



Hanson Aggregates UK

Whatley Quarry – Deepening

Environmental Impact Assessment (EIA)

Scoping Report



Report for

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1. Introduction

1.1 Overview of the Proposed Scheme

- 1.1.1 Hanson UK Ltd (hereinafter referred to as Hanson) plan to secure the continued extraction of all consented limestone reserves, and extraction of further unconsented reserves, within the existing footprint of Whatley Quarry, near Frome in Somerset (hereafter referred to as 'the Proposed Scheme').
- 1.1.2 Hanson seeks to vary a number of planning conditions attached to planning consent 109122/002 dated 6 July 1996 under Section 73 of the Town and Country Planning Act 1990 to enable additional extraction from 'The Western Staggered Benches', the 'Northwest Tip', and a deepening of the base of the quarry from 0 m above ordnance datum (AOD) to -60 m AOD. Amendments are proposed to condition 3 (duration of permission); 12 (phased working of the quarry); 17 and 18 (protection of groundwater) and 39 (depth of working) attached to the extant permission 109122/002.
- 1.1.1 Further details of the Proposed Scheme can be found in **Chapter 2: The Proposed Scheme**.

1.2 The applicant and project team

- 1.2.1 This Scoping Report has been prepared on behalf of Hanson by Wood Environment & Infrastructure Solutions UK Ltd (hereafter referred to as 'Wood').
- 1.2.2 Wood is registered with the Institute of Environmental Management and Assessment (IEMA)'s Environmental Impact Assessment (EIA) Quality Mark scheme. The scheme allows organisations that lead the co-ordination of EIAs in the UK to make a commitment to excellence in their EIA activities and have this commitment independently reviewed.

1.3 Purpose of this report

- 1.3.1 This Scoping Report has been prepared as part of an EIA relating to the Proposed Scheme. EIA is required because it is considered that the proposed deepening at Whatley Quarry meets the criteria for EIA development under Schedule 1 of *The Town and Country Planning (Environmental Impact Assessment) Regulations 2017*¹ (hereafter referred to as the 'EIA Regulations').
- 1.3.2 The Proposed Scheme requires EIA because it falls within the descriptions of development under paragraph 19 of Schedule 1, as it comprises "Quarries and open-cast mining where the surface of the site exceeds 25 hectares, or peat extraction where the surface of the site exceeds 150 hectares" and it is likely to have significant environmental effects.
- 1.3.3 This Scoping Report has been issued to Somerset County Council together with a discretionary request for a Scoping Opinion under the EIA Regulations. To inform this request, the following information is included in this report, as required under Regulation 15 of the EIA Regulations:
- A plan sufficient to identify the land;
 - A brief description of the nature and purpose of the development, including its location;

¹ *The Town and Country Planning (Environmental Impact Assessment) Regulations 2017* [online]. Available at: <http://www.legislation.gov.uk/ukxi/2017/571/contents/made>

- An explanation of the likely significant effects of the development on the environment; and
- Such other information or representations as the person making the request may wish to provide or make.

1.3.4

Under the EIA Regulations, once a request for a Scoping Opinion has been issued to the determining authority, it is required to consult with the consultation bodies (as defined in the EIA Regulations) and to issue the developer with a pre-application opinion within five weeks of the date of receipt of the request. The opinion of Somerset County Council is being sought on the following:

- The environmental topics that should be assessed within the Environmental Statement (ES);
- The likely significant effects of the Proposed Scheme;
- Those effects that are not likely to be significant and do not need to be considered further;
- The approach to defining the study areas for each environmental topic;
- The data that has been gathered (and will be gathered);
- The assessment methods that will be used to determine likely significant effects;
- The approach to determining the environmental measures that could be incorporated into the Proposed Scheme to avoid, reduce or, as a last resort, compensate for significant effects; and
- Developments that, together with the Proposed Scheme should be subject to cumulative assessment.

1.4 Structure of this report

The remainder of this Scoping Report is structured as follows:

- **Chapter 2: The Proposed Scheme** provides a description of the Proposed Scheme;
- **Chapter 3: Legislation and planning policy overview** provides an overview of the legislation and policies that are relevant to the Proposed Scheme;
- **Chapter 4: The Environmental Impact Assessment Process** explains the approach that has been taken to identify the scope of the EIA;
- **Chapter 5:** set out the proposed scope and methodology for each technical topic where a significant environmental effect is likely to arise because of the Proposed Scheme. This chapter also identifies those effects that are scoped out of the EIA; and
- **Chapter 6: Summary** provides a summary of the proposed content of the ES.

2. The proposed scheme

2.1 Outline description of the proposed development site

- 2.1.1 Whatley Quarry is an operational Carboniferous limestone quarry, which is located approximately (~) 0.6 km to the north-west of the village of Whatley. The quarry (including the plant area and areas where soils are stored etc.) covers a total area of ~180 ha and occupies the position of a plateau lying at around 130 m AOD on the eastern boundary rising to some 158m AOD some 2 km to the west. The land to the north of the quarry falls steeply into the valley of the Mells River, on the north bank of which lies the village of Mells. The hamlets of Mells Green and Little Green lie between the quarry and the river. To the south lies the valley of Whatley Brook (which runs through Whatley Bottom). The hamlet of Chantry neighbours to the south/ south west.
- 2.1.2 The main approach route is from the east via Whatley Road which runs in a north/ south direction and forms the eastern site boundary. Two road access points exist. One which serves (primarily) as a service access lies in Whatley Bottom, while the main access site lies some 0.5 km further to the north. A dedicated rail line passes through a tunnel under Whatley Bottom into the Plant Site used exclusively for mineral export. The railway branch line runs eastwards, connecting to the Reading and Taunton line north of Frome. The rail operation is managed by a joint-venture company (between Hanson and Aggregate Industries) Mendip Rail.
- 2.1.3 The site location is illustrated in **Figure 2.1**.

2.2 Background to the development

- 2.2.1 Quarrying has been undertaken at Whatley quarry since the late 1930's. The site forms part of the wider Mendip Hills area which has long been a prominent location in the Somerset minerals industry, producing hard rock aggregates of national importance.
- 2.2.2 The planning history at Whatley Quarry dates back to 1948, when permission was granted for continued mineral extraction under the Town and Country (General Interim Development) Order (IDO) (ref. Interim Development Certificate reference 81). A revised application (ref. 109122/002) for a smaller westwards extension² was submitted and subsequently approved in 1996 and forms the principal consent for Whatley Quarry. This principal consent was the subject of an application for determination of conditions under the Review of Mineral permissions in accordance with the Environment Act 1995 (First Periodic Review) in December 2011. This application remains with the Minerals Planning Authority (Somerset County Council) for determination.
- 2.2.3 There are also several Section 106 legal agreements relating to the extant 1996 permission. These relate to the surrendering of mineral planning permissions at nearby locations and the previous permission relating to Whatley Quarry; road improvements and funding of school transport; borehole agreement and compensation measures; Bath hot springs monitoring; and river and spring augmentation measures.
- 2.2.4 Today, the site provides high quality crushed limestone which is supplied to both national and regional markets, as well as asphalt and ready mixed concrete as added value products which are supplied to local and regional markets. The limestone varies slightly in composition and colour

² 109122/002 (dated 6 July 1996) – Continued Quarrying & processing of Limestone at Whatley Quarry, and Extension to Quarry (35ha) together with the formation of a reservoir at Snatch Bottom and Improvements to Holywell Road

from bed to bed, but all are considered of good quality such that production variation is minimal, and the stone can be worked with little need for selection.

- 2.2.5 Annual output is limited by the extant planning consent to a maximum of 24 million tonnes over a 3-year calendar period. The site employees over 60 persons directly and a wide range of support staff and specialist subcontractors. Working is undertaken in shifts and includes night-time working to a limited extent.

2.3 Reasons for the Proposed Scheme

- 2.3.1 Whatley Quarry is one of Hanson's flagship sites. Its rail link means that this quarry is only one of a handful across England that has the capacity to supply wider UK markets – and most notably, those markets in London and the south east of England, where geology dictates that the vast majority of crushed rock requirements must be met by imports of material from other English regions. The ability to supply these markets with material delivered via rail means that Whatley Quarry is considered a strategic aggregate reserve.
- 2.3.2 However, for this strategic quarry to continue to supply valuable limestone resource to a range of regional and national construction projects, it is vital that the site replenishes its landbank of permitted material. Indeed, projects such as recently approved High Speed 2 rail link from London to Manchester means that there will be greater emphasis on rail linked quarries like Whatley to supply these more distant markets. In response to these increased demands, Hanson needs to carefully consider a strategy for ensuring that Whatley can continue to supply aggregates at existing permitted levels to the more distant, nationally significant construction markets, whilst still meeting the very important needs of the local south-west markets.
- 2.3.3 A fundamental part of this strategy is to secure the continued extraction of all consented limestone, as well as extraction of further unconsented reserves within the existing footprint of the quarry.
- 2.3.4 The extraction of consented reserves at Whatley is currently significantly complicated by the fact that there are conditions which affect the rate at which the quarry can be worked i.e. conditions (17) and (18) which state that:
- “(17) Save with the written consent of the MPA:*
- (a) the floor of the existing quarry shall not be lowered more often than once every four years other than for the construction of storage reservoirs. The first such lowering shall not take place before 1 January 1998;*
- (b) each lowering of the floor of the existing quarry shall not exceed 15 m.*
- (18) No quarry bench in the area of the application permitted shall be more than 100 m in advance of the bench below except where the bench below forms the base of the phase currently being worked”.*
- 2.3.5 These conditions effectively mean that given where current consented, remaining reserves are located within the quarry, the site's ability to supply its approved output rates of up to an average of 8 mt per annum is becoming increasingly compromised.
- 2.3.6 To enable Whatley Quarry to continue playing its part as a strategic supplier of limestone aggregate, and to ensure that the limestone within the site is worked in a sustainable manner – and most notably, in a way which does not sterilise large quantities of economically viable resource - Hanson is seeking to vary the current planning conditions to amend the site's working method. It is envisaged that such an amendment would:

- Facilitate the efficient working of remaining consented reserves; and

- Enable additional unconsented reserves within the footprint of the quarry (of which there are ~76 mt) to be worked through the re-profiling of the benches within the quarry as well as a deepening of the quarry itself.

2.3.7 Existing, permitted output levels would remain unchanged, however, to ensure that no valuable mineral is sterilised, it is anticipated that the site would need to operate beyond its current 2030 end date, to around 2042.

2.4 Description of the Proposed Scheme

Mineral extraction

2.4.1 The development seeks variation to conditions 3 (duration of permission); 12 (phased working of the quarry); 17 and 18 (protection of groundwater) and 39 (depth of working) attached to the extant permission 109122/002 under Section 73 of the Town and Country Planning Act 1990 to allow for a change in the approved working method within the main Whatley Quarry only to include additional extraction from the following areas:

- The 'Western Staggered Benches' – reprofiling of the benches in the western part of the quarry to release a further ~15.5 mt;
- The 'Northwest Tip' – reprofiling the benches on the north-western part of the quarry to release a further ~4.5 mt; and
- Deepening of the base of the quarry from its permitted 0 AOD to -60 m AOD, which would release a further ~56 mt.

The permitting of this additional limestone resource will ensure continuity of supply to important rail-based markets and the importance of safeguarding the regionally significant quarry operations at Whatley.

2.4.2 Permitted extraction techniques and output rates would remain unchanged and mineral would continue to be processed at the site's fixed processing plant, located in the south-eastern part of the quarry. Existing access arrangements into and out of the site would also remain unchanged. However, to reinforce Whatley Quarry's position as a strategically significant supplier of limestone aggregates, Hanson is (separately) seeking to secure the long-term resumption of permitted limestone extraction from their nearby Westdown Quarry (located ~1.5 km to the south). This would allow Whatley to focus on meeting the needs of the UK wide, rail-borne markets, as material from Westdown would supply the local road-borne markets. This means that fewer HGV movements would be anticipated from Whatley Quarry, as the majority of the material extracted would be despatched via the on-site rail head facility. Hanson, would however, wish to see the flexibility for HGV transfer to continue from Whatley and proposes that **combined** the two quarries (Whatley and Westdown) would not exceed the permitted 4 mt per annum of material being despatched from site via road.

2.4.3 The planning application boundary is illustrated on **Figure 2.2**

Operating hours

2.4.4 It is proposed that the operating hours in the extant permission for Whatley Quarry remain unaltered, as follows:

- Stripping and Construction Works:
 - ▶ 0800 to 1800 hours Mondays to Fridays; and

- ▶ 0800 to 1200 hours on Saturdays.
- Face Working –Top Two Benches:
 - ▶ 0600 to 2000 hours Mondays to Fridays; and
 - ▶ 0600 to 1200 hours on Saturdays.
- Drilling – Top Two Benches:
 - ▶ 0600 to 1800 hours Mondays to Fridays (excluding Public Holidays); and
 - ▶ 0600 to 1200 hours on Saturdays.
- Blasting – except in an emergency:
 - ▶ 0900 to 1800 hours Mondays to Fridays (excluding Public Holidays); and
 - ▶ 0900 to 1200 hours on Saturdays.

Restoration strategy

- 2.4.5 A revised restoration scheme that takes account of the proposed landform changes will also be submitted.
- 2.4.6 The ES will contain plans and accompanying text to describe the restoration proposals and approach being taken. The plans will clearly show the proposed final landform and the types of land cover and habitats proposed.

3. Legislation and planning policy overview

3.1 Introduction

- 3.1.1 This section sets out the legislation and planning policy context for the Proposed Scheme.
- 3.1.2 Each topic chapter in the Scoping Report (**Chapters 5**) includes topic specific legislation and a summary of the relevant planning policies where pertinent to the assessment. Legislation and planning policy will be used to guide the scope of the assessment and to inform the value ascribed to receptors.
- 3.1.3 The Environmental Statement (ES) will identify all the legislation and relevant policies which will be used to inform the scope and assessment of each environmental topic.

