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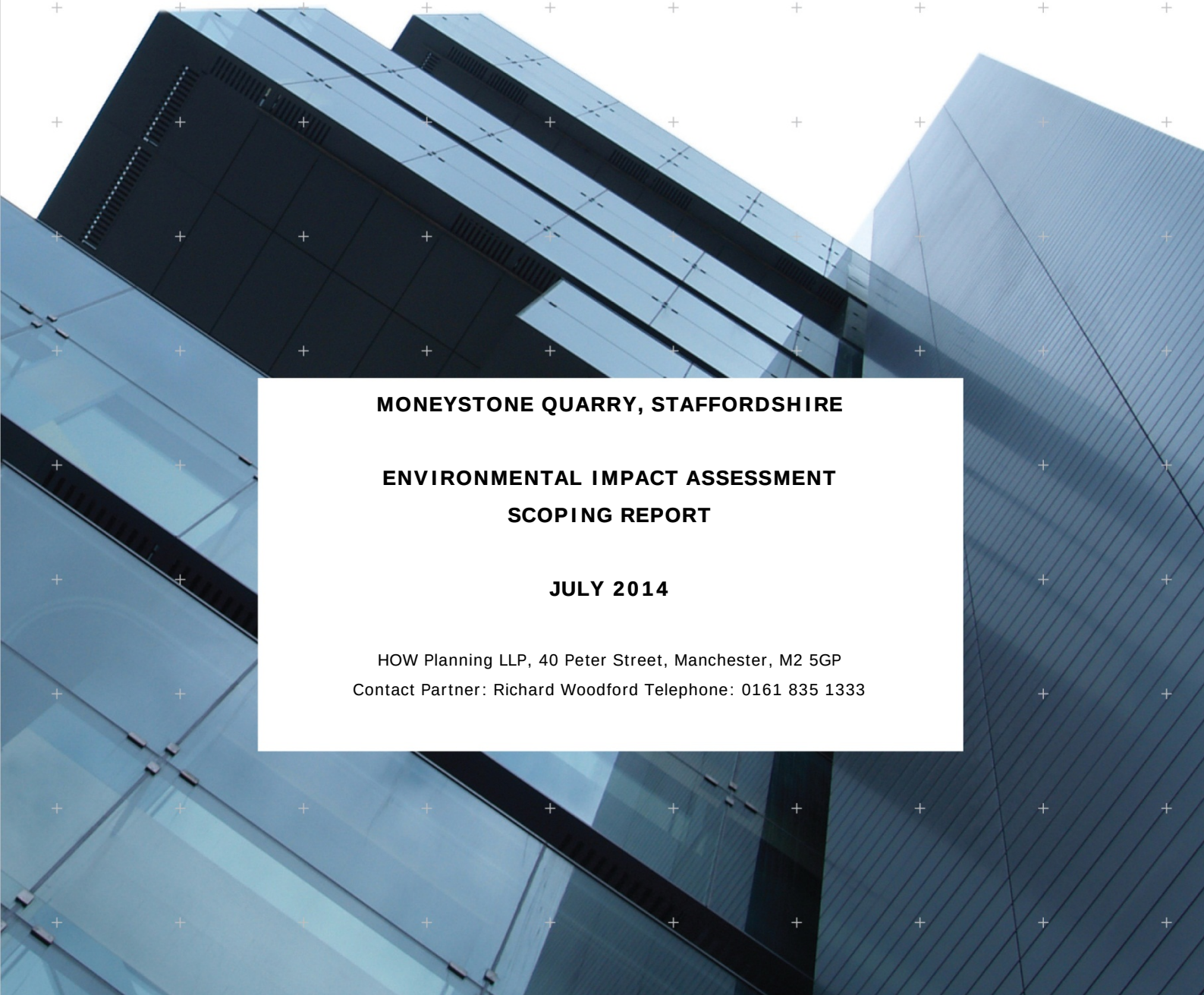

MONEYSTONE QUARRY, STAFFORDSHIRE

ENVIRONMENTAL IMPACT ASSESSMENT
SCOPING REPORT

JULY 2014

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APPENDIX

1 INTRODUCTION

Overview

1.1 Laver Resorts Limited is seeking to obtain planning permission for a leisure-led mixed use development on the Moneystone Quarry site in Whiston, Staffordshire following its closure in March 2012.

1.2 The proposals seek to restore and redevelop the quarry site in order to create a high quality leisure destination. The proposals will comprise a mixture of lodge accommodation, outdoor and indoor leisure facilities and a central hub which will consist of restaurants and shops. The development will be integrated into the landscape with habitat creation forming an important element of the scheme.

1.3 Figure 1 shows the location of the proposed development site, along with the indicative edge red boundary.

Requirement for Environmental Impact Assessment

1.4 The Town and Country Planning (Environmental Impact Assessment) (England) Regulations 2011 (hereafter referred to as the 'EIA Regulations') require that for certain planning applications, an Environmental Impact Assessment (EIA) must be undertaken. Schedule 1 of the EIA Regulations lists developments that always require EIA and Schedule 2 of the EIA Regulations lists developments that may require EIA if it is considered that they could give rise to significant environmental impacts.

1.5 Regulation 5 of the EIA Regulations makes provision for a developer to request a 'screening opinion' from the Local Planning Authority (LPA) to ascertain whether an EIA is required if a development is classed as a Schedule 2 development. This decision is based on the likelihood of significant environmental effects arising in relation to the development proposals. In this instance, it is considered that the proposals constitute 'EIA Development' due to the scale, nature and location of the proposed development. Accordingly, a request for a formal EIA Screening Opinion has not been submitted and an EIA will be undertaken voluntarily.

1.6 The application qualifies as EIA development under Schedule 2, Category 12(c) 'Holiday Villages and Hotel complexes outside urban areas and associated development'. The indicative threshold for this class is that if the area of works exceeds 0.5 hectares the development may be referred to as a Schedule 2 project, and it should be evaluated to establish whether the potential for significant environmental effects exists so that an EIA would be required.

EIA Scoping

1.7 Under Regulation 10 of the EIA Regulations, a person who is minded to make an EIA application may ask the relevant planning authority to state in writing their opinion as to the information to be provided and subsequently reported in an Environmental Statement (a 'Scoping Report'). The scoping process is an integral part of undertaking an EIA and its purpose is to provide relevant background information about the site, the proposed development, key environmental issues and the approach for the assessment of potential effects.

1.8 This Scoping Report outlines the proposed development and identifies issues that will be assessed by the EIA and reported in the ES that will accompany the planning application. The objectives of the scoping process are to:

- Provide a description of the development, including its physical characteristics and land use requirements;
- Identify key environmental topics that the EIA will consider;
- Define the extent to which environmental topics will be investigated;
- Allow consultation with the local planning authority, and Statutory and Non-Statutory Consultees; and
- Provide a mechanism for agreeing the content and methodology of the EIA with stakeholders at an early stage in the process.

Structure of the Report

1.9 The report is divided into the following sections;

- **Section 2: Site Context**: This section describes our understanding of the historical and current conditions of the site and the surrounding area,

including any receptors identified in the area which may be particularly sensitive to the proposed development.

- **Section 3: Description of Development**: This section provides a description of the development that will be subject to the EIA and planning application.
- **Section 4: Approach and Methodology:** This section details the proposed technical areas for assessment within the ES.
- **Section 5**: **Alternatives:** Outlines the main alternatives considered for the proposed development.
- **Section 6: Planning Policy Context:** Assesses the proposals against relevant planning policy.
- **Section 7 - 16: Environmental Assessment Topics:** Outlines the proposed methodology for the Environmental Statement and for each technical assessment expressed as chapters/ and or appendices of the ES.
- **Section 18: Non Significant Issue:** Sets out those environmental issues deemed to be insignificant for the purposes of EIA and that would not be included as a chapter in the ES.
- **Section 19: Structure of the Environmental Statement**: Defines the proposed structure of the ES chapters.
- **Section 20: The Project Team**: Identifies the members of the project team and their respective roles.

1.10 It should be noted that the Scoping Report has been produced using currently available information in regard to the proposed development; however the design of the proposed development is still evolving and will continue to do so throughout the EIA process. This is important as it allows an iterative design process to be followed which takes account of environmental issues and allows for the incorporation of mitigation measures into the proposals.

2 SITE CONTEXT

2.1 This section sets out the geographical and historical context in which the proposed development is set and identifies environmental constraints and potentially sensitive receptors in the vicinity of the proposed development.

Site Location

2.2 The site is located 16.5km east of Stoke on Trent, 11km south of Leek, 14.5km west of Ashbourne, 26km north east of Stafford and 4km north east of Cheadle, and is located between the villages of Oakamoor and Whiston adjacent to the Churnet Valley. The entire site lies within the district of Staffordshire Moorlands and is split across the parish boundaries of Kingsley and Oakamoor. It is centred on National Grid Reference SK.045482.

Planning Context

2.3 In SMDC's Core Strategy (adopted 26th March 2014), Policy SS7 'Churnet Valley Area Strategy' states:

> *The Churnet Valley is identified as an area for sustainable tourism and rural regeneration. Within this area particular support will be given to forms of development and measures including:*
>
> - *Short stay and long stay visitor accommodation;*
> - *The expansion of existing tourist attractions and facilities and the provision of compatible new tourist attractions and facilities.*

2.4 In response to the Core Strategy, the site has been identified as an opportunity site within the Churnet Valley Masterplan Supplementary Planning Document (adopted March 2014). This proposes that the site be used for holiday accommodation of a maximum of 250 lodges with outdoor recreation facilities, a central hub and non-motorised water based activities.

Description of the Development Site

2.5 The site, which is approximately 46 hectares in size, comprises the former Moneystone Quarry and its landholdings located between the villages of Whiston and Oakamoor in Staffordshire. The silica sandstone quarry, which is known for its production of industrial sands, closed following 60 years of operation in 2012. This decision follows a refusal of planning permission to extend the quarry for further extraction.

2.6 Land use within the site boundary comprises a central administrative and processing area of office buildings, former plant sites, car parking and a research and development laboratory. The site is accessed by a private tarmac road off Whiston Eaves Lane.

2.7 There are three main quarries on the site, which are hereafter referred to as Quarry 1, 2 or 3. The location of Quarries 1-3 are shown on the Site Location Plan contained in Appendix 1.

2.8 Quarry 1 is located to the immediate south and east of the administrative and processing area on the south side of Whiston Eaves Lane. This area of former quarrying has been largely restored to wetland habitat and some lagoons are present in this area.

2.9 Quarry 2 lies to the north of Quarry 1 on the opposite side of Whiston Eaves Lane. Quarry 2 is accessed via a tunnel under the Lane, thereby connecting the two parts of the site. The tunnel is in sandstone bedrock and its surface stability is maintained using mesh and rock bolts. The access track leading from the tunnel separates the quarry in two with its western half consisting of an existing tailings lagoon and the eastern half consisting of a former tailings lagoon which has been restored. Restoration of the former lagoon has consisted of hydro-seeding of the peripheral slopes and the strewing of green hay to encourage the establishment of grassland. This area includes further dry quarried areas with steep slopes to the northern boundary.

