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WASTE RESOURCE MANAGEMENT



O'BRIEN AGGREGATE MARSDEN LTD

MARSDEN QUARRY TIME EXTENSION

Scoping Report

May 2025

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Marsden Quarry Time Extension

Scoping Report

May 2025

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EXECUTIVE SUMMARY

Marsden Quarry is an active quarry extracting limestone and dolomite for agricultural lime and aggregate production. The site also operates as a permitted inert waste landfill site as part of the long-term restoration scheme. The quarry is located 0.5km north of Whitburn and 1km south of South Shields and is accessed via the A183, south east of the site. The quarry is a key source of material to support the construction of the allocated housing provision in and around South Tyneside. The extant permission at the quarry, reference ST/01369/2//DM, permits mineral extraction, landfilling and all restoration works to be completed by the end of December 2027.

The proposed time extension comprises the following elements:

- A time extension of 5 years for extraction and 7 years for restoration, complete at the end of 2032 and 2034 respectively.
- A small amendment to the red line boundary to regularise the extraction which occurred beyond the permitted boundary.
- A regularisation to the restoration scheme as per the phase of the current workings and infill volumes at the site.

It is proposed that the application would be submitted via Section 73, to vary conditions 1, 4 and 31 attached to ST/01369/2//DM, in relation to the above.

The remaining reserves are estimated to be between 800,000 and 1,000,000 tonnes, with extraction proposed to continue at a rate of 125,000 tonnes per year over the extended period. This aligns with the currently approved extraction rates. Restoration would continue to be phased, progressing from the north to south, to higher contours through inert filling, ensuring the site operates sustainably. The current processing plant and site access at Marsden Quarry will continue to be used, and transport movements, hours of operation and employment numbers would be consistent with the currently approved.

The proposed development is identified as Schedule 1 Development, as defined within The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (EIA Regulations). Therefore, an Environmental Impact Assessment (EIA) is required to be carried out. The purpose of this Scoping Report is to request a scoping opinion from South Tyneside Council which would define the desired scope and level of detail that is to be provided in the Section 73 application. This is anticipating that the Environmental Statement of the original permission would need to be updated to reflect the proposed changes.

Given the extended works at the site, it is proposed to include the following assessments in the EIA, for which agreement is requested:

- Landscape and Visual
- Air quality
- Traffic and Transport
- Noise
- Ecology
- Heritage and Archaeology
- Water resources
- Climate change

1 INTRODUCTION

1.1 Terms of reference

1.1.1 This Scoping Report has been prepared by Wardell Armstrong LLP (part of SLR) on behalf of O'Brien Aggregate (Marsden) Limited to support an application that seeks the Scoping Opinion of South Tyneside Council.

1.1.2 This Scoping Opinion request is in regard the proposed extension of time at Marsden Quarry. This would be submitted under Regulation 15 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (EIA Regulations).

1.2 Background

1.2.1 Marsden Quarry is an active limestone quarry, located north of the village Whitburn, South Tyneside and is accessed from the east via the A183. The quarry is a key source of aggregates and building material for construction across South Tyneside and beyond.

1.2.2 The O'Brien Group has operated a successful commercial quarrying and processing activity at Marsden Quarry since acquiring the site from Owen Pugh in 2018. The quarry has been in operation for over 150 years providing a range of primary and recycled construction aggregates which supply markets throughout the North East of England.

1.2.3 Planning consent for mineral working at Marsden was first granted under an IDO consent issued in 1948 with subsequent permissions granted in 1953 and 1972. These permissions have had subsequent updates to conditions under the provisions of the Planning and Compensation Act 1991 and the Environment Act 1995.

1.2.4 The extant permission, reference ST/01369/2//DM, was granted 15th April 2005, for the 'importation of inert waste for the purpose of restoring the quarry void'. This permission consolidated the three planning consents from 1948, 1953 and 1972. The permission was granted for a limited period until the end of December 2027, by which time mineral operations shall have ceased, and the site restored.

1.2.5 **Table 1** below details the planning history associated with Marsden Quarry.

Table 1.1: Planning History		
Reference Number	**Description of Development**	**Decision Date**
ST/1000/85//CC	APPLICATION UNDER CLASS XIX OF THE G.D.O.1977 FOR A NISSEN HUT	Unknown (deact) 20-12-1985
ST/0242/92/01/DM	Submission of conditions for IDO Registration under IDO Permission Planning and Compensation Act.	Grant Permission (deact) 18-11-1993
ST/0242/92/02/DM	Details of Working Scheme pursuant to condition 4 IDO	Grant Permission (deact) 24-05-1994
ST/0169/97//DM	Application for Determination of new conditions in relation of extraction of limestone under Schedule 13 para 9 of Environment Act 1995	Grant Permission with Conditions 29-05-1997
ST/0242/92/03/DM	Submission of condition 4 Details of vehicle routing.	Grant Permission (deact) 07-07-1997
ST/0826/98//DM	Application under Section 96, para 9 of Schedule 13 of the Environmental Act 1995 for determination of new conditions in relation to the extraction of limestone	Grant Permission (deact) 26-11-1998
ST/0103/99//DM	Proposed extension to Marsden Quarry (Including Env Statement)	Refused 17/04/2000
ST/0828/01/DM	Extension to existing perimeter screening mound on western side	Withdrawn March 2002
ST/1369/02//DM	Importation of inert waste for the purpose of restoring the quarry void.	Grant 14/04/2005
ST/1879/05/COND	Submission of condition 13 on planning approval ST/1369/02/DM: Noise Management Plan.	Grant 27/09/2005
ST/1882/05/COND	Submission of condition 17 on planning approval ST/1369/02/DM: Dust action plan	Grant 18/10/2005
ST/1877/05/COND	Submission of condition 10 on planning approval ST/1369/02/DM: Details of measure to ensure that public highways are kept free of mud and debris.	Grant 26/10/2005
ST/1742/07/FUL	Introduction of recycling operation to recover inert construction waste for export from the site in addition to the existing quarrying and landfill operations.	Grant with Conditions 21/07/2008
ST/1801/12/VC	Application under Section 73 of the Town and Country Planning Act 1990 to allow variations to Conditions attached to planning consent ST/1742/07/FUL as follows: Variation of Condition 2 to permit a permanent permission for the recycling operation: Variation of Condition 6 to require that the wheel wash facility (as updated) be maintained on site: Variation of Condition 10 to require the agreed scheme of measures to prevent dust emissions be maintained on site: Removal of Condition 3 relating to the monitoring of the temporary operations: Removal of Condition 8 requiring submission of a monitoring methodology, at Marsden Quarry, Coast Road, Whitburn.	Grant with conditions 18/03/2013

1.2.6 The purpose of this Scoping Report is to seek a scoping opinion under Regulation 15 of the Town and Country Planning (Environmental Impact Assessment) (England) Regulations 2017 (EIA Regulations). Under the EIA Regulations, the proposed development is identified as Schedule 1 Development due to the development falling under the following description *"Quarries and open-cast mining where the surface of the site exceeds 25 hectares…",* and being considered as a change to such development, as stated under paragraph 24 of Schedule 1. Therefore, an Environmental Impact Assessment (EIA) is required for the submission of a Section 73 planning application relating to the extension of time and minor revision to the site boundary that would be submitted to South Tyneside Council, as the mineral planning authority.

1.2.7 The primary purpose in seeking a scoping opinion is to ensure that any subsequent EIA is sufficiently detailed to encapsulate all of the potentially significant environmental effects of the proposed development and includes the identification of all relevant known sensitive receptors.

2 SITE DESCRIPTION

2.1 Site location

2.1.1 The site is located approximately 0.75km to the south of Marsden, a residential suburb of South Shields, and approximately 0.45km north of properties that form the outskirts of Whitburn.

2.1.2 The quarry is centred at National Grid Reference NZ 40400 64150. Access to the quarry is provided by the A183 Mill Lane, south east of the site.

2.1.3 See drawing NT16974 005 'Site Location Plan', for further detail.

2.2 The Site

2.2.1 Marsden Quarry is an operational site extracting limestone and dolomite for agricultural lime and aggregate production.

2.2.2 The quarry is broadly split into two areas of operation. Restoration is progressively undertaken via the importation of inert landfill, which progresses from the northern to the southern extent of the quarry. The imported inert material is used to infill the void and restore it to safer contours. The remaining reserves of limestone for extraction are located within the south east corner of the quarry void, beneath the area currently occupied by the quarry offices, weighbridge, and car park.

2.2.3 The current permitted output from Marsden Quarry is approximately 250,000 tonnes per annum. Up to 250,000 tonnes of inert waste and up to 60,000 tonnes of construction/demolition waste is permitted to be imported per annum.

2.2.4 See Drawing NT16974 006 and 007 'Existing Site Plan' and 'Topography' for further details.

2.3 Surrounding Area

2.3.1 Surrounding land uses comprise a number of other amenities, including Whitburn Golf Course, allotments, Dog Park, Car Park, the National Trist 'Souter Lighthouse and The Leas', a coastal park, agricultural land and the North Lizard Riding School. A number of residential properties located to the south of the site at Arthur Street which is also nearby to the Lighthouse Christian Fellowship Church.

2.4 Landscape

2.4.1 The site is not located within a designated landscape area but is within the Green Belt.

2.4.2 The site is located in South Tyneside Council's Landscape Character Area 35, Cleadon Hills, within the Urban/Rural Fringe.

2.5 Ecology

2.5.1 The majority of environmental designations are located to the east of the A183. The nearest environmental designation is Durham Coast Special Area of Conservation and Durham Coast Site of Special Scientific Interest, approximately 85m east of the site. The site is also less than 1km south east of the Marsden old Quarry, Local Nature Reserve and less than 1km north west of Whitburn Point, Local Nature Reserve.

2.5.2 Cleadon Hills LNR and SSSI is located approx. 1.5km to the south west of the site. Harton Down Hill LNR and SSSI is also located approx. 1.5km to the north west of the site.

2.5.3 The site contains a number of waterbodies and an open mosaic habitat in the western void.

2.5.4 More details can be found in Section 10, Ecology, and in the accompanying Preliminary Ecological Appraisal.

2.6 Historic Environment

2.6.1 There is one scheduled monument, 'Marsden Lime Kilns' (NHLE 1005911) within the north eastern corner of the site boundary, adjacent to Coast Road.

2.6.2 Scheduled monument, 'Lizard Lane Heavy Anti-Aircraft Battery' (NHLE 1419998) is located approximately 0.2km to the west of the site, within the former proposed extension area.

2.6.3 The following listed buildings are located less than 1km east of the site, at the Lighthouse;

- Grade II listed, 'Walls extending from Mill Lane around the Lighthouse and linked buildings', approx. 0.1km east of the site.
- Grade II* listed, 'Souter Point Lighthouse and attached buildings', approx. 0.2km east of the site.
- Grade II listed, 'Souter Point Lighthouse Foghorn to east of lighthouse and steps and walls to east of lighthouse', approx. 0.2km east of the site

2.7 Flood Zone

2.7.1 The site is located in Flood Zone 1, with a low probability of flooding from rivers and the sea

2.8 Amenity

2.8.1 The site is bounded to the west by Lizard Lane, to the north by Whitburn Golf Course, to the east by former lime kilns and the A183 Coast Road / Mill Lane, and to the south by agricultural land / horse stables. There are three properties in close vicinity of the site (assessed as being within 25m), including Whitburn Golf Course Clubhouse and adjacent private property (Toll Cottage) on the west site boundary and a private property (Hill House) located on the eastern site boundary. A stables facility is located immediately to the south of the quarry.

2.8.2 Those receptors that would likely be considered sensitive to the existing site and proposed use, include rural properties and villages in the surrounding area. The nearest of which is Hill House, immediately adjacent to the east of the site and the A183, and the properties located just over 200m south of the site.

2.8.3 There are no public rights of ways (PRoW) within the site boundary.

3 THE PROPOSED DEVELOPMENT

3.1.1 Planning permission ST/01369/2//DM permits the extraction of limestone from the area until 31 December 2027, although there are still some reserves remaining to be extracted which would require time beyond the current expiration date. It is proposed to extend the operational lifespan of the existing quarry by 8 years to operate in line with the restoration scheme and current phase of workings.

3.2 Extension of Time

3.2.1 The proposed development seeks the approval for a seven-year extension to the existing planning permission. This extension would allow for an additional five years of extraction, from December 2027 to December 2032, followed by a two-year period for site restoration from December 2032 to December 2034.

3.2.2 The extension of time would provide a more practical and realistic timeframe to fully work the remaining permitted reserves at the currently approved rate of extraction, 125,000 tonnes per annum and also deliver the restoration to higher, safer contours.

3.3 Minor alteration to the site boundary

3.3.1 The proposed development also encompasses a minor regularisation to the site boundary, to account for the extraction which occurred beyond the permitted boundary, behind Hill House.

3.3.2 Condition 1 of extant permission ST/01369/2//DM lists the documents which are approved in accordance with the operations of the quarry. This includes the restoration masterplan, which illustrates the approved red line boundary of the site. Therefore, we propose that this list of documents is revised to include the amended red line for restoration. This would not alter the description of development and is only considered a minor alteration to the red line.

3.4 Restoration

3.4.1 Condition 31 of permission ST/01369/2//DM states "so as to take account of any changes which may be necessary as a result of working experience on the site, a review of the detailed restoration plan and statement, incorporating revision as appropriate, shall be submitted for approval by the Mineral Planning Authority at intervals of not less than five years from the date of this permission through to final restoration of the site".

3.4.2 Restoration at the site has not yet reached the stage anticipated as per the approved restoration scheme due to several factors. These include delays caused by the pandemic, which stalled operations, and a change in site operator.

3.4.3 Since Condition 31 allows for revisions to the restoration scheme and specifications, we propose updating the scheme to account for these delays. It is proposed to continue the importation of inert landfill at a rate of 350,000 tonnes per year, equating to a volume of 175,000m^3 annually over the extended time period (10.22 years).This would facilitate the successful delivery of the restoration scheme, achieving a final restoration to higher contours, accounting for the additional time required to complete restoration in a timely and publicly beneficial manner, with restoration complete at the start of 2035.

3.4.4 The extension of time would enable completion of the restoration by early 2035, ensuring timely progress while maximising public benefits. The updated scheme would also deliver a Biodiversity Net Gain of at least 10% and incorporate feedback and aspirations gathered through community consultations. These proposed changes would comply with Condition 31, address on-site delays, and provide significant environmental and community benefits.

3.5 Working scheme

3.5.1 It is proposed that the quarry would continue to be worked as per the current scheme of works, with phased infilling from the north and extraction in the south. The mineral would be extracted at the same rate as currently permissioned, 125,000 tonnes per annum.

3.6 Vehicle Movements

3.6.1 Existing vehicle movements associated with the current permission would be retained, with a maximum daily two-way HGV traffic level of 394, subject to an average daily two-way level of 304.

3.7 Hours of operation

3.7.1 The existing hours of operation are not proposed to be altered, continuing to operate between the hours of 07:00-18:00 Monday to Friday, excluding public holidays and 07:00-13:00 on Saturdays with no works taking place on Sundays.

3.8 Employment

3.8.1 No changes to existing employment numbers are proposed.

3.9 Conditions to be varied (ST/01369/2//DM)

3.9.1 As a result of the proposed time extension, a number of variations are proposed to be applied to the conditions of permission ST/01369/2//DM.

Condition 4: "Mineral extraction, landfilling and all restoration works shall be completed by the end of December 2027 or as otherwise may be agreed in writing by the Mineral Planning Authority".

3.9.2 This condition in relation to the operation of the existing site, would need to be reworded accordingly to align with the proposed time extension.

Condition 1: "the development hereby approved shall only be carried out in accordance with the following documents… And such amendments to these as may be agreed in accordance with subsequent conditions"

3.9.3 The documents listed under this condition would need to be superseded, removed, or added to in order to account for the minor variation to the red line boundary to include the updated restoration plan boundary.

Condition 31: "So as to take account of any changes which may be necessary as a result of working experience on site, a review of the detailed restoration plan and statement, incorporating revision as appropriate, shall be submitted for approval by the Mineral Planning Authority at intervals of not less than five years from the date of this permission through to final restoration of the site."

3.9.4 Where the current phase of restoration has not progressed as anticipated, the restoration plan would be reviewed to align with the updated timeframe as well as incorporate higher contour levels to account for the increasing volume of inert fill material being delivered to the site over time.

4 THE EIA PROCESS

4.1 The EIA Directive and Regulations

4.1.1 The statutory requirement for an EIA derives from the 1985 European Council Directive (2011/92/EU), amended in 2014 by Council Directive 2014/52/EU, and requires the study of the effects of a development upon human beings, flora, fauna, soil, water, air climate the landscape, material assets, cultural heritage, and the interaction between these. The EIA Regulations translate the Directive into UK planning legislation.

4.1.2 In general, an EIA will be needed for projects likely to have significant effects on the environment by virtue of their nature, size, or location. Whether or not a particular development requires an EIA to be carried out depends on the nature of the development. An EIA is compulsory for major types of development listed in Schedule 1 of the EIA Regulations. Schedule 2 indicates types of other development for which an EIA is required when certain thresholds and criteria are met. Changes or extensions to Schedule 1 or Schedule 2 developments that may have significant adverse effects on the environment also fall within the scope of the EIA Regulations.

4.1.3 Under the EIA Regulations, the proposed development is anticipated to be identified as Schedule 1 Development due to the development falling under the following description, *"Quarries and open-cast mining where the surface of the site exceeds 25 hectares…",* and being regarded as a change to such development, as stated under paragraph 24 of Schedule 1. Therefore, an EIA is required for the purpose of the future planning application that would be submitted to the mineral planning authority.

4.2 Environmental Statements

4.2.1 The findings of an EIA are presented in an Environmental Statement (ES). The formal requirements for the content of an ES are set out in Schedule 4 of the EIA Regulations. While every report should provide a full factual description of a project's effects, the emphasis of Schedule 4 is on the significant effects to which the project is likely to give rise. Other effects of little or no significance in relation to planning considerations usually need only brief reference in the ES to indicate that their possible relevance has been considered.

4.2.2 There is general guidance given on the definition of what constitutes a significant effect, but this is not exhaustive, and much is dependent on expert opinions, including the views of regulatory authorities, as well as local conditions at the site.

4.2.3 Regulation 4 of the EIA Regulations provide a checklist of environmental components which should form the basis of an impact assessment:

a) population and human health;

b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC(1) and Directive 2009/147/EC(2);

c) land, soil, water, air and climate;

d) material assets, cultural heritage, and the landscape;

e) the interaction between the factors referred to in sub-paragraphs (a) to (d).

4.2.4 In addition, the EIA Regulations require a description of the expected significant effects of the development on the environment deriving from the vulnerability of the development to risk of major accidents or disasters which are relevant to the development.

4.2.5 At this stage it is understood that the proposed development will require a revision to the original Environmental Statement, dated 17th December 2002, due to both the scale of the site and the length of extended time sought. This would include updating the technical chapters, including transport, water, air quality, dust to detail what environmental impacts are likely and what the mitigation measures are in place for the development, and align these with the predicted impacts from the proposed changes.

4.3 Scoping Opinions

4.3.1 In seeking a scoping opinion, the purpose of this Scoping Report is to outline what the applicant identifies as the potential significant environmental effects of the proposed development upon which the full EIA will be conducted.

4.3.2 This Scoping Report provides the necessary background information to STC to provide an accurate scoping opinion, in accordance with regulation 15(2) of the EIA Regulations.

4.4 Scoping responses

4.4.1 Any responses to this scoping opinion request should be sent to the following:

Minerals and Waste Planning Team

South Tyneside Council

Town Hall and Civic Offices

Westoe Road,

South Shields,

N33 2RL

4.4.2 It is also requested that any responses are copied to:

Nicholas Beale

Wardell Armstrong LLP

City Quadrant

11 Waterloo Street

Newcastle upon Tyne

NE1 4DP

nbeale@wardell-armstrong.com

4.5 The EIA team

4.5.1 Under Regulation 18(5), the EIA Regulations require that an ES be prepared by competent experts and must be accompanied by a statement outlining the relevant expertise or qualifications of such experts.

4.5.2 The preparation of the ES will be project managed by Wardell Armstrong LLP who, as multi-disciplinary environmental and engineering consultants, have extensive experience in assessing the environmental impacts of mineral developments. The relevant consultants are listed below in Table 2.

Table 4.1: The EIA Team

Role	Company
Project Management	Wardell Armstrong LLP (part of SLR)
Planning	Wardell Armstrong LLP (part of SLR)
Landscape and Visual Amenity	Wardell Armstrong LLP (part of SLR)
Air Quality	Wardell Armstrong LLP (part of SLR)
Noise	Wardell Armstrong LLP (part of SLR)
Soils and Agriculture	Wardell Armstrong LLP (part of SLR)
Climate Change	Wardell Armstrong LLP (part of SLR)
Water Resources	Wardell Armstrong LLP (part of SLR)
Cultural Heritage	Wardell Armstrong LLP (part of SLR)
Biodiversity	Wardell Armstrong LLP (part of SLR)
Transport	Wardell Armstrong LLP (part of SLR)

5 PLANNING POLICY CONTEXT

5.1 Legislation requirements

5.1.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 and Section 70(2) of the Town and Country Planning Act 1990 (as amended) require planning applications to be determined in accordance with the relevant development plan unless material considerations indicate otherwise.

5.1.2 In regard to applications submitted under Section 73 of the Town and Country Planning Act 1990 (as amended), decision-taking should focus attention on national and local policies, or other material considerations that may have changed significantly since the original grant of planning permission. It is considered that there have been updates to both national and local planning policy since the original permission.

5.2 Adopted development plan

5.2.1 The site is located within the administrative area of South Tyneside Council (STC). The South Tyneside Local Development Framework (LDF) is the current Local Plan and guides the future development and use of land in the borough. The LDF includes a portfolio of statutory Development Plan Documents (DPD) which are as follows;

- Core Strategy (June 2007)
- Core Strategy Key Diagram
- Development Management Policies
- Technical Appendices: Local Wildlife and Geodiversity Sites (2010)
- Site-Specific Allocations (April 2012)

5.2.2 It is understood that STC is currently developing a new Local Plan, and a publication draft (Regulation 19) has been uploaded. Consultation on the draft Local Plan took place in early 2024 and the publication draft was referred to Borough Council on 5th September 2024 with a recommendation that it be submitted to the Secretary of State for Examination in Public. However, the recommendation was not endorsed.

5.2.3 As this is not yet formally adopted, it can only be given minimal weight in decision making, although will be referred to. These documents include;

- South Tyneside Publication draft Local Plan 2023 -2040
- Publication Draft Local Plan Policies Map

5.2.4 The site is located within the Whitburn Neighbourhood Plan.

5.3 Whitburn Neighbourhood Plan

5.3.1 The Whitburn Neighbourhood Plan (2021 to 2036) forms part of the statutory Development Plan for South Tyneside.

5.3.2 As a point from the South Tyneside Landscape Character Study, character area 35, Cleadon Hills – 'in the longer term, restoration of Marsden Quarry will present a major opportunity to enhance the area'.

5.3.3 Within the neighbourhood plan, the site is allocated within the Wildlife Network AND Green Infrastructure Corridor WNP6. Land immediately to the east and south of the site are allocated as Local Wildlife Sites (WNP5) and allotments WNP9f. Immediately north of the site, is Local Geodiversity Site (WNP5).

5.3.4 The Local Geodiversity Site comprises part of a long-abandoned and partially overgrown, limestone quarry together with a fine group of large disused lime kilns.

5.4 Other material considerations

5.4.1 Those other material considerations considered key to any upcoming application for the proposed development are listed and briefly discussed below.

National planning policy and guidance

5.4.2 The following national planning policy and guidance applies to the proposed development:

- National Planning Policy Framework
- National Planning Practice Guidance

5.4.3 The National Planning Policy Framework (NPPF) was revised on 12th December 2024 in response to the Proposed reforms to the National Planning Policy Framework and other changes to the Planning system consultation and sets out the government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development which runs through both plan-making and decision-taking.

5.4.4 National Planning Practice Guidance (NPPG) is a web-based resource which was launched in March 2014 by the Department for Communities and Local Government (DCLG) and provides planning guidance on a range of subject areas, relevant to the NPPF.

Local Aggregate Assessments

5.4.5 Annual Local Aggregate Assessments (LAA) are required to be prepared under national planning policy which sets out the information on sales and reserves of quarries within the Tyne and Wear.

5.4.6 The most recent LAA publication is the Tyne and Wear Joint Local Aggregates Assessments, published between 2023 and 2024 and reports on data from both 2021. The most recent LAA issued at the time of submission would be used.

5.4.7 Under the Draft Local Plan Policies Map, the site is allocated under Minerals Infrastructure Policy 56. And includes designations of Local Wildlife Sites Policy 34.

Supplementary Planning Documents

5.4.8 The Local Plan is supported by non-statutory advisory guidance. Those supplementary planning documents that are considered relevant to the site or proposed development include.

- SPD1 Sustainable Construction and Development (August 2007)
- SPD3 Green Infrastructure Strategy (February 2013)
- SPD3 Green Infrastructure technical appendices (February 2013)

6 LANDSCAPE AND VISUAL AMENITY

6.1 Introduction

6.1.1 A Landscape and Visual Impact Assessment (LVIA) would be undertaken, which would examine the effects of the extension of time and the proposed changes to the restoration of the existing quarry. It would be based upon guidance as outlined in the following publications:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition, edited by The Landscape Institute and Institute of Environmental Management and Assessment (2013)
- Visual Representation of Development Proposals, Landscape Institute Technical Guidance Note 06/19 (September 2019)

6.1.2 The previous LVIA was carried out in 2002, therefore this new assessment would draw on this and on information provided by statutory consultees, current landscape planning policies, a computer-based visibility analysis and fieldwork observations. Where necessary, appropriate mitigation with respect to phasing and restoration would be identified, with the aim of minimising views of the workings and ensuring that the long-term restoration of the site meets relevant objectives in respect of landscape character and nature conservation.

6.2 Landscape character baseline

6.2.1 The following studies provide a strategic assessment of the study area (see Drawing NT16974/011):

- The regional study developed as part of the Character of England project and published by the then Countryside Agency[1], now Natural England, has identified a number of National Character Areas (NCAs) - The site is within NCA 15: *Durham Magnesian Limestone Plateau.*
- South Tyneside Landscape Character Study[2] - the site is within Landscape Character Area (LCA) 35, Cleadon Hills, with The Leas and Whitburn Coast LCAs along the coast.

