

**Thewlis Lane Quarry
Variation of Planning
Permission 2013/90793/WO**

Addendum to the Environmental Statement

March 2019

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A1.0 Introduction

Purpose

- A1.1 This Environmental Statement (ES) Addendum (March 2019) has been prepared on behalf of Johnsons Wellfield Ltd and provides further environmental information to that presented in the Thewlis Lane ES (March 2013). The ES Addendum should be read in conjunction with the original ES.
- A1.2 Johnsons Wellfield Limited is presently extracting mineral from Thewlis Lane Quarry in accordance with planning permission 2013/62/90793. The development has reached the stage whereby suitable quarried materials will be placed within the worked-out quarry void to deliver its reinstatement to agreed ground levels. A change to the specification of the materials to be used for the site reinstatement necessitates the crushing of spoil extracted and shales imported to the site.
- A1.3 This ES Addendum (March 2019) accompanies an application pursuant to section 73 ('s73') of the Town and Country Planning Act 1990 which seeks consent for the removal of planning condition 18 of the planning permission which prohibits the use of crushing and screening plant for reasons of amenity. It has been agreed with Kirklees Council that the application should report on the potential noise effects of the crushing process. To this effect, Kirklees Council has allowed for a temporary period of noise monitoring to be undertaken of the operational plant, so as to inform the noise reporting and assessment. The assessment has also been undertaken to reflect the latest committed development scheme within the vicinity of the site (cumulative effects), and the Non-Technical Summary (March 2013) prepared and submitted with the application has been supplemented with a Non Technical Summary Addendum to reflect the variation now sought and re-assessment.

Context

Operational Context

- A1.4 The permitted minerals extraction operates in accordance with planning permission 2013/90793/WO. It is proposed to utilise a mobile crushing plant (Proposed Process) within the quarry working area to produce a specification of material arising from the spoil generated from the working area and that imported in the form of shales from the Crosland Moor 'Airfield' working area, suitable for the progressive backfilling and reclamation of the exhausted extraction void. The mobile plant will be in a position and shall include such mitigation as is necessary to ensure the Proposed Process takes place in accordance with the controls set out in planning permission 2013/90793/WO, with the exception of planning condition 18, for which a minor material amendment application is made to remove.
- A1.5 The proposal does not seek to make any change to the approved scheme of working or reclamation. The mobile crushing plant will only be utilised during the permitted hours of operation and for the purposes of processing material for the reclamation of Thewlis Lane Quarry as set out in planning condition 41 and 43 of planning permission 2013/62/90793/WO.
- A1.6 Whilst the quarry has an overall extent of some 4.3 ha, the crushing plant will occupy an area of some 0.4ha at any one time.

Construction and Phasing

- A1.7 The working and reclamation of the quarry will be undertaken in accordance with the permitted scheme of phasing and reclamation as referenced in decision notice 2013/62/90793/WO. The use of crushing plant will be discontinued in conjunction with the completed reclamation of the site.

The Site

- A1.8 The quarry site boundary is identified on the plan Figure 1 Site Location - included at Technical Appendix 2. This remains unchanged from the (Thewlis Lane) site boundary submitted in the ES (March 2013).

Updated Policy and Legislation Context

- A1.9 The ES (2013) was prepared pursuant to the Town and Country Planning (EIA) Regulations 2011 (as updated by the Town and Country Planning (EIA)(Amendment) Regulations 2015). On 16 May 2017, these were replaced by the Town and Country Planning (EIA) Regulations 2017. As a s73 application is considered a 'new' application for planning permission in accordance with the relevant EIA legislation, this ES Addendum has been prepared with reference to the 2017 EIA Regulations. For ease of reference, the relevance of this issue is considered further in Section A2.0 of this ES Addendum.

Kirklees Local Plan

- A1.10 Since the completion of the ES (March 2013), the Kirklees Local Plan (February 2019) has been adopted. This document wholly supersedes the saved policies of the former Kirklees Unitary Development Plan. This Local Plan sets out new policies which address environmental controls applied to minerals workings and the control of noise. There are no other changes to local or national planning policy of relevance to the changes proposed by the Section 73 planning application.

Scope of the ES Addendum (March 2019)

- A1.11 Consideration has been given to the extent to which the changes identified above will affect the conclusions of the documentation submitted with the planning application of 2013.
- A1.12 The changes have very limited effects on the findings of the ES (March 2013) but, where scheme changes require additional assessment (if any), this is provided as summarised below.
1. Chapter 8.2 Ecology
The development area has been entirely stripped of soils and the agricultural land which existing prior to minerals working taking place. The crushing of overburden is unlikely to alter the previous assessment or the site wide approach to biodiversity.
 2. Chapter 8.3 Landscape and Visual
The development area is now an operational quarry. There are considered to be no new aspects arising now that have not been previously assessed as part of the original ES. On this basis, significant effects are not expected to arise.
 3. Chapter 8.4 Soils and ALC
The development area is now an operational quarry. There are considered to be no new aspects arising now that have not been previously assessed as part of the original ES. On this basis, significant effects are not expected to arise.

4. Chapter 8.5 Dust and Air Quality

The development area is now an operational quarry. All operations take place in accordance with the controls applied through the grant of planning permission. There are considered to be no new aspects arising now that have not been previously assessed as part of the original Environmental Statement. On this basis, significant effects are not expected to arise.

5. Chapter 8.7 Traffic

The crushing of stone and shale within the quarry will not result in any new traffic movements over and above that permitted. On this basis, significant effects are not expected to arise.

6. Chapter 8.8 Hydrology and Hydrogeology (including Flood Risk)

The development area is now an operational quarry. All operations take place in accordance with the controls applied through the grant of planning permission. There are considered to be no new aspects arising now that have not been previously assessed as part of the original Environmental Statement. On this basis, significant effects are not expected to arise.

7. Chapter 9.0 Archaeology

The development area is now an operational quarry. All operations take place in accordance with the controls applied through the grant of planning permission. There are considered to be no new aspects arising now that have not been previously assessed as part of the original Environmental Statement. On this basis, significant effects are not expected to arise.

8. Chapter 12.0 Economic Impact

The development area is now an operational quarry. No change to baseline conditions and no uplift in overall development quantum requiring re assessment.

A1.13 The ES Addendum (March 2019) should be read in conjunction with the ES (March 2013). Where the amendments may give rise to additional or revised environmental effects (based on the reasons set out below) then an assessment has been carried out. This relates to the following Chapter:

- Chapter 8.6 Noise, on the basis of the proposed crushing of overburden materials and shales for backfill.

A1.14 A supplementary Noise and Vibration section is set out within this reporting, which is in turn supported by the Technical Appendix 5 which is appended to this ES Addendum (March 2019):

A1.15 There are no updates or changes to any of the other Technical Appendices.

EIA Methodology, Process and Difficulties

A1.16 Amendment to any methodology, process and difficulties associated with the supplementary environmental information provided in this ES Addendum (March 2019) is stated, where necessary, within relevant sections. These amendments should be read in conjunction with the information provided in the (ES March 2013).

Consultation

A1.17 All the changes assessed by this ES Addendum (March 2019), and proposed to be considered by the accompanying Section 73 application, relate to the use of crushing plant within the quarry. This matter was initially discussed with Kirklees Council on 28th November 2018. The scope of the ES has been discussed and agreed in advance with Kirklees Council through the issue of its Scoping Opinion of 15th March 2019 (as per Technical Appendices 3 and 4).

