



EIAR Non-Technical Summary: Murrens Sand & Gravel Pit Extension

Proposed Extension to Existing Sand and Gravel Pit
Development at Murrens townland, Oldcastle, Co.
Meath

BD Flood Unlimited Company

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SLR Project No.: 501.00023.065670

July 2025

Revision: Final

RECEIVED: 04/07/2025

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
0	24 June 2025	LH	SMcD	
Final	3 July 2025	LH	SMcD	SMcD

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1.0 Introduction

An Environmental Impact Assessment Report (EIAR) has been prepared in support of a planning application for proposed development at an existing sand and gravel pit at Murrrens townland in Oldcastle, Co. Meath. This document provides a non-technical summary (NTS) of the EIAR.

An Appropriate Assessment (AA) Screening has also been prepared in support of the planning application and is provided as a separate document.

1.1 The Applicant

The planning application and accompanying supporting documentation has been prepared by SLR Consulting Ireland (SLR) on behalf of BD Flood Unlimited Company.

BD Flood is one of the main producers of precast concrete products, readymix concrete, aggregates and concrete blocks in Ireland. It is part of the Flood Group, a family run business founded in 1938 and which employs c. 450 people (directly and indirectly) across all of its locations. It began its operation in the extraction of aggregates and later expanded into the production of readymix concrete and blocks.

The Group's Headquarters and Precast facility is based adjacent to the application site at Hilltown, Oldcastle, Co Meath. Eight other aggregate/readymix and concrete block plants are located throughout the midlands.

BD Flood is an IS EN 206 accredited company that supplies a range of products to the building trade, the farming industry and the housing sector. These products include readymix concrete, stone, aggregate products and blocks. All products are certified to the I.S EN ISO 9002 Quality.

1.2 Rationale for Planning Application

The existing sand and gravel pit has been registered with Meath County Council in accordance with Section 261 of the Planning & Development Act, 2000 (Quarry Ref. No. QY 24).

A substitute consent application (PL17.SU0079) was submitted in December 2013 to An Bord Pleanála (ABP) for part of the existing pit, in accordance with the Section 261A determination issued by Meath County Council. A grant of substitute consent was issued on 11 December 2014 by ABP.

A planning application (KA/141129) was made for an extension of extraction area of c. 23.9 hectares into lands adjacent to the existing pit, with an additional connection to the existing materials transport conveyor system and associated landscaping works in 2014. The planning application was accompanied by an Environmental Impact Statement¹.

Permission was granted by Meath County Council in July 2015. A third party appeal to An Bord Pleanála followed, and planning permission (PL17.245257) was granted by the Board in December 2016. A copy is provided in EIAR Chapter 1, **Appendix 1-A**.

There is a portion (c. 4 hectares) of the existing permitted development of P. Ref. KA/141129 / ABP PL17.245257, located in the southwest area of the permitted extension which will now not be extracted due to the inferior quality of the materials that has been tested to date. This is shown as Area 1 on **Figure NTS-3**.

¹ The previous name by which Environmental Impact Assessment Reports were referred to, prior to the 2014 amendment to the EIA Directive which was transposed in Ireland by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018)



The application site (shown as Area 2 on **Figure NTS-3**) is a new proposed extension extraction area of c. 4.2 hectares that will effectively be a replacement source of sand and gravel materials with extraction to be commensurate with the life of P. Ref. KA 14/1129 / ABP PL17.245257 which is due to expire in December 2036.

1.3 Site Location

The application site is located within a rural area referred to as 'The Murrrens', located c. 4 km west of Dromone and 6 km southwest of Oldcastle town. The R195 regional route that runs along the eastern edge of the existing landholding links Oldcastle, Co. Meath (to the north) to Castlepollard to the south.

The proposed pit extension area is located to the southeast of the existing pit and represents c. 4.2 hectares set within an overall landholding of c. 254 hectares. The existing pit site is located within the townlands of Annagh, Baltrasna and the Murrrens. The proposed extension lands subject of this planning application are located with the townland of the Murrrens. Please refer to **NTS Figures 1, 2 and 3** for illustration of the site location within the strategic and local context.

1.4 Site Description

The planning application site (c. 5.8 hectares) is an area of previous plantation woodland located immediately adjacent and southeast / east of the existing sand and gravel pit development permitted by planning permission KA/141129 (ABP PL17.245257). **NTS Figure 4** shows the application site in its current layout.

The application site is made up rough ground and scrub terrain as a result of cleared forestry, which consisted of poorly performing Ash trees due to the presence of the widespread Ash dieback disease. Within the extraction area footprint of 4.2 hectares, there are some remaining clusters of trees within the southeastern portion of the site.

To the immediate west of the site, is the existing operational BD Flood sand and gravel pit. The northern application boundary forms the landholding boundary between the BD Flood lands and the third-party quarry site operated by JJ Flood. The southwestern application boundary adjoins third party agricultural lands while the southern / southeastern boundary adjoins lands under the control of BD Flood and currently used for forestry plantation.

The application site does not adjoin any public road boundary. The R195 regional road is in excess of 100m southeast of the application site with the intervening area covered by mature forestry, which fully screens both the existing sand and gravel pit and the extension land areas from public view.

Within the application site, the topography is gently sloping from north to south, the highest point being the northern tip of the site at c. 140m AOD, and the lowest point being the southern boundary at c. 132m AOD. The surrounding landscape is gently undulating at elevations of between 120 and 140m AOD.

An underground 38KV and higher electricity cable underlies the application site just inside its southwestern boundary. The line connects offsite to the west to an overhead powerline and to the east it runs beneath ground along the R195 road. There are no structures within the application site.

1.5 Surrounding Land-Use

There is a third-party quarry site immediately adjacent to the north.

