May 2025

Appropriate Assessment – Stage 1

Screening Report

Proposed Extension to the Agall Quarry at the Rise, Co. Offaly.

On behalf of

Condron Concrete Limited

Arden Road, Tullamore, Co. Offaly

MALONE O'REGAN ENVIRONMENTAL

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Appropriate Assessment – Stage 1 Screening Report

Proposed Extension to the Agall Quarry at the Rise, Co. Offaly.

Condron Concrete Limited

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1 INTRODUCTION

1.1 Background

Malone O'Regan Environmental ('MOR Environmental') were commissioned by Condron Concrete Limited ('the Applicant') to undertake an Appropriate Assessment Screening Report ('AA') in support of a planning application to Offaly County Council ('OCC').

This AA assesses the potential likely and significant effects on nearby sites with European conservation designations (i.e., European sites) arising from the Applicant's intention to:

- Extend the current active gravel quarry into agricultural land to the west and north of the existing working face;
- Continued use of the existing onsite infrastructure, including processing plant, wheel wash, site access and office / welfare unit.
- Creation of earthen berms, planting and landscaping;
- The recommencement of extraction of remaining resources within part of the area under Substitute Consent (19.SU.0131) which was historically partially worked out; and,
- All ancillary works.

The above works are collectively presented in this report as the 'Proposed Development.' All works will occur within the townlands of Agall and Glaskill, Co. Offaly OSI Grid Reference ITM 626611 722998; refer to the redline boundary presented in Figure 1-1 below for context ('the Site').

The Applicant operates an authorised sand and gravel extraction quarry known as the Agall Quarry. This encompasses the existing active extraction, onsite dry processing of aggregate and the restoration of historically extracted lands. The land at the Agall Quarry under the control of the Applicant encompasses circa ('ca.') 45 hectares ('ha') of land, including active working pit, storage and processing areas and the historically worked (and partially restored) pit. The Site lies within this boundary and encompasses an area of ca. 17ha. Planning permission is being sought for 30 years (inclusive of 2 years for the Rehabilitation Phase).

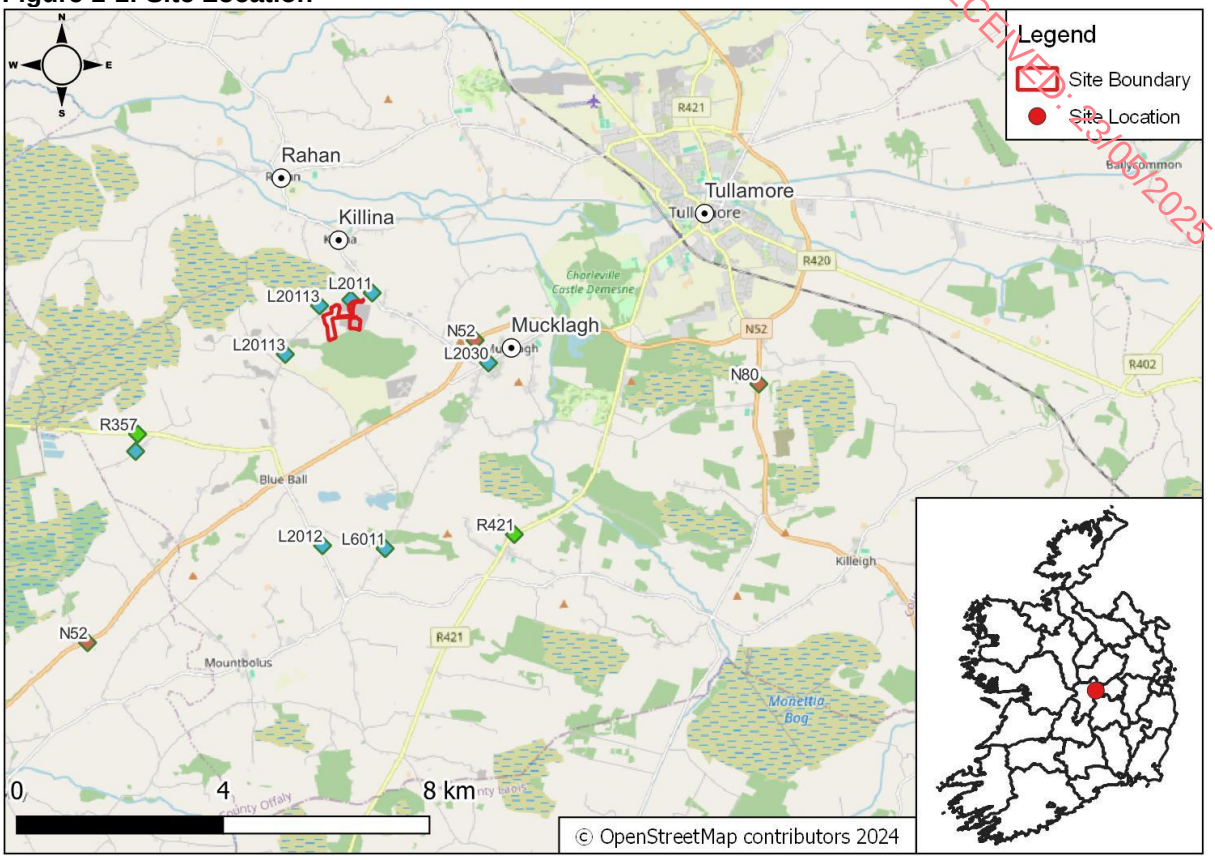
The purpose of this assessment was to determine the appropriateness, or otherwise, of the proposed works in the context of the conservation objectives of European sites.

1.2 Existing Development

The current extraction operations at Agall Quarry operate under planning permission granted by An Bord Pleanála ('ABP') in April 2017 (19.QD.0008) for a period of 20 years.

At the time of submitting this planning application, extraction operations are ongoing, and lands permitted for extraction under 19.QD.0008 still remain available for extraction.

Figure 1-1: Site Location



1.3 Statement of Authority

This report was approved by Mr. Dyfrig Hubble, Associate Director - Ecologist. Dyfrig is a full member of the Chartered Institute of Ecology and Environmental Management ('CIEEM'). Dyfrig has over 18 years' experience working in the ecological consultancy sector, including habitat surveys and appraisals and specialist protected species surveys in support of Appropriate Assessments.

1.4 Regulatory Context

The following guidance documents were adhered to for the preparation of this AA report:

- Office of Public Relations ('OPR') Practice Note PN01, *Appropriate Assessment for Screening for Development Management,* The Office of the Planning Regulator [1];
- *Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, European Commission [2];
- *Guidelines for Ecological Impact Assessment in the UK and Ireland*, Chartered Institute of Ecology and Environmental Management [3];
- *Managing Natura 2000 Sites: The Provision of Article 6 of the Habitats Directive 92/43/EEC,* European Commission [4];
- *Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities*, Department of Environment, Heritage and Local Government ('DoEGLH') [5]; and,
- *Appropriate Assessment under Article 6 of the Habitats Directive; Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10*, DoEGLH [6].

This AA was prepared in accordance with and in compliance with the following legislation:

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna better known as "The Habitats Directive". This provides the framework for the legal protection of habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. The Habitats Directive was transposed into Irish law by the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 / 2011) (as amended) [7].

For completeness, the Planning and Development Act 2000 (as amended) states "*European site*" means:

a. A candidate site of Community Importance;
b. A site of Community Importance, F815 [(ba) a candidate Special Area of Conservation];
c. A Special Area of Conservation ('SAC');
d. A candidate Special Area of Conservation ('cSAC'); or,
e. A Special Protection Area ('SPA').

These are Special Areas of Conservation ('SACs') designated under the Habitats Directive and Special Protection Areas ('SPAs') designated under the Conservation of Wild Birds Directive (79/409/EEC as amended 2009/149/EC) (better known as "The Birds Directive"). The Birds Directive was also transposed into Irish law through the Planning and Development Act 2000 (as amended) and S.I 477 / 2011 [7].

Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment.

> *"Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public".*

The Habitats Directive promotes a hierarchy of avoidance, mitigation, and compensatory measures. First, the project should aim to avoid any negative impacts on European sites by identifying possible impacts early in the planning stage and designing the project in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the AA process to the point, where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, it must be rejected unless it follows the process established under Article 6(4). If the project is required for imperative reasons of overriding public interest ('IROPI' test) under Article 6(4) of the Habitats Directive, then compensation measures are required for any remaining adverse effects.

1.5 Stages of Appropriate Assessment

There are four distinct stages to undertaking an AA as outlined in current European Union ('EU') and Department of Environment, Heritage and Local Government ('DoEHLG') guidance:

Stage 1: Screening

This process identifies the potential impacts of a plan or project on a Natura site, either alone or in combination with other plans and projects and considers whether these impacts are likely to be significant. If potentially significant impacts are identified the plan or project cannot be screened out and must proceed to Stage 2.

Stage 2: Appropriate Assessment

Where potentially significant impacts are identified, an assessment of the potential mitigation of those impacts is required; this stage considers the appropriateness of those mitigation measures in the context of maintaining the integrity of the Natura 2000 sites. If potential significant impacts cannot be eliminated with appropriate mitigation measures, the assessment must proceed to Stage 3.

Stage 3: Assessment of Alternatives Solutions

This process examines alternative ways to achieve the objectives of the plan or project that avoid adverse impacts on the integrity of the Natura 2000 site if mitigation measures are deemed insufficient.

Stage 4: Imperative Reasons of Overriding Public Interest ('IROPI')

Assessment where no alternative solution exists for a plan or project and where adverse impacts remain. This includes an assessment of compensatory measures, which, in the case of projects or plans, can be considered necessary for IROPI.

2 SCREENING FOR APPROPRIATE ASSESSMENT

Screening determines whether Appropriate Assessment is necessary by examining:

1. Whether a plan or project can be excluded from AA requirements because it is directly connected with, or necessary to, the management of a European site; and,
2. Whether the project will have a potentially significant effect on a European site, either alone or in combination with other projects or plans, in view of the site's conservation objectives.

Screening involves the following:

i) Description of a plan or project;

ii) Identification of relevant European sites, and compilation of information on their qualifying interests and conservation objectives;

iii) Assessment of likely effects – direct, indirect, and cumulative – undertaken on the basis of available information as a desk study or field survey or primary research as necessary; and,

iv) Screening Statement with conclusions.

2.1 Methodology

2.1.1 Determining Zone of Influence

The starting point for this assessment was to determine the Zone of Influence. The Zone of Influence ('ZoI') comprises of the area which the Proposed Development may potentially affect the conservation objectives (or qualifying interests) of a European site.

Guidance in Appropriate Assessment of plans and projects in Ireland notes that a distance of 15km is recommended for the identification of relevant European sites [5]. However, guidance from the NPWS recommends that the distance should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects (cumulative) [8]. For some projects, the distance could be greater than 15km, and in some cases, less than 100m.

The definition of the zone of influence for the proposed works includes evaluating the following:

- Identification of the European sites that are situated within, in close vicinity or downstream within the zone of influence of the Proposed Development;
- Identification of the designated habitats and species and Conservation Objectives for the identified European sites;
- Identification of the environmental conditions that stabilise and increase the qualifying interests of the Natura sites towards favourable conservation status;
- Identification of the threats / impacts – actual or potential that could negatively impact the conservation objectives for the European sites;
- Identifying the activities of the proposed works that could give rise to significant adverse impacts; and,
- Identification of other plans or projects, for which in-combination impacts would likely have significant adverse effects.

2.1.2 Source-Pathway-Receptor Model

European sites are only at risk from significant effects where a source-pathway-receptor link exists between a Proposed Development and European sites. This can take the form of a direct impact (e.g., where the Proposed Development is located within / in close vicinity to the

boundary of a European site) or an indirect impact, where impacts occur outside of the European site but affect ecological receptors within (e.g., impacts to water quality that can affect estuarine habitats at a distance from the impact source).

The likely effects of the Proposed Development on any European site have been assessed using a source-pathway-receptor model. A source-pathway-receptor model is a standard tool used in environmental assessment [9, 10]. The model comprises of:

- A source: any potential impacts from the Proposed Development, e.g. the runoff of sediment / construction pollution;
- A pathway: the means or route by which a source can affect the ecological receptor; and,
- A receptor: the qualifying interests and/or special conservation interests of the European sites.

To establish the Zone of Influence of the Proposed Development works, the likely key environmental impacts / changes associated with the Proposed Development were determined, considering the project characteristics set out in Section 3.3 of this report. The zone of Influence for various potential impact pathways is discussed in Section 4.1.

2.1.3 Desk Based Studies

A desk-based review of information sources was completed, which included the following sources of information:

- The National Parks and Wildlife Service ('NPWS') website was consulted with regard to the most up-to-date details on conservation objectives for the European sites relevant to this assessment [11];
- The National Biodiversity Data Centre ('NBDC') website was consulted with regard to species distributions [12];
- The Environmental Protection Agency ('EPA') Maps website was consulted to obtain details about watercourses in the vicinity of the Site [13]; and,
- The OCC Planning Portal to obtain details about existing / proposed developments in the vicinity of the Site [14].

2.1.4 Field Survey

A Site walkover was undertaken on 27th September 2022, by two suitably qualified and experienced MOR Environmental Ecologists. An updated habitat survey was undertaken on 9th August 2024 by two suitably qualified MOR Environmental Ecologists to establish that the habitats previously identified during the 2022 survey remained unchanged. These surveys aimed to identify the extent and quality of habitats present onsite and to identify any potential ecological receptors associated with the European sites. The surveys were extended to cover the full landholding as outlined in Figure 2-1 below.

Figure 2-1: Site and Landownership Boundaries

The survey was undertaken for the Site using the Fossitt's Guide to Habitats in Ireland' [15]. This is the standard habitat classification system used in Ireland and includes both a desk based and field-based assessment. The surveys were conducted in line with the Heritage Council's '*Best Practice Guidance for Habitat Survey & Mapping*' .

2.1.4.1 Survey Limitations

No survey limitations were encountered.

3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

3.1 Site Context and Description

The land at the Agall Quarry under the control of the Applicant covers an area of ca. 45 ha in size. The Site lies within this boundary and is ca. 17ha.

The western portion of the Site encompasses two agricultural fields and part of a third agricultural field. These fields are utilised for the production of grass for agricultural feed material and as pastures for cattle. The fields were bound by a combination of managed hedgerows, fencing and hedgerow / treelines at the time of the survey. No drainage ditches or water features were present within these fields. The eastern portion of the Site is comprised of disturbed ground. This area was previously subject to extraction and, therefore, was largely devoid of vegetation. The northern portion of the Site contained the main shed, fixed processing plant, welfare facilities, wheel wash and access road.

As outlined in Section 1.1, the Site is located within a ca.45ha landholding which encompasses the entirety of Agall Quarry. As such, the Site is bound by restored lands to the east and the southern section of the Site is divided by the permitted / active extraction area within Agall Quarry.

A separate quarry is located to the north of the Site. Residential properties and the L20113 local road are present along the northwest boundary of the Site. The L20113 is a narrow road with overhanging trees. The L20113 joins the L2011 local road to the east. The distance from the Site entrance to the junction with the L2011 road is ca. 270m. The L2011 local road runs to the southeast for ca 2.3km and joins the L2030, which runs through Mucklagh Village, prior to joining the N52 national road. The N52 provides the primary transport route for Heavy Goods Vehicles (‘HGVs’) accessing and egressing the Site.

North of the Site and the local road L20113, there is a spring utilised for the supply of water to the local Group Water Scheme. This spring, known as the Agall Water Supply Scheme had a groundwater protection zone developed in April 2021 by the Geological Society of Ireland (‘GSI’). The groundwater supply notes the operational quarry and Blackwood in proximity to the spring source and within the northern portion of the protection zone which extends southward to Blue Ball.

A mixed-broadleaved woodland is located to the south of the Site. This woodland, Blackwood Forest, is owned and managed by Coillte. Coillte identify Blackwood Forest as an Oak Ash woodland with areas of young native woodland and mixed high forest on an old woodland site. The remainder of the Site is surrounded by agricultural land in the form of pastures and arable fields.

3.2 Watercourses within the Vicinity of the Site

The Site is situated within the Lower Shannon Water Framework Directive (‘WFD’) Catchment [Catchment_ID: 25A] and the Brosna_SC_040 subcatchment [Subcatchment_ID: 25A_5] [13].

As per EPA maps, there is one hydrological feature of note within close proximity of the Site, the Killina Stream [13].

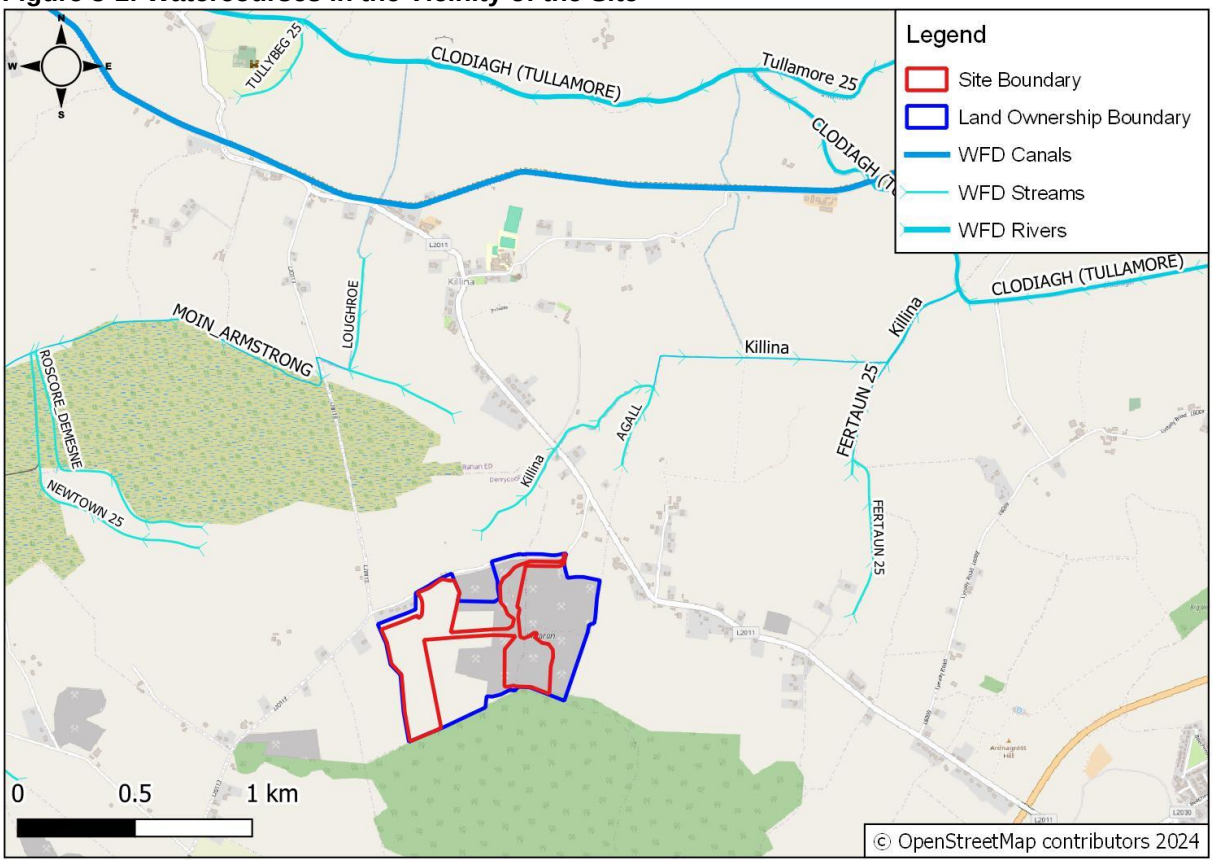
The Killina Stream is located ca.240m to the northeast of the Site, at its closest point. This stream flows in a northerly direction and drains into the Clodiagh (Tullamore) River ca.2.6km downstream. The Clodiagh (Tullamore) River flows roughly northeast before crossing the Grand Canal and then merging with the Tullamore River. The Clodiagh (Tullamore) River continues west until it drains into the Brosna River. The Brosna River discharges into the River Shannon ca. 38.8km downstream of the Killina Stream. The River Shannon forms part of the River Shannon Callows SAC and the Middle Shannon Callows SPA.