- A1.18 The ES scoping opinion states *‘the Council agrees with your approach with regard to the scope of an ES to support an application to remove condition 18 of planning permission 2013/90793 which could then allow the use of crushing and screening plant within the quarry to facilitate site restoration. This letter represents the Council’s formal scoping opinion with regard to the proposal detailed in your letter of 7 February 2019’.*

Alternatives

- A1.19 This ES Addendum (March 2019) assess the scheme in the context of the addition of the new noise source within the permitted area. Given the nature of the amendments described above, alternatives are not identified or further addressed in this ES Addendum (March 2019).

About the Authors

- A1.20 Lichfields is accredited with an Institute of Environmental Management and Assessment (“IEMA”) EIA ‘Quality Mark’ which is a scheme ensuring that EIA carried out by registrants achieves excellence. The EIA has been led by Jonathan Standen BSc FRICS MRTPI FIQ CIWM CEnv, who holds PIEMA accreditation. Jonathan Standen has over 30 years’ experience in planning, the majority of which has included both the consideration and preparation of Environmental Statements for major development proposals.
- A1.21 Simon Waddell BSc. (Hons) MIOA is an environmental consultant with more than 9 years’ experience in acoustics. Simon has completed the Institute of Acoustics’ (IoA) Postgraduate Diploma in Acoustics and Noise Control and the Certificate of Competence in Environmental Noise Measurement and is a corporate member of the IoA. He has worked on many Environmental Impact Assessments (EIAs) for a wide range of developments, and has undertaken non-EIA noise assessments for an even greater range of projects, both in the UK and internationally.

Availability of Document

- A1.22 A paper or electronic (CD-ROM) copy of the full ES can be obtained from:
Lichfields
3rd Floor, 15 St. Paul’s Street
Leeds
LS1 2JG
Tel: +44(0)113 397 1397
- A1.23 Reasonable copying and printing charges will be applied to the paper copy. A CD Rom is available free of charge.
- A1.24 Alternatively, the Section 73 (variation of condition) application submission can be viewed at the following address:
Planning Services, Development Management, Civic Centre III, Huddersfield
- A1.25 All comments on the ES (and planning application) should be issued to KC for the attention of Glenn Wakefield.

A2.0 Revised EIA Regulations

- A2.1 As set out in Section 1, since preparation of the ES (March 2013), the UK has implemented a number of changes introduced by the EIA Directive (2014/52/EU). The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ('the 2017 Regulations') came into force in England on 16 May 2017.

Compliance with Paragraph 18 and Schedule 4 of the 2017 Regulations

- A2.2 Paragraph 18 of the 2017 Regulations sets out the requirements for an environmental statement for the purposes of the 2017 Regulations. Schedule 4 details all necessary information for inclusion in Environment Impact Assessment Statement.

Additional Requirements of the 2017 Regulations

Competent Experts

- A2.3 In accordance with The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 Part 5(18)(5), Johnsons Wellfield Ltd confirms that the ES (March 2013) and ES Addendum (August 2017) have been prepared by persons with sufficient expertise to ensure the completeness and quality of the Statement (see statement set out within Technical Appendix 1 to this ES Addendum (March 2019)).

Proposed Monitoring Arrangements

- A2.4 Those environmental issues or potential effects identified as a result of the ES (March 2013) where additional monitoring or verification was considered necessary included issues of ground conditions of the reclaimed landform, and conditions were added to planning permission 2013/62/90793 requiring further testing and/or verification of these effects either during, or post, construction. Ongoing monitoring relating to other matters was not considered necessary as no effects were identified requiring such monitoring to take place.
- A2.5 It is anticipated that conditions requiring verification in respect of the ground condition of the reclaimed landform will continue to apply to any new planning permission.

A3.0

Policy Context

Purpose

A3.1 The purpose of this section of the ES addendum is to set out the main national and development plan policy and guidance material to the assessment of the Proposed Process. The Noise technical section and its corresponding Technical Appendix A5 may refer in detail to specific policies and guidance.

National Policy

National Planning Policy Framework

A3.2 The Revised National Planning Policy Framework (NPPF) was published on 24 July 2018. The NPPF sets out the Government's planning policies for England and is a material consideration in the determination of planning applications. The information below provides a summary of the key NPPF themes that are of relevance to the assessment of this proposal. The main purpose of the Revised NPPF is to secure sustainability at the heart of the planning system, and focuses on the role of the planning system to encourage mutually beneficial economic, social and environmental development.

Sustainable Development

A3.3 The NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development, and that there are three dimensions to sustainable development: economic, social and environmental (Paragraph 7 – 12). These three dimensions are defined as follows:

- 1 an economic role – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity and by identifying and coordinating the provision of infrastructure;
- 2 a social role – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe environment, with accessible services and open spaces that reflect current and future needs and support communities 'health, social and cultural well-being; and
- 3 an environmental role – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping improve biodiversity, using natural resources prudently, minimising waste pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

A3.4 The cornerstone of the NPPF is to proactively deliver sustainable development to support the Government's economic growth objectives and deliver the development which the country needs. This is encapsulated by the 'presumption in favour of sustainable development', which seeks to ensure that planning policies act as an enabler to development, rather than a barrier.

A3.5 Paragraph 10 states: so that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development, which should be applied through both plan-making and decision-taking.

A3.6 Paragraph 11 states: *‘Plans and decisions should apply a presumption in favour of sustainable development’* and c) *‘approving development proposals that accord with an up to date development plan without delay.’*

A3.7 Further, the NPPF provides:

- the need for a plan-led planning system, with plans providing a positive vision for the future of an area and a framework for addressing economic, social and environmental priorities (para 15)
- the avoidance of significant adverse impacts on the plan’s economic, social and environmental objectives (para 32)

Development Plan

A3.8 The following development policies are material to the assessment of the proposal.

Kirklees Local Plan (February 2019)

A3.9 The proposal is considered against a suite of wide ranging policies found within the documents which comprise the Development Plan. For the purposes of this planning application, the Development Plan comprises the Kirklees Local Plan (2019).

A3.10 The Kirklees Local Plan (KLP) was adopted on 27th February 2019. The KLP allocates the site as a minerals extraction site and for housing (which could be developed once the minerals working site has been reclaimed to approved ground levels).

A3.11 Policy PLP52 concerns the protection and improvement of environmental quality and requires submissions for proposals which have the potential to increase pollution from considerations such as noise, must be accompanied evidence to show the impacts have been evaluated and mitigation incorporated where required to ensure the development does not have an unacceptable impact on the environment.

A4.0

Methodology

Purpose

A4.1 The purpose of this section is to describe the process undertaken to identify the possible significant environmental effects giving rise to the need for Environmental Impact Assessment ('EIA'). The ES is supported by a single technical section (Noise and Vibration) which describes the specific technical methodology adopted to identify and assess the potential environmental effects arising.

Structure

A4.2 The structure of this section is as follows:

A summary of the process of scoping the EIA with Kirklees Council (KC). This has included:

- Requirement for EIA
- Scope of the Environmental Impact Assessment
- Methodological Approach – An overview of the methodological approach applied in this Environmental Statement (ES)
- Consultation and Engagement - An overview of the process of consultation which has taken place to inform and assist in the process of EIA
- Difficulties - A review of the some of the overall difficulties in the process of assessments that have arisen in carrying out the EIA addendum. Further detail is provided in the Noise and Vibration section where relevant and applicable.
- Summary and Conclusions.