3.2 Legislative context

- 3.2.1 As discussed in **Chapter 1: Introduction**, the Proposed Scheme is to be assessed under the EIA Regulations, specifically *The Town and Country Planning (Environmental Impact Assessment) Regulations 2017*¹.
- 3.2.2 Other legislation of relevance to this EIA is that which relates specifically to the need to review old mineral planning consents i.e. *The Planning and Compensation Act 1991* and *The Environment Act 1995* – the former setting out the statutory provision for IDO permissions and the latter for ROMPs.
- 3.2.3 Any topic specific legislation is discussed within **Chapters 5 and 6**.

3.3 National planning policy

- 3.3.1 The application for Whatley Quarry must be assessed in the context of planning policy contained particularly within:
- The National Planning Policy Framework (NPPF) (February 2019); and
 - Supporting technical guidance as set out in the National Planning Practice Guidance (NPPG).
- 3.3.2 In terms of the former, particular consideration will be given to the policy set out in the following sections:
- Facilitating the Sustainable Use of Minerals;
 - Conserving or Enhancing the Natural Environment;
 - Promoting Sustainable Transport;
 - Meeting the Challenge of Climate Change, Flooding and Coastal Change; and
 - Supporting a Prosperous Rural Economy.
- 3.3.3 Consideration will also be given to the supporting technical guidance as set out in the NPPG. This will include reference to the following topics:
- Minerals;
 - Air Quality;

- Environmental Impact assessment;
- Natural Environment; and
- Water Quality.

3.4 Local planning policy

- 3.4.1 Section 38 of the Planning and Compulsory Purchase Act 2004 requires decisions on planning applications to be made in accordance with development plan policy unless material considerations indicate otherwise.
- 3.4.2 The Development Plan for the site comprises:
- Somerset Minerals Plan: up to 2030 (Adopted 2015); and
 - Mendip Local Plan Part I: Strategy and Policies 2006-2029 (Adopted 2014).
- 3.4.3 **Table 3.1** seeks to summarise the provisions of the **key** policies (please note, this table is not an exhaustive list of all relevant policies, simply a summary of those key policies as being of particularly relevant to Whatley Quarry):

Table 3.1 Relevant key policies and their implications

Policy reference	Commentary
Somerset Minerals Plan	
SD1: Presumption in favour of sustainable development	Sets out the overarching approach that the Council will take to minerals development. The policy reflects the NPPF's presumption in favour of sustainable development.
DM1: Landscape and visual amenity	This policy states that planning permission for mineral development will be granted subject to the application demonstrating that: a) the proposed development will not generate unacceptable adverse impacts on landscape and visual amenity; and b) measures will be taken to mitigate to acceptable levels adverse impacts on landscape and visual amenity. All mineral development proposals must be informed by and refer to the latest, relevant character assessments, nationally and locally.
DM2: Biodiversity and geodiversity	This policy states that development will be granted subject to applications demonstrating that a) the proposed development will not generate unacceptable adverse impacts on biodiversity and geodiversity and b) measures will be taken to mitigate to acceptable levels adverse impacts on biodiversity and geodiversity and secure biodiversity net gain where possible.
DM4: Water Resources and Flood Risk	The policy supports the granting of planning permission for mineral development subject to demonstration that the proposal will not have an unacceptable adverse impact on future use of water resources; environmental value and visual amenity of the water resource; and drainage and flood risk.
DM8: Mineral operations and the protection of local amenity	The policy states that planning permission will be granted for mineral development subject to the application demonstrating: a) that the proposed development will not generate unacceptable adverse impacts on local amenity; b) measures will be taken to mitigate to acceptable levels (and where necessary monitor) adverse impacts on local amenity due to: i. Vibration; ii. Dust and odour; iii. Noise; and iv. Lighting. The policy how the applicant intends to engage with local communities during the operational life of the site.
DM10: Land stability	This policy requires the submission of a stability assessment to demonstrate that proposals will not have an adverse impact on the stability of neighbouring land or properties; and not result in watercourse channel instability either during the working phase of a minerals development or at any time after the cessation of mineral extraction operations.

Policy reference	Commentary
DM12: Production limits and cumulative impacts	The Mineral Planning Authority will impose planning conditions to limit production where this is considered necessary and appropriate to prevent any unacceptable adverse impacts from the operation.
Mendip Local Plan Part I	
Development Policy 1 – Local Identity and Distinctiveness	The policy states that: 1. All development proposals should contribute positively to the maintenance and enhancement of local identity and distinctiveness across the district. 2. Proposals should be formulated with an appreciation of the built and natural context of their locality recognising that distinctive street scenes, townscapes, views, scenery, boundary walls or hedges, trees, rights of way and other features collectively generate a distinct sense of place and local identity. Such features may not always be designated or otherwise formally recognised. Where a development proposal would adversely affect or result in the loss of features or scenes recognised as being distinctive, the Council will balance up the significance of the feature or scene to the locality, the degree of impact the proposal would have upon it, and the wider benefits which would arise from the proposal if it were approved. Any decisions will also take into account efforts made by the applicant to viably preserve the feature, avoid, minimise and/or mitigate negative effects and the need for the proposal to take place in that location.
Development Policy 4 – Mendip’s Landscapes	The policy states that proposals for development that would, individually or cumulatively, significantly degrade the quality of the local landscape will not be supported. Any decision-making will take into account efforts made by applicants to avoid, minimise and/or mitigate negative impacts and the need for the proposal to take place in that location.
Development Policy 5: Biodiversity and Ecological Networks	The policy states that all development must ensure the protection, conservation and, where possible, enhancement of internationally, nationally or locally designated natural habitat areas and species. The policy also seeks to resist proposals with the potential to cause adverse impacts on protected and/or priority sites, species or habitats except where the impacts cannot be reasonably avoided; offsetting/compensation for impacts can be secured, other considerations or public interest clearly outweigh the impacts.
Development Policy 8 – Environmental Protection	The policy states all development proposals should minimise, and where possible reduce, all emissions and other forms of pollution.
Development Policy 9 – Transport Impact of New Development	The policy states that where appropriate, development proposals must demonstrate how they will improve or maximise the use of sustainable forms of transport (particularly by means other than the private car), and shall include, where relevant, the submission of Travel Plans and/or Transport Assessments.

3.4.4 In addition, the Mendip Local Plan Part II: Sites and Policies is currently at examination. The draft plan does not therefore currently form part of the development plan. However, in accordance with the NPPF paragraph 48. Local Authorities may give weight to relevant policies in emerging plans according the stage of preparation, the extent to which there are unresolved objections, and degree of consistency with the NPPF.

3.5 Other consents needed

3.5.1 The proposals at Whatley Quarry will require other consents, licences, permits, etc. These will be identified during the course of the EIA and appropriate will take place with organisations such as the local planning and highway authorities, Civil Aviation Authority, Natural England, the Environment Agency and others as appropriate.

4. The environmental impact assessment process

4.1 Overview

- 4.1.1 Environmental Impact Assessment (EIA) is a systematic process that must be followed for certain categories of project before they can receive development consent. It aims to identify a project's likely significant effects through the scoping process, and then assess those effects in an Environmental Statement (ES).
- 4.1.2 The EIA process should be systematic, analytical, impartial, consultative and iterative allowing opportunities for environmental concerns to be addressed in the design of a project. Typically, a number of design iterations take place in response to environmental constraints identified during the EIA process prior to the final design being reached.
- 4.1.3 The EIA process will identify the different methodologies used for the assessment and these should be based on recognised good practice and guidelines specific to each technical area as set out in **Chapter 5**.

4.2 EIA terminology

Impacts and effects

- 4.2.1 The terms *impact* and *effect* are often used synonymously and this can lead to confusion. For clarity, a cause and effect logic will be applied to the EIA of the Proposed Scheme, whereby impacts are the changes that arise because of the Proposed Scheme (e.g. changes in drainage pattern) and effects are the consequences of those changes (e.g. habitat becomes degraded by in the altered drainage pattern).

Types of effects

- 4.2.2 Paragraph 5 of Schedule 4 of the EIA Regulations states that the "*The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development.*" The ES will consider these types of effects, as may be appropriate, in the environmental topic chapters, in so far that individual topics are so affected. However, whilst some terms are self-explanatory, to assist we have provided a definition of most types of effects here to confirm how these terms will be applied throughout the ES, with cumulative effects being dealt with separately.

Direct effects

- 4.2.3 Direct effects are those that result directly from the Proposed Scheme.

Indirect and secondary effects

- 4.2.4 Indirect and secondary effects are those that result from consequential change caused by the Proposed Scheme. As such they would normally occur later in time or at locations farther away than direct effects. An example would be where water or gas pipes are damaged because of the Proposed Scheme, and the consequences of that damage is fire or flood risk to other receptors.

Transboundary effects

- 4.2.5 Transboundary effects are those effects that would affect the environment in another state within the European Economic Area (EEA).

Spatial and temporal scope

- 4.2.6 Spatial scope is the area over which changes to the environment are predicted to occur because of the Proposed Scheme. In practice, an EIA should focus on those areas where these effects are likely to be significant.
- 4.2.7 The spatial scope will vary between environmental topics and has been described with relation to each topic based on the information currently available. For example, the spatial effects of a development on landscape and visual amenity will likely cover a much greater area than that affected by noise. The spatial scope of each assessment may be refined for the ES in response to comments from consultees or further assessment work.
- 4.2.8 The temporal scope covers the time period over which changes to the environment and the resultant effects are predicted to occur and are typically defined as either being temporary or permanent.
- 4.2.9 The temporal scope for construction effects will be determined by the construction period of the Proposed Scheme; this varies for each of the proposed waste facilities. For operational effects, the temporal scope will be determined by the anticipated operational life of the Proposed Scheme (see **Chapter 2: The Proposed Scheme**).

4.3 EIA scoping

- 4.3.1 The results of the EIA process are reported in an ES and Schedule 4(4) of the EIA Regulations specifies that the ES should describe those:

"...factors...likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape."

- 4.3.2 Regulation 4(2) of the EIA Regulations requires the interaction between these factors to be considered. In addition, Regulation 4(4) requires ESs to consider:

"...the expected significant effects arising from the vulnerability of the proposed development to major accidents or disasters that are relevant to that development."

- 4.3.3 Establishing which aspects of the environment are likely to be significantly affected by a particular project is captured in the EIA scoping process. Scoping involves identifying the following:

1. the people and environmental resources (collectively known as 'receptors') that could be significantly affected by the Proposed Scheme; and
2. the work required to take forward the assessment of these potentially significant effects.

- 4.3.4 Our approach involves scoping being started at the outset of our work on the EIA, with the initial conclusions about the likely significant effects of the Proposed Scheme being set out in this Scoping Report.

- 4.3.5 The preparation of this Scoping Report has been informed by information about the legislative and policy context relevant to the Proposed Scheme. It has also been informed by the simple rule that, to be significant, an effect must be of sufficient importance that it could influence the process of decision-making for the Proposed Scheme or an element of it (the 'significance test').
- 4.3.6 The conclusion that is made using the significance test is based upon professional judgement, with reference to the Proposed Scheme description, and available information about:
3. the magnitude and other characteristics of the potential changes that are expected to be caused by the Proposed Scheme;
 4. the sensitivity of receptors to these changes;
 5. the effects of these changes on relevant receptors; and (where relevant)
 6. the value of receptors.
- 4.3.7 If the information that is available at this stage does not enable a robust conclusion to be reached that a potential effect is not likely to be significant, the effect is then taken forward for further assessment³.
- 4.3.8 After the issue of this Scoping Report, the scope of the assessment may be progressively refined in response to comments from the determining authority and from consultees, together with environmental information resulting from survey or assessment work carried out in relation to the EIA, and the evolution of the project proposals. Any changes to the scope of the assessment will be detailed within the ES.
- 4.3.9 If necessary, changes to the Scoping Opinion will be agreed through consultation with Somerset County Council.

Overview of significant evaluation methodology

- 4.3.10 The receptors that could be significantly affected, and therefore be taken forward for consideration in further detailed assessment in the ES, are identified within each topic chapter. The approach that has been adopted to determine whether the effects on these receptors are significant is to apply a combination of professional judgement and a topic-specific significance evaluation methodology.
- 4.3.11 In applying this approach to significance evaluation, it is necessary to ensure that there is consistency between each environmental topic in the level at which effects are considered to be significant. Thus, it is inappropriate for the assessment of one topic to conclude that minor effects are significant, when, for another topic, only comparatively major effects are significant.
- 4.3.12 In order to achieve the desired level of consistency, the specialists responsible for writing each of the technical chapters in this Scoping Report have considered the 'significance test' to inform their decision on whether effects are likely to be significant or not and therefore require further consideration in the ES, as well as the relevant topic-specific significance evaluation methodology. This approach will also be adopted for the technical assessments to be included in the ES.
- 4.3.13 For some of the topics to be assessed in the ES, there is published guidance available about significance evaluation. Where such guidance exists, even if in draft, it will be used to inform the development of the significance evaluation methodologies to be used in the ES. For other topics, it will be necessary to develop methodologies without the benefit of guidance. This will involve technical specialists drawing on their previous experience of significance evaluation in EIA.

³ Where an effect cannot be confirmed as being 'not significant' these will be 'scoped in' to the assessment

Evaluation matrices

- 4.3.14 Significance evaluation involves combining information about the sensitivity or value of a receptor, and the magnitude and other characteristics of the changes that affect the receptor. The approach to using this information for significance evaluation is outlined below.

Receptor sensitivity of value

- 4.3.15 The sensitivity or value of a receptor is largely a product of the importance of an asset, as informed by legislation and policy, and as qualified by professional judgement. For example, receptors for landscape, biodiversity or the historic environment may be defined as being of international or national importance; lower value resources may be designated as being sensitive or important at a county or district level.
- 4.3.16 The use of a receptor would also play a part in its classification. For example, when considering effects on the amenity of a human population, a receptor used for recreational purposes may be valued more than a place of work as the environmental quality of the recreational receptor is more likely to be an important part of that receptor's use.

