May 2025

Non-Technical Summary (NTS) Volume 1

Proposed Whitestown Sand & Gravel Quarry

On behalf of Mr. James & Mr. Thomas Metcalfe

Whitestown Lower, Co. Wicklow

MALONE O'REGAN ENVIRONMENTAL

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Whitestown Lower, Co. Wicklow

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1 INTRODUCTION

Malone O'Regan Environmental ('MOR Environmental') was commissioned by Mr. James Metcalfe and Mr. Thomas Metcalfe ('the Applicants') to prepare an Environmental Impact Assessment Report ('EIAR') in support of a planning application to Wicklow County Council ('WCC') for a proposed sand and gravel extraction and processing development in Whitestown, County Wicklow.

1.1 General

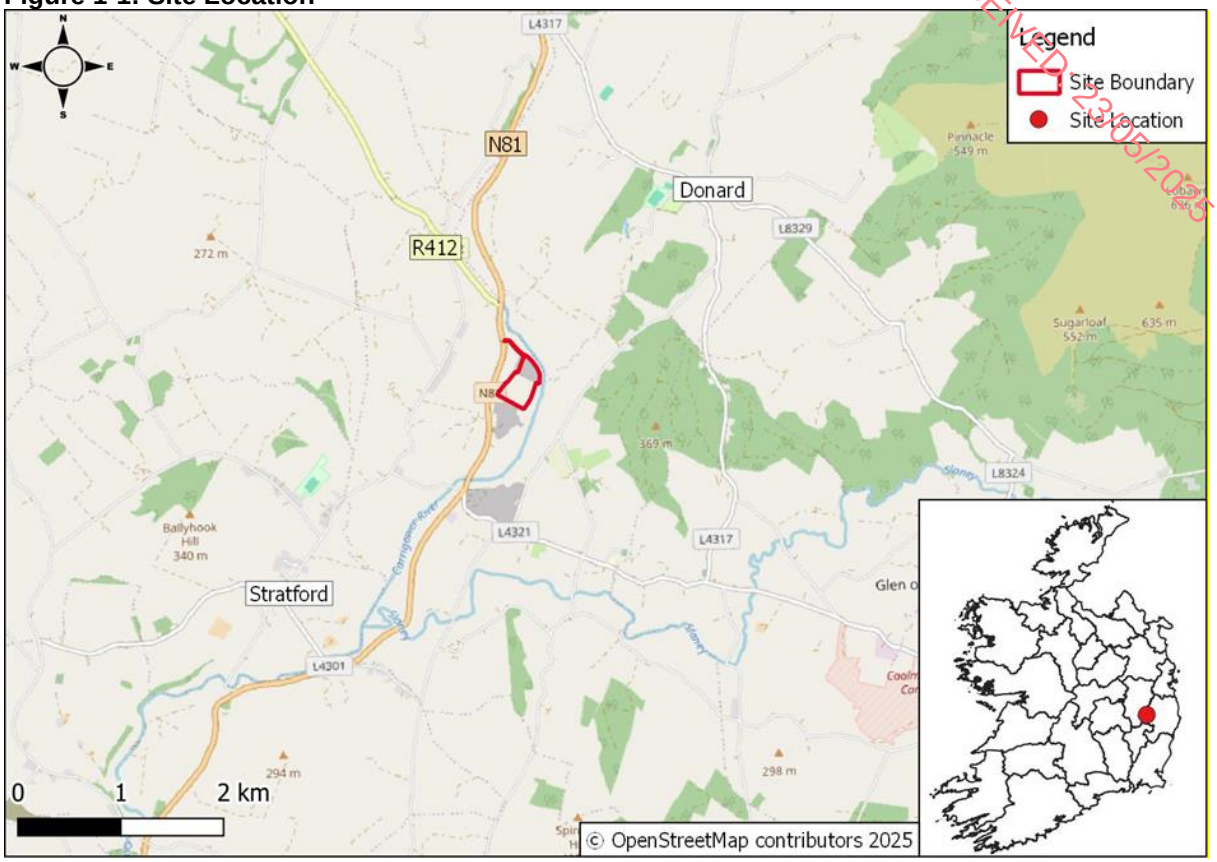
This Non-Technical Summary ('NTS') document (Volume 1) provides a summary in non-technical language of the information within the main text of the EIAR that is contained in Volume 2, while the supporting technical documents are presented in Volume 3 – Appendices. It should be noted that the phrase "not significant" is a term which usually means that the activity referred to can result in notable changes to the environment, but without significant consequences.

A significant effect, as per the Environmental Protection Agency's Environmental Impact Assessment Reports Guidelines 2022, is an effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.

This EIAR assesses the potential environmental effects of a proposed sand and gravel extraction and processing development. The extraction lands are situated adjacent to the south of a former sand and gravel pit, which extends into undeveloped agricultural land. The proposal comprises the extraction, processing and temporary storage of aggregates—primarily sand and gravel—along with the continued use of existing on-site infrastructure. This infrastructure includes the established site entrance from the N81, internal access routes, weighbridge, site office, wheel wash, production well and security gates. Restoration works will also be undertaken within the footprint of the former sand and gravel pit. Together, these elements are referred to hereafter as the Proposed Development.

The Proposed Development will occur on a site covering an area of circa ('ca.') 11.2 hectares ('ha'), which includes the proposed 7.75ha extension of the former sand and gravel pit within the townland of Whitestown Lower, Co. Wicklow (Ordnance Survey Ireland Grid Reference ITM 691307 695854) ('the Site'). The Site is situated approximately 2.76km northeast of Stratford town centre and 2.28km southwest of Donard town centre. Refer to Figure 1-1 for the redline boundary of the application Site.

Figure 1-1: Site Location



1.2 The Applicant

The Applicants, Mr. James Metcalfe of Newtown, Donard, Co. Wicklow, and Mr. Thomas Metcalfe of Ballylion, Donard, Co. Wicklow, own the land detailed in Folios WW2198 and WW31829F. They have lived and farmed on these lands for over twenty years, giving them a deep understanding of the site's history and surroundings. This long-term local engagement, combined with their extensive industry experience, uniquely positions them to successfully carry out the Proposed Development.

Their expertise in the aggregates and extraction business is further reinforced by a strong family background in the industry. Their uncle, Nicholas O'Toole, operated a successful business that supplied aggregates from local sand pits and quarries to farmers and construction sites throughout the area. By working closely with him for many years, both Tom and James gained invaluable experience and developed excellent customer relationships, further demonstrating their capability to manage and execute projects effectively in this sector.

1.3 Overview of the Site and Context

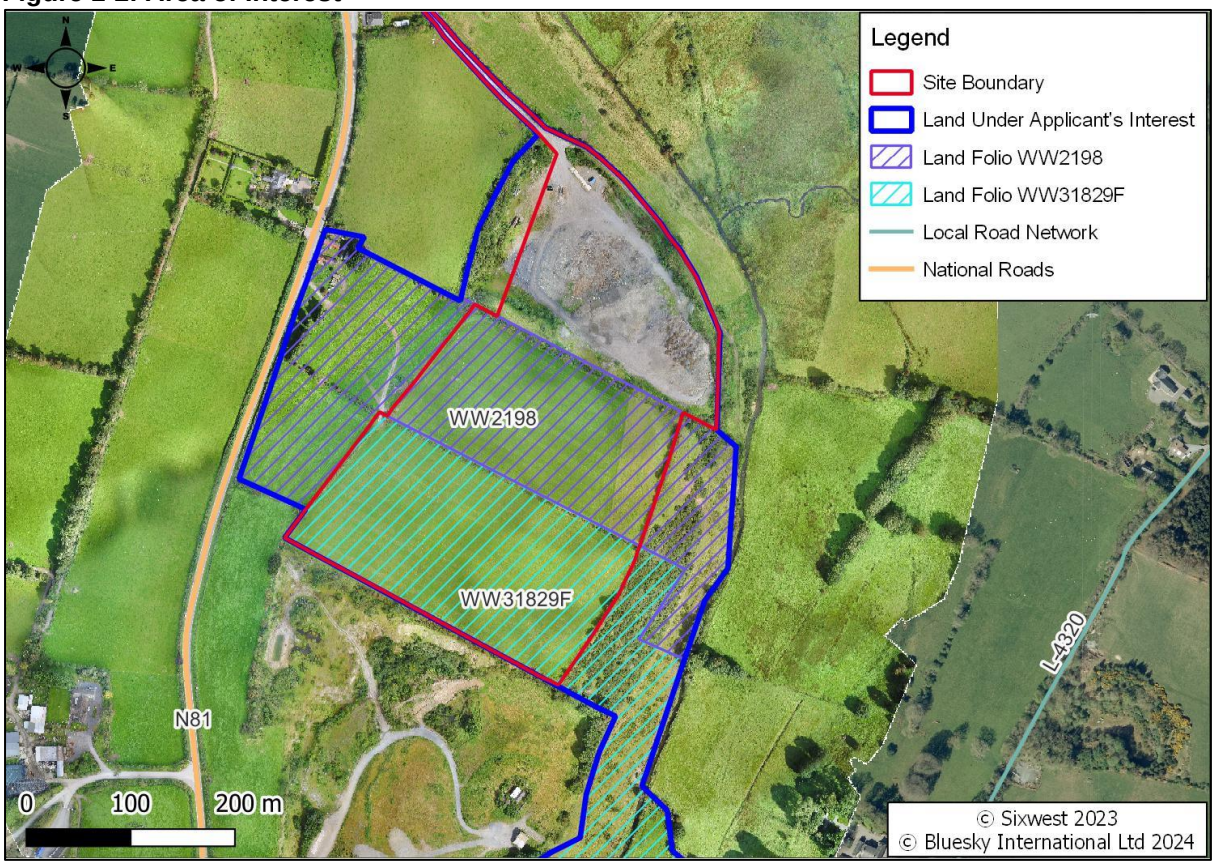
The current landholding (Figure 1-2 below) in the Site's northern portion was previously used for aggregate extraction. After extraction operations ceased, WCC granted planning permission (Ref: 20/1117) for the importation of inert soil and stones to facilitate the restoration of an extracted area in the northern part of the Site. This restoration is being undertaken under a separate Waste Facilities Permit ('WFP') and does not form part of the current application. The Proposed Development will take place independently but alongside the ongoing WFP restoration works.