2.10 Quarry 3 was the last part of the site to be actively quarried and is located to the immediate north-east of the former plant site at Quarry 1. This area includes a

deep quarry with steep sides to the northern edge that has filled with water since the cessation of quarrying activities, forming a lagoon. Water level control gates are situated at the south-western corner of the lagoon, that can control the flow of water to the SSSI.

2.11 To the south of the site a steep track leads down to the disused Churnet Valley railway track. A former conveyor and pipeline follows the route of the track. Dense woodland and vegetation is located to both the east and the west of the track which form part of Carr Wood and Key Wood respectively.

2.12 The land outside of the development site is dominated by open grassland fields bounded by stonewalls and hedgerows, some of which are in agricultural use. Crowtrees Farm, which has been subject to a recent change of use application, is located to the immediate south-east of the site.

2.13 There are also a number of nature conservation and landscape designations in the local vicinity, including:

- The Whiston Eaves SSSI is located to the west of Quarry 3;
- The fields adjoining the SSSI to the west, north and south are partly designated as a Grade 1 Site of Biological Interest (SBI); and,
- The site itself falls within a "Special Landscape Area" which is a local designation.

Topography

2.14 The points of lowest elevation in the local landscape are found along the valley floor of the River Churnet, where the land rises north-eastwards to Whiston Eaves Lane. To the north of Whiston Eaves Lane, the land rises to a high point within the site along the site's north eastern boundary. To the west of Quarry 3, the landform rises gently on the site's north eastern boundary.

2.15 The landscape within the site is heavily influenced by the historical quarrying activity and other landscape features, which create an undulating nature characterised by rocky outcrops and steep sided valley sides.

Geology and Hydrology

2.16 The site is located within the Millstone Grit Group below the Coal Measures. The sandstone excavated as part of the quarrying operations represents Rough Rock Formation of coarse grained sandstone interbedded with grey mudstone. Groundwater in the sandstone has been artificially lowered as part of the quarrying operations and previous borehole logs have shown that the water table is perched. Groundwater to the east of Quarry 3 flows southwards, whilst groundwater to the west flows west and then south discharging to small perennial streams feeding the River Churnet.

2.17 The site is located within Flood Zone 1 according to Environmental Agency maps. This means that the site is outside of the flood plain and has a risk of flooding of less than 1 in 1000 in any year.

2.18 According to the Environment Agency's website, the water quality of the River Churnet is recorded as Grade B 'Good'. Approximately 100m to the south of the site a large aquifer is located. However, the site itself is recorded as a minor aquifer.

Access and Transport Links

2.19 The site is accessed by Whiston Eaves Lane, which connects the village of Whiston to the north of the site and to Oakamoor located to the south east of the site. At Whiston, the Lane joins the A52 which is a strategic route connecting Stoke on Trent to the west and Ashbourne to the east. Blakeley Lane is located adjacent to the north eastern boundary of the site which joins Whiston Eaves Lane to the east of the Crowtrees Farm access. Access to the northernmost part of the site, the wooded area north of Quarry 3, is gained via a spur off of Blakeley lane. This spur is a remnant of the former route of Blakeley Lane, which was diverted to make way for the quarrying activity.

2.20 There are a number of cycle and footpath links through the site and in the immediate vicinity. Footpath 50 runs along the northern edge of the site, north of Whiston Eaves Lane, extending westwards to Whiston and eastwards towards Blakeley Lane. An application for a footpath diversion order has been made to

Staffordshire County Council to divert Footpath 50 through the site along the north and eastern edges of Quarry 2. The application has been made in respect of the consented restoration proposals for the Quarry.

2.21 Footpath 70 runs north-eastwards from Footpath 50 north of Whiston Eaves Lane and Footpath 51 runs broadly north from Whiston Eaves Lane, crossing the golf course to Whiston.

2.22 Footpath 68 runs through the site from Littleheath House Farm to Whiston Eaves Lane before it connects to Footpath 69 which also runs along Whiston Eaves Lane. Footpath 69 ceases at the entrance of the Quarry site where it connects to Footpath 49 which runs alongside the eastern extent of Quarry 4 before turning westward passing Dustystyle Farm heading southward where it eventually connects to Staffordshire Way. The Staffordshire Way long distance recreational footpath runs on the western slopes of the River Churnet and there are a number of other recreational circular routes, promoted by Staffordshire Moorlands Council such as the 'Oakamoor and Whiston Circular Route', which partly runs along Footpath 50.

Surrounding Area

2.23 The site is located within the Churnet Valley, approximately 19km from Stoke on Trent, 11km from the Peak District and 16km from Ashbourne all of which are connected via principal routes such as the A52, which is located to the north of the site. There are also a number of small local villages and hamlets within less than 2km of the site, including Whiston, Oakamoor, Farley and Alton. These villages are typical of the local landscape surrounding the site and consist of small clusters of residential development with a number of local services.

2.24 The site is also located in close proximity to a number of national and local tourist attractions, all of which are well connected by principle transport routes, such as the A52 or via bridleways, public footpaths and cycle routes. These include, but are not limited to, the following:

- Alton Towers: located approximately 3km south east of the site. There are a number of road linkages which connect the site to Alton Towers, such as via

Whiston Eaves Lane, Carr Bank, Farley Road and Farley Lane. There are also numerous public footpaths and bridleways which provide linkages between the two sites;

- Foxfield Steam Railway: located approximately 11km south west of the site. This is a heritage steam railway linking Blythe Bridge to Godleybook. Road linkages are from the A52 and the A521;
- Churnet Valley Railway: located approximately 4km north-west of the site. The railway is located at Cheddleton Station and links Leek Brook to Froghall. There are numerous linkages to the station via either the A52 or the A520 or via public footpaths such as the Staffordshire Way which runs through the Churnet Valley;
- Sudbury Hall: located approximately 16km south-east of the site towards Ashbourne. This is a National Trust site and houses a Museum of Childhood and numerous landscape gardens. Linkages via the A52;
- Whiston Hall Hotel, a Victorian Hall, built in 1850 with an 18 hole golf course is situated to the north-west of the site; and,
- There are also a small number of campsites including Star Caravan park at Cotton, Hales Hall Camping and Caravan Park near Cheadle and numerous public houses within walking distance of the site.

2.25 Immediately surrounding the site there are a number of local farmsteads which are sparsely distributed throughout the local landscape. Grassland fields used for grazing are typical features to the north and south of the site, with the majority of them being separated by low drystone walls or hedgerows.

2.26 The farmsteads bordering the site include Crowtrees Farm to the east, Cottage Farm lies to the north east and Little Eaves Farm lies on the western boundary of the site.

2.27 A number of other farmsteads are located within 1km of the site. These include:

- Oldfield Farm to the north east (300m);
- Blakeley Farm to the north east (550m);
- Moneystone Farm to the north east (350m);
- Orchard Farm to the south east (800m);
- Littleheath House Farm to the north west (200m);

- Heath House Farm to the north west (500m);
- Eavesford Farm to the north west (700m); and
- Whiston Grange Farm to the north west (350m);

2.28 Along the north western side of the site, north of Quarry 3, there are a number of residential properties and rock outcrops which form the north and north western boundary of the site. This includes Rock Cottage a stone built cottage with a rock outcrop forming a gable end of the property, situated on Blakeley Lane along with Wood View, The Bungalow and Moneystone Cottages.

Environmental Constraints and Potentially Sensitive Receptors

2.29 Features of the site and surrounding area may form a constraint to development or be identified as a sensitive receptor that may be affected by the proposed development. Identifying such constraints and receptors early in the design process will ensure that mitigation measures are designed into the proposals progressively from the outset, and fully integrated into the project design where appropriate. Early analysis of the site and the surroundings has identified the following potential constraints:

- Whiston Eaves SSSI located to the west of the site covers an area of approximately 10 hectares. It is divided into six SSSI units and consists predominately of semi-natural grassland, pasture, woodland cover and running water. The majority of the units are in an unfavourable but recovering status with the remainder in a favourable condition. The topography of the SSSI is varied due to steep sided valley slopes created by small tributaries of the River Churnet. Detailed consideration will need to be given to the location of any development proposals in respect of this designation to avoid negative impact;
- Ashbourne Hey Grade 2 Site of Biological Importance (SBI) adjoins the SSSI to the north, south and west, consisting of the surrounding fields where grazing and grassland management has resulted in areas of high quality grassland pasture. Detailed consideration will need to be given to the location of any development proposals in respect of this designation to avoid negative impact;

- The identification of Protected Species within the site will potentially require mitigation such as protection of existing habitat, relocation of species to an appropriate location or the provision of alternative habitat on- or off-site where they are to be lost. In addition, a survey will be undertaken to identify habitats of value within the site such as existing mature and semi-mature vegetation. Where identified, habitats of nature conservation importance will be maintained and enhanced wherever possible;
- Consideration of geo-environmental conditions of the site will be an important factor in developing the scheme. In addition, geotechnical issues will determine which areas are available for development taking into account existing factors such as ground and slope stability;
- Surface and ground water changes will also be an important factor which will influence the scheme evolution once quarrying operations have ceased and will determine areas that can be used for potential recreational and leisure activities; and,
- The site is located in a 'Special Landscape Area', a local designation and therefore consideration will need to be given to the scale, siting and design of the development.

2.30 Those potential receptors in the surrounding area include:

- The Churnet Valley SSSI is managed as a Nature Reserve by the RSPB and Staffordshire Wildlife Trust and as a Country Park by Staffordshire County Council. It is designated as a SSSI due to the variety of habitat species and assemblages the site supports, including semi natural ancient woodland and species rich grassland. The site is located to the north west of Whiston and to the north of the A52. It is approximately 1.5km north west of the site;
- Froghall Meadow and Pastures SSSI is an 11 hectare site located within 1.7km of the site, to the north-west. The site is designated due to its composition of unimproved, species rich fields showing a range of grassland types. The SSSI is located to the north west of the site, within the Churnet Valley and is adjacent to the disused section of the Churnet Railway;
- Bath Pastures SSSI is an 8 hectare site located 1.1km to the east of the development site and adjoins a Staffordshire Wildlife Trust site known as Side Farm Meadows. It is allocated due to the assemblages of rich unimproved acid grassland, with both dry and wet communities;

- Whiston Hall SBI is located to the north west of the site and encompasses the golf course. In addition, there are a number of other SBI's within a 1km radius including Whistonbrook, Heathy Gore and Upper Cotton Dell;
- Areas of Ancient Woodland adjoining parts of the southern boundary of the site;
- The River Churnet is located to the south of the site, flowing approximately 70m from the southern boundary; and,
- Local residents adjacent to the site may experience indirect effects from the construction and operation of the proposed development. Consideration will be given to the nature and scale of any potential effect so appropriate mitigation measures can be outlined and incorporated into the scheme were appropriate.