Under the Water Framework Directive ('WFD') 2000/60/EC, the EPA classifies the status and the risk of not achieving good water quality status for all waterbodies in Ireland. According to the river waterbody WFD 2016-2021, the most up-to-date assessment at the time of this report, the water quality within the Killina Stream is considered to be '*moderate,'* and the status of this river is considered *'at risk'* of not achieving *'high'* water quality [13].

No surface water impact pathways between the Site and the Killina Stream or any other watercourses in the vicinity of the Site were identified.

The location of the key surface water features in the vicinity of the Site are illustrated in Figure 3-1 below.

Figure 3-1: Watercourses in the Vicinity of the Site



3.3 Proposed Development

The Site covers an area of ca. 17ha, which can be further subdivided as follows:

- Ca. 11ha for the proposed greenfield extension, of which 6.96ha is the proposed extraction area;
- Ca. 3.81ha for proposed extraction within the previously authorised substitute consent lands; and,
- Another ca. 2ha. which relates to continued use of the existing onsite infrastructure, including processing plant, wheel wash, site access, office / welfare unit and continued temporary storage and processing of aggregates.

The layout of the various elements on the Site are presented below in Figure 3-2. The gravels within the quarry are glacial till-derived material, which forms part of the Screggan Fan geological feature. As such, the resource is varied. It is this variability that has pre-empted this application for an extension to ensure the future reserve will continue to offer a mix of

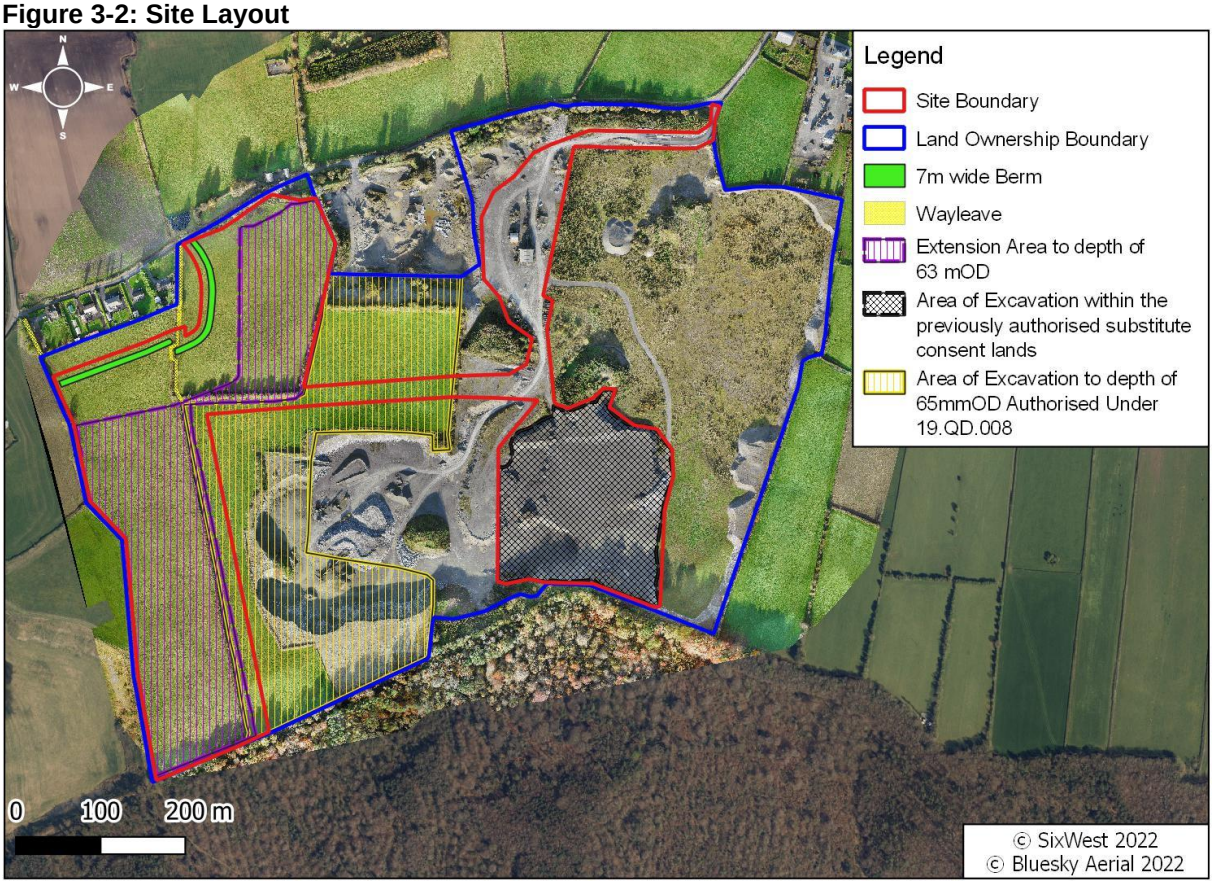
aggregate material for operations within the Applicant's concrete manufacturing business in Tullamore town.

The Proposed Development will enable the continued extraction of key aggregates from the Agall Quarry to supply the Condron Concrete facility in Tullamore, extending the operational life of the quarry by up to 30 years and is necessitated by the strong economic growth experienced and anticipated by the Applicant since current permission was granted at the quarry in 2017 under 19.QD.008.

Due to unknown future economic and market needs, it is likely the Proposed Development will extract at lower rates than the peak permitted extraction rate and, therefore, will need a longer operational period. Moreover, the potential scarcity in the midland and eastern region (as highlighted in the Irish Concrete Federation 2018 report [1]) increases the importance of supplies in this region. The Proposed Development presents an opportunity to safeguard valuable resources for future generations and their development goals. As such, planning permission is being sought for 30 years (inclusive of 2 years for the Rehabilitation Phase).

The Proposed Development will see a continuation of existing activities as permitted under 19.QD.008, with works expanding laterally to the west and north. Extraction has been permitted to date to a depth of ca. 65mOD. The Proposed Development will increase the depth of extraction to ca. 63mOD within the relevant extraction areas. The Site layout is shown in Figure 3-2 below.

Figure 3-2: Site Layout



The Proposed Development incorporates distinct elements, which are presented below in further detail.

3.3.1 Development Design and Management

The Proposed Development design considerations and key elements are discussed below in detail. This covers operational aspects such as operational hours, parking, water supply, traffic management, key production plant, welfare and re-fuelling.

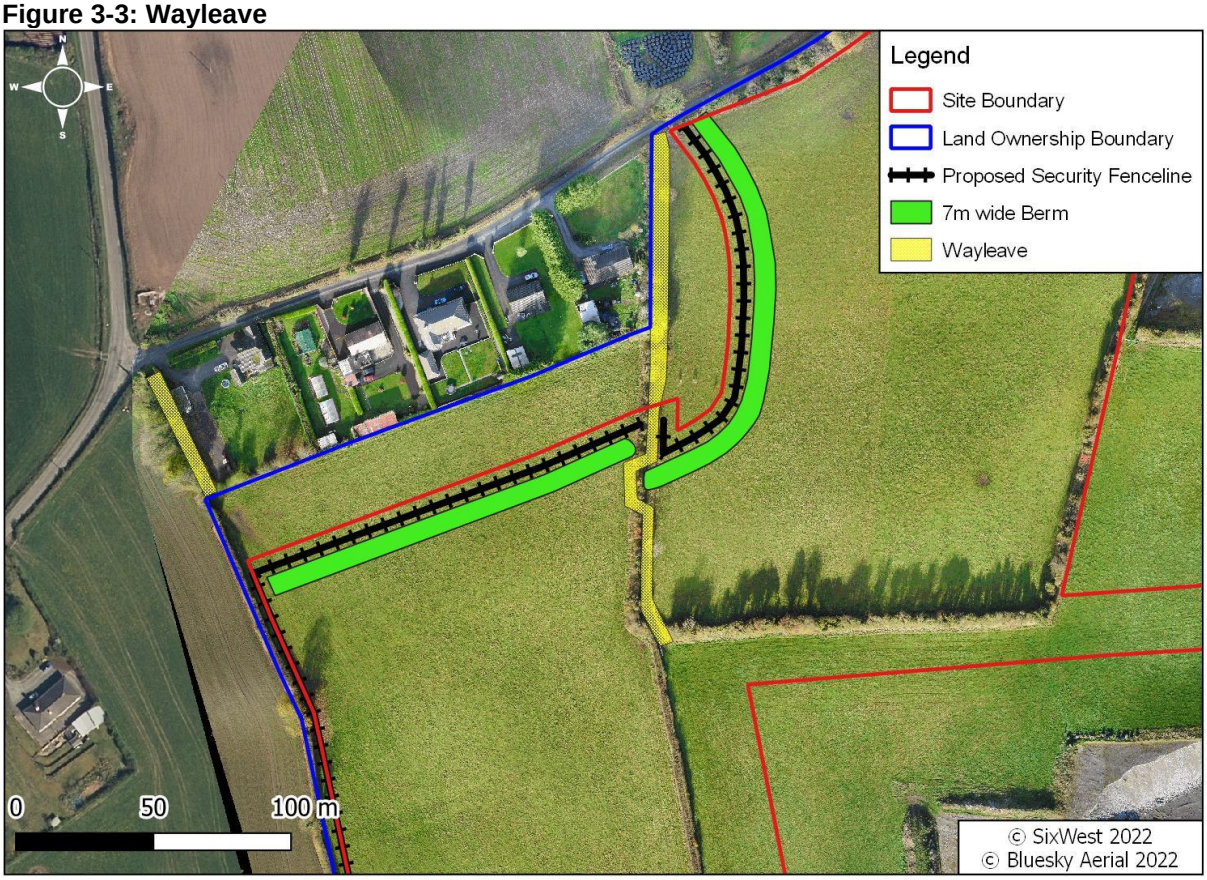
Although some elements of preliminary construction / enabling works will form part of the Proposed Development, no new plant or buildings are required to successfully undertake this project, as the existing haulage roads, fixed plant and welfare will be used. The construction / enabling works will include the works detailed below.

Topsoil to be stripped from the Site will be reused, where possible, in two screening berms, ca. 7m wide and 3m high. This will ensure that impacts on the soil are minimised / avoided. These berms will be located within the northwest portion of the Site, in between the proposed extraction area and the residential dwellings that border the Site. Establishment of the proposed berms close to the northern boundary of Folio OY307F and close to the western boundary of Folio OY3342F. The northern berm will be planted with native trees in a low-density planting programme, along with additional tree planting on the residential (northern) slope of the field. A hedgerow will then be planted north of this low-density tree planting along with a security fence consisting of wooden post and wire mesh fencing, ca. 2m tall. Two mammal gates will be introduced along this security fence. A hedgerow will then be planted north of this fence. The western berm will be seeded to bind the soil and a security fence, as above, using timber posts and mesh, will be erected on the residential side of this berm.

The western berm will be seeded to bind the soil and a security fence, as above, using timber posts and mesh, will be erected on the residential side of this berm.

There is an existing wayleave that will be facilitated through the berms. Refer to design Drawing 110 and Figure 3-3, which presents an extract of this detail.

Figure 3-3: Wayleave



During the initial 5 years following the planting, an ecological review of the planting will be undertaken seasonally, and any trees or planting not successful will be identified and replaced.

Development phasing of the works is outlined in Section 3.4 below.

3.3.1.1 Construction / Operational Hours and Staffing

The construction and operational hours for the Proposed Development will reflect the current operational hours of the Agall Quarry under 19.QD.0008, which are:

- 07:00 – 18:00 Monday to Friday;
- 07:00 – 14:00 Saturday; and,
- Closed Sundays and Bank Holidays.

The Agall Quarry supports two full-time employees arising from onsite personnel, hauliers and maintenance personnel. The Proposed Development will not result in a change to employment.

3.3.1.2 Car Park

Car parking facilities for onsite personnel will be maintained within the authorised quarry located near the fixed plant building. No additional parking is proposed as part of the Proposed Development. Existing onsite parking is sufficient and will continue to be.

3.3.1.3 Access Route / Security

The existing entrance off the local road will be maintained as the ongoing access and egress route from the Agall Quarry. This road has a secure gate to prevent unauthorised access and is closed during out of hours.

The existing entrance off the local road will be maintained as the ongoing access and egress route from the Agall Quarry. This road has a secure gate to prevent unauthorised access, as shown in Plate 3-1, which is closed outside of operational hours.

Plate 3-1: View of Access Road and Access Gate

3.3.1.4 Water Abstraction

Water abstraction is from the existing well (PW1) and serves to fill the pre-existing wheel wash and sprinkler system. Low volumes of water are required to operate this system (ca. 3m^3/day). The volumes of water required will remain unchanged as a result of the Proposed Development.

3.3.1.5 Wheel Wash

From within the gate the initial portion of the access road is tarmac with a wheel wash and sprinkler system deployed along the route for dust control. Drainage from the road is to the haul road edges where it percolates to ground., refer to Plate 3-2 below.

Plate 3-2: On-site Wheel wash

The wheel wash is periodically emptied into a secure container onsite, prior to short term storage and removed by competent and authorised contractors. Top-up of the wheel wash is supplied by the onsite well located along the northern edge of the Agall Quarry.

3.3.2 Processing Plant, Machinery and Storage

The access route incorporates the main shed located towards the centre of the Site (Plate 3-5). The fixed processing plant is partially housed within this shed. This plant provides for additional screening of extracted aggregates on the Site and is used on occasion. It is intended that mobile processing machinery (Plate 3-3 below) will be used to process aggregates closer to the working face and also continue to utilise the fixed plant on occasion with the Proposed Development.

Plate 3-3: Mobile Plant Equipment

Plate 3-4: Fixed Plant Equipment

Plate 3-5: Storage Shed

Plate 3-6: Excavator

3.3.3 Welfare

Adjacent to the pumphouse is the onsite canteen unit for onsite staff, and an office unit, refer to Plate 3-6 below. A toilet is located beside the Storage Shed (Plate 3-4). It discharges to an underground tank which is emptied as required by a licensed contractor and in accordance with the requirements of relevant waste legislation.

Plate 3-7: Existing Canteen and Pumphouse

3.3.4 Fuel and Oil Storage

No fuel will be stored within the Site. Any oils (and/or lubricants) will be stored in a storage container onsite. Re-fuelling of mobile plant will continue to take place using a fuel truck direct from a fuel merchant when required.

Fixed screening plant will be utilised to provide secondary / tertiary processing of aggregate from the Site within the Agall Quarry. This will continue to be refuelled using a fuel truck direct from a fuel merchant when required.

It is important to note that all plant and machinery subject to refuelling procedures will be refuelled by a competent person utilising a drip tray. In addition, absorbent sands and a full spill kit system are stored within the Quarry.

3.4 Development Phasing

The extent of the phasing plan and individual phases is shown in Figure 3-4 below and forms the current best knowledge in terms of an approach.

Figure 3-4: Proposed Extraction Phasing

The extraction area will be cleared, and aggregates removed in a structured manner over time to minimise exposed ground. The future extraction faces will be subject to changes depending upon the available type of aggregate in each section of the Site, and the needs of the Applicant over time. The proposed extraction phasing plan will be carried out alongside the current authorised phasing plan within the Agall Quarry.

The northern extraction phase (Phase D), approaching the local road will likely be carried out in 20 – 25 years' time and this incorporates a sloping topography to the roadside, and setbacks from housing and third-party lands to the west.

The western phase, Phase B is a similar size to the existing extraction face and mirrors the multiple aggregates that have been identified within this Site by the Applicant. This will be processed in line with aggregates remaining in Phase A, which is located within the main quarry to the east. It is planned that activities will commence on the south and central sections, closest to Blackwood, and move in a northerly direction.

Phase C, positioned in the north of the greenfield lands, will be developed as Phase B is finishing. Extractions within Phase C are predicted to be carried out in 18-20 year's time.

3.4.1 Construction Phase

3.4.1.1 Vegetation Clearance and Overburden Stripping

The main extraction will see the Agall Quarry expand to the north and west into new agricultural fields. This will incorporate an area of ca.6.96ha to be stripped of topsoil and subsoils and will expose the underlying aggregates for extraction and processing. Refer to Section 3.3.6.2 on phasing for these works. Works will include the clearance of hedgerows / treelines at the appropriate time of year.

To remove the soils, a bulldozer or similar will be deployed on the field to strip and push the soils into an embankment along the boundaries. Stripping of new lands will be controlled to expose two phases of extraction at one time to ensure a correct blend of gravels is available.

It should be noted that the works within the proposed extraction area (i.e. ground clearance and quarrying works) will be completed in a structured manner over time to minimise areas of exposed ground. In addition, the future extraction faces will be subject to changes depending on the available type of aggregate in each section of the Site. As such, some areas within the proposed extraction area will not be cleared or removed if the aggregate in these areas is not considered to be of good quality.