6.3 Proposed study area

[1] Character of England project and published by the then Countryside Agency in 1999 and updated by Natural England 2015
[2] South Tyneside Landscape Character Study, LUC for South Tyneside Council, March 2012

6.3.1 A Zone of Theoretical Visibility (ZTV) plan has been prepared for a 5km area (see Drawing NT16974/013). The plan indicates that the majority of the theoretical visibility occurs along the coastline. Both screened and unscreened ZTV models were produced for the assessment. According to the unscreened ZTV, which represents a 'worst-case scenario' for visibility by accounting only for terrain elevation and excluding intervening features such as trees and buildings, the elevated area to the west, Cleadon Hills, does not have a direct line of sight to the quarry site.

6.3.2 Due to the short to medium term nature of the proposed extension of time and the presence of existing screening bunds and vegetation to the site boundaries, it is proposed to focus the LVIA on the immediate setting of the site. A study area of 1km for the LVIA is considered appropriate.

6.4 Landscape character assessment

6.4.1 This would assess the effects of the proposed development on the landscape character of the site and the surrounding study area. The assessment would identify the landscape value of the landscape receptors within the study area and the susceptibility of them to the proposed changes. This would then determine the sensitivity of them to the proposed changes. This would then be combined with an assessment of the magnitude of the proposed changes to determine the overall effects on the landscape receptors and whether or not these would be significant. Where necessary, appropriate mitigation will be identified, with the aim of minimising the effects of the development.

6.5 Visual assessment

6.5.1 Drawing NT16974/013 shows 5 proposed viewpoints within the study area, as listed in Table 3 below. Photographs will be taken from these viewpoints to illustrate the likely visibility of the development from these viewpoints. Agreement with the proposed viewpoints is requested.

Table 6.1: Proposed Viewpoints

Ref	Location	Receptor / View
1	High point on the golf course to the north	Recreational receptors
2	Entrance to Souter Lighthouse Car Park to south-east	Road users, recreational receptors along the coast, nearby residents
3	Souter Lighthouse to east	Recreational receptors along the coast
4	A183 to north-east	Road users, recreational receptors along the coast, nearby residents

Table 6.1: Proposed Viewpoints		
Ref	**Location**	**Receptor / View**
5	Hillhead Tea Room car park to west	Recreational receptors and residents

6.5.2 As with the landscape character assessment, the visual assessment would identify the value the visual receptors within the study area and the ZTV (including road and rights of way users, residents, and recreational receptors) are likely to attached to their views and the susceptibility of them to the proposed change, this would then determine the sensitivity of them to the proposed change. This would then be combined with an assessment of the magnitude of the proposed changes to determine the overall effects on the visual receptors and whether or not these would be significant. Where necessary appropriate mitigation would be identified, with the aim of minimising the visibility of the development.

6.6 Likely effects

6.6.1 Due to the presence of the existing quarry, the short to medium term nature of the proposed extension of time and the presence of existing screening bunds and vegetation to the site boundaries, it is not considered that the proposals would result in significant landscape and visual effects.

7 AIR QUALITY

7.1 Introduction

7.1.1 The potential air quality impact associated with the proposed extension of time to existing operations at Marsden Quarry would be assessed and included in an Air Quality Chapter to accompany the ES.

7.1.2 A semi-quantitative mineral dust assessment will be undertaken to determine the potential effects of disamenity dust and adverse health effects arising from particulate matter (PM10 and PM2.5) emissions during the working of the quarry, at existing sensitive receptors.

7.1.3 The existing air quality chapter which was submitted by Wardell Armstrong in December 2002 (ref. NT02565/0009) will be reviewed to take into account the dust monitoring results, proposed dust mitigation measures and the conclusions of the assessment. The updated air quality ES chapter will therefore consider the existing dust management in place at Marsden Quarry and recommend additional appropriate mitigation measures to reflect the development proposals, where necessary.

7.1.4 It is our understanding that there is currently no Dust Management Plan (DMP) in place at Marsden Quarry. Therefore, site-specific dust mitigation measures will be detailed in the air quality ES chapter. If it is requested by South Tyneside Council (STC), a DMP can be prepared as an appendix to the Air Quality ES.

7.1.5 It is assumed that the permitted vehicle trips associated with the current operations at Marsden Quarry are below the requirement for a detailed assessment of vehicle emissions, in accordance with the Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM) guidance for Land-Use Planning and Development Control (January 2017) (i.e. an Annual Average Daily Traffic (AADT) count of 200 HGVs). Due to the nature of the development proposals, it is unlikely that there will be any significant changes to the number of vehicle trips associated with Marsden Quarry, as existing.

7.1.6 Consultation will be undertaken with the transport team to determine any anticipated changes to the trip generation, in consideration to the development proposals. The trip generation would be reviewed, and in the case that the EPUK and IAQM screening guidance is exceeded, a detailed assessment of vehicle emissions would be undertaken.

7.2 Policy, Legislation and Guidance

7.2.1 The air quality assessment will include the requirements of Planning Practice Guidance (Stages 1 to 5)[3]. These are to establish the baseline, assess the potential impact and conclude the mitigation requirements of the dust-generating works at Marsden Quarry.

7.2.2 Air quality would be assessed in accordance with the Statutory air quality objectives in The Air Quality Standards Regulations 2010.

7.2.3 The mineral dust assessment will be prepared in accordance with the source-pathway-receptor approach in accordance with the IAQM 'Guidance on the Assessment of Mineral Dust Impacts for Planning' (May 2016) (IAQM Minerals Guidance).

7.2.4 The requirement for a vehicle emissions assessment will be determined in accordance with the EPUK and IAQM 'Land-Use Planning and Development Control: Planning for

[3] Requirements of Planning Practice Guidance Stages 1 to 5 https://www.gov.uk/guidance/minerals#Dust-emissions

Air Quality' (January 2017) guidance. If required, the assessment would also consider the Local Air Quality Management Technical Guidance (August 2022) (LAQM.TG22).

7.3 Baseline

7.3.1 The IAQM Minerals Guidance provides a screening approach to determine whether a detailed assessment is required, based on distances of 400m for hard-rock and 250m for soft-rock extraction. Marsden Quarry is a hard rock quarry, and there are several existing sensitive receptors located within 400m of the site; therefore, a detailed assessment would be undertaken.

7.3.2 The baseline section of the Air Quality ES Chapter will establish the potential sensitive receptors surrounding Marsden Quarry, with consideration of local air quality conditions. Background concentrations would be sourced from the 2021-based Defra background concentration maps, and a review of the latest STC Annual Status Report (ASR) would be undertaken to determine if there are any STC-owned monitoring locations within the vicinity of Marsden Quarry.

7.4 Consultation

7.4.1 This scoping request provides our air quality methodology in full, and it is considered no further follow up would be required, subject to an appropriately detailed response being provided in the Scoping Opinion.

7.5 Potential Effects and Methodology

Disamenity Dust

7.5.1 The air quality assessment will assess the potential for disamenity dust and particulate matter impacts during the operation of the proposed time extension at Marsden Quarry.

7.5.2 The assessment will be undertaken in accordance with the source-pathway-receptor approach as outlined in the IAQM Minerals Guidance, for receptors within 400m of a dust-generating operation.

7.5.3 The pathway effectiveness would be assessed by means of a semi-quantitative meteorological assessment. The pathway calculations will determine the amount of time that sensitive receptors may be downwind of potential dust-generating sources. This would be completed for each operation (for example mineral extraction, stockpiling, trackout, restoration, etc.) to determine the potential risk of windblown dust towards sensitive receptors.

7.5.4 It is proposed to use a 5-year average dry-day (<0.2mm rainfall) dataset from the Newcastle Meteorological Station, which is the most representative meteorological station to the site due to the close proximity and similar elevation. A dry-day dataset is proposed as during rainfall events any dust emissions would be suppressed.

7.5.5 The particulate impact would be assessed using the methodology provided in the IAQM Minerals Guidance.

7.5.6 The existing 2002 Air Quality ES chapter would be reviewed, and the concluded impacts and mitigation measures will be considered in the updated air quality assessment. It should be noted that the time extension proposals include mineral extraction to be continued via pecking, rather than blasting which was considered in the existing air quality ES. Therefore, it is anticipated that the assessed dust impact at existing sensitive receptors will be reduced, in comparison to the conclusions of the 2002 air quality assessment.

7.5.7 As part of the existing 2002 Air Quality ES Chapter, dust monitoring undertaken by STC and the applicant (Owen Pugh (Site Services) Ltd) was reviewed, which concluded that dust levels were consistently within the 200mg/m2/day criterion, as set out in the Atmospheric Environment paper (Volume 32, Issue 16, August 1998). If more recent dust monitoring has been carried out, the results of this will be requested and a review of this data will be undertaken with consideration to the IAQM Minerals Guidance and summarised as part of the disamenity dust assessment. However, it should be noted that dust monitoring is not a requirement, unless this is requested to be undertaken by STC.

7.5.8 The assessment will also include consideration of any potential disamenity dust cumulative effects, as necessary.

7.6 Vehicle Emissions

7.6.1 It is anticipated that proposed time extension will not result in an increase of vehicle movements associated with Marsden Quarry. Traffic data will be analysed to assess if a detailed assessment of the air quality impact of vehicle emissions will be required.

7.6.2 If required, a detailed assessment would be undertaken using the atmospheric air dispersion model ADMS-Roads. The assessment would focus on concentrations of NO2, PM10 and PM2.5 at existing sensitive receptors. Pollutant concentrations would be predicted both for 'without proposed works' and 'with proposed works' scenarios, and the impacts would be assessed against criteria listed in IAQM guidance. The

assessment would be prepared to the requirements of the National Planning Policy Framework and Planning Practice Guidance- Air Quality.

7.6.3 Once operational, adverse air quality effects could be experienced at nearby sensitive receptors because of traffic generated by the proposed works. Recommendations for mitigation measures that should be applied during the proposed works would be made, as appropriate.

7.7 Complaints

7.7.1 Details are requested of any dust or air quality complaints which have been received, registered or investigated by the Environmental Health Department of STC. Alternatively, confirmation that no complaints have been received in the last 5 years is requested.

8 HISTORIC ENVIRONMENT

8.1 Introduction

8.1.1 This section of the scoping report identifies and considers the potential impacts upon historic environment receptors as result of the proposed time extension application.

8.1.2 Potential impacts to archaeological receptors are likely to be direct impacts and will only occur during virgin groundbreaking associated with any lateral extension (construction phase) to the quarry. Indirect impacts to the setting of heritage receptors may occur during the operational phase which includes restoration.

8.2 Baseline

Definition of terms and planning policy

8.2.1 A heritage asset is defined in the National Planning Policy Framework (NPPF) as 'A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions because of its heritage interest' (MHCLG 2024 Annex 2 page:73).

8.2.2 The significance of a heritage asset (designated or non-designated) is defined within the National Planning Policy Framework (NPPF) as 'the value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic' (MHCLG 2024, Annex 2 page:78).

8.2.3 The setting of a heritage asset (designated or non-designated) is defined as 'the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a

positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.' (MHCLG 2024, Annex 2 page:78).

8.2.4 Where heritage assets (designated or non-designated) are to be affected by development, 'local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance' (MHCLG 2024, para:207).

8.2.5 Designated heritage assets comprise 'a World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Sites, Registered Park and Garden, Registered Battlefield and Conservation Areas designated under relevant legislation' (MHCLG 2024, Annex 2 page: 72)

8.2.6 Nationally significant archaeological sites, monuments and structures are protected under the Ancient Monuments and Archaeological Areas Act (1979), which provides for a schedule of nationally important monuments. It should be noted that this Act makes no provision for the setting of scheduled monument, which is a matter of planning policy only.

The Planning (Listed Buildings and Conservation Areas) Act (1990) states that:

8.2.7 *'in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the secretary of state shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses' (Section 66).*

8.2.8 With regards to Conservation Areas it states that:

'special attention shall be paid to the desirability of preserving or enhancing the character of that area' (section 72).

8.2.9 Non-statutory designated heritage assets, comprising Registered Battlefields and Registered Parks and Gardens, are protected under national and local planning policy. This is also the case for the remainder of the archaeological resource; entries onto a historic environment record or sites and monument record as well as previously unknown features which may be recorded during the course of data collection in respect to a given development proposal.

8.2.10 The National Planning Policy Framework (NPPF) is supported by the Planning Practice Guidance (PPG) (MHCLG 2025). The PPG is a web-based resource to be used in conjunction with the NPPF. The relevant section is 'Historic environment' and advises on enhancing and conserving the historic environment. It sets out the best practice to applying government policy in the NPPF. It provides an interpretation for each of the interests assigned to heritage assets in understanding significance: archaeological, architectural and artistic, and historic (Paragraph 006 Reference ID: 18a-006-20190723).

8.2.11 In ensuring the statutory duty of the Planning (Listed Building and Conservation Areas) Act, the NPPF requires that when considering potential impacts 'great weight' should be given to the asset's conservation and that 'substantial harm to or loss of… grade II listed buildings, or grade II registered parks or gardens, should be exceptional' whilst 'substantial harm to or loss of…assets of the highest significance, notably Scheduled Monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional' (MHCLG 2024, para: 212 & 213).

8.2.12 Developments where there is substantial harm to or total loss of significance of a designated heritage asset should be assessed against specific tests and should deliver substantial public benefits which outweigh any loss or harm (MHCLG 2024, para:214). Less than substantial harm to a designated asset would require public benefits including the securement of an optimum viable use (MHCLG 2024, para:214).

8.2.13 Impacts to the significance of non-designated assets will require a balanced judgement based on the level of significance and the scale of harm (MHCLG 2024, para:216), although non-designated assets which are of equivalent significance to designated assets will be considered as such (MHCLG 2024, page:61). Where heritage assets of an archaeological nature may be impacted upon by development 'local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation' (MHCLG 2024, para:207).

Scoping Baseline

8.2.14 Potential impacts to the archaeological and heritage resource which can be identified through a review of recorded archaeological remains and designated heritage assets in the area, and which would be a material consideration in the planning process, are identified below.

8.2.15 Baseline information for this report was obtained from the following:

- National Heritage List for England (NHLE) (consulted January 2025):
  - Scheduled Monuments;
  - Listed Buildings;
  - Protected Wreck Sites;
  - Registered Parks and Gardens;
  - Registered Battlefields; and
  - Conservation Areas.
- Tyne & Wear online Historic Environment Record (HER) 'SiteLines'

8.2.16 Records within a radius of 1km from the Site boundary were obtained. A full HER record search will be obtained as part of a Heritage Statement.

8.2.17 The NHLE lists five assets within 1km of the Site boundary, two scheduled monuments and three listed buildings:

- Marsden lime kilns (NHLE1005911) – this monument lies within the revised Site boundary;
- Lizard Lane Heavy Anti-Aircraft Battery (NHLE1419998);
- Souter Point Lighthouse and Attached Buildings, listed Grade II* (NHLE1185593);
- Walls Extending from Mill Lane Around the Lighthouse and Linked Buildings, listed Grade II (NHLE1185616); and
- Souter Point Lighthouse Foghorn to East of Lighthouse and Steps and Walls to East of Lighthouse, listed Grade II (NHLE1355068).

8.2.18 In terms of non-designated heritage assets and sub-surface archaeological potential, the increased boundary from the edge of the existing quarry is small and a review of readily available historic Ordnance Survey mapping indicates that post-medieval activity in the form of quarrying and railway lines impacted the area, reducing/removing the potential for earlier surviving features, so impacts to such receptors are scoped out of the assessment. There are five assets listed on the Historic Environment Record within the Site boundary:

- a flint scatter (HER855) which included a flake and chips discovered in 'red soil' by Gibbs in 1939. Later discoveries included 'a scatter of Mesolithic flints including flakes and cores', in 1964-5;
- Marsden Lime Kilns (HER1002);

- Marsden Quarry (HER2491), marked as 'Old' on the 2nd edition Ordnance Survey map and partially overlay an earlier quarry that was served by a railway (HER2494);
- a railway (HER2494) that connected quarries (HER2491 & HER2492) with the South Sheilds, Marsden and Whitburn Colliery Railway (HER2466);
- a tunnel (HER17541) that was discovered in 2016 by workmen at the quarry. It ran from NZ406020 564140 toward the coast line for 40m.

8.2.19 SiteLines, Tyne and Wear's online Historic Environment Record, indicates that a number of other prehistoric finds have been recovered from the vicinity, such as flints, arrowheads, human bones, including flints from the quarry itself, as well as Roman pottery and evidence for more recent human activity, including post medieval quarrying, a pump house, reservoirs, railway infrastructure, and coastal related features such as guard stations, quays and beacons, and modern defensive features, including pillboxes, searchlight batteries, home stations, etc. Again, owing to the quarrying activity and the details of the application, archaeological receptors are scoped out of the assessment.

8.3 Potential Environmental Impacts

Construction Phase

8.3.1 The proposed application for time extension does not include lateral extension of the quarry. As such, there will be no construction phase impacts.

Operational Phase

8.3.2 With regard to impacts caused as a consequence of changes to a designated heritage asset's setting, baseline data has highlighted a number of such assets that may be impacted and will be included in a Heritage Statement.

8.4 Methodology

8.4.1 As this application is for a time extension only with no lateral extension and therefore no construction phase, it is likely that there will be no impact to below ground archaeological receptors, this is in agreement with the conclusion of the ES Statement for the previous application.

8.4.2 Designated heritage assets identified in this scoping report may be impacted upon during the operational phase of the time extension, specifically during restoration.

8.4.3 The effects of the proposals on the designated heritage assets including scheduled monuments and listed buildings within a 1km search area will be assessed within the

Heritage Statement which will outline the potential indirect impact to the significance of designated heritage assets as a consequence of introducing change within their setting.

8.4.4 The Heritage Statement will be submitted as a technical appendix to an ES chapter.

8.4.5 The Heritage Statement will include reference to field observations and primary and secondary resources. The Heritage Statement will be undertaken with due regard to the Standard and guidance for historic environment desk-based assessment issued by the Chartered Institute for Archaeologists.

8.4.6 The proposed assessment methodology to be employed to assessing the impact of the proposals upon cultural heritage assets has been informed by the following documents:

- NPPF (MHCLG 2024);
- Conservation Principles (English Heritage 2008);
- Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking in the Historic Environment (GPA2) (Historic England 2015);
- Historic Environment Good Practice Advice in Planning Note 3: (Second Edition): The Setting of Heritage Assets (GPA3) (Historic England 2017);
- Statements of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12; (Historic England (2019); and
- Design Manual for Roads and Bridges, LA 104 Environmental Assessment and Monitoring (Highways England, 2020).

8.4.7 Using professional judgement, heritage assets will be assessed on an individual basis and regional variations and individual qualities are taken into account, where applicable. It is proposed that value is ascribed to an asset using the following guidance:

Table 8.1: Heritage Asset Value

Assigned Value	Typical description/value
Very High	Very high importance and rarity, international scale and very limited potential for substitution such as World Heritage Sites.
High	High importance and rarity, national scale, and limited potential for substitution such as Scheduled Monuments, Grade I listed buildings, Grade I Registered Parks and Gardens, archaeological remains of equal significance to a scheduled

	monument. There are also Grade II* listed buildings, some Grade II listed buildings, some Conservation Areas, Grade II* and some Grade II Registered Parks and Gardens, Registered Battlefields. Non-designated heritage assets (archaeological sites, historic buildings, monuments, parks, gardens or landscapes) that can be shown to have demonstrable national or international importance. Well preserved historic landscape character areas, exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution such as some Grade II listed buildings, some Conservation Areas, some non-designated heritage assets which retain a high degree of integrity and authenticity Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable regional importance. Averagely preserved historic landscape character areas, exhibiting reasonable coherence, time-depth or other critical factor(s). Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible.
Low	Low or medium importance and rarity, local scale such as some non-designated heritage assets including some locally listed buildings and archaeological sites, historic buildings, monuments, park, gardens or landscapes that can be shown to have demonstrable local importance. Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade.
Very Low	Very low importance and rarity, local scale such as non-designated heritage assets which have been largely altered previously in terms of fabric, context for example. Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade. Landscape with no or little significant historical merit

8.4.8 In respect of identifying the importance of setting to the identified significance of a heritage asset, Historic England's good practice guidance presented in the Setting of Heritage Assets (2017) will be utilised; specifically, the five-step approach to assessment which is set out below:

- Step 1 – Identify which heritage assets and their settings are affected;
- Step 2 – Assess the degree to which these settings make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated;
- Step 3 – Assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it;

- Step 4 – Explore ways to maximise enhancement and void or minimise harm; and
- Step 5 – Make and document the decision and monitor outcomes.

8.4.9 A non-exhaustive list provided within the document (2017:11) identifies themes such as the following which should be considered when assessing setting and its contribution to significance:

- Physical surroundings:
  - Topography
  - Aspect;
- Functional relationships and communications:
  - History and degree of change over time and
  - Sense of enclosure, seclusion, intimacy or privacy.
- Experience:
  - Views from, towards, through, across and including the asset;
  - Intentional inter-visibility with other historic assets and natural features; and
  - Sense of enclosure, seclusion, intimacy or privacy.

8.4.10 The guidance within this Historic England publication will be used alongside Table 4 and Tables 6 and 7.

8.4.11 The magnitude of impact is measured from the condition that would prevail in a 'do nothing' scenario and it is assessed without regard to the importance of the receptor (Highways England 2020).

8.4.12 Heritage assets are susceptible to numerous forms of development during the construction process and as a consequence of the operational life of the proposed development. These can be either direct (physical) impacts or indirect (non-physical) impacts.

8.4.13 The worst magnitude of impact would be complete physical removal of the heritage asset. In some instances, it is possible to discuss percentage loss when establishing the magnitude of impact. However complex receptors will require a much more sophisticated approach (Highways England 2020).

8.4.14 The significance of an impact is devised by cross referencing the importance of the receptor with the magnitude of the impact, see Tables 4 - 6. The significance categories are set out in Table 7.

Table 8.2: Establishing the magnitude of impact		
Magnitude of impact (change)		**Typical description**
Major	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Moderate	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Minor	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.
No change		No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Table 8.3: Establishing the significance of impact						
Value/Importance	**Very High**	Neutral	Slight	Moderate/large	Large or very large	Very large
	High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral/slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight
		No change	**Negligible**	**Minor**	**Moderate**	**Major**
		Magnitude of impact				

Design Manual for Roads and Bridges, LA 104 Environmental Assessment and Monitoring (Highways England, 2020)

Table 8.4: Significance categories	
Significance Category	**Typical Description**
Very large	Effects at this level are material in the decision-making process.
Large	Effects at this level are likely to be material in the decision-making process.
Moderate	Effects at this level can be considered to be material decision-making factors.
Slight	Effects at this level are not material in the decision-making process.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Design Manual for Roads and Bridges, LA 104 Environmental Assessment and Monitoring (Highways England, 2020)

8.5 Significance of Impacts

8.5.1 The impacts in Table 6 detail those which can be anticipated at the scoping stage. These have been considered for the construction and operational stages without mitigation and are based on information gained from the known baseline position at this time. Effects will be reviewed as part of the comprehensive ES technical paper and reported in the Heritage Statement. Further impacts including cumulative impacts may be identified during additional baseline data collection undertaken as part of the Environmental Impact Assessment.

8.6 Impact Predication Confidence

8.6.1 The criteria for impact prediction confidence are set out below:

Table 8.5: Confidence Level	
Confidence Level	**Description**
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

8.7 Construction Phase

8.7.1 Ground disturbance would have the potential to affect heritage assets of archaeological and / or historic interest. In this case, there are no potential impacts and do not need to be considered further.

8.8 Operational Phase

8.8.1 There is a potential for indirect impacts to the significance of designated heritage assets within the vicinity of the redline boundary through changes to their settings

due to land restoration. For this assessment, the search area applied will be 1km from the redline boundary. Specific assets identified during the preliminary baseline prepared for scoping are identified in Section 8.2.

Table 8.6: Predicted Operational Impacts

Nature of Impact	Receptor (NHLE REF) (importance)	Magnitude of Impact	Significance Impact (DMRB)	Confidence Level
Setting Impact	NHLE1005911	Minor	Slight/Moderate	Low*
Setting Impact	NHLE1419998	Negligible	Slight	Low*
Setting Impact	NHLE1185592	Negligible	Slight	Low*
Setting Impact	NHLE1185616	Negligible	Neutral/slight	Low*
Setting Impact	NHLE1355068	Negligible	Neutral/slight	Low*

*further research and field observations will be required to inform the level of impact with a greater degree of confidence, where this is possible.

8.9 Mitigation

8.9.1 The mitigation requirements will be determined through the full environmental assessment to reduce any effects, where considered necessary. Any mitigation measures deemed necessary will be confirmed in the resulting ES.

8.9.2 With regards to indirect impacts, appropriate stand-off between and asset and the proposed development and / or screening to minimize any harm to the significance of identified heritages assets may be included as embedded mitigation within the masterplan.

8.10 Conclusion

8.10.1 The scoping assessment has not been able to confidently predict the level of impacts to heritage assets and as such there remains a potential for significant effects to designated heritage receptors in terms of EIA.

8.10.2 It is anticipated that the assessment of potential impacts to the archaeological and heritage resource will be assessed within specialist technical appendices (a Heritage Statement) which will provide an evidence base for an ES chapter. Archaeology and Heritage is therefore scoped into the EIA on this basis.

8.10.3 The table below confirm the details to be scoped into the environmental assessment.

Table 8.7: Work Scoped in	
Environmental Issue	**Reason for "scoping in"**
Operation: Potential indirect impacts to the setting of designated heritage assets	The potential for changes within the setting of the identified designated heritage assets which could affect an understanding and appreciation of their significance

9 SOILS AND AGRICULTURAL LAND

9.1.1 Given that no additional land will be disturbed during the proposed time extension, it is recommended that soils and agricultural land be scoped out of the assessment, as the proposed operations do not extract or move any soils within the site.

10 ECOLOGY

10.1 Introduction

10.1.1 This section outlines the proposed methodology for assessing the ecological impact of the proposed Extension of Time (EoT) application as part of the EIA. The project will involve seeking to obtain planning permission for a seven-year time extension to the existing planning permission to extend extraction for five years from December 2027 to December 2032 and to extend the restoration period for two years from December 2032 to December 2034.

10.1.2 The project will also involve a minor regularisation of the site boundary behind Hill House.

10.2 Baseline Conditions

10.2.1 A Preliminary Ecological Appraisal (PEA) has been undertaken to update the baseline data for the site. The UKHab Habitat Results plan is provided as NT16974-002. Previous ecological surveys have been undertaken in 1999/2002 (WA,2002) to support a planning application for extraction and inert landfill operations. As part of this process a progressive restoration plan has been prepared.

10.2.2 The site currently supports a large open quarry void with steep cliff or benched sides. The open disturbed areas of the quarry are located to the south and east, with areas of inert land fill to the north and west. An active processing plant and recycling facility is present within the active parts of the quarry.