Scope of the Environmental Statement

Request of an EIA Scoping Opinion

A4.3 To assist in identifying those environmental issues requiring considering, the 2017 EIA Regulations make provision for an applicant to seek the local authority's formal opinion on the scope for the EIA (the 'scoping opinion'). The scoping opinion identifies those issues that the local authority considers may give rise to the most significant effects and enables the applicant to focus on the assessment on those areas.

A4.4 On 7th February 2019, the Applicant requested that KC form an EIA scoping opinion with respect to the proposed removal of planning condition 18 of planning permission 2013/90793 (Technical Appendix 3). KC duly provided its ES Scoping Opinion on 18th March 2019 (Technical Appendix 4).

A4.5 The consultees from whom comments were sought prior to their forming a scoping opinion was as follows:

- Kirklees Council Pollution and Noise Control.

The Scope of the EIA

A4.6 The scope of the EIA relates to the red line boundary set out within Technical Appendix 2.

- A4.7 In its formal EIA Scoping Opinion, the Local Planning Authority confirmed that the methodology set out in the scoping report of 14th March 2019 is acceptable.
- A4.8 KC's EIA Scoping Opinion confirms the Council's agreement that the EIA should address the following:
- Noise
 - Cumulative Impacts
 - Mitigation and Monitoring
- A4.9 The EIA Scoping Opinion provides information on matters that will be addressed as part of the ES Addendum

Vulnerability to Major Accidents and/or Disasters

- A4.10 Although not raised specifically during the EIA scoping process, the scheme has been reviewed in the context of its vulnerability to major accidents and /or disasters, in accordance with Schedule 4, Part 8 of the 2017 EIA Regulations.
- A4.11 Given the nature, scale and location of the proposals, no potential vulnerability to the risk of major accidents and /or disasters has been identified.

EIA Process and Difficulties

- A4.12 The EIA considers the likely environmental effects based on current knowledge of the site and surroundings, desk top assessment, survey and fieldwork and information available to the EIA team. Regard is given to national planning policy guidance and relevant national, strategic and local planning policy and other legislation of relevance to individual topic areas. This topic-specific guidance is considered within further detail within the individual chapters of the ES Addendum.
- A4.13 The EIA has been completed with reference to best practice and relevant legislation and has addressed all those matters that could reasonably be required to assess the effects of the Proposed Process. Where 'built in' mitigation is taken into account in the technical assessments, this is identified.
- A4.14 Following the Council's formal consultation on the planning application and associated ES, new issues may emerge or practices identified which may affect the findings in this ES. Throughout the ES, the difficulties in compiling information and testing impacts or the assumptions that have been adopted are noted explicitly.

Examples of such difficulties relevant to this ES Addendum include: -

- 1 Information being unavailable to the team or the necessity to rely on reasonably available data in carrying out the EIA.
 - 2 Availability of accepted methodologies. In these situations, professional judgement, experience and agreement of other forms of assessment have been relied as the basis of EIA.
- A4.15 Where limitations and difficulties have arisen on individual topic areas, these are identified in each section as appropriate.

Methodological Approach

- A4.16 The EIA has been prepared in accordance with the requirements of the 2017 EIA Regulations and with reference to best practice including that published by the Institute of Environmental Management and Assessment ("IEMA"). All information required or reasonably required to identify the significant environmental effects of the development, as defined by Schedule 4 of the Regulations has been provided as part of the ES.
- A4.17 The assessment includes a consideration of relevant policy and legislation of relevance as well as considering comments received by consultees during the pre-submission period.
- A4.18 The Noise and Vibration technical assessment follows a consistent approach and format: -
- 1 Brief review of relevant policy and legislative context;
 - 2 Confirmation of the detailed topic specific assessment methodology, consultation undertaken and confirmation on how the assessment relates to the standard significance criteria adopted for the EIA (see below);
 - 3 Consideration of Baseline Conditions including an identification of sources of information, site history, current environmental conditions and future trends/anticipated changes to current conditions that could be anticipated without the scheme;
 - 4 Identification of the potential effects including a summary of those resources/receptors likely to be affected, the sensitivity of those receptors to accommodate change; the degree of change resulting from the proposal; the change of events or pathways linking cause to effect and a prediction of the significance of effects in terms of nature, extent and magnitude including whether it is direct/indirect, short/long term, permanent/temporary, beneficial/adverse;
 - 5 The scope for incorporating mitigation measures to avoid, reduce, remedy or compensate for any identified effects; and
 - 6 Identification of any effects remaining after mitigation.
- A4.19 Mitigation measures that are identified and the mechanisms for monitoring their effectiveness, are consolidated and set out in a coordinated manner in a dedicated section (Mitigation and Monitoring) within this ES Addendum.
- A4.20 The effects of individual environmental matters will be classified by reference to a common list of EIA significance criteria, comprising: -
- 1 Substantial₁ beneficial
 - 2 Moderate₂ beneficial
 - 3 Minor₃ beneficial
 - 4 Neutral/negligible
 - 5 Minor₃ adverse
 - 6 Moderate₂ adverse
 - 7 Substantial₁ adverse

1 Substantial – considerable effects (by extent, duration or magnitude) or of more than local significance or breaching identified standards or policy

2 Moderate – limited effects which may be considered significant

3 Minor – slight, very short or highly localised effects

- A4.21 The ES includes a clear description of the likely significant environmental effects on the environment including direct/indirect effects, secondary, cumulative, short/medium/long term, permanent/temporary and beneficial/adverse effects arising from the Proposed Process.

Consultation and Engagement

- A4.22 In accordance with the National Planning Policy Framework (NPPF paragraphs 39-46) the Proposed Process has been subject to early engagement and discussions with the Kirklees Council Pollution and Noise Team. This consultation has informed the noise monitoring undertaken with respect to the noise assessment.
- A4.23 Detailed engagement with key stakeholders with the ability to inform the process of EIA has been undertaken in the context of noise and is described in the Noise and Vibration section of this ES Addendum.

A5.0

Noise and Vibration

Purpose

- A5.1 This ES Addendum section assesses the potential noise and vibration effects of the activities associated with the operation of a new, state of the art mobile crushing plant within Thewlis Lane Quarry (“the Proposed Process”), and the likely significance of such effects during construction and operational phases.
- A5.2 This section has been prepared by ITP Energised on behalf of Johnsons Wellfield Ltd (“the Applicant”).
- A5.3 A detailed assessment considering noise and vibration impacts associated with the Proposed Process is provided in Technical Appendix A5 to this ES Addendum. This section relies on the findings of the detailed assessment and refers to the detailed assessment throughout.

About the Author

- A5.4 Simon Waddell BSc. (hons) MIOA is an environmental consultant with more than 9 years’ experience in acoustics. Simon has completed the Institute of Acoustics’ (IoA) Postgraduate Diploma in Acoustics and Noise Control and the Certificate of Competence in Environmental Noise Measurement and is a corporate member of the IoA.
- A5.5 He has worked on many Environmental Impact Assessments (EIAs) for a wide range of developments, and has undertaken non-EIA noise assessments for an even greater range of projects, both in the UK and internationally.

