topic covered, the relevant ES chapter number is given and has been used in the paragraph numbering but is not intended to replace any paragraphs with the same paragraph numbers within the July 2023 ES document.

Chapter 6: Highways and Transport

6.1 The Transport Statement (TS) makes an assessment of the impacts of the proposed development in terms of highways and traffic, but does not set out any significance criteria and therefore the generic criteria discussed in the overarching methodology section above were adopted.

6.2 In terms of the traffic impacts the TS concluded that the development would result in a 0.5% increase in Annual Average Daily Traffic on the A588, which would increase the HGV/PSV content of the traffic from 2.4% to 2.8%. The impact will be non-permanent as it will only occur during the proposed 6 year programme of mineral extraction and backfilling of the resultant void. The TS states the predicted increases are low for an A road and would be easily accommodated by it. In the ES the magnitude of this impact has been classed as Negligible. The TS is clear that the A588 is not sensitive to this level of traffic increase, hence the A588 has been classed as Low sensitivity, and as a result the impact significance was considered within the ES to be Negligible. Within the ES the traffic impact of the development was therefore not considered to constitute a significant adverse impact for the purposes of the EIA.

Chapter 7: Landscape and Visual Impact

7.1 The Landscape and Visual Impact Assessment (LVIA) follows published guidance for this type of study. At paragraph 2.21 the LVIA report states *Conclusions about the significance of the identified effects of the proposed development are arrived at by linking judgements about the sensitivity of a receptor (susceptibility and value) and about the magnitude of effect (scale, geographical extent, duration and reversibility),* and (at paragraph 2.22) *with moderate and substantial effects considered significant in the context of the EIA Regulations*.

7.2 Tables 2 and 3 from the LVIA report are reproduced below for reference. Further details of the LVIA methodology and assessment of significance of impacts/effects are presented in Appendix 1 of the LVIA.

Table 2: Significance of landscape effects

		DESCRIPTION
LEVEL OF LANDSCAPE EFFECT	Substantial	Major loss or permanent negative effects, over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes.
	Moderate	Noticeable or long-term negative effects, over a landscape character type or area, on elements and/or aesthetic and perceptual aspects that contribute to local authority designated landscape.
	Slight	Perceptible but small negative effects, over a localised area, on elements and/or aesthetic and perceptual aspects that are key to the character of landscapes of community value.
	Negligible	Reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscapes of community value.

Table 3: Significance of visual effects

		DESCRIPTION
LEVEL OF VISUAL EFFECT	Substantial	Major change to features in the view and major changes in its composition due to a large proportion of the view occupied by the proposed development.
	Moderate	Noticeable change to features in the view and noticeable changes in its composition due to a moderate proportion of the view occupied by the proposed development.
	Slight	Minor change to features in the view and minor changes in its composition due to a small proportion of the view occupied by the proposed development.
	Negligible	Very minor change to features in the view and very minor changes in its composition due to a limited proportion of the view occupied by the proposed development

Chapter 8: Ecology and Biodiversity

8.1 The ecological impact assessment was carried out in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (2022). The assessment of impact significance is dealt with in section 4.10 of the report. At paragraph 4.10.2 the report indicates that *In order to assess the significance of effect, valued ecological resources / receptors (VERs) that could potentially be affected by Development have been identified and described using a range of parameters (e.g. extent, magnitude and duration). The significance of effect has then been assess by considering the impact on the integrity of an ecological feature, where integrity is defined as "the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat and / or the levels of populations of the species for which it was classified".*

8.2 At paragraph 4.10.10 the report states that *impact significance is detailed by cross referencing Receptor sensitivity with magnitude of effect*, and presents a table of impact significance categories, which is reproduced below.

Receptor Sensitivity (inclusive of value)	Magnitude of Effect				
	Very High	High	Medium	Low	Very Low
Very High	Major	Major	Moderate	Moderate	Minor
High	Major	Moderate	Moderate	Minor	Negligible
Medium	Moderate	Moderate	Minor	Minor	Negligible
Low	Minor	Minor	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible	Negligible

Table 3- *Magnitude of Impact*

8.3 The report outlines mitigation measures for identified adverse impacts arising from the proposed development and then assess the residual impacts that remain after implementation of the mitigation measures. At paragraph 4.10.14 the report states that *those residual impacts of moderate or major significance are the resultant likely significant environmental effects*.