10.2.3 Calcareous grassland/magnesian grassland habitat is present around the margins of the quarry to the north and east, with areas of neutral/calcareous grassland, tall ruderal, scattered scrub and ephemeral/short perennial within the quarry on bunds and inert landfill areas. Due to the disturbed nature of the Site, this vegetation

supports more competitive species. Certain habitats on Site are identified on MAGIC[4]as s.41 Priority open mosaic habitat. However MAGIC data is typically provisional as it is often undertaken from aerial photography with limited or no ground truthing, and hence can be inaccurate. In summary, the on-site habitats are not currently considered to reflect s.41 Priority habitat status.

10.2.4 Four waterbodies (WB1-4) are present within the site boundaries (one permanent silt washing lagoon and 3 temporary pools) and a further three waterbodies (WB5-7) are located within 250m of the site. All waterbodies are shown on drawing NT16974-004

10.3 Scope of Assessment

10.3.1 The ecological information to be considered in the ecology ES chapter relates to the Site and the Zone of Influence (ZoI), which varies between receptors depending upon factors such as mobility and sensitivity. It is derived from survey visits as well as desk-based sources of information.

10.3.2 For most ecological receptors the ZoI is proposed to extend to 1km from the site boundary (this is a precautionary approach as the ZoI is unlikely to extend this far for most ecological receptors). However, for statutory designated sites this distance is increased to 2km and would also take into account impact risk zones.

10.3.3 The ZoI for the proposed development is the area over which ecological features may be affected by changes as a result of the proposed project and activities associated with all development stages, i.e. construction and operation. Effects arising from the proposed development may extend beyond the site boundary. The ZoI has been used to determine the extent of the desk study and baseline ecological surveys.

10.3.4 Current guidance[5] advises that construction related dust impacts only need to be considered for important ecological features within 50m of the development boundary. The desk study has considered the presence of important ecological features within 1km of the site (and is therefore precautionary with regards to the impacts of dust and other pollutants).

10.4 Assessment Methodology

10.4.1 The evaluation and assessment within the ecology ES chapter would be undertaken with reference to relevant parts of the 2019 'Guidelines for Ecological Impact

[4] https://magic.defra.gov.uk/
[5] Holman et al (2014) Guidance on the assessment of dust from demolition and construction.

Assessment in the United Kingdom and Ireland; Terrestrial, freshwater, coastal and marine' published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2019). Although this is recognised as current industry guidance for ecological assessment, the guidance itself recognises that it is not a prescription about exactly how to undertake an ecological impact assessment (EcIA); rather, CIEEM advises that they "provide guidance to practitioners for refining their own methodologies".

10.5 Ecological Features and Potential Impacts

10.5.1 The first step in the EIA process is the identification of important ecological features (habitats, species, ecosystems, designated sites and their functions/processes). Important ecological features are then subject to detailed assessment if they are likely to be significantly impacted by the proposed development. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened, and resilient to project impacts such that there is no risk to their viability.

10.5.2 Table 11 below sets out the important ecological features that have been assessed within the PEA and the rational for either being 'scoped in or out' of the EIA for further assessment. Any features 'Scoped Out' in Table 11 below are scoped out of further assessment within future EIA.

Table 10.1: Important Ecological Features

Ecological Feature	Scoping	Rational (Potential Impacts[6])
Designated Sites		
Durham Coast SAC	Scoped out	The site lies at least 60m distant from the Durham Coast SAC and is separated from the site by the A187 coastal road. No direct impacts to the designated site are anticipated as a result of the continuation of quarrying works. No indirect impacts through dust deposition are anticipated. The dust arisings are likely to be contained within the deep quarry void, in combination with ongoing dust suppression that is in current use. This Site is scoped out of the assessment as no additional impacts are anticipated on its interest features as a result of this proposed development.
Northumbria Coast SPA	Scoped out	The site lies outside of the designated area (all infrastructure will be 1.3km distant from the SPA). The site does not include suitable supporting habitat for the

[6] Potential Impacts without mitigation.

Table 10.1: Important Ecological Features		
Ecological Feature	**Scoping**	**Rational (Potential Impacts[6])**
		SPA qualifying species which are all associated strongly with the coast for foraging, breeding and roosting and hence the site is not functionally linked to the SPA. No negative adverse effects are considered likely as a result of the proposed EoT, therefore this site is scoped out of further assessment.
Northumbria Coast RAMSAR	Scoped out	The site lies outside of the designated area (all infrastructure will be 1.3km distant from the Ramsar). The site is not functionally linked to the Ramsar as the qualifying species are dependant upon coastal habitats and/or open farmland. No indirect effects through dust deposition are anticipated on habitats and supporting invertebrate populations, given the distance from site. This Site has therefore been scoped out from further assessment.
Durham Coast SSSI	Scoped out	The site lies within close proximity to Durham Coast SSSI. No direct habitat loss will occur, indirect adverse effects through dust deposition is currently controlled via safe working practices to ensure dust and sediment is not transferred. No additional negative effects are considered likely as a result of an EoT application. This Site is scoped out of the assessment as no additional impacts are anticipated on its interest features as a result of this proposed development.
Cleadon Hill SSSI	Scoped out	The site lies outside of the designated area (all infrastructure will be 1.3km distant from the SSSI) and is not hydrologically linked to the SSSI. The site is separated from the SSSI by agricultural land and roads. Given the separation from site no direct or indirect effects are considered likely. This Site is scoped out of further assessment as no additional impacts are anticipated on its interest features as a result of this proposed development.
Harton Down Hill SSSI	Scoped out	The site lies outside of the designated area (all infrastructure will be 1.4km distant from the SSSI) and is not hydrologically linked to the SSSI. The site is separated from the SSSI by residential developments and roads. Given the separation from site no direct or indirect effects are considered likely. No further assessment is considered necessary.
Marsden Old Quarry LNR	Scoped out	The site is approximately 280m from Marsden Old Quarry LNR. No direct habitat loss will occur within the LNR. No indirect

Table 10.1: Important Ecological Features		
Ecological Feature	**Scoping**	**Rational (Potential Impacts[6])**
		effects through dust deposition are likely to occur. Control methods are in current use to control dust and sediment run off. No negative effects are anticipated and is therefore scoped out from further assessment.
Whitburn Point LNR	Scoped out	The site is separated from the LNR's by residential developments and roads. No direct impacts shall occur as a result of the EoT application. No indirect effects to qualifying species of the LNR through noise and disturbance are currently considered to occur above and beyond the current conditions. No negative effect is considered likely to occur and these sites are scoped out from further assessment.
Harton Down Hill LNR	Scoped out	
Cleadon Hill LNR	Scoped out	
		Habitats
Bare ground (Inland rock - s1/s1d)	Scoped out	This habitat is considered to be intrinsically low ecological value. This feature is considered to be of negligible habitat value, supporting a sparse flora of limited diversity.
Calcareous/magnesian grassland (Lowland Calcareous grassland (g2a)	Scoped out	This habitat although priority habitat shall not be impacted by the proposed EoT application. All habitat shall be . around the margins/periphery of the quarry. Restoration scheme to include habitat recreation.
Waterbodies (r1g)	Scoped out	Although this habitat is not considered to meet the definition of priority habitat, although it may support a range of protected species such as gcn and is therefore considered separately under species below.
Other Neutral grassland (g3c)/other calcareous grassland (g2d).	Scoped out	These grasslands comprise low species diversity and competitive neutral species typical of disturbance.
Scrub	Scoped out	This habitat is considered to be of low value due to its moderate diversity of locally common species. Impacts to this habitat is not considered to be significant.
Tall ruderal – other neutral vegetation (g3c)	Scoped out	This habitat is common and widespread in a national and local context. Impacts to this habitat is not considered to be significant.
Artificial Unvegetated Unsealed Surface (u1c)	Scoped out	This habitat is considered to be of negligible value due to its low diversity of locally common species. Impacts to this habitat is not considered to be significant.
Ephemeral /short perennial vegetation (Inland rock - s1)	Scoped out	This habitat is considered to be of low value due to its moderate diversity of locally common species and disturbed nature. The Impact to this habitat is not considered to be significant.

Table 10.1: Important Ecological Features		
Ecological Feature	**Scoping**	**Rational (Potential Impacts[6])**
	Species	
Breeding Birds	Scoped in	The site supports a range of breeding birds that are mostly associated with boundary habitats and areas of grassland over inert landfill area. However, given that survey data is greater than 20 years old, and taking into consideration the locality next to coastal habitats further survey is recommended to establish breeding bird assemblage o Great Crested Newts n site, including identification of peregrine nesting site.
Bats	Scoped out	Poor quality foraging habitat restricted to sheltered areas of the quarry. Limited records have been supplied by the desk study with only 2 species recorded. The continuation of works is not considered to have a negative effect of foraging bats.
Great Crested Newts	Scoped in (provisionally)	Further survey and assessment are required to consider impacts to this species.
Water Vole	Scoped out	This species is not considered to be present and is therefore scoped out of further assessment.
Otter	Scoped out	This species is not considered to be present and is therefore scoped out of further assessment.
Reptiles	Scoped out	This species is not considered to be present and is therefore scoped out of further assessment.
Badger	Scoped out	No evidence of this species has been identified on site and it is considered to be likely absent from the site therefore, impacts are considered negligible.
Priority Species	Scoped in	Common toad. Precautionary working methods to be adopted to ensure no incidental harm to common toads.
Priority Species	Scoped out	Brown hare and common hedgehog and butterfly species Dingy skipper, wall brown, small heath and Greyling. Limited habitat present within the open void, with suitable habitat around the periphery retained. Restoration of habitats will ensure suitable habitat in the medium to long term.

10.6 Further Surveys Required

10.6.1 The following surveys are recommended in order to provide an accurate assessment of baseline conditions within the site.

10.6.2 Presence/absence survey of great crested newt using eDNA of ponds considered to be suitable for the species.

10.6.3 Breeding Bird Survey to assess breeding bird assemblage and locate peregrine nesting site within the site (if present).

10.7 Proposed Mitigation, Compensation and Enhancements

10.7.1 The following mitigation is proposed however further mitigation may be required after baseline surveys are complete.

- Retain areas of peripheral habitat (calcareous/ magnesian grassland) around the top of the void during the continuation of quarrying activities.
- Avoiding works within the locality of the peregrine nest within the breeding season (taken to be Feb – August), unless proved to be absent;
- Production of a Construction Ecological Management Plan (CEMP) to set out how retained habitats and wildlife would be protected from construction activities.
- Pre-construction check for new badger setts to be undertaken 48hr before works begin.
- Precautionary working methods should be adopted to ensure no incidental harm to common toads. Any animals found are to be moved to a place of safety around the site perimeter.
- Measures to prevent amphibian species from entering water extraction equipment should include the fitting of filters (6mm gauge max) to the ends of extraction pipes.
- The removal of vegetation, including clearance of vegetation of the inert landfill area to be undertaken (where possible) outside the breeding season (i.e. avoiding the period mid-February to the end of August inclusive) to avoid an impact on nesting birds. If this is not possible then habitat clearance that needs to take place during the breeding season would only proceed once a Suitably Experienced Ecologist (SQE) has checked the area and confirmed that nesting birds are not present.
- Update the Landscape and Ecology Management Plan to reflect the results of further surveys (if necessary) to include habitat creation, management, and monitoring for of the site. Proposed habitats would aim to replace the lost habitats with like for like or better habitats and be reflective of the local area.
- Incorporate amphibian refugia within restoration scheme
- A comprehensive dust management programme already is already in action and shall be continued throughout the duration of quarrying. Methods of dust

control/suppression shall be incorporated into a Construction and Environmental Management Plan (CEMP) for the Site.

11 NOISE

11.1 Introduction

11.1.1 A noise assessment will be undertaken by Wardell Armstrong LLP and will be included as a chapter within an Environmental Statement (ES). This document has been prepared to outline the scope of the noise assessment and likely significant affects.

11.2 Legislation, Policy and Guidance

11.2.1 The assessment will be carried out with due regard to the following:

- National Planning Policy Framework (2024) (NPPF);
- Noise Policy Statement for England (2010) (NPSE);
- Planning Practice Guidance – Noise (2014):
- Planning Practice Guidance – Assessing the Environmental Impacts from Mineral Extraction (2014);
- British Standard 5228:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1&2: Noise (BS 5228-1), Vibration (BS 5228-2);
- British Standard 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings (BS 8233:2014); and,
- Department of Transport's technical memorandum Calculation of Road Traffic Noise 1998 (CRTN).

11.3 Consultation

11.3.1 Consultation will be undertaken with the Environmental Health Officer (EHO) at South Tyneside Council in order to agree a suitable methodology for the assessment prior to commencing work on the assessment.

11.4 Baseline Conditions & Receptor Identification

11.4.1 The baseline noise conditions will be set out in the ES chapter. Attended Noise monitoring will be undertaken to establish the existing acoustic environment at existing noise sensitive receptor locations, measured in accordance with guidance. The final locations will be agreed with South Tyneside Council.

11.4.2 The ambient and background sound levels in the vicinity of the Site and at local sensitive receptors, is likely to be dominated by local road traffic and noise from the

existing quarry operations. All noise sources will be observed during the baseline monitoring and reported within the baseline section of the Noise chapter.

11.4.3 Figure 11.1 below shows an indicative noise monitoring location plan.



Figure 11.1 – Noise Monitoring Location Plan

11.5 Potential Significant Effects

11.5.1 Potential noise impacts during the temporary and operational phases to be addressed by the ES are as follows:

- The noise impact of proposed quarry workings at existing sensitive receptors during time extension extraction of the mineral;
- The impact on existing sensitive receptors from existing and proposed quarry workings;
- The impact of changes to vehicle flows on roads surrounding the quarry, on existing sensitive receptors and;
- Proposed noise sources are likely to include:
    - Excavators – Excavators will be used for soil stripping and to extract the mineral
    - Dozers – to move earth

- Loaders – Loaders will be used to transport the extracted soil and minerals to different locations across the site.
- HGV Movements – HGV movements around the site will be used to transport mineral to and from the site.

- No further blasting is required to extract the remaining rock.

11.5.2 All sources associated with the development will be assessed in accordance with Planning Practice Guidance – Assessing the Environmental Impacts from Mineral Extraction (2014), and where required, mitigation will be suggested to reduce any significant impacts.

11.6 Assessment Methodology

11.6.1 The data gathered during noise monitoring, together with the phasing plans and plant equipment to be used, will be used to inform a computer noise model in SoundPLAN modelling software. This allows for specific and cumulative noise impacts to be considered.

11.6.2 Noise modelling is an important tool to accurately establish the propagation of noise across an area of interest, and the predicted noise levels will be used to assess any likelihood of an adverse impact due to the Proposed extension. Each phase of the extension will be modelled with regards to the location of the respective work to be carried. The noise model will include primary mitigation measures that are inherent in the design i.e. existing bunds, barriers, buildings etc…, on-site plant noise levels, vehicle noise levels and vehicle flows.

11.6.3 The prediction methodology for on-site operations will be ISO 9613-2. The prediction methodology for vehicle movements on the public road network will be Calculation of Road Traffic Noise. Both prediction methodologies are implemented in SoundPLAN.

11.7 Criteria for Significance of Impact

11.7.1 The significance of an environmental impact along with the determination of impact category under the noise hierarchy is determined by magnitude of change from the baseline and the sensitivity of the receptor.

11.7.2 The methodology for determining the sensitivity of receptors is shown in Table 11.1.

Table 11.1: Methodology for Determining Sensitivity

Sensitivity	Description
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance. Groups of 10 or more properties, schools, or SSSI
Moderate	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance. Individual residential properties
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance. Residential properties, where occupants have an interest in the development, commercial and business uses, and amenity

11.7.3 The significance of any potential noise impact can be judged in terms of the impact significance summarised in Table 11.2, derived from the guidance given in the PPG to the NPPF.

Table 11.2: Magnitude of Change

Threshold	Long-Term Operations Daytime (0700 to 1900) and Evening (19:00-22:00)	Long-Term Operations Night-time (22:00 to 07:00)	Temporary Operations (Less than 8 weeks per year)
Major	>15dB or more above $L_{A90,1hr}$ and/or >60dB $L_{Aeq,1hr}$	> 47dB $L_{Aeq,1hr}$	> 75dB $L_{Aeq,1hr}$
Moderate	>10 - ≤15dB above $L_{A90,1hr}$ and/or >55 - ≤60dB $L_{Aeq,1hr}$	>43 - ≤47dB $L_{Aeq,1hr}$	>70 - ≤75dB $L_{Aeq,1hr}$
Minor	>0 -≤10dB above $L_{A90,1hr}$ and/or >50 - ≤55dB $L_{Aeq,1hr}$	Equal to 42dB $L_{Aeq,1hr}$	Equal to 70dB $L_{Aeq,1hr}$
Negligible	≤0dB above $L_{A90,1hr}$ and/or ≤50dB $L_{Aeq,1hr}$	< 42dB $L_{Aeq,1hr}$	< 70dB $L_{Aeq,1hr}$

11.7.4 The significance of an environmental impact for noise from each phase of the quarry is determined by the interaction of magnitude and sensitivity. The Impact Significance Matrix used in this assessment is shown in Table 11.3.

Table 11.3: Significance of Effect Matrix and NPSE Noise Hierarchy Criteria			
Magnitude of Change	**Sensitivity**		
	High	**Moderate**	**Low**
Major	Major (UOAEL[7])	Major – Moderate (SOAEL)	Moderate – Minor (LOAEL)
Moderate	Major – Moderate (SOAEL[8])	Moderate – Minor (LOAEL)	Minor (NOAEL)
Minor	Moderate – Minor (LOAEL)[9]	Minor (NOAEL)	Negligible (NOEL)
Negligible	Minor (NOAEL[10])	Negligible (NOEL[11])	Negligible (NOEL)

11.7.5 Where Major and Major-Moderate significance of effect is determined these will be considered to be ***Significant*** (red boxes) in EIA terms.

11.7.6 For Moderate-Minor significance of effect (orange boxes) the final determination of whether an impact is ***Significant*** or ***Not Significant*** will depend upon additional discussion of the effect.

11.7.7 For Minor and Negligible significance of effects are considered to be ***Not Significant***.

11.7.8 Where effects are determined to be ***Significant***, secondary mitigation measure will be explored using the noise model to control noise emissions from the Proposed extension. The effects after the implementation of the secondary mitigation will be reported.

11.7.9 The baseline conditions, prediction of noise levels, assessment of effects and any proposed secondary mitigation along with the reported residual effects will be provided in an Environmental Statement Chapter

12 TRANSPORT

12.1 Introduction

12.1.1 This section sets out the methodology and scoping details for a Transport Chapter of the ES that would be submitted in relation to proposals for the extension of time at Marsden Quarry.

12.1.2 In terms of the proposed extension of time of operations, extraction would occur as per the currently approved rate, not extracting more than originally approved. The

[7] Unacceptable Observed Adverse Effect Level (UOAEL)
[8] Significant Observed Adverse Effect Level (SOAEL)
[9] Lowest Observed Adverse Effect Level (LOAEL)
[10] No Observed Adverse Effect Level (NOAEL)
[11] No Observed Effect Level (NOEL)

proposed works would continue to operate in line with current extraction operations, i.e. 07:00-18:00 Monday to Friday and 07:00-13:00 on Saturdays. In line with current extraction operations, the works would generate a maximum of 304 two-way trips (in and out) per day.

12.1.3 It is anticipated that staffing numbers would continue at existing levels during the extended time period for extraction and restoration.

12.1.4 The traffic generated by the proposed extension of time will not exceed what is currently approved for extraction and is deemed not to have a material impact on the operation of the local highway network.

12.2 Baseline Conditions and Future Baseline

12.2.1 The existing quarry is located to the west of the A183 Coast Road which provides access to the existing site by means of a priority T-junction. The A183 Coast Road is a single carriageway road circa 10m wide and subject to a 40mph speed limit with footways provided on both sides of the road in the vicinity of the site. A shared walk/cycle path runs along the eastern side of the road. The A183 Coast Road links with the A1300 to the north which provides access to more key roads in the local area such as the A19 and the A1018.

12.2.2 To the west of the site, Lizard Road is a single carriageway road running parallel to the A183 Coast Road on a south-north orientation between Whitburn village and a roundabout junction with B1301/A1300 Prince Edward Road East. Lizard Road is circa 6m wide and subject to a mix of 40mph and 20mph speed limits. Footway is provided on the eastern side of the road from circa 100m south of the Whitburn Golf Club towards north.

12.2.3 The closest bus stop is located on the A183 Coast Road, circa 120m north the site access. The bus stop provides access to the bus route E1 which links with Sunderland.

12.3 Existing traffic flows/future traffic flows

12.3.1 The proposal is not expected to generate additional vehicle movements that would have a material impact on the local highway network. Consequently, a capacity assessment is not anticipated to be necessary. Furthermore, no significant amendments to the existing site access arrangements are proposed. Therefore, a Transport Statement is deemed sufficient to accompany the planning application.

12.4 Transport Statement

12.4.1 The Transport Statement would include the following:

- Review of local and national transport policy context;
- Summary of existing baseline conditions on local highway network, existing site access arrangements and existing site operations;
- Collision data analysis at the Site access junction;
- Undertake traffic count survey of the existing quarry;
- Estimation of vehicle movements associated with the extension of time, which would require some client/project team input regarding extraction rates and expected changes to traffic numbers;
- Review of existing HGV routing strategy, and discussion of suitability, identifying any required changes; and
- Review of compliance with any existing HGV or staff traffic time restrictions, identifying any additional traffic management measures required.

12.4.2 The Transport Statement will require a traffic count survey of the existing site access, to inform the baseline conditions.

12.5 Conclusion

12.5.1 It is concluded that the traffic generated by the proposed extension of time will not exceed the currently approved assessment for extraction and deemed not to have a material impact on the operation of the local highway network. Given that Traffic and Transport were scoped into the original ES for Marsden Quarry, it is recommended that these continue to be included and addressed as part of the Section 73 application. This would allow for the consideration of any potential changes in traffic-related impacts resulting from the proposed amendments and changes in the surrounding area since the original grant of permission.

12.5.2 The Transport ES chapter is proposed to be produced drawing on information from the TS with the TS included as a technical appendix. The Transport ES chapter will be prepared with due cognisance of Environmental Assessment of Transport and Movement (IEMA, 2023).

13 WATER ENVIRONMENT

13.1.1 The Water Environment ES Chapter will consider the potential effects arising from the proposed time extension for Marsden Quarry (the Site) in relation to the water environment. The chapter will assess the potential effects on:

- surface water and groundwaters;
- flood risk; and
- anthropogenic features such as Private Water Supplies (PrWS), abstractions and discharges.

13.2 Baseline

13.2.1 The assessment will develop a baseline dataset, assess potential effects through each stage of the Proposed Development and consider potential mitigation and management measures, to assess the significance of residual effects. The assessment will also consider the potential for cumulative effects arising from the Proposed Development and other current or future (known) developments within the same catchment(s) and the Site.

Surface Water Features

13.2.2 There are no surface water features (rivers, streams, ponds etc.) within or in the vicinity of the Site. The Site is not located within an Environment Agency Water Framework Directive (WFD) surface water body.

Hydrogeology

13.2.3 According to the British Geological Survey (BGS)[12] 1:50,000 mapping, there is glacial Till deposits at edges of the Site however review of aerial imagery indicate that these deposits have been remove as the quarry has progressed. There are also small areas of Pelaw Clay Member (clay) deposits, which are also no longer in situ. The quarry's underlying bedrock geology is comprised entirely of Dolostone (limestone) of the Roker Formation. The BGS also recorded Made Ground (undivided) - artificial deposits in the east and southeast of the Site.

13.2.4 A review of the BGS online Hydrogeology map1[13] and the DEFRA Magic Map[14], indicated the Site bedrock underlaying the Site is a highly productive aquifer with flow virtually all through fractures and other discontinuities, which is classed by the EA as a principal aquifer. Principle aquifers are "strategically important rock units that have

[12] British Geological Survey (2025) GeoIndex Onshore [online]. Accessed February 2025. Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html
[13] British Geological Survey (2025) GeoIndex Onshore [online]. Accessed February 2025. Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html
[14] Magic Partnership (2025) Magic Map [online]. Accessed February 2025. Available at: https://magic.defra.gov.uk/MagicMap.aspx

high permeability and water storage capacity."[15] This highly productive aquifer locally can yield up to 50 L/s of very hard water.[16]

13.2.5 Local groundwater levels recorded at the West Hall Farm Environment Agency observation borehole (national grid reference: NZ 39560 62024), located approximately 1.9km southwest of the Site, show a gradual rising trend in groundwater levels over the 32-year period from 1993 to 2025. This aligns with the general trend of increasing groundwater levels in the northeast of England. The rising groundwater levels are thought to be caused by the reduced abstraction of water from the underlying coal measures causing the groundwater levels in the coal measures to rise and consequently forcing groundwater levels in the Dolostone to rise.

Flood Risk

13.2.6 The EA Flood Map for planning shows the Site is located entirely within Flood Zone 1, defined as having "low probability of flooding from rivers and the sea (an annual probability of less than 1 in 1000 in any year)."[17] However, approximately 0.1km to the east of the Site towards the coast is classified as a Flood Zone 3, "land with a high probability of flooding from rivers and the sea."[18]

13.3 Designations

13.3.1 There are no designations within the Site. However, the Site is in close proximity to several designated areas:

- Marsden Old Quarry is approximately 300m northwest of the Site and is designated a Local Nature Reserve but is not designated for hydro-ecological reasons;
- Durham Coast is approximately 100m east is classified as a Site of Special Scientific Interest (SSSI) and a Special Area of Conservation (SAC) but is not designated for hydro-ecological reasons;
- Whitburn Point is 675m southwest is designated a Local Nature Reserve but is not designated for hydro-ecological reasons;

[15] British Geological Survey (2025) Aquifers and Shales [online]. Accessed February 2025. Available at: Aquifers and shales | Groundwater | Our research | British Geological Survey (BGS)
[16] British Geological Survey (2025) GeoIndex Onshore [online]. Accessed February 2025. Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html
[17] British Geological Survey (2025) Aquifers and Shales [online]. Accessed February 2025. Available at: Aquifers and shales | Groundwater | Our research | British Geological Survey (BGS)
[18] British Geological Survey (2025) Aquifers and Shales [online]. Accessed February 2025. Available at: Aquifers and shales | Groundwater | Our research | British Geological Survey (BGS)

- Cleadon Hill is approximately 1.4km southwest is classified as a SSSI and LNR but is not designated for hydro-ecological reasons;
- Harton Down Hill is approximately 1.3km north is classified as a SSSI and LNR) but is not designated for hydro-ecological reasons;
- Northumbria Coast is approximately 1.1km to the north of the Site and 1.5km to the south of the Site is classified as a RAMSAR site and Special Protection Area (SPA) but is not designated for hydro-ecological reasons.