3.4.1.2 Berm Construction / Landscaping

As a key development design, once extraction commences in Phase B, a ca. 3m high and 7m wide embankments will be formed to the south of the residential landholdings to the north of the new fields. The berm to the west, along the southern boundary of the residential lands to the north, will be planted with a double row of native tree species in the first planting season following formation.

Prior to extractions commencing in Phase D a ca. 3m high and 7m wide embankments will be formed to the east of the residential landholdings to the north of the new fields. The berm to the east will be sown with a grass seed mix upon formation.

Following the Applicant's consultation in September and October 2024 with local residents living to the northwest of the Site and within 100m of the proposed extension lands with residential properties, an area of known aggregate reserves was removed from the proposed extraction extent to increase the set-back of future operations under this application from residents to a minimum distance of 80m.

A hedgerow and a treeline will be planted to the north of the western berm. A security fence will be installed in between these linear features and the residential housing to the north. Furthermore, ca. 95m of treeline will be planted along the western boundary to provide additional screening to the landholding to the northwest of the Site. This treeline will be planted alongside the existing hedgerow. The security fence along this boundary will be setback ca.5m from the proposed treeline and will contain two mammal gates. A 140m long hedgerow will then be planted along the north of this fence.

The planting mixes utilised for the hedgerow, treeline and planted berm have been designed to replace the native species removed during the vegetation clearance works and to reflect the species found in the wider surrounding area. The planting will take place within the first available season (November to March) and any trees that fail to become established within 5 years of planting will be replaced by trees of a similar size / species within the next available planting season. However, it should be noted that the Proposed Development will be undertaken in phases so that the area of exposed ground does not significantly increase over time. Therefore, the removal of vegetation onsite will be staggered. The construction phase planting has been designed to replace and establish vegetation onsite at the earliest possible point to mitigate the removal of treelines and hedgerows as the Proposed Development progresses.

For further information relating to the proposed landscaping and restoration of the Site, refer to Appendix A.

The construction phase will take 3-4 months to complete.

3.4.2 Operational Phase – Aggregate Extraction

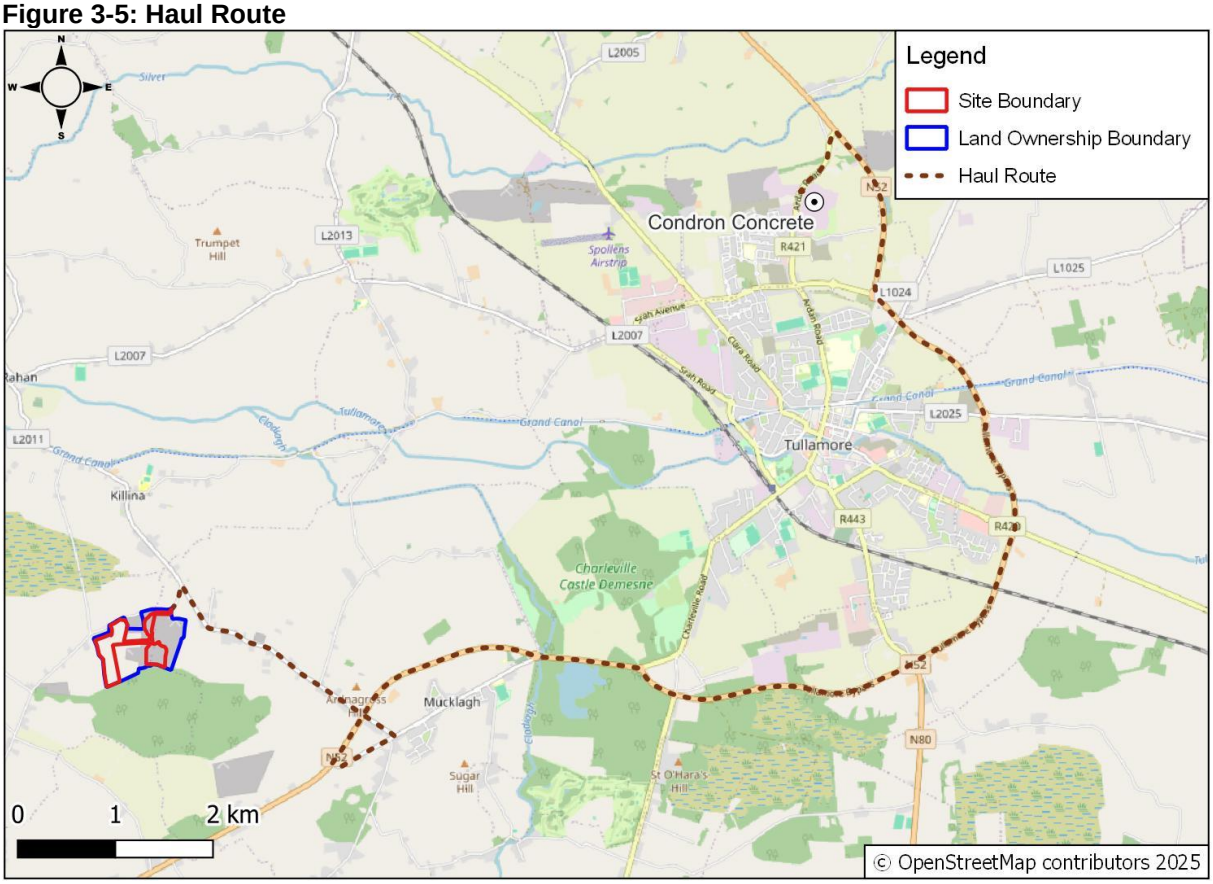
The Proposed Development will operate in a similar manner to the current activities at the Agall Quarry. It is estimated that a further 1,770,000m3 of aggregate is in the operational areas. Extraction itself will be undertaken by use of an excavator, positioned on the pit floor,

dragging aggregate down with the bucket. A loading shovel will collect aggregate from the pit floor and transport it to the mobile screening plant. The mobile screening plant will continue to follow the working face, at an operational distance of 20-100m from the working face. The plant will then move periodically to re-position closer to the working face as it progresses. Fixed plant onsite will be used as required.

Aggregate will be processed into stockpiles of usable fractions by the screening plant, which will be loaded on to trucks as needed, for off-site transportation. The applicant has committed to avoid ingress and egress into Tullamore town and Mucklagh Village and utilise the N52 transport links for haulage of aggregates. The Proposed Development will operate in a similar manner to the current activities at the Agall Quarry. It is estimated that a further 1,770,000m3 of aggregate is in the operational areas, including the greenfield extension and within the historically exposed grounds. Extraction itself will be undertaken by use of an excavator, positioned on the pit floor, dragging aggregate down with the bucket. A loading shovel will collect aggregate from the pit floor and transport it to the mobile screening plant. The mobile screening plant will continue to follow the working face, at an operational distance of 20-100m from the working face. The plant will then move periodically to re-position closer to the working face as it progresses. Fixed plant onsite will be used as required.

Aggregate will be processed into stockpiles of usable fractions by the screening plant, which will be loaded onto trucks as needed, for off-site transportation. The applicant has committed to avoid ingress and egress into Tullamore town and Mucklagh Village and utilise the N52 transport links for the haulage of aggregates, refer to Figure 3-5 below which presents the haulage route from the Site to Tullamore.

Figure 3-5: Haul Route



Due to the varying aggregate on the pit face, the extraction face will vary depending upon the needs of the Applicant. Additionally, more than one area of pit face may be extracted at any one time to ensure the requisite blend of coarse and fine aggregates.

As part of the project design, a minimum set-back of ca. 80m from the boundaries of the residential homes will be maintained as the extraction area extends.

An additional 1ha of land, within the existing operational pit area, will be utilised for the short-term storage and processing of materials and internal haulage of aggregates. This area has been included to ensure sufficient space is presented on the Site for such activities. As the new lands are extracted, this area of Agall Quarry will be restored and all plant and processing will be moved forward into the new reserves.

A secondary area for extraction will also be opened within the existing Agall Quarry lands. This ca. 3.814ha area contains viable aggregate reserves, including finer sands and stones. This land is already exposed with soils historically removed. As no intensification of extraction is proposed within the Site, plant and equipment will be moved from the active face to this area, as and when the aggregates within this location are required.

The Operational Phase will occur over 25-28 years.

3.4.2.1 Development Phasing

This application for permission to extend and develop the Agall Quary is submitted with a proposed commencement date of 2025. At this time, the existing authorised Agall Quarry will be further advanced within its extraction and will have moved forward with the agreed phased restoration of exhausted sections; refer to Figure 3-6 below. However, it is noted that the full extent of this permission will be still ongoing, and aspects of this application will enable this plan to be amended. The amended restoration plan to facilitate the Proposed Development is shown in Figure 3-6 below.

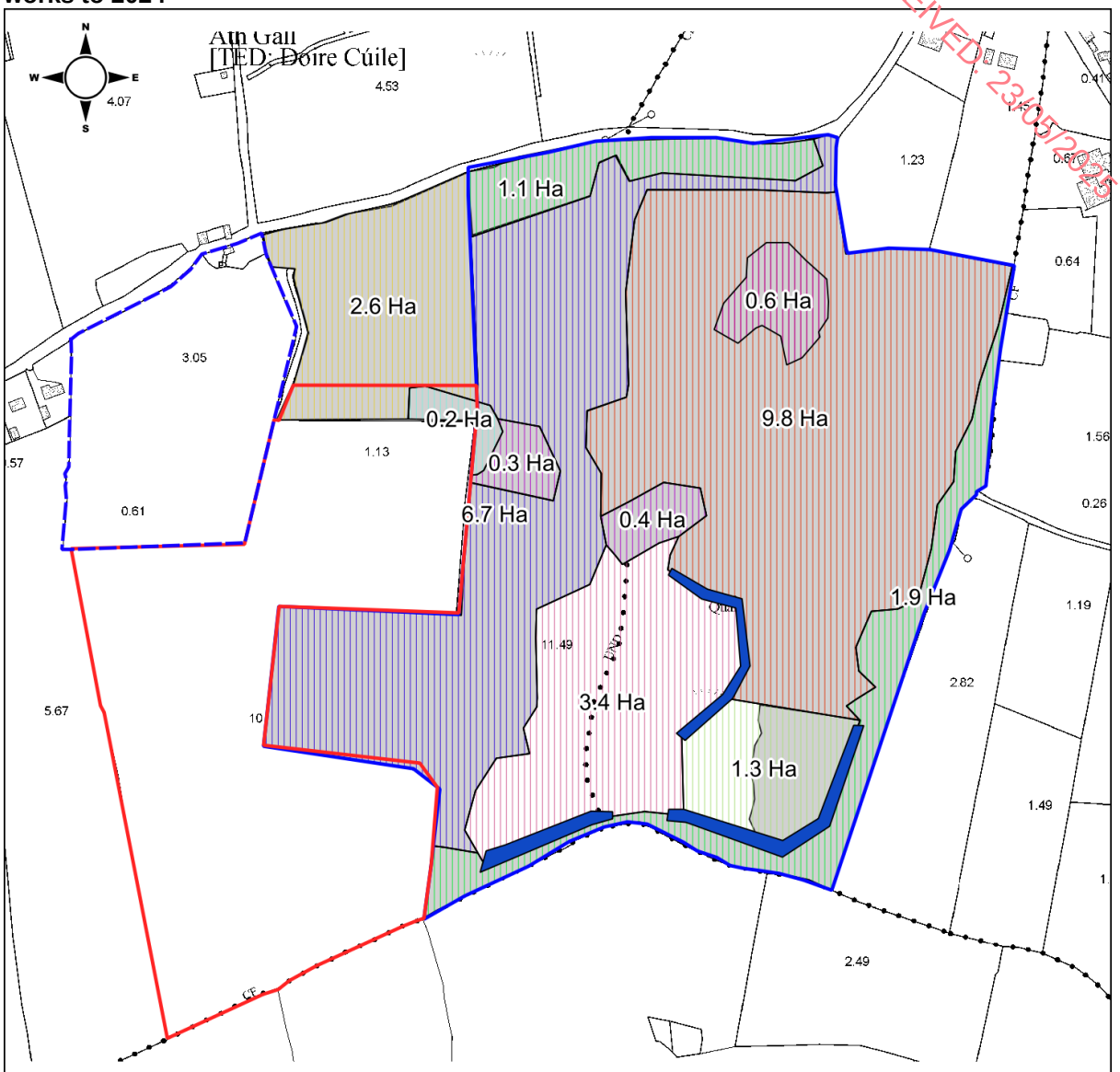
As visible on the aerial survey shown in Figure 3-4 above, the existing authorised operations still have reserves to the south and west and a significant reserve into the final field to the north. These reserves present a 7-10 year aggregate reserve based on current extractions – however, as noted earlier the requirement by the Applicant is for a mix of stone and sands, which necessitates this application for extraction to enable a suitable ongoing mix of aggregates to be extracted.

It is planned that, during the currently authorised extraction in the northern field, extraction would commence within Phase A of this Proposed Development works, and similarly, Phase A will be ongoing, during the movement of activities into Phase B.

Therefore, it is likely that if authorised, portions of the Proposed Development will be operating at a time when the existing development is still in operation.

The Proposed Development will continue operation after the expiry of the planning permission for the existing extraction activities, condition 3 of QD0008, utilising the onsite haulage routes, fixed plant and welfare system. The Proposed Development will operate within the permitted outputs under the application to ABP for substitute consent and future works (references: 19.QD.0008) which is currently ca. 200,000 tonnes per annum pending market conditions.

Figure 3-6: Restoration Plan associated with existing planning permission including completed works to 2024



id	Text	Area (ha)
1	Proposed Restoration with Soil	1.3
2	Restoration with Soil (Complete)	9.8
3	Proposed Low Nutrient Restoration	3.4
4	Red Hemp Nettle Protection Zone (Existing)	0.2
5	Boundary and Recolonised Ground (Existing)	1.9
6	Access and Operational Area (Existing)	6.7
5	Boundary and Recolonised Ground (Existing)	1.1
7	Soil Embankment	0.3
7	Soil Embankment	0.6
7	Soil Embankment	0.4
8	Low Nutrient Landscape Returned to Landowner	2.6

0 75 150 m

Legend

2017 Restoration Plan Areas
- Access and Operational Area (Existing)
- Boundary and Recolonised Ground (Existing)
- Low Nutrient Landscape Returned to Landowner
- Proposed Low Nutrient Restoration
- Proposed Restoration with Soil
- Red Hemp Nettle Protection Zone (Existing)
- Restoration with Soil (Complete)
- Soil Embankment
- Sand Martin Embankments
- Restoration Works Complete / No Works Required

Site Boundaries as per 2017 Restoration Plan
- Future Reserves
- Permitted Extension 19.QD.0008
- Substitute Consent Quarry 19.SU.0131

3.4.3 Restoration Phase

The Restoration Plan submitted as part of this application (attached as Appendix A) supersedes the previous restoration plans for the Agall Quarry submitted under ABP References 19.SU.031 and 19.QD.0008. The general plan is shown in Figure 3-5.

The restoration of the Site will be a continuous process in line with the previous plans. The exhausted areas will be re-levelled, creating an undulating landscape, and all stockpiles and trenches will be removed from these areas. The stockpiled material and soils stripped from the next phase of extraction will be used to cover the previously exhausted area, allowing for continuous restoration. The soils will be spread to a depth not exceeding 300mm and these areas will then be reseeded. The hedgerows / treelines removed during quarrying activities will also be replanted once operations have ceased.

As such, the proposed restoration will be undertaken in phases as works progress within the Site. The continuous restoration of the Site will involve the following works:

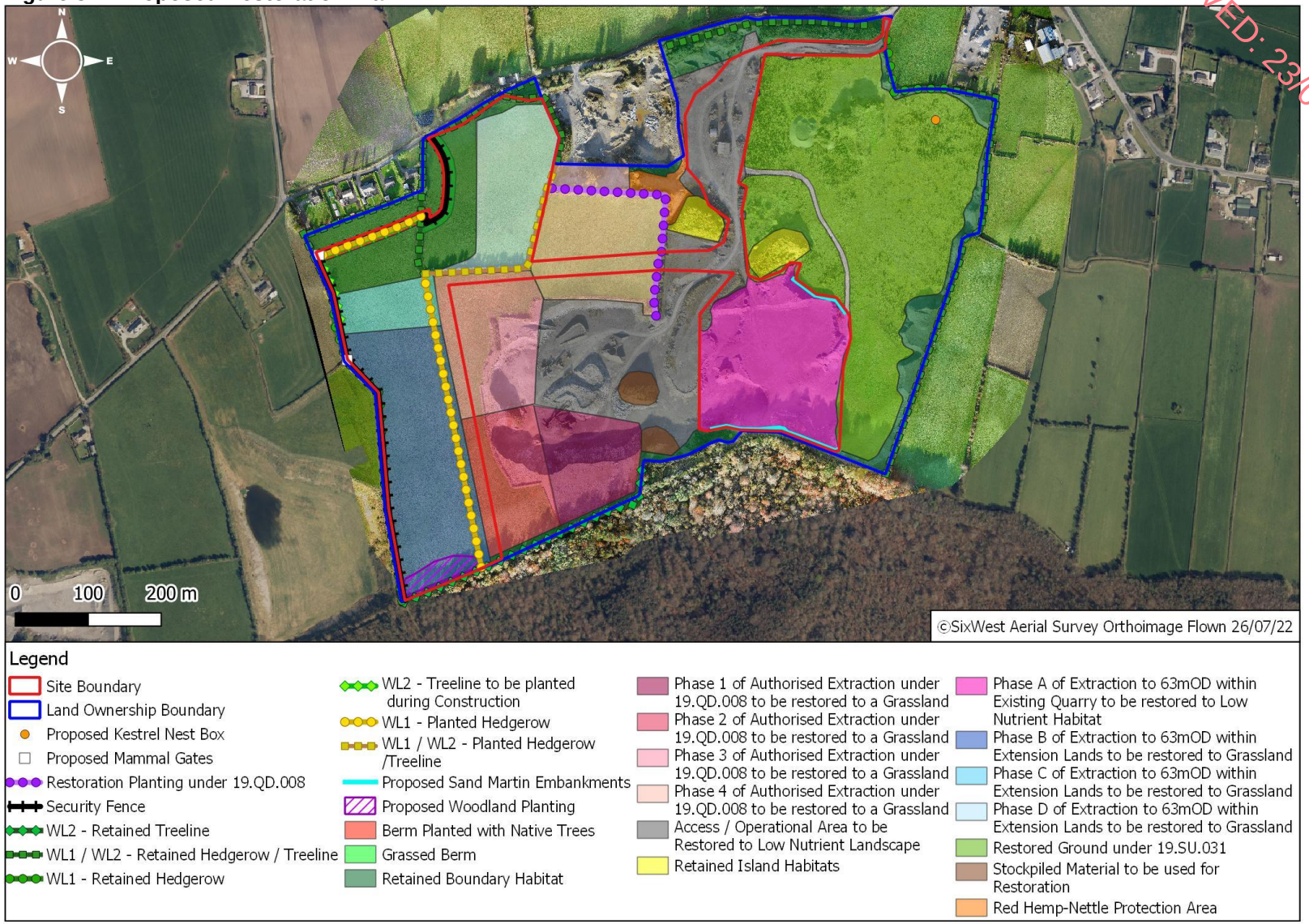
- Extracting aggregate in phases;
- Providing safe slopes from the new ground level to the adjoining lands;
- Spreading soil over exhausted areas within the western portion of the Site with soil removed from the next phase of extraction;
- Re-establishing grasslands and hedgerows within these exhausted areas;
- Introducing a ca.0.26ha woodland within the southwest portion of the Site once extraction in this area has ceased;
- Establishing a low nutrient habitat with sand martin embankments within the eastern portion of the Site; and;
- Erecting a kestrel nest box within the northeast portion of the Site.