Background

- A5.6 Thewlis Lane Quarry operates in accordance with and is controlled by planning permission 2013/ 62/90793. Planning condition 18 prohibits the use of crushing and screening plant within the quarry for the reason that the use of that plant may impact upon residential amenity. This ES addendum chapter has been prepared to inform a planning application to vary planning permission 2013/62/90793 which seeks permission to enable this activity to take place.
- A5.7 The Applicant proposes to operate a new, state of the art mobile crushing plant within Thewlis Lane Quarry, with the material being generated to a predetermined specification for the engineered reclamation of the quarry.
- A5.8 The Proposed Process will include the following noise and vibration emitting activities:
- Transport of material from the neighbouring Crosland Moor Quarry to Thewlis Lane Quarry using dump-trucks (up to a maximum of 6 truck movements per hour);
 - Loading of material into a crusher using an excavator;
 - Crushing of material; and
 - Backfilling and spreading of processed materials within the quarry using mobile plant and a roller.
- A5.9 Currently, the eastern part of Thewlis Lane Quarry is approximately 25m deep and the western part approximately 2m deep. As part of the Proposed Process, Thewlis Lane Quarry will be backfilled to approved ground levels. There is an existing 4m high bund surrounding the quarry which will remain in-situ until completion of the backfilling activities.

- A5.10 Other quarrying-related activities take place within the adjacent quarries, and it is assumed that these will continue concurrently with the Proposed Process.
- A5.11 In general terms there is the potential for noise from the proposed crushing operations in addition to the existing 'working' of the scheme, including existing outgoing and incoming haulage vehicles, to give rise to significant effects at noise sensitive receptors near to the site and on roads used by haulage traffic.
- A5.12 Vibration arising from the proposed crushing operations has the potential to give rise to significant effects at sensitive receptors near to the site. The Chapter also determines the potential vibration effects of operating the new crushing plant.

Policy Context

Purpose

- A5.13 A summary of the development plan documents and planning context material to the Proposed Process is provided in Section 3. This section summarises relevant policy and legislation that are directly relevant to the consideration of Noise and Vibration.

National Planning Guidance

National Planning Policy Framework 2018 (NPPF)

- A5.14 The NPPF provides planning guidance for local planning authorities in England. The NPPF states that planning policies and decisions should aim to:
- Prevent new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability;
 - Mitigate and reduce to a minimum, potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;
 - Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason;
 - Avoid noise from giving rise to significant adverse noise impacts on health and quality of life as a result of new development; and
 - Mitigate and reduce to a minimum, other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions.

- A5.15 With regard to the avoidance of significant adverse effects on quality of life, the NPPF references the Noise Policy Statement for England (2010).

Noise Policy Statement for England 2010 (NPSE)

- A5.16 The NPSE provides three categories of effect:
- **NOEL – No Observed Effect Level;** the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.
 - **LOAEL – Lowest Observed Adverse Effect Level;** the level above which adverse effects on health and quality of life can be detected.
 - **SOAEL – Significant Observed Adverse Effect Level;** the level above which significant adverse effects on health and quality of life occur.

A5.17 The NPSE provides the following guidance regarding the SOAEL:

“It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times.”

A5.18 And:

“Increasing noise exposure will at some point cause the SOAEL boundary to be crossed. Above this level the noise causes a material change in behaviour such as keeping windows closed for most of the time or avoiding certain activities during periods when the noise is present. If the exposure is above this level the planning process should be used to avoid this effect occurring, by use of appropriate mitigation such as by altering the design and layout. Such decisions must be made taking account of the economic and social benefit of the activity causing the noise, but it is undesirable for such exposure to be caused.”

Other Legislation

Control of Pollution Act 1974 (CoPA)

A5.19 The CoPA gives local authorities powers for controlling noise and vibration from construction sites and other similar works. The legislation also defines the term Best Practicable Means (BPM) as follows:

A5.20 “In that expression “practicable” means reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to the financial implications.

A5.21 The means to be employed include the design, installation, maintenance and manner and periods of operation of plant and machinery, and the design, construction and maintenance of buildings and acoustic structures.”

Environmental Protection Act 1990 (EPA)

A5.22 The EPA makes provision for the improved control of pollution arising from industrial and other processes, further to that set out in the CoPA. The EPA provides a list of matters which constitute statutory nuisances, in which noise emitted or caused by vehicles, machinery or equipment in a street is included.

Standards and Guidance

A5.23 The following guidance has advised this assessment and the supporting standalone assessment in Technical Appendix A6.

IEMA Guidelines for Environmental Noise Impact Assessment

A5.24 The IEMA guidance addresses the key principles of noise impact assessment, and provide specific support on how noise impact assessment fits within the Environmental Impact Assessment (EIA) process.

BS 4142:2014 Methods for Rating & Assessing Industrial & Commercial Sound

A5.25 BS 4142 describes methods for rating and assessing sound from industrial or commercial premises. BS 4142 is the main source of guidance used in the rating of noise of an industrial nature as it affects residential receptors. The methods detailed in the standard use outdoor sound levels to assess the likely effects on people inside or outside a residential dwelling upon which sound is incident.

- A5.26 BS4142 provides methods for determining the following:
- Rating levels for sources of industrial and commercial sound; and
 - Ambient, background and residual sound levels.
 - These may be used for assessing sound from proposed, new, modified or additional sources of sound of a commercial or industrial nature.
- A5.27 BS4142 makes use of the following terms:
- **Ambient sound level, $L_a = L_{Aeq,T}$** – the equivalent continuous sound pressure level of the totally encompassing sound in a given situation at a given time, usually from multiple sources, at the assessment location over a given time interval, T.
 - **Background sound level, $L_{A90,T}$** – the A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90 percent of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels.
 - **Specific sound level, $L_s = L_{Aeq,Tr}$** – the equivalent continuous sound pressure level produced by the specific sound source at the assessment location over a given reference time interval, T.
 - **Rating level, $L_{Ar,Tr}$** – the specific sound level plus any adjustment for the characteristic features of the sound.
- A5.28 Residual sound level, $L_r = L_{Aeq,T}$ – the equivalent continuous sound pressure level at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound, over a given reference time interval, T.
- A5.29 The standard determines the degree of noise impact by comparison of the background noise level at noise-sensitive receptors in the absence of the industrial or commercial facility (the specific source) with the ambient sound level when the specific source is operational.
- BS 7445-1:2003 Description & Measurement of Environmental Noise. Guide to Quantities & Procedures**
- A5.30 BS 7445 provides guidance on appropriate environmental noise monitoring, including specification of equipment, suitable weather conditions and observations to note regarding the nature of the noise environment.
- BS 5228-1:2009+A1:2014 Code of Practice for Noise & Vibration Control on Construction & Open Sites, Parts 1 & 2**
- A5.31 BS 5228 (BSI, 2014) provides a procedure for the estimation of construction noise and vibration levels, and for the assessment of the significance of the predicted effects at NVSRs. Annex D of the standard includes a library of measured typical noise levels for a range of construction plant and activities. The standard also provides several methods for the evaluation of the significance of construction noise effects.
- A5.32 With regard to vibration, Part 2 of the standard notes that humans are very sensitive to vibration, with the threshold of perception being typically in Peak Particle Velocity (PPV) range 0.14 mm/s to 0.3 mm/s. The standard therefore adopts a threshold of PPV 0.3 mm/s as having an effect that vibration “might just be perceptible in residential environments”. Buildings are noted to be less sensitive to vibration, with the onset of cosmetic damage noted to occur at PPV 20 mm/s in the most sensitive types of structures.
- A5.33 BS 5228 provides historical examples of vibration levels from construction activities which generate significant vibration and prediction methods for determining likely vibration levels

associated with such activities. The activities listed comprise piling, vibratory compaction, dynamic compaction and tunnelling.