Chapter 9: Soils and Agricultural Land Quality

9.1 The Soils and Agricultural Quality report makes an assessment of the baseline soil and agricultural land quality conditions and provides recommendations for appropriate management and handling of the soils present on site in order to preserve their characteristics, and guidance for their use in the restoration scheme. The report does

not make any assessment of impacts or set out specific significance criteria. In the ES the generic criteria discussed in the overarching methodology section above were adopted.

9.2 The proposed development will stockpile the soils arising from the excavation, adopting the report's recommendations for their handling and temporary storage, and as the mineral extraction works progresses, the stockpiled soils will be used to progressively restore the site. With appropriate handling, storage and placement of the soils the residual impact of the proposed development on soil resources and their quality were assessed as negligible and neutral (neither beneficial or adverse). within the ES, and the residual impacts on agricultural land quality were assessed as minor beneficial. As a result, the impacts were therefore not considered to constitute significant impacts for the purposes of the EIA.

Chapter 10: Groundwater Environment

10.1 The Hydrogeological Impact Assessment (HIA) report uses an in-house assessment methodology that is detailed in Appendix 3133/HIA/A1 of the report. The methodology follows the stepwise approach of assessing the baseline conditions and the sensitivity of the key catchments and watercourses, and then assessing the significance of the predicted impacts of the proposed development by considering the impact magnitude before and after implementation of mitigation measures and the sensitivity of the affected baseline environment.

10.2 The table from the appendix that details the impact significance category based on impact magnitude and receptor sensitivity is reproduced below, along with the table that describes the significance categories.

Table 3133/HIA/A1.3: Significance matrix				
Magnitude	Sensitivity			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Minor
Low	Moderate	Minor	Minor	None
Negligible	Minor	Minor	None	None

Table 3133/HIA/A1.4: Significance of effects categories		
Significance	Definition	Guideline criteria
None	No detectable change to the environment	No effects on drainage patterns, surface and groundwater quality or aquatic habitat
Minor	A small but detectable change to the environment	Localised changes in drainage patterns or groundwater flows, or changes resulting in minor and reversible effects on surface and groundwater quality or aquatic habitats
Moderate	A larger, but non-fundamental change to the environment	Changes in water quality or quantity affecting part of a catchment or groundwaters of moderate vulnerability, or changes resulting in loss of conservation value to aquatic habitats or designated areas
Major	A fundamental change to the environment	Changes in water quality or quantity affecting widespread catchments or groundwater reserves of strategic significance, or changes resulting in substantial loss of conservation value to aquatic habitats and designations

10.3 The HIA has assessed the various potential impacts of the proposed development it identified as either of 'minor' or 'none' significance. Within the ES the impacts were assessed as temporary minor adverse or negligible neutral, and therefore were not considered to constitute significant impacts for the purposes of the EIA.

Chapter 11: Flood Risk and Surface Water

11.1 The Flood Risk Assessment (FRA) was undertaken in accordance with the statutory requirements of the National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) regarding development and flood risk. The FRA report does not set out specific significance criteria, however it ranks the flood risk for a variety of sources and identifies mitigation measures for some of these. In the ES the generic criteria discussed in the overarching methodology section above were adopted.

11.2 The FRA assessed most sources of flood risk as very low to low risk, however a slight increase in risk of fluvial and tidal flooding was identified due to the lowering of ground levels in the site due to the mineral excavations in the operational phase, and the FRA recommended that the site adopts an Emergency Plan to reduce this low flood risk. Measures to manage surface and groundwater during the operational phase were recommended in the FRA to mitigate other potential flood risks.