13.3.2 The nearest groundwater source protection zone is located 2km south from the Site and is designated as a Zone 3 'Total Catchment'.

13.4 Methodology

Desk Based Studies

13.4.1 The desk-based study will examine the catchments and the conditions of the water environment onsite and downstream of the Site. For the purposes of the ES Chapter, the Water Environment study area will be a 2km buffer from the Site red line boundary. It is proposed the following tasks will be undertaken to ensure the baseline data informs the impact assessment:

- review of Ordnance Survey (OS) maps to identify surface water features;
- identification of the locations and characteristics of catchments, surface water features and springs within and adjacent to the Site;
- identification of WFD classifications and objectives, obtained from the Environment Agency Catchment Data Explorer within and adjacent to the Site;
- request from the Environment Agency and Local Authority for the data and location of abstractions, PrWS and discharges within and adjacent to the Site;
- collation of information on climate (including long term average monthly rainfall figures), surface hydrology and flood risk; and
- identification of hydrogeological conditions and groundwater resources (including groundwater vulnerability and productivity); together with secondary information relating to:
    - bedrock and superficial geology mapping; and
    - review of soil mapping.

Consultation

13.4.2 As part of the desk-based study, the Environment Agency will be consulted regarding incidents of flooding, surface water and groundwater quality and level data and abstractions and discharges within the Site and surrounding area. South Tyneside Council will be contacted regarding the presence of PrWS within or close to the Site.

Water Resources Legislation and Policy

13.4.3 The following EU legislation has been transposed into English and Welsh Law through various acts and regulations and remain extant. The applicable legislative framework is summaries as follows:

- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, which transposes The Water Framework Directive (2006/118/EC);
- The Groundwater (England and Wales) Regulations (2009), which transposes The Groundwater Daughter Directive 2015 (2006/118/EC);
- The Water Environment (Water Framework Directive) (England and Wales) (Amendment) Regulations 2015. Which transposes The Priority Substances Directive (2008/105/EC);
- Environment Act 2021;
- The Environment Protection Act 1990;
- The Land Drainage Act 1991; and
- The Water Resources Act 1991, Water Act 2003 , and Water Act 2014.

13.4.4 The applicable planning policy includes:

- National Planning Policy Framework (NPPF), December 2024;
- Planning Practice Guidance (PPG): Flood Risk and Coastal Change, August 2022;
- Planning Practice Guidance (PPG): Water supply, wastewater and water quality, July 2019;
- South Tyneside Council's South Tyneside Local Development Framework; and
- South Tyneside Council's emerging policy from the draft Local Plan (2024).

Assessment

13.4.5 The assessment will focus on the effects relating to time extension and any changes to the quarry extraction practises. As identified in the baseline section the effects of

rising groundwater levels over the time extension will be assessed including any change on the quarry operational practises.

13.4.6 Mitigation measures will be designed to avoid, reduce or offset potential adverse effects resulting from the longer operational phase. The mitigation section will, if required, provide preliminary hydrological and hydrogeological monitoring proposals, the extent and nature of monitoring will depend on the findings of the baseline surveys and the assessment of effects.

13.4.7 Effects and cumulative effects that are determined to be major or moderate are considered to have a significant effect on a receptor. The identification of significant effect(s) will then require the implementation of specific mitigation in addition to the good design, pollution prevention measures and mitigation measures contained in the Environmental Management Plan (EMP) or equivalent. Effects that are identified as minor or negligible are not considered to have a significant effect and no further mitigation, beyond the adoption of good industry practice and guidance, will be required.

13.4.8 Due to the Site area being over 1ha in area, a Flood Risk Assessment will be prepared and form an appendix to the Water Environment ES Chapter.

13.5 Potential Effects

13.5.1 The assessment will identify potential effects arising from the time extension in relation to potential water environmental effects. The potential effects identified and to be assessed in the ES Chapter include, but are not limited to, the following:

- Increase in flood risk due to rising groundwater levels;
- Increase in risk of pollution to groundwater and surface water due to the use and presence of large machinery and vehicles onsite for a longer timeframe; and
- Delay to restoration (landfilling) which may change the local hydrogeological regime associated with rising groundwater levels.

Focused Questions

- Is there any available local knowledge / data on groundwater levels, groundwater flooding or relevant problems in the area we should be aware of?
- Are there any Environment Agency boreholes apart from West Hall Farm near to the Site recording long-term groundwater levels?

- Is the spatial extent of the 2km for the water environment study area considered to be appropriate?

14 FLOOD RISK AND DRAINAGE

14.1 Introduction

14.1.1 The potential flood risk associated with the proposed extension of time to existing operations at Marsden Quarry would be assessed and included in an appendix to the Water Resources Chapter to accompany the ES.

14.1.2 The original Water Resources chapter which was submitted by Wardell Armstrong in December 2002 (ref. NT02565/0009) did not refer specifically to Flood Risk and it is anticipated that a Flood Risk Assessment (FRA) would be requested to accompany the future application.

14.2 Policy, Legislation and Guidance

14.2.1 There have been multiple changes to policy and guidance since the original application was made. The latest National Planning Policy Framework was published in December 2024; Annex 3 indicates that the development would be classified as Less Vulnerable.

14.2.2 The site lies within Flood Zone 1 and, on account of the presence of a quarry void, indicates areas at risk of surface water flooding.

14.2.3 Guidance on allowances for climate change for rainfall intensity, fluvial flows and sea levels have been updated a number of times since the initial application with predicted effects increasing.

14.3 Potential Effects and Methodology

14.3.1 Restoration of the void will impact surface water flow routes and run-off characteristics and will be assessed as part of the FRA.

14.3.2 Lining of the base with low permeability soils will impact the infiltration characteristics of the existing quarry void and will be assessed as part of the FRA.

14.3.3 Current climate change allowance guidance and EA flood risk mapping may affect the flood risk context of the proposed development and will be assessed as part of the FRA.

14.3.4 The site drainage strategy during operational and restoration stages will be reviewed as part of the assessment. Measures should be in place to ensure that surface water

can be effectively managed on site with no increase in flood risk elsewhere and discharges to groundwater are suitably treated.

15 CLIMATE CHANGE AND RESILIENCE

15.1 Introduction

15.1.1 The EIA Regulations (2017) introduced the requirement to consider climate as part of the EIA process and require a consideration of "the impact of the project on climate" and "the vulnerability of the project to climate change" (Schedule 4, paragraph 5(f)).

15.1.2 The climate change impact assessment will identify and assess the likely significant effects of the Proposed Development on the climate (i.e., greenhouse gas/carbon emissions), and how to minimise these. The assessment also considers how the Proposed Development adapts to a changing climate, how other EIA topics/ receptors could be affected, and how resilience can be designed into this.

15.1.3 The ES Chapter will be produced by Wardell Armstrong (part of SLR Consulting).

15.2 Legislation, policy and guidance

15.2.1 The assessment will consider any national and local planning policy requirements, which include the following:

- The Town and Country Planning (EIA) Regulations (2017);
- The Climate Change Act 2008 (2050 Target Amendment) Order 2019;
- The National Planning Policy Framework (NPPF) (2024);
- South Tyneside Core Strategy and Local Development Framework (Adopted June 2007)
- South Tyneside Council Publication Draft Local Plan 2023-2040 (January 2024);
- Sustainable South Tyneside 2020-2025- Climate Change Strategy and Action Plan

15.3 Proposed Assessment Methodology

15.3.1 Due to the way climate change is assessed in an EIA, the proposed methodology may vary from typical methodologies employed by other ES chapters. The focus of the first part of the assessment will be on greenhouse gas (GHG) emissions associated with the Proposed Development over the entire lifecycle from cradle to grave, and the impacts on climate change.

15.3.2 Several guidance publications have been produced containing suggested methods for establishing a baseline and limited advice on techniques for applying significance thresholds. The following guidance documents will be used to inform the assessment:

- IEMA's 'Environmental impact assessment guide to assessing greenhouse gas emissions and evaluating their significance' (2022);
- European Commission, 'Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment' (2013);
- European Investment Bank (EIB) Project Carbon Footprint Methodologies (2023);
- BSI - PAS 2080:2023 'Carbon Management in Buildings and Infrastructure; and
- IEMA's guidance 'Climate Change Resilience and Adaption' (2020)

15.3.3 The IEMA's 'Environmental impact assessment guide to assessing greenhouse gas emissions and evaluating their significance' (2022) will act as the primary guidance for the climate change assessment, as this is the most recent available and is applicable to the UK. It is also considered to be the most holistic method of assessing GHG emissions, as it applies a whole life cycle methodology, incorporating not just the construction and operational phase of development, but also the decommissioning/end of life and beyond asset life cycle stages, allowing a more robust "worst case scenario" to be applied.

Scope of Assessment

15.3.4 The scope of the climate change impact assessment is considered to be those activities associated with the Proposed Development that either directly or indirectly release GHG emissions that contribute to climate change effects, irrespective of their source, and across all relevant project lifecycle stages (whole lifecycle carbon emissions). The system boundary applied for this assessment will be Cradle-to-Gate as this is proportional to the nature and scale of the Proposed Development.

15.3.5 A reference study period will be selected as the basis of the GHG emissions assessment based on the expected service life of the construction asset, and this will form the temporal boundary for the assessment.

15.3.6 The objective of the assessment is to ensure the minimum overall lifetime carbon emissions and the maximum lifetime resource efficiency, and to demonstrate how the Proposed Development will mitigate the impact it will have on climate change through the release of GHG emissions in the longer term.

Setting a Baseline

15.3.7 A baseline is a reference point against which the impact of a new project can be compared. In addition to the current emissions baseline, it is necessary to establish a second (sectoral) emissions baseline against which the project can be meaningfully compared. This is represented by a typical 'Business as Usual' (BaU) development of a similar type built elsewhere to minimum regulatory standards, where assumptions are made on current or future GHG emissions. These are summarised as baselines A and B below:

15.3.8 GHG emissions within the boundary of the GHG quantification but without the proposed project; or

15.3.9 GHG emissions arising from an alternative project design and/or BaU for a project of this type.

15.3.10 This assessment considers both forms of baseline represented by points A and B to provide a meaningful comparison of impacts associated with the project. As stated in the IEMA (2022) guidance, the goal of establishing a baseline is assessing and reporting the proposed project's net GHG impact. The EIB "Project Carbon Footprint Methodologies" (2022) guidance will be used to establish the baseline scenario, as this goes into greater detail in terms of baseline methodology for assessing GHG emissions from projects.

15.3.11 The current baseline represents existing GHG emissions before construction and operation of the proposed development and should account for expected land use change resulting in the release of previously sequestered carbon (such as the disturbance or removal of woodland). The baseline will represent a realistic worst-case scenario as per best practise. Where alternative baselines have been considered early in the project life cycle, the EIA will also include a qualitative assessment of the emissions impact of these alternative baselines.

15.3.12 The future baseline will capture construction emissions, as well as both direct and indirect operational and user GHG emissions associated with the proposed development, irrespective of their source as recommended by the updated 2022 IEMA guidance. This will be proportionate to the scale of development.

15.3.13 The approach to setting a credible baseline for this assessment is endorsed by a Technical Note published by European Bank for Reconstruction and Development (EBRD) in 2019. This Technical Note states that this type of baseline is appropriate

since "it is recognised that 'something' must be done" and allows for a comparison of relative effect.

15.3.14 This assessment method for setting a baseline is a slightly different approach to other technical disciplines which describe a 'no development scenario' as the future baseline for the assessment of impacts within the ES Chapters, however, it is still compliant with the requirements of the EIA legislation in the UK.

Estimating Emissions within the System Boundary

15.3.15 Emissions will be calculated by multiplying the activity data with the emission factors published annually by the Department for Energy Security and Net Zero (DESNZ) (formally Department of Business, Energy and Industrial Strategy (BEIS) and the Department of Environment, Food and Rural Affairs (DEFRA), in line with IEMA (2022) best practice guidance. The general equation for emission estimation is:

GHG emission factor × Activity data = GHG emission or removal

15.3.16 Activities where expected emissions are less than 1% of the total emissions will be excluded, but only where all exclusions total up to a maximum of 5% of total overall emissions associated with the Proposed Development across all project lifecycle modules within the applied system boundary (the whole lifecycle carbon emissions).

15.3.17 Emissions are expressed in terms of tonnes of carbon dioxide equivalent (tCO2e). This is a universal metric measure used to compare the emissions from various greenhouse gases on the basis of their GWP (global warming potential), by converting amounts of other gases to the equivalent amount of CO2 with the same GWP.

15.3.18 In terms of CO2e emissions, the project as a whole is assessed for its 'relative emissions (Re)' or net emissions. This is expressed as the difference between absolute emissions generated by the proposed project and the baseline emissions for a 'typical' development of a similar type.

Relative Emissions (Re) = Absolute Emissions (Ab) – Baseline Emissions (Be)

15.3.19 The relative emissions are then used a reference point in combination with industry expertise on carbon reduction targets to evaluate the project against the defined significance criteria.

15.3.20 This methodological approach is recommended by the EIB (2023) and is fully compatible with the EIA regulations.

Receptors

15.3.21 As climate change is a global phenomenon, highly localised climate change impacts as a direct result of emissions associated with the Proposed Development are not assessed in the same way as in other technical EIA disciplines, which consider the significance of effects on individual receptors within a specified geographical location.

15.3.22 The assessment will consider the emissions from the Proposed Development that will contribute to global climate change, based on the information available at the planning stage. The assessment will focus on CO2 emissions associated with the whole lifecycle stages of the development, as relevant to the nature and scale of the development.

Consultation

15.3.23 Consultation activities were not undertaken during the Scoping exercise for an assessment of emissions associated with the Proposed Development.

15.4 Significance Criteria

15.4.1 Effects that are deemed to be significant for the purposes of this assessment are different to those associated with other technical ES chapters.

15.4.2 All sources of GHG emissions will contribute to global climate change. The atmospheric concentration of GHG emissions is defined by IEMA (2022) as being of high sensitivity to further emissions. Therefore, all emissions are considered to have an adverse and permanent impact on climate change in both the short, medium, and long term.

15.4.3 The significance of the impacts associated with the Proposed Development will be assessed in-line with the criteria set out within the IEMA guidance (2022). Where GHG emissions cannot be avoided, the goal of the EIA process is to reduce the project's residual emissions at all stages.

15.4.4 With consideration to the IEMA (2022) guidance, minor adverse and negligible effects are not considered to be significant (see Table F4 2). Impacts are only considered to be minor adverse if the project's GHG impacts are fully consistent with existing and emerging policy requirements and good practice. Impacts are only considered to be negligible if the development goes well beyond existing policy and design standards. It needs to be viewed as well 'ahead of the curve' for the net zero trajectory and have minimal residual emissions. Projects that actively reverse (rather than only reduce) the risk of severe climate change can be judged as having a beneficial effect.

15.5 Current Baseline

15.5.1 Marsden Quarry is an operational site extracting limestone and dolomite for agricultural lime and aggregate production.

15.5.2 The quarry is broadly split into two areas of operation where the phasing of inert landfill progresses from the northern part of the quarry to the south. The remaining reserves of limestone are located within the south east corner of the quarry void, beneath the area currently occupied by the quarry offices, weighbridge, and car park. The imported inert waste is used to modify the quarry landform and restore it to safer contours.

15.5.3 Current activities contributing to emissions include office resource use, fuel and oil consumption with fixed and mobile plant on site, as well as site resource extraction, and waste management activities.

15.5.4 Potential Significant Effects

15.5.5 The potential environmental impact of the Proposed Development is the release of greenhouse gas (GHG) emissions into the environment as a result of the project's whole life cycle.

15.5.6 The IEMA and PAS 2080 guidance reinforces a key principle of EIA which is to reduce the impact of a project's emissions through mitigation. Therefore, it is important to look at what measures can be implemented through the design and EIA process to reduce the release of GHG emissions.

15.5.7 Potential mitigation measures for the proposed extension to time for current quarrying operations could include:

- Plan for transition to electric mining vehicles and specialist equipment;
- Invest in appropriate site infrastructure to support transition;
- Introduce sustainability measures for landfill design and site layout;
- Use of renewable energy technology to provide on-site power generation for electricity and heat demands for temporary onsite facilities;
- Improved sustainable drainage to reduce flood risk;
- Provision for biodiversity, including climate resilient landscaping.

15.6 Proposed Assessment Methodology

Part 2: Vulnerability to Climate Change (Climate Resilience)

15.6.1 IEMA's guidance 'Climate Change Resilience and Adaption' (2020) presents a methodology for the consideration of climate change resilience and adaption in the EIA process, which will be followed in the EIA.

15.6.2 The aim of the second part of the assessment will be to assess the vulnerability of the Proposed Development to global climate change, which will highlight the potential risk of major accidents, and to identify adaptation and resilience measures to mitigate risk.

15.6.3 The first stage of the assessment is to is review the future climate projections published by the Met Office (through the UK Climate Projections (UKPC18) website), which includes variables such as annual mean temperatures and annual changes in summer and winter precipitation.

15.6.4 It is proposed that the site is assessed for climate projections under four different future climate scenarios, to cover the life of the development in varying future conditions. These range from RCP2.6 where atmospheric emission concentrations are strongly reduced through to the worst-case scenario, RCP8.5, where emission concentrations continue to rise, unmitigated. A range of probability levels are available, although this study will use the 50% probability level (i.e. a central estimate with less uncertainty).

15.6.5 The principal steps that will be undertaken are to:

- Define the current climate at the site and surrounding region;
- Assess the future climate scenario for the site and region;
- Qualitatively assess, using professional judgement, how any sensitive receptors identified across other EIA topics are likely to be affected by the future climate scenario described above; and
- Consider and identify the resilience and adaptive measures associated with the scheme's design or management to mitigate the risk to receptors and the development as a whole.

Study Area & Receptors

15.6.6 Marsden Quarry is an active limestone quarry, located north of the village Whitburn, South Tyneside and is accessed from the A183, east of the quarry. The quarry is a key source of aggregates and building material for construction across South Tyneside and beyond.

15.6.7 The O'Brien Group has operated a successful commercial quarrying and processing activity at Marsden Quarry since acquiring the site from Owen Pugh in 2018. The quarry has been in operation for over 150 years providing a range of primary and recycled construction aggregates that supply markets throughout the North East of England.

15.6.8 Planning consent for mineral working at Marsden was first granted under an IDO consent issued in 1948 with subsequent permissions granted in 1953 and 1972. These permissions have been subject to applications for updating conditions under the provisions of the Planning and Compensation Act 1991 and the Environment Act 1995.

15.6.9 The current extant permission is ST/01369/2//DM, granted 15th April 2005, for the 'importation of inert waste for the purpose of restoring the quarry void'. This permission consolidated the three planning consents from 1948, 1953 and 1972. The permission was granted for a limited period until the end of December 2027, by which time mineral operations shall have ceased, and the site restored. Currently the quarry has ongoing inert landfill operations alongside the main task of processing the reserves of limestone in the quarry. As such, this Scoping Report is in regard to extend time for extraction, infilling and restoration at Marsden Quarry.

15.6.10 The location of a site has a considerable influence when assessing vulnerability and adaptability to future climate change. The climate change chapter will review this in detail, however site location features that may have the potential to cause, mitigate or be at risk from climate change can be initially identified as:

- Road users of roads such as Lizard Lane, A183, private roads within the Site boundary, and other roads surrounding the Site,
- Residential areas adjacent to the site boundary including Whitburn and Marsden,
- Commercial businesses adjacent to the Site, including Whitburn Golf Club,
- Species and Habitats,
- Heritage features such as the Souter Lighthouse and The Leas Coastline; and,
- Coastal aspects (North Sea)

Consultation

15.6.11 Consultation activities were not undertaken during the Scoping exercise for the assessment of climate resilience.

Significance Criteria

15.6.12 Following the IEMA guidance (2020), the assessment of resilience will use a combination of probability and consequence to reach a reasoned conclusion on the magnitude of the effect of climate change on the Proposed Development, including risk of vulnerability to increased heatwaves, flooding and extreme weather. It is likely that if the probability and/or consequence of the effect is high then the magnitude of the effect would also be high. The significance of this impact on the Proposed Development will be determined using the Significance Matrix for Climate Resilience. Effects of Moderate Adverse or Major/Substantial Adverse are considered Significant.

Current Baseline

15.6.13 England is classified under Köppen Geiger as having a 'Cfb' climate, more commonly known as a temperate oceanic climate. These are typically mid latitude climates with warm summers and mild winters. The average surface air temperature in Whitburn, South Tyneside, is 11°C with an average rainfall of 718mm per year. The future climate baseline will be determined using the UK climate change projections for a regional 25km grid surrounding the Application Site boundary.

Potential Significant Effects

15.6.14 The potential significant effects of climate change on the proposed development are the increased risk of flooding events and heatwaves. Designing in mitigation measures can build the Proposed Scheme's resilience to future climate change.

16 SUMMARY

16.1.1 This Scoping Report supports a request for a scoping opinion from STC under Regulation 15 of the EIA Regulations. This report has provided the necessary background information, in accordance with regulation 15(2) of the EIA Regulations, sufficient for the Council to provide an accurate scoping opinion.

16.1.2 Subject to confirmation from the requested scoping opinion, those environmental factors identified in this report would be evaluated through an assessment of the baseline conditions, followed by identification and evaluation of likely significant effects during both the operational and restoration phases of the proposed development. The assessments would consider the form and nature of the effects and whether the identified effects are significant or not. It would consider the mitigation and compensatory measures which may be proposed to minimise or enhance those effects.

16.1.3 At this stage, it is considered that the proposed development has the potential to adversely impact landscape and visual, air quality, noise, transport, ecology, heritage and archaeology, climate change and water resources.

16.1.4 Due to the method of extraction, where no blasting will occur, it is proposed that vibration would also be scoped out.

16.1.5 South Tyneside Council's formal opinion is requested to confirm that:

- The range of topics proposed for study in the ES is acceptable.
- There are no further topics that should be assessed as part of the EIA.
- The potential significance of the effect of each environmental topic is agreed, hence the need for study has been correctly identified.
- The existing and proposed baseline data and methodological approach, as discussed for each topic, is acceptable.

16.1.6 In considering this report, it would be of value if omissions, with respect to both consultees and potential effects on the environment, are identified at this stage, such that the scope of the assessment can be adjusted accordingly.

APPENDIX 1

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ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT



O'BRIEN AGGREGATE MARSDEN LIMITED

MARSDEN QUARRY EXTENSION OF TIME

PRELIMINARY ECOLOGICAL APPRAISAL

FEBRUARY 2025

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O'BRIEN Aggregate Marsden Limited

MARSDEN QUARRY EXTENSION OF TIME

PRELIMINARY ECOLOGICAL APPRAISAL

FEBRUARY 2025

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ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT

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Appendix 1 Legislation Summary
Appendix 2 Waterbody Descriptions
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DRAWINGS	**TITLE**	**SCALE**
NT16974/003	Habitat Plan	1:3,000@A3
NT16974/005	Site Location Plan	1:25,000@A3

NT16974/008	Designated Areas	1:12,500@A3
NT16974/014	Waterbody Location Plan	1:5,000@A3
Nt16974/015	Building Location Plan	1:5,000@A3

EXECTUTIVE SUMMARY

Wardell Armstrong LLP (WA) was commissioned by O'Brien Aggregate Marsden Limited to undertake a Preliminary Ecological Appraisal (PEA) in support of an extension of time (EoT) application at Marsden Quarry.

The site is located within close proximity to the Durham Coast SAC/SSSI and the Northumbrian coast SPA/SSSI. However, there are no supporting habitats for qualifying species associated with the SPA, and the proposal will not impact the nearby SAC/SPA.

The following species (receptors) have been evaluated as being subject to potential adverse effects (constraints) in the absence of mitigation and/or further survey or assessment:[1]:

- Protected Species (badger; great crested newt);
- S.41 Priority species (common toad, butterflies); and
- Breeding Birds.

Additional assessments, surveys and pre-construction checks have been recommended as necessary to fully inform the planning application:

- eDNA survey for Great Crested Newt;
- Breeding bird surveys;

Mitigation[2] and compensation[3] are discussed in section 4 of the report but include the following:

- Precautionary working methods should be adopted to ensure no incidental harm to common toads. Any animals found are to be moved to a place of safety around the site perimeter.
- Measures to prevent amphibian species from entering water extraction equipment should include the fitting of filters (6mm gauge max) to the ends of extraction pipes.
- Re-creation of magnesian limestone grassland and calcareous grassland will be undertaken across the site as part of the restoration plan, as well as hedgerow and tree planting. Management of habitats to secure the long-term future of this habitat, to be detailed in a Landscape and Ecology Management Plan. To be secured by planning condition; and
- Vegetation clearance undertaken outside of the bird nesting season or following an inspection carried out within 48hrs by an appropriately qualified ecologist.

[1] Note: the Preliminary Ecological Appraisal Report provides an overview of likely effects and therefore may not be sufficient to support a planning application on its own. Specialist surveys may be required to fully investigate effects and/or to support an Ecological Impact Assessment (EcIA).

[2] Mitigation are measures required in order to reduce the severity and magnitude of identified effects to an acceptable level.

[3] Compensation is required where effects cannot be fully mitigated.

Opportunities for ecological enhancements are set out in section 4 of this report. This includes provision of a conservation based restoration scheme, suitable native planting to be included in the landscape scheme and provision of hibernaculum habitats for the benefit of common reptiles, amphibians and hedgehogs.

In conclusion, it is considered that there are no significant ecological constraints to the development. With appropriate mitigation measures and additional survey/assessment the ecological receptors identified in this report would not be adversely affected by the development.

This report is valid for 18 months from the date the habitat survey was undertaken.

1 INTRODUCTION

1.1 Terms of Reference

1.1.1 Wardell Armstrong LLP (WA) was commissioned by O'Brien Agreggate Marsden Limited in December 2024 to undertake a Preliminary Ecological Appraisal (PEA) in support of a proposed time extension at Marsdon Quarry. The project is located at August Terrace, Whitburn, Sunderland, SR6 7NG, centred on approximate National Grid Reference (NGR) NZ 40354 64215.

1.1.2 This report has been produced with reference to current guidelines for UK Habitat (UKHAB) Classification V2 (UKHab, 2023), Guidelines for Preliminary Ecological Appraisal (CIEEM 2017[4]) and Biodiversity – Code of Practice for Planning and Development (BSI 2013[5]).

1.2 Scope of Report

1.2.1 The purpose of the Preliminary Ecological Appraisal (PEA) is in broad terms to undertake the following:

- Identify and report to the project team the likely ecological constraints associated with the EoT of the current permission, such that the site design can adequately take account of ecological features;
- Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy'[6];
- Identify any additional surveys that may be required to inform an Ecological Assessment and inform mitigation/compensation); and
- Identify the opportunities offered by the project to deliver ecological enhancement.