Assessment Methodology & Significance Criteria

Purpose

A5.34 This section details the assessment methodology applied to the assessment of noise, setting out noise and vibration significance criteria.

Assessment Methodology

A5.35 The IEMA guidance advises (paragraph 7.65):

‘... there is no simple answer and professional judgement will be required in both describing the likely effect of the noise impact and, in EIA, when going on to evaluate the effects’ significance.’

A5.36 In this assessment, criteria for describing the noise impact (magnitude) and effect (magnitude/sensitivity) have drawn on the IEMA guidance in combination with professional judgement and experience.

A5.37 As the Proposed Process will introduce new noise sources to the area and its surroundings, there is no potential for beneficial effects to occur through a reduction in existing baseline noise levels, therefore criteria adopted for this assessment consider only potential adverse effects.

A5.38 In this assessment, and in accordance with the IEMA guidance, the predicted change in noise level at a receptor is referred to as the magnitude of noise impact. The consequential noise effect is described in terms of likely changes in the amenity of those affected.

A5.39 The noise assessment has been carried out in accordance with the relevant standard (BS 5228:2009+A1:2014), and operational noise limits previously agreed with Kirklees Council for Thewlis Lane Quarry and the Applicant’s nearby quarrying operations.

A5.40 The relevant Standard (BS 5228) set out hereafter provides a method for the evaluation of the significance of noise effects during the Proposed Process. This method has been adopted to evaluate the significance of the predicted noise levels at the identified Noise Sensitive Receptors (NVSRs) due to the Proposed Process.

A5.41 The method of assessment is a process in which:

- baseline noise levels are established;
- noise limits are agreed with Kirklees Council by reference to existing noise limits for the Site and measured baseline background (L_{A90}) noise levels;
- noise levels (L_{Aeq}) are predicted for the proposed operations;
- cumulative noise effects are considered, taking account of simultaneous activities on other projects included in the cumulative assessment; and
- the predicted noise levels are evaluated against the agreed noise limits to determine their level of significance.

A5.42 This assessment will therefore identify the relevant guidance and advice for undertaking this noise assessment, presenting the results of measured noise levels at the NVSRs and uses these results to derive appropriate noise limits at the NVSRs.

A5.43 The National Planning Policy Framework had a supplementary Technical Guidance Note (TGN) that included noise, however this supplementary note was revoked on 7 March 2014. British

Standard 5228 (BS5228, 2014) is the relevant Standard for a noise and vibration assessment of a minerals extraction site, however, it currently references the supplementary TGN for appropriate noise limits. It is unclear what, if any, guidance on noise has replaced the supplementary note on noise, therefore the assessment uses noise limits that have been established in agreement with Kirklees Council for existing quarrying activities at the site.

Significance Criteria

Criteria for Magnitude of Noise Impact – Crushing (Operations)

A5.44 For the purpose of the assessment of noise during the operation of the proposed use of crushing plant (and the ongoing extraction (minerals working) phases (i.e. operation)), the following definitions of significance of effect have been adopted:

- **Substantial adverse** – the operational L_{Aeq} level is >15 dB above background (L_{A90}) level (i.e. >5dB above the noise limit provided in planning condition 42b);
- **Moderate adverse** – the operational L_{Aeq} level is >10 dB above and <15 dB above background (L_{A90}) level (i.e. <5dB above the provided limit in planning condition 42b);
- **Minor adverse** – the operational L_{Aeq} level is <10 dB above and >0 dB above background (L_{A90}) level (i.e. meets the noise limit provided in planning condition 42b); and
- **Negligible** - the L_{Aeq} level is below measured background (L_{A90}) level.

Criteria for Magnitude of Vibration Impacts – All Sources

A5.45 For the purpose of the assessment of vibration during the operation of the proposed use of crushing plant and the ongoing extraction / minerals working phases (i.e. operation), the following definitions of significance of effect have been adopted:

- **Substantial adverse** – the vibration level is >10.0 mm/s PPV;
- **Moderate adverse** – the vibration level is ≥ 1.0 mm/s PPV and ≤ 10.0 mm/s PPV;
- **Minor adverse** – the vibration level is ≥ 0.3 mm/s PPV and <1.0 mm/s PPV;
- **Negligible** - the vibration level is <0.3 mm/s PPV

Criteria for Significance of Effect

A5.46 In this assessment, a significant noise effect is defined as being that which exceeds applicable noise conditions for the site, as follows:

- i. during operation, noise levels are ≥ 10 dB above the measured background level at any noise-sensitive property (i.e. above the noise limit).

A5.47 A matrix that sets out the significance of effect against the adopted criteria is presented in Table A1.1.

A5.48 This assessment considers that all residential NVSRs are of “high” sensitivity.

Table A1.1 *Significance of Effect Matrix*

Magnitude	Sensitivity of Receptor		
	Low	Medium	High
Negligible	Neutral	Neutral	Neutral
Minor	Minor	Minor	Minor
Moderate	Minor	Moderate	Moderate
Substantial	Moderate	Major	Major

For the purpose of this assessment, a magnitude of impact that results in a **Moderate** or **Major** effect is considered to be **Significant** in the context of the EIA regulations.

Consultation

- A5.49 An EIA Scoping request was issued to Kirklees Council on 7th February 2019, detailing the proposed approach to the assessment and identifying appropriate criteria for the evaluation of noise and vibration effects (ES Addendum Technical Appendix 4). The Council's scoping opinion refers to noise and vibration assessment (ES Addendum Technical Appendix 5).
- A5.50 ITPE invited additional consultation (by email) to Kirklees Council Environmental Health Department, seeking to clarify the approach to the assessment, but had received no response at the time of reporting [Reference 10].

Assumptions and Limitations

- A5.51 This assessment assumes that noise and vibration levels measured during test operation of the Proposed Process remain representative of the actual plant which will be operated. Similarly, it is assumed that measured baseline noise levels are representative of the noise environment at all times when the Proposed Process and cumulative activities are not operating.
- A5.52 Where possible, a robust approach has been taken, including making worst-case assumptions with in prediction of noise levels associated with the Proposed Process.
- A5.53 The Proposed Process will require minimal set up; the majority of proposed plant items are already in use on the Site, and operate within a similar locus of their proposed use, therefore the only construction phase noise and vibration source which will differ from the baseline scenario is the delivery of the crusher to the Site. It has therefore been assumed that the activity assessed does not have a construction phase therefore the assessment undertaken solely relates to Operation. Upon the completion of backfilling of the Thewlis Lane Quarry, the use of the crushing plant will cease and the site reclamation will continue as permitted.

Baseline Conditions

Purpose

- A5.54 The purpose of this section is to set out the baseline noise conditions for the purposes of assessing the Proposed Process.