Magnitude of change

- 4.3.17 The magnitude of change affecting a receptor that would result from the Proposed Scheme would be identified on a scale from minor alterations of change, up to major changes or the total or substantial loss of the receptor. For certain topics, the magnitude of change would be related to guidance on levels of acceptability (e.g. for air quality or noise), and be based on numerical parameters, whilst for others it will be a matter of professional judgement to determine the magnitude of change, using descriptive terminology.

Determination of significance

- 4.3.18 The determination of significance is derived with reference to information about the nature of the development, the receptors that could be significantly affected and their sensitivity or value, together with the magnitudes of change that are likely to occur.
- 4.3.19 Other than for environmental topics for which significance evaluation does not involve the use of matrices, sensitivity/value and the characteristics of environmental changes can be combined using a matrix (see **Table 4.1**). In addition, professional judgement is applied because, for certain environmental topics, the lines between the sensitivities or magnitudes of change may not be clearly defined and the resulting assessment conclusions may need clarifying.
- 4.3.20 Variations to this approach, which may be applicable to specific environmental topics, will be detailed in the relevant 'assessment methodology' sub-section contained in each environmental topic chapter.
- 4.3.21 Definitions of how the categories that are used in the matrix are derived for each topic are also set out in each environmental topic chapter, along with the relevant explanation and descriptions of receptor sensitivity, magnitude of change and levels of effect that are considered significant in terms of the EIA Regulations.
- 4.3.22 Within the matrix, reference is made to:
1. major effects, which will always be determined as being significant in EIA terms;
 2. moderate effects that may be significant, although there may also be circumstances where such effects are considered 'not significant' based on specific scenarios and professional judgement; and

3. minor or negligible effects, which will always be determined as 'not significant'.

Table 4.2 Example significance evaluation matrix

		Magnitude of change				
		Very high	High	Medium	Low	Very low
Sensitivity/importance/value	Very high	Major (Significant)	Major (Significant)	Major (Significant)	Major (Significant)	Moderate (Potentially significant)
	High	Major (Significant)	Major (Significant)	Major (Significant)	Moderate (Potentially significant)	Minor (Not significant)
	Medium	Major (Significant)	Major (Significant)	Moderate (Potentially significant)	Minor (Not significant)	Negligible (Not significant)
	Low	Major (Significant)	Moderate (Potentially significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)
	Very Low	Moderate (Potentially significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)

Note: Significant effects are those identified as 'Major'. 'Moderate' effects have the potential to be significant, however there may be some exceptions, depending on the environmental topic and the application of professional judgment.

4.4 Environmental measures

- 4.4.1 The EIA Regulations require an assessment to be undertaken of *'the development'* - not of the Proposed Scheme with and without mitigation. To meet this requirement, the assessments in the ES will consider any *'environmental measures'* identified for adoption during the scheme design process "...to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment" (see Schedule 4(7)) as inherent to the Proposed Scheme and will therefore be an assessment of residual effects. The Proposed Scheme will also incorporate, where possible, relevant good practice and enhancement measures.

4.5 Assessment of cumulative effects

Introduction

- 4.5.1 Paragraph 5(e) of Schedule 4 of the EIA Regulations refers to the need to consider "*the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources*".
- 4.5.2 The requirement to consider 'existing and/or approved' development is echoed within Planning Practice Guidance (PPG), which notes:

“There are occasions, however, when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a proposed development. The local planning authorities should always have regard to the possible cumulative effects arising from any existing or approved development.”

- 4.5.3 Two types of cumulative effects assessment (CEA) will be considered in the ES, as set out below.

Inter-project effects

- 4.5.4 For each environmental topic to be considered in the ES, an assessment will be undertaken of how the environmental effects resulting from the Proposed Scheme could combine with similar topic-related effects generated by other existing or approved developments that affect a common receptor.
- 4.5.5 The starting point for this is to determine the Zone of Influence (ZoI) from the Proposed Scheme for each receptor that could be likely to be significantly affected under each environmental topic.
- 4.5.6 Other existing or approved developments, where they are located within the ZoI for a given environmental topic, should be subject to CEA. The ZoI and scope of the CEA will be discussed and agreed with the relevant stakeholders before undertaking the assessment.
- 4.5.7 Further details on the CEA methodology and the developments proposed to be scoped into the CEA are included within **Chapter 5**.

Inter-related (intra-project) effects

- 4.5.8 The second type of CEA involves assessing whether any of the individual environmental topic effects resulting from the Proposed Scheme could combine to create effects that are greater than the sum of the individual effects on a given receptor.
- 4.5.9 The first step will be to identify the environmental topics that have common receptors, and then to consider whether the topic effects on any common receptors are likely to combine.
- 4.5.10 Because this combined assessment involves different environmental topic assessments that cannot robustly be combined, the outcome of this CEA in the ES will be reliant on the application of professional judgement from, potentially, several different technical specialists.

5. Scope of the assessment

5.1 Content of the ES

5.1.1 In accordance with the EIA Regulations and good practice, the ES will contain:

- A non-technical summary (which will be available as a standalone document);
- A description of the proposed scheme comprising information on the need for the development, alternatives that have been considered and a description of the development;
- Information about the consents required if the development is to proceed and the policy context to the development;
- A definition of the EIA process, including the various steps in the EIA process, terminology, and the assessment methodology;
- Separate chapters setting out the assessment relating to each environmental topic, including:
 - ▶ A description of baseline conditions, including information about how these might change during the course of the development;
 - ▶ A description of any measures that have been incorporated into the proposed development with a view to delivering environmental benefits;
 - ▶ The scope of the assessment and the methodologies adopted;
 - ▶ Assessments and evaluations of significance of predicted effects - dealing, in turn, with each receptor/resource that has been assessed in detail;
 - ▶ A summary of the evaluations of significance; and
 - ▶ Proposals for implementing environmental and mitigation measures.
- An assessment of cumulative effects; and
- An appraisal of the effects of the scheme against relevant planning and environmental policies.

5.2 Landscape and visual

Baseline conditions

Landscape character

National level

5.2.1 At a national scale, Whatley Quarry lies within the Mendip Hills National Character Area (NCA), as defined in the National Character Area Profile 141⁴ (NE, 2013). Key characteristics of this NCA with specific regard to Whatley Quarry include:

⁴ Natural England. (2013). NCA Profile 141: Mendip Hills (NE416). [online]. Available at: <http://publications.naturalengland.org.uk/publication/5370593?category=587130>

The plateau and hill tops are largely treeless, except for a few old ash pollards, wind-shaped shelterbelts and conifer plantations. The slopes and valleys surrounding the plateau have a wide range of woodlands forming an attractive mosaic with calcareous grassland and agriculture. There is a more wooded nature to the eastern Mendips (within which Whatley Quarry is located); and

"Large-scale quarrying of limestone is particularly active in the eastern Mendips with super-quarries such as Whatley and Torr Works, though two smaller quarries, Callow and Batts Combe, remain active in the western Mendips."

- 5.2.2 The supporting description notes that ".....quarrying expanded greatly, particularly in the eastern Mendips, with massive quarries such as Whatley and Torr Works being carved out of the hills. These enormous workings are remarkably well hidden in the landscape and can easily be passed 100 m from the edge without being seen."

District level

- 5.2.3 At a more detailed scale, Mendip District Council has undertaken a district-wide landscape character assessment (*The Landscape Assessment of Mendip District*⁵) which indicates that Whatley Quarry is located within the *Rolling Farmland with frequent arable* Landscape Character Type (LCT) and more specifically within the northern spur of the *Leigh-Oakhill* (A9.1) Landscape Character Area (LCA). The description of this LCA primarily relates to the landscape to the west of Whatley Quarry and the three settlements within this area. The key characteristics are cited as:
- *"Irregular shelf adjacent to steep valley;*
 - *Mix of flat and undulating land;*
 - *Arable on flatter land;*
 - *Pasture surrounding large hedgerows;*
 - *Frequent hedgerow trees;*
 - *Small fields around villages and hamlets; and*
 - *Large villages".*
- 5.2.4 A number of other LCAs lie close to Whatley Quarry as follows:
- The valley formed by Fordbury Water and the associated Whatley Bottom to the south of Whatley Quarry lie with an LCA which is defined as A10.3 *Chantry and Fordbury Water Valley;*
 - The village of Whatley and the agricultural landscape to the northeast and southwest lie within the *South East Farmlands* (A11) LCA;
 - The village of Mells and land to the east and west (including Mells Park and Tedbury Covert) are located within *The Lower Mells River Valley* (A10.2) LCA; and
 - Land to the north of Mells is covered by an LCA which is defined as Northern and Eastern Farmlands (A7).

⁵ Chris Blandford Associates. (1997). Landscape Assessment of Mendip District. [online]. Available at: <http://www.mendip.gov.uk/landscapeassessment1997>

Landscape designations

National landscape designations

- 5.2.5 There are no national landscape designations located near to Whatley Quarry with the closest national landscape designation being the Cranborne Chase & West Wiltshire Downs AONB located ~6.9km to the southeast at its closest point. The Cotswolds AONB lies ~9.3km to the north of the site.

Special landscape features

- 5.2.6 Mells Valley – east of Mells Village along the Mells River corridor is designated in the *Mendip District Local Plan Part I Strategy and Policies 2006-2029*⁶ as a Special Landscape Feature and protected under Policy DP4. This Special Landscape Feature covers 185ha and lies ~0.5km to the northeast of Whatley Quarry at its closest point. The *Assessment of Special Landscape Features*⁷ provides further details under a range of quality criteria.

Visual baseline

- 5.2.7 The valley land forms within the landscape surrounding Whatley Quarry, high prevalence of woodland cover and the effective perimeter screening around the quarry combine to minimise views of the quarry itself and associated operations. Previous field surveys undertaken by a Chartered Landscape Architect from Wood to Whatley Quarry and its environs has confirmed that the land-used pattern summarised above results in a very limited number of visual receptors who have views of the quarry. The exception is users of bridleway FR 10/98 as it follows the top of the screening mound at the southern end of the Whatley Quarry to the east of Finger Farm. Recent native tree planting introduced on the screening mound between the bridleway route and the quarry void will in time screen views from the majority of the route although a strategic gap in the vegetation have been retained to provide a viewing area from which operations within the quarry can be observed.

Effects not requiring further consideration

- 5.2.8 On the basis of the findings from previous desk and field surveys and experience of undertaking LVIA's for other mineral deepening projects, it is proposed that an LVIA is scoped out of the EIA. No significant landscape or visual effects are likely to arise as a result of the proposed development based on the following considerations:
- quarrying activity at Whatley Quarry is an established feature of the landscape and is well screened in views from the surrounding landscape as documented in the relevant NCA profile and recorded during field surveys;
 - from the single publicly accessible location (bridleway FR 10/98) from which views of the quarry void are available, deepening operations would be viewed in context with the operational quarry thereby minimising visual contrast and the reducing the potential for a magnitude of change to occur that is sufficient to generate significant visual effects;
 - no lateral expansion is proposed and as a consequence that would be no removal of landscape elements (trees, hedgerows, grassland, buildings etc) to facilitate the proposed deepening; and

⁶ Mendip District Council (2014). Mendip District Local Plan Part 1: Strategy & Policies 2006-2029. [online]. Available at: <https://www.mendip.gov.uk/localplan>

⁷ Mendip District Council (2012). Assessment of Special Landscape Features. [online]. Available at: <http://www.mendip.gov.uk/evidencebaselandscape>

- revisions to the approved restoration scheme are likely to reflect land uses proposed as part of the permitted restoration albeit with varying footprints and quantities. As such, the revised restoration scheme is in itself unlikely to give rise to significant landscape or visual effects.

5.3 Noise

Relevant policies and their implications for scoping

5.3.1 **Table 5.1** lists the planning policy guidance and policies that are relevant to noise and sets out the implications of the guidance and policies for the scope of the EIA.

Table 5.1 Relevant policies and their implications – noise

Policy reference	Implications
National policy:	
Noise Policy Statement for England, 2010 (NPSE)	NPSE sets out the vision and aims for dealing with noise (except for workplace/occupational noise). NPSE requires that noise and vibration assessments identify impacts that would result in significant adverse impacts on health and quality of life from a proposed development. The aims of NPSE include: avoiding significant adverse impact on health and quality of life; mitigating adverse impacts on health and quality of life; and to contribute to the improvement of health and quality of life.
National Planning Policy Framework, 2019 (NPPF)	The NPPF states that new development should contribute to and enhance the environment by preventing new and existing development from contributing to, or being put at unacceptable risk from, or being adversely affected by unacceptable levels of noise pollution.
National Planning Practice Guidance, 2019 (NPPG)	The NPPG relates in terms of a noise hierarchy the levels of perception to noise exposure with expected outcomes and required actions.
National Planning Practice Guidance (Minerals), 2014	<p>The online National Planning Practice Guidance (NPPG), published in March 2014, state that the principal environmental issues of minerals working that should be addressed by mineral planning authorities, include (among others) noise associated with the operations. The main noise guidance from the NPPG (Paragraph: 021) states that:</p> <p><i>“Mineral planning authorities should aim to establish a noise limit, through a planning condition, at the noise-sensitive property that does not exceed the background noise level (LA90,1h) by more than 10dB(A) during normal working hours (0700-1900). Where it will be difficult not to exceed the background level by more than 10dB(A) without imposing unreasonable burdens on the mineral operator, the limit set should be as near that level as practicable. In any event, the total noise from the operations should not exceed 55dB LAeq, 1h (free field). For operations during the evening (1900-2200) the noise limits should not exceed the background noise level (LA90,1h) by more than 10dB(A) and should not exceed 55dB LAeq, 1h (free field). For any operations during the period 22.00 – 07.00 noise limits should be set to reduce to a minimum any adverse impacts, without imposing unreasonable burdens on the mineral operator. In any event the noise limit should not exceed 42dB LAeq,1h (free field) at a noise sensitive property”.</i></p> <p>The NPPG also acknowledges that mineral operations can often incorporate some particularly noisy short-term activities, which may not meet the limits described above. Such activities may include soil-stripping, the construction and removal of baffle mounds, soil storage mounds and spoil heaps, construction of new permanent landforms and aspects of site road construction and maintenance. For such activities, the NPPG (Paragraph: 022) states that:</p> <p><i>“Increased temporary daytime noise limits of up to 70dB LAeq 1h (free field) for periods of up to eight weeks in a year at specified noise-sensitive properties should be considered to facilitate essential site preparation and restoration work and construction of baffle mounds where it is clear that this will bring longer-term environmental benefits to the site or its environs.</i></p>

Policy reference	Implications
	<i>Where work is likely to take longer than eight weeks, a lower limit over a longer period should be considered. In some wholly exceptional cases, where there is no viable alternative, a higher limit for a very limited period may be appropriate in order to attain the environmental benefits. Within this framework, the 70 dB LAeq 1h (free field) limit referred to above should be regarded as the normal maximum”.</i>
Local policy:	
Somerset Minerals Plan (adopted 2015) Policy DM8: Mineral operations and the protection of local amenity	Policy DM8 states that applications for mineral development will be subject to the applicant demonstrating “a) that the proposed development will not generate unacceptable adverse impacts on local amenity; and b) measures will be taken to mitigate to acceptable levels (and where necessary monitor) adverse impacts on local amenity due to: [amongst other things] noise.”