3 DESCRIPTION OF THE DEVELOPMENT

3.1 It is currently anticipated that outline planning permission with all matters reserved for future determination except means of access will be sought for the development. The proposals seek to restore and redevelop the quarry site in order to create a high quality leisure destination, which will generate significant employment opportunities.

3.2 The key elements of the proposals considered in scoping the development are as follows:

- Up to 250 lodges;
- Admin block/Business Centre;
- Existing retained office block;
- Hub buildings comprising a mixture of recreational uses;
- Water Sports Centre;
- Café;
- Outdoor sports and leisure activities; and
- Visitors Centre.

3.3 The development will be integrated into the landscape with habitat creation forming an important element of the scheme. Existing landscape features and structures will be utilised to ensure the landscape character of the site is maintained.

3.4 The ES will include a detailed description of the proposed development and the construction activities required for its delivery. This section of the ES will also include a summary of the general principles required to avoid or reduce impacts during the construction stage.

3.5 The description of the development section will also include information on those mitigation measures that have been designed in to the proposals, having been identified as necessary through the EIA process. These features of the proposals will be considered to be part of the development that is subject to the final assessment of impacts presented in the ES. Where mitigation measures are not of

a nature that they can be designed in to the scheme, they will be specified separately. Further detail on this is presented in the following section.

3.6 Although the elements set out above are currently anticipated to form part of the proposals, the details of the proposals will be informed and refined through the EIA process and the continuous process of consultation with the LPA, key stakeholders and the public.

4 EIA APPROACH

4.1 This section details the proposed technical areas for assessment within the ES. It sets out the context, an outline of the intended approach to assessment and potential effects that have been identified at this stage. Where appropriate and where sufficient information is known, it outlines potential mitigation measures.

4.2 The following environmental issues have been 'scoped in' to the EIA for the proposed development;

- Socio Economics and Tourism;
- Ecology and Nature Conservation;
- Ground Conditions;
- Drainage and Flood Risk;
- Landscape and Visual;
- Archaeology and Cultural Heritage;
- Waste;
- Transport and Access;
- Air Quality and Dust; and
- Noise and Vibration.

EIA Approach and Methodology

4.3 The ES will be prepared to fully comply with Schedule 4 (Part I and II) of the EIA Regulations: *'Information for Inclusion in Environmental Statements'*; and in accordance with National Planning Practice Guidance.

4.4 The EIA Regulations state that:

…an ES should include a description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:

(a) the existence of the development;
(b) the use of natural resources;

(c) the emission of pollutants, the creation of nuisances and the elimination of waste.

4.5 As such, a consistent approach will be adopted throughout the EIA to ensure that likely significant effects are identified and evaluated in a transparent manner. Each environmental assessment topic will adopt the following approach:

- Baseline Assessment and Identification of the Study Area;
- Identification of Sensitive Receptors;
- Identification of Potential Effects during Construction and Operation of the proposed Development (including indirect, direct, adverse and beneficial);
- Assessment of Impact Significance;
- Identification of Mitigation Measures;
- Assessment of Residual Effects; and
- Assessment of Cumulative Impacts.

Baseline Assessment

4.6 Staffordshire County Council approved a Revised Restoration Plan for the site in March 2014. This restoration plan will form the baseline to be considered as part of the EIA for the planning application. The baseline section of the EIA will identify the current, existing and the future baseline assuming full implementation of the Revised Restoration Plan. The impact assessment and mitigation measures must be based on the impact to the baseline assuming full implementation of the Revised Restoration Plan.

Assessment Parameters

4.7 As the application is to be submitted (predominantly) in outline, we would assess the development proposals against a series of designated parameters to ensure a robust assessment of the worst case scenario and to ensure compliance with relevant case law. The assessment parameters would include those defined in the table below.

Assessment Parameters

EIA Parameters	Purpose
Planning Application Boundary	Defines the extent of the site and the proposed development.
Land Uses	Defines the type of development permissible within the identified zones.
Building Heights	Defines the range of heights permissible within the identified zones.
Strategic Open Space and Landscaping	Defines the areas reserved for open space and landscaping.
Detailed Means of Access Plans	Defines the means of access to the site, which will be applied for in full detail.

4.8 Where features of the development are applied for in full detail, the assessment of the effects of these features will be undertaken on the basis of the detailed planning application drawings rather than assessment parameters defined in the above table.

Significance Criteria

4.9 The assessment of impact significance will be undertaken for all potential effects to determine their relative importance. The following criteria will be considered when assessing their significance:

- Magnitude (size of effect);
- Spatial extent (size of the area affected);
- Duration (short, medium, or long term);
- Nature of the effect (direct or indirect, reversible or irreversible);
- Sensitivity of the surrounding environment and receptors;
- Inter-relationship between effects;
- International, national or local standards; and,
- Relevant planning policy.

4.10 Wherever appropriate, the significance criteria below will be used to categorise predicted effects. Where alternative classifications have been used, they will be explained in the methodology sections within each technical assessment.

Significance Criteria to be adopted for impact assessment

Significance	Criteria
Major	These impacts are likely to be important considerations at a regional or district scale but, if adverse, are potential concerns to the project, depending upon the relative importance attached to the issue during the decision making process. Mitigation measures and detailed design work are unlikely to remove all of the impact upon the receptor.
Moderate	These impacts, if adverse, while important at a local scale, are not likely to be key decision making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or a particular resource. They represent issues where impacts will be experienced but mitigation measures and detailed design work may ameliorate/enhance some of the consequences upon affected communities or interest. Some residual impact may still arise.
Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision making process. Nevertheless, they are of relevance in the detailed design of the project and consideration of mitigation measures.
Negligible	Potential impact is beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.
No Impact	No impact is predicted.

Mitigation

4.11 Mitigation is defined as those measures that are required to avoid, remedy or offset the identified environmental impacts of a project. As described in Section 3, those mitigation measures that are identified through the EIA process and which have been designed in to the proposals such that they appear on the parameters plans and are integral to the development will be considered to be part of the development for the final assessment as presented in the ES. Designed in mitigation will be described in the Description of the Development chapter of the ES and within each technical chapter, where relevant.

4.12 Mitigation that is not designed in to the proposals and which requires a commitment from the applicants to carry out further actions will be specified in

the Mitigation section of each technical chapter and summarised in the Summary of Mitigation and Residual Effects chapter. These measures would then be secured through the application of conditions attached to the planning permission or through an appropriate legal framework, such as the Section 106 agreement.

Residual Effects

4.13 Each ES chapter will conclude with a summary of the residual effects of the development once all related mitigation measures have been taken into account. This is the final stage of the assessment process.

5 ALTERNATIVES

5.1 The EIA Regulations require that the ES reports '*…an outline of the main alternatives studied by the applicant of appellant and an indication of the main reasons for his choice, taking into account the environmental effects*'. Therefore, the ES will consider the following types of alternatives:

- The 'do nothing' alternative: Consideration of the site in the absence of the proposals and the possible implementation of alternative development. This is represented in this case by the future baseline scenario, which is based on the implementation of the revised restoration scheme;
- Alternative layout and designs: A description of the design and evolution based on environmental constraints, potential effects and other considerations, with a description and account of the main reasons why alternative layouts were dismissed and why the preferred design option was selected.

5.2 The site is identified as a 'Key Opportunity Site' within the Churnet Valley Masterplan Supplementary Planning Document and the Staffordshire Moorlands Core Strategy. Therefore, it is considered that the location of alternative sites is not relevant and will not be considered further within the EIA.

6 PLANNING POLICY CONTEXT

Context

6.1 A Planning policy context chapter will be included within the ES to assess the proposals against relevant planning policy. The details of policies relating to specific topics addressed within the ES will be contained within the relevant technical chapters.

Approach

6.2 The merits of the proposed development will be examined against the relevant planning policies and guidance adopted at national, regional and local levels. Particular relevance will be made of the following documents:

- National policy provided by Planning Policy Framework (NPPF);
- Local Planning Policy comprising the Staffordshire Moorlands Local Plan, and any associated Local Development Framework documents such as the Churnet Valley Masterplan and the Core Strategy.

6.3 In particular the following issues will be considered:

- General planning principles;
- The compatibility and appropriateness of the proposed uses;
- The environment;
- Tourism and leisure;
- Transport; and,
- Design (policy and guidance).

7 SOCIO-ECONOMICS AND TOURISM

7.1 The purpose of this chapter is to identify and assess the likely socio-economic and tourism impacts of the proposed development. The assessment is split into two parts with the first part of the assessment concerning the socio-economic impacts of the proposals relating specifically to job creation, implications for the resident population and cultural and sporting effects. The second part of the assessment concerns the tourism aspects of the proposals which relate specifically to likely visitor numbers and spend, potential catchment, estimation of duration and extent of staying visitors and an assessment against national, regional and local tourism strategies and policies.

Site Context

7.2 The local employment pattern reflects the nature of the area, and as with many locations is increasingly moving away from more traditional employment to service sector jobs. Up to its closure in 2012 there was some decline in the relative proportion and absolute numbers employed at the site. The majority of those previously employed at the site both directly and indirectly are from the local area, including skilled, semi-skilled and unskilled workers.

7.3 In terms of recreation, there are a number of public footpaths near the site. The proposals will contribute to the current network and increase the recreational activities in the local and wider area.

Approach

7.4 The assessment will be undertaken in a number of stages. The first stage will consist of establishing the baseline through data collection. This will include a desktop review of local plans and strategies such as the emerging Core Strategy for Staffordshire Moorlands District Council and their Economic Regeneration and Tourism Strategy, along with a review of regional and national level plans and strategy such as the West Midlands Visitor Economy Strategy. It will also include establishing the baseline demographic, economic and employment trends with reference to a number of published data sources on population, employment, travel pattern together with local service providers.

7.5 The baseline analysis will cover the following broad topics:

- Local economic conditions;
- Employment, Unemployment and Worklessness;
- Deprivation;
- Education and Skills;
- Health and Wellbeing; and
- Crime and Fear of Crime.

7.6 In addition, the baseline assessment will consider the existing conditions relating to the visitor economy by reviewing the current supply of tourism facilities within Staffordshire, analysing current available visitor data and establishing trends and types of visits to the area.

7.7 The second of stage of the assessment is to assess the socio-economic and tourism effects during both the construction and operational phases of development.

7.8 During the construction phase the key issues are considered to be:

- The provision of temporary employment for the construction works; and
- The impact of temporary, local spending relating to construction activity.

7.9 During operation the key issues are considered to be:

- Impact on the tourist and visitor economy, including the impact at the local/ regional and national level on increased visitor attraction and visitor stays;
- Impact on local employment and implications for local skills linked to tourism; and
- The effects of the potential increase in spending in the area and the indirect impact on employment.

7.10 This will be used to assess the socio-economic and tourism related impacts of the proposals and a level of significance will be determined. This will allow mitigation measures to be identified along with any residual effects.