Study Area and Noise Sensitive Receptors

- A5.55 The Proposed Process will operate within Thewlis Lane Quarry, an existing operational quarry, which lies in a mixed industrial/residential area on the outskirts of Huddersfield, bordering a rural area of farmland. The Applicant operates three quarries and associated material processing facilities within approximately 500m of Thewlis Lane Quarry.
- A5.56 Noise and Vibration Sensitive Receptors (NVSRs) are typically considered to include buildings in residential, cultural (e.g. churches, libraries) or institutional (schools, hospitals) use. This assessment considers noise and vibration effects at the closest NVSRs to the Proposed Process, which have all been determined to be residential dwellings. Noise and vibration effects will decrease with increasing distance from the Proposed Process, therefore demonstration of no significant effects at the closest NVSRs will entail no significant effects at more distant NVSRs.
- A5.57 The study area of this assessment has been defined to include the Proposed Process, the closest NVSRs and potential cumulative noise and vibration sources, comprising operations at other nearby sites operated by the Applicant. Noise and vibration effects have been considered at the following representative NVSRs:
- NVSR1 – Representative of residential properties on Ballater Avenue, approximately 100m north of the Proposed Process;
 - NVSR2 – Representative of residential properties on Sutherland Drive, approximately 80m east of the Proposed Process; and
 - NVSR3 – Representative of residential properties on Moor Close, approximately 90m north of the Proposed Process.
- A5.58 The site location and extent are shown in Figure 1 of the *Thewlis Lane Quarry, Noise and Vibration Assessment* (Technical Appendix 5). The extent of the study area and the identified representative NVSRs are shown in Figure 2 of the *Thewlis Lane Quarry, Noise and Vibration Assessment* (Technical Appendix 5).

Existing Conditions

- A5.59 ITPE undertook a noise and vibration survey on 7th February 2019 to characterise the baseline environment at locations representative of NVSRs. Details of the monitoring undertaken are provided in Appendix 5. The monitoring locations used in the baseline survey are shown in Figure 3 of Technical Appendix 5.
- A5.60 The noise environment was dominated by quarrying activities, both from within Thewlis Lane Quarry and, to a lesser extent, from the nearby Waterholes Quarry and Crosland Moor 'Airfield' Quarry. Identified noise sources included drilling, beeper reversing alarms, material handling noise and engine noise from plant. Outside the operating hours of the quarries, the dominant noise source was road traffic on the surrounding road network and sporadic aircraft noise.
- A5.61 The methods of baseline characterisation and the detailed findings are provided in *Thewlis Lane Quarry, Noise and Vibration Assessment* (Technical Appendix 5). The measured baseline noise levels are summarised in Table A1.2.

Table A1.2 Summary of Measured Baseline Noise Levels

Operating Scenario		Monitoring Duration	Aggregated Ambient Noise Levels – $dBL_{Aeq,T}$	Aggregated 90th percentile Noise Levels – $dBL_{A90,T}$
MP1				
Quarries operating (i.e. Thewlis Lane Quarry and neighbouring quarries)	Without the Proposed Process	15 minutes	49.5	46.2
	With the Proposed Process	15 minutes	51.2	48.0
MP2				
No quarrying activities on-going (i.e. Thewlis Lane Quarry, Proposed Process and neighbouring quarries not in operation)		30 minutes	45.8	42.1

- A5.62 The MP2 baseline scenario is considered to be a conservative scenario given that mineral extraction has been a long-term feature of the ambient noise environment (during working hours). MP1 is representative of the existing ambient background noise environment. The Proposed Process will only take place during permitted operational hours.
- A5.63 However, the similarity between the measured levels at MP1 and MP2 is considered to be a positive indication that the baseline noise environment is consistent, and has been appropriately characterised.
- A5.64 A baseline vibration survey was undertaken simultaneously with the noise survey. The methods and equipment used are detailed in the *Thewlis Lane Quarry, Noise and Vibration Assessment* Technical Appendix 5. A summary of the baseline vibration levels is provided in Table A1.3.

Table A1.3 Summary of Measured Vibration Levels

Operating Scenario		Monitoring Duration	Measured Vibration Level, PPV mm/s		
			X axis	Y axis	Z axis
Quarries operating (i.e. Thewlis Lane Quarry and neighbouring quarries)	Without the Proposed Process	15 minutes	0.10	0.09	0.04
	With the Proposed Process	15 minutes	0.08	0.08	0.04

Operating Scenario	Monitoring Duration	Measured Vibration Level, PPV mm/s		
		X axis	Y axis	Z axis
No quarrying activity (Thewlis Lane Quarry, Proposed Process and Waterholes not in operation).	30 min	0.05	0.05	0.05

A5.65 No perceptible vibration was noted at any off-site monitoring position during the survey.

Future Baseline

A5.66 It is assumed that the baseline will remain unchanged for the duration of quarrying activity.

Potential Effects

Introduction

A5.67 This section sets out the assessment of effects in accordance with the methodology set out within the preceding section of this chapter.

During Construction

A5.68 The Proposed Process will require minimal set up; the majority of proposed plant items are already in use on the Site, and operate within a similar locus of their proposed use, therefore the only construction phase noise and vibration source which will differ from the baseline scenario is the delivery of the crusher to the Site. Noise and vibration effects associated with construction will therefore be of very short duration, and will generate substantially lower levels of noise and vibration than during operation of the Proposed Process. Noise and vibration effects associated with construction are therefore not considered further.

During Operation

A5.69 Noise and vibration levels associated with the Proposed Process were measured during the baseline noise survey. Details of the measurements undertaken, and methods used, are provided in *Thewlis Lane Quarry, Noise and Vibration Assessment* (Technical Appendix 5).

A5.70 The measurements were used to determine source noise terms for the Proposed Process, such that noise levels for the operational phase could be predicted at NVSRs. Details of the measurements undertaken, the derived source noise terms, and the prediction method are provided in *Thewlis Lane Quarry, Noise and Vibration Assessment* (Technical Appendix 5).

Evaluation of Noise Effects

A5.71 The predicted noise levels at NVSRs associated with the Proposed Process are provided in Table A1.4. The depth of the quarry void will determine the amount of screening provided to noise from the Proposed Process, with screening becoming reduced as the void is backfilled. Predicted levels consider two scenarios; a quarry void 25 m deep and also for the void backfilled to the same level of the surrounding land (0 m deep). The predictions consider operation of the Proposed Process in four different locations within the void, as shown in *Thewlis Lane Quarry, Noise and Vibration Assessment* (Technical Appendix 5), Figure 3.

Table A1.4 Predicted Noise Levels at Representative NVSRs

Location	Predicted noise level, $\text{dBL}_{\text{Aeq,1hr}}$		
	NVSR1	NVSR2	NVSR3
Void depth = 25 m			
South-East Corner	36.3	28.5	26.4
South-West Corner	41.6	42.0	45.1
North-West Corner	46.4	41.9	41.2
North-East Corner	30.9	30.5	34.6
Highest Predicted Level	46.4	42.0	45.1
Void depth = 0 m			
South-East Corner	45.3	47.5	45.6
South-West Corner	41.6	42.0	48.3
North-West Corner	47.7	42.0	41.2
North-East Corner	49.4	49.1	42.6
Highest Predicted Level	49.4	49.1	48.3

A5.72 Representative background noise levels at the identified NVSRs, in the absence of all quarrying activities (i.e. Thewlis Lane Quarry, Proposed Process and neighbouring quarries not in operation), have been derived from the measured levels at the MPs (refer to Table A1.2).