Legislation

- 5.3.2 Relevant legislation includes:
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended) (EIA Regulations);
 - The Control of Pollution Act 1974 (particularly Sections 60 and 61) (CoPA);
 - The Environmental Protection Act 1990 (as amended by the Noise and Statutory Nuisance Act 1993) (particularly Section 79) (EPA);
 - The Noise Insulation Regulations 1975 (NIR); and
 - The Noise Act 1996 (NA).

Technical guidance

- 5.3.3 Standards and guidance have been used to define the scope of the noise assessment. The main Standards and Guidance are summarised in **Table 5.2** below.

Table 5.2 Summary of standards and technical guidance for noise

Technical guidance	Summary
Operational road traffic noise – The Department of Transport Calculation of Road Traffic Noise, 1988 (CRTN)	Provides a calculation methodology for road traffic noise, which will be used if any increase in HGV numbers is likely to result in an increase of more than 1 dB(A) in road traffic noise.
Operational road traffic noise – Transport and Road Research Laboratory – Converting the UK traffic noise index LA10,18hr to EU noise indices for noise mapping, 2002 (TRL PR/SE/451/02)	A method for converting the road traffic noise indexes described in CRTN to produce outputs in the form of European Union indices, in particular TRL Method 2 which outlines the conversion of the LA10, 18hr noise indices to the LAeq, 16hr and LAeq, 8hr indexes.
Operational road traffic noise - Highways Agency Design Manual for Roads and Bridges, 2011 (DMRB)	Presents a methodology for determining impacts upon noise sensitive receptors from changes in road traffic noise due to road projects.
Operational sound - Acoustics – Attenuation of sound during	Defines a method for calculating the attenuation of sound during propagation outdoors in order to predict the levels of environmental noise at distances from a source.

Technical guidance	Summary
<i>propagation outdoors: Part 2 General Method of Calculation, 1996 (ISO 9613-2)</i>	
<i>Institute of Environmental Management and Assessment Guidelines for Environmental Noise Impact Assessment, 2014 (IEMA)</i>	Presents guidelines on how the assessment of noise effects should be presented within the Environmental Impact Assessment (EIA) process. The IEMA guidelines cover aspects such as; scoping, baseline, prediction and example definitions of significance criteria.
Extant Planning Consents	Cognisance of the extant planning consent conditions would also be made. Particularly relevant is planning consent ref 109122/002 condition 31.

Baseline conditions

Data sources

- 5.3.4 The assessment scope has been based upon the results of a desk study. The desk study has involved reviewing Ordnance Survey mapping and Google Earth imagery of the site and surroundings.

Summary of baseline conditions

- 5.3.5 Review of the Google Earth imagery indicates that the main source of noise for Whatley, Mells Green, Little Green and Chantry would be from the existing workings at Whatley Quarry. The existing planning consent (ref: 109122/002) requires that existing operations at the quarry are within the noise limits set out under condition 31 of that permission. The condition identified the noise criteria for residential receptors (The Old Schoolhouse; Little Clavey's; Meadow View and Yew Tree (Chantry)) in addition to criteria for all residential receptors.

Predicted trends

- 5.3.6 It is envisaged without the proposed scheme that sound contributions would continue as per existing operation of Whatley Quarry in line with the extant planning permission.

The scope of the assessment

- 5.3.7 The proposed scope of the assessment will cover the following aspects:
- Description of the site and the main sound emitting sources;
 - Identification of the appropriate sound criteria for the assessment;
 - Identification of the nearest noise sensitive receptors (NSRs);
 - Unmanned long-term background sound surveys at agreed locations (the NSRs if practically possible) around the development site;
 - Determination of the ambient and background sound levels at each NSR;
 - Evaluation of the predicted sound and vibration levels against the relevant criteria as agreed with Somerset County Council Environmental Health Professionals; and
 - Outline appropriate mitigation measures if required.

Assessment methodology

- 5.3.8 Wood will undertake appropriate surveys to quantify the baseline acoustic environment in the vicinity of the receptors agreed with the Environmental Health Officer (EHO) at Somerset County Council. Subject to instrument and personnel safety, this is likely to entail as a minimum:
- A long-term sound level survey at a maximum of 7 No. locations, using an appropriate and calibrated Class 1 sound level meter (SLM) in an environmental protection case. Sound levels would be logged continuously in 15 minute periods over a full 24 hours for at least a period of 4-5 days including a weekend. This monitoring will form the basis of the background sound level for the assessments. The proposed locations suggested below for noise monitoring reflect those set out in the ES that supported the application for determination of conditions under the Review of Mineral permissions in December 2011. It is proposed that these locations are identified for noise monitoring for the proposed scheme pending agreement with the EHO:
 - ▶ Mellsgreen Farm;
 - ▶ Yew Tree Cottage (immediately adjacent to Meadow View);
 - ▶ The Old School House;
 - ▶ Finger Farm;
 - ▶ The Smithy;
 - ▶ The Buses; and
 - ▶ Chantry Farm.
 - Monitoring of parameters such as $L_{Aeq,T}$, $L_{A90,T}$, $L_{A10,T}$ and L_{Amax} as a minimum would be captured and detailed notes of significant sound sources around each monitoring location would be made on deployment and collection of this instrument. In addition, a weather station would be installed capable of logging weather details in the same 15 minute periods as the SLM.
- 5.3.9 An ES chapter will be produced detailing the results of the above against relevant noise criteria, and an assessment of potential effects undertaken to determine the significance of any effects on identified receptors. An outline of any mitigation measures deemed necessary as a result of the assessment would also be provided.
- 5.3.10 Appropriate sound power level data for plant to be used for operational activities will be used for modelling of sound propagation from the proposed development to the agreed NSRs. The modelling will involve prediction of:
- **Operational sound levels** – predictions using methodologies identified in BS5228-1:2009+A1:2014. The predictions will be based upon the available data regarding the method of working the main phases of the quarry including any working method statement plans, scaled sections, plant type and numbers, vehicle movement details, etc. as provided by Hanson. These sound levels would be assessed against criteria derived from NPPG(M) 2014 and agreed with the relevant Environmental Health Professional. Any brief, sound reduction measures deemed necessary would be outlined; and
 - **Operational traffic noise** – predictions of the relative increase in traffic noise levels would be undertaken where data indicates that there will be an increase of 25% or decrease of 20% in existing traffic levels or if there is an increase of more than 1 dB(A) due to HGV traffic increases on the main route(s) to the development. Any increase would be assessed in terms of the criteria given in DMRB. However, it is understood at this stage that the production rate at the quarry will remain unchanged as part of the proposed scheme.

- 5.3.11 An ES chapter will be produced detailing the results of the above and including identification of LOAEL and SOAEL levels (as per NPSE). An outline of any mitigation measures deemed necessary to comply with existing planning conditions as a result of the assessment will also be provided.

5.4 Vibration

Relevant policies and their implications for scoping

- 5.4.1 **Table 5.3** lists the planning policy guidance and policies that are relevant to vibration and sets out the implications of the guidance and policies for the scope of the EIA.

Table 5.3 Relevant policies and their implications – vibration

Policy reference	Implications
National policy:	
National Planning Practice Guidance (Minerals), 2014	Blast vibration is referred to as one of “the principal issues that planning authorities should address” (Paragraph: 013). No further detail is provided.
Local policy:	
Somerset Minerals Plan (adopted 2015) Policy DM8: Mineral operations and the protection of local amenity	Policy DM8: Mineral operations and the protection of local amenity states that applications for mineral development will be subject to the applicant demonstrating “a) that the proposed development will not generate unacceptable adverse impacts on local amenity; and b) measures will be taken to mitigate to acceptable levels (and where necessary monitor) adverse impacts on local amenity due to: [amongst other things] vibration.”

Legislation

Relevant legislation includes:

- The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended) (EIA Regulations); and
- The Control of Pollution Act 1974 (particularly Sections 60 and 61) (CoPA).

Technical guidance

- 5.4.2 Standards and guidance have been used to define the scope of the vibration assessment. The main Standards and Guidance are summarised in **Table 5.4**.

Table 5.4 Summary of standards and technical guidance for vibration

Technical guidance	Summary
BS 7385-2:1993 "Evaluation and Measurement for Vibration in Buildings, entitled Guide to Damage Levels from Ground borne Vibration"	This standard gives guide values to prevent cosmetic damage to property. Between 4 Hz and 15 Hz, a guide peak particle velocity (PPV) value of 15 - 20 mms ⁻¹ is recommended, whilst above 40 Hz the guide value is 50 mms ⁻¹ . These vibration criteria reconfirm "damage criteria" published by the US Bureau of Mines.
BS 6472-2:2008 "Guide to evaluation of human exposure to vibration in buildings. Blast-induced vibration"	BS 6472-2:2008 deals with the particular problems associated with periodic blasting within range of occupied buildings: the guidance is a formalization of established, widely recognized techniques common in industry. The Standard gives guidance on human exposure to blast-induced vibration in buildings. It is primarily applicable to blasting associated with mineral extraction.
Construction (vibration) British Standards Institution 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration, 2014 (BS5228-2:2009:A1:2014)	Provides guidance on the assessment of ground-borne vibration associated with activities such as demolition and construction. Annex E BS 5228- 2:2009+A1:2014, describes methods of estimating vibration emanating from proposed construction activities.
Department of Transport and Regions (DETR) research report on "The Environmental Effects of Production Blasting at Surface Mineral Workings". 1998	Government guidance on this subject is given within this document which also proposes example blasting conditions for planning consents.
Extant Planning Consents, e.g. Ref: 109122/002	In terms of blasting this includes Condition 34 which places restrictions on the maximum peak particle velocity of 9mm per sec at a 95% confidence level.

Baseline conditions

Data sources

- 5.4.3 The assessment scope has been based upon the results of a desk study and professional judgement based on knowledge of the site and surrounding area. The desk study has involved reviewing Ordnance Survey mapping and Google Earth imagery of the site and surroundings.

Summary of baseline conditions

- 5.4.4 There is no information available to quantify the blasting vibration environment at locations surrounding the quarry. Review of Google Earth imagery indicates that the main source of vibration would be from the operation of the existing Whatley Quarry.

Predicted trends

- 5.4.5 It is envisaged that the only activity that could potentially increase the magnitudes/frequency of blasting vibration would be due to increased activities at the consented Whatley Quarry in terms of either frequency of blasting or the closer proximity of blasting operations to existing receptors. However, this is not considered likely.

The scope of the assessment

- 5.4.6 Variations in instantaneous charge weight used in blasting at any particular site have been seen to be closely related to variations in measured vibration magnitudes. Thus, it is the instantaneous

charge weight, together with the distance from the blast that forms the basis for blast vibration prediction methodology.

Assessment methodology

- 5.4.7 It is assumed that any data from any ongoing blast vibration monitoring that has been undertaken around the site will be made available to aid in the production of a regression line for the quarry.
- 5.4.8 The accepted method of prediction is to plot measured peak particle velocities against a scaled distance value for each measurement location. When a number of such values are plotted on logarithmic axes a straight-line relationship is observed. This is the so-called blasting regression line. In almost all cases, a certain amount of data scatter would be evident, and so statistical confidence levels are also calculated by least squares regression analysis techniques and the best fit or mean (50%) line as well as the upper 95% confidence level are plotted. The latter forms the basis of most vibration regulations. Wood would collect any historic data from Hanson regarding vibration measurements from production blasting including the results of any test blasts. A regression line for Whatley Quarry would be produced.
- 5.4.9 The regression line would be used to predict the vibration impact for blasting operations on the quarry on nearby properties in terms of the peak particle velocity (PPV). These PPV levels would be assessed against the latest Government guidance on the subject as well as Condition 34 of the extant planning consent (ref: 109122/002) which states:
- "All blasting operations in the area hereby permitted shall be designed not to exceed a peak particle velocity of 9mm per sec at a 95% confidence level at the nearest residential property."*
- 5.4.10 Any remedial measures considered necessary as a result of the blasting vibration assessment along with general recommendations would be put forward to ensure that the proposed development meets the criteria in the extant planning conditions. It is envisaged that the same receptors used for the noise assessment will also be used for blasting vibration assessment.