8 ECOLOGY AND NATURE CONSERVATION

8.1 The purpose of this assessment is to identify and assess the likely ecological effects of the proposed development. It will include an outline of the legislative framework in respect of nature conservation, and outline of the various ecological surveys undertaken and their adopted methodologies, identification and evaluation of the existing ecological resource, identification of likely impact and a discussion on the scope for mitigation and enhancement. Residual impacts will also be assessed.

Site Context

8.2 The site is located in a wider area of pastoral farming with a fairly high degree of woodland cover. The site itself has no designations. However, adjacent to Quarry 3 is Whiston Eaves SSSI. This is a series of fields of species-rich semi natural grassland. Churnet Valley lies 1.5 km to the north west which includes the main valley of the River Churnet and a number of the tributary valleys. This retains the largest remaining concentration of ancient semi-natural vegetation in Staffordshire. Froghall Meadow (1.7km) SSSI and Bath Pasture (1.1 km) SSSI lie north west, and east respectively.

Planning Policy Context

8.3 There is a comprehensive system of legislation, both domestic and international, which aims to protect biodiversity at the landscape, habitat and species level. Much of this legislation exists within and also independently of the planning process, and will therefore be taken into account. Such legislation includes:

- Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way Act 2000;
- The Natural Environment and Rural Communities Act 2006;
- The Protection of Badgers Act 1992; and
- EC Directive Conservation of Natural Habitats & Flora (92/43/EEC) implemented in the UK by the Conservation Regulations 2010.

8.4 National, Regional and Local Policy documents will also be of importance:

- UK Biodiversity Action Plan (UKBAP);
- National Planning Policy Framework (NPPF);
- Planning Practice Guidance (PPG);
- BS42020 Biodiversity – Code of Practice for Planning and Development (BSI 2013);
- Conserving Biodiversity – The UK Approach (DEFRA, 2007);
- The British Standards Institute's Publicly Available Statement on planning to halt the loss of biodiversity (PAS 2010), issued 2007;
- Staffordshire Moorlands Local Plan; and
- Staffordshire Biodiversity Action Plan.

Approach

8.5 The aim of the assessment will be to identify, as far as is reasonably possible, the nature of the ecological resource within the site and the study area, to assess its significance and to make appropriate recommendations for the future treatment of key habitats which may be affected by the proposed development. The significance of the ecological resource will be assessed according to the approach set out in the Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (IEEM 2006). The assessment will comprise a desk-top study and a site inspection along with further detailed habitat and species surveys.

8.6 The desk top study has already commenced and included consultation of the following resources:

- Staffordshire Moorlands District Council;
- Staffordshire County Council
- Natural England;
- Staffordshire Ecological Record (the key ecological data holder);
- Staffordshire Wildlife Trust;
- Staffordshire Badger Conservation Group;
- Staffordshire Mammal Group;
- Multi-Agency Geographic Information for the Countryside (MAGIC); and
- Nature on the Map.

8.7 Further consultation was held with Staffordshire Moorlands District Council (Arne Swithenbank) and Staffordshire County Council in April and May 2014. This consultation focused upon the scope of updating surveys which were described as follows:

- Updating Phase 1 habitat survey to map vegetation and carry out checks for mobile species such as badger and new habitats for species such as amphibians. The survey will focus upon the proposed development area plus a buffer of up to 500 m for GCN and 50 m for other protected species (e.g. badger).
- Great crested newt – two visits during the peak period to confirm that previous population assessment (medium sized population of great crested newts). This survey will concentrate on the restored lagoon in L1, lined ponds by the Sibelco lab buildings and the former settling lagoons in Q1 – these water bodies, particularly the restored lagoon and lab ponds, are the focus for the GCN population utilising habitats within the quarry and wider area.
- Updating breeding bird survey – 2 visits during the peak period between May-June. The survey will concentrate upon the proposed development areas in Q1 and Q2.
- Bat surveys – general activity survey within the quarry. The majority of buildings have now been removed and the current proposals will have a limited effect upon potential roosting habitat (mainly mature trees in the woodland activity area in the south of Quarry 1).

8.8 The response to this consultation was as follows:

- Following our phone discussion I am happy with these proposals. Just a note: should Phase 1 survey identify any new water bodies – ponds or ditches that may have been colonised by great crested newts survey should include these. Staffordshire County Council 13th May 2014.
- In terms of consultation, SCC remains a key consultee - doubly so given their role in ensuring satisfactory re-instatement following the cessation of quarrying. We have received some interim comments from Ali Glaisher (SCC Ecologist) which will be forwarded to the applicants - she does

underline the need for up-dates to surveys - broadly as you have indicated I think. Staffordshire Moorlands District Council 13th May 2014.

8.9 An initial extended Phase 1 habitat survey was undertaken in April 2010 with the aim of identifying potential for protected species and ecological development constraints. The Phase 1 survey was updated in 2011 and during the summer of 2014. A wide range of ecological surveys were undertaken during 2010-2011 with targeted updates in 2014. Details of the ecological surveys undertaken to date are detailed in Table 8.1 below, which includes a brief synopsis of the methods adopted.

Summary of Survey Method and Overview

Study & Method	Overview
Phase 1 & botanical Extended Phase 1 survey following Phase 1 habitat survey methodology (JNCC, 1993) during 2010 and updated in 2011 and 2014. Phase 2 Vegetation Survey during 2010 and 2011– plant community mapping and sampling. Vegetation assigned to the National Vegetation Classification (Rodwell 1991 et seq) where relevant.	The site is complex and in general terms consists of: The current working quarry, restored areas (including Lagoon L6 which has been subject to hay strew and natural regeneration – with patchy recolonisation), secondary habitats (including regenerating birch woodland, gorse scrub, grassland), other restored habitats (gorse/broom planting), semi-natural habitats (grassland, woodland) predominately retained around the edges of the quarry and around lagoons on the southern side of the quarry. Areas outside of the quarry are predominantly grassland subject generally to grazing. Some of these areas fall within non-statutory designations and vary in composition and quality. These habitats were considered to support a variety of faunal interests that were subject to further surveys. The updating Phase 1 surveys in 2014 confirm that baseline conditions are similar to those recorded in 2010 and 2011.
Hedgerows All hedgerows within the land holding, were assessed, utilising the Hedgerow Evaluation and Grading Systems (HEGS): A Methodology for the Ecological Survey, Evaluation and Grading of Hedgerows (DK Clements & RJ Tofts)	Areas of land outside of the quarry (and leisure proposals) support a network of native hedgerows of varying value. Whilst the hedgerow network will not be significantly affected by the current leisure proposals, this information is included within the assessment in terms of assessing ecological connectivity within the wider area.
Reptile surveys follow the methods outlined in Gent & Gibson (1998). Eight survey visits were	Adder, grass snake, slow worm and common lizard are all recorded from the area. Grass snake, common lizard and a medium sized population of slow worm were recorded during site surveys.

considered to be sufficient effort to assess the use of the site by reptiles.	
Amphibian surveys were undertaken during April, May and June 2010; and updated over two visits during April and May 2014. The surveys followed the methodology outlined in Natural England's Great Crested Newt Mitigation Guidelines (Natural England 2001).	The quarry supports a medium sized population of great crested newts. The 2014 update survey confirms that site conditions remain similar to the original survey. Great crested newt was recorded in an additional pond (settling lagoon at the southern end of Quarry 1) within the quarry and it is considered that breeding habitat is improving at the site as a consequence of cessation of minerals operations at the site.
Breeding Birds The bird survey was carried out between 25th May 2010 and 15th March 2011. The methodology used was broadly in accordance with the Breeding Bird Survey (BBS) Methodology (Gilbert, Gibbons and Evans, 1998). This survey was updated over two visits during spring and early summer 2014.	The site supports a relatively wide range of breeding bird species. Four species of bird afforded higher protection under Schedule 1 of the Wildlife and Countryside act 1981 (as amended) were recorded during site surveys including goshawk, peregrine and kingfisher and little ringed plover. Of these it is considered that little ringed plover breed at the site (1 pair) and peregrine have used cliffs for perching whilst hunting. Eight species recorded at the site are included on the RSPB Red List of 'Birds of Conservation Concern' (RSPB, 2004) including lapwing (also a BAP species), willow tit, starling, song thrush, spotted flycatcher, house sparrow, tree pipit and linnet.
Otter and Water Vole The otter surveys were carried out in line with Natural England's advice on standard survey methods for otter surveys. A water vole habitat potential assessment was undertaken during the otter surveys. The assessment followed Strachan R. (1998). Water vole conservation handbook. Wildlife Conservation Research Unit, Oxford.	Otter activity was identified along the River Churnet and along small, unnamed watercourses within the woodland at Whiston Eaves. Signs identified include tracks and spraint. The habitat potential assessment carried out at the same time as the otter surveys identified that no waterbodies provide suitable habitat for water vole within the study area or within the immediate vicinity. All watercourses were either too steep sided with rocky banks (such as within the Whiston Eaves woodland) or too deep and fast flowing with unsuitable bank habitat such as along the River Churnet. In addition to this, no signs of water vole including burrows, feeding remains, grazed lawns or droppings were identified during the otter survey.
White clawed crayfish survey followed Peay S (2003). Monitoring the white-clawed crayfish *Austropotamobius pallipes*. Conserving Natura 2000 Rivers Monitoring Series	Survey in 2011 found a single American signal crayfish *Pacifastacus leniusculus* in a small tributary stream of the River Churnet adjacent to the site. Updating surveys during 2014 identified the presence of the same species in the southern most settling pond within Quarry 1.

No. 1, English Nature, Peterborough.	
The approach to the bat surveys followed **Bat Surveys** - Good Practice Guidelines (Bat Conservation Trust 2012). The bat survey involved: 1) building inspections, 2) tree inspections, 3) emergence and return surveys, 4) evening activity surveys and 5) the use of remote detectors (Anabat). These surveys were updated in 2014 by undertaking two transect surveys, one in June and one in July 2014. In addition, static detectors were deployed at the site during July 2014.	The data search revealed records of five species of bat including Pipistrelle sp., common pipistrelle, brown long eared, Daubentons and Whiskered/Brandts within a 2km radius of the site. Records of roosts have been obtained from desk study, surveys for a quarry extension in 2006, surveys at the site in 2010 and 2014. These roosts are located at; • Fairfield, Stoneydale which is approximately 1km south east of the southern extent of the site. • Oakamoor Tunnel provides summer and hibernation roost of natterers, Daubentons and brown long eared bat. • A small brown long eared bat roost in Whiston Barn. • A small roost of unidentified bats was also noted within the loft of Littleheath House Farm. • Heath House Farm supports a small roost of less than ten individuals of brown long eared and common pipistrelle bats. • Rake Edge Barn also supports a roost of a small population of less than 10 individuals of common and soprano pipistrelles and brown long eared bats. • A small (single bat) brown long eared bat roost in a barn at Crow Trees Farm. None of these buildings/structures will be affected by the current leisure proposals. During 2011, fifty three trees were considered to offer high to moderate potential to provide bat roosting habitat. No confirmed tree roosts were identified during the assessment. It should be noted that the majority of these trees are outside of the current leisure proposals. The habitat assessment, activity surveys and remote detector surveys identified that the site provides valuable foraging and commuting habitat for a number of species of bat including common and soprano pipistrelle, brown long eared, noctule, natterers and Daubentons bat. Commuting and foraging habitat is provided via the extensive network of hedgerows, stone walls, woodland, single mature trees, watercourses, ponds and standing water within the quarry.
Additional faunal assessments were undertaken during the course of the other surveys. This included an assessment of habitat for polecat, pine marten and dormouse.	No evidence of other notable species was recorded during surveys at the site.