The surrounding land-use to the northwest and west is dominated by the existing BD Flood sand and gravel pit and associated processing and storage facilities. The western area of the overall sand and gravel pit site is exhausted of resources and partly restored.



The central area contains the site facilities and processing area, including the existing crushing and screening and washing plant, a concrete batching plant, concrete block plant and block yard, banded fuel storage, conveyor system, site offices, workshop, weighbridge & office, wheelwash and settlement lagoons.

Immediately west of the application site, extraction works within the existing pit are advancing southwards within the permitted extraction area of planning permission KA/141129 (ABP PL17.245257). There is a fixed field conveyor system transporting the extracted materials to the central site processing area over a distance of c. 1.5km. Also within the overall landholding there is the permitted precast factory operated by Flood Precast Ltd, which is part of the wider Flood Group.

The character of the wider area is predominantly agricultural, interspersed with other small blocks of plantation woodland and small lakes. Small rural settlements and isolated farmsteads are scattered along the local road network. The regional R195 route runs along the east of the application site.

Pasture fields bound by mature hedgerows dominate the landscape surrounding the site, however, other landscape elements are scattered throughout the area, such as loughs, fens, deciduous tree plantations, wooded eskers, peat bogs and sand and gravel pits.

There are few residences in the immediate vicinity of the site, with the residential pattern comprising isolated farm dwellings and one-off housing developments along the local roads. The closest property is located c. 235m south of the application site, with six further properties within 500m of the application site, all in the south/southeast direction. In total there are c.29 residential properties within a 1km radius of the application site.

1.6 Site Access

There is a permitted access to the existing sand and gravel pit already in-situ. This access is from the local road L6818, which is an unmarked single carriageway road approximately 7.5 metres in width that provides a link between the R195 to the east of the application site and the R394 via the L5763 to the west.

At the site access there is a double gated entrance set back from the carriageway edge. Each of the gates measure 7 metres in width and open inwards allowing arriving vehicles to wait for entry off the public highway. The access is lit and appropriately signed with a 10mph speed restriction upon entering the site.

The junction layout provides generous space for HGV manoeuvring and unobstructed visibility is afforded in both directions on approach, access and egress to the site.

1.7 Consideration of Alternatives

The existing site is located in an area favourable to extraction activities, due to, inter alia the:

- extension area is adjacent to existing and permitted extractive site and will effectively be operated within the same confines of planning permission KA14/1129 / ABP PL17.245257, albeit over a partially different extraction area to that originally permitted;
- previous history of sand and gravel extraction at this site and in the general geographic location;
- application site is a proven source of high-quality sand and gravels;
- ongoing and continued increases in the level of construction and development activity in the midlands and eastern regions is generating ever increasing demand for construction materials;
- within an appropriate topographic setting i.e. well screened from surrounding areas;
- remote location, but with access to the regional and national roads network;



- the existing permitted annual extraction rate and HGV traffic movements on the local road network will remain the same;
- best practice industry standard extraction methods can be used; and
- the proposed development will be carried out by a long established and experienced operator in the extractive and ancillary concrete manufacturing industry with a proven track record in planning and environmental compliance within their overall pit / quarry portfolio.

1.7.1 Do Nothing Alternative

If the proposed development does not take place, there would be a loss of a proven and valuable aggregate supply within the lands. The existing pit would continue to operate under the confines of P. Ref. KA14/1129 / ABP PL17.245257, with extraction ceasing prior to the expiry date in 2036 due to the portion of lands (Area 1) that will no longer be extracted.

1.7.2 Alternative Sources of Aggregates

In the medium term there are no real alternatives to the current land-based sources of construction aggregates. Until such time as end of waste criteria in respect of construction & demolition (C&D) materials is formally implemented, these materials cannot be relied upon and for the foreseeable future there are no real alternatives to primary land-won aggregates. Notwithstanding the above, the volume of C&D waste suitable for recycling into secondary aggregates would be considered very low in comparison to the overall demand for aggregates. The demographic spread of the population results in only the large urban centres potentially being capable of generating sufficient volumes of construction and demolition (C&D) waste to justify a commercial operation producing secondary aggregates going forward. In the longer term (>25 years), there may be some scope for extraction of minerals from marine sources.

In the absence of significant volumes of aggregates from recycled / secondary and marine sources, it is clear that land-based deposits (such as the proven reserves at the Murrens) will continue to be the main source of construction aggregates in Ireland, including Meath and the wider midlands and eastern region.

1.7.3 Alternative Locations

Aggregates can only be worked where they exist and where the environmental effects of working them can be minimised. However, this is not the only prerequisite which determines a suitable location for an aggregates site. Others include a willing vendor, distance from market, required quality and quantity to justify capital investments, etc. It is usually the case that a number of these prerequisites are not met, and the alternative is discounted.

The provision of aggregates is essential to meet the needs of society. As reserves of sand and gravel and rock are finite resources and eventually become exhausted at their location, it is therefore necessary for quarry operators to continually seek out new greenfield sites in tandem with maximising or extending extraction at existing established sites. Both options are essential and required to replace existing supplies that are being worked out and to provide a security of supply of aggregates and building materials to the construction sector.

At the current time, the application site is considered the most suitable replacement sand and gravel location available to the applicant, given its proximity to the existing extraction and processing operations.

The existing site at the Murrens is an established pit in a relatively remote location and has a local road network providing access to and from it that has proven to be suitable for this type of development previously.



Notwithstanding the continual search for suitable development sites, the lands at the Murrens application site are proven to contain an economically viable volume of quality sand and gravel reserves. The site is deemed appropriate for the following reasons:

- suitability of the economic sand and gravel reserve;
- extent of the lands over which the applicant has an interest in, and which are available for development;
- access and road infrastructure with proximity to the national road network and key transport corridors, namely the M4/M3 motorways and R195/R154 regional roads;
- low environmental impact: topography and surrounding forestry assists with screening of the development (no significant visual intrusion), no recorded monuments within the application area; and not within a designated ecological or landscape area; and
- detailed water and ecology studies indicate the development can proceed without impacts on the surrounding hydrogeological and ecological regimes.