Upon completion of extraction activities, the Site will be fully decommissioned within a 2-year period, with all plant and equipment removed during the initial stage of final restoration.

Waste considered unsuitable for re-use or recycling, which includes, inter alia, domestic waste, will be disposed of off-site by an appropriately permitted waste contractor at a suitable permitted waste facility. All-access routes will be broken up to improve the percolation of the surface into the ground.

The boundaries of the Site will be checked and security measures in the form of additional perimeter fencing, and signage will be erected as required to prevent unauthorised access to the Site by members of the public.

Figure 3-7: Proposed Restoration Plan



4 IDENTIFICATION OF EUROPEAN SITES

In accordance with the European Commission Methodological Guidance [17] a list of European sites that can be potentially affected by the Proposed Development has been compiled. Guidance for Planning Authorities prepared by the Department of Environment Heritage and Local Government [5] states that defining the likely zone of impact for the screening and the approach used will depend on the nature, size, location and the likely significant effects of the project. The key variables determining whether or not a particular European site is likely to be negatively affected by a project are:

- The physical distance from the Site to the European site;
- The presence of impact pathways;
- The sensitivities of the ecological receptors; and,
- The potential for in-combination effects.

All SPAs and SACs within 15km have been considered to assess their ecological pathways and functional links. As acknowledged in the OPR guidelines [1], few projects have a zone of influence this large. However, the identification of European sites within 15km has become widely accepted as the starting point for the screening process. For this reason, all SPAs and SACs in 15km have been identified for consideration as part of the screening.

There are six European sites located within 15km of the Site - these are identified in Figure 4-1 and Table 4-1.

Figure 4-1: European sites within 15km of the Site

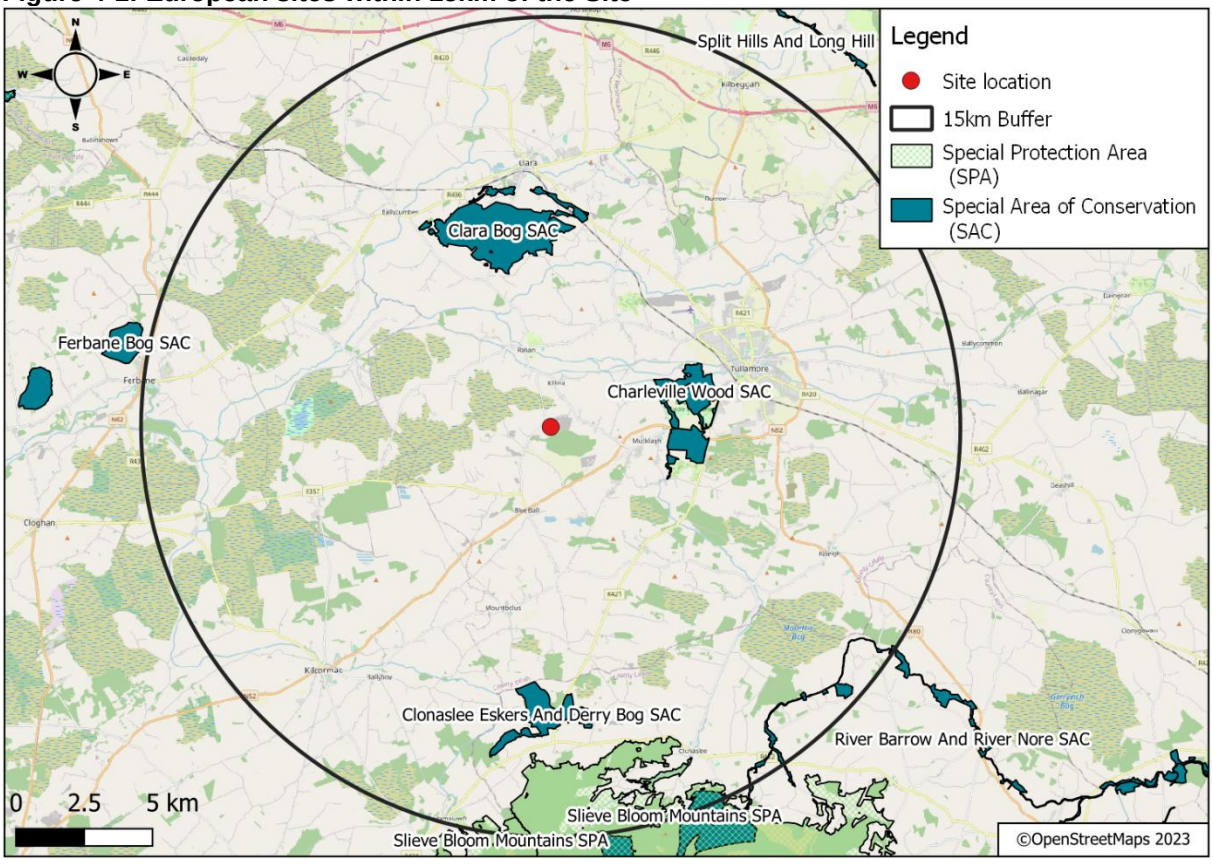


Table 4-1: European Sites within 15km of the Site

Site Name	Code	Distance	Direction from the Site
Special Areas of Conservation ('SAC')			
Charleville Wood	000571	3.8km	E
Clara Bog	000572	5.5km	N
Clonaslee Eskers and Derry Bog	00859	9km	SW
River Barrow and River Nore	002162	13km	SE
Slieve Bloom Mountains	000412	14.3km	SE
Special Protection Area ('SPA')			
Slieve Bloom Mountains	004160	11.5km	S

4.1 Identification of European Sites within ZoI

4.1.1 Habitat Loss / Degradation

The following section provides details of the field-based assessment that was undertaken for the Site on 27th September 2022 and 9th August 2024. Below is a description of the habitats identified onsite and within the wider landholding. These habitats are illustrated in Figure 4-2 below.

Habitats within the Site Boundary

Improved Agricultural Grassland (GA1)

The western portion of the Site encompassed two improved agricultural grassland fields and part of a third field. These fields were utilised for the production of grass for agricultural feed material and as pastures for cattle. At the time of survey, signs of trampled ground were evident.

This habitat was dominated by creeping bent grass (*Agrostis stolonifera*), perennial rye grass (*Lolium perenne*), false oat grass (*Arrhenatherum elatius*), Yorkshire fog (*Holcus lanatus*) and orchard grass (*Dactylis glomerata*).

However, the following herbaceous species were also identified in this area, particularly along the field margins, ribwort plantain (*Plantago lanceolata*), prostrate knotweed (*Polygonum arenastrum*), tansy ragwort (*Jacobaea vulgaris*), silverweed (*Argentina anserina*), white clover (Trifolium repens), red clover (*Trifolium pratense*), wild carrot (*Daucus carota*), common dandelion (*Taraxacum officinale*), creeping buttercup (*Ranunculus repens*), spiny sow thistle (Sonchus asper), rough hawkbit (*Leontodon saxatilis*), sun spurge (*Euphorbia helioscopia*), stinging nettles (*Urtica dioica*) and bitter dock (*Rumex obtusifolius*).

Hedgerow / Treeline (WL1 / WL2)

Hedgerows / treelines formed the principal boundaries within the greenfield lands onsite.

A hedgerow / treeline runs from east to west along the southern boundary of the northern agricultural grassland field. This hedgerow / treeline was largely characterised by ash (*Fraxinus excelsior*) trees covered in ivy (*Hedera helix*) hawthorn (*Crataegus monogyna*) and pedunculate oak (*Quercus robur*) trees. However, holly (*Ilex aquifolium*), hazel (*Corylus avellana*), common lilac (*Syringa vulgaris*) and dog-rose (*Rosa canina*) were also recorded in these hedgerows / treelines.

The hedgerow / treeline in between the agricultural field and the local road to the north comprised of common lilac, dogrose, mature ash, hawthorn, ivy, European plum (*Prunus domestica*), sycamore (*Acer pseudoplatanus*), cypress (*Chamaecyparis lawsoniana*) and brambles (*Rubus fruticosus agg*).

Two managed hedgerows were identified onsite. One hedgerow separated the existing Agall Quarry from the proposed extension lands and the second hedgerow formed the western boundary of the Site. These hedgerows comprised of blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), hawthorn, hazel, pedunculate oak, spindle (*Euonymus europaeus*) and dog rose. Brambles, ivy, stinging nettles, herb Robert (*Geranium robertianum*), broad leaf dock (*Rumex obtusifolius*), hairy willowherb (*Epilobium hirsutum*), lords and ladies (*Arum maculatum*), germander speedwell (*Veronica chamaedrys*), Italian arum (*Arum italicum*), cow parsley (*Anthriscus sylvestris*) were recorded in the understorey of these hedgerows.

A treeline also bordered the Site to the south. This treeline lay behind a fence line and formed the edge habitat of a mixed broadleaved woodland. The species identified in this area included hawthorn, hazel, ash, sycamore, alder, pedunculate oak, wild privet (*Ligustrum vulgare*), and holly. Mature trees within this treeline were characterised by dense ivy cover. The understorey of this treeline was comprised of bramble, ground ivy (*Glechoma hederacea*), gorse, dog-rose and stinging nettles. A stonewall also ran along a section of this treeline (see below).

Stone Walls and Other Stonework (BL1)

A section of a stone wall was present in the southern corner of the Site. This stone wall was comprised of discarded and broken stones, and no notable plant species were observed within this habitat.

Active Quarries and Mines (ED4)

The eastern portion of the Site is comprised of quarry habitat. This area was previously subject to extraction and therefore, was largely devoid of vegetation. This habitat comprised of sand, gravel and sediment and contained steep slopes and stockpiled material in places.

The quarry habitat extends into the northern portion of the Site where the main shed, fixed processing plant, welfare facilities, wheel wash and access road were located.

Spoil and Bare Ground (ED2)

A small area of spoil and bare ground is located within the Site boundary. This habitat was dominated by topsoil and loose stones and showed signs of recent disturbance by machinery. This area was devoid of vegetation and was separated from the agricultural field to the north by a soil berm. This ground has been cleared to enable the expansion of quarrying activities towards the western Site boundary as per the authorisation by ABP reference number: 19.QD.0008.

Habitats within the Landholding

The landholding encompasses the Site, the active portion of Agall Quarry and the restored lands to the east. The following habitats were identified within the wider landholding, outside the Site boundary:

- Improved Agricultural Grassland (GA1);
- Scrub (WS1);
- Hedgerows / Treelines (WL1 / WL2);
- Active Quarry and Mines (ED4);
- Recolonising Bare Ground (ED3);
- Dry Meadows and Grassy Verges (GS2); and,

- Spoil and Bare Ground (ED2).

The improved agricultural grassland within the wider landholding is a continuation of the third field within the Site boundary. This field was bound by hedgerows / treelines and a low spoil berm at the time of survey. The spoil and bare ground identified onsite is continued along the boundary of the active quarry habitat to the south of the landholding. This active quarry habitat is regularly disturbed by machinery and is characterised by steep unstable slopes and stockpiles of material.

Loose spoil and bare ground also formed unvegetated berms within the eastern portion of the landholding, where the ground has been restored to a low nutrient landscape. Hedgerows / treelines were recorded adjacent to or atop these steep banks. The dominant species within these hedgerows / treelines were hawthorn and ash.

Additional habitats were also recorded within the wider landholding, these habitats are described below in more detail.

Recolonising Bare Ground (ED3)

This habitat was present in small patches onsite but was predominantly identified in areas within the wider landholding subject to less disturbance i.e. the margins of active work zones, on the slopes of recolonising berms / stockpiles and within the restored land to the east of the landholding. Blue fleabane was found in abundance throughout this habitat. Red hemp nettle (Galeopsis angustifolia) was also found along the northwest berm, which separates the landholding from the ca. 2.6 ha quarry to the north, refer to Figure 4-2 for mapped extent.

Herbaceous plants that are adapted to nutrient-poor conditions characterised these areas with species such as colt's foot (*Tussilago farfara*), fireweed (*Chamaenerion angustifolium*), scarlet pimpernel (Anagallis arvensis), tansy ragwort, silverweed, clovers, marjoram (Origanum vulgare), yellow wort (*Blackstonia perfoliata*), St. John's wort (*Hypericum perforatum*), yarrow (*Achillea millefolium*), rough hawkbit, common knapweed (*Centaurea nigra*), field scabious (Knautia arvensis), oxeye daisy (*Leucanthemum vulgare*), black medic (*Medicago lupulina*), corn poppy (*Papaver rhoeas*), silverweed (*Potentilla anserina*) and fescue (*Festuca spp.*) identified.

In addition, wild oregano (*origanum vulgare*), hogweed (Heracleum sphondylium), creeping buttercup, false oat grass, hairy willowherb, brambles, dandelion, lesser knapweed (Centaurea nigra), common kidney vetch (*Anthyllis vulneraria*), orchard grass, glaucous sedge (*Carex flacca*), bracken (*Pteridium aquilinum*), wild carrot, greater knapweed (Centaurea scabiosa), catsear (*Hypochaeris radicata*), mouse ear (*Cerastium sp.*), hawkweed (Hieracium sp.), thistle (*Cirsium sp.*), bitter dock, long leaf speedwell (*Veronica longifolia*), montbretia (*Crocosmia sp.*), smooth hawksbit (*Crepis capillaris*) and pale toadflax (*Linaria repens*) were identified.

Small clusters of willow (*Salix spp.*) and gorse (*Ulex europaeus*) were present on top of berms and in open areas where vegetation was slowly transitioning towards scrub. Individual saplings and immature trees were also present in this habitat. They comprised of the following species: lilac, cypress, hazel, silver birch (Betula pendula) and sycamore. Red-stemmed feather moss (*Pleurozium schreberi*) was also commonly observed as ground cover in less disturbed areas.

Slight variation between the berms and areas of recolonising bare ground was identified during the habitat survey with white campion (*Silene latifolia*) and bindweed (*Convolvulus arvensis*) observed along the berm in the northern portion of the landholding and lesser hawkbit (*Leontodon taraxacoides*) and field horsetail (*Equisetum arvense*) recorded on berms within the central portion of the landholding. However, most of the areas of recolonising bare ground within the landholding comprised of the same species mixes listed above.

Scrub (WS1)

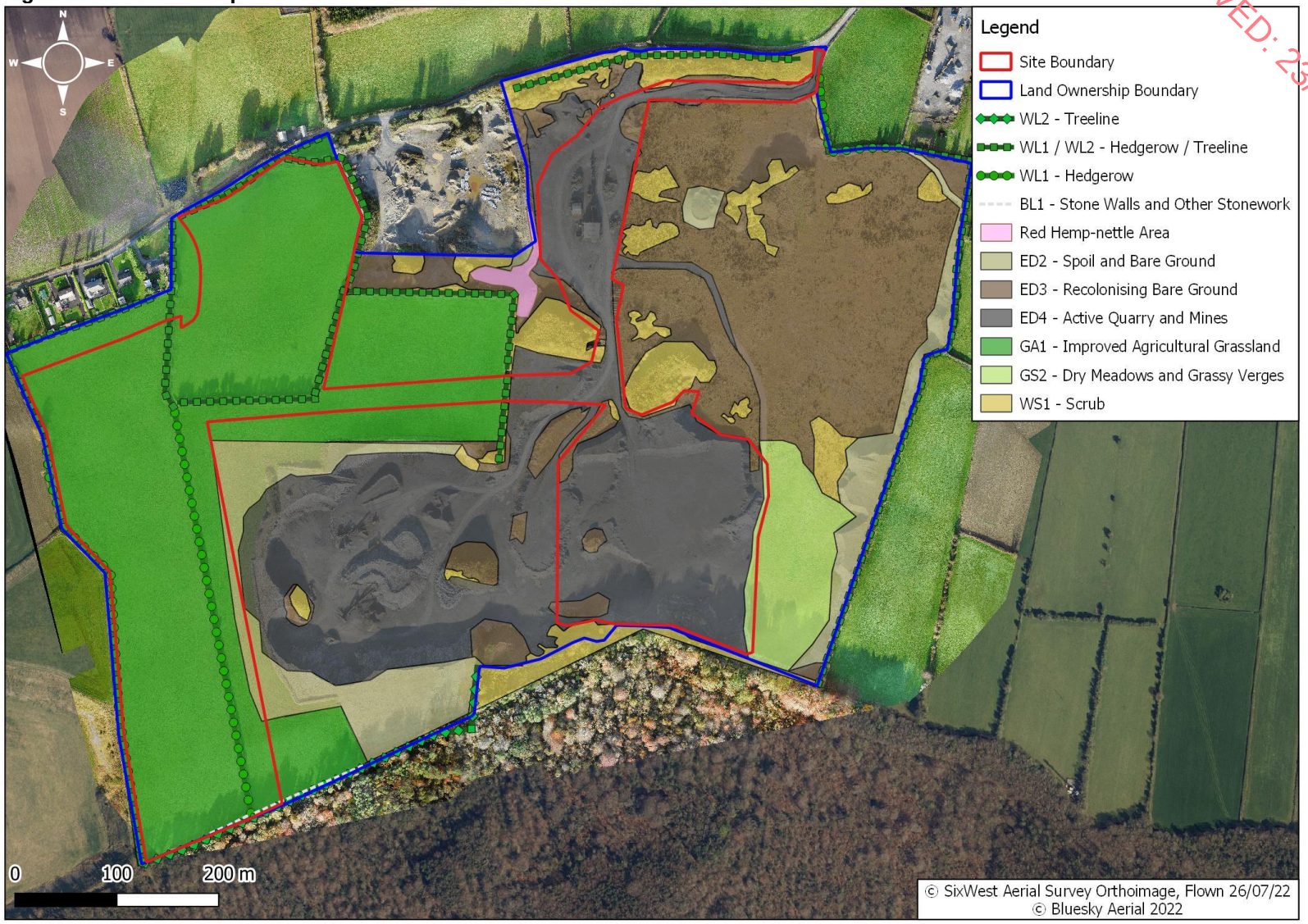
Several unmanaged vegetated stockpiles were present within the wider landholding. These stockpiles comprised of species commonly associated with scrub habitats such as gorse and willow trees. Common ruderals and weeds were also identified in these areas including brambles, stinging nettles, bracken fern, bitter dock, tansy ragwort, field horsetail and fireweed.