The Proposed Development seeks to extend the former sand and gravel pit into adjacent agricultural land to the south, with a total Site area of ca. 11.2ha. The 7.75ha extraction area lies within Folios WW2198 and WW31829F, currently in agricultural use and separated by a

hedgerow. Both parcels are under the ownership of the Applicants. As this extension area has no known history of prior development, it is classified as "Greenfield" land. The Proposed Development will extend from the historic pit along established haul routes, connecting to the existing site entrance.

The ongoing restoration programme at the former sand and gravel pit, within the Proposed Development, was authorised by the Environmental Section of the WCC, permitting the importation of waste soils under WFP-WW-21-0067-01, granted to Herbie Stephenson Ltd. on 24th August 2021, with an expiry date of 23rd August 2026.

Figure 1-2: Area of Interest



The Site is bounded by and accessed via the N81 road to the west, with a ca. 250m long access road connecting the former sand and gravel pit entrance to the N81 road. The northern boundary of the Site is adjacent to the Slaney River Valley Special Area of Conservation ('SAC'), with an eastern section of the Site overlapping the SAC. Its southern boundary is adjacent to an unauthorised landfill which was granted a waste license (W0204-01) in April 2006 for the activities associated with the cleanup and remediation of an unauthorised landfill of ca. 240,000 tonnes ('t') of mixed construction and commercial waste emplaced during the 1970s to 2001.

The Carrigower River is located ca. 40m from the northeast boundary of the Site, which flows in a northeast to southwest direction. The Brown's Beck (Brook) River is located ca. 50m northeast of the Site, which flows in a northeast to southwest direction and joins the Carrigower River at ca. 40m from the Site's northeastern boundary. The Winetavern River, located ca. 1.5km southwest of the Site, flows north to southeast before merging into the Carrigower River ca. 2km southwest of the Site. The Slaney River is located ca. 1.6km south of the Site, flows east to west-southwest. The Carrigower River ultimately becomes part of the Slaney River, ca. 2.6km southwest of the Site.

There are ca. six residential and business properties spread out within 350m of the Site and linear one-off residential dwellings in Whitestown Lower, located ca. 1km west of the Site.

The Site is well served by existing transport infrastructure, benefiting from a priority-controlled T-junction with the N81, a national secondary road. The N81 runs from the M50 motorway to Tullow, County Carlow, in a north-south direction and continues for another 8km past Tullow, terminating at the village of Closh, where it intersects with the N80. The road is a dual carriageway between the M50 and west of Tallaght Bypass or Blessington Road and intersects the M50 at junction 11.

1.4 Environmental Impact Assessment Report ('EIAR')

This Environmental Impact Assessment Report ('EIAR') has been prepared in accordance with all relevant legislative and best practice guidelines in support of the planning application.

1.5 Consultation

In accordance with best practice guidelines [11], [12], this EIAR included non-statutory consultation. Table 1-8 below lists the consultees notified about the Proposed Development, whether a response was received, and the topics of interest raised by the consultee, where relevant. A non-statutory consultation document was issued to all relevant stakeholders inviting their comments on the Proposed Development on 7th February 2025. All of the responses received were considered throughout each stage of the design of the Proposed Development and the Environmental Impact Assessment process. Table 1-1 below outlines the consultees who responded and where their responses were taken into consideration in Volume 2 of the EIAR.

Table 1-1: Consultation and Consultee Responses

Consultee	Date of Response	Method of Response	Topics Raised	Relevant Chapter
Department of Housing, Local Government and Heritage	24/03/2025	Email (letter attached)	Consultation acknowledgement received. The consultee identified the site near several recorded archaeological monuments, including standing stones, cairns, and potential castle remains. The developer is required to commission a detailed archaeological impact assessment involving documentary research, geophysical surveys, and licensed archaeological testing, the results of which must form part of the EIAR. Depending on findings, recommendations may include preservation in situ, archaeological excavation (preservation by record), monitoring, and potentially establishing buffer zones around identified features. Compliance with national archaeological policy, which strongly prefers preservation in situ, and adherence to Wicklow County Development Plan archaeological objectives (particularly preserving recorded monuments and conducting thorough assessments) is mandatory. Regarding nature conservation, as the site is adjacent to the Slaney	The topics raised by the Department are addressed in Chapters 6 and 13

Consultee	Date of Response	Method of Response	Topics Raised	Relevant Chapter
			River Valley SAC, an Appropriate Assessment (AA) must evaluate potential impacts on this protected area, especially concerning aquatic habitats and species like otters. Ecological surveys, including otter and aquatic assessments within the zone of influence, are required, along with proposed mitigation, compensation, enhancement measures, and post-construction monitoring within the EIAR and AA.	
Uisce Éireann	20/03/2025	Email (letter attached)	Consultation acknowledgement received. The consultee has assessed the impacts of the proposed development on water and soils. The applicant must provide detailed plans and methodologies for proposed excavations, clearly assessing groundwater impacts, especially risks associated with excavation below groundwater levels and necessary dewatering measures. The EIAR should comprehensively address potential contamination risks from stormwater runoff and hydrocarbons throughout construction, operational, and decommissioning stages, proposing suitable mitigation to protect groundwater and surface waters. Detailed information on water supply and wastewater servicing must also be provided, alongside considerations for protecting Uisce Éireann drinking water sources, ensuring inert backfill material, managing trade effluent, preventing surface water discharges into combined sewers, and safeguarding public drinking water abstraction points. Additionally, infrastructure capacity and any required upgrades or diversions must be confirmed through Uisce Éireann, ensuring compliance with separation distances, avoidance of building over assets, and adherence to necessary connection agreements and regulatory standards.	The topics raised by Uisce Éireann are addressed in Chapters 7 and 8, of the EIAR
Health and Safety Authority ('HSA')	10/02/2025	Email (letter attached)	Consultation acknowledgement received. The consultee has indicated that the Proposed Development does not fall within their regulatory scope concerning	No topics were raised by the consultee.

Consultee	Date of Response	Method of Response	Topics Raised	Relevant Chapter
			major accidents hazards, resulting in no specific observations or concerns from their side.	
Health Service Executive ('HSE')	10/03/2025	Email (letter attached)	Consultation acknowledgement received. The consultee has raised the assessment of impacts arising from the Proposed Development in relation to population/human health, water (hydrology and hydrogeology), land, soils and geology, air quality, climate change and opportunity for health gain, noise and vibration and waste management, ancillary facilities and cumulative impacts as topics for attention. Additionally, the consultee has recommended that public consultation is undertaken, including the effectiveness of any existing mitigation currently in place for the existing quarry and identify where mitigations should be continued and/or reviewed, a Construction Environmental Management Plan (CEMP) should be included, decommissioning/restoration is considered and an environmental management system is put in place.	The topics raised by HSE are addressed in Chapters 3, 4, 5, 7, 8, 9, 10 and 11, of the EIAR.
Office Public Works ('OPW')	07/02/2025	Email (letter attached)	Consultation acknowledgement received. The consultee has raised the assessment of impacts arising from any potential construction, alteration, reconstruction of bridges, culverts or similar structures over watercourses associated with the development, which would require prior consent. Additionally, if the construction involves damming a watercourse with flume pipes or diversion channels, such activities may require consent. Therefore, the OPW's concerns pertain to the hydrological and hydraulic impacts of the Proposed Development, emphasizing the need for the appropriate consents and adherence to design standards to mitigate potential environmental effects	It is not envisaged that the Proposed Development will involve any of the activities described in the topics raised by OPW during the construction, operational or restoration stages.
Transport Infrastructure Ireland ('TII')	17/02/2025	Email (letter attached)	Consultation acknowledgement received. The consultee has raised the assessment of impacts on the national road infrastructure and has requested that	The topics raised by TII are addressed in Chapters 9,10,11 and 13.