On the basis of the above, it is considered that the proposed extension development of the existing pit, subject to implementation of best environmental management practice and compliance with appropriate planning controls (i.e. planning conditions and standard emission limit values for the sector) can be carried out without any significant environmental impacts on the surrounding area.

1.7.4 Alternative Designs / Layouts

The design layout plan that was chosen for the proposed extension area is considered to best minimise the potential impacts on the environment and third-party residences from noise, dust, visual and landscape impacts, through the design proposed. This will be achieved through extraction operations commencing on the floor of the existing pit and gradually advancing southeast, thereby using the existing face as screen.

The gradual manner of workings will minimise the land disturbance at any one time, thereby avoiding dramatic or sudden impact on the fauna of the area, and allow them to adapt to the pit workings and relocate to adjoining forestry and agricultural lands for the duration of the proposed development.

1.7.5 Alternative Processes

BD Flood are a company with expertise and experience in the field of quarrying, aggregates production and the manufacture of value-added products. As the proposed development comprises the extension of an existing pit with standard extraction and processing methods to be implemented, alternative processes are not considered relevant in this instance. There is no requirement for any processing plant, or buildings as part of this planning application.

2.0 Description of the Proposed Development

2.1 Existing Sand and Gravel Pit

The existing sand and gravel site at the Murrens is long established, having been in operation since 1962 and prior to the implementation of the Planning and Development Act (1963). It has been subsequently registered by Meath County Council (MCC) as QY 24 under Section 261 of the Planning and Development Act, and was awarded quarry specific Substitute Consent by An Bord Pleanála on 11 December 2014 (PL17 .SU0079).

In 2014, a planning application (KA/141129) was made for an extension of extraction area of c. 23.9 hectares into lands adjacent to the original pit, with an additional connection to the existing materials transport conveyor system and associated landscaping works.



Following a third party appeal of the MCC grant to An Bord Pleanála, planning permission (PL17.245257) was granted by the Board in December 2016.

2.2 Proposed Development

There is a portion (c. 4 hectares) of the existing permitted development of P. Ref. KA141129 / ABP PL17.245257, located in the southwest area of the permitted extension which will now not be extracted due to the poor quality of the materials that has been tested to date. This is shown as Area 1 on **NTS Figure 4**.

The application site (shown as Area 2 on **NTS Figure 4**) is a new proposed extension extraction area of c. 4.2 hectares that will effectively be a replacement source of sand and gravel materials with extraction to be commensurate with the life of P. Ref. KA14/1129 / ABP PL17.245257 which is due to expire in December 2036.

The proposed development being applied for under this current planning application will consist of:

- Extraction of sand and gravel (dry working) over a lateral extension extraction area of c. 4.2 hectares adjacent to the existing sand and gravel pit development permitted by planning permission KA/141129 (ABP PL17.245257) with access gained from the existing pit.
- Restoration of the lands will form part of the overall adjacent sand and gravel pit restoration site, returning the lands to a combination of agricultural grazing and beneficial ecological habitat.
- The development will be commensurate with the life of existing site permission (P. Ref. KA14/1129 & ABP PL.17.245257) which is due to expire in December 2036.
- All associated site ancillary works within an overall application area of c. 5.8 hectares.

The overall extraction development plan is shown in **NTS Figure 5**.

2.2.1 Construction Phase

The following construction stage works are anticipated to be carried out within a 3-6 month period.

- Extension of fixed field conveyor system using standard construction techniques;
- Construction of perimeter fencing; and
- Topsoil and overburden will be stripped to obtain access to the underlying sand and gravel resource and will be either placed in landscaped screening berms or stored for final restoration of the extraction area.

2.2.2 Operational Phase

The proposed operational phase will see sand and gravel extraction carried out within an overall extraction area of c. 4.2 hectares. The final extraction scheme is shown in plan on **NTS Figure 5**. It is proposed that extraction would be carried out over the remaining time period permitted by the existing planning permission and would be extraction rates would be within the same overall limits for the pit (maximum of 500,000 tonnes per year).

Extraction within the existing pit is carried out as a dry extraction operation above the groundwater table. It is proposed that extraction within the extension area will also be carried out above the groundwater table, with the proposed pit floor over the extension lands of between 123m AOD and 120mAOD. It is proposed to extract the sand and gravel on a gradual basis with the extraction face advancing southeast from the existing pit as shown on **NTS Figure 5**.



A mechanical excavator will take material from the working pit face to be placed into a mobile crusher to crush any oversized boulders. The extracted sand & gravel from the working face and mobile crusher will be transported for processing via the efficient and environmentally friendly field conveyor system using the existing crushing, screening, and washing plant located within the existing central processing area.

The lack of requirement to locate any fixed plant within the proposed extension lands will minimise any impact of the development on the local residences from dust, noise and visual intrusion. The conveyor system will also eliminate the requirement for dump trucks to transport the material internally within the site, thereby reducing fuel costs, emissions and potential disturbance from noise and dust.

2.2.3 Restoration Phase

Once extraction operations cease, it is proposed to return the worked lands to agricultural grazing lands on the pit floor with some dedicated peripheral areas to be left for natural habitat as shown on **NTS Figure 6**.

The pit side slopes will be regraded to achieve a relatively uniform profile and left for natural regeneration.

The only material requirements in respect of the planned restoration scheme are those topsoils and subsoils already present on site and which will remain on site for restoration purposes. It is not proposed to import material onto the site for operational or restoration purposes.