Potential effects not requiring further consideration

- 5.4.11 Comprehensive investigations into the nature and effects of air overpressure with particular reference to its damage potential have been undertaken by the United States Bureau of Mines (USBM), which has reviewed the relevant other published data on this subject. The research has concluded that the weakest parts of most structures that are exposed to air overpressure are windows.
- 5.4.12 With respect to determining what constitutes significant effects in terms of air overpressure, specific levels have not been identified in the relevant UK Government guidance (e.g. NPPG). This is mainly to do with the influence of weather conditions (very variable in the UK) on air overpressure, but also due to very high levels that would need to occur to cause structural damage.
- 5.4.13 In addition, British Standard (BS) 6472-2:2008, indicates in section 5.3 that the prediction of air overpressure is "almost impossible" and goes on to state that "control of air overpressure should always be by its minimisation at source through appropriate blast design".
- 5.4.14 A numerical assessment of air overpressure effects has therefore been scoped out of the assessment.

5.5 The Water Environment

- 5.5.1 **Table 5.5** lists the planning policy guidance and policies that are relevant to the water environment and sets out the implications of the guidance and policies for the scope of the EIA.

Table 5.5 Relevant policies and their implications – water environment

Policy reference	Implications
National policy:	
National Planning Policy Framework, 2019 (NPPF) Paragraph 149.	NPPF Para 149 states that “Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply”.
National Planning Policy Framework, 2019 (NPPF) Paragraph 170.	NPPF Para 170 states that “wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.”
National Planning Practice Guidance, 2019 (NPPG)	This sets out guidance regarding the need for and scope of assessments on the impact of developments on water quality.
Local policy:	
Somerset Minerals Plan (Adopted 2015) DM4: Water Resources and Flood Risk	The policy supports the granting of planning permission for mineral development subject to demonstration that the proposal will not have an unacceptable adverse impact on future use of water resources; environmental value and visual amenity of the water resource; and drainage and flood risk.
Mendip Local Plan 2006-2029: Part I: Strategy and Policies (Adopted 2014) Development Policy 8: Environmental Protection	The policy requires development proposals to demonstrate that they do not give rise to unacceptable adverse environmental impacts on (inter alia) “the quality of water resources, whether surface river or groundwater”. Proposals must include an assessment appropriate to the type and extent of the impact and any associated risks.
Mendip Local Plan 2006-2029: Part I: Strategy and Policies (Adopted 2014) Development Policy 23: Managing Flood Risk	The policy requires the implementation of the sequential approach to flood risk management with development in areas at risk of flooding expected to be resilient and incorporate mitigation measures.

Legislation

- 5.5.2 Key legislative drivers relating to the water environment that have been considered are detailed below:
- The European Union (EU) Water Framework Directive (WFD): focuses on delivering an integrated approach to the protection and sustainable use of the water environment on a river basin scale;
 - Environmental Permitting (England and Wales) Regulations 2010 (SI 2010 No. 676), as amended: includes requirements for the prevention of hazardous substances entering groundwater and the control of non-hazardous pollutants to avoid pollution of groundwater (from revoked the Groundwater (England and Wales) Regulations 2009);
 - Water Resources Act 1991: states that it is an offence to cause or knowingly permit polluting, noxious, poisonous or any solid waste matter to enter controlled waters. The Act was revised by the Water Act (2003) which sets out regulatory controls for water abstraction, discharge to water bodies, water impoundment and protection of water resources;
 - The Land Drainage Act 1991 & 1994: places responsibility for maintaining flows in watercourses on landowners and gives Local Authorities powers to serve a notice on landowners to ensure works are carried out to maintain flow of watercourses; and

- Floods and Water Management Act, 2010: sets out the Government's proposals to improve flood risk management, water quality and ensure water supplies are more secure. In December 2009, the Flood Risk Regulations were published, which transpose the EU Floods Directive into UK law and these cover the flood issues from the Floods and Water Management Bill.

Baseline conditions

Data Sources

5.5.3 The key data sources used to inform this part of the Scoping Report are listed in **Table 5.6**.

Table 5.6 Sources of information

Topic	Aspect	Source of information
Geology	Solid and drift geology	British Geological Survey (BGS), Geological Survey of England and Wales 1:63,360/1:50,000 geological map series, New Series, Sheet 281, Frome, Solid and Drift (1965).
Hydrology	River network	OS, 1: 25,000, Explorer Sheet 142 Shepton Mallet & Mendip Hills East, Frome and Midsomer Norton
	Abstraction licensing strategies	Bristol Avon and North Somerset Streams WFD Management Area Abstraction Licencing Strategy https://www.gov.uk/government/publications/bristol-avon-and-north-somerset-abstraction-licencing-strategy
	Surface water quality	Catchment Data Explorer http://environment.data.gov.uk/catchment-planning/
	River flow and catchment descriptions	Centre for Ecology and Hydrology (CEH, 2018b) - National River Flow Archive On-line http://nrfa.ceh.ac.uk/ Monthly stream flow data from the Whatley Quarry hydrometric monitoring network.
	Flood risk	Flood Map (Environment Agency, 2018a) https://flood-map-for-planning.service.gov.uk/ Flood Estimation Handbook (FEH) Web Service (CEH, 2018a) https://fehweb.ceh.ac.uk/GB/map
Hydrogeology	Aquifer status	Environment Agency/British Geological Survey Aquifers Bedrock Designation map
	Groundwater levels	Hourly groundwater level data from two boreholes at Whatley Quarry.
	Groundwater protection zones	Environment Agency On-line Source Protection Zones Map
	Groundwater quality	Environment Agency River Basin Management Plan (cycle 2)

Geology

5.5.4 Whatley Quarry is located in the belt of steeply dipping Carboniferous Limestone on the northern limb of the Beacon Hill Pericline towards the eastern end of Mendip Hills. The quarry contains almost all of the Carboniferous Limestone sequence which dips at around 65°–80° to the north. This includes a Black Rock limestone outcrop is also apparent here. The limestone is well fractured

and jointed with only occasional faulting. One minor fault is evident in the upper benches of the northern face of the quarry. The limestone sequence is understood to extend to a depth of over 1000 m.

Hydrology

Watercourses

- 5.5.5 There are no natural watercourses within the Site boundary, hydro-geologically the Site lies within the surface catchment area of the Mells River which lies to the north and flows west to east.
- 5.5.6 To the north of the quarry is the River Mells which at its nearest point is approximately ~350m from the site. The river runs east to west. To the south of the quarry is Whatley Brook which runs southwest to northeast and at its closest point runs through the south east of the site as it flows under Whatley Bridge (which runs through Whatley Bottom). Whatley Brook joins the River Mells near Frome. Whatley Quarry falls within the surface water catchment area of the River Mells.
- 5.5.7 River Basin Management Plans (RBMPs) have been drawn up by the Environment Agency for the ten river basin districts in England and Wales as a requirement of the WFD. The River Mells to the north of the quarry and Whatley Brook are covered by the RBMP for the Severn River Basin District (Environment Agency, 2015). A summary of the local WFD river water bodies and their associated status definitions is provided in **Table 5.7**.

Table 5.7 Summary of local WFD river water bodies and their associated status definitions

WFD Water /Body	Whatley Bk - source to conf Mells R	Mells source to conf with Somerset Frome
Water Body Identifier	GB109053021990	GB109053022020
Heavily Modified Water Body (HMWB)	N	N
Overall current (2016) status	Moderate	Moderate
Predicted 2027 status	Good	Good

- 5.5.8 In terms of surface water run-off, the quarry's plant area comprises a hard surfaced of compacted crushed aggregate or surfaced with asphalt laid to a fall, consequently runoff is collected and channelled through an oil intercept prior to entering the site's approved discharge consent easement to the River Mells.
- 5.5.9 Regarding foul water, sewerage from mess and toilet facilities are contained within a sealed cess pit and prevented from discharging to either surface water or groundwaters.

Flood risk categorisation

- 5.5.10 Whatley Quarry is situated largely in Flood Zone 1, indicating a low probability of fluvial flooding, except for a small area of plant site in the south-east corner of site near to Whatley Bridge near Railford Bottom where there is a small area of Flood Zone 2 and 3.

Hydrogeology

- 5.5.11 The Carboniferous limestone and Jurassic Inferior oolite is categorised by the Environment Agency as a Principal Aquifer, i.e. layers of rock that have high intergranular and/or fracture permeability

(high level of water storage) which may support water supply and/or river base flow on a strategic scale. The Environment Agency's aquifer designations reflect the importance of aquifers in terms of groundwater as a resource (drinking water supply), but also their role in supporting surface water flows and wetland ecosystems. The aquifer designation maps show the various aquifer types for both superficial deposits and the bedrock. These are accessible on-line and have been reviewed in order to correlate the geologic strata identified around the quarry from the geology maps with the various aquifer types.

- 5.5.12 At the base of the workings is a reservoir which maintains a saturated zone in the upstream section of this part of the aquifer. Dewatering from the quarry is pumped into the River Mells and Whatley Brook. Water monitoring to assess the impacts on the hydrological and hydro-geological conditions are subject to the Section 106 agreement relating to planning permission 109122/002 granted in 1996. There is interaction between surface water and groundwaters as River Mells and Whatley Brook pass over outcropping limestone. Where the water table is below the level of streams (for example along Whatley Brook at Whatley Bottom) water is lost into the aquifer. Elsewhere the interaction depends on the levels in the stream and water in the aquifer, where surface waters either recharge the aquifer or groundwaters emerge into the river when above the river level. It is a particularly important process near to the quarry where discharge from dewatering is often recharged back into the limestone aquifer through the bed of the stream receiving the discharge.
- 5.5.13 The 1996 permission was granted subject to S106 planning obligations prescribing methodologies for monitoring and maintenance of water flows in the Mells River and extensive monitoring at groundwater boreholes and surface water sites. The formal monitoring and assessment reporting is undertaken on a two-yearly basis in consultation with the Somerset County Council and Environment Agency. The monitoring and review reports to date conclude the mitigation is satisfactory.
- 5.5.14 The 1996 permission allows the construction of the 'Snatch Bottom Reservoir' to the north of the main quarry. The requirement for this feature formed part of the original River Augmentation Scheme, However, in developing the site a more direct discharge arrangement via a reservoir in the base of the workings was agreed with the EA and the Snatch Bottom Reservoir to date has not been required. The quarry retains the ability to construct the reservoir at a later date however, and planning conditions relating to its development have been retained.
- 5.5.15 In the past, it was suggested that the Carboniferous limestone of the Mendip Hills is the source of spring water that gives rise to the thermal hot springs, including the Bath Hot Springs ~40 km north of Westdown. There are concerns that dewatering in order to extract Carboniferous Limestone could negatively impact spring water availability and quality. Whatley Quarry, has, however reported that no change in spring discharge has been identified that could be attributed to the Mendips, and that hydraulic connectivity between Bath Hot Springs and the area was considered very unlikely.

Predicted trends

- 5.5.16 The effects of climate change are expected to alter the baseline over time. As a result of climate change it is predicted that there will be an increase in peak rainfall intensities and resulting flood flows over time. The guidance on climate change allowances to be applied in England was last updated in April 2016⁸ and provides guidance on the potential enhanced rainfall seasonality, with wetter winters and drier summers. This will, of course, have implications for river flows and groundwater levels, although these effects are difficult to quantify at present.

⁸ Flood risk assessments: climate change allowances, Environment Agency, published 2016 (Available via: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>)

- 5.5.17 In addition, the location and rate of surface and groundwater abstractions in the area could vary over time, and increased understanding of the groundwater flow regime may result in changes to the aquifer status and SPZ designations.

The scope of the assessment

- 5.5.18 In consultation with the Environment Agency, the assessment will utilise existing data to achieve the following:
- Further develop the baseline description of the hydrology and hydrogeology in the Whatley Quarry area;
 - Consider the potential effects of the Whatley Quarry proposals on surface water and groundwater; and
 - Consider mitigation measures required to address these and other water-related concerns.
- 5.5.19 In accordance with existing requirements, a standalone Flood Risk Assessment (FRA) would also be produced and appended to the EIA.

Assessment methodology

- 5.5.20 The significance of an effect resulting from the proposals at Whatley Quarry will be primarily determined by the sensitivity (or value) of a given water feature and the magnitude of the effect. This approach provides a mechanism for identifying areas where mitigation measures are required and to identify the most appropriate measures to alleviate the risk presented by the development. The residual effects of the proposed development on the water environment will be evaluated assuming that identified mitigation are fully implemented.
- 5.5.21 In terms of hydrology and hydrogeology, the key determinants of magnitude relate to water quantity (level and flow), and groundwater quality. However, depending on the effects of surface water flows, there may also be indirect effects on downstream morphology and sediment dynamics, river water quality and flood risk.

Predicted trends

- 5.5.22 The effects of climate change are expected to alter the baseline over time. As a result of climate change it is predicted that there will be an increase in peak rainfall intensities and resulting flood flows over time. The guidance on climate change allowances to be applied in England was last updated in March 2020⁹ and provides guidance on the potential enhanced rainfall seasonality, with wetter winters and drier summers. This will, of course, have implications for river flows and groundwater levels, although these effects are difficult to quantify at present.
- 5.5.23 In addition, the location and rate of surface and groundwater abstractions in the area could vary over time, and increased understanding of the groundwater flow regime may result in changes to the aquifer status and SPZ designations.

The scope of the assessment

- 5.5.24 In consultation with the Environment Agency, the assessment will utilise existing data to achieve the following:

⁹ Flood risk assessments: climate change allowances, Environment Agency, published 2016 (last updated in 2020) (<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>)

- Further develop the baseline description of the hydrology and hydrogeology in the Whatley Quarry area;
- Consider the potential effects of the Whatley Quarry proposals on surface water and groundwater; and
- Consider mitigation measures required to address these and other water-related concerns.

5.5.25 In accordance with existing requirements, a standalone Flood Risk Assessment (FRA) would also be produced and appended to the EIA.

Assessment methodology

5.5.26 The significance of an effect resulting from the proposals at Whatley Quarry will be primarily determined by the sensitivity (or value) of a given water feature and the magnitude of the effect. This approach provides a mechanism for identifying areas where mitigation measures are required and to identify the most appropriate measures to alleviate the risk presented by the development. The residual effects of the proposed development on the water environment will be evaluated assuming that identified mitigation are fully implemented.