1.2.2 Certain species, habitats and nature conservation sites receive legislative protection which is detailed fully within Appendix 1. Other species/groups and habitats are notable due to their identification in national and/or local planning policy or via local records. An indicative assessment of potential adverse effects to such receptors is provided within this report, although this is not a substitute for full EcIA (CIEEM 2018)

[4] Chartered Institute of Ecology and Environmental Management (CIEEM 2017).

[5] British Standard BS 42020:2013 (BSI 2013).

[6] As defined in BS 42020:2013 (BSI 2013).

and a full EcIA may be required to fully inform any subsequent planning application along with additional surveys and assessments.

1.2.3 Provisional mitigation and enhancement opportunities are also discussed, where appropriate.

1.2.4 As this is a variation to the existing planning permission the application is exempt from Biodiversity Net Gain assessment. However, the revision of restoration scheme shall aim to enhance the site for biodiversity in keeping with the natural area and increase cross site connectivity.

1.3 Background Information

1.3.1 Marsden Quarry is an operational quarry which currently extracts limestone and dolomite for agricultural lime and aggregate production. Planning permission for extraction of materials extends to 2042.

1.3.2 Previous ecological surveys have been undertaken in 1999/2002 to support a planning application for extraction and inert landfill operations. As part of this process a progressive restoration plan has been prepared.

1.4 Site Context

1.4.1 Marsden Quarry is located 0.75km to the south of Marsden, a residential suburb of south Shields. The A1837 Coast Road is located to the east of the site and is the main arterial route from Sunderland to South shields. Lizard Lane is located immediately to the west of the site. Marsden golf course is located immediately adjacent to the northern extent of the of the quarry. To the south are arable/grassland fields and horse pasture. Three properties are located adjacent to and within 25m of the site, including Whitburn golf course clubhouse and adjacent private property (Toll Cottage) to the west and a private property (Hill House) located on the eastern site boundary. A stables facility is located immediately to the south of the quarry. The site's location is shown on Drawing Number NT16974/005.

1.4.2 The planning application area comprises an active open cast limestone/dolomite quarry supporting large expanses of bare ground and currently active works.

1.4.3 The Durham Coast Site of Special Scientific Interest (SSSI), a component of the Durham Coast Special Area for Conservation (SAC) lies within 20m of the eastern site boundary of the Site. The Northumbrian Coast SPA and RAMSAR is located 1.3km to the south-east of the site and Marsden Old Quarry Local Nature Reserve (LNR) is located 280m west of the site.

1.5 Description of Development

1.5.1 The project will involve seeking to obtain planning permission for a seven year time extension to the existing planning permission to extend extraction for five years from December 2027 to December 2032 and to extend the restoration period for two years from December 2032 to December 2034.

1.5.2 The project will also involve a minor regularisation of the site boundary behind Hill House where the quarry has been slightly overworked beyond the existing permitted boundary. This regularisation will address the outstanding enforcement notice that relates to this matter.

1.6 National Planning Policy Framework (NPPF)

1.6.1 The NPPF[7] requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan. In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

[7] https://www.gov.uk/government/publications/national-planning-policy-framework--2 (last updated 20/07/2021).

2 METHODOLOGY

2.1 Desk Study

2.1.1 The desk study was informed by review of existing available information provided by Environmental records Information Centre North-East (ERIC-NE) and from available internet-based resources for a 2km search radius from the Site boundary (see 8-002 Designated Sites Plan). The search area was extended to 10km for internationally designated sites. Ordnance Survey (OS) and satellite mapping was also used to gain contextual habitat information.

2.1.2 Specific information was sought for:

- Statutory designated sites[8];
- Locally designated sites;
- Ancient woodland[9];
- Protected and priority species;
- Priority (s.41) Habitats and Species[10];
- Local Biodiversity Action Plan (LBAP) priority habitats and species.

2.1.3 The ecological desk study was carried out by a competent Ecologist who is an Associate member of CIEEM, and who has completed numerous ecological desk studies within the last 4 years.

2.2 Extended UK Habitat Classification Survey

2.2.1 WA carried out a UK Habitat Classification Survey (UKHab, 2023) of the Site on 22nd December 2024. The survey was carried out by experienced WA ecologist and a full member of CIEEM, who has completed numerous ecological habitat surveys within the past 20 years.

2.2.2 The survey followed the 'UK Habitat Classification Version 2' (UKHab, 2023) methodology with each of the main habitats classified according to the relevant criteria including vegetation composition expressed according to the DAFOR[11] system.

[8] Locations provided by MAGIC http://magic.defra.gov.uk/MagicMap.aspx

[9] As defined by Natural England in their Inventory of Ancient Woodlands http://www.gis.naturalengland.org.uk/pubs/gis/tech_aw.htm

[10] As defined under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

[11] D = dominant, A = abundant, F = frequent, O = occasional, R = Rare

2.2.3 In addition to the mapping and description of habitats, the survey was 'extended' to include the incidental observations of protected and/or notable species and the potential for such species to occur on Site (and in the surrounding landscape where relevant). This was also recorded onto secure digital media for mapping and data collection. The extended element of the survey was based on professional judgement.

2.2.4 Specific habitat features are mapped on Drawing Number NT16974/003 (UKHab Survey Results), NT16974/014 (Waterbody Location Plan) and NT16974/015 (Building Locations) with appropriate reference numbers identifying features of particular note.

2.3 Evaluation and Assessment of Features

2.3.1 Evaluation of the importance / likely importance of ecological features and the likelihood of impacts affecting important features was made, where possible, using professional judgement in accordance with published guidance (CIEEM 2017).

2.3.2 Protected and s.41 species were evaluated in order to identify potential adverse effects in Table 2, based on the following criteria:

- Desk study records;
- Evidence found during the survey;
- Presence, extent, quality and viability of suitable on-site habitat;
- Ecological connectivity to viable off-site habitats; and
- Perceived impacts of habitat loss/impact to individuals in relation to proposals.

2.3.3 A 'traffic light' system is used in Tables 1, 2 and 3 to highlight potential constraints and opportunities whereby:

- Green: No constraint or limited constraint unlikely to be of planning and/or legal significance.
- Amber: Potential constraints which require further survey and/or mitigation and may be of planning and/or legal significance depending on the outcome of further survey/assessment.
- Red: Constraints which have already been identified by the PEA survey/desk-based assessment and are likely to be of planning and/or legal significance.

2.4 Nomenclature

2.4.1 Vascular plant names follow '*New Flora of the British Isles*' (Stace 2019) with vernacular names as provided in the Botanical Society of the British Isles website (BSBI,

2013)[12]. All other flora and fauna names following the National Biodiversity Network (NBN) Atlas (NBN Atlas Partnership, 2021). The common and scientific name of species/taxa is provided (if available) when first mentioned in the text, with only the vernacular name referred to thereafter.

2.5 Limitations / Deviations

2.5.1 Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in December which is outside the optimum recommended April – August, survey period for habitat surveys, therefore, the habitat classifications are considered to be provisional at this stage. This report is not designed, nor is it required to present a complete inventory of flora/fauna.

2.5.2 The absence of desk study records is not relied upon to determine absence of a particular species/habitat. Often, the absence of records is a result of under-recording within the given search area and as such the experience of the ecologist concerned together with a range of additional factors, in particular the presence/absence of potentially supporting habitat; is used to infer likely presence/absence of ecological receptors.

2.6 Quality Assurance & Environmental Management

2.6.1 The surveys and assessments have been overseen by and the report checked and verified by a full member of CIEEM, who is bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in British Standard BS 42020, and as stated within specialist guidance, as appropriate and referenced separately.

[12] http://rbg-web2.rbge.org.uk/BSBI/intro.php

3 RESULTS AND EVALUATION

3.1 Statutory and Non-Statutory Designated Sites

3.1.1 Desk study results for designated sites are evaluated in Table 1, below.

3.1.2 Designated sites which are considered potentially sensitive to the development proposals by virtue of their supported species or habitat assemblages, the distance/ecological connectivity to the Site and the nature of the perceived impacts are discussed in detail in the final sections of the report.

3.1.3 Designations for which potential adverse effects are not anticipated are excluded from further assessment.

Table 1: Designated Sites Evaluation			
Site Name and Status[13]	**Distance and direction from Site**	**Reason for Designation/identification**	**Potential Constraints**
Durham Coast SAC	60m east of site	The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I: Vegetated sea cliffs of the Atlantic and Baltic coasts. The Durham Coast is the only example of vegetated sea cliffs on Magnesian Limestone exposures in the UK. These cliffs extend along the North Sea coast for over 20 km from South Shields southwards to Blackhall Rocks. Their vegetation is unique in the British Isles and consists of a complex mosaic of maritime-influenced, calcareous and species-rich-neutral grasslands, tall-herb fen, seepage flushes and wind-pruned scrub.	The site lies at least 60m distant from the Durham Coast SAC and is separated from the site by the A187 coastal road. No direct impacts to the designated site are anticipated as a result of the continuation of quarrying works. No indirect impacts through dust deposition are anticipated. The dust arisings are likely to be contained within the deep quarry void, in combination with ongoing dust suppression that is in current use.
Northumbria Coast SPA	1.7km north-east of site and 1.3km south-east	The site qualifies under Article 4 of the Birds Directive (2009/147/EC) for the following species: *1.* Artic tern *Sterna paradisaea* 2. Little tern *Sternula albifrons* 3. Turnstone *Arenaria interpres* 4. Purple sandpiper *Calidris maritima*	The site lies outside of the designated area (all infrastructure will be 1.3km distant from the SPA). The site does not include suitable supporting habitat for the qualifying species. All the qualifying species are restricted to coastal sites for foraging and roosting and hence the site is not functionally linked to the SPA. No negative adverse effects are therefore considered likely as a result of the proposed EoT.
Northumbria Coast RAMSAR	1.7km north-east of site and	The site is one of the largest expanses of undeveloped coastal habitat of its type in Europe. It is a particularly good example of a marshland coast with intertidal sand	The site lies outside of the designated area (all infrastructure will be 1.3km distant from the Ramsar). The site is not functionally linked to the

[13] **SPA** – Specially Protected Area, **SAC** – Special Area for Conservation, **Ramsar** – site designated under the Ramsar Convention, **SSSI** – Site of Special Scientific Interest, **NNR** – National Nature Reserve, **LNR** – Local Nature Reserve.

Table 1: Designated Sites Evaluation			
Site Name and Status[13]	**Distance and direction from Site**	**Reason for Designation/identification**	**Potential Constraints**
	1.3km south-east	and mud, saltmarshes, shingle banks and sand dunes. There are a series of brackish-water lagoons and extensive areas of freshwater grazing marsh and reed beds. The site supports at least three British Red Data Book and nine nationally scarce vascular plants, one British Red Data Book lichen and 38 British Red Data Book invertebrates. Assemblages of international importance: Species with peak counts in winter: 98462 waterfowl (5 year peak mean 1998/99-2002/2003). Criterion 6 - Qualifying species: Sandwich tern *Sterna (Thalasseus) sandvicensis sandvicensis,* Common tern *Sterna hirundo hirundo,* Little tern *Sterna albifrons albifrons,* Red knot *Calidris canutus islandica,* Pink-footed goose *Anser brachyrhynchus,* Dark-bellied brent goose *Branta bernicla bernicula,* Eurasian wigeon *Anas penelope,* Northern pintail *Anas acuta.* Species/populations identified subsequent to designation for possible future consideration under criterion 6: Ringed plover *Charadrius hiaticula,* Sanderling *Calidris alba*, Bar-tailed godwit *Limosa lapponica lapponica.*	Ramsar as the qualifying species are dependant upon coastal habitats and/or open farmland. No indirect effects through dust deposition are anticipated on habitats and supporting invertebrate populations, given the distance from site.
Durham Coast SSSI	60m east of site	The Durham Coast between South Shields and Hart Warren is of considerable biological, geological and	The site lies within close proximity to Durham Coast SSSI. No direct habitat loss will occur, indirect adverse effects through dust deposition is currently controlled via safe working practices to ensure dust and

Table 1: Designated Sites Evaluation			
Site Name and Status[13]	**Distance and direction from Site**	**Reason for Designation/identification**	**Potential Constraints**
		physiographic interest. It contains most of the para-maritime Magnesian Limestone vegetation in Britain, as well as a species-rich dune system, and supports nationally important numbers of wintering shore birds and breeding little terns which contribute to the internationally important populations of the north-east coast.	sediment is not transferred. No additional negative effects are considered likely as a result of an EoT application.
Cleadon Hill SSSI	1.4km west of site	Cleadon Hill is of interest for its Magnesian Limestone grassland communities which are associated in the main with shallow soils, rock outcrops and old earthworks on the flanks of the hill. The main grassland supports a community comprising meadow oat-grass *Avenula pratensis*, crested hair-grass *Koeleria macrantha,* crested dog's-tail *Cynosurus cristatus* and red fescue *Festuca rubra*, in which quaking grass *Briza media*, blue moor-grass *Sesleria albicans* and upright brome *Bromus erectus* also occur. Of particular note is sea plantain *Plantago maritima*, a herb which also occurs in coastal and montane grasslands and which is here favoured by the base-rich substrate and lack of competition.	The site lies outside of the designated area (all infrastructure will be 1.3km distant from the SSSI) and is not hydrologically linked to the SSSI. The site is separated from the SSSI by agricultural land and roads. Given the separation from site no direct or indirect effects are considered likely.
Harton Down Hill SSSI	1.4km north-west of site	Harton Down Hill is of importance for the Magnesian Limestone Grassland communities which are associated with the shallow soils and rock outcrops of this small but prominent hill near South Shields. The	The site lies outside of the designated area (all infrastructure will be 1.4km distant from the SSSI) and is not hydrologically linked to the SSSI. The site is separated from the SSSI by residential developments and

Table 1: Designated Sites Evaluation			
Site Name and Status[13]	**Distance and direction from Site**	**Reason for Designation/identification**	**Potential Constraints**
		grassland supports a community dominated by meadow oat-grass *Avenula pratensis*, crested hair-grass *Koeleria macrantha* and red fescue *Festuca rubra*, in which blue moor-grass *Sesleria albicans,* quaking grass *Briza media* and upright brome *Bromus erectus* also occur. Of particular note is the large population of perennial flax *Linum anglicum,* found on the hill-top, its southern and western slopes, this being its northernmost locality in Britain	roads. Given the separation from site no direct or indirect effects are considered likely.
Marsden Old Quarry LNR	280m west of site	Marsden Old Quarry Local Nature Reserve has a range of habitat types: unimproved calcareous grassland, unimproved neutral grassland, tall ruderal vegetation, broad-leaved plantation woodland, dense scrub, scattered scrub, quarry exposure and quarry spoil. The top of the quarry face supports species-rich magnesian limestone grassland dominated by blue moor-grass Se*sleria caerulea* and containing common rock-rose *Helianthemum nummularium*, rough hawkbit *Leontodon hispidus,* salad burnet *Sanguisorba minor,* small scabious *Scabiosa columbaria*, and carline thistle *Carlina vulgaris.*	The site is approximately 280m from Marsden Old Quarry LNR. No direct habitat loss will occur within the LNR. No indirect effects through dust deposition are likely to occur. Control methods are in current use to control dust and sediment run off. No negative effects are anticipated.
Whitburn Point LNR	590m south-east of site	Whitburn Point Local Nature Reserve is situated in the Whitburn Coastal Park just east of the Shearwater Estate. Purple Sandpiper and Turnstone arrive from	The site is separated from the LNR's by residential developments and roads. No direct impacts shall occur as a result of the EoT application. No indirect effects to qualifying species of the LNR through noise and

Table 1: Designated Sites Evaluation			
Site Name and Status[13]	**Distance and direction from Site**	**Reason for Designation/identification**	**Potential Constraints**
		Scandinavia. When the tide is out the rock pools display a variety of sealife.	disturbance are currently considered to occur above and beyond the current conditions. No negative effect is considered likely to occur.
Harton Down Hill LNR	1.2km north-west of site	Various wildflower and wildlife flourish in the Magnesian limestone grassland.	
Cleadon Hill LNR	1.4km west of site	Cleadon Hill supports magnesium limestone grassland and herb communities (see description for Cleadon Hill SSSI).	

3.1.4 The search area is extended to allow for the inclusion of Impact Risk Zones (IRZs) for SSSIs[14]. IRZs define areas around SSSIs which could be impacted by development schemes. The zones vary depending on the particular sensitivities of the features for which the SSSI is notified and indicate the types of development proposal which could potentially have adverse impacts. The desk study shows that the application site falls within an IRZ, with the following development proposals considered likely to adversely affect the SSSI: Planning applications for quarries – including new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction – This amendment relates to an extension of time, surface water run-off and current ground water conditions are managed on site and are regularly assessed. On this basis this potential ecological receptor has been discounted from needing further assessment.

3.2 Habitats

3.2.1 All habitats within the Site are described in Table 2, below, together with an indication of their s.41 Priority status and status and reference within the Durham Local BAP[15].

3.2.2 Habitats which could be subject to adverse effects (amber or red) are discussed in the latter sections of the report. Habitats for which potential adverse effects are not anticipated are excluded from further assessment. The location and extent of habitats are shown on Drawing Number NT16974/003 (UKHab Survey Results).

3.2.3 Certain habitats on Site are identified on MAGIC[16] as s.41 Priority open mosaic habitat. This assessment is typically undertaken from aerial photography with limited or no ground truthing. The UKHab surveys in support of this report note that such habitats are heavily disturbed and appear to be colonising the inert fill materials on site alongside bare ground (active worked quarry habitat). Hence although this area has become vegetated in places it is frequently disturbed as part of ongoing quarrying operations. In summary, the on Site habitats are not currently considered to reflect s.41 Priority habitat status, although it is recognised that their transient nature may have influenced their MAGIC classification.

3.2.4 A review of OS data has identified seven waterbodies (WB1-WB7) within 500m of the Site, as shown on Drawing Number NT16974/014 (Waterbody Location Plan).

[14] https://data.gov.uk/dataset/sssi-impact-risk-zones

[15] https://www.nebiodiversity.org.uk/local-biodiversity-action-plans-lbaps/

[16] https://magic.defra.gov.uk/MagicMap.html

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Bare ground/quarry Bare ground quarry with steep cliffs and or benched sides. Areas of quarry where extraction is complete supports wash plant facilities. Central area of the quarry holds a recycling facility.	Primary Habitat Code: Inland rock (s1)/Other inland Rock and Scree (s1d) Secondary code: Bare ground (510) Active sand pit or quarry or open cast (85)		n/a	This area of disturbed land is of intrinsic low ecological value in its current state. No negative effects are considered likely as a result of the extension of time application.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Calcareous grassland/Magnesium calcareous grassland. A strip of calcareous grassland vegetation is present on the top of the bunded northern boundary of the Site. An additional area is located along the centre of the eastern boundary. The vegetation in this area is connected to calcareous grassland habitat off site along the coastal road verge. Here vegetation is unmanaged and supports some ruderal species mixed in with finer grassland including fescue sp *Festuca* sp, glaucous sedge *Carex flacca*, occasional carline thistle *Carlina vulgaris*, Greater Knapweed *Centaura scabiousa*. Ruderal species which are colonising include frequent common nettle, occasional rosebay willowherb and teasle *Dipsacus fulanum*.	Primary Habitat Code: Lowland Calcareous grassland (g2a) Secondary code: Scattered scrub (10)		s.41/LBAP	This habitat along the northern edge of the quarry shall be retained as part of the proposed extension of time application. No negative effects are considered likely as a result of the proposed works.

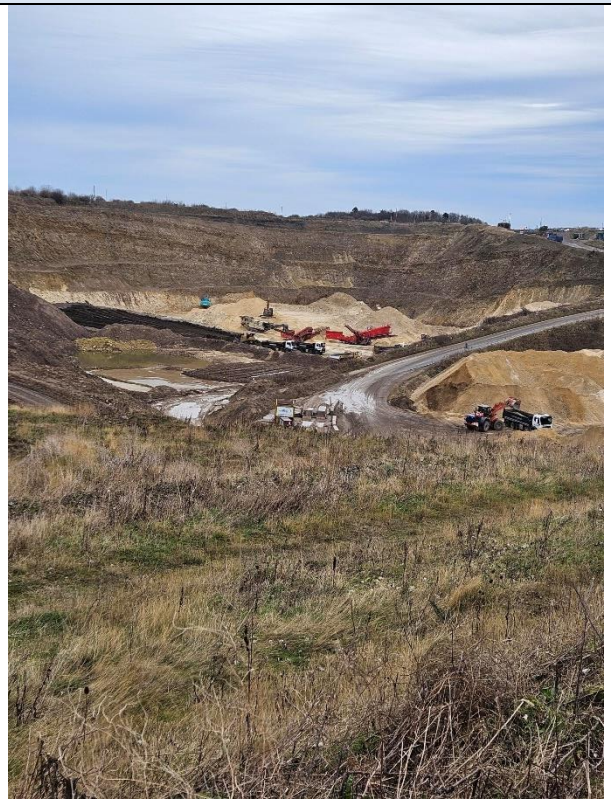
Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Calcareous grassland/Neutral grassland Areas of neutral and calcareous grassland habitat located on internal bunds and internal road edges on site. The natural regenerating vegetation supports species typical of disturbed ground and early colonisation as well as species of finer calcareous soils. This grassland habitat is heavily influenced by competitive neutral species.	Primary Habitat Code: Other Neutral grassland (g3c)/other calcareous grassland Secondary code: Scattered scrub (10) Ruderal or ephemeral (81) Unmanaged (521)		n/a	The parcels of vegetation on site This habitat is typical of disturbed ground. The vegetation in the centre of the site is growing in areas that have been subject to heavy disturbance. This habitat may be disturbed during the EoT works. The species composition is species poor and not reflective of calcareous grassland, including that along the northern boundary. Due to the limited intrinsic value of the habitat, no negative effects are considered likely as a result of continuing extraction /landfill works.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Tall ruderal Tall ruderal vegetation is located to the west of the site and areas of bunds and slopes that have been previously disturbed. The vegetation comprises frequent hogweed *Heracleum sphondylium*, bramble *Rubus fruticosus*, common knapweed *Centaurea nigra*, common nettle *Urtica dioica*.	Primary Habitat Code: Other Neutral grassland (g3c) Secondary code: Scattered scrub (10) Tall forbs (16)		n/a	It is likely that tall ruderal vegetation shall be lost as a result of continuing with quarrying works. This habitat is considered to be common and widespread in a national and local context.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Dense and Scattered Scrub Areas of dense bramble scrub and or mixed scrub comprising bramble, dog rose *Rosa canina*, gorse *Ulex europaea* elder *Sambucus nigra.*	Primary Habitat Code: Bramble Scrub (h3d) Mixed scrub (h3h) Secondary code: Scattered scrub (10)		n/a	It is likely that some of the scrub habitat shall be lost as a result of the consented works. Scrub habitat is considered to be common and widespread in a national and local context. No negative effects are considered likely as a result of the proposed works.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Ephemeral/Short Perennial Areas of early colonising vegetation on disturbed ground. A large area of ephemeral/short perennial vegetation is located to the west of the site over areas of inert landfill/ stockpiled agricultural lime. This area is not restored and is likely to be further disturbed/re-processed. Ground is undulating and been in place for 2-3 years. The area supports abundant creeping bent *Agrostis stolonifera*, frequent *Epilobium sp,* smooth meadow-grass *Poa pratensis,* creeping thistle *Cirsium arvensis*, and occasional ribwort plantain *Plantago lancelata*, common vetch *Vicia sativa*, and creeping cinquefoil *Potentilla reptans*. An stock pile of agricultural lime is located within this area is to be reprocessed.	Primary Habitat Code: Inland Rock (s1) Secondary code:		n/a	The area of ephemeral vegetation shall be lost as part of the inert land fill operations as areas are infilled and stockpiles are re-processed. Ephemeral vegetation along the edges of tracks may be disturbed as areas of the quarry continue to be extracted particularly towards the west and south -west areas. The vegetation type is typical of disturbed ground and is considered to be common and widespread nationally and locally. No negative effects are considered likely as a result of the proposals.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Waterbodies Four waterbodies are present within the site application boundary. One waterbody (WB1) is considered to be a permanent waterbody for associated with the washing plant. The water is frequently disturbed, recycled and contains heavy sediments. The other three waterbodies (WB2-4) are temporary in nature and are collections of rain-water in low lying undulating ground. A further 3 waterbodies are located beyond the site boundary within 250m. A full description of waterbodies on site and within 250m is given in Appendix 2	Primary Habitat Code: Other standing Water (r1g) Secondary code:		n/a	It is likely that some if not all the waterbodies will be lost as a resul of the continued extraction and infill works. The waterbodies do not meet the criteria to qualify as s.41 priority habitat and are common and widespread. No negative effects are considered likely as a result of the proposed extension of time /proposed works.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Bare Ground Access tracks throughout the site and areas of hardcore within the car park at the main entrance	Primary Habitat Code: Artificial Unvegetated Unsealed surface (u1c) Secondary code:			This habitat is of low ecological value. No negative effects are anticipated as a result of the proposed works.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Hard standing Surfaced road surface at quarry entrance, around weighbridge.	Primary Habitat Code: Sealed surface (u1b) Secondary codes Road (111)		n/a	This habitat is of negligible ecological value. No negative effects are anticipated as a result of the continuing works.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Built features The built features within the Site comprise dry stone walls and fences. The periphery of the site is demarcated by a post and wire fence. A stone wall is present along the southern boundary of the application area.	Primary code Built Linear features (u1e) Secondary codes Dry stone wall (67) Fence (69)		n/a	This habitat may be modified by the development proposals but is of negligible intrinsic value.

Table 2: Habitat Descriptions and Evaluation				
Habitat Description	**UK Hab Classification**	**Photograph**	**Local BAP/s.41**	**Negative effects**
Buidlings Three buildings are present within the Site. All buildings are either steel cabins or prefabricated buildings. See Appendix 3 for detailed description	Primary Code: Buildings (u1b5)		n/a	The buildings are of negligible intrinsic ecological value. No negative effects are considered likely.

3.3 Species

3.3.1 Protected and s.41 species are evaluated in order to identify potential adverse effects in Table 3 below, based on the following criteria:

- Desk study records;
- Evidence found during the survey;
- Presence, extent, quality, and viability of supporting on-site habitat;
- Ecological connectivity to viable off-site habitats; and
- Perceived impacts of habitat loss/impact to individuals in relation to proposals.

3.3.2 Species for which adverse effects are predicted (amber or red) are discussed in more detail in the Discussion and Recommendations section. Species/taxa for which potential adverse effects are not anticipated (green) are excluded from further assessment.