2.3 Hedgerows/Tree (Removal / Reinstatement)

It is proposed to remove c. 133m of hedgerow along the northwest boundary between the existing pit and the proposed extension area. There are some remaining clusters of trees which are showing signs of widespread ash dieback within the southeastern portion of the proposed extraction area. It is proposed to remove these poorly performing trees.

The proposed landscaping / restoration plan is shown on **NTS Figure 6**. In mitigation, c. 375m of diverse native hedge will be planted as part of the restoration proposal.

All hedges and trees planted as part of the proposed landscaping and restoration plans will be comprised of native and typically occurring species present in the local vegetation and/or hedgerows in Co. Meath.

2.4 Aggregate Reserve Assessment

Surveys and modelling have indicated a total recoverable reserve of sand and gravel from within the proposed development extension design scheme estimated to be c. 875,000 tonnes.

2.5 Duration of Extraction

The duration of quarrying activities at the application site will largely be dictated by the rate at which the sand and gravel is extracted from the site. There are many factors which will influence this, including, but not limited to the prevailing economic climate and related construction industry demand and distance of construction projects from the facility (and scale of activity). The sand and gravel will be used to primarily supply the onsite concrete plant, concrete block making and precast concrete facilities.

The development is proposed to tie in with the life of existing site permission, which is due to expire in December 2036. The extraction rate from the extension area will also be included within the maximum output permitted under P. Ref. KA/1129 (ABP PL.17.245257), i.e. 500,000 tonnes per year.



2.6 Removal of Topsoil & Overburden Soils

Topsoil and overburden stripped to obtain access to the underlying sand and gravel resource will be either utilised directly for construction of the perimeter screening berms, landscaping works or stored in stockpiles on the pit floor until it can be used in the final restoration.

There is no requirement to remove topsoil or overburden off site.

All berms will have slope angles not greater than 1:1.5 and will be re-vegetated at the earliest opportunity to avoid soil erosion by air and water.

2.7 Site Drainage

A small stream along the northern boundary of the land ownership connects a complex series of small lakes and wetlands within the Lough Naneagh, a proposed Natural Heritage Area (pNHA), and discharges into Lough Naneagh approximately 1.5 km to the northwest of the site.

There is also a system of drains/ streams/ ponds located to the south and southeast of the site drains into the Ben Loughs, Lough Doo complex and White Lough.

Within the application site itself, there are no water courses or ponds. There is no surface water discharge from the proposed extraction area off site.

The existing extraction operations have been in successful operation for over sixty years. Much of the existing pit has been worked down to a main floor level which is above the groundwater table and in some locations it has been previously worked below the water table in various low level lagoons at the western end of the overall site.

There has been no need for dewatering at the existing pit in the past. There is little surface water runoff over the existing site owing to the relatively high permeability of the sand & gravel materials, therefore there has been no requirement for surface water drainage infrastructure within the site.

The material to be extracted from the proposed extension area will be processed at the existing central processing facility at the site. Therefore, there are no water requirements within the proposed extension area for any processing activities.

The management of water in the proposed extraction area will be relatively straightforward; it is not anticipated that there will be any surface water across the proposed extension area and precipitation will infiltrate naturally to the ground. No oils or fuels will be stored in the proposed extension area.

2.8 Stability of the Pit

Industry standard slope angles, bench heights, and bench widths will be used for extraction operations at the site.

2.9 Method of Extraction

The proposed extraction area will be worked in a similar fashion to the existing sand and gravel pit. Sand and gravel extraction will be carried out using industry standard mechanical excavation techniques - front end loader and track excavator, with processing being carried out by mobile processing plant (mobile jaw crusher onto the extended field conveyor and then transported to the central processing plant located within the existing pit site). Extraction will be carried out from the existing pit floor using the pit face as an acoustic and dust screen. Extraction will be gradual with the pit face advancing in a southeast direction. Typically, a section of the extension area will be stripped of the topsoil/overburden followed by the extraction of the underlying sand and gravel, with this process repeated until extraction operations are completed.



There is no requirement for blasting.

2.10 Processing Methods

Any oversized boulders will be placed into a mobile crusher at the working pit face. Extracted materials (including the crushed boulders) will then be transported to the processing plant via the (extended) dedicated conveyor system. The processing plant includes a sand and gravel washing / screening unit with primary and secondary crushing units.

A concrete batching plant, concrete block plant and block yard, banded fuel storage, conveyor system, site offices, workshop, weighbridge & office, wheelwash and settlement lagoons are also situated within the central processing area of the existing pit site, while a precast concrete facility is located to the west of the central processing area.

All water used in the washing process is treated within the existing site washing plant system with c. 90% recycled back to the washing plant (i.e. it is a closed system with no discharges to surface water).

Once processed, the finished products will include a range of sand and gravel aggregates for use in concrete production, concrete blocks and precast manufactured products.

2.11 Pit Working Hours

The proposed hours for operations (extraction, processing and haulage) at the site will be 06.00 hours to 20.00 hours Monday to Friday inclusive and 06.00 hours to 14.00 hours on Saturdays. No operations will be carried out on Sundays or Public Holidays.

2.12 Employment

The sand and gravel extraction operations provide employment directly for c. 40 people. The wider Flood Group of companies provides considerable employment for c. 450 personnel directly and indirectly throughout all site locations. The extension of the sand and gravel pit into an area with proven mineral reserves will secure the life of the existing established aggregate and concrete manufacturing business for the duration of the current planning permission due to expire in 2036 and therefore provide continued employment at the site. This will in turn provide sustained revenue in the rural area surrounding the site. The development will also provide employment indirectly in the form of hauliers, maintenance, contractors, material suppliers, etc.