8.10 A report will be produced which will describe the work carried out and the results obtained. The information will be used to describe the ecological resource, potential impacts at different stages of development (including construction and operational phases), their significance and possible mitigation.

8.11 Once the surveys have identified which specials and habitats are present on site. An ecological value will be assigned to each resource using a geographical framework. An ecological resource or feature is considered to be important at a particular geographical level such as:

- International;
- National;
- Region;
- County;
- Local; and
- The site

8.12 The potential impacts of the project on the ecological resource will be considered in relation to valued ecological receptors, for example: i) habitats with nature conservation designations, ii) habitats and species identified in the National Biodiversity Action Plan (also NERC S41 Habitats and Species of Principal Importance for Nature Conservation) and the Staffordshire Biodiversity Action Plans, iii) habitats and features which support protected and/or vulnerable species, and iv) habitats which make a significant contribution to local biodiversity interests (e.g. connecting habitats such as stone walls, hedgerows and watercourse).

8.13 Consideration will be given to any change in the nature and value of conservation resources that are likely to be present within the study area. These considerations could include changes to the character and quality of the habitat.

8.14 The prediction and evaluation of effects will need to consider the scale of the change, the likely change to the resource as a result of the effect and the sensitivity of the resource.

8.15 The potential impacts on such resources are likely to be characterised with consideration to the following characteristics of impact:

- Positive or negative;

- Magnitude – quantification, where possible, of impact, e.g. area of habitat loss, partial loss of habitat;
- Extent – area over which the impact occurs (when considering habitat loss the magnitude and the extent are the same);
- Duration – given with consideration to the functioning of the ecosystem or species;
- Reversibility – an impact is reversible it spontaneous recovery is possible or if a commitment to mitigation has been made;
- Timing and frequency – timing of the works in relation to critical life-stages or seasons, and how often an impact will occur.

8.16 A level of certainty in the prediction of impact on ecological structure and function is assigned using a scale from certain or near certain to probable, unlikely, and extremely unlikely. This is important in determining the requirements for mitigation.

8.17 If the impact on the integrity of the ecological resource is significant, then the impact is considered significant at the geographical scale (i.e. local to international) that the ecological resource has been valued at. If the impact is not considered at that geographical scale, it may still be significant at a smaller geographical scale.

9 GROUND CONDITIONS

9.1 The purpose of this assessment is to examine the site's geological and hydrological conditions and the effects on them during both the construction and operational phase. The potential for ground contamination will be examined in light of the sites previous use as a working quarry and remedial measures specified as necessary.

Site Context

9.2 The site's past use was a series of sandstone quarries removing the 30m to 35m thick Rough Rock Sandstone which outcrops either side of Eaves Lane dipping between 3 and 12 degrees to the south-southwest. On the lower ground to the south, between the quarries and the River Churnet the sandstone are overlain by the Upper Carboniferous Coal Measures consisting of mainly grey undifferentiated mudstone. However, historic maps show shallow coal mining has occurred in Coal Measures southwest of the site, north of the River Churnet, on the west side of what is now known as Key Wood. On the higher ground to the north of the quarries, the sandstone outcrops over siltstones and shale beds of the lower Rough Rock sequence. Groundwater generally flows through the lower sequence of the Rough Rock Sandstone and drains with the surface water into a series of incised valleys to the south, and the River Churnet.

Approach

9.3 The aim of the assessment will be to identify, as far as is reasonably possible, the nature of the underlying ground conditions and contamination within the study area. All previous desk based assessments and previous site investigations will be used to inform the assessment and to identify potential environmental risks associated with historical ground contamination. This will include identification of any landfilling of waste material on site within 400m of the site. Any hazardous substances or signs of pollution or contamination will be noted. A conceptual model of the site will be developed using the source – pathway - receptor model to identify pollutant linkages.

9.4 The objectives of the desk-based assessment will be as follows:

- To review all previous desk based and site studies already undertaken on the site;
- To establish the environmental setting of the site, particularly with regard to ground conditions including local geology, hydrology and hydrogeology;
- To identify historic use or current potential sources of contamination and how these may affect the proposed scheme or indeed the wider environment;
- To develop a conceptual model of the site. This would be carried out in line with requirements of the Environmental Protection Act Part IIA source-pathway-receptor 'pollutant linkage' methodology; and
- To undertake a geotechnical appraisal of the site and identify any site constraints and potential risks.
- Constraints and development considerations, including recommendations for further investigations, assessments and mitigation.

9.5 In addition, initial testing of surface water and surface tailings of the existing tailings lagoon in Quarry 2 will be undertaken to determine the pH. This will help to determine the potential risk it may present.

9.6 The effects during the construction stage will be identified and mitigation measures outlined. This will include consideration of creating development platforms on areas of previous quarrying activity including areas which have been previously infilled, proposed changes to ground levels and structural stability of certain areas within the site. Mitigation measures will inform the design and layout of the proposals or will be recommended for implementation during the actual construction process.

9.7 The effects during the operational phase will also be considered and mitigation measures outlined. This will include consideration of potential sources of ground contamination during operation. Mitigation measures will inform the design and layout of the proposals or will be recommended for implementation during the actual construction process.

10 DRAINAGE AND FLOOD RISK

10.1 The purpose of this assessment will be to assess the likely effects on water quality as a result of the proposed development. It will also provide an assessment of flood risk and a flood risk assessment will form an appendix to the Environmental Statement.

Site Context

10.2 The site is located on the north side of the steeply incised valley of the River Churnet. Several small streams drain the area south-west of the river. The predominantly northeast-southwest drainage pattern has led to the development of a series of small valleys, cutting into the valley side. These have a marked effect on the outcrop pattern of the solid geology which strikes approximately perpendicular to the valleys.

10.3 A review of Environment Agency data has shown that the whole site lies within Flood Zone 1. This zone comprises land with the lowest flood risk, a 0.1% chance of annual flooding.

Approach

10.4 The aim of the assessment will be to identify, as far as is reasonably possible, the nature of the hydrology within the area of the proposed development, to assess its significance and to make appropriate recommendations for potential mitigation, which may be necessary.

10.5 In the first instance the assessment will consider the existing hydrological regime on the site and the quality of the water features present. The approach to the assessment will be informed by the Design Manual for Roads and Bridges (DMRB) 'Road Drainage and the Water Environment'. The DMRB approach provides a methodical approach based on:

- Identifying of all water features within a site (e.g. a river or an aquifer);

- Understanding the importance of the water feature based on its attributes (e.g. whether it is used for recreational amenity, for water abstraction or as a fishery);
- Identification of the potential effects of construction and operation of a proposed development;
- Assessment of potential sources and pathways of construction and operational contamination with reference to environmental best practice guidelines;
- Following assessment, identification of appropriate mitigation measures to minimise/ prevent adverse effects on local receptors for inclusion within a Code of Construction Practice (CoCP) or Construction Environmental Management Plan (CEMP).

11 LANDSCAPE AND VISUAL

11.1 The purpose of the assessment is to examine the current landscape and visual baseline conditions within the site and also to examine the site in its broader context including the identification of long distance viewpoints and visual receptors within the surrounding area. The assessment will analyse the likely landscape and visual effects of the proposal and recommend mitigation measures where these have not been incorporated into the design.

11.2 It is noted through site inspection that the site is visually contained from a number of vantage points. However, detailed consideration will be given to the potential for visual effects as the scheme design progresses and to the fact that the site falls within the local designation of a 'Special Landscape Area'.

Site Context

11.3 The landform in Quarry 2 rolls in a broad wave along a northwest-southeast alignment, whilst always rising (from approximately 180mAOD) in a northeasterly direction (to a level of approximately 232mAOD).

11.4 The site south of Whiston Eaves Lane falls from a level of approximately 190mAOD in the north to approximately 170mAOD in the southern extremity. Much of the land alongside Quarries 1 and 3 contains grassland swards of varying quality.

Approach

11.5 Landscape and visual effects are independent but related issues. Landscape effects relate to changes to the landscape fabric and the features contained within the landscape character and quality; visual effects relate to the appearance of such changes and the resulting effect on visual amenity.

11.6 The aim of the assessment will be to identify, as far as is reasonably possible, the nature of the landscape and visual changes that will arise from the proposed development, to assess any significance and to make appropriate recommendations for the future mitigation of any resulting effects. The report will assess the effect of the proposed development on the landscape character of

the site and the surrounding areas as well as the visual character of the proposed development.

11.7 The methodology for undertaking the Landscape and Visual Assessment follows the guidelines set out in the Guidelines for Landscape & Visual Impact Assessment, 3rd Edition, 2013 (referred to hereafter as "the Guidelines").

11.8 Identification of the existing landscape and visual baseline conditions must be identified in order to evaluate the potential effects of development.

11.9 Accordingly, the landscape and visual assessment identifies:

- Effects on the Landscape Character: The effects which may arise as a result of the proposed development on discrete character areas and/or character types comprising features possessing a particular quality or merit; and

- Visual Effects: Effects that may arise as a result of the proposed development on views from visual receptors such as residential properties, and upon the amenity value of the views of surrounding uses.

11.10 In terms of the landscape assessment, the significance of effects will be assessed by taking account of the sensitivity of the receptor (the ability of the landscape to accommodate change) together with the nature, scale and/or magnitude and duration of the change.

11.11 Attributes which may contribute to the sensitivity of the landscape could include:

- Landscape character including aesthetic considerations;
- Landscape features that are commonplace / rare / distinctive
- Visual enclosure / openness;
- Landscape designations (e.g. National Park, AONB, etc);
- Value (national / regional / local);
- Historical or cultural associations;
- Rarity;
- Wildness / tranquillity;
- Tolerance to change;

- Replaceability or substitutability;
- The scope for effective mitigation in character with the existing landscape.

11.12 Attributes which may be considered in assessing the magnitude of change include:

- The extent to which the change of landscape features alters the landscape character;
- The extent of the area over which the effect is evident;
- The duration of the effect (short / medium / long term, permanent / temporary); and
- The effectiveness of the mitigation proposed.

11.13 In terms of the Visual Assessment, the first stage in the process of assessing the visual effects in relation to a particular development is to establish the area from which a proposal is likely to be visible, the 'Zone of Theoretical Visibility' (ZTV) or 'Visual Envelope' (VE). Potential visual receptors are identified through desktop studies and supported by site inspections.