Table 3: Protected and Notable Species Evaluation					
Receptor (species/taxa)	**Desk Study records**	**Status[17]**	**Evaluation**	**Supporting Habitat(s)Present**	**Potential Constraints**
Badger *Meles meles*	✓[18]	BA		Habitat suitable for sett creation and foraging is present on site. Plantation woodland also provides viable opportunities for sett creation.	Potential foraging and sett creation habitat may be impacted by the proposed works.
Bats *Chiroptera*	Common Pipistrelle *Pipistrellus pipistrellus* Pipistrelle sp *Pipistellus sp* Noctule *Nyctalus noctula* Foraging only	EPS, WCA, s.41,	Site	Foraging habitat only on Site, around the sheltered margins of the quarry. No trees or buildings with bat roost potential on Site. Wide range of potential roosting habitat for all species within adjacent buildings/heritage features.	Poor quality foraging habitat restricted to sheltered areas of the quarry. Limited records have been supplied by the desk study with only 2 species recorded. The continuation of works is not considered to have a negative effect of foraging bats.
Birds	A wide range of BoCC and Red List species and WCA Schedule listed species including: Willow warbler Whitethroat Peregrine	s.41, WCA BoCC	Site	Foraging and breeding habitat in habitats around periphery of Site mainly for ground nesting species and in grassland and scrub habitats within the Site. Quarry faces are suitable for peregrine.	Potential breeding habitat may be lost/disturbed by proposals. Foraging habitat may also be lost.
Brown hare *Lepus europaeus*	None	s.41	Site	This species favours open expanses of pastoral farmland and therefore are unlikely to utilise the habitats on Site.	No adverse effect.

[17] **EPS** – European Protected Species, **WCA** – Wildlife and Countryside Act, **WCA (9)** – species listed under Schedule 9, **A1** – Annex 1 (Birds Directive), **BA** – Protection of Badgers Act, **s.41** – species listed under section 41 of the NERC Act as species of principal importance, **BoCC** – Birds of Conservation Concern.

[18] Locations of badger activity are confidential due to the sensitivity of this species

Table 3: Protected and Notable Species Evaluation					
Receptor (species/taxa)	**Desk Study records**	**Status[17]**	**Evaluation**	**Supporting Habitat(s)Present**	**Potential Constraints**
European hedgehog *Erinaceus europaeus*	✓ within the wider search area.	s.41	Site	Limited habitat available in scrub. Site is set within a deep void.	Adverse effects through habitat losses are unlikely to be significant due to the lack of suitable connected habitat on site and the availability of equivalent supporting habitats elsewhere in the locality
Great crested newt *Triturus cristatus*	✓ Located 1km to the west	EPS, WCA, s.41	Site	Four waterbodies are present within the site. Suitable terrestrial habitat is present within grassland and scrub habitat.	Loss of waterbodies may result in an adverse effect on GCN in the absence of mitigation.
Common toad *Bufo bufo*	✓	s.41	Site	Grassland, waterbodies on site may provide suitable habitat for common toad.	Loss of waterbodies and grassland may result in adverse effects on common toad without appropriate mitigation.
Common Reptiles	✓	WCA, s.41		Grassland, scrub	Given the disturbed nature of the site and the isolated nature of more recently vegetated habitats within a deep void, reptiles are likely to be absent.
Hazel dormouse *Muscardinus avellanarius*	x	EPS, WCA, s.41		The site is located outside this species natural range	Species is likely to be absent.
Invertebrates (Protected and notable species)	Dingy Skipper Wall Small heath	s.41/LB AP	Site	Grassland	Loss of suitable habitat from site may result in a negative effect on s.41 priority species without mitigation.

Table 3: Protected and Notable Species Evaluation					
Receptor (species/taxa)	**Desk Study records**	**Status[17]**	**Evaluation**	**Supporting Habitat(s)Present**	**Potential Constraints**
Otter *Lutra lutra*	✓	EPS, WCA, s.41	n/a	No suitable supporting habitat on site	Absent from Site
Water vole *Arvicola amphibia*	x	WCA, s.41		No suitable supporting habitat on site	Absent from Site
White-clawed crayfish *Austropotamobius pallipes*	x	EPS, WCA, s.41		No suitable supporting habitat on site	Absent from Site
Protected and notable plant species	x	WCA, s.41		No recorded from site	Absent from site.
Non-native invasive species (INNS)	Japanese Rose *Rosa rugosa* Japanese Knotweed *Fallopia japonica*	WCA (9)		Habitat on site is capable of supporting invasive species. No invasive species have been recorded on site to daye.	Absent from site

4 DISCUSSION AND RECOMMENDATIONS

4.1 Sensitive Receptors

4.1.1 The following conservation sites, habitats, and species (receptors) have been evaluated as being subject to potential adverse effects and hence can be constraints to the proposals:

- Protected Species: Badgers, GCN, and breeding birds including peregrine; and
- S.41 Species: Butterflies and common toad.

4.1.2 The nature of potential effects, requirements for further surveys and proposed mitigation/compensation are discussed below for each of the identified receptors.

4.2 Protected Species

Badger

4.2.1 No evidence of badger has been recorded on site, however, habitats are viable for sett creation in banks sides and inert land fill areas. It is recommended that site staff remain vigilant for mammal burrows that exceed 100mm in diameter. If any new holes/mammal excavations appear on site, it is advised that works cease within 30m until advice can be sought from a suitably experienced ecologist.

Great crested newt

4.2.2 Four waterbodies have been recorded on site with a further three waterbodies recorded off site but within 250m. Amphibian surveys were undertaken in 1999 and GCN's/common toad were not recorded (only common newts and common frog). However, desk study information shows that GCN have been recorded within 1km of the site.

4.2.3 Given the proximity of GCNs in the wider area and the age of survey data, it is recommended that GCN Environmental DNA (eDNA) is undertaken of all waterbodies on site and within 250m of the Site to validate the findings of the previous surveys. The window for undertaking GCN eDNA survey is mid April to 30th June, when animals are likely to be within the waterbodies.

4.2.4 Recommendations for the necessary mitigation regarding GCN shall be updated following the results of the eDNA survey.

Breeding Birds

4.2.5 Habitats are present on site that may support arrange of breeding birds. Previous survey reports (WA, 2002) identified common gull, lesser black backed gull and kittiwake on site. It is not clear in the ES whether these were fly overs or recorded within the site given the close proximity to the Durham coast, however, breeding bird surveys are recommended to review and update the assemblage of breeding birds to consider any change in distribution and to update the previous appraisal.

4.2.6 In accordance with industry standard guidelines breeding bird surveys are undertaken over 6 visits between March to June inclusive.

4.2.7 Peregrine has previously been recorded breeding on site on the exposed cliff face to the south-west. As peregrine are loyal to their breeding sites, it is assumed that Peregrine may return to site to occupy the available territory. The breeding bird surveys will seek to record breeding peregrine and identify the location of nest sites to inform mitigation/compensation recommendations which are likely to include:

- avoiding works within the locality of the Peregrine nest within the breeding season (taken to be Feb – August), unless proved to be absent;
- retain and make provision of inaccessible cliffs (with cliff ledges) within the restoration scheme suitable for peregrine nesting.

4.2.8 This mitigation and compensation shall be sufficient to ensure the breeding population of peregrine is retained on site.

Common Toad

4.2.9 Habitats on site are suitable for common toad. During habitat clearance, it is recommended common toads encountered are moved to a place of safety around the perimeter of the site.

4.2.10 Measures to prevent toads and other amphibian species from entering water extraction equipment should include the fitting of filters (6mm gauge max) to the ends of extraction pipes.

4.2.11 Creation of a waterbody and hibernaculum suitable for amphibian refuge/overwintering shall be incorporated within the proposed landscape restoration proposals ensuring no loss of habitat from site upon completion of extraction works. The waterbody provided shall be created and managed for the benefit of wildlife.

Invertebrates

4.2.12 Viable habitat in the form of calcareous grassland vegetation is present on site for s.41 priority and Local BAP species dingy skipper, wall and small heath, all of which are cited in historical records within 2km of the Site. As detailed within the previous ES chapter (WA, 2022) the peripheral habitats on site provide more favourable conditions for such species, with connections to off-site calcareous grassland verges along Lizard Lane. Areas of grassland within the central areas of the site are heavily disturbed and isolated.

4.2.13 Given that the optimal habitats on site located around the site periphery are to be retained and unimpacted by proposed continuation of quarrying works, no further survey is considered necessary.

4.2.14 Favourable habitat for s.41 butterfly species shall be provided as part of the Restoration proposals and shall include Magnesian Limestone grassland and calcareous grassland habitat and well as exposed cliff suitable for basking.

General Nesting Birds

4.2.15 All scrub and grassland habitats have some suitability to support nesting birds. It is recommended that where possible all vegetation shall be removed outside the nesting bird season (taken to be March to August) unless a checking survey by an appropriately qualified ecologist confirms active nests to be absent, immediately prior to the start of works.

4.3 General Recommendations

4.3.1 If the Site boundary alters and any other habitats are identified to be lost or affected by the development, then further surveys for habitats and protected species may be required.

4.3.2 Night-time work should be avoided whenever possible to limit the potential for disturbance to nocturnal animals.

4.3.3 Details of landscape restoration proposals and management shall be detailed within a Landscape and Ecological Management Plan (LEMP) to be provided as a condition of planning.

4.4 Biodiversity Enhancement

4.4.1 The restoration plan for the proposed quarry provides a range of conservation habitats including magnesian limestone grassland, calcareous grassland, wetland grassland, an attenuation pond, woodland and scrub and rough grassland and exposed cliff faces. These habitats reflect the diversity of the local area and assist in meeting national and local biodiversity targets by providing a range of s.41 and Durham BAP priority habitats.

4.4.2 In accordance with the requirements of the NPPF and BSI 42020:2013 ecological enhancements should be proposed that are over and above measures required to mitigate effects on biodiversity. Such enhancements could include the provision of the following, in addition to any measures required as mitigation:

- Creation of insect and invertebrate houses/hotels, or management of retained standing and fallen deadwood.
- Provision of bat boxes, bird boxes or hedgehog houses within suitable habitats;
- Planting of native trees and shrubs of local provenance which naturally occur within the local area. To include berry, pollen and nectar producing species.
- Areas of green spaces/grassland planted with diverse native flora and linked to the wider landscape character.
- Creation of wildlife ponds to provide habitats for invertebrates and amphibians.

5 CONCLUSION

5.1.1 Given the identified evidence of presence and/or likely presence of ecological receptors which may be adversely impacted by the development scheme, further surveys and/or assessments have been recommended in order to inform a full evaluation of adverse effects. Consequently, additional protected species survey and assessment reports will be required to compliment the planning application. Additionally, the results of further protected species surveys and evaluations should be considered either within an Ecological Impact Assessment (EcIA) report or via individual baseline reports, in line with standard industry practice (CIEEM 2024). Such reports should include a formal assessment of impacts to fully inform the planning application.

5.2 Report Validity

5.2.1 In general, this report remains valid for a period of 18 months following the date of the habitat survey.

5.2.2 If the Site boundary or layout is subsequently modified and any other habitats are identified to be lost or affected by the development, then further surveys for habitats and protected species may be required.

7 REFERENCES

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APPENDICES

Appendix 1

Legislation and Policy Summary

Appendix 1 – Legislation and Policy Summary

Legislation for Habitats/Sites

Designated Site/Habitat	Status
Ramsar Sites	Ramsar Sites are wetlands of international importance designated following the Ramsar Convention. RAMSAR sites have the same level of protection as SACs and SPAs under the Wildlife and Countryside Act 1981 (as amended).
SPA (Special Protection Areas)	SPAs seek to protect the habitats of rare and vulnerable European and UK birds. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended) protect such sites in the UK.
SAC (Special Areas for Conservation)	SACs are strictly protected areas which represent important and threatened habitats in Europe and the UK. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended) protect such sites in the UK.
SSSI (Sites of Special Scientific Interest)	SSSIs protect the best examples of the UK's flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were renotified under the Wildlife and Countryside Act 1981 (as amended). Modified provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000.
NNR (National Nature Reserves)	NNRs are examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 or the Wildlife and Countryside Act 1981 (as amended). Legal protection of NNRs is provided under the Wildlife and Countryside Act 1981 (as amended).
Hedgerows	All hedgerows are protected by the Hedgerows Regulations 1997, under which it is an offence to remove or destroy certain hedgerows without planning consent or permission from the Local Planning Authority. These regulations do not apply to any hedgerow within the curtilage of, or marking the boundary of the curtilage of, a dwelling house.
LNR (Local Nature Reserves)	Designated by the National Parks and Access to the Countryside Act 1949, LNRs may be declared for nature conservation by local authorities after consultation with the relevant statutory nature conservation agency. Legal protection of LNRs is provided under the Wildlife and Countryside Act 1981 (as amended).

Legislation for Species

Species	Legal Status
Creeping Marshwort, Early Gentian, Fen Orchid, Floating-leaved Water Plantain, Killarney Fern, Lady's Slipper, Shore Dock, Slender Naiad, Yellow Marsh Saxifrage	Under the Conservation of Habitats and Species Regulations 2017 (as amended), it is illegal to deliberately pick, collect, uproot or destroy any such species.
Bats, Dormouse, Otter, Wild Cat, Great Crested Newt, Natterjack Toad, Sand Lizard, Smooth Snake, Large Blue Butterfly	These animals and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (as amended), which makes it illegal to: • Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs; • Deliberately disturb[19] such an animal; and • Damage or destroy a breeding site or resting place of such an animal. European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed, namely: • The development is for reasons of overriding public interest; • There is no satisfactory alternative; and • The favourable conservation status of the species concerned will be maintained and/or enhanced. LPAs must consider the above 3 'tests' when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations.
Bats, Dormouse, Great Crested Newt, Heath Fritillary, High Brown Fritillary, Large Blue, Marsh Fritillary, Natterjack Toad, Pine Martin, Otter, Red Squirrel, Sand Lizard, Smooth Snake, Swallowtail, Water Vole, Wildcat	These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended), which makes it illegal (subject to certain exceptions) to: • Intentionally kill, injure or take any such animal; • Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection; and

[19] Under the Conservation Regulations, disturbance of protected animals includes in particular any disturbance which is likely to: (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young or to hibernate or migrate; (ii) significantly affect the local distribution or abundance of the species in question.

Species	Legal Status
	• Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Adder, Common Lizard, Grass Snake, Slow Worm, White-clawed Crayfish	These animals receive partial protection under the Wildlife and Countryside Act 1981 (as amended), which provide protection against intentional killing or injury of any such animal.
Nesting Birds	All wild birds (as defined by the act) are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it illegal (subject to exceptions) to: • Intentionally kill, injure or take any wild bird; • Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Wildlife and Countryside Act 1981 (as amended) Schedule 1 listed Birds	Additional protection is provided to birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to intentionally or recklessly disturb any bird listed on Schedule 1, or their dependent young while nesting.
Badgers	The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a Badger, or attempt to do so and to intentionally or recklessly interfere with a Badger sett. This includes: • damaging or destroying an active sett; • obstructing access to a sett; and • disturbing a Badger while it is occupying a sett. Licences can be granted to permit sett closure and/or disturbance between July and November inclusive (i.e. outside the sow pregnancy/birth period).
Wild Mammals	The Wild Mammals (Protection) Act 1996 provides legal protection to all wild mammals (as defined by the act) against the following actions: mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
Wildlife and Countryside Act 1981 (as amended) Schedule 9 listed invasive animals (Part 1) and plants (part 2)	Certain species of plants and animals that do not naturally occur in Great Britain have become established in the wild and represent a threat to the natural fauna and flora. Section 14 of the Wildlife and Countryside Act 1981 (as amended) prohibits the release or allowed escape of animals listed in Schedule 9 to the Act and planting, or allowed growth, of any plant listed in Schedule 9 to the Act.

Policy Summary

Section 40 of the Natural Environment and Rural Communities (NERC) Act imposes a legal duty on Planning Authorities to 'have regard' to the conservation of biodiversity when considering planning applications.

Section 41 of the NERC Act requires the Secretary of State to publish a list of species and habitats of principal importance for conserving biodiversity in the UK. Such Biodiversity Action Plan (BAP) Habitats and Species (2007) do not offer the species any specific protection but help to highlight the species importance at a national level. This list is used by Local Planning Authorities to identify the species and habitats that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF).

The NPPF underpins the Government's planning policies for England and how these are to be applied. The central theme of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment because of its potential impact on a habitats site is being planned or determined.

The NPPF states:

> *When determining planning applications, local planning authorities should apply the following principles:*
>
> - *If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
> - *Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
> - *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons[63] and a suitable compensation strategy exists; and*

- *Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*
- *The following should be given the same protection as habitats sites:*

  a) potential Special Protection Areas and possible Special Areas of Conservation;

  b) listed or proposed Ramsar sites; and

  c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

The NPPF requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan. In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

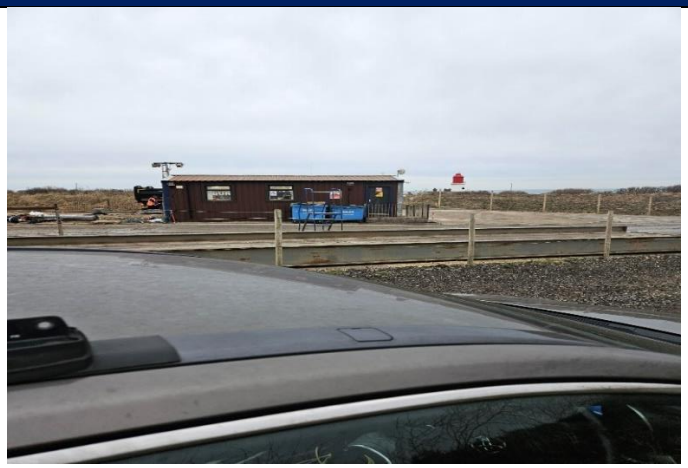
Appendix 2

Appendix 2 - Waterbody Descriptions

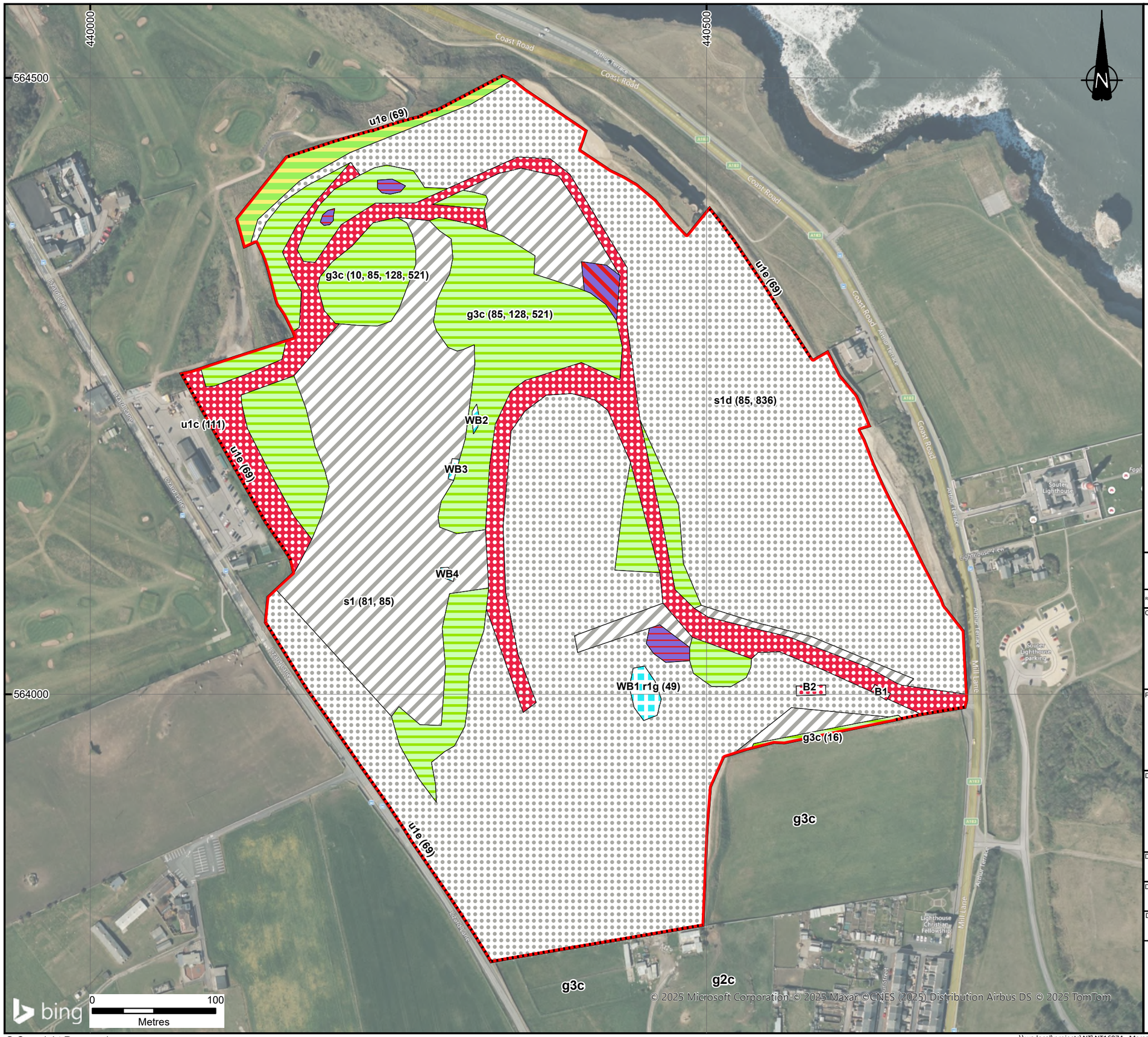
Waterbody Number	Photo	Description	Previously Recorded	HSI
WB1		Large sediment water recycling lagoon. Water used primarily for dust suppression on site. Water levels maintained throughout the year. Waterbody is c30m in length and 15m wide and greater than 1m depth. Margins are shallow to two sides. No aquatic or margin vegetation present	Yes	0.44 Poor/Below Average
WB2		A wet scrap within the inert landfill area. Run off from undulating land and bunds. Will dry annually. Waterbody is approximately 14m x2.5m with occasional clumps of hard rush on the margins and within the pool of water. Max water depth is approximately 0.15m.	No	0.36 Poor
WB3		A wet scrape within inert landfill area measuring 20m x 2.5m. Formed at the base of a bund of earth, No aquatic or emergent vegetation. Banks shallow, water depth is approximately 0.15m.	No	0.36 Poor
WB4		A linear temporary pool of water has formed between two bunds of inert fill and a stockpile. Waterbody measures 10m x 1.5m . No aquatic or emergent vegetation is present, likely to be dry for large parts of the year.	No	0.36 Poor
WB5	No photo	No access	No	tbc
WB6	No photo	No access	No	tbc
WB7	No photo	No access	No	tbc

Appendix 3

Appendix 3 – Building Descriptions

Building Number	Description	Photo	Bat suitability
B1	Steel cabin used as a weighbridge office. Single story building with Steel pitched roof.		Negligible
B2	Steel cabins used as site Offices. Sealed units.		Negligible

DRAWINGS



KEY

- Minerals Permission Boundary
- g2c - Other calcareous grassland
- g3c - Other neutral grassland
- h3d - Bramble scrub
- h3h - Mixed scrub
- r1f - Temporary water bodies
- r1g - Other standing water
- s1 - Inland rock
- s1d - Other inland rock
- u1b5 - Buildings
- u1c - Artificial unvegetated, unsealed surface
- u1e - Built linear features

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D

CLIENT

OBRIEN AGGREGATES

PROJECT

MARSDEN QUARRY

DRAWING TITLE

HABITAT PLAN

DRG No.	REV	SUIT. CODE
NT16974/003	A	--

DRG SIZE	SCALE	DATE
A3	1:3,000	10/04/2025

DRAWN BY	CHECKED BY	APPROVED BY
SRW	LP	TP

wardell armstrong
PART OF SLR

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KEY

Site Boundary

Notes:

Boundaries are indicative.

REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D

CLIENT

O'BRIEN AGGREGATES (MARSDEN) LIMITED

PROJECT

MARSDEN QUARRY

DRAWING TITLE

SITE LOCATION PLAN

DRG No.	REV	SUIT. CODE
NT16974/005	A	--

DRG SIZE	SCALE	DATE
A3	1:25,000	10/04/2025

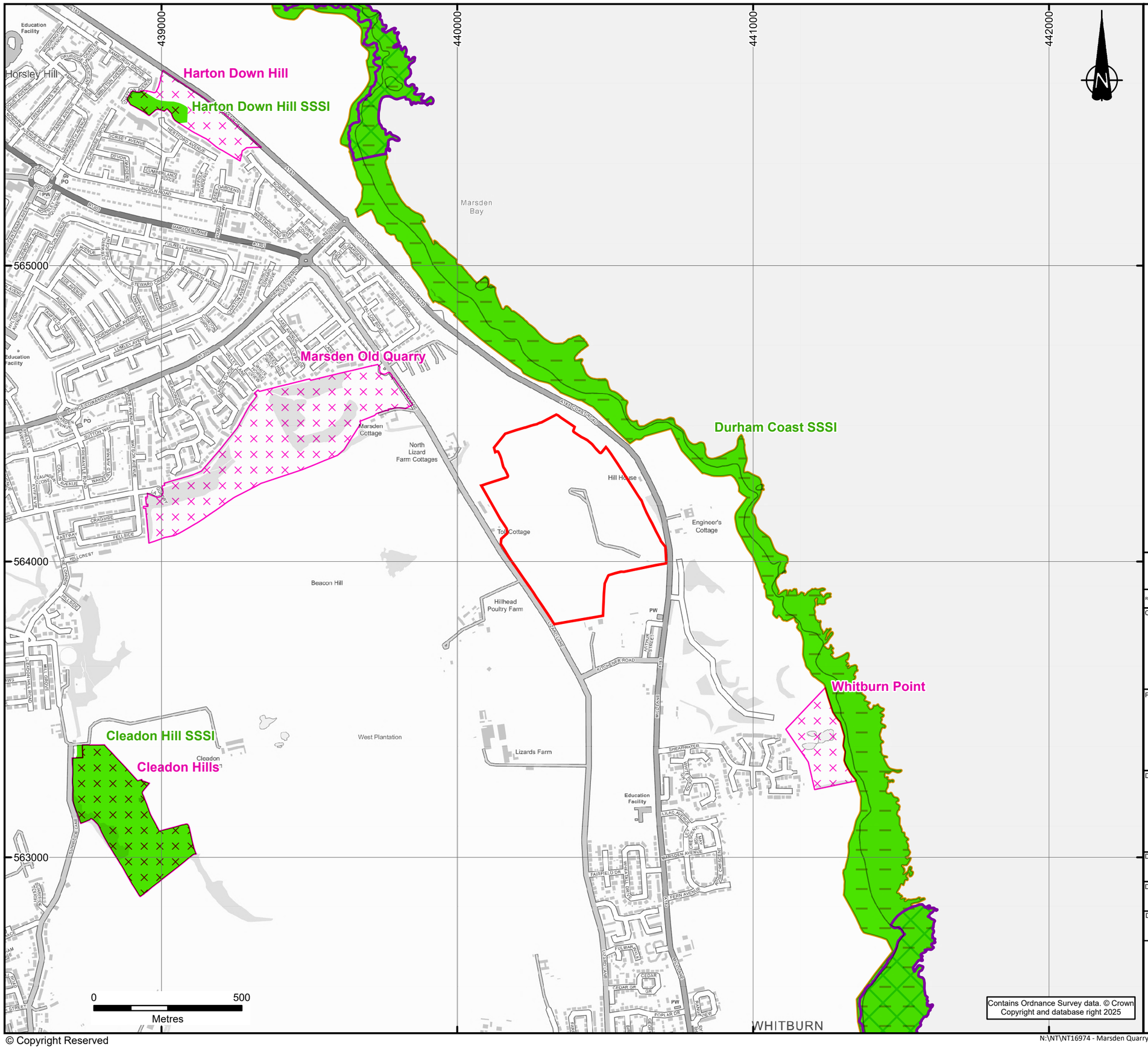
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KEY

- Site Boundary
- Northumbria Coast RAMSAR
- Northumbria Coast Special Protection Area
- Durham Coast Special Area of Conservation
- Local Nature Reserves
- Sites of Special Scientific Interest

Notes:

Boundaries are indicative.