5.5.27 In terms of hydrology and hydrogeology, the key determinants of magnitude relate to water quantity (level and flow), and groundwater quality. However, depending on the effects of surface water flows, there may also be indirect effects on downstream morphology and sediment dynamics, river water quality and flood risk.

Potential effects not requiring further assessment

5.5.28 At this stage, it is not proposed to scope out any potential effects.

5.6 Biodiversity

Relevant policies and their implications for scoping

5.6.1 **Table 5.8** lists the planning policy guidance and policy issues that need to be considered when defining the scope of the Ecological Impact Assessment (EcIA).

Table 5.8 Relevant policies and their implications – biodiversity

Policy reference	Implications
National policy:	
National Planning Policy Framework, 2019 (NPPF) Section 15: Conserving and enhancing the natural environment Paragraph 170.	NPPF Paragraph 170 states that planning policies and decisions should contribute to and enhance the natural and local environment by (inter alia): protecting sites of biodiversity or geological value (commensurate with statutory status); recognising the wider benefits from natural capital and ecosystem services; minimising impacts on and providing net gains for biodiversity, including by establishing networks
NPPF Paragraph 175.	NPPF Paragraph 175 sets out the principles that local authorities should apply when determining applications. It states that applications should be refused if significant harm to biodiversity cannot be avoided, adequately mitigated or compensated for (at a last resort); land within or outside SSSIs should not normally be permitted.
NPPF Section 17. Facilitating the sustainable use of minerals	NPPF Paragraph 204 states that planning policies should (inter alia) set out criteria to “ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural ...

Policy reference	Implications
NPPF Paragraph 204.	environment ... taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality".
NPPF Paragraph 205.	NPPF Paragraph 205 states that mineral planning authorities should (inter alia) "ensure that there are no unacceptable adverse impacts on the natural ... environment... and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality"
Local policy:	
Minerals Local Plan (Adopted 2015) Policy DM2: Biodiversity and geodiversity	This policy states that development will be granted subject to applications demonstrating that a) the proposed development will not generate unacceptable adverse impacts on biodiversity and geodiversity and b) measures will be taken to mitigate to acceptable levels adverse impacts on biodiversity and geodiversity and secure biodiversity net gain where possible.
Mendip Local Plan 2006-2029: Part I: Strategy and Policies (Adopted 2014) Development Policy 5: Biodiversity and Ecological Networks	The policy states that all development must ensure the protection, conservation and, where possible, enhancement of internationally, nationally or locally designated natural habitat areas and species. The policy also seeks to resist proposals with the potential to cause adverse impacts on protected and/or priority sites, species or habitats except where the impacts cannot be reasonably avoided; offsetting/compensation for impacts can be secured, other considerations or public interest clearly outweigh the impacts.
Mendip Local Plan 2006-2029: Part I: Strategy and Policies (Adopted 2014) Development Policy 8: Environmental Protection	The policy requires development proposals to demonstrate that they do not give rise to unacceptable adverse environmental impacts on (inter alia) biodiversity. Proposals must include an assessment appropriate to the type and extent of the impact and any associated risks.

Legislation

5.6.2 Relevant legislation includes:

- The Conservation of Habitats and Species Regulations 2010 (as amended) (hereafter referred to as the 'Habitats Regulations');
- Wildlife and Countryside Act 1981 (as amended);
- Protection of Badgers Act 1992;
- Natural Environment and Rural Communities Act 2006 (NERC Act); and
- The Hedgerows Regulations 1997.

Baseline conditions

Data sources

5.6.3 The Scoping Report is based on an Extended Phase 1 habitat survey of the site undertaken by Wood in March 2018, albeit this was written to take into account options for extending the quarry laterally into surrounding semi-natural habitats (the current proposals comprise extraction of the Western Staggered Benches, Northern Tip area and deepening (i.e. no loss/change of flora/habitat that exists outside of the operational areas of Whatley Quarry).

Summary of baseline conditions

Designated sites

- 5.6.4 There are 13 statutory designated sites of conservation value within 5km of the Site, including 2 Special Areas of Conservation (SAC) and 11 Sites of Special Scientific Interest (SSSI). There are 26 non-statutory designated sites of nature conservation value within 2km of the Site including 1 Local Wildlife Site (LWS) that is adjacent, or just within the southern site boundary.
- 5.6.5 **Tables 5.9** and **5.10** outline the results of the search for designated nature conservation sites, and briefly summarise the pathways by which development of the site could impact the conservation site.

Table 5.9 Statutory designated nature conservation sites within the relevant search area

Site	Location Relative to Site	Summary of Interest Features
Mendip Woodlands SAC	0.7km South	Primarily designated for supporting an extensive example of Tilio-Acerion forest on limestone.
Mells Valley SAC	Largest constituent area - 5km west. Nearest constituent area - 0.7km east.	Primarily designated for supporting a maternity colony of greater horseshoe bats, comprising 12% of the UK's population.
Asham Wood SSSI	0.7km south	Largest, most diverse and one of the most important ancient semi-natural woods in the Mendips.
Cloford Quarry SSSI	2.3km south	Geological
Holwell Quarries SSSI	2.3km south	Geological
Old Ironstone Works, Mells SSSI	0.7km east	Important site for roosting greater and lesser horseshoe bats.
Cookes Wood Quarry SSSI	2.3km north west	Geological
Edford Woods and Meadow SSSI	3.7km north west	Area supporting wide range of semi-natural ancient woodland and unimproved meadows and pastures.
Leighton Road Cutting SSSI	3.4km south west	Geological
St. Dunstons Well Catchment SSSI	4.7km west	An area of nationally rare species-rich unimproved calcareous grassland. Small numbers of greater and lesser horseshoe bats hibernate in the cave system.
Vallis Vale SSSI	2.2km east	Important ancient woodland site.
Moons Hill Quarry SSSI	4.5km west	Geological.
Postlebury Wood SSSI	4.5km south	Important undisturbed woodland.

Table 5.10 Non-statutory designated nature conservation sites within the relevant search area

Site	Site Reference Code	Location Relative to Site	Summary of Interest Features
Cobby Wood	ST74/007	0.3km north	Ancient semi-natural broadleaved woodland.
Whatley Road Section	ST74/525	South east site boundary	Geological site.
Whatley Bottom LWS	ST74/018	South eastern site boundary	Ancient semi-natural broadleaved woodland along the steep sides of the Whatley stream.
Little Acre Wood	ST74/097	Southern site boundary	Part ancient semi-natural broadleaved woodland
Railford Bottom	ST74/017	Southern site boundary	Semi-natural broadleaved woodland with rich ground flora in steep sided valley.
Mells Park	ST74/058	0.25km north	Broadleaved woodland and wood pasture with species-rich flora.
Melcombe Wood	ST74/005	0.25km north	Mixed woodland on ancient woodland site.
Railford Bottom Wood	ST74/016	0.25km south	Stream valley with ancient semi-natural woodland and unimproved calcareous grassland
Hare Warren	ST74/026	0.2km west	Largely replanted ancient woodland site.
Castlehill Wood	ST74/004	0.5km south	Strip of broadleaved woodland adjoining Asham Wood SSSI
Wadbury Valley	ST74/555	0.75km east	A steep sided river valley covered with broadleaved semi-natural woodland.
Chantry Pond	ST74/027	0.75km south	Lake and stream with alder and willow carr, and predominantly broadleaved woodland.
Asham Wood East	ST74/078	0.7km south	Ancient semi-natural broadleaved woodland.
Tedbury Camp LWS	ST74/035	0.9km east	Ancient semi-natural broadleaved woodland, scrub, and species-rich grassland.
Newbury Camp LWS	ST75/053	1km north	Semi-improved and unimproved calcareous grassland.
Mells - Bilboa Quarries	ST74/075	1.25km north	Disused quarries with calcareous grassland.
Barrow Hill LWS	ST75/031	1.5km south	Complex of herb-rich unimproved grassland, semi-improved grassland and semi-improved grassland with areas of semi-natural broadleaved woodland and scrub on hummocky south-facing slope.
Collie Corner Lane	ST74/076	1.5km south	Lane with mature trees and hedgerows supporting rich flora.
Barnclose Quarry	ST64/595	1.5km west	Geological
Baucombe Coppice South LWS	ST64/132	1km south west	Semi-natural broadleaved coppiced woodland with occasional standards.

Site	Site Reference Code	Location Relative to Site	Summary of Interest Features
Old Down Wood LWS	ST74/019	2km east	Ancient semi-natural broadleaved woodland.
Mineral Railway LWS	ST75/029	2km north	Herb-rich railway embankment.
Upper Vobster Quarry	ST74/074	2km north	Species-rich grassland and woodland.
Shipperage Wood	ST64/048	2km north	Ancient woodland.
North Vobster Fields	ST64/121	2km north west	Unimproved herb rich grassland.
Maggs Wood	ST64/020	2km north west	Ancient semi-natural broadleaved woodland.

Priority habitats

- 5.6.6 Priority habitats within 2km of the Site comprise broadleaved deciduous woodlands, lowland meadows and calcareous grassland.

Habitats on site

- 5.6.7 The habitats at the site vary in type and maturity. Excluding the areas of semi-natural broadleaved woodland and rich understorey associated with Railford Bottom LWS (which are clearly of high value to biodiversity), the habitats across the Site are principally of artificial origin and immature in development relative to the surrounding natural and semi-natural habitats.
- 5.6.8 However, the belts and blocks of plantation woodland appear to have been designed to create a continuous corridor linking mature and valuable habitats at one extent of the quarry (i.e. Railford Bottom LWS) to mature and valuable habitats at the other extent (i.e. Cobby Wood and Hare Warren LWS's), and it is assumed that the habitats created in-between serve as replacements for habitats lost through quarrying. In addition to this, the value of the created habitats is set to increase in the future, with the majority of areas having not reached full maturity, and the implementation of a Biodiversity Action Plan (by Hanson UK), aimed at contributing to biodiversity through management and enhancement of these areas in the long term.
- 5.6.9 Habitats within the operational Whatley Quarry comprise almost exclusively of bare/disturbed ground, with sporadic stands of buddleia, small and sporadic patches of regenerating grassland atop undisturbed quarry benches (which are visible from atop the quarry void but which cannot be surveyed) and the large lagoon at the base of the quarry void.

Fauna

- 5.6.10 With regard to fauna:

- 12 waterbodies within ~500m of the site were identified during desk study. Seven of which were subject to HSI assessment and were considered to have an average or good HSI score in respect of its potential to support great crested newts. These ponds were recommended for further assessment for GCN eDNA. At the time of eDNA surveys 4 ponds were dry and so sampling was not possible, whilst for the remaining 3 ponds newt eDNA was absent, including from the lagoon at the base of the quarry void;

- Fordbury Water, adjacent to the southern site boundary is suitable for use by water vole and otter on a regular basis, and likely provides breeding opportunities for otter. These species are not likely to occur elsewhere on or near to the operational areas of the site;
- No evidence of badger activity was recorded in the Phase 1 habitat survey although badger is a mobile species and is widely distributed across the local landscape;
- Based on the results of the desk study records and the Phase 1 habitat survey, the areas of semi-natural/natural habitat at the site is potentially of high value for commuting/foraging bats, whereas the operational areas are of negligible value. Whilst the buildings present within the quarry are deemed unsuitable for roosting bats, woodland blocks are likely to provide several roosting opportunities;
- The habitats at the site (including the operational areas) could support assemblages of breeding and wintering bird species including breeding peregrine;
- Somerset County Council states that the county supports a significant population of dormouse¹⁰. As such, the site is situated within a wider landscape that is of value to dormouse, albeit there are no records of dormouse local to the site. The habitats at the site are unexceptional compared with the surrounding landscape, but it is possible that this species could traverse along the site's hedgerow and woodland habitats, albeit dormouse will not be present in operational areas; and
- The site provides suitable habitat for all British species of reptile, except for sand lizard. If present, reptiles are likely to be confined to the areas of woodland, hedgerow and grassland that are distributed around the periphery of the site, albeit Reptiles will not be present in operational areas.

Predicted trends

- 5.6.11 In the absence of the deepening project, substantial shifts in the overall baseline condition are not predicted as current land use and management practices are likely to continue.

The scope of the assessment

- 5.6.12 The EcIA will consider the potential for the scheme to affect protected or conservation-notable biodiversity receptors including:
- European protected sites within 10km;
 - Other statutory and non-statutory sites designated for their nature conservation interest within 2km;
 - Protected species, Section 41 species of Principal Importance for the Conservation of Biological Diversity, or other conservation-notable species recorded within 2km; and
 - Habitats of Principal Importance for the Conservation of Biological Diversity, or other conservation-notable habitats recorded within 1km.
- 5.6.13 At this stage, the site is not considered to support priority and conservation notable habitats, but has the potential to support the following protected and/or priority species:
- Peregrine falcon; and
 - A potentially notable assemblage of wintering gulls.

¹⁰ <http://www.somerset.gov.uk/policies-and-plans/policies/european-protected-species/>

- 5.6.14 Where potentially significant effects are identified, a receptor may be subject to a more detailed 'secondary' assessment within the EcIA designed to characterise those effects more accurately and identify any bespoke mitigation requirements (beyond normal best-practice) that may be required.
- 5.6.15 Further detailed survey work and assessment was undertaken in 2019, in accordance with best practice survey guidance. Results from the suite of surveys will further inform the baseline and the assessment of potentially significant effects on receptors.