Areas of scattered gorse and immature willow trees were identified to the north and east of the landholding where recolonising bare ground has transitioned towards scrub habitat. Immature downy birch (*Betula pubescens*), sycamore and cypress trees were recorded in these transitional areas to the north of the landholding whilst Scot's pine (Pinus sylvestris) saplings were recorded to the east. In addition, hawthorn and hazel trees were observed within areas of scrub atop steep banks. Pedunculate oak, elder, European plum, lilac, and silver birch saplings were also recorded in these areas.

Dry Meadows and Grassy Verges (GS2)

A restored grassland habitat, which was transitioning towards a dry meadow, was located within the southeast portion of the Site. The following species were recorded in this habitat; creeping bent, false oat grass, cow parsley, tansy ragwort, creeping buttercup, bitter dock, black medic, field scabious, perennial rye, yarrow, Yorkshire fog, oregano, selfheal (Prunella vulgaris), germander speedwell, dandelion, daisy, scarlet pimpernel, bull thistle (Cirsium vulgare), orchard grass, hogweed, buttercup, ribwort plantain, and nettle.

Figure 4-2: Habitat Map



Potential for Habitat Loss / Degradation

The Site is not located within or adjacent to any European sites with the nearest European site over 3km away. The Site is located within an area of agricultural land. As outlined above, no habitats or species designated under any of the European sites within the wider surrounding area were identified during the field surveys undertaken at the Site.

There are no direct impact pathways to the European sites and no direct hydrological connection was identified. Therefore, no impacts associated with designated habitat loss or degradation are expected to occur as a result of the Proposed Development.

4.1.2 Water Quality Impairment

Potential water quality impacts would typically be associated with the release of sediment and other pollutants to surface water. The ZoI would be considered to include the receiving waterbodies adjacent to and downstream of the Site within 5km.

As mentioned in Section 3.2 above, the Killina Stream is located ca. 240m northeast of the Site. This stream eventually discharges into the River Shannon Callows SAC and the Middle Shannon Callows SPA (ca. 33.6km downstream of the Killina). However, the surveys conducted onsite did not identify any direct hydrological connections to this watercourse. The Site did not contain any wet drainage ditches, and the proposed works will be conducted above the groundwater table.

Therefore, it can be objectively concluded that there will not be any likely significant effects on any European site in the absence of mitigation and as such, impacts associated with water quality impairment have been screened out from further consideration.

4.1.3 Air Quality Impairment

According to the Institute of Air Quality Management ('IAQM') Guidelines, potential adverse effects from dust arising from construction to ecological receptors occur within 50m of a construction site [18]. In addition, potential adverse effects from mineral dust on ecological receptors can occur within 250m of dust-generating activities from sand / gravel quarries [19].

No European sites have been identified within this ZoI. Therefore, it can be objectively concluded that there will not be any likely significant effects on any European site in the absence of air quality mitigation and as such, impacts associated with mineral and construction dust have been screened out from further consideration.

4.1.4 Noise / Disturbance

Noise from the construction activity has the potential to cause disturbance to resting, foraging and commuting qualifying species of the European sites. As there will be no piling or in-river works required for the Proposed Development, there is no potential for underwater noise impacts beyond the immediate vicinity of the Site. Individual species will provoke different behavioural responses to disturbances at different distances from the source of the disturbance.

- Transport Infrastructure Ireland (formally the National Roads Authority) has produced a series of best practice planning and construction guidelines for the treatment of certain protected mammal species (i.e. otter), which indicate that disturbance to terrestrial mammals would not extend beyond 150m [20]; and,
- Studies have noted that different types of disturbance stimuli are characterized by different avifaunal reactions; however, in general, a distance of 300m can be used to represent the maximum likely disturbance distance for waterfowl [21].

The ZoI for noise / disturbance is therefore established as the Site with a 300m buffer. No European sites were identified within this ZoI, and it is not expected that any designated species will disperse into this ZoI, given the intervening distance between the Site and the

European sites listed in Table 4-1. As such, no impacts associated with noise/disturbance are expected to occur as a result of the Proposed Development.

4.1.5 Invasive Species

No medium or high-impact invasive species (including those that are regulated under the European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374/2024) [21] were recorded within the Site.

Therefore, no impacts associated with the spread of invasive species as a result of the Proposed Development are anticipated.

4.2 ZoI Conclusion

The Site is not located within or directly adjacent to any European sites, however, the boundaries of six are located within 15km from the Site.

Given the distance separating the Site from Charleville Wood SAC, Clara Bog SAC, Clonaslee Eskers and Derry Bog, River Barrow and River Nore SAC, Slieve Bloom Mountains SAC and Slieve Bloom Mountains SPA, the lack of impact pathways and reasoning above, it is considered that the Proposed Development will not result in any adverse effects to these European sites and they have therefore been screened out from further consideration.

4.3 Conservation Objectives

European and national legislation places a collective obligation on Ireland and its citizens to maintain a favourable conservation status at candidate and designated European Sites. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

According to the EU Habitats Directive, favourable conservation status of a habitat is achieved when:

- Its natural range, and the area it covers within that range, is stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and,
- The conservation status of its typical species is favourable, as defined below.

The favourable conservation status of a species is achieved when:

- Population data on the species concerned indicate that it is maintaining itself;
- The natural range of the species is neither being reduced nor likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

5 SCREENING AND ASSESSMENT OF POTENTIAL IMPACTS

Using professional experience, guidance and judgement, the following factors have been taken into account in identifying potential significant impacts on the identified European sites:

- Distance from any European Site;
- Qualifying Interests;
- Special Conservation Interests;
- Conservation Objectives;
- The nature of the onsite habitats;
- The location of the Site;
- The scale and disturbance of the Proposed Development.

Based on these factors, **no potential significant impact has been taken forward for further consideration**. This is based on the available information from field and desk-based assessment as outlined in Section 4.

Overall, the screening exercise **did not identify any other factors** that could result in any direct or indirect loss or disturbance to any of the Annex I habitats or Annex I or II species for which the European sites are designated. It can be stated that the Proposed Development will not cause:

- Any reduction in the area of the habitat or European Site;
- Direct or indirect damage to the physical quality of the environment of any European Site;
- Any serious or ongoing disturbance to species or habitats for which any European Site is designated; or,
- Direct or indirect damage to the size, characteristics or reproductive ability of populations any European Site.

On the basis of the Source-Pathway-Receptor ('SPR') risk assessment principle, there is no ecological or functional link between the Proposed Development and any European sites.

5.1 Analysis of 'In-Combination' Effects

The Habitats Directive requires competent authorities to make an appropriate assessment of any plan or project which is likely to have a significant effect alone or in combination with other plans and projects.

The Proposed Development involves the extension of Agall Quarry. Therefore, the ongoing extraction and ancillary activities within Agall Quarry, permitted under ABP reference number 19.QD.0008, have been considered throughout this assessment.

OCC carried out an AA in support of the substitute consent application submitted to ABP (ABP reference number 19.SU.0131). This AA determined that there was no risk of significant impact on the conservation objectives of the nearest European site from Agall quarry given the lack of ecological connectivity to any designated conservation site. An AA was submitted as part of the application for further development at Agall Quarry (ABP reference number 19.QD.0008). This AA concluded that the extension to Agall Quarry would be unlikely to have significant effects on European sites and designated features of interest due to the intervening distance and lack of connectivity from the quarry to these sites.

Therefore, as part of the planning process, the existing permitted activity at Agall Quarry was assessed for potential adverse effects on European sites, and the accompanying reports

concluded that the existing activity on-site would not have a significant effect on any habitats or species designated as conservation interests for any European site.

It should also be noted that OCC carried out an AA in support of the substitute consent application submitted to ABP (ABP reference number 19.SU.0131). This application sought to regularise previous activities only and did not allow for further development. Nonetheless, the AA determined that the previous activities conducted onsite did not result in a significant impact on the conservation objectives of the nearest European site from Agall Quarry given the lack of ecological connectivity to any designated conservation site.

As described above, the Proposed Development alone is unlikely to have any direct or indirect adverse effects on any of the European sites located within 15km of the Site.

A review of the OCC Planning eplan website did not identify any current or previously granted plans or projects in the immediate vicinity that are considered likely to result in significant impacts on European sites in combination with the Proposed Development [14].

Taking the above into account, it can be concluded that there will not be any significant in-combination contribution by the Proposed Development to potential adverse effects on any European sites.

6 SCREENING CONCLUSIONS AND STATEMENT

The screening process has examined the details of the Proposed Development and has considered the potential for causing adverse effects on European sites and their qualifying features of interest within a 15km radius of the Proposed Development.

Six European sites – Charleville Wood SAC, Clara Bog SAC, Clonaslee Esker and Derry Bog SAC, River Barrow and River Nore SAC, Slieve Bloom Mountains SAC and Slieve Bloom Mountains SAC - are located within a 15km radius of the Proposed Development. However, given the intervening distance and lack of impact pathways between the Site and these European sites, as described in Section 4, it can be concluded that the Proposed Development will not result in any significant impacts either directly or indirectly on the conservation objectives or status of the listed European sites and will not result in the direct loss or disturbance of any Annex I habitats and / or Annex II species for which the European sites are designated.

In conclusion, activities associated with the Proposed Development either alone, or in-combination with other projects or land uses, will not have any direct or indirect significant effects on any European sites in light of their conservation objectives and best scientific knowledge, and no reasonable scientific doubt exists in relation to this conclusion.

Accordingly, the progression to Stage 2 of Appropriate Assessment process (i.e., preparation of a Natura Impact Statement) is not considered necessary.

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[17] Irish Concrete Federation, "Essential Aggregates: Providing For Ireland's Needs to 2040," Irish Concrete Federation, 2018.

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APPENDICES

RECEIVED: 23/05/2025

APPENDIX A

May 2025

Restoration Plan

Proposed Extension to Agall Quarry, The Rise, Co. Offaly

Condron Concrete Limited

Arden Road, Tullamore, Co. Offaly

MALONE O'REGAN ENVIRONMENTAL

Form ES - 04

MALONE O'REGAN ENVIRONMENTAL

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Title: Restoration Plan, Proposed Extension to Agall Quarry, The Rise, Co. Offaly, Condron Concrete Limited, Arden Road, Tullamore, Co. Offaly

Job Number: E2018

Prepared By: Stephanie Lonergan **Signed:** S. Lonergan

Checked By: Sarah de Courcy **Signed:**

Approved By: Dyfrig Hubble **Signed:**

Revision Record

Issue No.	Date	Description	Remark	Prepared	Checked	Approved
01	14/05/25	Report	Final	SL	SDC	DH

Restoration Plan

Proposed Extension to Agall Quarry, The Rise, Co. Offaly

Condron Concrete Limited

Arden Road, Tullamore, Co. Offaly

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1 INTRODUCTION

Malone O'Regan Environmental ('MOR Environmental') has been commissioned by Condron Concrete Ltd ('the Applicant') to prepare a Restoration Plan in support of a planning application to Offaly County Council ('OCC').

The Applicant intends to:

- Extend the current active gravel quarry into agricultural land to the west and north of the existing working face;
- Creation of earthen berms, planting and landscaping;
- Creation of an access route to the new extraction areas;
- The recommencement of extraction of remaining resources within part of the area under Substitute Consent (19.SU.0131), which was historically partially worked out;
- Continued use of the existing onsite infrastructure, including processing plant, wheel wash, site access and office / welfare unit;
- Phased restoration of the Site;
- All ancillary works, including dry screening and short-term stockpiling of aggregates; and
- Obtain a 30-year planning permission for the completion of the proposed development.

The above works are collectively presented in this report as the' Proposed Development'.

The land at the Agall Quarry under the control of the Applicant encompasses circa ('ca.') 45 hectares ('ha') of land, including an active working pit, storage and processing areas and the historically worked (and partially restored) pit. All works will occur across a 17ha area within the townlands of Agall and Glaskill, Co. Offaly OSI Reference ITM 626611 722998 ('the Site').

Figure 1-1 below shows the Site location.

Figure 1-1: Site Location

1.1 Purpose

The management measures described in this Restoration Plan are based on the ecological baseline survey works undertaken as part of the ecological assessment of the Site and wider landholding as outlined in Chapter 6 – Biodiversity in the EIAR prepared in support of this planning application.

This Restoration Plan supersedes the previous restoration plans for the Agall Quarry submitted under An Bord Pleanála ('ABP') References 19.SU.031 and 19.QD.0008. The restoration of the Site will be a continuous process in line with the previous plans. As such, the proposed restoration will be undertaken in phases as works progress within the Site.

This Restoration Plan includes ecological enhancement measures and has taken full cognisance of protected and notable species that have the potential to be present within the area after the closure of the Site.

1.2 Statement of Authority

The Restoration Plan was prepared under the direction of Dyfrig Hubble, Associate Director of Ecology, who provided peer review and support to the project.

Dyfrig Hubble has a B.Sc. (Hons) Tropical Environmental Science and an M.Sc. in Environmental Forestry. Dyfrig is a full member of the Chartered Institute of Ecology and Environmental Management ('CIEEM'). Dyfrig has over 18 years' experience working in the ecological consultancy sector, including habitat appraisals and specialist species-specific surveys. Dyfrig has extensive experience in the preparation of Habitat Engagement / Restoration Plans and Habitat Management Plans for various projects within both the UK and Ireland.

1.3 Methodology

This Restoration Plan has been prepared in accordance with best practice guidelines and legislation including:

- Wildlife Habitats & the Extractive Industry - Guidelines for the Protection of Biodiversity within the Extractive Industry [1]; and,
- Environmental Management in the Extractive Industry (Non-Scheduled Minerals) [2].

1.4 Overview of Quarry Restoration

Quarries can be of very high value for nature conservation and are often termed biodiversity hotspots. Mineral extraction creates a large variety of landscapes and habitats which support numerous floral and faunal species. Over the years, biologists have generated an abundance of evidence highlighting the importance of quarries for rare floral species such as red hemp nettle, insects such as bumble bees and dragonflies, and bird species such as sand martin and ringed plover.

Until recently, many quarry rehabilitation strategies were aimed at producing vegetation cover as quickly as possible. However, allowing plants to naturally colonise bare ground and other quarry habitats is now recognised as an important element of quarry rehabilitation. Quarries provide excellent opportunities for natural regeneration and natural habitat conservation.

Studies have shown that natural regeneration of quarries allows for the development of natural landscapes with increased biodiversity and species preservation compared with the ‘classic’ regeneration of quarries via the planting of vegetation cover.

The aim of any natural restoration plan is to restore ecological balance and to produce self-sustaining plant and wildlife communities and habitats. This Restoration Plan will seek to balance areas of natural regeneration with re-seeded and re-planted areas.

This Restoration Plan provides detailed guidance for the restoration of the Site in keeping with the previously permitted plan.

1.5 Structure of the Restoration Plan

The structure of this Restoration Plan is as follows:

- Site Analysis: provides contextual detail;
- Restoration Plan: details the rehabilitation works proposed for the Site and wider landholding; and,
- Monitoring and Aftercare: provides details regarding the monitoring and review of the plan as the rehabilitation strategy progresses.

2 SITE ANALYSIS

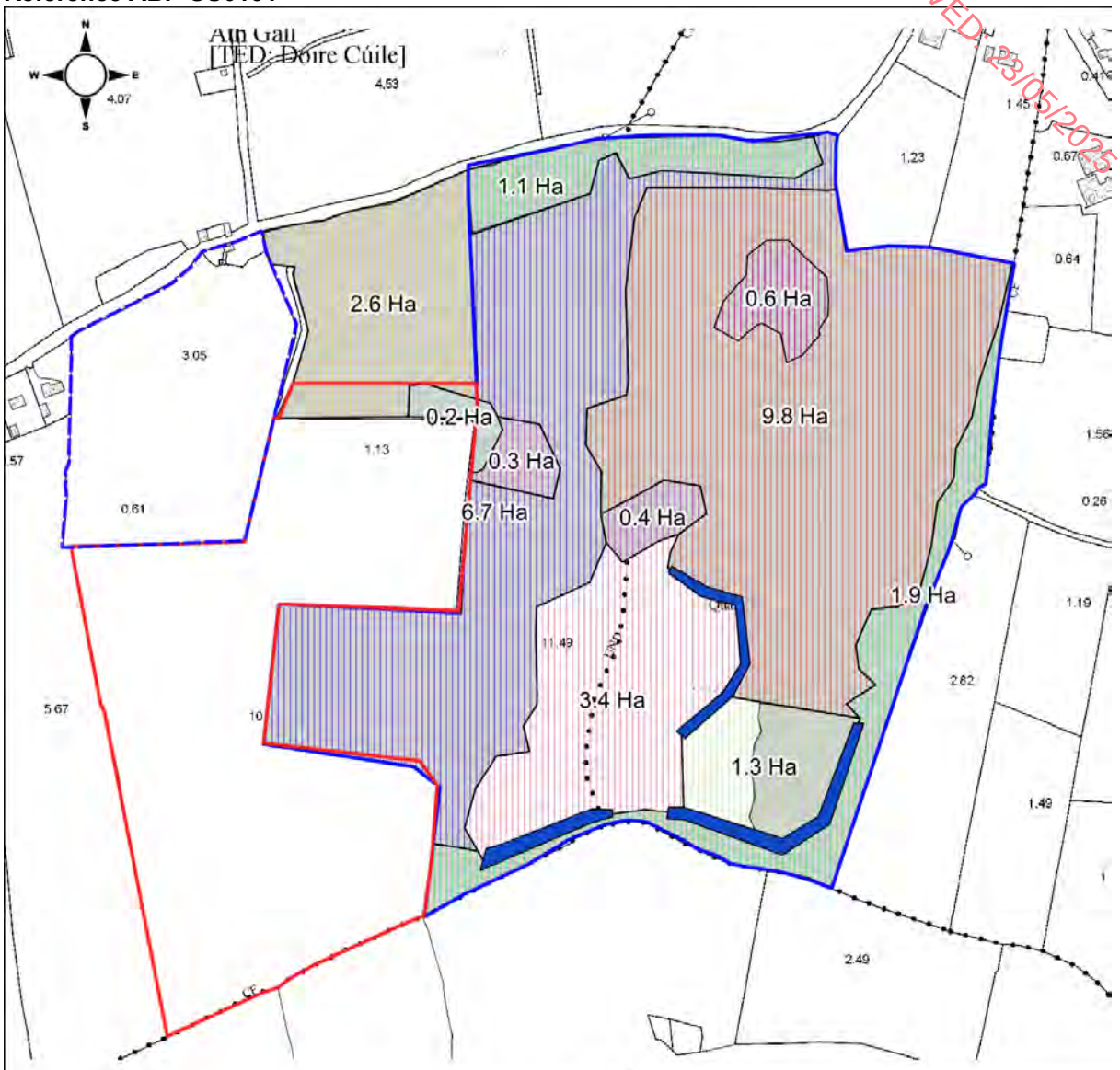
2.1 Previous Restoration Plans

The approach to restoration within the permitted plans under ABP Reference 19.SU.031 and ABP Reference 19.QD.0008 has been taken into account whilst designing the proposed plan.