Consultee	Date of Response	Method of Response	Topics Raised	Relevant Chapter
			consultation take place with the local authority in relation to existing and future road schemes and highlight that direct access or intensification of access to the N81, where a 100km/hr speed limit applies, is generally not permitted; The consultee has also specified the need to consider accumulative impacts and any conditions imposed by ABP on the road schemes in the area. A Traffic and Trasport Assessment (TTA) may be required, along with reference to TII's guidelines on sub-threshold TTA requirements. A Road Safety Audit should be considered, and any TMP must comply with TII standards. The CEMP should ensure compliance with TII requirements for works near the national road network. Additionally, a noise assessment is required, and suitable haul routes for material transport from the Site must be identified.	

2 PLANNING CONTEXT & THE NEED FOR THE PROPOSED DEVELOPMENT

2.1 Site Ownership

The lands corresponding to the Proposed Development, folios WW2198 and WW31829F, are owned by the Applicants with access through an existing authorised WFP lands owned by Mr. O'Neill. Access to the Proposed Development is via an existing industrial entrance onto the N81 national secondary road through the former sand and gravel pit. The lands associated with the former sand and gravel pit are owned by Joseph O'Neill, and a letter of consent has been acquired by the applicants for the use of the land

2.2 Planning History at the Site

The former sand and gravel pit, located in the northern portion of the Site, was previously used for aggregate extraction and was granted planning permission on appeal (Planning Ref. 27/5158916) by ABP on 30th November 1982, after WCC initially refused it.

In 2021, WCC granted planning for the proposed WFP application (Planning Ref. 20/1117) with concerns regarding traffic having been resolved through further information responses by the applicant.

At the time of writing this report, the only notable development identified as potentially interacting with the Proposed Development was received by WCC on 29th January 2025, and submitted by Herbie Stephenson Limited (Planning Ref. 2560046). The application seeks permission for the re-commencement and extension of a previously approved rock quarry within the townland of Deerpark and Donaghmore, Co. Wicklow, covering an area of ca. 8.1ha.

2.3 Planning Guidance

The planning context of the Proposed Development has been considered in terms of all national, regional, and local planning contexts.

The National Planning Framework lays out plans to manage more balanced growth between the major Irish cities (Dublin, Cork, Galway, Limerick and Waterford) and Ireland's rural communities. The National Development Plan also outlines the intent to invest in public infrastructure and housing. Both the National Planning Framework and the National Development Plan will require significant quantities of aggregate to deliver new infrastructure. The Irish Concrete Federation released a report stating that in order to meet the growth targets within the National Planning Framework and the National Development Plan, '1.5 billion tonnes of aggregates' are required.

The Eastern and Midland Regional Assembly intends to distribute future population growth and development across the region in a balanced and equitable manner and with a much greater focus on economic development and potential.

The Wicklow County Development Plan ('CDP') 2022-2028 was reviewed. The CDP includes objectives which relate to the extractive industry alongside meticulous guidelines to ensure responsible extraction operations.

These guidelines encompass considerations such as noise pollution, dust emissions, water quality preservation, and landscape conservation, which have been considered as part of this assessment.

2.4 The Need for the Proposed Development

The Proposed Development will facilitate the extraction of high-quality aggregates for supply to the construction industry and concrete manufacturing sector. This contributes to regional economic growth and aligns with the objectives of the CDP.

The Site hosts sand and gravel deposits of significant commercial value, formed during the deglaciation period, and well-suited for construction applications such as concrete production and road base. Development of the Site will enhance local supply, reduce reliance on distant sources, lower transport emissions, and support national policy goals for sustainable mineral resource management.

As outlined in Section 2.4 of the EIAR, the policies and objectives of local and regional plans for the Eastern and Midlands area prioritise economic and infrastructure development. Meeting these objectives will require a reliable supply of high-quality aggregates from a network of efficient and competitive quarry operators.

3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The Proposed Development covers an area of ca. 11.2ha, of which ca. 7.75ha is designated for extraction activities. The extraction area will be situated within land parcels identified by Folios WW2198 and WW31829F, currently in agricultural use and separated by a hedgerow.

The Proposed Development will establish a new sand and gravel extraction area to the south of the former sand and gravel pit, aiming to provide a reliable supply of high-quality aggregates to the local market. It is estimated to yield an in-situ reserve of approximately 1,140,762m^3 of aggregate material, equivalent to approximately 2,053,372t (based on a conversion factor of 1.8), within the proposed 7.75ha extraction area. The Proposed Development will seek to extract sand and gravel from the existing levels down to 143 metres Above Ordnance Datum ('mAOD'), featuring benches at ground level, ca. 162mAOD and 153mAOD. An excavator and dump truck and/or loading shovel will remove the sand and gravel aggregates and transport it to the proposed mobile crusher and screening plant.

Site access is provided via a 250m-long internal roadway connecting directly to the N81, a key arterial route that links the M50, M9 and M11 national road networks. This ensures efficient transportation of materials by HGV's (Refer to Plate 3-1 below).

The Proposed Development will utilise key existing ancillary infrastructure within the historic sand and gravel pit, including the site office, weighbridge, wheel wash and the on-site well.

The extraction area internal boundary slope will be at a gradient of 1:1.5 to a depth of 143mAOD, featuring a bench at 153mAOD to provide stability. No extraction is planned to occur below the groundwater table. The estimated groundwater level is approximately 129 mAOD, which will provide a cover of ca. 14m between the base of extraction and the groundwater level. It is proposed to extract up to a maximum output of 275,000t of aggregates per annum on average. The Applicants are seeking 20-year planning permission for extraction of aggregate at the Site. An overview of the timelines associated with the Proposed Development are as follows;

- Construction and Operational Stage (15-18 years); and,
- Restoration Stage (2 years).

If the Proposed Development meets the proposed extraction rate (ca. 275,000t per annum), the extension lands could be exhausted through an operational stage of ca. 7.5 years. However, due to unknown future economic and market needs, it is likely that the Proposed Development will extract at lower rates than the extraction rate stated above and will, therefore, need a longer operational period. The construction and operational stages will be considered together rather than separately and are expected to take 15-18 years, followed by an additional two years for the restoration stage to rehabilitate the extended area after excavations are completed.

Upon removal of the aggregate reserve, the Site will undergo rehabilitation as per the Restoration Plan.

There will be two distinct instances of soil removal: once during Phase One development and once during Phase Three development. To develop the Site in an organised manner, topsoil clearance will be minimised. Typical topsoil removal operations would be ca. ≤1.0ha per day. The topsoil removed during Phase One will be used to complete the 0.21ha restoration area located in the southeast section of the WFP site, which is designated for reinstatement using site-won materials. Any remaining topsoil will be used to soften the southern slope where the WFP lands meet the adjoining greenfield extraction area.

Additional soils removed during Phase One will be stored on-site for future use in the restoration of the greenfield lands. Restoration of the greenfield area will involve the

importation of topsoil to facilitate agricultural land use. Pit faces and benches will be maintained and planted with a native seed mix to improve soil retention. All imported materials for use in restoration will comply with the National By-Product Criteria in accordance with Regulation 27 of the European Communities (Waste Directive) Regulations []. Restoration will be phased, with soils removed during Phase Three site preparation used in the restoration of lands in areas of Phases One and Two, which will be no longer in use.

3.1 Construction Phase / Site Preparation

The Construction Stage involves preparing the greenfield agricultural lands within the Proposed Development, extending south from the former sand and gravel pit for aggregate processing activities. Initial works include removing intervening hedgerows between the former sand and gravel pit and the extension area of the Proposed Development, breaking through the boundary ridge between the former sand and gravel pit and extension lands to establish an entrance into the sand and gravel resource.

3.1.1 Structured Phasing Plan

The construction and operational stages will be structured in different phases, with each phase involving both preparatory construction activities and subsequent aggregate extraction.