2.13 Site Access and Security

The proposed development is an extension to an existing operational site and will continue to use the existing established access to the existing sand and gravel pit. This access is located on the local road L68181 to the northwest of the application site. The access gate will be locked outside operational hours. There is no other vehicular access proposed to the application site.

2.14 Parking

There is adequate provision for HGV parking and manoeuvring at the established entrance to the existing pit. HGVs will not require access to the application site as the finished aggregate products will be collected for dispatch from the central processing area.

Adequate car parking provision for employees, contractors and visitors is provided in a dedicated area on a hardcore surface adjacent to the site offices / workshop at the site entrance.



2.15 Wheelwash

An existing wheel wash facility is provided adjacent to the site entrance and adjacent to the refuelling facility. It will be utilised throughout the life of the development, with due maintenance as required. This will eliminate the risk of mud and dust being carried from the development onto the public road. All aggregate haulage vehicles will be required to pass through the wheelwash prior to leaving the site.

2.16 Weighbridge

In order to track and record the amount of material exiting the site, all HGV traffic will be directed across the existing weighbridge. The access road from the site entrance to the weighbridge is constructed of a concrete paved surface.

2.17 Offices and Ancillary Facilities

An office with canteen and toilet facilities, a garage/workshop and storage shed are already in existence at the main Murrens Pit site.

Servicing of plant and machinery is carried out on site at the existing site workshop.

2.18 Utilities and Services

There is an existing ESB connection at the central processing area in the wider landholding. There are 2 ESB substations on site and an underground 38KV or higher electricity cable underlies the application site just inside its southwestern boundary. Extraction works in this area will be undertaken in close consultation with ESB Networks.

There is an existing water supply well on site which is used only to supply the office, canteen and toilet facilities. Drinking water will continue to be supplied by means of bottled water.

Site based staff at the application site will be contactable by mobile phone, landline and email and broadband connections to the site office will be provided via a mobile network.

There is an existing waste water treatment system on site with associated percolation area.

Given the lack of combustible waste materials at this site, it is considered highly unlikely that a fire will break out during quarry operations. A range of fire extinguishers (water, foam and CO₂) will be kept at the site office to deal with any localised small scale fires which might occur. Additional fire-fighting capacity can be provided by storing water in a mobile bowser.

2.19 Lighting

Sufficient lighting is provided at the existing entrance and the ancillary processing and plant area to ensure safe operations during winter periods.

Where necessary, in wintertime operations, when darkness has fallen within the proposed site operating hours of 06.00 hours until 20.00 hours Monday to Friday and until 14.00 hours on Saturdays there may be a period where mobile lighting on the machinery used within the pit void would be required for up to 2 hours in the morning and up to 4 hours in the evening. Any night-time light pollution caused by the proposed development will therefore be of brief duration during winter months and is not considered significant.

2.20 Fuel and Oil Storage

There is an existing refuelling facility located adjacent to the existing wheelwash and site entrance. Plant and machinery is re-fuelled using a mobile 'bunded' double-skinned tanker. Servicing of plant and machinery is carried out on site at the existing site workshop.



Runoff from the paved hard stand area in front of the workshop is managed and treated through a hydrocarbon separator before percolation to the ground.

There is a further hydrocarbon interceptor located adjacent to the truck wash area. The interceptors are checked regularly and are emptied once per year.

The only chemicals stored on site are lubricating oils and hydraulic oils. Drums containing chemicals/ lubricants are stored on spill pallets. These are placed in bunded fuel tanks, which will be covered and enclosed to prevent the build-up of potentially contaminated water within the bund arising from rainfall. A build-up of rainwater in the bund could also reduce the holding capacity of the bund. The bund capacity is in excess of 110% of the combined volume of the tank(s).

Spill kits are provided on all mobile machinery and periodic spill kit training is provided to staff.

2.21 Waste Management

Almost all products and by-products arising from the aggregate processing have commercial value. There is no intention on behalf of BD Flood to discard, where possible, any material extracted from the sand and gravel pit extension. The principal aim of the extractive waste management plan for the site is to prevent waste production which is in accordance with Section 5(2)(a) of the 2009 Regulations. All materials will be used for operational or restoration purposes.

Potential waste produced and the proposed measures used to control it are described as follows:

- **Scrap metal/disused plant and machinery** – these materials are chiefly produced from the maintenance of the processing plants and can cause a nuisance if allowed to build up in an uncontrolled manner. A designated scrap metal area will be demarcated on site and the build-up of scrap will be controlled by the regular removal by licensed scrap metal contractors.
- **Used Oil and Oil Filters** – any waste oil/oil filters that may arise from servicing of fixed or mobile plant will be removed from the site by a licensed waste contractor.
- **Used Batteries** – similarly all used batteries will be removed from site for collection and recycling by a licensed waste contractor in accordance with the Waste Management Regulations.
- **Used Tyres** – similarly all used tyres will be removed from site for collection and recycling by a licensed waste contractor in accordance with the Waste Management Regulations.
- **Domestic Waste** (Canteen Waste) – domestic waste generated at the offices and employee's facility will be collected by a licensed waste collection contractor.

2.21.1 Environmental Control, Management & Monitoring

Extraction, processing and ultimately restoration activities at the application site require a number of environmental controls to eliminate or minimise the potential nuisance to the public arising from the extraction and processing operations. The environmental control measures to be put in place at the site for dust, noise and water management are outlined in the relevant EIAR Chapters and these are summarised under the relevant topic headings in this summary document.

The existing pit operations are regulated by conditions attached to the Section 261 Quarry Registration process, Ref. QY/24 and the extant planning permission P. Ref. KA/141129 (ABP PL.17.245257).



A site-specific Environmental Management System (EMS) is implemented at the site under the group's ISO14001 accredited system.