An update on the previous restoration plan for the Site under ABP Reference 19.SU.031 was submitted to Offaly County Council for agreement and a release of bonds in 2023. This previous restoration plan is shown in Figure 2-1 below.

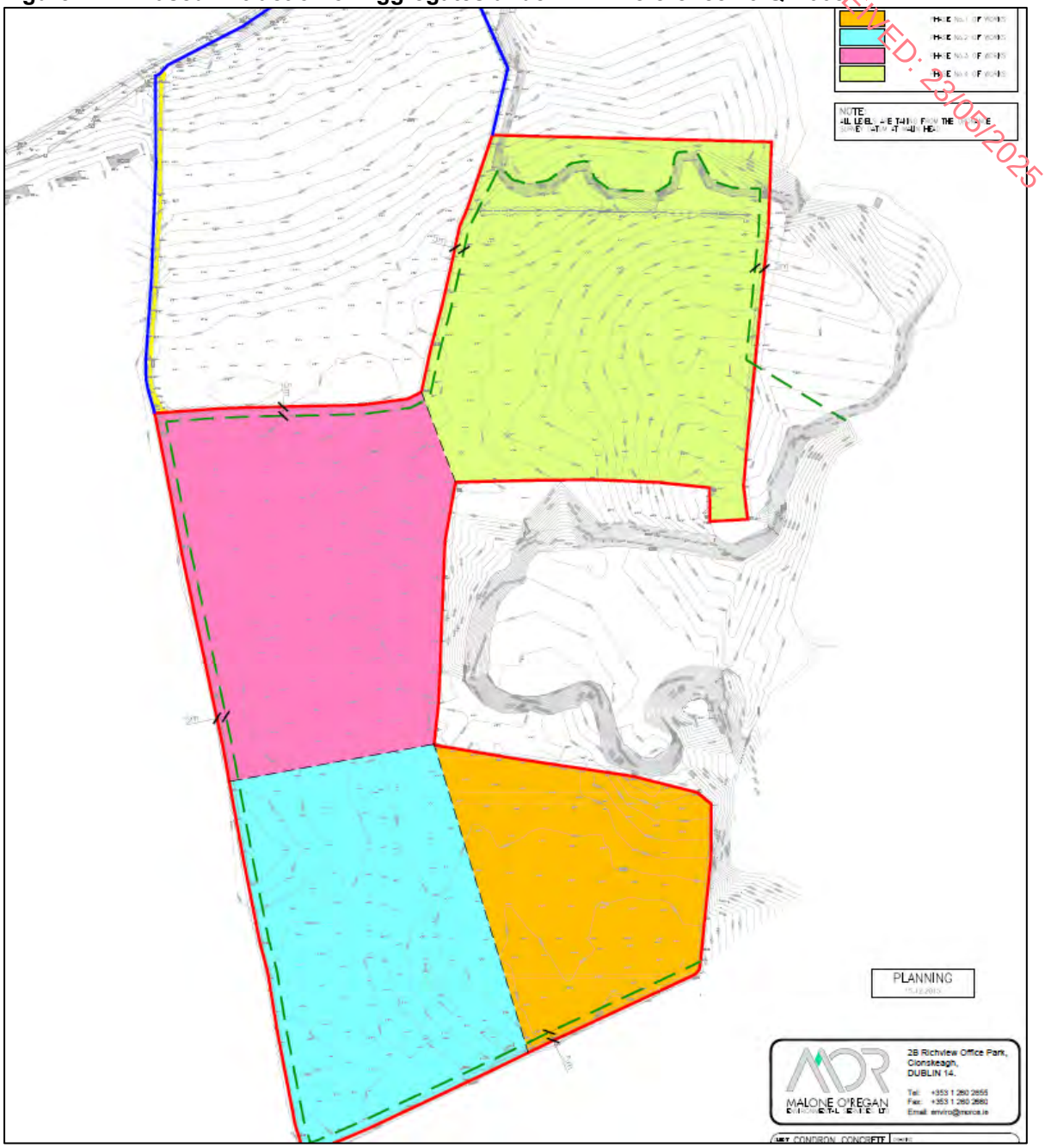
The existing authorised Agall Quarry will be further advanced within its extraction and will have moved forward with the agreed phased restoration of exhausted sections, refer to the extraction phasing previously submitted under ABP Reference 19.QD.0008 (Figure 2-2) for reference.

Figure 2-1: Permitted Restoration Plan (including completed works to 2024) under Planning Reference ABP-SU0131



id	Text	Area (ha)
1	Proposed Restoration with Soil	1.3
2	Restoration with Soil (Complete)	9.8
3	Proposed Low Nutrient Restoration	3.4
4	Red Hemp Nettle Protection Zone (Existing)	0.2
5	Boundary and Recolonised Ground (Existing)	1.9
6	Access and Operational Area (Existing)	6.7
5	Boundary and Recolonised Ground (Existing)	1.1
7	Soil Embankment	0.3
7	Soil Embankment	0.6
7	Soil Embankment	0.4
8	Low Nutrient Landscape Returned to Landowner	2.6

Figure 2-2: Phased Extraction of Aggregates under ABP Reference 19.QD.008



2.2 Ecological Context

2.2.1 Habitats

The following habitats were identified onsite using Fossitt's, '*A Guide to Habitats in Ireland*' [3]:

- Improved Agricultural Grassland (GA1);
- Hedgerows / Treelines (WL1 / WL2);
- Stone Walls and Other Stonework (BL1);
- Active Quarries and Mines (ED4); and,

- Spoil and bare ground (ED2).

The following additional habitats were identified within the wider landholding:

- Recolonising Bare Ground (ED3);
- Scrub (WS1); and,
- Dry Meadows and Grassy Verges (GS2).

2.2.2 Species

The following species were identified onsite and within the wider landholding (either directly through sight or sound; or indirectly through prints, scats or other field evidence) during the field surveys between 2022-2023:

- Badger (*Meles meles*);
- Barn swallow (*Hirundo rustica*);
- Blackbird (*Turdus merula*);
- Blackcap (*Sylvia atricapilla*);
- Blue fleabane (*Erigeron acris*);
- Blue tit (*Cyanistes caeruleus*);
- Brown long-eared bat (*Plecotus auritus*);
- Buzzard (*Buteo buteo*);
- Chaffinch (*Fringilla coelebs*);
- Dunnock (Prunella modularis);
- Common pipistrelle (*Pipistrellus pipistrellus*);
- Deer (*Cervus spp.*);
- Fox (*Vulpes vulpes*);
- Goldfinch (*Carduelis carduelis*);
- Great tit (*Parus major);*
- Hooded crow (*Corvus cornix)*;
- Jackdaw (*Corvus monedula);*
- Magpie (*Pica pica);*
- Mistle thrush (*Turdus viscivorus*);
- Kestrel (*Falco tinnunculus*);
- Leisler's bat (*Nyctalus leisleri);*
- Linnet (*Carduelis cannabina*);
- Nathusius' pipistrelle (*Pipistrellus nathusii*);
- Red hemp-nettle (*Galeopsis angustifolia*);
- Robin (*Erithacus rubecula);*
- Rook (*Corvus frugilegus);*
- Sand martin (*Riperia riperia*);
- Soprano pipistrelle (*Pipistrellus pygmaeus*);
- Spotted flycatcher (*Musciapa striata*);
- Starling (*Sturnus vulgaris*);
- Wood pigeon (*Columba palumbus*);
- Whiskered bat (*Myotis mystacinus*);
- Wren (*Troglodytes troglodytes);*
- Yellowhammer (*Emberiza citrinella*).

For further information on existing habitats, survey results and on-site conditions, refer to Chapter 6 of the EIAR.

3 RESTORATION PLAN

The restoration of the Site will be a continuous process in line with previous plans submitted under ABP References 19.SU.031 and 19.QD.008. As such the proposed restoration will be undertaken in phases as works progress within the Site.

The key focus of this restoration plan is the phased extraction and restoration of the greenfield lands to the west of the Site.

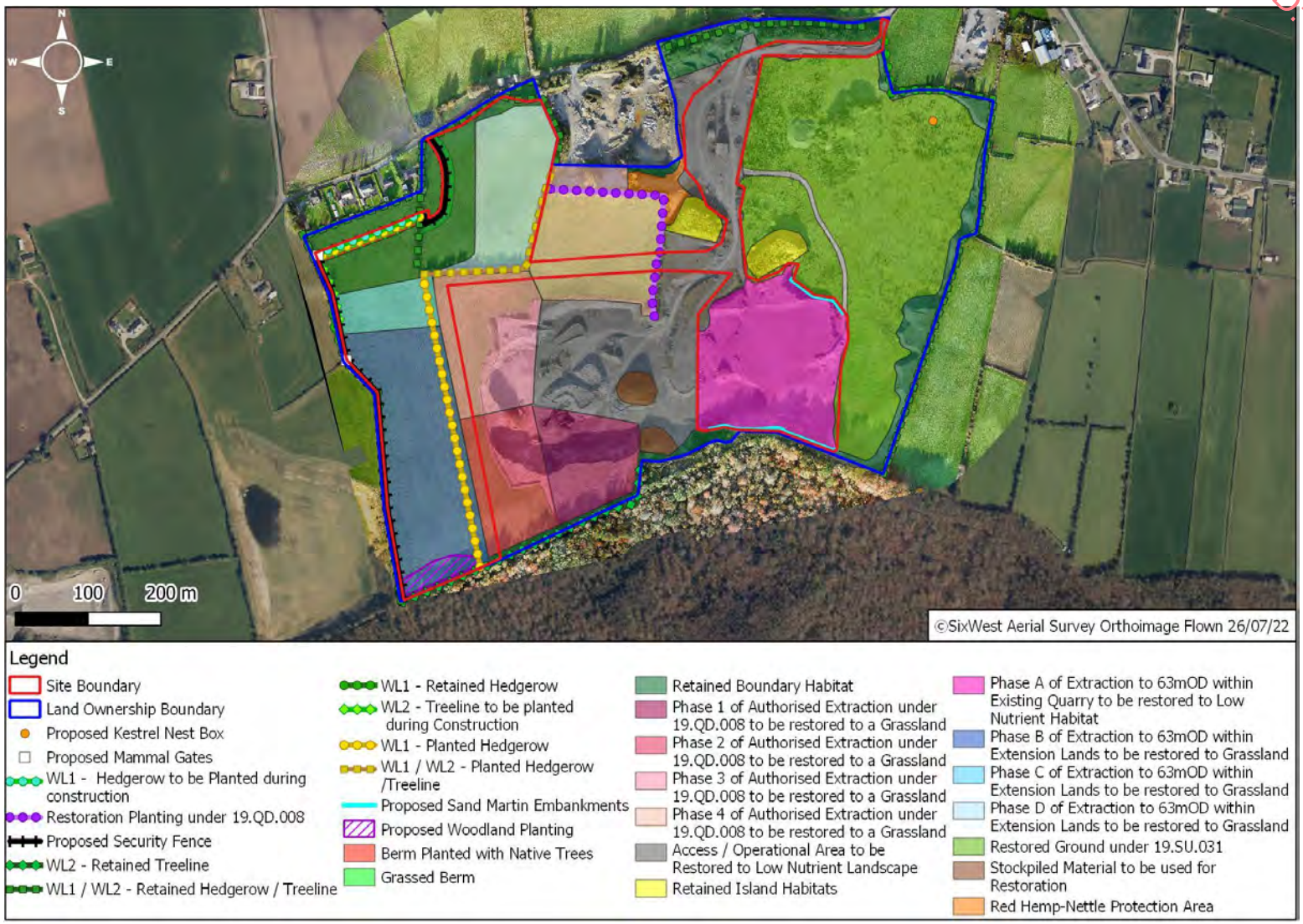
However, this restoration plan also includes for the creation, retention and protection of habitats as required by previously permitted plans. The proposed restoration of the Site is presented in Figure 3-1 and is attached as an appendix to this report in A3 format. The different phases of this restoration plan are also presented in A3 format as part of the appendix.

Upon completion of extraction activities, the Site will be fully decommissioned within a 2-year period, with all plant and equipment removed during the initial stage of final restoration.

Waste considered unsuitable for re-use or recycling, which includes, inter alia, domestic waste, will be disposed of off-site by an appropriately permitted waste contractor at a suitable permitted waste facility. All-access routes will be broken up to improve the percolation of the surface into the ground.

The boundaries of the Site will be checked and security measures in the form of additional perimeter fencing, and signage will be erected as required to prevent unauthorised access to the Site by members of the public.

Figure 3-1: Proposed Restoration Plan



3.1 Construction Phase Works

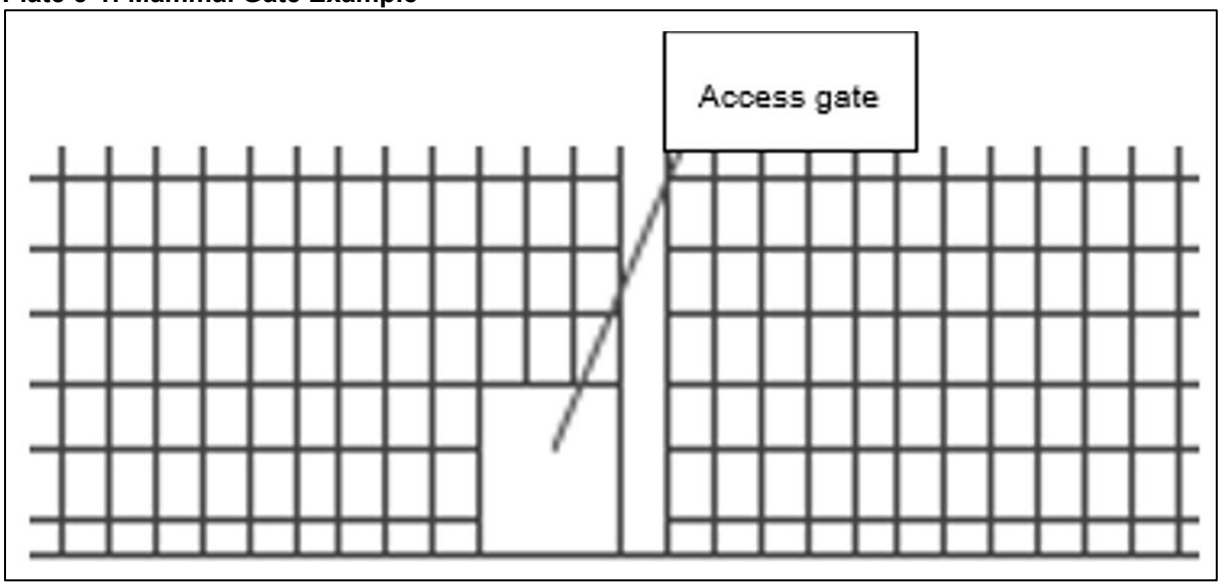
The Proposed Development will be undertaken in phases so that the area of exposed ground does not significantly increase over time. Therefore, the removal of vegetation on-site will be staggered. The construction phase planting has been designed to replace and establish vegetation on-site at the earliest possible point to mitigate the removal of treelines and hedgerows (ca. 702m in total) as the Proposed Development progresses. Therefore, construction phase works have been included in this Restoration Plan.

It is proposed to introduce ca. 795m of linear planting as part of the construction phase, refer to Figure 3-2 for context.

3.1.1 Installation of Fencing, Mammal Gates and Hedgerow Planting

A security fence, consisting of wooden post and wire mesh fencing, will be introduced along the northwest boundary of the Site. This fence will be ca. 2m high. Two mammal gates will be introduced along this security fence. The mammal gates will be suitably located at points along the perimeter fence in order to ensure connectivity for terrestrial mammals such as rabbits, badger, foxes to the wider landscape. Refer to Plate 3-1 for context.

Plate 3-1: Mammal Gate Example



A 140m hedgerow will be planted to the north of this fence. A suitable planting mix for this northern hedgerow has been included in Table 3-1 below. This hedgerow will be planted in tripled staggered rows to provide a well-structured hedgerow.

This newly planted hedgerow will be lightly managed / pruned in year two. Once established, the hedgerow will be cut on a 2 or 3-year cycle with no more than 1/3 cut in any one year. All pruning and management will take place outside of the nesting and breeding bird season, typically March 1st to August 31st.

Table 3-1: Proposed Hedgerow Mix

Common Name	Scientific Name	Percentage of Mixture (%)
Hawthorn	*Crateagus monogyna*	60%
Blackthorn	*Prunus spinosa*	15%
Holly	*Ilex aquifolium*	15%

Common Name	Scientific Name	Percentage of Mixture (%)
Guelder Rose	*Viburnum opulus*	2.5%
Hazel	*Corylus avellana*	2.5%
Dog Rose	*Rosa canina*	2.5%
Spindle	*Euonymus europaeus*	2.5%

3.1.2 Creation and Planting of Screening Berms

Two screening berms will be constructed within the north / northwest portion of the proposed extension lands. These berms will be located in between the proposed extraction area and the residential properties outside the Site boundary. A minimum set-back of 80m from the proposed extraction area and these residential properties will be maintained at all times.

The berms will be ca. 3m high and 7m wide at the base. Once extraction commences in Phase B, the western berm will be formed. The western berm will be retained throughout the lifetime of the Proposed Development. This berm will be planted with a double row of native trees, amounting to ca. 280m of hedgerow / treeline. The proposed planting mix is outlined in Table 3-1 below.