11.14 The visual assessment is based on selective representative viewpoints, that both characterise views of the development and those which are of particular importance or sensitivity, against which the effects of the development will be assessed.

11.15 The significance of the visual effect resulting from the development will be derived through consideration of the sensitivity of change to the view, together with the magnitude of change of view.

11.16 The sensitivity of the identified potential visual receptors relates to the amenity value of the view. This value is dependent on a range of factors including:

- Location of the viewpoint;
- Importance of the view (popularity, cultural associations);
- Public accessibility;
- Occupation and expectations of the receptor (e.g. residents / users of recreational facilities / workers in their workplace / motorists passing through);

- Wide panorama, framed, glimpsed or sequential view;
- Extent of screening or filtering of the view (e.g. by buildings / vegetation); and
- The scope for effective mitigation in character with the existing landscape.

11.17 The magnitude or scale of potential visual change on views and on visual amenity of the identified receptors will be described by reference to the following:

- The scale of change in the view with respect to the loss or addition of features and changes in the visual composition;
- The degree of contrast or integration of any changes with the existing or remaining landscape components – form, mass, height, colour and texture;
- The duration of the effect (temporary / permanent, intermittent / continuous etc);
- The angle of the view in relation to the main activity of the receptor;
- The distance from the viewpoint to the proposed development;
- The number of receptors affected; and
- The effectiveness of the mitigation proposed.

11.18 Viewpoint locations will be agreed in consultation with Staffordshire Moorlands District Council and a series of representative photomontages will be developed.

11.19 The report will also consider the potential cumulative impacts from the proposed Solar farm located adjacent to the site.

11.20 Culmulative impacts can be defined as: *"landscape and visual effects that result from additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments".*

11.21 Guidance on methodology for cumulative impact assessment is currently very limited, however reference has been made to brief guidance within the 'Guidelines'.

11.22 Sources examined for the desk-top study will include:

- Local Planning Policy comprising the Staffordshire Moorlands Local Plan, and any associated Local Development Framework documents including the Churnet Vallet Masterplan Supplementary Planning Document March 2014;
- Landscape and Heritage Designations (it is noted that the site falls within a Special Landscape Area as identified on the Proposals Map);

- Natural England's National Character Area 64 'Potteries and Churnet Valley';
- Natural England's National Character Area 53 'South West Peak';
- Natural England's National Character Area 52 'White Peak';
- Natural England's Natural Area Profile, the 'Churnet Valley Natural Area'.
- Public Rights of way;
- Local OS Maps; and
- Aerial Photographs.

11.23 A site inspection will be undertaken. The aim of the site inspection is to:

- Confirm the extent of study areas for the landscape and assessments respectively (these will be agreed with Staffordshire Moorlands District Council);
- Confirm status of baseline conditions identified by the desktop study;
- Identify and establish the landscape character areas within the study area; and
- Identify key viewpoints from the surrounding landscape from which to assess any visual effect of the proposed development.

11.24 Mitigation measures will be incorporated into the proposals throughout the design process where necessary and described within the ES. An assessment of any residential effects which may arise following the incorporation of additional mitigation measures will be undertaken.

12 ARCHAEOLOGY AND CULTURAL HERITAGE

12.1 The Archaeology and Cultural Heritage Assessment will assess the known and potential archaeological and historic resource within the study area. This will be placed in the local, regional and national context and assessed against national criteria.

Site Context

12.2 Topographically the area may have been seen an attractive area for settlement during the Mesolithic to Early Iron Age periods, though sites dating to these periods are notoriously difficult to detect in the region. However, similar areas in the Pennine fringes of Cheshire and Greater Manchester have recently been found to have been occupied during those periods.

12.3 There is currently no evidence for later, Romano-British or Anglo-Saxon, settlement either within the site or in the study area. The archaeology of these periods is currently poorly understood in North Staffordshire, though the elevated, almost moorland situation, is unlikely to have been attractive for settlement, which in later periods seems to have been concentrated in the more fertile and less exposed valleys. Anglo-Saxon settlement in the wider area is likely to have consisted of isolated scattered farmsteads with a low level of material culture, difficult to detect using current methodologies. This pattern of settlement appears to have persisted into the late 17th century when the area began to become increasingly industrialised.

12.4 Evidence for medieval and early post-medieval settlement in the area is based primarily upon map evidence from later periods. This suggests that early in the period most of the proposed development was unenclosed common land, though the presence of ridge and furrow earthworks suggests that small areas at least were used for arable agriculture. Documentary sources and analogy with other areas imply that in the later medieval period this was likely to have been used for grazing/pasture and was gradually enclosed. This process was complete within the development area by at least 1811 when the first detailed map of the site was produced.

12.5 However, there are no known archaeological sites or monuments within the site and extensive recent quarrying suggests that it has very limited potential for the presence of previously unrecorded archaeological deposits.

12.6 There is a Grade II Listed Building, in the form of, Little Eaves Farmhouse (250m south west). In addition to a number of Grade II Listed Buildings within 1 km of the site. These lie to the north west and south east. The origins of small farmsteads such as Little Eaves are currently poorly understood. Most are assumed to have originated in the 17th and 18TH centuries when an increase in population resulted in more marginal land being taken into cultivation. However, it appears that settlement in upland areas has long consisted of a thin scatter of dispersed settlements and therefore some may have earlier origins.

Approach

12.7 The aim of the assessment will be to identify, as far as is reasonably possible, the nature of the archaeological and cultural heritage resource within the study area, to assess significance and to make appropriate recommendations for the future treatment of any remains which may be affected. The importance of the archaeological and cultural heritage resource will be assessed using criteria set out in DMRB Vol 11. The assessment will comprise a desk-top study and a site inspection.

12.8 The desk based assessment would be undertaken in accordance with standards set by the Institute of Field Archaeologists (IFA 2001). In accordance with the Institute of Field Archaeologists Standard the definition of a Desk-Based Assessment (IFA) is to:

"…determine, as far as is possible from existing records, the nature of the archaeological resource within a specified area. It will be undertaken using appropriate methods and within a specified area. It will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, which comply with the Code of Conduct, Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology, and other relevant by-laws of the IFA".

12.9 A site inspection will be undertaken at the site in accordance with the Institute for Archaeologists recommend practice. The site inspection will assess any information previously obtained to identify the extent and condition of any visible remains or cultural heritage features and assess the topography and geomorphology of the proposed area. Key features within the study area will be visited to assess potential indirect effects.

12.10 As such, the Archaeology and Cultural Heritage chapter of the ES will include assessment of potential effects or changes to:

- Known and potential buried archaeological remains;
- Listed and Locally Listed Buildings and their settings within the site and in the vicinity;
- Scheduled Ancient Monuments;
- Conservation Areas;
- Registered Parks and Gardens;
- Other features and buildings of historic or social heritage significance that may come forward through desk study or consultations.

12.11 Consultation with the following organisations and documents will also be undertaken:

- Historic Environment Record;
- Staffordshire Moorlands District Council Archaeological Officer;
- Local studies and archives and other relevant repositories;
- English Heritage;
- A review of relevant National Policy Guidance, including Planning Policy Statement 5: Planning for the Historic Environment;
- Local Planning Policy comprising the Staffordshire Moorlands Local Plan, and any associated Local Development Framework documents;
- Historic OS Mapping;
- Archaeological Data Service Online Catalogue;
- Reference and review would also be made to any previous desk-based assessments, environmental impact assessments or fieldwork reports prepared for other sites within the vicinity; and,

- A site inspection to assess the visible archaeological and built heritage resource and to make an assessment of the archaeological potential.

12.12 The assessment will identify and evaluate the nature and likelihood of impacts, in both the long and short term, on archaeological and cultural heritage features against clearly defined criteria. The significance of impacts will be assessed using a clearly defined significance criteria taking into consideration the scale and magnitude of effects upon identified sensitive receptors. The assessment methodology would be based broadly upon the guidance set out in the Design Manual for Roads and Bridges Vol. 11.

12.13 Archaeological resources are susceptible to a range of impacts during development; these relate to works associated with site preparation as well as construction related activities, including;

- Demolition and site clearance activities that disturb archaeological remains;
- Excavation that extends into archaeological sequences, for example deep foundations or basements resulting in the removal of the resource;
- Piling activities resulting in disturbance and fragmentation of the archaeological resource;
- Dewatering activities resulting in desiccation of waterlogged remains and deposits.

13 WASTE

Context

13.1 The purpose of this assessment is to assess the potential environmental effects resulting from waste associated with both the construction and operational phases of the site.

13.2 In March 2014, Staffordshire County Council (SCC) approved a Revised Restoration Plan for the site; therefore, the impact assessment and mitigation measures within the waste assessment will be based on the impact referenced to the baseline scenario assuming full implementation of the Revised Restoration Plan.

13.3 The site, assuming full implementation of the Revised Restoration Plan, will comprise a mixture of bare open ground (sandstone substrate and grassland), wet grassland, woodland, water bodies and pathways.

Approach

13.4 A review of national legislation, regional and local waste policies will be undertaken to determine and confirm what requirements will be expected for waste and recycling provision. This will also include a review of any waste guidance specific to SMDC.

13.5 An assessment of the waste streams generated during the construction phase will be undertaken using applicable construction waste arisings benchmark data from the Building Research Establishment (BRE) and will therefore be dependent upon the accuracy of existing/available input data. It is anticipated that the construction methodology to be used by the Principal Contractor will not be determined until the post planning approval stage. Accordingly the assessment will be based upon typical estimations of both volumes and types of construction waste. Opportunities for reducing, reusing, segregation and recycling of waste materials, together with an assessment of any residual construction waste streams, will be identified.

13.6 The future operations at the Proposed Development will generate commercial wastes. The likely volumes and types of waste materials generated from operational activities will be estimated, including identifying the percentage of waste materials that are likely to be suitable for recycling and appropriate disposal routes. Estimations will be determined from credible sources, which will be agreed with the Local Authority through consultation.

13.7 Consideration will be given to the potential impact on the capacities of local waste management infrastructure i.e. landfill sites, materials recovery facilities and other waste treatment facilities for waste materials generated during the construction and operation phases.

13.8 The magnitude of change and sensitivity of the affected receptor/receiving environment are both assessed on a scale of high, medium, low and negligible. Determination of magnitude will reflect judgements to the scale of the predicted change and deviation from the established baseline conditions. The significance of effects reflects judgements as to the magnitude of effect against the sensitivity of the affected receptor(s).

Construction Phase

13.9 During the construction phase a significant amount of waste may be generated including:

- Soils;
- Contaminated soils;
- Site clearance materials;
- Waste construction materials (concrete, steelwork, aggregate etc); and
- Waste from construction site welfare facilities.

13.10 The following effects have been considered as potentially significant and will therefore be assessed within the ES:

- Increase in waste generation from construction materials and increase in demand for local waste treatment and disposal facilities; and

- Potential health risks to contractors and personnel from the temporary storage of hazardous waste materials such as batteries, chemicals and waste electrical and electronic equipment during construction.