The Proposed Development will be divided into two sections, northern (Folio WW2198) and southern (Folio 31829F), separated by an existing hedgerow running west to east. The extraction works will be phased accordingly over the operational lifetime of the sand and gravel pit. The estimated volumes of topsoil to be removed during each phase are outlined below:

- Phase One: Excavation will commence in the northern section, with material excavated at a slope gradient of 1:1.5 down to an elevation of 153.0mAOD. Approximately 9,600m³ of topsoil will be removed from an area of approximately 32,000m²;
- Phase Two: A bench will be created at 153.0mAOD, followed by further excavation of the northern section down to the final pit floor level of 143.0mAOD, again at a 1:1.5 slope. Upon achieving the proposed base level, a 13.0m by 60.0m settlement pond will be constructed in the northeast corner, with a final depth of 139.8mAOD. The surrounding pit floor, in the vicinity of the settlement pond, will be graded to ca. 142.8mAOD to promote natural drainage into the pond. Additionally, a 3.0m by 8.0m generator shed will be installed west of the pond, along with an 8.0m by 8.0m concrete plinth adjacent to the shed entrance. A drainage line will direct runoff from the plinth through an oil / water separator before discharge into the settlement pond. Phase Two will begin in the eastern section to allow for the installation of the infrastructure during this phase;
- Phase Three: Excavation works will commence in the southern section, where overburden will be removed from ground level at a 1:1.5 slope down to 153.0mAOD. It is expected that ca. 13,667m³ of topsoil is expected to be removed from an area of ca. 45,555m²; and,
- Phase Four: A bench will be constructed at 153.0mAOD in the southern section, with further excavation to the final pit floor level of 143.0mAOD, continuing at a 1:1.5 slope.

The phasing plan is outlined in drawings submitted as part of this application (MW230824 PHASE 1 Overview, MW230824 PHASE 2 Overview, MW230824 PHASE 3 Overview and MW230834 PHASE 4 Overview).

3.1.2 Operational Hours and Staffing

The main operational processing hours for the Proposed Development will be:

- Monday to Friday: 08:00 to 18:00;
- Saturday: 08:00 to 14:00; and,
- Sunday & Public Holidays: Closed.

HGV movements in and out of the sand and gravel pit will occur up to one hour before and after processing operations – i.e. between 07:00 – 19:00 on weekdays and 07:00 – 15:00 on Saturdays. This allows for the departure of HGVs loaded the previous day and ensures returning HGVs can access the Site at the end of the day.

The former sand and gravel pit currently employs four to five staff members, and this is not expected to change with the Proposed Development. Any potential indirect employment effects, such as demand for hauliers or local services, would depend on operational needs and market conditions.

3.1.3 Drainage

The extension area for the Proposed Development is not bounded by any land drains, streams or rivers. Rainwater across the Site percolates into the ground. The main sources of water at the Site will be surface water runoff and process water from the screening and washing processes. To manage this, a water management pond with a capacity of 2,340m^3 will be built following initial phase extraction, after Phases One and Two are completed. The settlement pond will collect water from the sand and gravel floor and process water from the screening and washing plant. No water will be discharged off-site; instead, it will be directed to the settlement pond for reuse. Drainage is further assessed in Chapter 8 – Water (Hydrogeology and Hydrology).

3.2 Rehabilitation Stage / Site Closure

The restoration stage will be carried out in line with a dedicated Restoration Plan, which has been prepared by MOR Environmental and accompanies this planning application (refer to Appendix 6-1). The Restoration Plan outlines proposed restoration measures for each stage of the development, in addition to actions to be undertaken once operations have ceased.

Restoration will involve the careful placement of remaining stored topsoil and subsequent seeding to recreate habitats similar to those that existed prior to extraction activities. As described in Section 3.4.2, topsoil from the Proposed Development will be used in the restoration of the 0.21ha outlined in the planning permission (Planning Ref. 201117).

To complete the restoration of the Proposed Development, topsoil will need to be imported. It is proposed that a 0.5m thick topsoil layer will be added to the area disturbed by the excavation of aggregates; this will require up to 65,875t of soil to be brought into the Site. It is envisaged, based on the current guidance outlined by the EPA, that this soil will be sourced through non-waste pathways, i.e. Declared Regulation 27 soils or greenfield soils (Refer to Section 3.4.4).

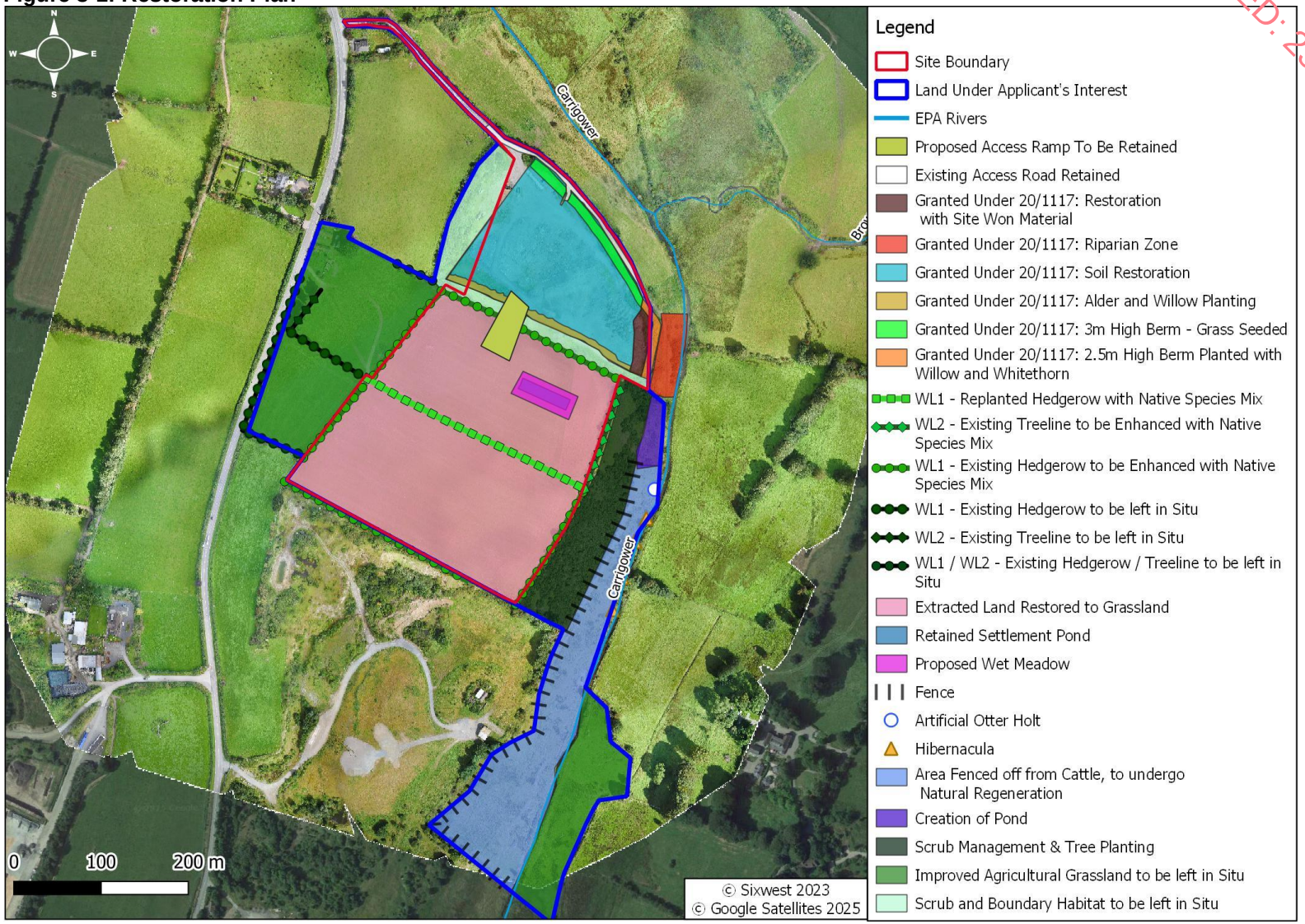
The removed hedgerow between Folio's WW2198 and WW31829F will be re-established, and the proposed water management pond will be fully retained and enhanced to form a permanent biodiverse waterbody that will support local fauna and flora. The access into the excavated lands through the ridge along the boundary of the WFP will be left in place and covered with a topsoil layer and then seeded (see Figure 3-1 for context).

All mobile and semi-mobile plant and equipment will be removed from the Site.

The shed will be dismantled and removed upon completion of the works. However, it is proposed to leave in-situ the concrete plinth and shed floor.

The underground oil interceptor will be depolluted by a competent and National Waste Collection Permit Office ('NWCPO') authorised operator to ensure no oils or silts remain. The tank will be left in situ.

Figure 3-1: Restoration Plan



4 CONSIDERATION OF ALTERNATIVES

The Planning and Development Regulations 2001 (as amended) specify the information to be contained within an EIAR. Schedule 6 1(d) specifies that an EIS shall include '*An outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice taking into account the effects on the environment.*'

The alternatives evaluated during the evolution of the Proposed Development are outlined below.

4.1 The "Do-Nothing" Scenario

Under the 'do-nothing' scenario, the proposed extension would not proceed, and the greenfield lands would remain in agricultural use. The existing WFP would continue to operate within its permitted limits, and the restoration of the worked-out area would proceed in accordance with existing planning and waste facility permits.