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REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D
A	FIRST ISSUE	04/25	GR	IS	NB

CLIENT

O'BRIEN AGGREGATES (MARSDEN) LIMITED

PROJECT

MARSDEN QUARRY

DRAWING TITLE

DESIGNATED AREAS

DRG No.	REV	SUIT. CODE
NT16974/008	A	--

DRG SIZE	SCALE	DATE
A3	1:12,500	11/04/2025

DRAWN BY	CHECKED BY	APPROVED BY
GR	IS	NB

wardell armstrong
PART OF SLR

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KEY

- Site Boundary
- 250 m Buffer
- Waterbodies

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
A	FIRST ISSUE	04/25	SRW	LP	TP

CLIENT

OBRIEN AGGREGATES

PROJECT

MARSDEN QUARRY

DRAWING TITLE

WATERBODY LOCATION PLAN

DRG No.	REV	SUIT. CODE
NT16974/014	A	--

DRG SIZE	SCALE	DATE
A3	1:5,000	11/04/2025

DRAWN BY	CHECKED BY	APPROVED BY
SRW	LP	TP

wardell armstrong
PART OF SLR

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KEY

- Site Boundary
- Buildings

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

REVISION	DETAILS	DATE	DRAWN	CHKD	APP'D
A	FIRST ISSUE	04/25	SRW	LP	TP

CLIENT

OBRIEN AGGREGATES

PROJECT

MARSDEN QUARRY

DRAWING TITLE

BUILDING LOCATION PLAN

DRG No.	REV	SUIT. CODE
NT16974/015	A	--

DRG SIZE	SCALE	DATE
A3	1:5,000	11/04/2025

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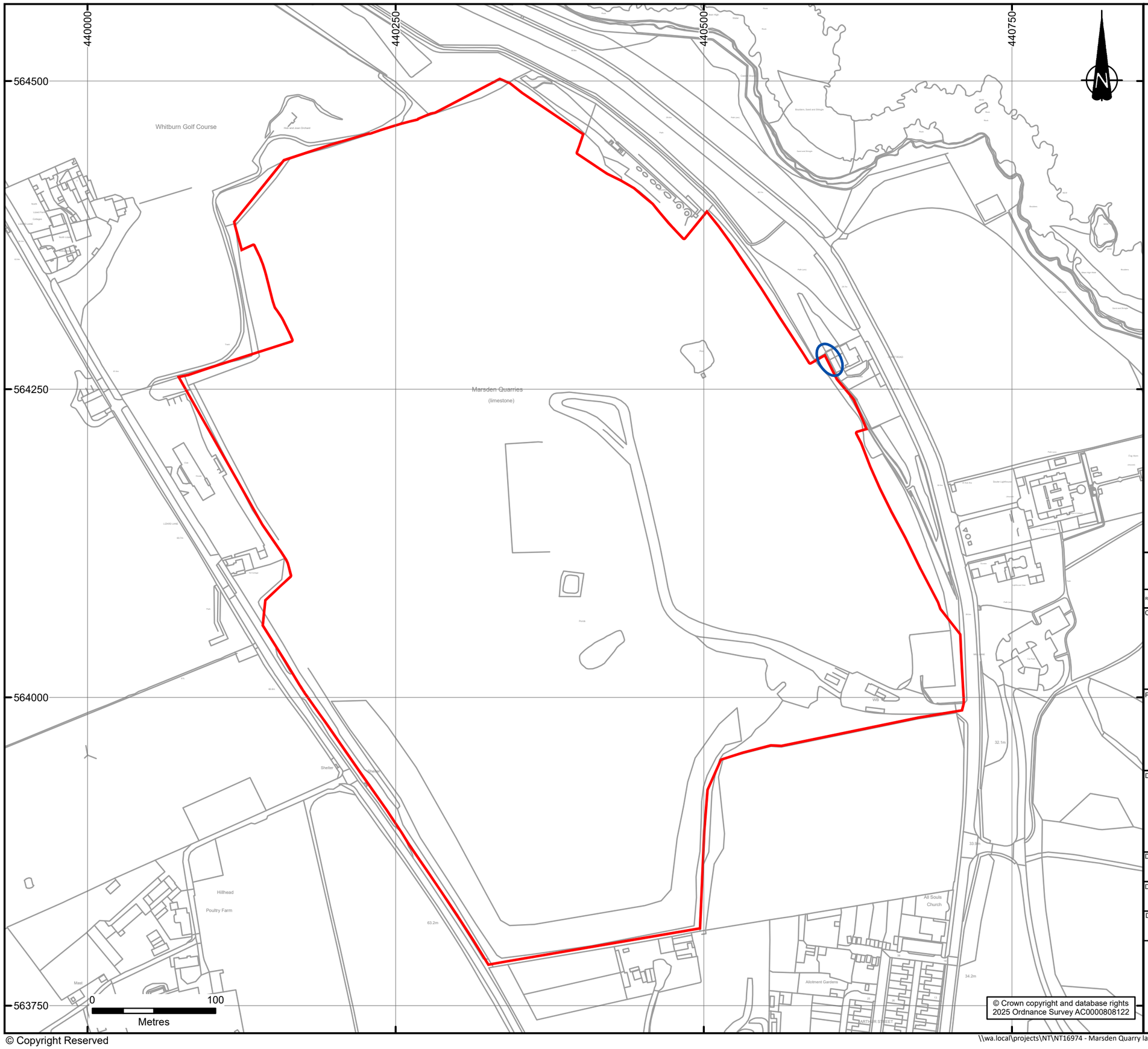
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DRAWINGS



KEY

- Site Boundary
- Minor Variation

Notes:

Boundaries are indicative.

REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D

CLIENT

O'BRIEN AGGREGATES (MARSDEN) LIMITED

PROJECT

MARSDEN QUARRY

DRAWING TITLE

PROPOSED SITE BOUNDARY

DRG No.	REV	SUIT. CODE
NT16974/004	A	--

DRG SIZE	SCALE	DATE
A3	1:3,000	10/04/2025

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KEY

Site Boundary

Notes:

Boundaries are indicative.

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PROJECT

MARSDEN QUARRY

DRAWING TITLE

SITE LOCATION PLAN

DRG No.	REV	SUIT. CODE
NT16974/005	A	--

DRG SIZE	SCALE	DATE
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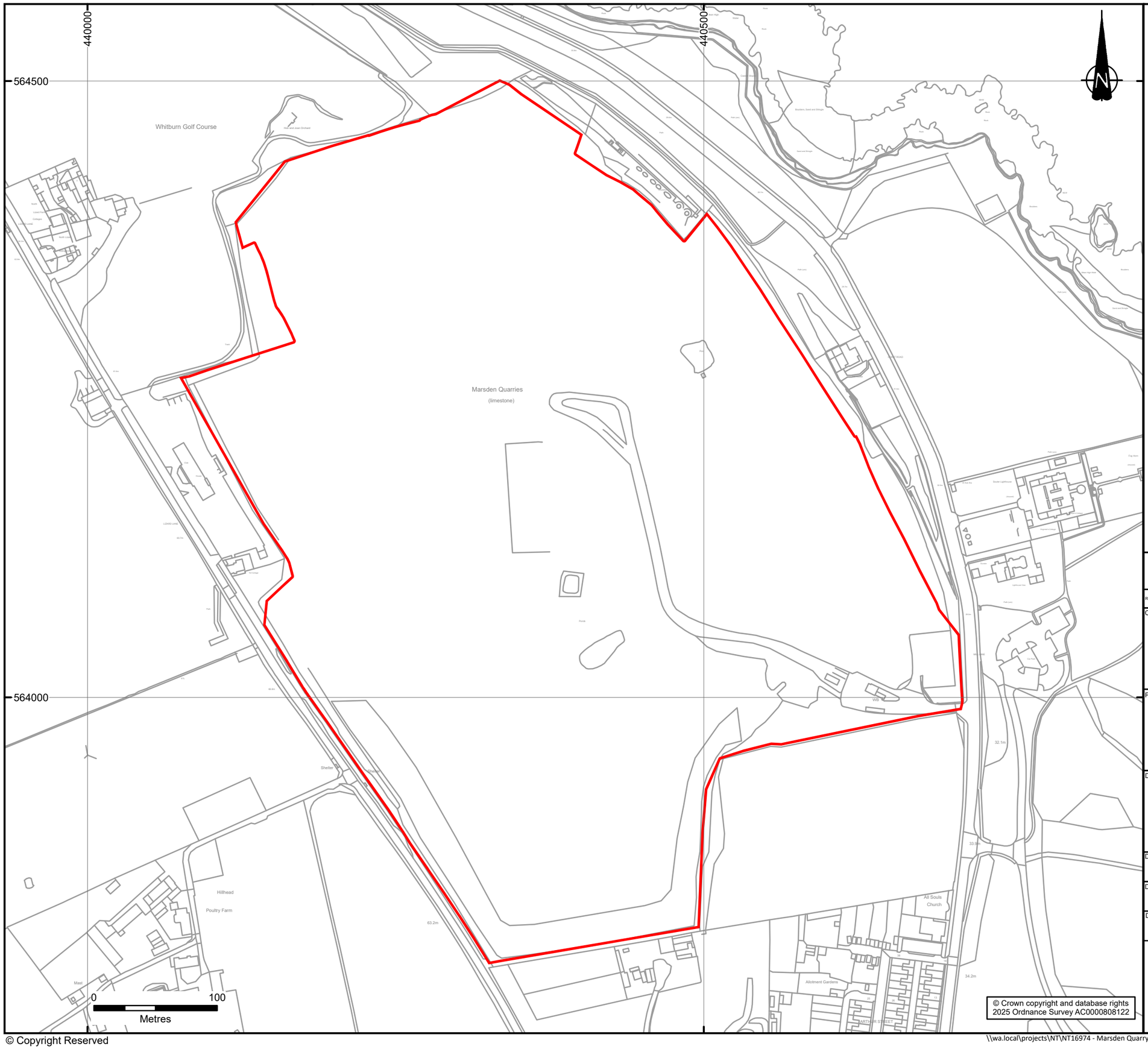
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KEY

Existing Site Boundary

Notes:

Boundaries are indicative.

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PROJECT

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EXISTING SITE PLAN

DRG No.	REV	SUIT. CODE
NT16974/006	A	--

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POTENTIAL CONNECTION TO THE BRIDLEWAY WHICH RUNS ADJACENT TO THE SITE

WHITBURN GOLF COURSE

North Lizard Cottages

North Lizard Riding School

PHASE 1

PHASE 2

PHASE 3

PHASE 4

PHASE 5

PHASE 6

Lime Kilns

APPROXIMATE EXTENT OF ATTENUATION POND

Water

Ponds

Water

Club House

WHITBURN GOLF COURSE

LIZARD LANE

Toll House

A183 COAST ROAD

Souter Lighthouse

Dunelm

Lighthouse View

MILL LANE A183

All Souls Church

Allotment Gardens

STORED TOPSOIL PUSHED OVER FROM THE QUARRY RIM TO AID NATURAL REVEGETATION ON ROCK BENCHES

Boundary Stone

Hillhead Poultry Farm

Stone

Slope

564500N

564400N

564300N

564200N

564100N

564000N

563900N

563800N

0 5 10 20 30 40 50 75 100

Metres

34.2m

KEY

- APPLICATION BOUNDARY
- 1 MAGNESIAN LIMESTONE GRASSLAND
- 2 EXPOSED ROCK FACES WITH MAGNESIUM LIMESTONE GRASSLAND
- 3 EXPOSED ROCK FACES
- 4 ROUGH GRASSLAND
- 5 WOODLAND / SCRUB
- 6 CALCAREOUS GRASSLAND
- 7 WETLAND GRASSLAND
- 8 WETLAND FEATURE
- 9 WETLAND SCRUB
- 10 ACCESS RAMP
- 11 CAR PARK
- PATH
- PHASING BOUNDARY
- 10 PROPOSED RESTORATION CONTOURS

F	APPLICATION BOUNDARY AMENDED	06/05	CR	HK	DB
E	PHASING BOUNDARIES AMENDED	26/05	IW	HK	DB
D	PHASING BOUNDARIES ADDED	24/05	SRM	HK	GB
C	NUMBERS ADDED	17/05	LG	HK	GB
B	LANDFORM AMENDED	28/04	LG	HK	GB
A	RESTORATION MASTERPLAN WITH PATHS	15/03	WL	HK	GB
REV	DETAILS	DATE	DRAWN	CHK'D	APP'D

AMENDED PLAN

SOUTH TYNESIDE M.B.C. THIS PLAN WAS GRANTED PLANNING PERMISSION ON 18 MAY 2005 SUBJECT TO CONDITIONS

SOUTH TYNESIDE M.B.C. 06 MAY 2005 DEVELOPMENT CONTROL SERVICES

This does not constitute approval under the Building Regulations

OWEN PUGH & CO LTD

ST 1307/2002/DM

MARSDEN QUARRY
ENVIRONMENTAL IMPACT ASSESSMENT

DRAWING TITLE

FIGURE 3.4
RESTORATION MASTERPLAN

DRG No	SCALE	DATE
NT02565/043	1:1000 @ A0	MAY 2002
DRAWN BY: LA	CHECKED BY: HK	APPROVED BY: DB

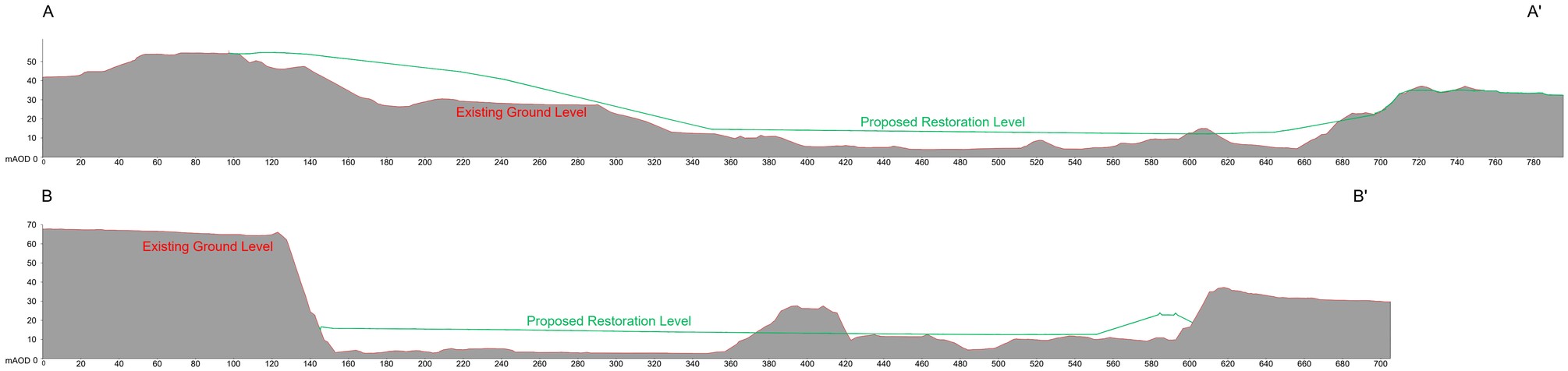
NEWCASTLE-UNDER-LYME TEL 01782 612636
NEWCASTLE UPON TYNE TEL 0191 232 0945
WEST BROMWICH TEL 0121 580 0909
LONDON TEL 020 7287 2872
CARDIFF TEL 029 2038 2485
LEEDS TEL 01942 260101
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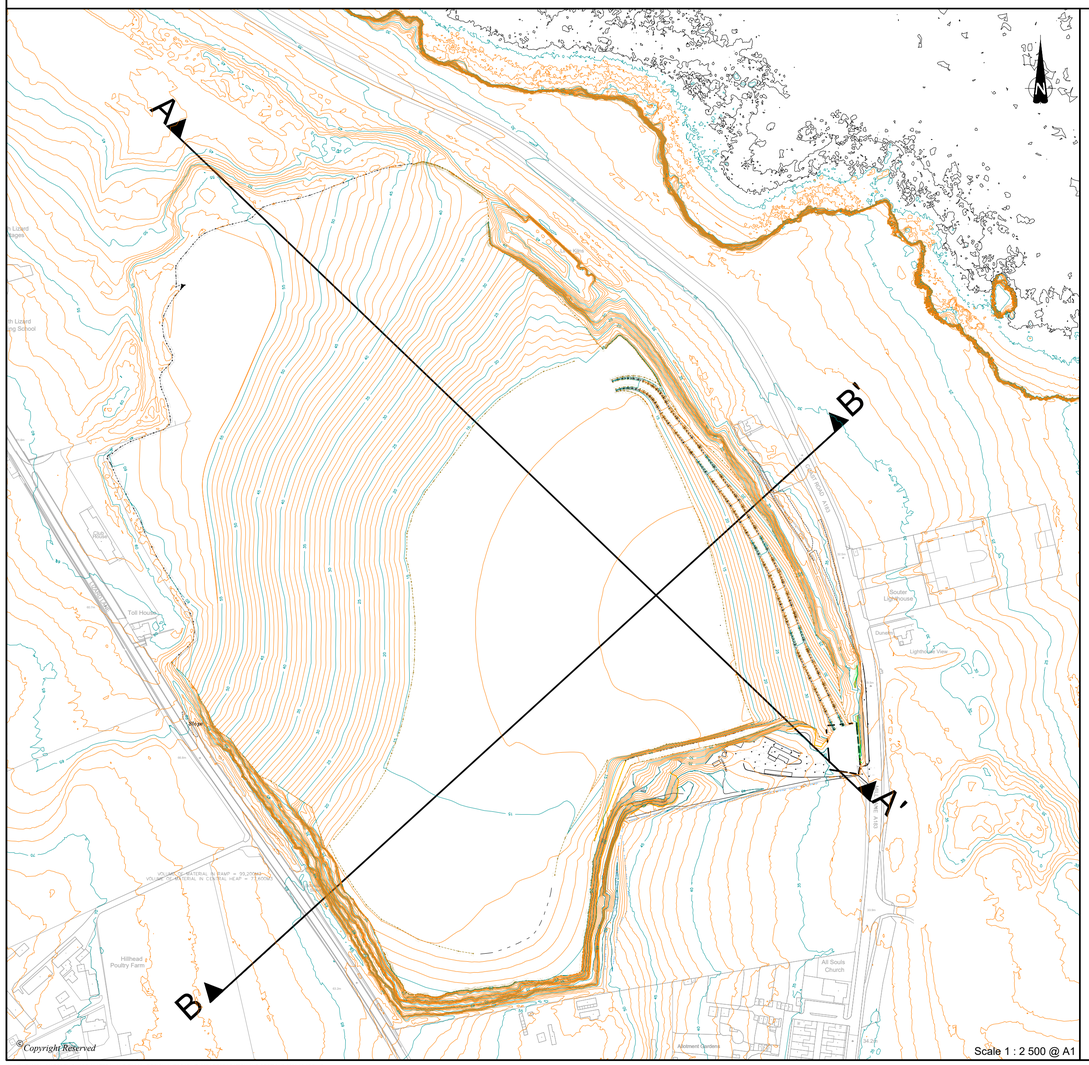
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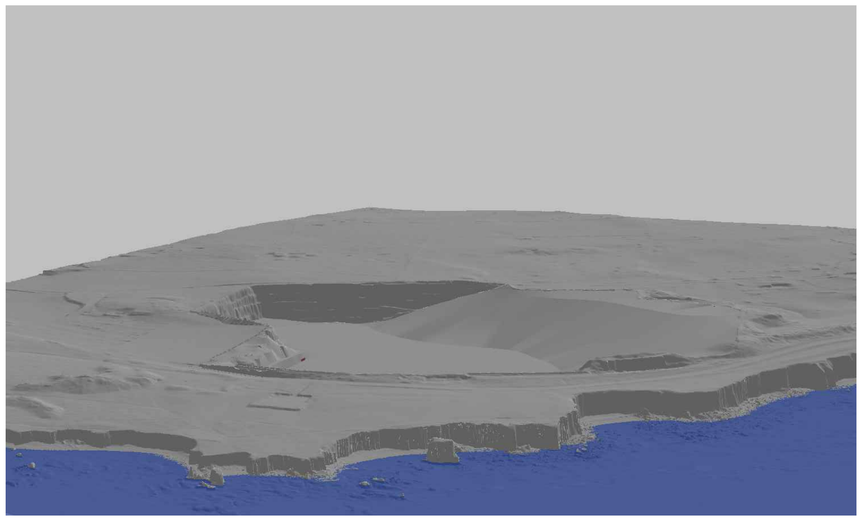
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Scale 1 : 1 250 @ A1



Scale 1 : 2 500 @ A1



REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D

CLIENT: O'Brien Aggregate

PROJECT: Marsden Quarry

DRAWING TITLE: Restoration Sections Plan

DRG No.	REV	SUIT. CODE
NT16974-001		

DRG SIZE	SCALE	DATE
A1	AS SHOWN	March 2025

DRAWN BY	CHECKED BY	APPROVED BY
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KEY

Site Boundary

Terrain

80 mAOD

0 mAOD

Notes:

Boundaries are indicative.

REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D
A	FIRST ISSUE	04/2025	GR	IS	NB

CLIENT

O'BRIEN AGGREGATES (MARSDEN) LIMITED

PROJECT

MARSDEN QUARRY

DRAWING TITLE

TOPOGRAPHY

DRG No.	REV	SUIT. CODE
NT16974/007	A	--

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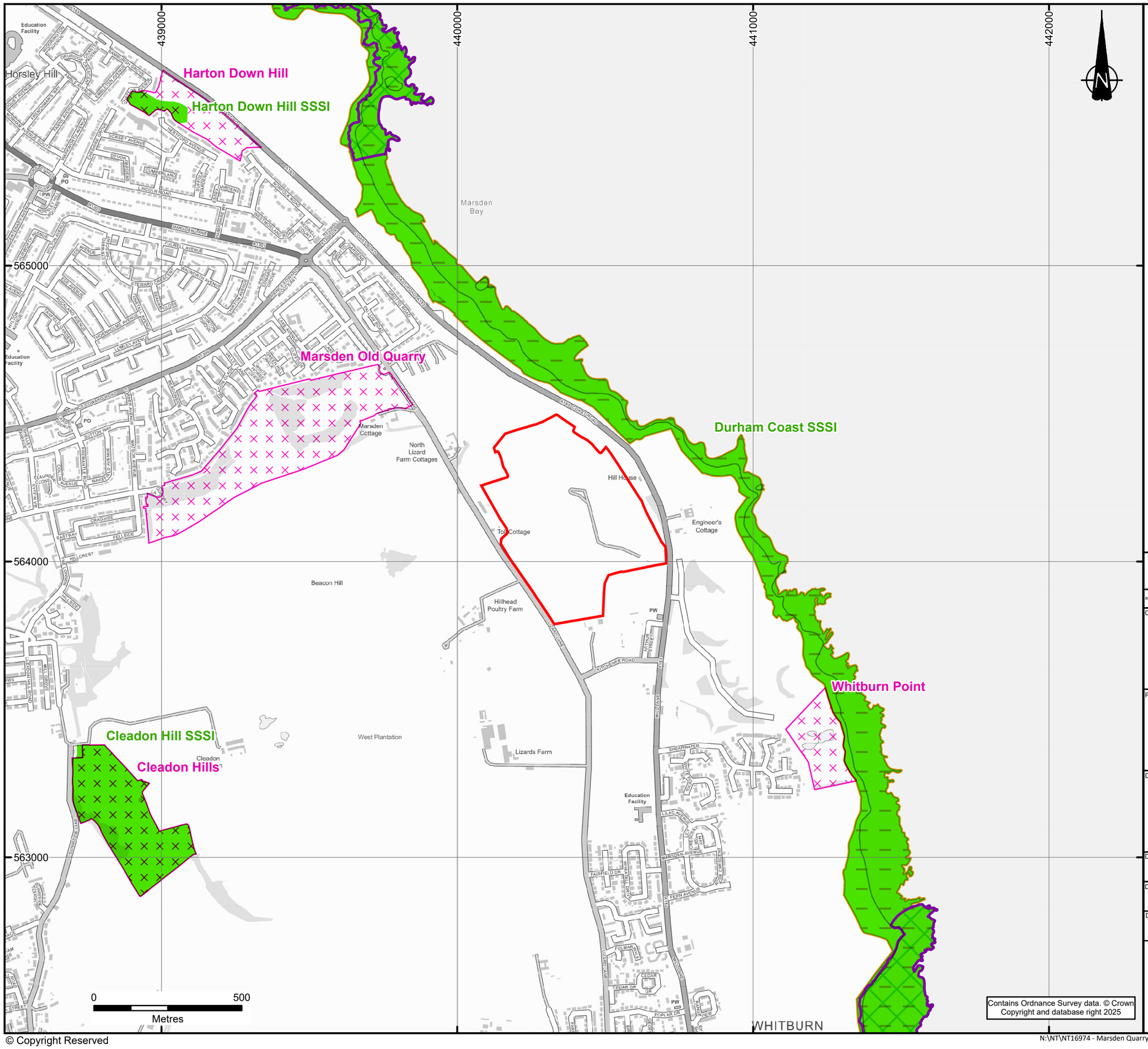
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KEY

- Site Boundary
- Northumbria Coast RAMSAR
- Northumbria Coast Special Protection Area
- Durham Coast Special Area of Conservation
- Local Nature Reserves
- Sites of Special Scientific Interest

Notes:

Boundaries are indicative.