Operational Phase

13.11 Waste generated during the operational phase may include:

- Office wastes;
- Organic wastes from the Equestrian Centre;
- Commercial wastes; and
- Catering and accommodation wastes.

13.12 The following effects have been considered as potentially significant and will therefore be assessed within the ES:

- Increase in the volume of operational waste and increase in demand for local waste treatment and disposal facilities.

Sensitive Receptors

13.13 The following sensitive receptors will be assessed within the ES:

- Contractors and site personnel; and
- Waste treatment and recycling facilities, inert, non-hazardous and hazardous landfill sites.

13.14 There are residential properties within the vicinity; however, any disruption to these residents would be of limited duration.

14 TRANSPORT AND ACCESS

14.1 The purpose of the transport and access assessment will be to report and interpret the findings of the Transport Assessment which will form an Appendix to the Environmental Statement. An assessment will be undertaken to ascertain the likely transportation changes on the existing highway network as a result of the development and provide consideration of the access requirements of the development.

Site Context

14.2 Whiston Eaves Lane is the main access route running through the site. Travelling in a north west to south east direction where it interjects approximately 900 metres south of the site with the B5417. Whiston Eaves Lane provides access to the nearest settlement, Whiston Village.

14.3 Blakeley Lane runs along the eastern periphery of Quarry 2. Travelling northwards into the A52. The A52 is the main road running east-to-west between Stoke-on-Trent and Derby. This lies approximately 1.2 km north of the site.

Planning Policy Context

14.4 The Transport Assessment shall examine the transport implications and transport strategy requirements of the development in relation to relevant guidance, which will include:

- National Planning Policy Framework (2012);
- The Staffordshire Moorlands Local Plan and Local Development Framework (LDF).
- Churnet Valley Masterplan Supplementary Planning Document (March 2014);
- Guidance on Transport Assessment, Department for Transport (2007);
- The Design Manual for Roads and Bridges, Department for Transport (various dates);
- The Manual for Streets, Department for Transport (2007);
- The Manual for Streets 2, Chartered Institution of Highways and Transportation (2010);

- Good Practice Guidelines: 'Delivering travel plans through the planning system', Department for Transport (2009).
- The Essential Guide to Travel Planning, Department for Transport (2008);
- Transport Assessments and Travel Plans Guide, Staffordshire County Council (January 2008)

Approach

14.5 The aim of the assessment will be to identify, as far as reasonably possible, the nature of the transport changes within the area of the proposed development, to assess significance and to make appropriate recommendations. The assessment will include consideration of traffic impacts during construction as well as impacts during the operation of the proposed development. The assessment will comprise a Transport Assessment and Travel Plan Framework.

14.6 The scope of the Transport Assessment and Travel Plan Framework was agreed during a meeting with SMDC Highway Officer on 30 April 2014. It was accepted that the scope of Transport Assessment and Travel Plan Framework will follow the scope previously agreed for the 2012 development proposals for the site.

14.7 A report will be produced which will describe the work carried out and the results obtained. This report will include an assessment of the following key issues:

- Effects due to construction vehicles;
- Effects on highway operations during construction;
- Conflicts between construction vehicles and other traffic/pedestrians;
- Pedestrian and cycle requirements;
- Effects to highway network;
- Effects upon public transport operation; and
- Parking management and control.

14.8 Central to the assessment will be the impact of the development on the local highway network and junction capacity issues. The Transport Assessment will outline appropriate measures. A Travel Plan Framework for the proposed development will also be produced to encourage access to the site by sustainable modes of travel.

15 AIR QUALITY AND DUST

15.1 The purpose of the assessment will be to determine the impact on air quality as a result of the proposed development during the construction and operational phase of development.

15.2 Under the Environment Act 1995 (Part IV), local authorities have a duty to monitor the air quality in their area and in any areas where it would fail to meet health-based objectives, they are required to declare an Air Quality Management Area (AQMA). Staffordshire Moorlands District Council has note declared any AQMAs.

Approach

15.3 The aim of the assessment is to identify, as far as is reasonably possible, the nature of the existing local air quality within the area of the proposed development and to detail the potential effects and significance of the development proposals on local air quality.

15.4 The land use planning process is a key means of improving air quality, particularly in the long term, through the strategic location and design of new developments. Any air quality consideration that relates to land use and its development can be a material planning consideration in the determination of planning applications, dependent upon the details of the proposed development.

15.5 Planning policies and key guidance particularly relevant to air quality assessment are set out in:

- National Planning Policy Framework;
- Department for Environment, Food and Rural Affairs (DEFRA) (Feb 2009) 'Part IV The Environment Act 1995 and Environment (Northern Ireland) Order 2002 Part III, Local Air Quality Management Review and Assessment Technical Guidance LAQM.TG(09)';
- EPUK (April 2010) 'Development Control: Planning for Air Quality (2010 Update)'; and

- Institute of Air Quality Management (2014). Guidance on the Assessment of Dust from Demolition and Construction.

15.6 Information on existing air quality in the area proposed for redevelopment will be obtained from the Defra website, Staffordshire Moorlands District Council Review and Assessment documents, the Environment Agency and previous assessments for this site.

15.7 The air quality assessment will consist of an initial review of the existing air quality in the area and an assessment of the potential changes in air quality arising from the construction of the proposed development.

15.8 The potential sources of air pollutants associated with the construction of the proposed development would include exhaust emissions (nitrogen dioxide (NO_2) and particulate matter (PM_{10})) from the plant, equipment and vehicles, as well as fugitive dust emissions. The ES would identify the potential sources of emissions and consider (through a qualitative assessment using relevant guidance) their potential effect with regard to the local air quality. Any potential effects during construction however, are likely to be temporary and short-term.

15.9 During the operational phase traffic related effects will be assessed using the ADMS Roads detailed dispersion model. The assessment will establish the impact of the proposals on local air quality by modelling concentrations of nitrogen oxides (NOx), NO_2 and PM_{10} both with and without the development at a number of existing receptor locations. Pollutant concentrations will be undertaken for the baseline year and opening year (with and without the proposed development in place).

15.10 Fundamental to determining the significance of air quality effects is the consideration of the magnitude of any changes in concentrations of the pollutants, NO_2 and PM_{10}. These will be evaluated in terms of their relative effect on prescribed levels of air quality as detailed within the UK Environmental Protection Significance Criteria.

15.11 Following the assessment, appropriate recommendations for mitigation measures to reduce any adverse effects will be outlined and the residual effects identified.

16 NOISE AND VIBRATION

Context

16.1 The purpose of the noise and vibration assessment is twofold, firstly to consider to suitability of the prevailing local noise and vibration environment for sensitive aspects of the proposed development, and secondly to assess the potential impacts of the proposed development on existing local noise and vibration sensitive receptors (e.g. local dwellings etc.). The assessment will consider the potential impacts during both the construction and operational phases of the proposed development and account for the prevailing local noise and vibration climate.

Approach

16.2 The assessment will, in the first instance, identify all key local noise sources and existing and proposed sensitive receptors. A baseline noise survey will then be undertaken to establish the prevailing ambient and background levels at a representative sample of existing noise-sensitive receptors. This survey will also, establish the noise levels arising at proposed sensitive receptors at the site as a result of dominant local noise sources. This baseline survey will be key to characterising the prevailing local noise environment.

16.3 Existing noise sensitive receptors include the following dwellings:

- Blakely Farm
- Oldfield Farm
- Rock Cottage
- Wood View
- The Bungalow
- Moneystone Farm
- Moneystone Cottages
- Hightrees Farm
- Peckstones Farm
- Alcove Cottage
- Orchard Farm
- Carr Wood Farm

- Woodside Cottages
- Crowtrees Farm
- Little Eaves Farm
- Cottage Farm
- Littleheath House Farm
- Whiston Grange
- Heath House Farm
- Eavesford Farm
- Dusty Stile

16.4 An initial desk based review of freely available aerial photography and Ordnance Survey mapping has identified the following environmental noise sources which are anticipated to be primary contributors to the prevailing local noise environment:

- Road traffic noise from the A52 to the north; and
- Road traffic noise from local road traffic routes such as the Eaves Lane and Blackley Lane.

16.5 Other local noise sources are anticipated to include sporadic farm workings, natural sources such as bird song, the wind / breeze through trees and vegetation etc., the movement of trees and vegetation and noise from water courses etc.

16.6 The desk review has not identified any major industrial, commercial or rail traffic or air transport related noise sources in the vicinity of the site. Whilst the Churnett Valley Railway is located to the south-west of the site, this is a tourist steam railway and not subject to intensive numbers of rail pass-bys.

16.7 Quarrying operations at Moneystone Quarry have ceased so the quarry itself it not considered to be a significant source of noise, nor any previously associated HGV and transport movements on the local road network.

16.8 Characterising the local noise environment will allow the impact of the proposed development to be assessed, including determining whether the construction and operational phases of the development are likely to have significant effects on the identified receptors.

16.9 The proposed noise and vibration assessment will be undertaken with reference to the requirements and advice contained within the *National Planning Policy Framework* (NPPF) and the noise section of the *Planning Practice Guidance (PPG)*. It should be noted that unlike Planning Policy Guidance Note 24: *Planning and noise*, which was superseded by the NPPF, neither the NPPF nor the PPG provide detailed guidance on appropriate noise or vibration assessment methodologies for different development scenarios. Accordingly, it is anticipated that the noise and vibration assessments will draw upon the guidance contained within a number of other applicable British Standards and guidance documents which remain in date and valid for use.

16.10 Construction activities have been identified as a potential, albeit temporary, source of noise and vibration. BS 5228-1:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites. Noise* and BS 5228-2:2009 *Code of practice for noise and vibration control on construction and open sites. Vibration* will be used to assess potential noise and vibration effects from the construction process. These standards provide a methodology for the assessment and control of noise and vibration from construction operations. The BS5228-1 Standard also contains detailed information on noise reduction measures and promotes the 'best practicable means' (BPM) approach to control noise and minimise associated impacts on local residents.

16.11 To consider the suitability of the prevailing local noise environment for noise sensitive aspects of the proposed development (such as the proposed lodge and holiday cottage accommodation), an assessment drawing upon the guidance contained within BS8233:2014: *Guidance on sound insulation and noise reduction for buildings* and the World Health Organisations: *Guidelines for community noise* (1999) document will be undertaken. These documents specify appropriate internal and external noise level criteria for different development types.

16.12 Drawing upon the results of the baseline noise survey, consideration will be given to the noise mitigation measures that will be required to ensure compliance with appropriate criteria selected from these guidance documents.

16.13 The effects of noise as a result of development generated traffic will be assessed in general accordance with the principles of the *Design Manual for Roads and Bridges* (DMRB). For a sample of local routes (i.e. before development generated traffic is dispersed across the wider network), noise levels from road traffic will be calculated using the methodology given in *Calculation of Road Traffic Noise* memorandum (CRTN) published by the Department of Transport and the Welsh Office in 1988. This prediction method requires a good understanding of the traffic flows, percentage heavy vehicles (HGVs) and traffic speeds amongst other factors. As such, information from the Transport Assessment will be used to inform the road traffic noise level predictions.