Assessment methodology

- 5.6.16 The EcIA approach is based on current Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the United Kingdom*¹¹. These guidelines recognise that an appropriate ecological assessment cannot consider in detail every individual species or habitat that may potentially be affected by a development. The scope of the EcIA is therefore based on outcomes of baseline surveys; the scoping exercise; other consultations and data; and the incorporated mitigation. These are used to identify those biodiversity receptors that could be 'significantly' affected by the proposed development (i.e. where the effects on the receptor are of sufficient concern that they could influence the decision about whether or not planning permission should be granted), or for which the development could result in the contravention of relevant legislation. EcIA should therefore focus on 'valued ecological receptors' (which may include legally protected species) that may be vulnerable (i.e. both exposed and sensitive) to the likely effects of the scheme. Receptors that are of sufficient value that an effect upon them would have the potential to be significant, together with all relevant legally protected species, are assessed. This involves:
- Identifying, for each receptor, any environmental changes that are likely to be caused by the proposed development (allowing for cumulative changes associated with other developments that are already built, are under construction or are likely to be constructed), which have the potential to lead to a significant effect and/or to contravene relevant legislation; and
 - Determining the likely magnitude and hence significance of any effects, taking into account bespoke mitigation incorporated into the scheme design, or measures outlined in the proposal that are available, achievable and generally accepted as being effective for preventing significant effects (e.g. normal best-practice).
- 5.6.17 The assessment of effects takes into account the value of the receptor; the value of the site to that receptor; and the magnitude of change predicted. It also accounts for the environmental measures that will be employed to avoid or reduce potential adverse effects on biodiversity receptors; to prevent breaches of the legislation; compensate for adverse effects; and/or deliver environmental enhancement. This is typically a two-stage process, involving a 'screening' of receptors that cannot be significantly affected, followed by more detailed assessment of impacts on remaining receptors.

Potential effects not requiring further consideration

- 5.6.18 Assessment of the following potential effects has led to the conclusion that they are unlikely to be significant and do not require further assessment:
- Effects on the statutory sites listed below are scoped out as the receptors listed within the site citation, or their qualifying features, are not considered sensitive to potential effects at a distance greater than ~2km from the Whatley site boundary:

¹¹CIEEM (2016) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal. 2nd edition.* Chartered Institute of Ecology and Environmental Management, Winchester.

- ▶ Cloford Quarry SSSI; Holwell Quarries SSSI; Cookes Wood Quarry SSSI; Edford Woods and Meadow SSSI; Leighton Road Cutting SSSI; St. Dunstons Well SSSI; Vallis Vale SSSI; Moons Hill Quarry SSSI; Postlebury Wood SSSI.
- Effects on the following protected/notable species are scoped out as they are considered highly unlikely to be present in, or reliant upon, the areas that will be affected by the proposals (i.e. the Western Staggered Benches, the Northern Tip Area and areas where the existing quarry void will be deepened):
 - ▶ Great crested newts;
 - ▶ Bats;
 - ▶ Badger;
 - ▶ Dormouse;
 - ▶ Aquatic fauna (otter and water vole);
 - ▶ Breeding birds;
 - ▶ Reptiles; and
 - ▶ Terrestrial priority species including (but not limited to) hedgehogs and brown hare.

5.7 Traffic and transport

Relevant policies and their implications for scoping

5.7.1 **Table 5.11** lists the planning policy guidance and policies that are relevant to traffic and transport and sets out the implications of the guidance and policies for the scope of the EIA.

Table 5.11 Relevant policies and their implications – traffic and transport

Policy reference	Implications
National policy:	
National Planning Policy Framework 2019 (NPPF) Section 9. Promoting sustainable transport	National policy issues relative to traffic and transport for all modes of travel, including abnormal loads and conveyance of freight and construction materials.
Local policy:	
Somerset Minerals Plan, Development Plan Document up to 2030 adopted in 2015	Planning permission for mineral development will be granted subject to the application demonstrating that the road network serving the proposed site is suitable or can be upgraded to a suitable standard to sustain the proposed volume and nature of traffic without having an unacceptable adverse impact on distinctive landscape features or the character of the countryside or settlements. Particular regard should be given to:
Policy DM9: Minerals transportation	a) highway safety; b) alignment; c) proximity to buildings; d) air quality; e) the integrity of the road network including construction and any impacts on capacity; f) disruption to local communities. Proposals for mineral development that will generate significant transport movements must be supported by a Transport Assessment and Travel Plan. The Transport Assessment will need to

Policy reference	Implications
	demonstrate that appropriate consideration has been given to the alternatives to road transport, including rail, as a primary freight transport option. Alternatives to road transport should be pursued if they are demonstrated to be practicable and beneficial
Mendip District Local Plan Part I: Strategy and Policies 2006-2029, adopted in 2014	The policy states that where appropriate, development proposals must demonstrate how they will improve or maximise the use of sustainable forms of transport (particularly by means other than the private car), and shall include, where relevant, the submission of Travel Plans and/or Transport Assessments.
Development Policy 9 – Transport Impact of New Development	

Legislation

- 5.7.2 The following legislation is relevant to the assessment of the effects on potential traffic and transport receptors:
- Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

Technical guidance

- 5.7.3 The technical guidance set out in **Table 5.12** is relevant to the assessment of effects on traffic and transport receptors.

Table 5.12 Technical guidance relevant to traffic and transport

Technical Guidance	Summary
Guidance on Transport Assessments (Department for Transport (DfT, 2007) - archived (2014))¹²	Provides guidance to developers and local authorities about the methodology and scope of Transport Assessments which support planning applications for the construction or changes of use of various types of infrastructure or development. Whilst this has been archived, it is still a point of reference as it has not been replaced by alternative guidance.
Guidelines for the Environmental Assessment of Road Traffic (GEART) (Institute of Environmental Management and Assessment (IEMA))¹³.	Provides guidance to developers and local authorities for identifying traffic and transport related environmental effects and receptors.
Extant Planning Consents	Cognisance of the extant planning consent conditions would also be made. Particularly relevant is planning consent ref 109122/002 condition 30.

Baseline conditions

- 5.7.4 Access to Whatley Quarry is via two accesses on to Whatley Road to the east of the site. The most southerly access serves (primarily) as a service access lies in Whatley Bottom whilst the most

¹² Department for Transport (2007). *Guidance on Transport Assessment* [online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/263054/guidance-transport-assessment.pdf [Accessed 13 February 2020].

¹³ Institute of Environmental Assessment (1993). *Guidance Notes No. 1 - Guidelines for the Environmental Assessment of Road Traffic*. Horncastle: F.W.Cupit.

northerly is the main access. The majority of HGV traffic goes in a southerly direction along Whatley Road before joining the A361. Whatley Road was subject to a widening and improvement scheme as part of the Section 106 agreement related to planning permission 109122/002. The quarry is also served by a dedicated rail line which passes through a tunnel under Whatley Bottom which connects to the Reading and Taunton line north of Frome.

- 5.7.5 Under planning consent ref 109122/002 Condition 30 no more than 4 million tonnes can be transported from the quarry by road in any one calendar year. However, permission for working of the quarry is due to expire on 31st December 2030 due to Condition 3 attached to that planning consent. The proposed scheme would retain the same production rate and output at the quarry but seek to extend the time frame within which this work can be undertaken. The output transported by road under the proposed scheme would therefore accord with the extant permission. Existing access arrangements into and out of the site would also remain unchanged.
- 5.7.6 The continuation of HGV traffic currently generated by the site represents a 'worst-case' scenario to some extent. Hanson is separately pursuing a Review of Old Minerals Permission (ROMP) submission for Westdown Quarry (which will be subject to a separate EIA) which is located ~1.5km to the south. Westdown coming on stream would lead to a decrease in HGV traffic movements associated with Whatley Quarry with an associated proportionate number of new HGV movements from Westdown. The majority of material extracted from Whatley would be exported by rail. However, for the purposes of this Scoping Report it is assumed that existing traffic movements will continue with the proposed scheme

Predicted trends

- 5.7.7 In the absence of the proposed development, material from the quarry would continue to be transported via road and rail as permitted through the existing permission and in accordance with the extant conditions. Should Westdown Quarry become operational (subject to the separate application) Whatley Quarry may have decreased HGV traffic and there may be changes in HGV patterns along Whatley Road although together the HGV transfer would not exceed 4 mt per annum.

The scope of the assessment

- 5.7.8 No increase in output from the site, and consequentially, the number of traffic movements is proposed. However, the proposed scheme seeks to enable the working of the quarry beyond 2030 to 2042. Therefore, the assessment solely relates to the continuance of effects against the anticipated baseline traffic levels for 12 years beyond the 2030 rather than to changes in output (and associated increases in HGV movements). The HGV movements would continue to remain within the limit for road traffic set by planning condition 30 of planning permission ref: 109122/002.
- 5.7.9 The scope of the assessment reflects that it is not an increase in traffic per se but the continuation of effect against the anticipated traffic baseline.

Assessment methodology

- 5.7.10 The Institute of Environmental Assessment (IEA14) publication Guidance Notes No. 1: Guidelines for the Environmental Assessment of Road Traffic (1993), hereafter referred to as GEART, provide guidance on the environmental assessment of traffic and transportation effects.

¹⁴ Now the Institute of Environmental Management and Assessment (IEMA)

- 5.7.11 To define the scale and extent of an assessment, the IEMA guidelines identify the following rules by which to undertake an assessment of potentially significant traffic and transport related environmental effects:
- Rule One: Include roads where traffic flows are predicted to increase by more than 30% (or where the number of HGVs are predicted to increase by more than 30%); and
 - Rule Two: Include any specifically 'sensitive' areas where traffic flows are predicted to increase by 10% or more.
- 5.7.12 The 10% threshold in Rule two considers daily variations in traffic levels which are typically around 10% meaning that an increase in traffic levels of less than 10% is not likely to have an undesirable effect and would not require assessment.
- 5.7.13 The IEMA guidelines identify general thresholds for traffic flow increases as identified above. Where the predicted increase in traffic flows is lower than the thresholds, the guidelines suggest the significance of effects can be stated to be low or insignificant and further detailed assessments are not required. **Table 5.13** below summarises the significance criteria based on Rule One and Rule Two above.

Table 5.13 Traffic and transport environmental assessment significance criteria

Parameter of assessment	Significance
Change in traffic flows and HGVs over 30%	Significant
Change in total traffic flows over 10% in sensitive areas	Significant
Change in traffic flows and HGVs below 30%	Not significant
Change in total traffic flows less than 10% in sensitive areas	Not significant

- 5.7.14 The proposed scheme does not seek to increase output from the quarry and does not seek to increase the use of road traffic meaning that it will be within the 4 mt per annum for road transport in line with conditions of the extant planning permission. Therefore, GEART suggests that the proposed scheme would not trigger the need for detailed assessment. However, the assessment methodology will be tailored to consider the continuation of effects above the baseline beyond 2030 rather than assessing effects related to an increase in traffic.
- 5.7.15 The receptors selected for the assessment will be agreed with the Highways Authority and be based on the highways links that could be subject to a change as a result of the extension of permission to work reserves at Whatley and continuation of HGV flows beyond 2030.

5.8 Socio economics

Relevant policies and their implications for scoping

- 5.8.1 **Table 5.14** lists the planning policy guidance and policies that are relevant to socio-economic effects and sets out the implications of the guidance and policies for the scope of the EIA.

Table 5.14 Relevant policies and their implications – socio-economics

Policy reference	Implications
National policy:	
National Planning Policy Framework, 2019 (NPPF) Section 6. Building a strong, competitive economy NPPF Paragraph 80	The NPPF at Paragraph 80 states that “Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development.”
NPPF 2019 Paragraph 83.	Under the ‘Supporting a prosperous rural economy’ section, The NPPF at Paragraph 83 states that “planning policies and decisions should enable: the sustainable growth and expansion of all types of business in rural areas.”
NPPF Section 17. Facilitating the sustainable use of Minerals Paragraph 203.	States that it is essential that there is sufficient supply of minerals to provide the infrastructure, buildings, energy and goods to support the country’s needs and best use needs to made of mineral resources.
NPPF Paragraph 205.	Paragraph 205 states that great weight should be given to the benefits of mineral extraction, including to the economy when determining planning applications.
Local policy:	
Mendip Local Plan 2006-2029: Part I: Strategy and Policies (Adopted 2014) Core Policy 3	Core Policy 3: Supporting Business Development and Growth sets out the approach to achieving sustainable economic growth in the District.

Legislation

- 5.8.2 There is no specific legislation pertaining to the assessment of socio-economic effects that will require consideration in the EIA.

Baseline Conditions

Data sources

- 5.8.3 The assessment of socio-economic issues will draw upon information from the following data sources:
- The existing and emerging development plan and its associated evidence base;
 - The Somerset Economic Assessment (2016) and any associated updates; and
 - Statistics (where required) provided by the NOMIS and ONS websites.

Summary of baseline conditions

- 5.8.4 Hanson is a well-established company who currently employ over 3,500 people across the UK. The company’s existing operations at Whatley Quarry mean that Hanson is already an important local employer, currently directly supporting some 60 people, along with a range of support staff and contractors.

Predicted trends

- 5.8.5 Whilst there are not expected to be any 'external' changes which would affect the baseline conditions, in the absence of the proposed development, materials needed for key national and local infrastructure projects wouldn't be provided from Whatley and alternative supplies would need to be developed.

The scope of the assessment

- 5.8.6 Although it is not envisaged that the deepening of the Whatley Quarry would result in the creation of significant additional employment opportunities, it is recognised that the proposed development would ensure the long-term security of the site, enabling job retention, which could have an effect on employment and inward investment in the wider area.
- 5.8.7 In addition to securing direct employment opportunities at the site, it is envisaged that a number of indirect and induced jobs will continue to be supported, because of the need to service the site. Typically, these relate to the provision of a wide variety of goods and services, including specialist engineering assistance for plant maintenance and contractors for services such as the provision of mobile plant etc.
- 5.8.8 It is recognised that the deepening of the Quarry could have an effect on the local employment and inward investment. The socio-economic assessment will therefore be concerned with:
- Change in the local employment structure and effect on the local employment market;
 - Employment opportunities and displacement; and
 - Increased local expenditure.
- 5.8.9 The receptors to be assessed will include existing residents and local employers.

Assessment methodology

- 5.8.10 The assessment will follow the best practice guidelines for undertaking socio-economic assessments (including The Green Book: Appraisal and Evaluation in Central Government, HM Treasury 2003 and A Standard Approach to Assessing the Additional Impact of Projects, English Partnerships, 2nd edition 2004).