The planting of the western berm will take place within the first available season (November to March) and any trees that fail to become established within five years of planting will be replaced by trees of a similar size / species within the next planting season. Early planting during construction will allow this habitat to become established during the operations on-site.

Prior to extraction commencing in Phase D, the eastern berm will be created. The eastern berm will be sown with a grass seed mix to retain the soils and prevent dust. This berm will not be planted with any trees and will be removed once operations have ceased. The soils from this berm will be used in the restoration of the northern field where possible.

Table 3-2: Western Berm Planting Mix

Common Name	Scientific Name
High Canopy – Dominants (20%)	
Ash	*Fraxinus excelsior*
Pedunculate oak	*Quercus robur*
Scots pine	*Pinus sylvestris*
Low Canopy – Sub-dominants (20-25%)	
Alder	*Alnus glutinosa*
Downy birch	*Betula pubescens*
Rowan	*Sorbus aucuparia*
Understory and Fringe – Higher Shrubs (20-40%)	
Bird Cherry	*Prunus padus*
Elder	*Sambucus nigra*

Common Name	Scientific Name
Hazel	*Corylus avellana*
Holly	*Ilex aquifolium*
Hawthorn	*Crataegus monogyna*
Goat willow	*Salix caprea*
Understorey and Edge – Lower Shrubs (15-25%)	
Blackthorn	*Prunus spinosa*
Dog-rose	*Rosa canina*
Spindle	*Euonymus europaeus*

The planted berm will be retained and protected throughout the lifetime of the Proposed Development. Once mature, the berm will provide potential foraging habitats for species within the vicinity of the Site.

The eastern berm will be sown with a varied sward structure which includes grasses, legumes and herbaceous species. This berm will not be planted with trees, refer to Table 3-2 for details on the proposed grassland mix.

Table 3-3: Eastern Berm Mixed-sward Grassland Mix

Common Name	Scientific Name	Percentage of Mixture (%)
Grasses		
Perennial ryegrass	*Lolium perenne*	50%
Timothy	*Phleum pratense*	8%
Meadow fescue	*Festuca pratensis*	8%
Legumes		
White clover	*Trifolium repens*	8%
Red Clover	*Trifolium pratense*	8%
Sainfoin	*Onobrychis*	8%
Herbs		
Ribwort plantain	*Plantago lanceolata*	4%
Chicory	*Cichorium intybus*	4%

The eastern berm will be dismantled after operations have ceased. The topsoil and subsoil within this berm will be used in the restoration of the Site, where possible.

As part of the design process, the area proposed for aggregate reserve removal was adjusted to increase the set-back of future operations under this planning from residents to a minimum distance of 80m.

3.1.3 Proposed Planting to the North of the Screening Berms

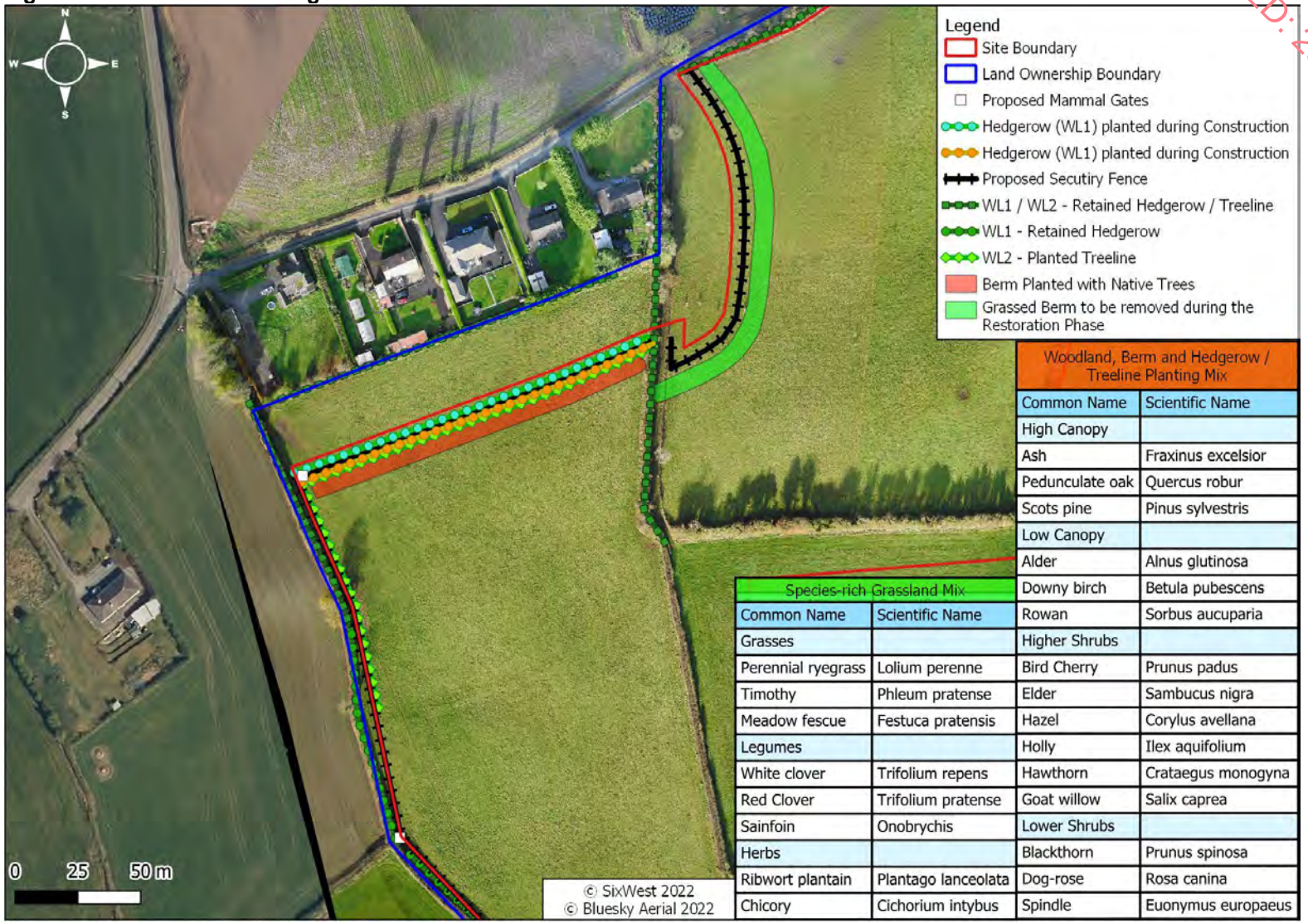
A 140m treeline will be planted to the north of the western berm during the construction phase. This treeline will comprise of the species listed in Table 3-2. The varied canopy height and understorey planting will ensure a biodiverse treeline is introduced in this area and will further screen the base of the western berm. This treeline will be planted in triple staggered rows.

A 140m hedgerow will also be introduced to the north of the western berm during the construction phase. This hedgerow will be located to the north of the treeline and to the south of the proposed fence and its associated hedgerow. This additional hedgerow will further soften the appearance of the northwest boundary of the Site. This hedgerow will be planted with the same species as the hedgerow described in Section 3.1.1. This hedgerow will be managed as per the hedgerow management measures described in Section 3.1.1.

3.1.4 Proposed Treeline along Western Boundary

A ca. 95m treeline will be planted along the western boundary of the Site during the construction phase. This treeline will be planted alongside the existing hedgerow. The proposed security fence will be installed ca. 5m from the proposed treeline. The treeline will comprise of the species listed in Table 3-1.

Figure 3-2: Restoration during Construction Phase Works



Species-rich Grassland Mix	
Common Name	Scientific Name
Grasses	
Perennial ryegrass	Lolium perenne
Timothy	Phleum pratense
Meadow fescue	Festuca pratensis
Legumes	
White clover	Trifolium repens
Red Clover	Trifolium pratense
Sainfoin	Onobrychis
Herbs	
Ribwort plantain	Plantago lanceolata
Chicory	Cichorium intybus

Woodland, Berm and Hedgerow / Treeline Planting Mix	
Common Name	Scientific Name
High Canopy	
Ash	Fraxinus excelsior
Pedunculate oak	Quercus robur
Scots pine	Pinus sylvestris
Low Canopy	
Alder	Alnus glutinosa
Downy birch	Betula pubescens
Rowan	Sorbus aucuparia
Higher Shrubs	
Bird Cherry	Prunus padus
Elder	Sambucus nigra
Hazel	Corylus avellana
Holly	Ilex aquifolium
Hawthorn	Crataegus monogyna
Goat willow	Salix caprea
Lower Shrubs	
Blackthorn	Prunus spinosa
Dog-rose	Rosa canina
Spindle	Euonymus europaeus

3.2 Phased Restoration of Active Quarry to the West

3.2.1 Dismantling of Eastern Embankment and Stockpiles

The eastern berm will be dismantled after all operations have ceased. The topsoil and subsoil within this berm will be used in the restoration of the Site, where possible.

Stockpiles within the existing active pit will be dismantled and utilised for restoration purposes, as marked by Figure 3-1.

3.2.2 Re-establishment of Grasslands

Stripping of new lands will be controlled to expose only the next phase of extraction. This will ensure that the area of exposed ground does not significantly increase over time. The phasing of the works is presented in Figure 3-1.

Exhausted areas will be re-levelled into an undulating landscape, all stockpiles and trenches will be removed from these areas. Safe slopes will be created from the new ground level to the adjoining lands. Stockpiled material and soils stripped from the next phase of extraction will be used to cover the previously exhausted area, allowing for continuous restoration. Soils will be spread to a depth not exceeding 300mm. These areas will then be reseeded. It is recommended that the species mix outlined in Table 3-2 is utilised to enhance the ecological value of the Site.

A programme of observation and maintenance, including wetting during periods of dry weather will be followed to ensure the successful restoration of grassland habitats in these exhausted areas.

3.2.3 Re-planting of Hedgerows and Hedgerow / Treelines

In addition to re-establishing grassland habitats, all hedgerows and hedgerows / treelines removed during the quarrying works will be re-planted once operations in each phase have ceased. The central hedgerow removed to facilitate access into Phase B and C will be re-planted once operations have ceased in these areas and works have progressed into Phase D. The hedgerow / treeline bordering Phase D will be replanted once operations have ceased and the final restoration works have begun.

These hedgerows and hedgerows / treelines will be planted across the newly re-established grasslands within the first available planting season. All species will be of local providence, native and / or those with a known attraction or benefit to local fauna. Table 3-2 above provides an appropriate planting mix to replace the hedgerow / treeline removed within the northern section of the Site, and Table 3-1 presents a suitable planting mix for the re-planting of the central managed hedgerow.

These linear features will be replanted with native species in tripled staggered rows to provide a well-structured hedgerow and hedgerow / treelines. A height of 3-4m will be established along the hedgerow / treelines after two to three years (three to four growing seasons).

Annual inspections of the trees will take place for a period of five years to ensure tree health and establishment. Trees that fail to become established within five years of planting will be replaced by trees of a similar size / species within the next planting season.

All re-planted hedgerows will be lightly managed / pruned in year two. Once established, the hedgerow will be cut on a 2 or 3-year cycle with no more than 1/3 cut in any one year. All pruning and management will take place outside of the nesting and breeding bird season, typically March 1st to August 31st.

3.2.4 Proposed Woodland Planting

A ca. 0.26ha woodland area will be planted within the southwest portion of the Site during Phase B. Works during Phase B will progress from south to north. Therefore, as extraction occurs within the central and northern portion of Phase B, restoration works (including the planting of this woodland area) will begin in the southern section of Phase B.

The addition of woodland planting within an exhausted section of an ongoing operational phase will maximise the time the trees have to become established. This woodland area will help provide additional nesting and foraging opportunities for birds and mammals in the long term.

All planting will consist of native or naturalised species that are prevalent in the immediate area and will provide a source of food for a variety of species throughout the year. The woodland area will be planted with the high canopy, low canopy, understorey and fringe species listed in Table 3-1.

Advanced nursery stock will be used as part of the planting mix for the woodland. Trees and shrubs will be planted directly into square tree pits. The tree pits will be at least 100mm greater than the root system, with the depth not exceeding the root ball. Pit to be backfilled with a mix of topsoil, planting compost and polymer granular. The planting will take place within the first available season (November to March), and any trees that fail to become established within 5 years of planting will be replaced by trees of a similar size / species within the next planting season.

3.3 Protection / Retention of Habitats

3.3.1 Red Hemp-nettle Protection Area

The habitats supporting red hemp-nettle will be protected as part of the Proposed Development. These habitats have been delineated onsite using red surveyor flags and signage has been erected. Access into this area will be restricted to activities relating to the management or monitoring of red hemp-nettle. As such, no materials or equipment will be stored in the red hemp-nettle protection zone.

The habitats supporting red hemp nettle will be maintained as an open habitat with sparse vegetation cover. Scrub / competing vegetation will be removed as required during the appropriate time of year i.e. outside of the breeding bird season (March 1st to August 31st). Future management of this area will be informed by monitoring.

3.3.2 Boundary Habitats

3.3.2.1 Hedgerow / Treelines

The boundary vegetation within the eastern portion of the Site, atop the retained quarry slopes, will be left in situ. In addition, the following protection measures will be implemented for the protection of trees bordering the extension lands to the west:

- A minimum buffer of 5m will be maintained between the proposed extraction area and the retained hedgerows onsite / the woodland to the south. This buffer has been extended to include the full crown extent of the hedgerow / treeline separating the proposed extension lands from the L20113-2 local road to the north. The extraction area has also been reduced to allow for a 5m buffer from the proposed treeline along the western boundary of the Site;
- No materials, equipment or machinery will be stored within close proximity to retained hedgerows / treelines;
- Notice boards, wires, etc., will not be attached to any trees;

- The construction of the berms onsite will be supervised by an Ecological Clerk of Works ('ECoW') to ensure that no impacts occur to bordering hedgerows / treelines. The retained trees will be assessed by an arborist following the completion of these works;
- In addition, the condition of the trees bordering the extraction areas within the Site will be inspected by the ECoW on an annual basis; and,
- In order for treeline protection measures to work effectively, all personnel associated with the operation of heavy plant machinery must be familiar with the above principles for the protection of treelines.

3.3.2.2 Recolonising Bare Ground

The ground in between the boundary hedgerow / treelines and the restored quarry floor to the east is sloped and characterised by bare ground and pockets of recolonising vegetation.

Recolonising bare ground is an essential feature for a highly diverse range of specialist flora and fauna and is especially important for a suite of rare or threatened invertebrates which use open areas for nesting, chasing after prey and basking. Examples of invertebrates that utilise bare ground habitats include solitary bees, butterflies and moths.

These slopes provide a calcareous environment for plants to develop away from competition and can lead to interesting communities of pioneer species. These areas will not be altered as part of the Restoration Plan.

3.3.3 Island Habitats

There are two soil stockpiles within the existing quarry, which have developed as biodiversity islands. The height and undisturbed nature of these habitats has enabled flora to recolonise and become established. These vegetated stockpiles will be left in-situ, refer to retained island habitats in Figure 3-1 for context.

3.3.4 Existing Restored Ground

The calcareous grassland located within the eastern portion of the landholding will not be altered as part of this Restoration Plan and will be left in-situ. This area will continue to be monitored as outlined in Section 4.

3.4 Creation of Habitats

3.4.1 Proposed Low Nutrient Habitat

An additional area of extraction is proposed within the eastern portion of the Site. Once operations in this area have ceased, this area will be restored to a low nutrient landscape. This will require the levelling off of the ground to a gently undulating landscape and the removal of stockpiles and trenches. No soil will be spread on this area as it is envisaged that calcareous flora and pioneer species will colonise this low nutrient habitat. The creation of this low nutrient habitat will provide suitable conditions for red hemp nettle growth and establishment.

This low nutrient landscape will be monitored for this species and should it be recorded in this area; suitable management and protection strategies will be implemented such as the control of scrub and competitor species.

3.4.2 Sand Martin Nesting Area

Sand martins were identified foraging within the proposed extension lands during the 2023 breeding bird surveys and previous sand martin nest holes have been identified onsite. Sand martins require steep or vertical slopes of fine sand. They will tunnel into sand even when it is being excavated and may even tunnel in heaps of loose sand. Both males and females make a horizontal tunnel 45-90cm long with a chamber at the end.

Suitable sites may be used for years. Sites are abandoned once the face slumps, becomes weathered (forming resistant crust), overgrown with vegetation, or accessible to predators. New tunnels will be dug as the cliff collapses, or as old holes become too big.

As per the restoration plan submitted under 19.SU.031, it is proposed to regrade slopes within the eastern portion of the Site to create suitable sand martin nesting habitat. However, the exact location of the sand martin embankments has been altered to allow for additional quarrying works. The slopes along the southern and northeast boundary of this additional extraction area will be regraded to prevent predator access and to ensure ca. 3-5m of vertical slopes. The re-grading of this area will happen once extraction has ceased within the eastern portion of the Site. Refer to Figure 3-1 for indicative location.

Whilst extraction activities are occurring within the eastern portion of the Site, a suitable quarry / aggregate face will be identified and set aside. This should ideally be away from the main works area to avoid any potential impacts on this species.

3.4.3 Kestrel Nesting Area

A potential kestrel nest was identified underneath the conveyor within the existing storage shed onsite. It is proposed to encourage the kestrels to relocate to an area within Agall Quarry that is not subject to direct anthropogenic disturbance.