This alternative would avoid the direct environmental impacts associated with further extraction. However, it would also mean that a known, high-quality aggregate resource would remain undeveloped despite being adjacent to a former sand and gravel pit with suitable infrastructure. This could place increased pressure on alternative aggregate sources in the region.

Furthermore, it would represent a missed opportunity to complete the restoration and visual integration of the wider landholding under single ownership, including the potential to create enhanced biodiversity and landscape features.

4.2 Alternative Locations

The Applicant holds a landbank within the area corresponding to the Proposed Development. An agreement is in place with Mr Joseph O'Neill to facilitate access to the Proposed Development through the former sand and gravel pit, which currently operates as a WFP.

The area corresponding to the Proposed Development contains high-quality aggregates, with no zoning restrictions or planning infringements that would prevent excavation. The Site benefits from strong local connections to the primary road network. Additionally, there are relatively few sensitive receptors along the haul route to regional and national roads.

Expansion to the north is not viable, the former sand and gravel pit where aggregates has already been excavated and is currently used for importing waste soils under a WFP site. Expansion to the east is constrained with a notable loss in ground elevation and by the Carrigower River. Lands to the west are limited by a notable loss in ground elevation and the N81 road and residential dwellings.

The agricultural fields to the south of the WFP remain a greenfield site with no previous planning history. These fields are setback from the N81 road and residential dwellings, making them a viable extraction area for the Proposed Development.

Given these constrains, extending the quarry into the lands proposed is considered the only viable option for the Applicants in their landholding.

4.3 Alternative Layout and Phasing Options

The greenfield lands have existing access via agricultural entrances onto the N82 to the west. However, these are not designed for regular HGV movements and would require additional screening measures to achieve appropriate visual screening. Additionally, efforts been made on the adjoining site in terms of restoration can be supported through the Proposed Development incorporating the WFP into the design and direct moving of surplus soils from the greenfield site into the WFP restoration project.

Additionally, new infrastructure such as a wheel wash to prevent material tracking onto the road and weighbridge would be required. The presence of two separate access points would also contribute to increased local traffic.

The expanded project proposal aimed to remove all boundaries and level the hill to match the surrounding terrain. Although this project could reduce the visual impact using berms, it was found to have additional ecological effects, especially on the eastern and northern boundaries of the greenfield areas, and visual impacts from the west, north, and east would be more significant than the adopted approach.

The adopted layout begins with extraction in the northern portion of the extension area (Folio WW2198), progressing southward in a phased manner. This approach allows for the early establishment of drainage and settlement infrastructure and enables progressive restoration of worked-out stages. Access to the extension area is provided through the former sand and gravel pit and extension lands, thereby avoiding the need for new external haul roads.

The pit design incorporates benches at 153mAOD and a final extraction level at 143mAOD, with slopes at a gradient of 1:1.5. This ensures long-term stability, supports stormwater management, and facilitates restoration. The phasing strategy also allows for ongoing environmental monitoring and responsive mitigation during active operations.

4.4 Alternative Extraction Methods

A range of extraction and processing methods were considered for the Proposed Development. The assessment considered the nature of the resource, the hydrogeological setting, the Site's proximity to sensitive receptors and compatibility with the former sand and gravel pit infrastructure.

The sand and gravel deposits present within the extension area are amenable to conventional excavation using tracked excavators and front-end loaders, with screening and washing carried out on-site. The extraction will occur entirely above the established groundwater table, and as such, does not necessitate any active groundwater management techniques.

Three primary extraction strategies were reviewed during project planning:

- Dry Extraction Only (without washing);
- Dry Extraction with On-Site Wet Processing (Preferred); and,
- Dry Extraction with Fixed Processing and Conveyor Systems.

Blasting, crushing, or any form of hard-rock extraction methods were ruled out early in the process as they are entirely unnecessary for the type of aggregate present.

4.5 Alternative Restoration

Restoration is a key component of the Proposed Development and was carefully considered at the early planning stage. Two restoration pathways were evaluated:

- A structured reinstatement to agricultural use; and,
- A more passive, nature-led rewilding approach.

The preferred option involves a progressive restoration of the Site to agricultural grassland, complemented by the creation of a permanent wetland feature around the settlement pond.

This approach supports soil reuse, biodiversity enhancement, and landscape integration. Stored topsoil and imported inert material will be used to regrade the Site, stabilise pit faces, and re-establish hedgerow boundaries. The wetland will provide additional habitat value, contributing to the site's long-term ecological resilience.

In contrast, a passive rewilding approach was deemed less predictable and potentially less effective in delivering safe, stable, and ecologically diverse outcomes, particularly on exposed quarry faces.

5 POPULATION AND HUMAN HEALTH

A desk-based study was carried out to characterise the environment in relation to the human population, including the receiving population, population changes over time, employment levels and human health indicators. Information from the Central Statistics Office ('CSO') was analysed according to guidance from the Institute of Public Health ('IPH'), in particular the Health Sensitivity Conceptual Model. The sensitivity of the local population and outlook to any potential effects was deemed to be Medium.

The Proposed Development will be a direct provider of employment during the working life of the Quarry. Indirect employment arising from the quarry will result from the requirements of machinery maintenance, upkeep, deliveries, and professional services.

Mitigation measures have been included in relevant chapters within the EIAR to address any potential effects to human health arising from the Proposed Development.

The effect of the Proposed Development on the population and local economy in terms of direct employment can be considered as long-term and positive. The overall effect on human health was considered long-term and not significant. The effects on the local and regional aggregate supply can be considered as long-term, positive and moderate. The residual effect in terms of human health within the local population will be long-term and slight to moderate.

6 BIODIVERSITY

This chapter assesses the likely effects of the Proposed Development on biodiversity, focusing on both the local Site characteristics and broader context. A comprehensive suite of ecological surveys and assessments, based on best practice guidance, were conducted at the Site. The assessments considered the full life cycle of the Proposed Development, including the construction phase, operational phase, and restoration phase. The Site was assessed by suitably qualified MOR Environmental ecologists. An initial walkover was conducted to assess the extent and quality of habitats present, and updated Site walkovers were undertaken to ensure that the findings of all surveys and assessments remained consistent. The field surveys conducted on-site were extended also to identify the potential for these habitats to support other features of nature conservation importance and protected species (badgers, bats, breeding birds and otter).

The boundary of one European site, the Slaney River Valley SAC, is partially located within the Site boundary. The boundaries of an additional three SACs and two SPAs are located within 15km of the Site. Given the distance and intervening lands between these five European sites, they were screened out from further consideration. Further consideration was given to the Slaney River Valley SAC in the NIS due to the proximity of the Site to the SAC.

A combined Stage One: Appropriate Assessment Screening Report and Stage Two: NIS has been prepared in support of this planning application. The NIS concluded that the Proposed Development, either alone or in-combination with other plans or projects, will not result in any significant adverse effects on any European sites or any of their designated features of interest following the implementation of appropriate mitigation measures. All mitigation measures have been incorporated into the Proposed Development.

6.1 Habitats

The Site comprised of the WFP in the north of the Site and the proposed extension lands in the south. The WFP comprised primarily of recolonising bare ground and spoil and bare ground around areas that had undergone high levels of disturbance through previous extraction. Areas of scrub were also bordering these bare ground habitats in the north of the Site.

The proposed extension lands comprised of two agricultural fields and were divided and bordered by hedgerow / treelines. The agricultural fields were comprised of managed grassland and the hedgerow / treelines ranged from unmanaged and containing semi-mature trees >5m in height to heavily managed in sections.

The Carrigower River and Brown's Beck (Brook) River were identified as notable habitats outside of the Site boundary. These were depositing / lowland rivers and both form part of the Slaney River Valley SAC.

The recolonising bare ground, spoil and bare ground and scrub habitats in the WFP are undergoing restoration under Planning Reference 20/1117. The Proposed Development will not alter these habitats and they were screened out from further assessment.

Loss or disturbance to the improved agricultural grassland fields was not considered to be significant given the low ecological value of this habitat. However, the loss of the hedgerow / treelines within the Site warranted further assessment. Mitigation measures have been included to ensure the protection of any species utilising these habitats (refer to Section 6.2 below) and to replace any vegetation removed. It is considered that the habitats created and enhanced as part of the restoration for the Site within the landholdings will partially compensate for the removal of vegetation onsite. These habitats include an area of scrub management and tree planting and the enhancement of the boundary hedgerow / treelines with a native species mix. These habitats will be created during the construction phase works to allow for the newly created and enhanced habitats to become established over the lifetime of the Proposed Development.