2.22 Pit Restoration

The final restoration works will start when all the accessible sand and gravel deposits have been exhausted. All plant associated solely with extraction and processing activities will be removed from site. The pit slopes and material used in the screening berms will be regraded and the general area returned to a beneficial agricultural use over the pit floor.

The stored subsoil and topsoil will be spread on the contoured area and seeded with a mix of suitable grasses to create pasture and when this operation is completed the site will have fully reverted back to agricultural land and will blend in with the surrounding topography.

A layer of overburden/silt material will be spread over the worked out pit floor as a sub-base. Topsoil will be spread over the entire treated area; stone picked and promptly grass seeded under expert supervision.

On completion of the extraction works the sand and gravel pit will be restored to an agricultural use, which is one of the beneficial after uses listed in the EPA Guidelines: 'Environmental Management in the Extractive Industry' (2006).

2.22.1 Site Management and Supervision

BD Flood will clearly define the management responsibility for the site restoration work and will ensure that this person has the necessary information (from the planning application) and authority to manage the whole restoration process. Relevant staff will be briefed on the scheme and will be adequately supervised / controlled. A system of record keeping for the key restoration activities will be put in place.

2.22.2 Long Term Safety and Security

The existing overall landholding boundary fences, walls and hedgerows will be maintained in a stock proof state of repair.

All components of the barrier system of the site protection outlined above will remain in place after extractive/processing operations have ceased. This, combined with the secure and locked entrance gates to the development will prevent unauthorised third-party access.

2.22.3 Long Term Surface Water and Groundwater

The surface water will percolate to ground. There is no requirement for any active long term surface water or groundwater management at the site.

2.22.4 Decommissioning of Plant and Machinery

Redundant structures, plant equipment and stockpiles will be removed from site on permanent cessation of extraction activity. Machinery and buildings will either be utilised on other sites, or be sold as working machinery or scrap. As part of the overall decommissioning process, all fuel and oil storage tanks within the existing site will be removed from the site by a licensed waste contractor. Therefore, there will be no potential for fuel, oil or sewage to cause long-term water pollution following completion of extraction activities.

2.22.5 Aftercare and Monitoring

There will be no on-going requirement for monitoring noise or dust after extraction and processing and manufacturing operations have ceased.

With regard to the hedge planting, establishment maintenance will be carried out for 2 years following the planting works (minimum 3 maintenance visits per year; i.e. spring, summer and



autumn). This will include weed control, replacement planting, watering (if required) and the adjustment/removal of tree ties and spiral guards.

3.0 Existing Environment, Effects and Mitigation

3.1 Population & Human Health

The review of population is based predominantly on a review of settlement and land use patterns to identify existing residential housing and sensitive receptors in the vicinity of the application site. Ordnance Survey maps and aerial photography were also examined. Demographic information from the three Electoral Division (ED) areas of Moylagh, Hilltown and Killeagh (which all intersect the Murrens pit), from the census years of 2016 and 2022 were used in order to identify broad trends in the area.

The census results indicate that the population has increased in the local area, but at a much lower rate than that observed at the county and national level. The area also has a noticeably higher rate of population in all age categories over the age of 55, apart from the age 80-84 bracket. In general, it also has a lower rate of population across most of the younger age ranges.

Lower rates of short and long-term employment rates were observed locally than at County/State levels, but number of persons retired and unable to work due to permanent illness were recorded higher than in the Counties and State. The proportion of local populations working in professional occupations appear to have grown between 2016 and 2022. However, more residents in the local area are reliant on non-office based employment such as agriculture, forestry and fishing and manufacturing, than at the County and State level.

The publicly available information reviewed did not highlight any particular sensitivities in relation to human health. The deprivation indices in the area do not highlight the area as significantly disadvantaged and self-reported health status is positive and better than the national situation. The scale of community facilities and amenities available to local residents is considered to be in proportion with their rural location. Tourism and economic resources are closely linked with typical rural activities including mineral extraction and agriculture.

The proposed development will support the direct employment of existing employees at the Murrens Pit up to 2036. Employment will cease on completion of extraction activities.

The proposed development will also indirectly support and sustain indirect employment and contribute to the local and regional economy by supporting the construction industry and providing supply of aggregates that are proven to be lacking in the region.

The main potential for the proposed development to cause negative impacts to human health is through the potential for noise emissions and emissions to air, land and water. Distances/directions of the closest residences to the proposed extension area which have been obtained through the population review have been used as the basis for technical assessments relating to potential emissions.

The potential for emissions and suggested mitigating measures to reduce/eliminate these to ensure no negative health impacts have been addressed in detail in their respective chapters of the EIAR. The proposed development has potential for a substantial positive influence on the local economy through the enabling of the application site to continue to provide a source of direct and indirect employment. This has potential knock-on effects in terms of contributing to the overall wellbeing of the local population.



3.2 Biodiversity

All designated sites for biodiversity within 15 km and with ecological and/or hydrological connectivity have also been considered as part of this assessment, which comprised of both desk and field studies.

The preliminary ecological appraisal (PEA) of the application site was undertaken during a field survey in February 2025 to identify initial ecological constraints and to determine the need for targeted surveys. All habitats within the site were mapped and are described in detail in EIAR Chapter 5. The woodland habitats on-site may provide suitable habitat for common mammal species including pine marten and red squirrel. However, these habitats are very small in scale and fragmented when compared to the woodlands in the surrounding landscape. Therefore, they are considered to be of limited value to woodland mammals. No invasive species were noted on-site during the field surveys.

The closest European designated natura site is the White Lough, Ben Loughs and Lough Doo SAC (Site Code 001810), also c. 700m southwest of the application site. The Lough Bane and Lough Glass SAC (Site Code 002120) is located c. 1.9km southeast of it.