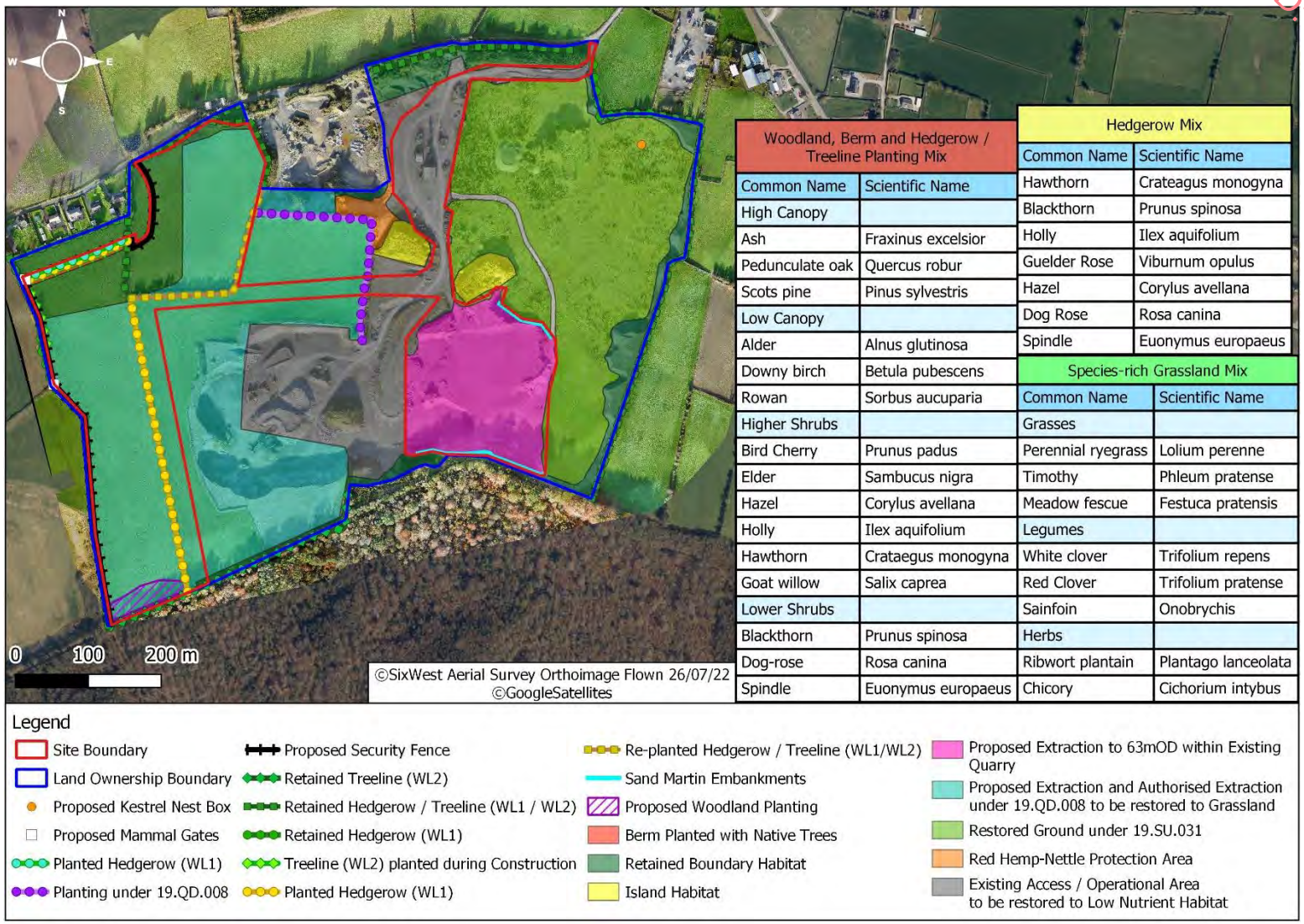
The kestrel nest box will be erected on a post within the northeast portion of the Site. This nest box will be designed to attract kestrels, refer to Plate 3-2 for examples. The exact location will be specified by the ECoW.

The northeast portion of the Site comprised of a calcareous grassland. This area will provide suitable foraging habitat for this species and is considered to be a suitable location for the nest box.

Plate 3-2: Examples of Kestrel Nest Boxes

The proposed restoration of the Site after operations have ceased and all restoration works are complete is presented in Figure 3-1 below.

Figure 3-3: Final Restoration of the Site



Woodland, Berm and Hedgerow / Treeline Planting Mix	
Common Name	Scientific Name
High Canopy	
Ash	Fraxinus excelsior
Pedunculate oak	Quercus robur
Scots pine	Pinus sylvestris
Low Canopy	
Alder	Alnus glutinosa
Downy birch	Betula pubescens
Rowan	Sorbus aucuparia
Higher Shrubs	
Bird Cherry	Prunus padus
Elder	Sambucus nigra
Hazel	Corylus avellana
Holly	Ilex aquifolium
Hawthorn	Crataegus monogyna
Goat willow	Salix caprea
Lower Shrubs	
Blackthorn	Prunus spinosa
Dog-rose	Rosa canina
Spindle	Euonymus europaeus

Hedgerow Mix	
Common Name	Scientific Name
Hawthorn	Crateagus monogyna
Blackthorn	Prunus spinosa
Holly	Ilex aquifolium
Guelder Rose	Viburnum opulus
Hazel	Corylus avellana
Dog Rose	Rosa canina
Spindle	Euonymus europaeus

Species-rich Grassland Mix	
Common Name	Scientific Name
Grasses	
Perennial ryegrass	Lolium perenne
Timothy	Phleum pratense
Meadow fescue	Festuca pratensis
Legumes	
White clover	Trifolium repens
Red Clover	Trifolium pratense
Sainfoin	Onobrychis
Herbs	
Ribwort plantain	Plantago lanceolata
Chicory	Cichorium intybus

4 MONITORING AND AFTERCARE

4.1 Site Closure and Safety Preparation

This restoration plan has been carefully designed to prevent the creation of potential hazards that may pose a threat to public safety. Following cessation of quarrying activities, the Site will be fully decommissioned within a 2-year period.

Waste considered unsuitable for re-use or recycling, which includes, *inter alia*, domestic waste, will be disposed of off-site by an appropriately permitted waste contractor at a suitable permitted waste facility. All access routes will be scarred to improve percolation of surface into the ground.

The boundaries of the Site will be checked and security measures in the form of additional perimeter fencing, and signage will be erected as required to prevent unauthorised access to the Site by members of the public.

4.2 Restoration Success Monitoring

The Project Ecologist will conduct an annual review of the Site's restoration plan. The annual review will involve compiling a species record of flora and fauna utilising the restored areas onsite. The review will also incorporate an assessment of the following:

- The continued health of the red hemp-nettle population;
- The continued health of the blue flea bane population; and,
- The presence or absence of invasive species onsite. Mitigation measures will be implemented in the event that invasive species are identified.

The Restoration Success Monitoring will be undertaken within the optimal season for botanical surveys including the appropriate months for red hemp-nettle surveys.

A report will be submitted to the Council each year detailing the progress of the restoration plan and outlining any additional works required. Following a period of five-years, a review will be undertaken to assess the requirements for additional / further works / monitoring.

5 REFERENCES

[1] DoAHG, "Wildlife, Habitats & the Extractive Industry," Department of Arts, Heritage and the Gaeltacht, Dublin, 2007.

[2] EPA, "Environmental Management in the Extractive Industry," Environmental Protection Agency, Wexford, 2006.

[3] J. A. Fossitt, A Guide to Habitats in Ireland, Dublin : The Heritage Council, 2000.

APPENDICES

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APPENDIX A

Restoration Plan – Appendix A

Proposed Extension to Agall Quarry

Condron Concrete Limited

Ardan Road, Tullamore, Co. Offaly

Contents

APPENDIX A


N
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Legend
Site Boundary
Land Ownership Boundary
TN1 - Badger Prints
TN2 - Badger Scat
TN3 - Potential Kestrel Nest
TN4 - Deer Prints
TN5 - Fox Scat
TN6 - Fox Prints
TN7 - Mammal Hole in 2023
TN8 - Mammal Hole in 2024
ED2 - Spoil and Bare Ground
ED3 - Recolonising Bare Ground
ED4 - Active Quarry and Mines
GA1 - Improved Agricultural Grassland
GS2 - Dry Meadows and Grassy Verges
WS1 - Scrub
Red Hemp-nettle Area
Existing Treeline (WL2)
Existing Hedgerow / Treeline (WL1/WL2)
Existing Hedgerow (WL1)
Mammal Run
BL1 - Stone Walls and Other Stonework
Sand Martin Nest Holes
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200 m
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N
W
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Legend
Site Boundary
Land Ownership Boundary
Red Hemp-nettle Area
Planting under 19.QD.008
Island Habitat
Restored Ground under 19.SU.031
Stockpile
Authorised Extraction under 19.QD.008 restored to Grassland
Existing Treeline (WL2)
Existing Hedgerow/Treeline (WL1/WL2)
Existing Hedgerow (WL1)
Stone Walls and Other Stonework (BL1)
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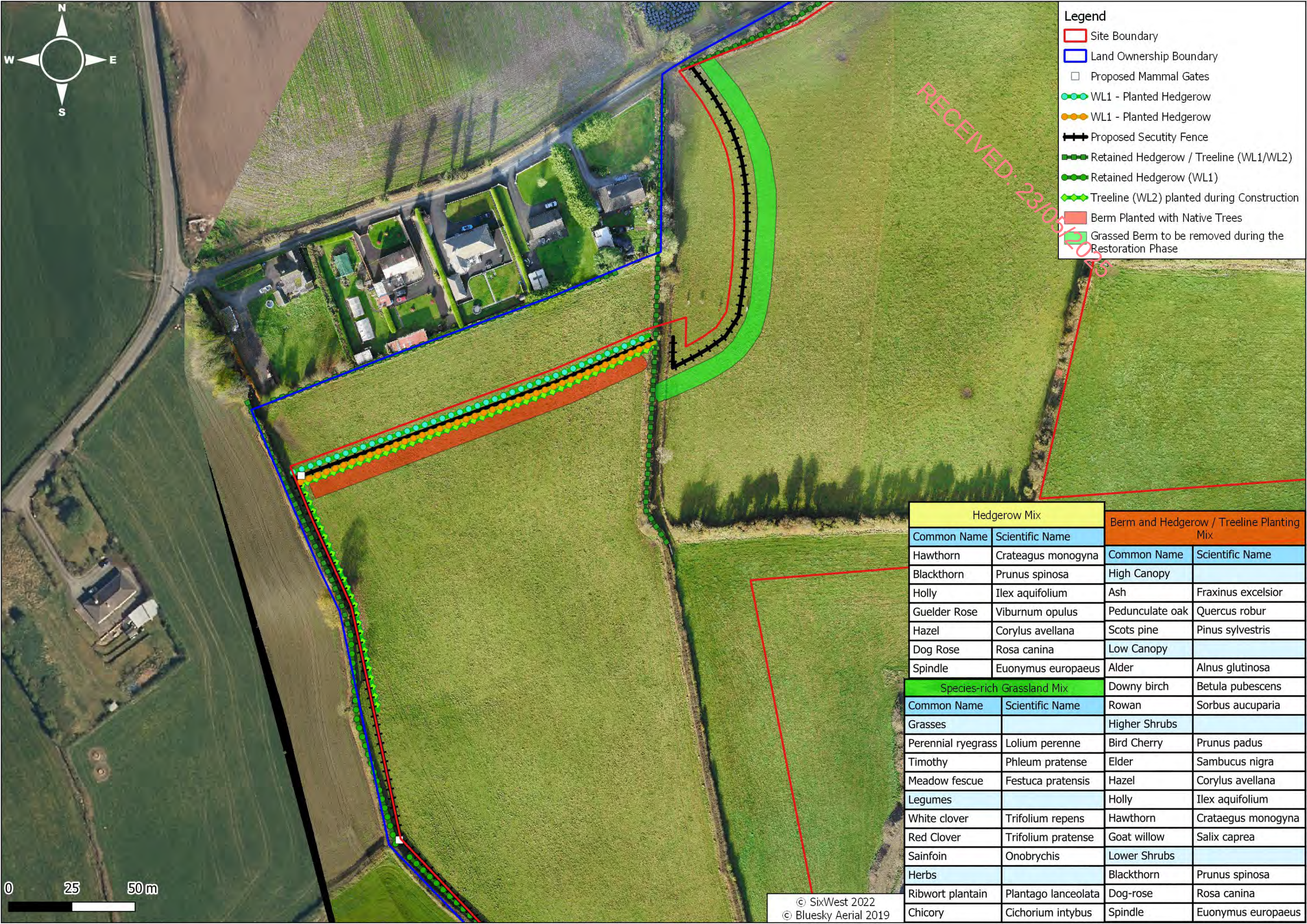
© Bluesky Aerial 2019



Hedgerow Mix	
Common Name	Scientific Name
Hawthorn	Crateagus monogyna
Blackthorn	Prunus spinosa
Holly	Ilex aquifolium
Guelder Rose	Viburnum opulus
Hazel	Corylus avellana
Dog Rose	Rosa canina
Spindle	Euonymus europaeus

Species-rich Grassland Mix	
Common Name	Scientific Name
Grasses	
Perennial ryegrass	Lolium perenne
Timothy	Phleum pratense
Meadow fescue	Festuca pratensis
Legumes	
White clover	Trifolium repens
Red Clover	Trifolium pratense
Sainfoin	Onobrychis
Herbs	
Ribwort plantain	Plantago lanceolata
Chicory	Cichorium intybus

Berm and Hedgerow / Treeline Planting Mix	
Common Name	Scientific Name
High Canopy	
Ash	Fraxinus excelsior
Pedunculate oak	Quercus robur
Scots pine	Pinus sylvestris
Low Canopy	
Alder	Alnus glutinosa
Downy birch	Betula pubescens
Rowan	Sorbus aucuparia
Higher Shrubs	
Bird Cherry	Prunus padus
Elder	Sambucus nigra
Hazel	Corylus avellana
Holly	Ilex aquifolium
Hawthorn	Crataegus monogyna
Goat willow	Salix caprea
Lower Shrubs	
Blackthorn	Prunus spinosa
Dog-rose	Rosa canina
Spindle	Euonymus europaeus


N
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Legend
Site Boundary
Land Ownership Boundary
Red Hemp-nettle Area
Kestrel Nest Box
Mammal Gates
Hedgerow (WL1) planted during Construction
Hedgerow (WL1) planted during Construction
Planting under 19.QD.008
Proposed Security Fence
Retained Treeline (WL2)
Retained Hedgerow / Treeline (WL1/WL2)
Retained Hedgerow (WL1)
Treeline (WL2) planted during Construction
Re-planted Hedgerow / Treeline (WL1/WL2)
Sand Martin Embankments
Proposed Woodland introduced as part of the Restoration of Phase B
Berm Planted with Native Trees
Grassed Berm to be removed during restoration phase
Retained Boundary Habitat
Island Habitat
Phase A - Extraction Completed and restored to Low Nutrient Landscape
Restored Ground under 19.SU.031
Authorised Extraction under 19.QD.008 restored to Grassland
Southern Extraction in Phase B Complete and Restoration to Grassland Commenced
Active Northern Extraction within Phase B
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Legend
Site Boundary
Land Ownership Boundary
Red Hemp-nettle Area
Kestrel Nest Box
Mammal Gates
Hedgerow (WL1) planted during Construction
Hedgerow (WL1) planted during Construction
Planting under 19.QD.008
Proposed Security Fence
Retained Treeline (WL2)
Retained Hedgerow / Treeline (WL1 / WL2)
Retained Hedgerow (WL1)
Treeline (WL2) planted during Construction
Re-planted Hedgerow / Treeline (WL1/WL2)
Sand Martin Embankments
Proposed Woodland Planting
Berm Planted with Native Trees
Grassed Berm to be removed during the Restoration Phase
Retained Boundary Habitat
Retained Island Habitat
Phase A - Extraction Completed and restored to Low Nutrient Landscape
Phase B - Extraction Completed and restored to Grassland
Phase C Commenced
Restored Ground under 19.SU.031
Authorised Extraction under 19.QD.008 restored Grassland
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200 m
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Legend

- Site Boundary
- Land Ownership Boundary
- Red Hemp-nettle Area
- Kestrel Nest Box
- Mammal Gates
- Hedgerow (WL1) planted during construction
- Hedgerow (WL1) planted during construction
- Planting under 19.QD.008
- Proposed Security Fenceline
- Retained Treeline (WL2)
- Retained Hedgerow / Treeline (WL1/WL2)
- Retained Hedgerow (WL1)
- Treeline (WL2) planted during construction
- Re-planted Hedgerow (WL1)
- Re-planted Hedgerow / Treeline (WL1/WL2)
- Sand Martin Embankments
- Proposed Woodland Planting
- Berm Planted with Native Trees
- Grassed Berm
- Retained Boundary Habitat
- Retained Island Habitat
- Phase A - Extraction Completed and restored to low Nutrient Landscape
- Restored Ground under 19.SU.031
- Authorised Extraction under 19.QD.008 restored to Grassland
- Phases B,C & D - Restored to Grassland

0 100 200 m

Hedgerow Mix	
Common Name	Scientific Name
Hawthorn	Crateagus monogyna
Blackthorn	Prunus spinosa
Holly	Ilex aquifolium
Guelder Rose	Viburnum opulus
Hazel	Corylus avellana
Dog Rose	Rosa canina
Spindle	Euonymus europaeus

Species-rich Grassland Mix	
Common Name	Scientific Name
Grasses	
Perennial ryegrass	Lolium perenne
Timothy	Phleum pratense
Meadow fescue	Festuca pratensis
Legumes	
White clover	Trifolium repens
Red Clover	Trifolium pratense
Sainfoin	Onobrychis
Herbs	
Ribwort plantain	Plantago lanceolata
Chicory	Cichorium intybus

Species Mix for Woodland, Western Berm and Treeline	
Common Name	Scientific Name
High Canopy	
Ash	Fraxinus excelsior
Pedunculate oak	Quercus robur
Scots pine	Pinus sylvestris
Low Canopy	
Alder	Alnus glutinosa
Downy birch	Betula pubescens
Rowan	Sorbus aucuparia
Higher Shrubs	
Bird Cherry	Prunus padus
Elder	Sambucus nigra
Hazel	Corylus avellana
Holly	Ilex aquifolium
Hawthorn	Crataegus monogyna
Goat willow	Salix caprea
Lower Shrubs	
Blackthorn	Prunus spinosa
Dog-rose	Rosa canina
Spindle	Euonymus europaeus

Legend

- Site Boundary
- Land Ownership Boundary
- Proposed Kestrel Nest Box
- Proposed Mammal Gates
- Hedgerow (WL1) planted during construction
- Planting under 19.QD.008
- Proposed Security Fence
- Retained Treeline (WL2)
- Retained Hedgerow / Treeline (WL1/WL2)
- Retained Hedgerow (WL1)
- Treeline (WL2) planted during Construction
- Re-planted Hedgerow (WL1)
- Re-planted Hedgerow / Treeline (WL1/WL2)
- Sand Martin Embankments
- Proposed Woodland Planting
- Berm Planted with Native Trees
- Retained Boundary Habitat
- Retained Island Habitat
- Restored Ground under 19.SU.031
- Existing Access / Operational Area to be restored to Low Nutrient Habitat
- Proposed Extraction to 63mOD within Existing Quarry to be restored to Low Nutrient Habitat
- Proposed Extraction and Authorised Extraction under 19.QD.008 to be restored to Grassland
- Red Hemp-Nettle Protection Area