The extracted land will be restored to grassland and the removed hedgerow will be planted with a native species mix. Other enhancement measures included as part of the restoration plan include fencing off an area from cattle to undergo natural regeneration, the creation of a pond, installation of hibernacula and installation of an artificial otter holt. It is considered that when implemented, the Restoration Plan will provide more beneficial habitats for protected and notable species than currently exist within the Land Ownership boundary. The Restoration Plan will compensate for the vegetation removal and change in land use associated with the Proposed Development.

6.2 Species

Following the initial assessment of the Site and to ensure a comprehensive assessment of the potential impacts of the Proposed Development, the following surveys were undertaken: breeding bird surveys, badger surveys, bat surveys, otter survey and invasive species. These surveys covered various areas within the Site boundary, the lands under owner interest and habitats of note outside of the site boundary and lands under owner interest, collectively referred to as 'the Study Area'.

During the badger survey undertaken in 2025, a number of badger footprints were identified on-site and within the lands under owner interest. A single hole badger sett was also identified in the area of scrub, ca. 60m to the east of the Site (location confidential). This sett appeared to be inactive at the Site of the survey, given that the entrance was covered in cobwebs and the ground around the entrance to the holes appears to have remained undisturbed for some time. It is considered that badger may occasionally use this sett.

No bats were recorded roosting in any trees on-site. Across the two dusk surveys undertaken on-site the following bat species were recorded foraging and commuting on-site and within the vicinity of the Site: common pipistrelle, soprano pipistrelle, Leisler's bat, brown long-eared bat, and *Myotis* species. Based on the levels of bat activity recorded it was concluded that the Site is of high local value to foraging and commuting bats. A full bat report can be found in Volume 3 of this EIAR.

23 different bird species were recorded either within the Site or flying over the Site during the breeding bird surveys undertaken on-site. No species were classified as '*confirmed breeding'* and all 23 species were observed displaying territorial behaviours and were classified as '*possible breeding*'. It was concluded that the on-site habitats were considered suitable for a range of countryside bird species. A full bird report can be found in Volume 3 of this EIAR.

In-river otter surveys were undertaken in the Carrigower River and Brown's Beck (Brook) River within a 150m buffer of the Site. These surveys did not identify any otter holts or otter couches along these watercourses within 150m of the Site. However, there was extensive evidence of foraging and commuting otter along these rivers in the form of otter spraints, otter prints and otter feeding remains. No evidence of otter activity was identified within the Site boundary, and the on-site habitats were not considered optimal for foraging and commuting otter.

The Site was considered to be suitable for foraging and commuting rabbit, foxes and deer and evidence of these species was found onsite. No evidence of pine marten or hedgehogs were identified on-site but it was concluded that these species may commute through the Site to utilise the scrub and woodland habitats to the east of the Site.

Taking the above into account, the Proposed Development may result in some disturbance to wildlife in the area. Therefore, specific mitigation measures have been included for the protection of bats, birds, and terrestrial mammals. These mitigation measures include undertaking pre-construction surveys for badger, supervision of vegetation clearance by an ECoW, the protection of retained treelines to remain as suitable foraging and commuting habitats for bats, and noise and water quality mitigation measures to prevent effects to otter. Additionally, no vegetation removal will take place during the breeding bird season (1st March to 31st August), and the restoration plan includes tree planting and boundary planting which will replace the vegetation removed to facilitate the Proposed Development. Habitats will also be created as part of the restoration of the Site that will benefit wildlife within the area.

No plant species protected under the Flora Protection Order were recorded within the Study Area and no regulated high-impact invasive species were identified. However, biosecurity considerations and measures to prevent the introduction of invasive species onsite will be implemented for the duration of the works during the importation of material for restoration.

Considering the nature of the Proposed Development, the mitigation measures to be implemented and the proposed planting and restoration of the Site, it is concluded that the Proposed Development will be consistent with the National, Local and Municipal planning policies and objectives, and the effect on local biodiversity will be not significant.

7 LAND USE, SOILS AND GEOLOGY

This chapter assesses the likely effects of the Proposed Development on the land, soils, and underlying geological environment, focusing on both the local site characteristics and broader context. The assessment draws on national and international guidance and is informed by desktop studies, site surveys, and established geological data.

The Site comprises two main sections: a northern area currently operating under a Waste Facility Permit, and a greenfield southern section in agricultural use. The permitted facility accepts clean soil and stones under strict criteria, and no contaminated material is accepted. Historically, the northern portion was a gravel pit, while the southern lands have remained undeveloped. The Proposed Development involves phased extraction of sand and gravel across a 7.75-hectare footprint, reaching a final depth of 143mAOD. Site preparation will involve removal and storage of topsoil and subsoil for later reuse during restoration.

The topography of the Site is varied but not extreme. The central plateau lies around 160–164mAOD, with natural declines toward the N81 to the west, an unauthorised landfill to the

south, and a river corridor to the east. These gradients guide the site's surface water flow and influence the layout of extraction phases and drainage management.

The soil profile across the site is dominated by shallow, well-drained mineral soils derived from granite glaciofluvial deposits. These are generally acidic, with low moisture retention and moderate agricultural potential. Localised poorly drained soils occur in the northeastern area, and mineral alluvial soils are found near the eastern and northern boundaries, reflecting the influence of nearby watercourses. No peat or deep organic soils are present. According to the IEMA 2022 guidance, the soils are classified as low to moderate in sensitivity, with the alluvial soils near the river corridor considered of moderate to high sensitivity due to their ecological and hydrological roles.

The subsoil, or Quaternary geology, consists primarily of glaciofluvial sand and gravel, classified as granite-derived and formed under deglacial conditions. These deposits are typically well-draining and of high permeability. The underlying bedrock is predominantly from the Butter Mountain Formation, composed of slate-schist and quartzite. No bedrock outcrops are exposed at surface, and a mapped fault line runs along the northern boundary, marking a transition to the Donard Andesite Member. This geological context has no recorded geological heritage features or designated sites within or adjacent to the Site.

The economic geology of the Site is significant. The sand and gravel deposits represent a locally valuable aggregate resource identified in the national GIS Aggregate Potential Mapping as being of high quality. Their extraction will contribute to regional construction supply, reducing reliance on more distant sources and aligning with the objectives of Ireland's National Minerals Policy Framework. Extraction activities will be managed to avoid degradation of soil quality, and the development includes a full restoration strategy to support long-term beneficial after-use.

Geomorphologically, the Site reflects a post-glacial landscape with hummocky terrain created by ice-marginal processes. Undulating surfaces and gentle depressions are consistent with meltwater deposition, and more recent alluvial deposits near the river corridor reflect ongoing fluvial influence. These features contribute to local topographic and soil diversity and have been considered in the design of both extraction areas and restoration contours.

The principal direct impact from the Proposed Development is the permanent removal of subsoil and aggregate material, which forms part of the geological and hydrological structure of the Site. Although the topsoil will be stripped and stored for reuse, the aggregate itself is a non-renewable resource and will not be reinstated. This represents a permanent change in soil structure and geological profile. However, the affected area is relatively modest in scale and is already zoned for extractive use. With the proposed mitigation and restoration measures, the significance of this change is assessed as not significant.

Other potential effects include temporary loss of soil functionality due to excavation, degradation of soil structure from improper handling, and erosion or sedimentation risk during stripping or stockpiling. These are temporary and manageable through best practice methods, including phased excavation, segregated stockpiles, weather-sensitive handling, and designated haul routes. A detailed soil management plan will guide excavation and restoration across four operational phases, ensuring topsoil and subsoil are preserved for effective reuse.

There is a low risk of soil contamination during operations due to the use of machinery and fuel on-site. However, this risk will be mitigated through the implementation of spill prevention systems, controlled refuelling zones, and regular equipment maintenance. The risk of any such contamination is therefore minimal.

Interactions with other environmental factors are limited. Potential linkages with biodiversity, hydrology, air quality, and visual impacts have been assessed in related chapters of the EIAR. In all cases, no likely significant effects have been identified. There are also no indirect effects

expected from the development, as all soil-related activities are localised and will not influence off-site land stability, water quality, or geological integrity.

Residual effects from the Proposed Development, following full implementation of mitigation measures, are considered slight, long-term, and not significant. The permanent removal of aggregate will alter the geological profile, but this change is expected, accounted for, and balanced by the restoration of landform and soil function. The overall land use will temporarily change from agriculture to mineral extraction during the operational period, but post-extraction restoration will return the land to a beneficial and ecologically sustainable use, supporting grassland and wetland habitats.

A comprehensive Restoration Plan accompanies this application and ensures that the site will be returned to a stable, integrated landform consistent with surrounding topography and land use.

No significant cumulative or indirect effects are expected, and there is no requirement for ongoing monitoring. With best practice management and the proposed rehabilitation strategy, the overall effects on land, soils, and geology are considered long-term, slight, and not significant.