The Lough Naneagh proposed Natural Heritage Area (pNHA - Site Code 001814), part of which is located within the wider quarry landholding, is c. 400m west of the application site. The White Lough, Ben Loughs and Lough Doo pNHA (Site Code 001810) is located c. 700m southwest of the application site.

Best practice management practices will ensure that potential contaminant pathways between the application site and the ecologically designated areas will be prevented. The heavily disturbed nature of the application site has led to a finding of limited value for any rare or protected ecological species. The woodland habitat to the south of the Site would provide suitable nesting and foraging habitat for a variety of common and widespread passerine species, in addition to some amber and red listed species. The Site is considered to be of low/moderate value to foraging and commuting bats due to the presence of suitable habitats (i.e. scrub/woodland clearings, and treelines) which have good connectivity with the surrounding hedgerow network. However, the majority of the Site is composed of felled woodland which will not provide suitable foraging and commuting habitat for bats.

The proposed development will require the removal of one tree with low bat roosting potential and there is potential bat foraging and commuting habitat to be lost via the removal of 133m of treeline and the area of mixed broadleaved woodland in the south of the proposed extension area. However, these are of poor quality and of limited value to foraging bats and nesting birds due to the poor health of the trees in these habitats suffering from ash dieback. Appropriate felling measures (described in detail in Chapter 5 of the EIAR) will be implemented to protect any potential bat / nesting bird presence and appropriate management of replacement and the enhanced 375m of hedgerow will provide effective protection of bat and bird species.

3.3 Land, Soils & Geology

This assessment was undertaken based on available desktop information, a number of detailed site investigations to establish the geological conditions and prove the sand and gravel resource, as well as professional experience. Site investigations included:

- Trial Pits on adjacent lands to the west undertaken in 2013/2014;
- Boreholes on adjacent lands to the west undertaken in 2016; and
- Trial pits at the site undertaken in 2024 and boreholes at the site undertaken in 2025.

The sand and gravel material reserve at the site has been proven through the operation of the existing pit and the inspection and ground investigation surveys within the extension lands. This has included sampling and testing of the in-situ sand and gravel material.



The proposed development will result in a temporary loss of c. 4.2 ha of land across the proposed extension area. In terms of land take, the proposed development will result in a temporary use of the land for sand and gravel material extraction and a temporary loss of agricultural lands over the extension area. However, as this application is effectively for a 'land swap' therefore the permitted lands (Area 1) will remain untouched, in grassland. The soils at the site will be stripped and stored on site during the extraction of the sand and gravel material and will be used for the restoration of the site to return it to a beneficial agricultural after-use.

The soils at the application site is classified as the Rathowen Soil Association; it is described as fine loamy drift with limestones. The soil combination is considered to be imperfectly draining. Elton and Rathowen Series, from Grey Brown Podzolic Group are encountered as principal soil types across the wider study zone of a 2km radius surrounding the application site. These soils are considered to be moderately and imperfectly draining.

Subsoils across Ireland have been mapped under the Teagasc Irish Forestry Soils (IFS) study. The subsoils in the study area are represented by three main types:

- Limestone till;
- Limestone sand and gravels; and
- Chert Till.

Minor inputs are encountered in form of esker sands and gravels, peat, bedrock at or close to surface, alluvium, manmade ground and lake sediments within the study area.

Subsoils in the proposed extension site have been mapped under the IFS project as GL (Gravels derived from Limestones), limestone sand and gravels. Sands and gravels are widely distributed throughout the county and are particularly abundant in various hummocky regions situated below 120 m in elevation. Trial pits at the site indicate between c. 1 m and 2 m of glacial till subsoils were overlying the sand and gravel material. Borehole drilling for groundwater monitoring (2025) has confirmed the presence of sand and gravel material to depths of up to c. 9-11m below ground level on the application site.

The lands at the application site are underlain by Derravaragh cherty limestones, which are a lithological variation of the Calp Limestone and are silicified thick bedded limestones, with chert nodules and shaly layers. South of Slieve na Calliagh the Calp Limestone is overlain by or passes into the Derravaragh Limestone.

There are no bedrock exposures at the site, the closest bedrock outcrop of Derravaragh Formation in study area is encountered approximately 650m in a southeast direction from the southeast extension boundary. It is not proposed to extract or blast any bedrock at the site as part of this planning application.

The GSI database indicates that the application site is located within the Murrens County Geological Site (CGS), and is considered to be of very good quality, showing spectacular topography which is unique in Ireland and is of international importance. The esker will be recommended for Natural heritage Area (NHA) designation.

During pre-planning consultation with the GSI, the following possible mitigation measures were recommended in terms of the protection of geological heritage:

- Allow access to sand and gravel faces by appropriate scientists (upon request and with due regards to Health and Safety requirements) during quarrying to check for interesting new stratigraphies / relationships as they might become exposed and to establish if the quarry site is worthy of recognition post extraction and through aftercare/restoration planning; and
- Leave representative sections of the sand and gravel faces at the end of the pit life or inclusion of information panels to promote the geology to the public or develop tourism or educational resources if appropriate depending on the future use of the site. Natural



exposures are few, or deeply weathered, this measure would permit on-going improvement of geological knowledge of the subsurface.

These actions can be included in the restoration plan.

Soils will be managed on site in line with best practice. A specific Soil Management Plan (based on The Institute of Quarrying Guidelines, 2021) will be developed for the site for the stripping, storage and reuse of the soils in restoration at the site.

The stripped soils at the proposed development will be used in the restoration of the site to agricultural use. With this mitigation measure in place, it is considered that the residual impact on soils will be low to imperceptible.

The design of the extraction scheme (boundary set-back distance and final pit slopes) together with the operation of the pit will be in line with the Health and Safety Authority Safe Quarry Guidelines in relation to the Safety Health and Welfare at Work (Quarries) Regulations 2008 and will eliminate the potential for unplanned events such as instability of pit face or instability in adjacent lands.