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A	FIRST ISSUE	04/25	GR	IS	NB

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O'BRIEN AGGREGATES (MARSDEN) LIMITED

PROJECT

MARSDEN QUARRY

DRAWING TITLE

DESIGNATED AREAS

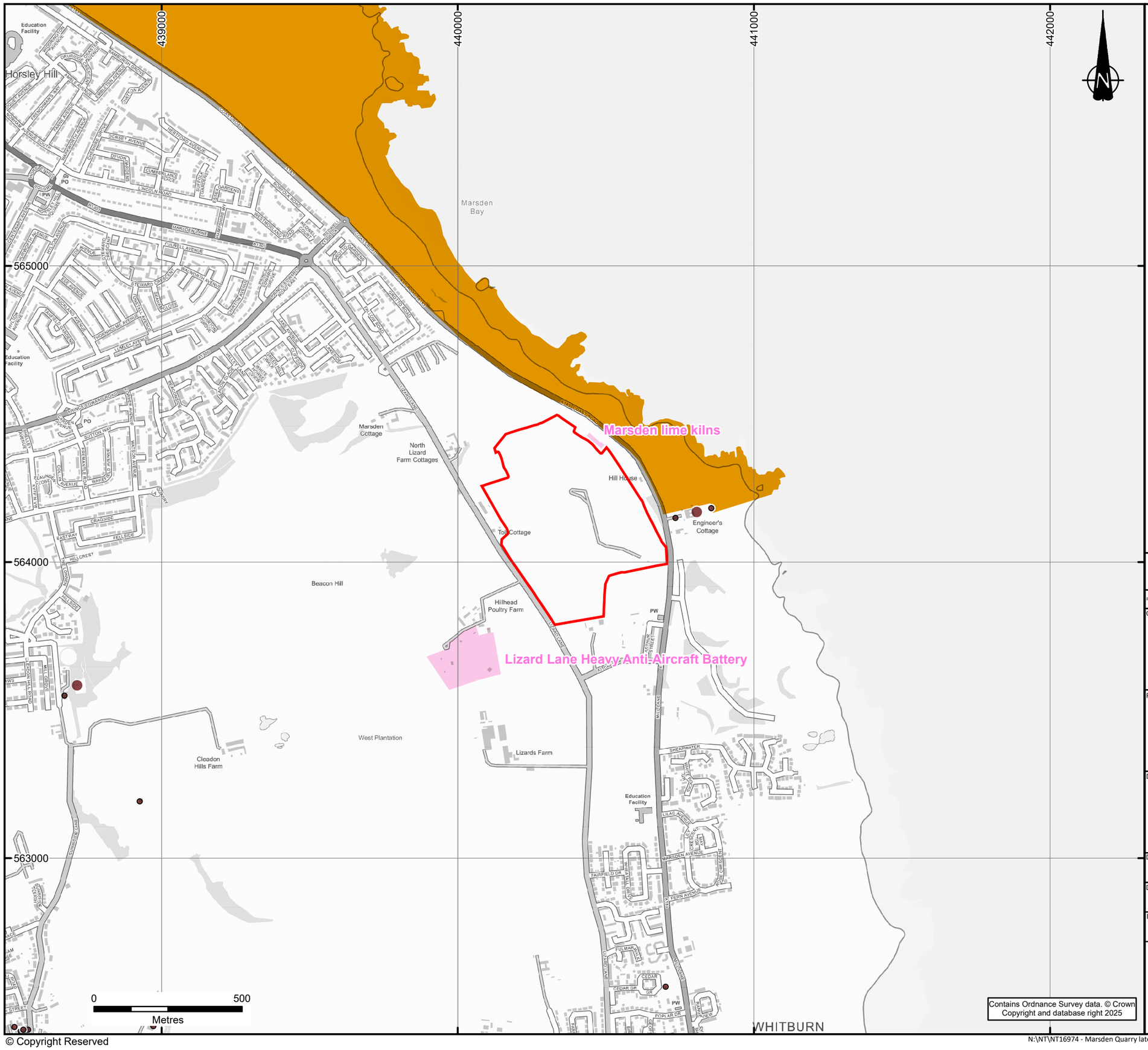
DRG No.	REV	SUIT. CODE
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KEY

- Site Boundary
- Scheduled Monuments
- National Trust Land

Listed Buildings

- Grade II* Particularly Important Buildings of more than Special Interest
- Grade II Nationally Important and of Special Interest

Notes:

Boundaries are indicative.

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O'BRIEN AGGREGATES (MARSDEN) LIMITED

PROJECT

MARSDEN QUARRY

DRAWING TITLE

SENSITIVE RECEPTORS

DRG No.	REV	SUIT. CODE
NT16974/009	A	--

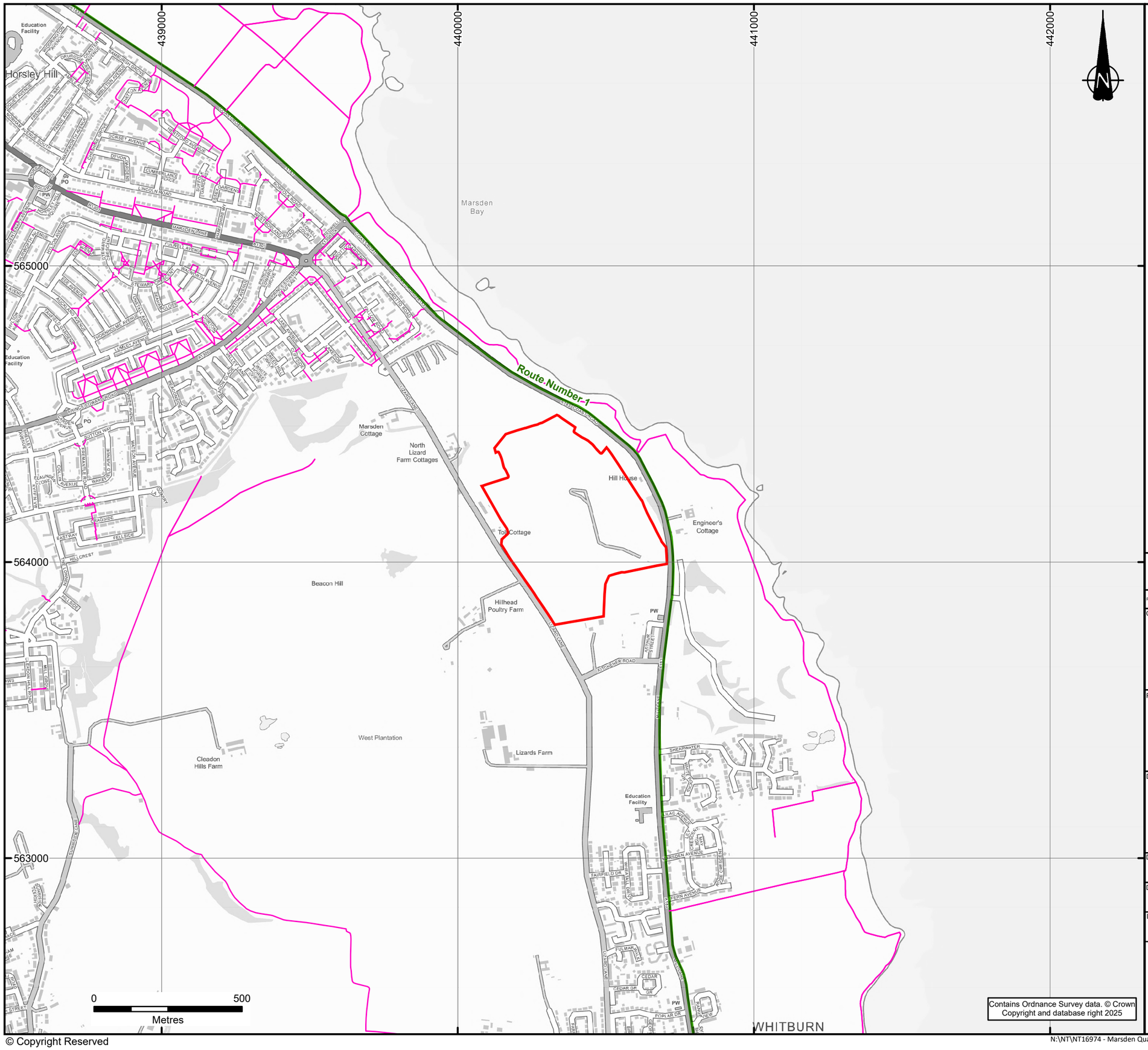
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KEY

- Site Boundary
- Public Rights of Way

National Cycle Route

- Traffic Free

Notes:

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PROJECT

MARSDEN QUARRY

DRAWING TITLE

ACCESS NETWORK

DRG No.	REV	SUIT. CODE
NT16974/010	A	--

DRG SIZE	SCALE	DATE
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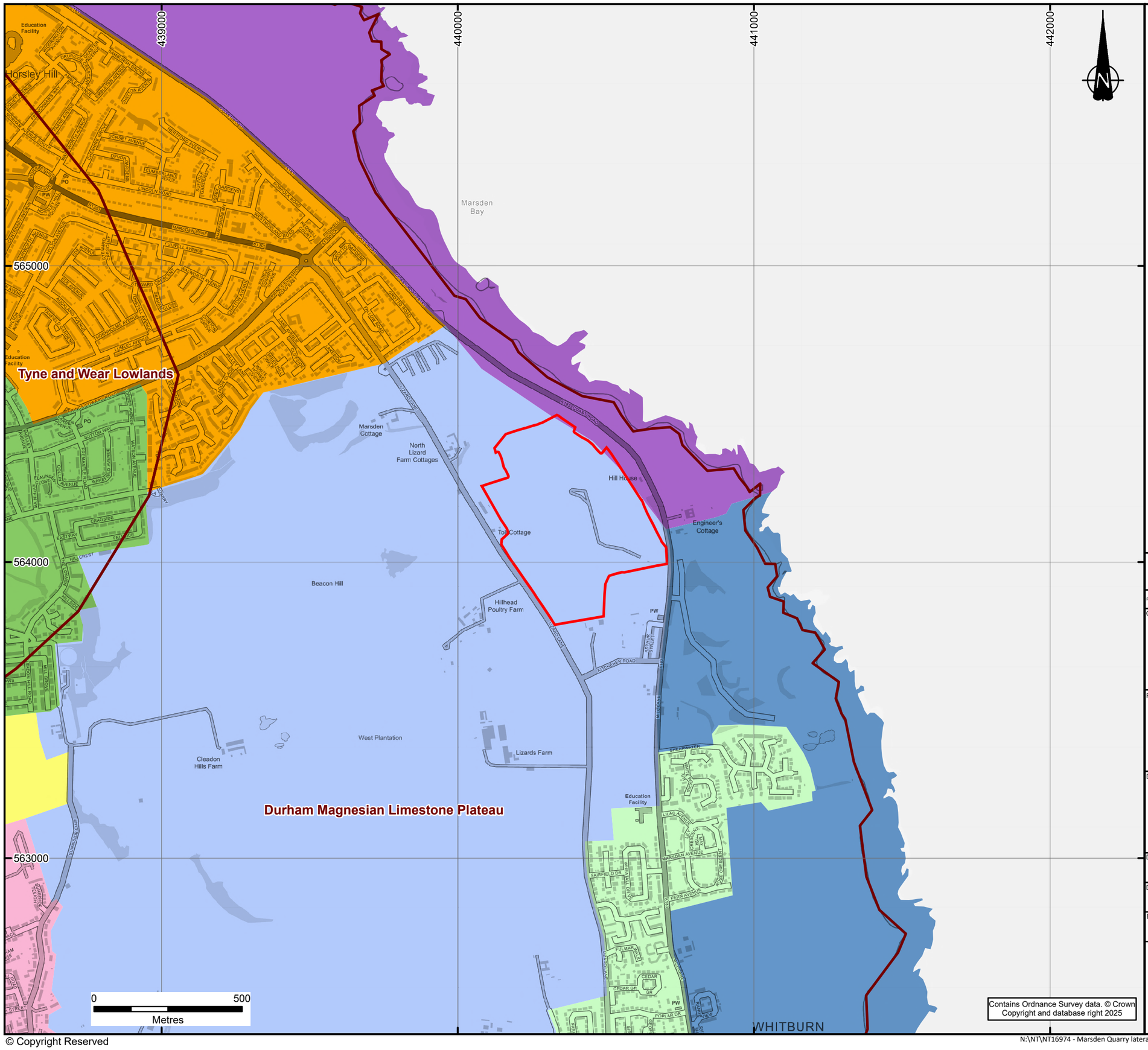
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KEY

- Site Boundary
- National Character Areas

Local Landscape Character Areas

- Boldon-Cleadon Fragmented Farmland
- Cleadon
- Cleadon Hills
- Harton
- Horsley Hill and Marsden
- The Leas
- Whitburn
- Whitburn Coast

Notes:

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PROJECT

MARSDEN QUARRY

DRAWING TITLE

LANDSCAPE CHARACTER

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NT16974/011	A	--

DRG SIZE	SCALE	DATE
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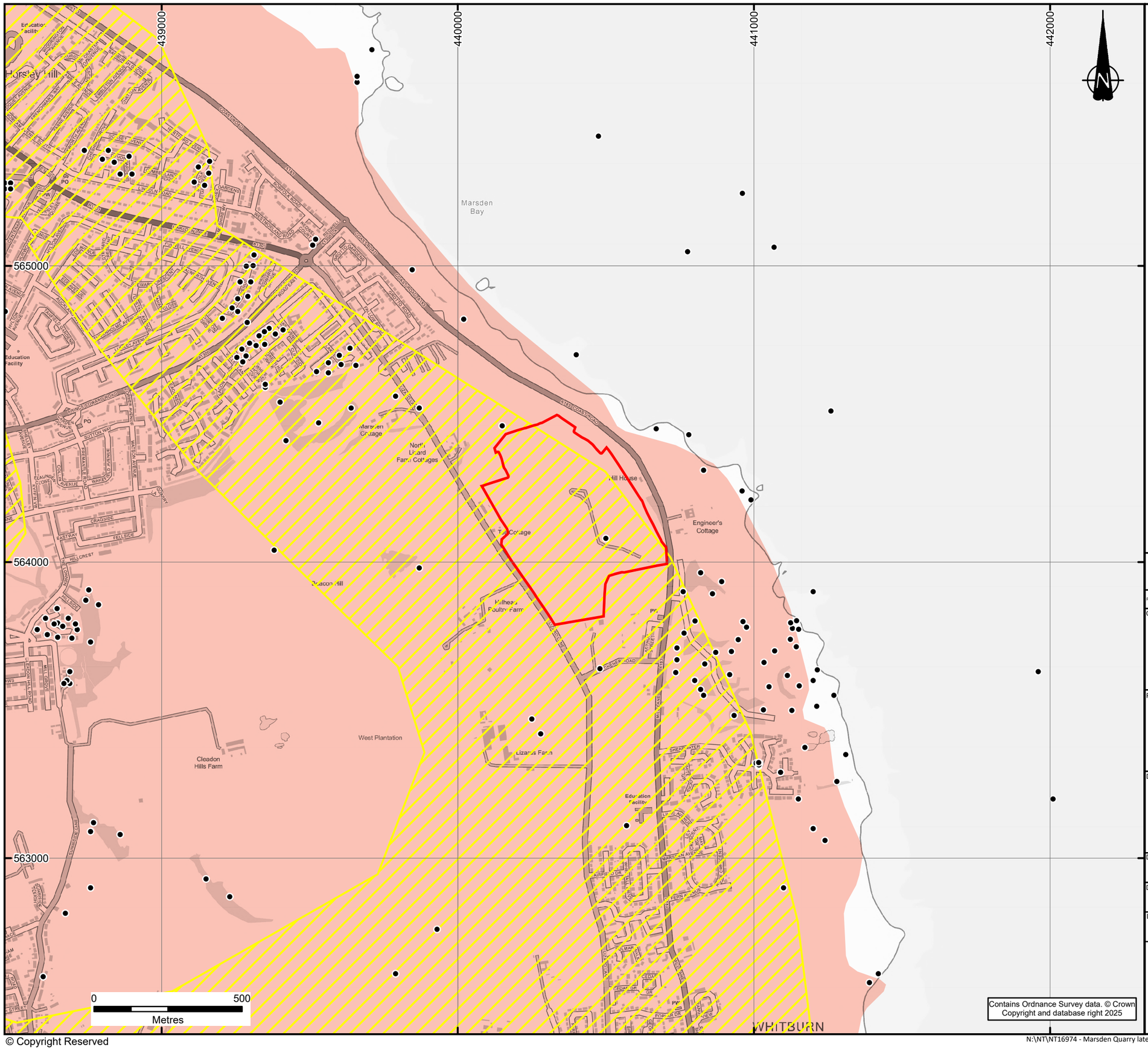
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KEY

- Site Boundary

Underlying Geology

- Zechstein Group

Superficial Geology

- Till
- Borehole Locations

Notes:

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MARSDEN QUARRY

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UNDERLYING GEOLOGY

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NT16974/012	A	--

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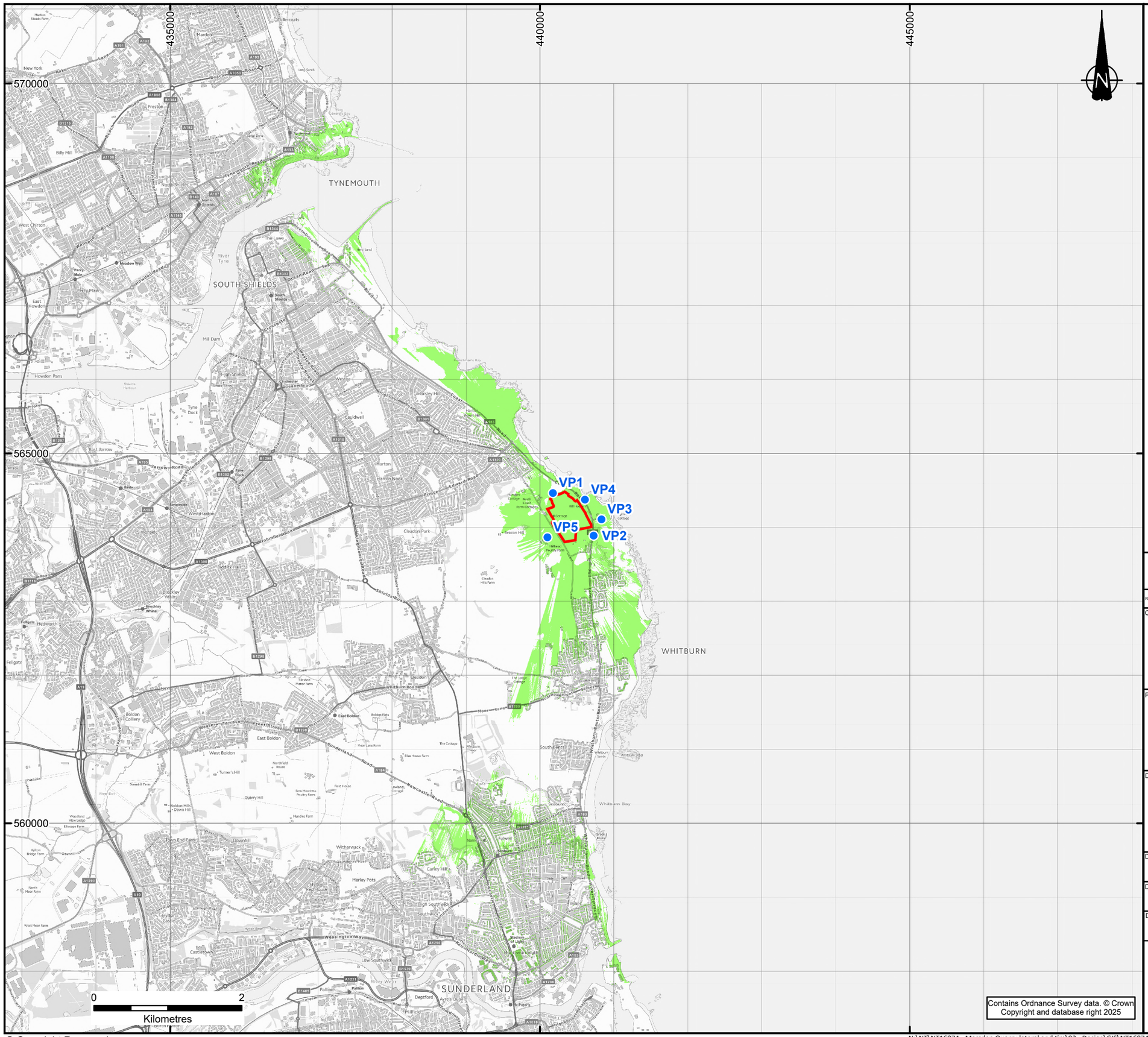
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KEY

- Site Boundary
- Area where the Proposed Development would be theoretically visible
- Proposed Viewpoint Locations

Notes:

Boundaries are indicative.

The ZTV is based on a 30 m spaced, multi-point grid within the site boundary. Each point is modelled at ground level.

ZTV is based on theoretical visibility using bare ground topography and any screening provided by vegetation or man made objects.

Environment Agency LiDAR (National LiDAR Programme DSM 5 m 2021) was used to create the model from which the ZTV was produced.

The ZTV takes into account an eye height of 2 m.

Areas within the OS Tidal Boundary have been removed from the ZTV.

The ZTV was created using QGIS software which takes into account the curvature of the Earth.

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SCREENED ZONE OF THEORETICAL VISIBILITY

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A3	1:50,000	11/04/2025

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KEY

- Site Boundary
- 250 m Buffer
- Waterbodies

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
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CLIENT

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DRAWING TITLE

WATERBODY LOCATION PLAN

DRG No.	REV	SUIT. CODE
NT16974/014	A	--

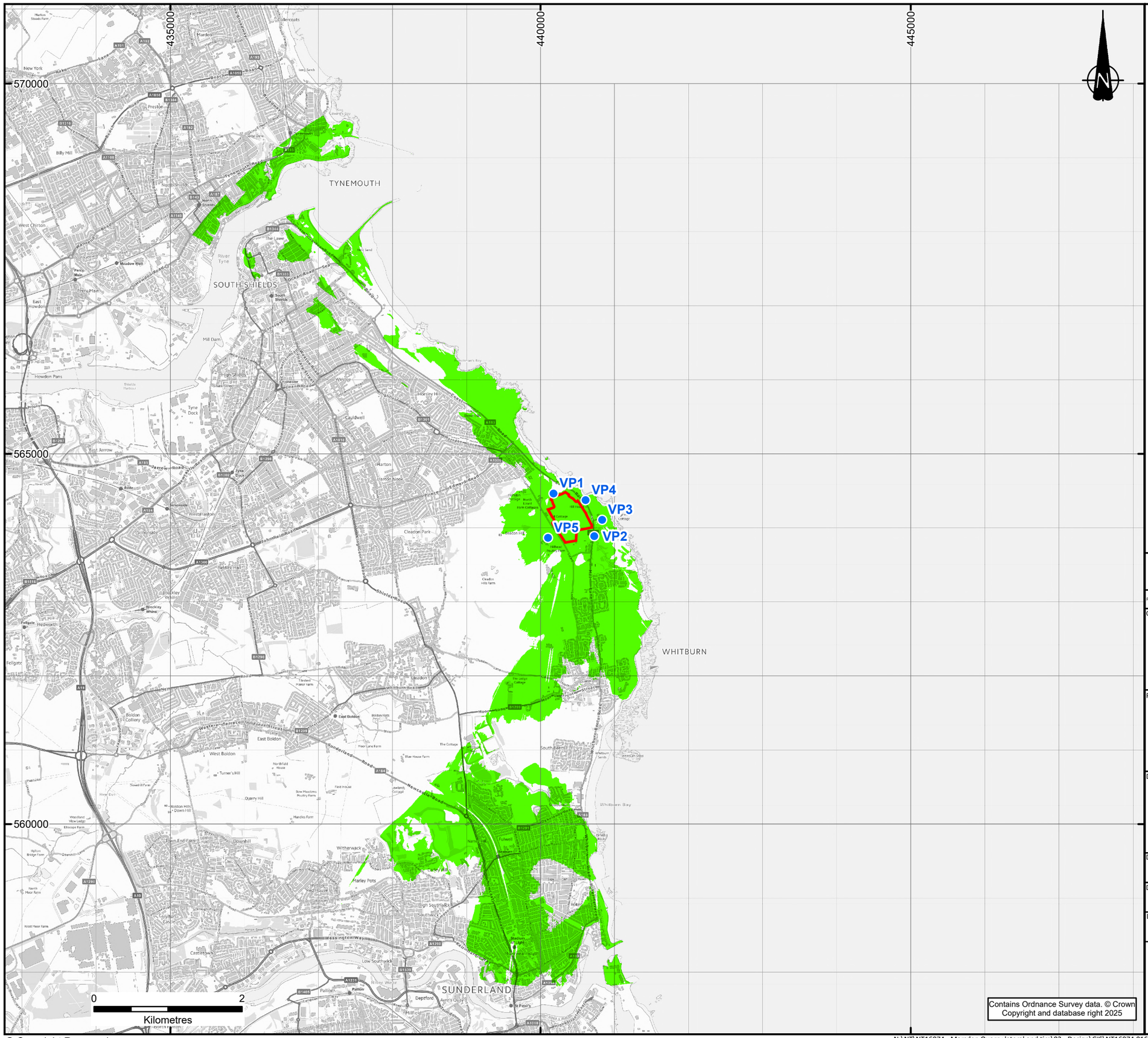
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KEY

- Site Boundary
- Area where the Proposed Development would be theoretically visible
- Proposed Viewpoint Locations

Notes:

Boundaries are indicative.

The ZTV is based on a 30 m spaced, multi-point grid within the site boundary. Each point is modelled at ground level.

ZTV is based on theoretical visibility using bare ground topography.

Environment Agency LiDAR (National LiDAR Programme DTM 5 m 2021) was used to create the model from which the ZTV was produced.

The ZTV takes into account an eye height of 2 m.

Areas within the OS Tidal Boundary have been removed from the ZTV.

The ZTV was created using QGIS software which takes into account the curvature of the Earth.

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DRAWING TITLE

BAREGROUND ZONE OF THEORETICAL VISIBILITY

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