5.9 Cumulative effects

- 5.9.1 There is a requirement under Schedule 4 of the EIA Regulations for the ES to include a description of the likely significant effects of a development on the environment, which should cover, amongst others, cumulative effects. As such, an assessment of potential cumulative effects will be undertaken for the proposed development. The assessment will consider two aspects:
- **Inter-project cumulative effects:** A qualitative assessment considering potential cumulative effects with other existing, permitted and proposed mineral developments in the area; and
 - **Intra-project cumulative effects:** A qualitative assessment as to whether any of the individual effects of the proposed development would combine to create a cumulative effect greater than the sum of the individual effects.
- 5.9.2 We will seek to agree the other developments to be scoped into the assessment of inter-development cumulative effects with Somerset County Council, however at this stage it is proposed that the following active or proposed quarry sites are included in the assessment:

- Colemans Quarry (Holwell);
- Halecombe Quarry;
- Torr Works Quarry; and
- Westdown Quarry.

5.9.3 In terms of intra-project cumulative effects, typically, the main focus of such an assessment relates to amenity topics, such as those that affect human receptors, i.e. noise, vibration, traffic, air quality and visual amenity, although it can also relate to other topics where a receptor can be subject to effects from more than one environmental topic, e.g. biodiversity and hydrology.

5.10 Topics scoped out from detailed assessment

Air quality

- 5.10.1 The proposed development would not include changes to the methods used to extract limestone and importantly, there would be no lateral extension of the quarry, which would bring sources of dust closer to sensitive receptors. Indeed, as extraction takes places deeper into the quarry void, dust generating activities within the quarry are less likely to have an adverse effect of nearby sensitive receptors. Furthermore, as it is not proposed to increase the annual output of the quarry, there are no anticipated increases in dust associated with the movement of material off-site via HGV. Indeed, the expectation is that a much greater proportion of material extracted from Whatley Quarry will be transported off-site via the existing rail facilities. As such, a reduction in road traffic associated with the quarry is expected.
- 5.10.2 It is therefore not considered that the proposed scheme would lead to changes in dust and particulate matter emissions for any sensitive receptors. The conditions attached to the extant permission (ref: 109122/002 conditions 20 and 21) to regulate dust and emissions would continue to remain in force and be employed at the quarry. The current Dust Mitigation Plan will be updated to capture the activities within the proposed scheme. Air quality is therefore scoped out from detailed assessment.

Cultural heritage

- 5.10.3 The proposed development involves deepening of the existing quarry and does not include a lateral extension. The original permission required archaeological assessment and investigation which has been carried out so direct effects on the historic environment have been assessed previously and informed the extant permission. Indirect effects arise where a development harms heritage asset without causing direct disturbance; primarily arising from change in the setting of heritage assets. The nature of the proposed development (a deepening with no lateral extension) means that there are no indirect effects. Therefore, no detailed assessment is proposed in the EIA.

Land and soils (including agriculture)

- 5.10.4 No new land-take is required as part of the proposed development, therefore there would be no effects on soils and agriculture as a result of the development. This has therefore been scoped out from detailed assessment.

Climate

- 5.10.5 The effects on climate will be considered within the chapter assessing the hydrology/hydrogeology and flood risk. It is therefore not considered that a separate chapter on climate is required.

Major accidents and disasters

- 5.10.6 The proposed development will take place at an existing operational site which is heavily regulated under health and safety and quarry regulations. The proposed development is not located in an area anticipated to be at risk of major accidents or disasters. The vulnerability to flood risk will be assessed in the Flood Risk Assessment and the Water Environment ES chapter. It is therefore proposed that major accidents and disasters are scoped out of the EIA.

6. Summary of proposed EIA scope

6.1.1 As set out in the preceding sections, the EIA for the proposed deepening and Whatley Quarry will include detailed assessments on the following topics:

- Revised restoration scheme;
- Noise;
- Vibration;
- Water environment;
- Biodiversity;
- Traffic and transport;
- Socio-economics; and
- Cumulative effects.

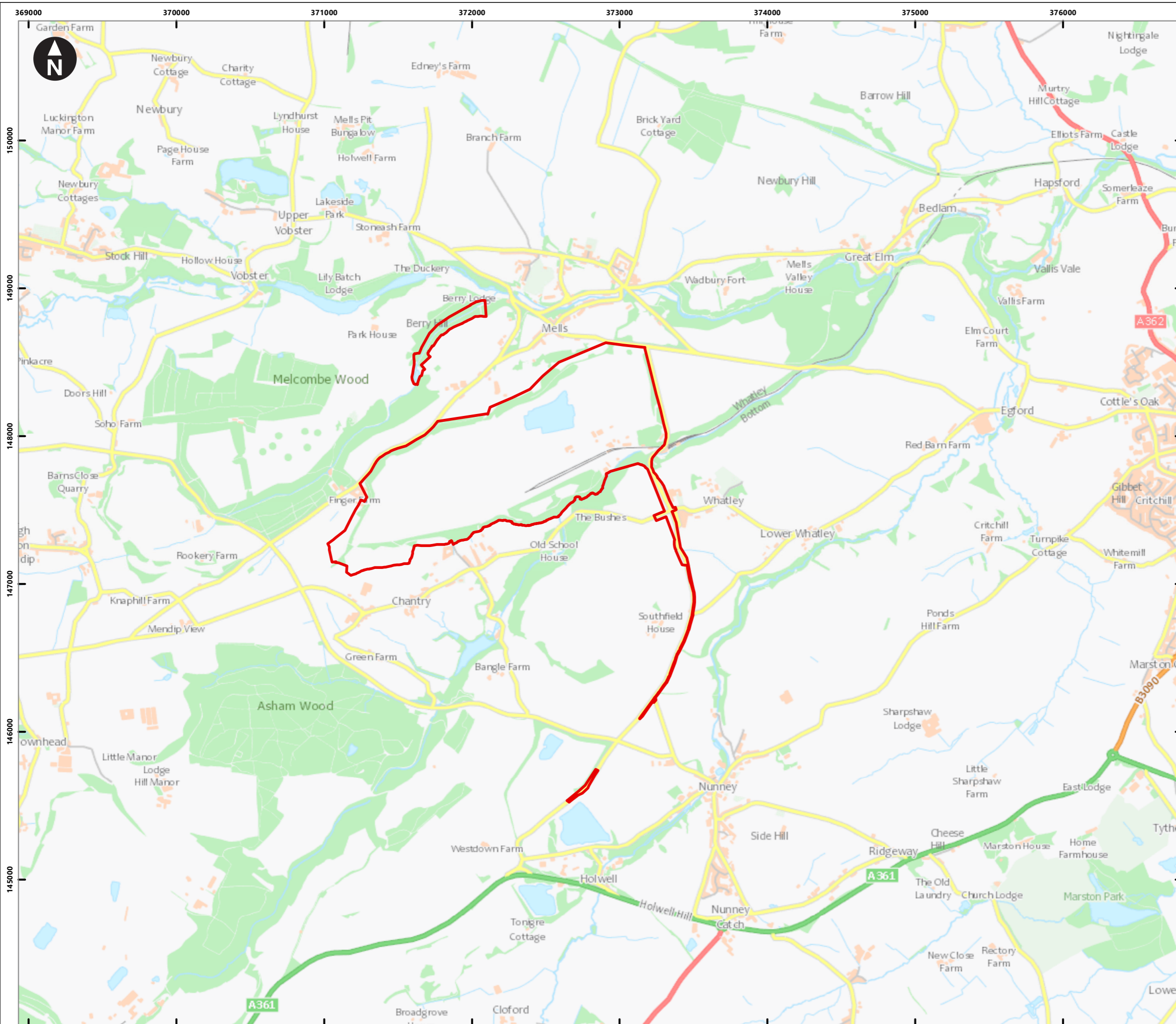
6.1.2 The ES will consider the significant issues in more detail and will report on further investigations in relation to the above.

6.1.3 Wood and Hanson would welcome comments on the proposed scope of the EIA and for any suggestions on potential mitigation and enhancement that can be incorporated into the proposed development as we proceed through the EIA process.

Figures



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Key

Whatley Quarry

0 250 500 750 1,000 1,250 1,500 m

Scale at A3: 1:25,000

Contains OS data © Crown Copyright and database right 2019

Whatley Quarry Scoping Support

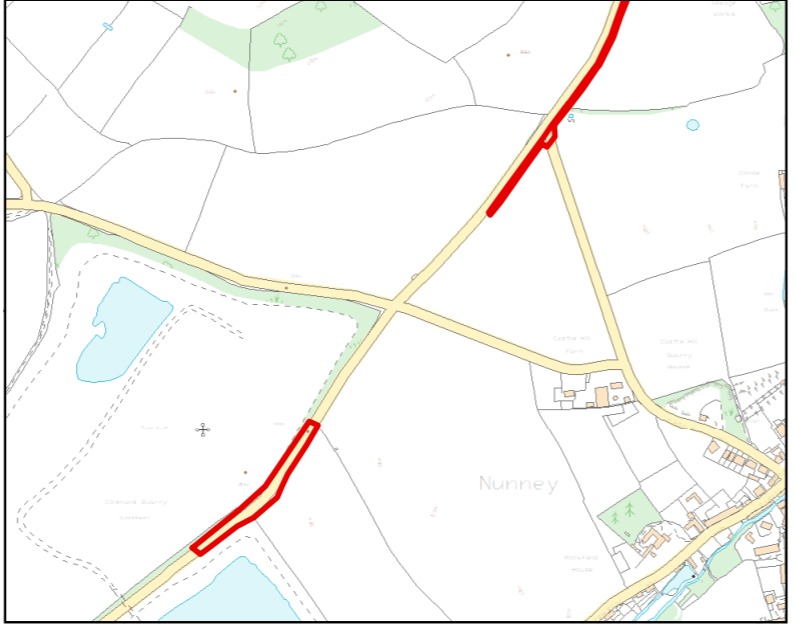
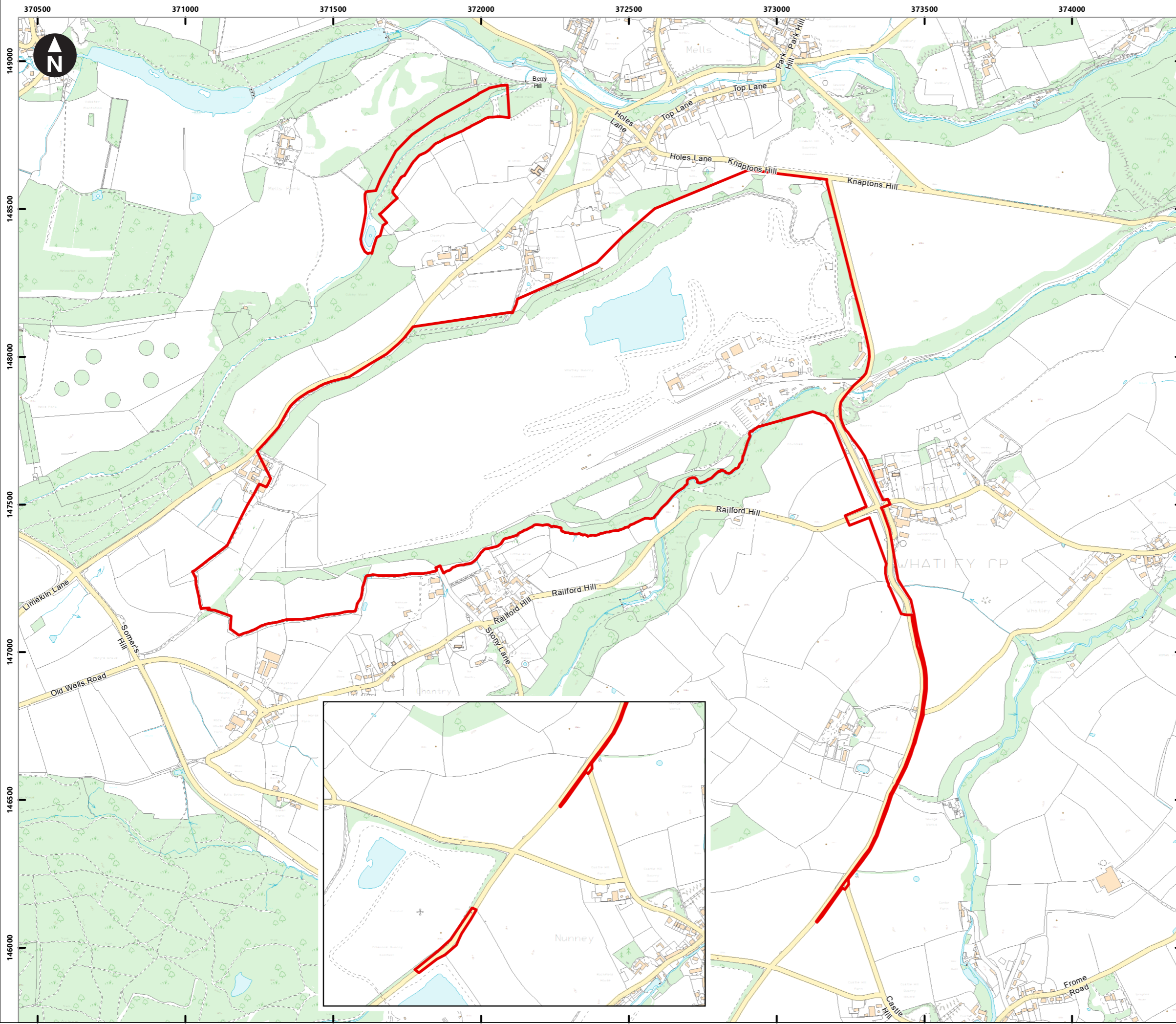
Figure 2.1
Site location

May 2020

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wood.

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Key

Whatley Quarry

0 100 200 300 400 500 600 700 m

Scale at A3: 1:12,500

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Whatley Quarry Scoping Report

Figure 2.2
Site boundary

May 2020

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wood.