16.14 Noise levels will be predicted for both 'with' and 'without' development scenarios, to allow determination of the changes in road traffic noise levels as a result of the proposed scheme. The significance of these changes in road traffic noise levels will be assessed against a set of clearly defined significance criteria drawing on the guidance contained within the DMRB, and accounting for the sensitivity of local receptors.

16.15 BS:4142: 1997: *Method for rating industrial noise affecting mixed residential and industrial areas* provides a method for rating external noise levels from factories, industrial premises or fixed installations of an industrial nature, such as building services plant, to determine the likelihood of complaints from occupants of nearby residential properties. Drawing upon this guidance, any specific requirements of the Local Authority, and the results of the baseline noise survey, a series of fixed plant noise level limits will be determined to which proposed fixed plant or building services noise should comply. It will be demonstrated how such limits could be incorporated into a conditional discharge to ensure a commensurate level of protection against such noise for both existing and proposed local receptors.

16.16 The assessment approach has been prepared based on the results of consultation previously undertaken with the Environmental Health Department at Staffordshire Moorlands District Council, but updated to reflect recent changes in planning policy guidance and applicable British Standards. Prior to commencement of the noise and vibration assessment, additional consultation would be undertaken with the department, to agree the detail above in addition to the approach to the baseline noise survey, including proposed measurement durations and locations.

17 CUMULATIVE IMPACTS

17.1 NPPG states that the potential for cumulative effects of the development in conjunction with other existing or approved development should be considered. The ES will consider the cumulative effects of the proposed development with other developments that either have planning permission or can reasonably be seen as obtaining planning permission and being delivered.

17.2 A solar farm is being promoted on land immediately adjacent to the leisure scheme and within the ownership of Laver Leisure. This includes solar development within areas of the former quarry. The solar farm planning application has now been submitted and the cumulative effects of the solar proposals will be considered as part of the EIA.

17.3 In order to comprehensively assess cumulative impacts, we request that SMDC supply details of any other developments in the vicinity of the site that should be considered in the cumulative effects assessment. We would note that in order to carry out this exercise to a meaningful level, schemes to be evaluated in the cumulative assessment should have been developed to a reasonable level such that information on their environmental effects is available or can be reasonably estimated. This follows the process established in the Bassetlaw case[1], which concluded that it is not reasonable to require applicants for development consent to consider future development in a cumulative assessment pursuant to the EIA Regulations when proposals for the development of the surrounding area are not reasonably foreseeable.

17.4 Most cumulative effects result when construction phases of more than one development overlap. However, the assessment will also assess operational effects of more than one development as appropriate. In particular, the potential cumulative impact of multiple schemes on traffic will be accounted for, along with the associated impact upon air quality and noise. This will involve the inclusion of relevant consented developments (to be agreed with SMDC) within the calculations of traffic impacts from the outset.

[1] R (Littlewood) v Bassetlaw District Council [2008] EWHC1812 (Admin)

17.5 The EIA will also consider the combination of effects (such as noise, dust and visual effect during construction) on any particular receptor as appropriate. These are referred to as synergistic effects and will be evaluated based on professional judgement of the impacts identified in the various technical assessments.

18 NON-SIGNIFICANT ISSUES

Lighting

18.1 Artificial lighting is provided to encourage a safe environment for a range of activities including driving, cycling, walking and sporting activities. It is also used to enhance the environment by means of decorative and flood lighting of areas, features and buildings. In relation to the impact of lighting from the proposed development, recommendations will be made in relation to appropriate lighting levels across the site in accordance with the proposed uses. National bodies including British Standards, The Institution of Lighting Professionals (ILP) and The Chartered Institution of Building Services Engineers (CIBSE) prescribe required lighting levels, which would be referenced in the Description of the Development within the ES. Furthermore, lighting will be designed in conjunction with the project ecologist and landscape consultant to ensure that lighting is appropriate in terms of the potential effects on protected species and key views of the site. As this mitigation can be 'designed-in' to the proposals and secured through appropriate planning controls, it is considered that a detailed assessment of lighting is not required to support the planning application.

Wind

18.2 The site is reasonably low lying and not subject to substantial wind effects. Equally, the proposed development is not of a high-rise or high density nature such that it could generate wind effects in the public realm. As such, the potential effects of wind are anticipated to be insignificant for the purposes of EIA.

Daylight, Sunlight and Overshadowing (DSOS)

18.3 DSOS assessments consider the potential for interference with existing light levels to sensitive receptors such as residential windows or the effect of glare on, for example, drivers. These assessments are typically required in densely populated areas or where a development includes significant glazed elements such as city centre tower blocks or solar farms. On this basis, a DSOS is not required for this project.

19 PROPOSED STRUCTURE OF THE ENVIRONMENTAL STATEMENT

Volume 1: The Non-Technical Summary

19.1 A Non-Technical Summary is required under the EIA Regulations and presents the findings of the ES in a manner suitable for use by non-experts.

Volume 2: Environmental Statement

19.2 This Volume will contain the main text of the ES. The proposed topics for consideration and their respective chapter headings are set out below:

- Introduction
- Approach
- Alternatives
- The Proposed Development
- Planning Policy Context
- Socio Economics and Tourism
- Ecology and Nature Conservation
- Ground Conditions
- Drainage and Flood Risk Assessment
- Landscape and Visual
- Archaeology and Cultural Heritage
- Waste
- Transport and Access
- Air Quality
- Noise

Volume 3: Appendices

19.3 This volume contains supporting information and a collection of technical reports upon which the conclusions of the ES are based.

20 PROJECT TEAM

20.1 The preparation of the ES will involve a range of inputs by specialist consultants. These are listed in the Table below.

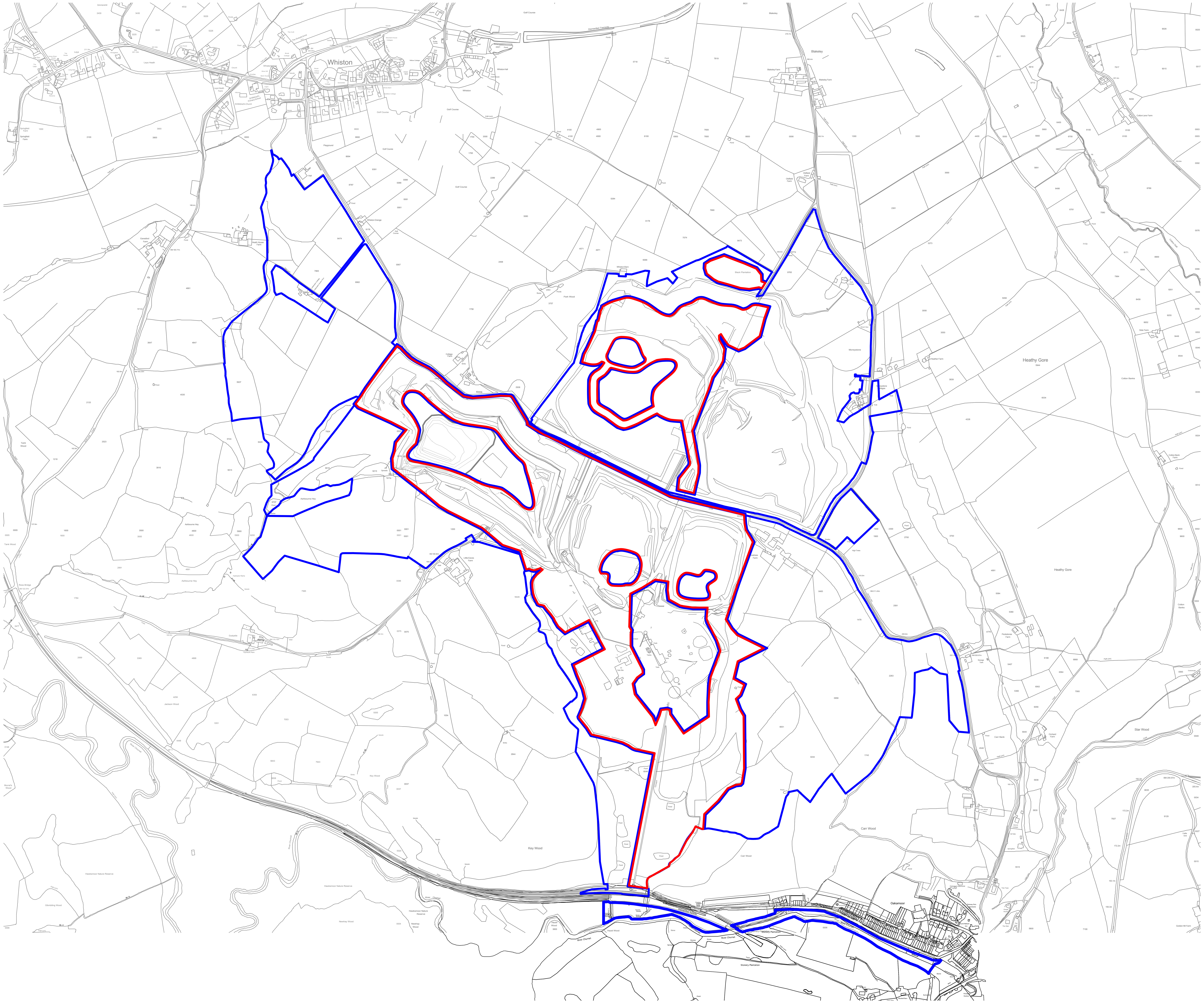
Project Team

Discipline	**Company**
Client	Laver Resorts Limited
Planning Consultants and EIA Coordination	HOW Planning LLP
Masterplanners and Landscape and Visual Assessors	Planit-ie
Socio Economics and Tourism	Regeneris and Christie and Co.
Ecology and Nature Conservation	Bowland Ecology
Ground Conditions, Drainage and Flood Risk	Abbeydale BEC
Archaeology and Cultural Heritage	Liverpool Archaeological Unit
Transport and Access	Royal HaskoningDHV
Air Quality and Dust; Noise and Vibration; and Waste	WSP

HOW Planning LLP

July 2014

APPENDIX 1: SITE LOCATION AND BOUNDARY PLAN



NOTE:
1. Do not scale from this drawing
2. All setting out, levels and dimensions to be agreed on site.
3. The dimensions of all materials must be checked on site before being laid out.
4. This drawing must be read with the relevant specification clauses and detail drawings
5. Order of construction and setting out to be agreed on site.
6. This drawing is copyright protected and may not be reproduced in whole or part without written authority.
7. All Dimensions are in millimetres unless Otherwise Stated

Planit - IE LLP
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020 7253 5678
2 Back Grafton St Altrincham WA14 1DY
0161 928 9281

Project Moneystone Quarry

Client Laver Leisure

Drg title Site location Plan

Drg nr PL1088.M106

Scale 1:5000@A1 **Date:** 21.07.2014 **Drawn** HE

Status **Revision** D **Checked** JW

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