11.3 With the recommended mitigations implemented the FRA concluded that the proposed development will not increase flood risk to external areas or pose a safety risk to site operations during the operational phase. The proposed restoration was considered to return the site to baseline conditions, with no increased flood risk and no mitigation measures required. Within the ES the residual risks of flooding were assessed as negligible/neutral and therefore were not considered to constitute significant impacts for the purposes of the EIA.

Chapter 12: Noise

12.1 The Noise Impact Assessment report does not set out specific significance criteria, however it assesses the noise impacts at a variety of receptors arising from both short-term site activities and more general site activities during the operational phase in relation to the 'Minerals' PPG guidance. The assessment takes account of elements within the design, such as screening bunds, that reduce noise impacts, and identifies a number of best practice operational mitigation measures to further control noise emissions from the proposed development. The noise assessment concluded that *the overall noise impact of the proposed development is therefore considered to be in line with current national and local planning policy which seeks to prevent and avoid any significant or unacceptable adverse impacts and, where necessary, mitigate and reduce to a minimum other adverse impacts*.

12.2 In the ES the generic criteria discussed in the overarching methodology section above were adopted. On the basis of the noise impact assessment findings, the noise impact magnitude was assessed as 'low' with 'high' receptor sensitivity. The noise impacts would be non-permanent and of short- to medium-term duration and were therefore assessed as minor adverse. The predicted noise impacts were therefore not considered to constitute significant impacts for the purposes of the EIA.

Chapter 13: Dust and Air Quality

13.1 The Air Quality Assessment (AQA) report assesses the dust and air quality impacts at a variety of receptors arising from proposed site activities during the operational phase in relation to published IAQM guidance on assessment of mineral dust impacts and in relation to air quality objectives (AQO).

13.2 At Section 5.5 the report presents a table of dust impact magnitude classes, reproduced below.

Table 13. Magnitude Descriptors

		Receptor Sensitivity		
		Low	Medium	High
Dust Impact Risk	High Risk	Slight Adverse Effect	Moderate Adverse Effect	Substantial Adverse Effect
	Medium Risk	Negligible Effect	Slight Adverse Effect	Moderate Adverse Effect
	Low Risk	Negligible Effect	Negligible Effect	Slight Adverse Effect
	Negligible Risk	Negligible Effect	Negligible Effect	Negligible Effect

13.3 The potential dust impacts (prior to implementation of mitigation/control measures) were classed as slight to moderate adverse. The dust assessment concluded that *the implementation of the dust suppression measures… …will ensure that dust emissions are minimised* and the residual dust impact effects at the various receptors, after implementation of standard best practice dust control measures, were assessed as 'negligible'.

13.4 In relation to air quality the report indicates that a predicted exceedance of the PM_{10} AQO indicates a potentially significant impact that should be assessed further. The report concluded that *the annual mean concentration of PM_{10} and $PM_{2.5}$ would not exceed the Air Quality Objectives*. Potentially air quality impacts due to traffic associated with the proposed development were assessed using published EPUK and IAQM guidance criteria, below which the potential impacts are considered insignificant, and concluded that *The proposed scheme is therefore not expected to exceed the Stage 2 criteria and… …The potential air quality impacts from traffic associated with the quarry development are not considered to be significant*

Chapter 15: Public Rights of Way

15.1 In the ES the generic criteria discussed in the overarching methodology section above were adopted. On the basis of the findings of the LVIA, noise impact assessment and air quality assessment, the significance of predicted impact effects was assessed as moderate to minor or negligible adverse during the short- to medium-term operational phases. The predicted impacts on PROWs were therefore not considered to constitute significant impacts for the purposes of the EIA.

4 Greenhouse gases and vulnerability to climate change

The appellant is requested to provide either a statement evidencing why an assessment of greenhouse gases and vulnerability to climate change is not required with reference to relevant assessment criteria and/ or thresholds OR a description of the likely significant effects of the proposed development on the environment resulting from the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change.

Reason: The ES as submitted does not include reference to, or an assessment of, this impact pathway as required by Schedule 4 (4) and Schedule 4 (5f) of the EIA Regulations, or an explanation provided as to why an assessment was not required.

Applicant response: is included in Appendix 2 of the Reg 25 Submission dated March 2026.