A5.73 Measured background noise levels at MP1 and MP2 were consistent, however, in a robust approach the lowest background noise level (measured at MP2) has been selected as representative of all the identified NVSRs.

A5.74 The background level used in this assessment is therefore: **41.3 dBA**.

A5.75 The impact magnitude and effect significance of the highest predicted noise levels for the two scenarios (void depths of 25 m and 0 m) are evaluated in Table A1.5, using the criteria provided in section A5.44 and Table A1.1.

Table A1.5 Evaluation of Noise Effects, Operation of Proposed Process

Aspect	Predicted noise level, dBL _{Aeq,1hr}		
	NVSR1	NVSR2	NVSR3
Void depth = 0 m			
Highest Predicted Level, dBL _{Aeq,T}	46.4	42.0	45.1
Noise limit (background level +10 dB)	41.3 + 10 = 51.3		
Difference (Predicted level minus noise limit), dB	-4.9	-9.3	-6.2
Impact magnitude	Minor	Minor	Minor
Effect significance	Minor	Minor	Minor
Void depth = 25 m			
Highest Predicted Level, dBL _{Aeq,T}	49.4	49.1	48.3
Noise limit (background level +10 dB)	41.3 + 10 = 51.3		
Difference (Predicted level minus noise limit), dB	1.9	2.2	3.0
Impact magnitude	Minor	Minor	Minor
Effect significance	Minor	Minor	Minor

A5.76 The predicted operational noise levels associated with the Proposed Process are higher than the background noise level, but do not exceed the derived noise limit at any of the representative NVSRs. The impact magnitude is therefore “minor” and the effect significance is “minor”.

A5.77 Noise effects associated with the Proposed Process are therefore “**not significant**”.

Evaluation of Vibration Effects

A5.78 Vibration effects associated with the Proposed Process, as reported in Table A1.3, are evaluated in Table A1.6 against the adopted criteria provided in Section A5.46.

Table A1.6 Evaluation of Measured Vibration Levels

Aspect	Result
Measured vibration level during operation of Proposed Process (highest level of any axis) mm/s PPV	0.08
Criterion, mm/s PPV	0.14
Difference (measured level minus criterion), dB	0.06
Impact magnitude	Negligible
Effect significance	Neutral

- A5.79 Vibration effects associated with the Proposed Process are below the assessment criterion; the resultant impact magnitude is therefore “negligible” and the effect significance is “neutral”. Vibration effects associated with the Proposed Process are therefore “**not significant**”.

During Decommissioning

- A5.80 The Proposed Process will require minimal decommissioning. At the end of the Proposed Process the quarry will be backfilled and no further processes are anticipated within the site. Decommissioning will comprise removal of the crusher from the site, therefore noise and vibration effects associated with decommissioning will therefore be of very short duration, and will generate substantially lower levels of noise and vibration than during operation of the Proposed Process. Noise and vibration effects associated with decommissioning are therefore not considered further.

No Proposed Process Scenario

- A5.81 In the event that the Proposed Process is not brought forward there would be no adverse effects associated conditions would remain as set out in Section A4.54 of this Chapter.

Mitigation and Monitoring

Introduction

- A5.82 Mitigation is the stage in the EIA process when measures are identified to avoid, minimise or remedy potential impacts. These measures are usually integral to a scheme but can be implemented as part of the process of impact management, together with any necessary adjustments to respond to unforeseen impacts. This section sets out additional mitigation relevant to noise which will be employed as part of the Proposed Process.

During Construction

- A5.83 Construction noise and vibration levels will be negligible and of very short duration. No potentially significant effects have been identified. No project-specific mitigation is proposed, however, industry good practice (as provided in BS5228) will be adopted throughout the project, where appropriate.

During Operation

- A5.84 Measured and predicted noise and vibration levels associated with operation of the Proposed Process are below the assessment criteria, and potential effects have therefore been determined to be “not significant”. No project-specific mitigation is therefore proposed, however, industry good practice (as provided in BS5228) will be adopted throughout the project, where appropriate.

During Decommissioning

- A5.85 Decommissioning noise and vibration levels will be negligible and of very short duration. No potentially significant effects have been identified. No project-specific mitigation is proposed, however, industry good practice (as provided in BS5228) will be adopted throughout the project, where appropriate.

Residual Effects

Introduction

- A5.86 The magnitude of effects during the construction and operational phases following the application of the identified mitigation measures (i.e. the residual effect) has been assessed with reference to the extent, magnitude and duration of the effect; performance against environmental quality standards and other relevant criteria; receptor sensitivity and compatibility with environmental policies.

During Construction

- A5.87 Noise and vibration impacts during Construction will be negligible, and no mitigation is proposed, other than following good practice guidance provided in BS5228. Residual effects remain as above; **not significant**.

During Operation

- A5.88 Noise and vibration levels have been determined to meet the evaluation criteria during Operation. Noise and vibration effects have been determined to be “not significant”. Good practice guidance for minimising unnecessary noise and vibration and NVSRs, as provided in BS5228, will be applied where appropriate. Residual effects therefore remain as above; **not significant**.

During Decommissioning

- A5.89 Noise and vibration impacts during Decommissioning will be negligible, and no mitigation is proposed, other than following good practice guidance provided in BS5228. Residual effects remain as above; **not significant**.

- A5.90 A summary of the residual effects is provided in Table D7.1 below

Table A1.7 Summary of Effects

Receptor	Effects	Mitigation	Residual Effects
During Construction			
All NVSRs	Not significant	None proposed	Not significant
During Operation			
All NVSRs	Not significant	None proposed	Not significant
During Decommissioning			
All NVSRs	Not significant	None proposed	Not significant

Summary & Conclusions

Conclusion

- A5.91 This section considers potential noise and vibration effects associated with the processing of quarried materials at Thewlis Lane Quarry, including crushing material, the backfilling of the quarry void over the permitted term.
- A5.92 The section relies on the findings of a standalone noise and vibration assessment, *Thewlis Lane Noise and Vibration Assessment* provided in Technical Appendix A6 which supplements the technical assessment undertaken in 2013.
- A5.93 A noise and vibration survey was undertaken to characterise the baseline noise and vibration environment, and noise and vibration emissions associated with the Proposed Process during

test operation at the site. Noise levels at off-site NVSRs have been predicted and evaluated in the context of noise limits previously agreed with Kirklees Council for quarries in the area. Vibration levels have been evaluated against criteria provided in relevant standards.

- A5.94 Noise and vibration levels associated with the Proposed Process, have been determined to be “not significant”. No mitigation has been proposed, and residual effects have been determined to be “not significant”. The residual effect reflects the outcome of the assessment undertaken for the then then proposed development as provided in the March 2013 ES.

A6.0 Cumulative Effects

A6.1 The ES prepared in 2013 assessed whether any cumulative effects may arise from the Proposed Process when considered alongside other committed schemes in proximity to the proposed process in proximity to the proposed development.

A6.2 Since the completion of the ES (2013) there has been the following additional scheme is considered within the cumulative assessment.

1. Moor End South, 2017/62/91213/WO described as Proposed extraction of minerals and subsequent reclamation to agriculture.

Noise

A6.3 The existing noise environment in the study area includes contributions from quarrying operations from, amongst others;

- The existing Thewlis Lane Quarry;
- Crosland Hill Works;
- Waterholes Quarry;
- The Airfield Working Area; and
- Crosland Moor Quarry, including the consented planning application for extraction of minerals and subsequent reclamation to agriculture (application reference 2017/62/91213/WO).