8 WATER

This chapter of the EIAR examines how the Proposed Development may affect both surface water and groundwater resources in the surrounding environment. The assessment was conducted in line with EU and Irish legislation, particularly the Water Framework Directive (‘WFD’), and reflects guidance from national environmental and engineering bodies.

The Site lies above a locally important bedrock aquifer that is moderately productive in local zones. The aquifer’s current classification indicates high groundwater vulnerability due to shallow subsoils and permeable ground conditions. As extraction progresses and overburden is removed, the site’s classification will elevate to “rock at or near surface,” which increases its vulnerability to contamination. However, this elevation in risk will be confined to the immediate 7.75-hectare extraction area, which is a very small proportion of the larger Ballyglass Groundwater Body.

Groundwater at the site is inferred to flow from northwest to southeast, with no significant groundwater source protection zones located within a 5km radius. Fourteen private wells were identified within 2km of the Site, though none are directly linked to or reliant on groundwater flow paths crossing the Site. Pump testing of an on-site well (Well 2) confirmed that a modest abstraction rate of approximately 1 cubic metre per hour is achievable. This supply is considered sufficient to support site operations, including use in the wheel wash, welfare facilities, and topping up the settlement pond.

Nearby surface water features include the Carrigower River, approximately 40 metres northeast of the Site, and the Slaney River, roughly 1.6 kilometres south. Despite their proximity, there is no hydrological connection between the Site and these watercourses. The Carrigower River forms part of a WFD-classified waterbody currently considered “moderate” in ecological status but “good” in physico-chemical quality. The Slaney River is a designated Special Area of Conservation and Salmonid waterbody and currently holds “high” status under WFD criteria. Due to the lack of hydrological connection and the absence of designed discharges from the Site, no effects on these surface waterbodies are anticipated.

The main water-related infrastructure associated with the development is a settlement pond located in the northeast corner of the extraction area. The pond will be constructed as a closed-loop system, with a capacity of approximately 2,340 cubic metres, divided into three chambers to provide a 24-hour retention period. It will be used to treat and recycle wash water used in site operations. The pond will receive inputs from rainfall, on-site abstraction, and used wash

water. No planned discharge will occur off-site, and any potential overflow will percolate into the ground, with no route to nearby rivers.

Potential risks to groundwater and surface water arise from the use of heavy machinery, fuel storage, and the disturbance of soils. These risks include localised contamination from hydrocarbon spills and increased exposure of the aquifer due to removal of protective soil layers. Without mitigation, these risks could have a slight negative impact on the local groundwater body. However, a suite of preventative measures will be implemented to control contamination, including bunded refuelling areas, use of oil-water separators, and spill response protocols. Daily inspections of the settlement pond will be conducted to check for signs of hydrocarbon contamination, and if detected, pumping will stop immediately and the water will be safely contained and removed.

Although the development increases aquifer vulnerability locally, the actual volume of water to be abstracted is low, and there is no expectation of a significant drawdown or pressure on groundwater reserves. The proposed activity does not alter groundwater levels or quality to an extent that would compromise the WFD objectives for the Ballyglass Groundwater Body, which currently holds “good” status but is listed as “at risk” of not achieving future targets. Similarly, the development will not impact any downstream surface waterbodies or hinder them from meeting WFD goals for water quality or ecological integrity.

A groundwater monitoring programme will be implemented throughout the operational period of the quarry. Quarterly sampling will take place from strategically located wells upgradient and downgradient of the Site to track any changes in water quality. Parameters will include pH, conductivity, suspended solids, nutrients, hydrocarbons, and metals. Monitoring data will be assessed against EU groundwater quality thresholds and, if necessary, corrective action will be taken.

Cumulative effects from other nearby quarries and an unauthorised landfill site are considered not significant. Most other quarries in the area are non-operational or are undergoing restoration, and the unauthorised landfill is subject to EPA licensing and remediation. The cumulative impact of the Proposed Development on regional water resources is therefore considered negligible.

No indirect impacts are anticipated. While the removal of overburden may result in minor changes in recharge dynamics or flow pathways, these will be localised and have no influence on springs, streams, or ecological features in the wider area. The presence of vegetated buffers and settlement infrastructure will reduce the risk of sediment transport or erosion.

Residual effects on groundwater and surface water will be slight to imperceptible and are not considered significant. With full mitigation in place, the development will not contribute to deterioration in the quality or status of any waterbody and will not jeopardise the ability of surrounding water features to meet the objectives of the WFD. Upon completion of extraction, the site will be restored in accordance with a dedicated Restoration Plan, which includes retaining the settlement pond as a permanent wetland habitat and reinstating topsoil to promote infiltration and ecological resilience.

9 AIR QUALITY

All phases of the Proposed Development were assessed to determine the effects on air quality in relation to sensitive receptors and the environment.

The main potential effects on air quality from the Proposed Development are dust emissions, which could give rise to the following effects:

- Disamenity due to dust deposited on surfaces, which leads to ‘soiling;’ and,
- Increased concentrations of dust particles suspended in the air (PM_{10}).

A disamenity dust risk assessment was completed in accordance with the Institute of Air Quality Management's ('IAQM') Guidance on the Assessment of Mineral Dust Impacts for Planning. This assessment aimed to determine the risk of impact from dust soiling on properties (or receptors) in the vicinity of the Site.

In brief, the risk assessment followed the source-pathway-receptor concept. The assessment quantified the likely emissions from the source (the Proposed Development), identified the pathway effectiveness (frequency of wind >5m/s) and determined the distance/orientation of receptors to the source. Following the analysis, it was determined that there was a 'Negligible Risk' of dust soiling occurring at all receptors in the absence of mitigation. The potential dust soiling at these receptors has the potential to be a 'Negligible Effect'. Nevertheless, a number of site-specific mitigation measures were identified.

Increased concentrations of suspended dust particles in the air (PM_{10}) can affect human health. Therefore, the methodology outlined by the IAQM guidelines was followed to determine the risk of increased PM_{10} particles in the air arising from the Proposed Development. Given the baseline environment, type and intensity of activities, and mitigation measures to be implemented, the potential residual effect from suspended ambient dust (or PM_{10}) is considered to be "not significant".

10 CLIMATE

Greenhouse gas ('GHG') emissions arising from the Proposed Development will mainly come from the transport of materials to and from the Site and from the plant and equipment used in the Construction – Operational Phase. These GHG emissions have been quantified and assessed against the National Second Carbon Budget (2026-2030) and the relevant Sectoral Emission Ceilings as established in the Irish Government's Climate Action Plan 2021. The Plan's third statutory annual update, Climate Action Plan 2025 ('CAP25'), was adopted on 15th April 2025.

A desk-based assessment was carried out to determine the effect of the Proposed Development on national GHG emissions in the context of global climate change. GHG emissions associated with the Construction – Operational Phase and the Site Restoration Stage – Site Closure were categorised under Scope 1, Scope 2 and Scope 3 emissions and assessed. The estimation of the tonnes of CO_2e ('e' - equivalent) that were emitted as part of the Proposed Development was determined using the most recent conversion factors provided by the Department for Energy Security and Net Zero ('DESNZ') and the Transport Infrastructure Ireland ('TII') Carbon Tool.

GHG emissions arising from operational HGV movement were assessed based on the estimated loads per day required during a typical day of outgoing aggregates at the Proposed Development. Additionally, predicted GHG emissions arising from operational plant use were calculated based on the assumption that plant would run continuously throughout a typical operational week. These assumptions represent an overestimation of GHG emissions to demonstrate that there will be no significant effects from the GHG emissions associated with the Proposed Development in the context of the National Second Carbon Budget (2026-2030) and relevant Sectoral Emission Ceilings.

In the context of the National Second Carbon Budget (2026-2030) and the Transport Sectoral Emission Ceiling, as set out in the CAP25, it was concluded that the effects of GHG emissions as a result of the Proposed Development will be 'not significant'.

The potential risks of climate change to the Proposed Development have been assessed by completing a Climate Vulnerability Assessment. By utilising available policy and guidance, the vulnerability of assets associated with the Proposed Development to potential climate hazards was determined. The identification of climate hazards relevant to the Proposed Development

was achieved through a detailed desk-based review of local, regional and continental scale tools. Based on the results of this Climate Vulnerability Assessment, the effects of climate change on the Proposed Development will be 'not likely' and 'not significant'.

Due to the size and nature of the Proposed Development, there are no potential effects on microclimate in terms of wind tunnelling and shading. As such, the potential effects on microclimate will not be assessed any further in this EIAR.

11 NOISE AND VIBRATION

A comprehensive noise and vibration impact assessment was conducted based on best practice guidance, both statutory and non-statutory noise impact assessment criteria for the Proposed Development during its Site Preparation, Operational and Restoration phases.

The surrounding roads including the National Road N81 are not classified as major roads as per the Environmental Noise Regulations 2006 and therefore no strategic noise maps have been developed.