A6.4 At the Noise Vibration Sensitive Receptors considered in the assessment, noise from mineral workings is the dominant noise source during quarry workings hours.

A6.5 The noise assessment in support of the Proposed Process derives noise limits from “true” background noise level, measured in the absence of any noise from cumulative quarrying and mineral working activities; the measurements were undertaken following cessation of works at all cumulative operations.

A6.6 Excluding noise from the prevailing dominant noise source is considered to be a robust approach, resulting in a highly conservative assessment. This approach was adopted to avoid “creeping background”, whereby each new development raises the background noise level, thereby allow subsequent developments to generate higher noise levels.

A6.7 If a background noise level which included noise from existing quarrying activities were used to derive noise limits for the Proposed Process, then derived noise limits for the Proposed Process would have been set at considerably higher level. Using the “true” background therefore limits noise from the Proposed Process to an appropriate level, in the absence of all cumulative developments. Cumulative noise effects are therefore “**not significant**”.

A6.8 Vibration effects associated with the Proposed Process have been demonstrated to be localised. Measured vibration levels included the Proposed Process and cumulative operation of existing processes at Thewlis Lane Quarry and met the evaluation criteria by a substantial margin. Cumulative vibration effects are therefore “**not significant**”.

Summary

A6.9

In summary, and as can be seen in Table A1.8, consideration of updated committed developments since the completion of the ES (2013) has not resulted in any new or amended impacts arising from developments in the local area which would require additional mitigation measures not previously identified in the ES.

Table A6.1 Summary of Impacts arising from Cumulative Development

Cumulative Effect	ES (2013)	ES Addendum (March 2019)
Noise	Not significant	Not Significant

A7.0

Mitigation and Monitoring

Introduction

- A7.1 Mitigation is the stage in the EIA process when measures are identified to avoid, minimise or remedy potential impacts. These measures are usually integral to a scheme but can be implemented as part of the process of impact management, together with any necessary adjustments to respond to unforeseen impacts. This section sets out additional mitigation relevant to noise which will be employed as part of the Proposed Process.

During Construction

- A7.2 Construction noise and vibration levels will be negligible and of very short duration. No potentially significant effects have been identified. No project-specific mitigation is proposed, however, industry good practice (as provided in BS5228) will be adopted throughout the project, where appropriate.

During Operation

- A7.3 Measured and predicted noise and vibration levels associated with operation of the Proposed Process are below the assessment criteria, and potential effects have therefore been determined to be “not significant”. No project-specific mitigation is therefore proposed, however, industry good practice (as provided in BS5228) will be adopted throughout the project, where appropriate.

During Decommissioning

- A7.4 Decommissioning noise and vibration levels will be negligible and of very short duration. No potentially significant effects have been identified. No project-specific mitigation is proposed, however, industry good practice (as provided in BS5228) will be adopted throughout the project, where appropriate.

A8.0

Summary and Conclusions

- A8.1 This ES Addendum (March 2019) has been prepared on behalf of Johnsons Wellfield Limited as an addendum to the ES (March 2013) which accompanied a full planning application for minerals extraction at Thewlis Lane, Crosland Moor, Huddersfield (2013/62/90793/WO). The planning permission was issued subject to a Section 106 Agreement on 29th January 2014.
- A8.2 The ES Addendum (March 2019) accompanies a Section 73 planning application which proposes the removal of planning condition 18 which prohibits the use of crushing and screening plant within the permitted area to safeguard the amenities of nearby residents.
- A8.3 In accordance with EIA regulations and procedure, and the requirements of condition 18, the ES (March 2019) submitted with the minor material amendment application has been reviewed and an assessment undertaken of the Proposed Process to assess the potential for new or amended environmental effects.
- A8.4 This has resulted in the additional consideration of Noise and Vibration with respect to the Proposed Process.
- A8.5 The assessment has also been updated to reflect the latest committed development scheme within the vicinity of the site (cumulative effects), and the Non Technical Summary (March 2013) prepared and submitted with the full planning application has been updated by way of an NTS Addendum to reflect the scheme proposal and assessment.
- A8.6 Overall, and as can be seen in Table A8.1, the ES Addendum identifies that the proposed operation of a crushing plant will result in no change to the residual effects and /or overall conclusions reached in the original ES (March 2013), providing sufficient information to enable Kirklees Council to reach a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment.

A8.7 Table A8.1 Change in Residual Effect

Aspect	Change in residual construction and operational effect ES march 2013/ ES addendum March 2019.
<i>Ecology</i>	<i>No Change</i>
<i>Landscape and Visual</i>	<i>No Change</i>
<i>Soils and ALC</i>	<i>No Change</i>
<i>Dust and Air Quality</i>	<i>No Change</i>
Noise	No Change
Traffic	No Change
<i>Hydrology and Hydrogeology</i>	<i>No Change</i>
<i>Archaeology</i>	<i>No Change</i>

A9.0

References

A9.1

The following references are made within the noise section.

- 1 BSI Publication. (2009/2014). BS 5228-1:2009+A1:2014 Code of Practice for Noise & Vibration Control on Construction & Open Sites, Parts 1 & 2.
- 2 BSI Publications. (2003). Description and measurement of environmental noise, Guide to quantities and procedures.
- 3 BSI Publications. (2014). BS4142:2014 Methods for Rating and Assessing Industrial and Commercial Sound.
- 4 DEFRA. (2010). Noise Policy Statement for England.
- 5 ISO. (1993). Acoustics - Attenuation of sound during propagation outdoors, Part 1: Calculation of the absorption of sound by the atmosphere, Part2: General method of calculation.
- 6 Ministry of Housing Communities & Local Government. (2018). National Planning Policy Framework.
- 7 UK Government. (1974). Control of Pollution.
- 8 UK Government. (1990). Environmental Protection Act.
- 9 Institute of Environmental Management and Assessment. (2014) Guidelines for Environmental Noise Assessment.
- 10 Email consultation sent to Kirklees Council Environmental Health Department on 04/02/2018. Subsequent phone calls following up email were made on 6th February with no response.

A10.0

Abbreviations & Definitions

A10.1

The following section sets out abbreviations and definitions referred to in this addendum document.

- A-weighting – A filter applied to measured noise levels to approximate the sensitivity of the human ear to different frequencies.
- Ambient sound level, $L_{Aeq,T}$ – The A-weighted equivalent continuous sound pressure level over a reference interval, T.
- Background sound level, $L_{A90,T}$ – The A-weighted sound pressure level exceeded for 90% of the measurement period, A-weighted and calculated by statistical analysis. Typically measured in the absence of noise from the source/activity being assessed.
- Tenth percentile noise level, $L_{A10,T}$ – The A-weighted sound pressure level exceeded for 10% of the measurement period, A-weighted and calculated by statistical analysis.
- Maximum noise level, $L_{Amax,T}$ – The A-weighted maximum sound pressure level.
- Broadband level – The A-weighted total noise energy across the frequency spectrum.
- Decibel, dB – The unit of measurement of noise.
- Emissions – Noise/vibration generated by a source.
- Immissions – Noise/vibration received at a receptor location.
- Octave Band Level – The noise energy contained within the range of frequencies within a specific octave.
- Peak Particle Velocity – The vector sum of the maximum vibration velocities in all directions (X, Y & Z).

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