A detailed assessment was undertaken of the Proposed Development. To assess the likely noise effect, the existing environment was characterised. Initially a review of the locality was conducted to identify noise and vibration sensitive receptors. This process identified six Noise Sensitive Receptors ('NSRs') which were named NSR01-NSR06, all of which are domestic homes / properties.

A baseline noise survey was undertaken within the study area utilising a precision sound level meter, and data were collected during daytime hours. Utilising this survey at each local receptor (NSR01-NSR06) were assigned baseline noise values associated with the existing ambient (without the Proposed Development operating) environment.

The Site Preparation phase (Construction Phase) will be completed prior to aggregate operations within the Site. This phase will occur over a discrete period of up to six to eight weeks period. Due to the activities proposed, this phase was assessed against typical construction noise standards namely. All proposed works within this phase were found to be within typical construction noise limits. Vibration from the Site Preparation Phase of works are negligible.

Operational noise modelling was conducted using iNoise V2024 software. Two noise models have been conducted to represent two different scenarios. Model 01 with normal operation at 153m AOD, will include all equipment. Scenario Model 02 with the operational plant located to the southern area upper bench at 153m AOD. Activities also occurring within Phase 2 to develop the settlement pond and generator building at 143m AOD. The washing plant is operational in the pit floor of Phase 2, at 143mAOD. As a worst-case scenario, the operational plant (generator and the wet screening plant have been also included).

The models, 01 and 02, assumed all sources were fully operational for the full working day. The outputs of the modelling were then added to the measured ambient background levels, as per best practice, to ascertain the likely future sound environment. This ensures the assessment accommodates the cumulative, as well as project-specific, impacts on the NSRs.

The predicted noise levels at sensitive receptors during the operational phase and the 'worst case' scenario of the Proposed Development will operate in compliance with the typical noise nuisance values at NSRs for both scenarios. Additionally, the predicted change is the worst-case scenario for the Proposed Development as only the initial bench has been modelled as the working floor. As the works progress for each bench, the noise will be reduced at NSRs due to the increasing relative height of noise sources to the boundary elevation and NSRs.

During the Restoration Phase of works, the noise will be associated with the spreading of soils and topsoil from onsite stockpiles. Much of this work will require minimal plant equipment and will predominantly occur within the quarry floor.

The Restoration Phase will not introduce new sound characteristics, nor will the Restoration Phase present sound qualities typically deemed to be objectionable, such as tonal or clearly impulsive / impact sounds. Moreover, no Restoration Phase vibration is likely.

Based on the assessment, the predicted effects during the Restoration Phase are deemed to be not significant short-term effects on a local basis.

Following mitigation measures, the residual noise effect, based on the proposed emissions, phasing and intensity of the Site, the mitigation and practices to be employed and within the context of the existing ambient environment, is deemed to be neutral.

It is proposed that, during operation, noise monitoring will occur within the Proposed Development and be reported to the Competent Authority. General activities onsite will be acoustically monitored with a site-specific noise limit, measured or calculated to NSR of daytime $L_{Aeq,1hr}$ 55dB, in-line with best practices by the EPA.

Following the implementation of mitigation measures, effects are assessed to be likely imperceptible and long-term during the construction and operational phases, and likely not significant and short-term during the Restoration Phase.

12 CULTURAL HERITAGE

Archaeological Management Solutions ('AMS') were commissioned by MOR Environmental to undertake an assessment of the archaeological, architectural, and cultural heritage impact assessment of the Proposed Development was undertaken as part of the EIAR. The study included a detailed desktop review of available archaeological and historical records, cartographic sources, and aerial photography, as well as a field inspection of the application area.

The assessment confirmed that there are no recorded archaeological monuments, protected structures, or sites listed in the National Inventory of Architectural Heritage within the application area or its immediate vicinity. No unrecorded features or finds were identified during the field inspection. The potential for encountering previously unknown archaeological material is considered low.

No direct, indirect, cumulative, or residual impacts on known archaeological, architectural, or cultural heritage resources are predicted as a result of the Proposed Development. However, as a precautionary measure, archaeological monitoring of soil stripping during the initial construction phase is recommended to ensure that any previously unknown subsurface archaeological material can be identified and appropriately recorded if encountered.

Overall, with the proposed mitigation in place, the Proposed Development is not expected to result in any significant adverse effects on the cultural heritage of the area.

13 TRAFFIC & TRANSPORT

PMCE Ltd were commissioned by MOR Environmental to undertake an assessment of the traffic impacts associated with the proposed quarry in Whitestown, Co. Wicklow, the findings of which are presented in Chapter 13 of the EIAR.

The Whitestown Quarry would be located in Whitestown, Co. Wicklow, in the area of Whitestown Upper, approximately 10km north of Baltinglass, and 20km south of Blessington. The site is an old quarry which is located to the east of the N81 and includes a short 250m long local access road between the quarry entrance and the N81 National Road. The quarry

benefits from an existing priority-controlled T-junction with the N81, which is located in a rural area, and has a posted speed limit of 80kph.

The Proposed Development is expected to excavate and remove approximately 275,000 tonnes from the site annually. Additionally, wet and dry screening will also occur on-site.

13.1 Traffic Analysis

Following a Traffic and Transport Assessment, both link and junction capacity analysis were undertaken to determine if the Proposed Development would lead to congestion on the local road network. The results of the Link and Junction Capacity Analysis indicate that the local road, and local road junctions, will continue to operate within capacity for each of the assessment years 2025, 2030, and 2040. Therefore, the risk of congestion within the local road network is imperceptible.

13.2 Road Safety

The entrance to the quarry is located on the N81 National Road. Visibility to the north and south of the quarry access is limited by the horizontal alignment of the local road and overgrown vegetation.

The N81's northbound carriageway includes a left-hand curve upstream of the access and there is the potential that northbound drivers may have restricted visibility to, and not anticipate, a stationary right turning vehicle waiting for a gap in southbound traffic before turning into the Quarry's access. Whilst sightlines were found to be acceptable, it should be noted that the N81's alignment does not provide tolerance beyond the 160m available on site. However, in the event that a northbound driver fails to observe a stationary vehicle in the road, the nearside hard shoulder should offer a safe route to pass a stationary vehicle.

In addition, routine maintenance of the verge and hedgerow either side of the quarry's access on the N81 will be required, and an existing sign will need to be relocated further north so as not to interfere with existing sightlines.

Following traffic analysis, it is concluded that the Proposed Development will have an imperceptible impact on traffic on the existing road network for each of the assessment years 2025, 2030, and 2040.

14 LANDSCAPE AND VISUAL

Macro Works Ltd. were commissioned by MOR Environmental to undertake This chapter assesses the potential effects of the Proposed Development on the landscape character and visual amenities of the surrounding area. The assessment considers both the landscape as a physical and aesthetic resource and how changes may affect views experienced by people (visual receptors).

The development is located in a rolling rural landscape west of the Wicklow Mountains, in a working agricultural and extractive setting, adjacent to the N81. The assessment area extends to a 3 km radius around the site and includes both low-lying pasture and more elevated foothill terrain.

A Landscape and Visual Impact Assessment ('LVIA') was conducted following national and international guidance. This included desk-based research, field surveys, the use of photomontages, and assessment of representative viewpoints. The existing landscape is considered robust with medium to low sensitivity, shaped by farming, forestry, and quarrying activity.

The Proposed Development involves sand and gravel extraction over approximately 7.75 hectares. While it introduces permanent changes to the landform, it is located in an area

already influenced by extractive industries. Native woodland planting around the site and retention of existing vegetation will provide effective visual mitigation over time.

Visual impacts were assessed from six representative viewpoints. From most locations, the development is partially screened by topography and vegetation, and where visible, it appears as a low-lying feature within a broader working rural context. Impacts range from moderate-slight near the site to imperceptible at more distant or screened locations. Mitigation planting will further reduce visibility and help integrate the development into the landscape.

Cumulatively, the project may be visible in combination with the proposed Deerpark Quarry. However, due to distance, vegetation, and intervening landform, cumulative effects are limited and not considered significant.

In conclusion, the landscape and visual impacts of the Proposed Development, including any cumulative or indirect effects, are assessed as not significant, with no monitoring required post-construction.

15 INTERACTION OF ENVIRONMENTAL EFFECTS

In accordance with Environmental Impact Assessment Report ('EIAR') best practice procedures, the cumulative impacts associated with all of the relevant interactions has been addressed in the specific specialist chapters of the main EIAR report (Volume 2).

16 SCHEDULE OF ENVIRONMENTAL COMMITMENTS

As part of the EIAR, all of the mitigation measures arising from each of the individual assessments for all phases were summarised in an overall Schedule of Environmental Commitments that is presented at the end of Volume 2 of the EIAR. The Applicant is fully committed to implementing all of these commitments. The implementation of these measures will ensure that the Proposed Development will not result in any significant adverse impacts on the receiving environment.