Therefore, it is considered that the residual impact of the proposed development on land, soil and geology will be negligible.

3.4 Water (Hydrology and Hydrogeology)

The application site is within the Boyne Catchment in the Lough Lene-Adeel Stream River Sub-basin. The White Lough, Ben Loughs and Lough Doo SAC (Site Code 001810), is located c. 700m southwest of the application site and is groundwater fed.

The closest waterbody to the site extension area is the Lough Lene-Adeel Stream which flows through the Annagh Lough, approximately 700m southwest of the site.

Under the WFD classification the Lough Lene-Adeel Stream is classified as Good Status and is designated under the Third-Cycle as being 'At Risk' due to agricultural pressures.

There are no recorded flood events near the site, nor is there any risk of potential flooding.

The site is located within the Tynagh Gravels Groundwater Body (GWB), the groundwater in the gravels is not classified as a Sand & Gravel Aquifer by the GSI.

The bedrock aquifer in the area is classified as a locally important aquifers, with an area being classified as a Regionally Important Karstified Aquifer. The aquifer at the site is classified as a locally important karstified (Lk) aquifer. The GWB is classified as Good under WFD classification. The groundwater vulnerability is classed as High due to the preamble nature of the sand and gravels material.

Three monitoring boreholes have been installed on the extension site area with a maximum depth of 28m bgl. The sand and gravel extension area pit floor levels will be maintained above the high groundwater level.

A well survey was carried out and no private water supplies were found in the surrounding area.

Surface water drainage in the area around the existing pit consists of a number of lakes and large ponds with no channel outlet. Surface water infiltrates to the ground. A system of drains/streams/ ponds located to the south and southeast of the application site drains into the Ben Loughs, Lough Doo complex and White Lough.

There will be no dewatering associated with the proposed development and therefore there will be no impact on groundwater flows or quantities. Final floor levels at the proposed pit excavations will be maintained above the underlying (seasonal maximum) groundwater level and any rain falling across the pit will percolate naturally through unsaturated ground to the underlying groundwater. A number of management measures will be implemented in order to



mitigate against the risk of pollution to groundwater and surface water occurring at the site and these are described in detail in Chapter 7 of the EIAR. Environmental water monitoring will continue to be carried out on a regular basis to demonstrate that the sand and gravel pit is not having any significant adverse effects on the surrounding environment.

All water used in the washing process is treated within the existing site washing plant system with c. 90% recycled back to the washing plant (i.e. it is a closed system with no discharges to surface water). The water requirement at the site is minimal and will be reduced further through monitoring water use and by promoting recycling and water efficient practices at the existing BD Flood operation.

3.5 Air Quality

A qualitative assessment has been undertaken, following appropriate industry guidance, to assess the potential to generate fugitive dust emissions and particulates (PM₁₀), to result in impacts on local air quality. The potential for combustion emissions (primary PM₁₀, and oxides of nitrogen) from vehicle emissions associated with transportation has also been considered.

Monitoring of fugitive dust emissions is already undertaken on site as part of the wider operations in accordance with Condition 7a of the existing permission. The dust monitoring program, which includes submission and approval by the planning authority, commenced in March 2017.

Dust monitoring is undertaken typically between the months of March to September, inclusive, and is carried out at 8 locations across the landholding. Dust deposition attributable to the extant operations is considered to be well within the limits set out in the approved monitoring strategy; dust control measures in place for the existing sand and gravel operations are therefore deemed to be satisfactory.

There have been no complaints received by the Site operators with regard to dust deposition in the local area; demonstrating that dust deposition beyond the site boundary at locations of exposure are considered to be acceptable.

The qualitative assessment of future potential dust effects, taking into account site specific factors such as distance between activities/receptors, weather patterns and baseline air quality, has factored in the continued implementation of operational dust control measures on site and the designed in environmental measures. Impacts on disamenity, human and ecological receptors are not considered to be significant. Notwithstanding this, a series of industry good practice measures have been recommended, alongside additional monitoring to supplement the existing monitoring regime.

A screening assessment of vehicle has been undertaken. On account of the extraction rates not proposed to increase above the permitted and operational rates, traffic volumes generated offsite will not increase as a result of the proposed development. As such, impacts on human and ecological receptors from traffic generation are also not considered to be significant.

Overall, it is therefore considered that the potential impacts from dust and airborne emissions arising from the proposed development do not present a material constraint to the development proposals.

3.6 Climate

Observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising sea level are unequivocal evidence of warming of the climate system globally. Global mean temperature has increased compared with pre-industrial times for land and oceans. Most of the observed increase in global average temperatures is very likely due to human activity.

Ireland has a typical maritime climate with relatively mild and moist winters and cool, cloudy summers. The prevailing winds are south westerly in direction. The climate is influenced by



warm maritime air associated with the Gulf Stream, which has the effect of moderating the climate, and results in high average annual humidity across the country. The area of least precipitation is along the eastern seaboard of the country in the rain shadow of the Leinster uplands.

Despite the different methods and scenario combinations used to project climate change, there is agreement in projected changes in Ireland, including sea level rises, storm surge and temperature extremes.

The climate data referred to as indicative of the local area is based on Met Éireann data for Mullingar (c. 22km south).

The design of the proposed development has been developed alongside the review of vulnerability to the effects of climate change, and the adaptation measures incorporated include avoiding mapped flood hazard areas, resilient water management system and procedures to facilitate operational shutdown during extreme weather events.

GHG emissions have been estimated for the proposed development based on likely annual energy, fuel use and traffic movements at the proposed development site in future years. Based on the calculated total of 3,850,030 CO_{2e} kg (3,850 CO_{2e} tonnes) and a comparison to Ireland's 2023 emissions value of c. 55.01M Tonnes of CO_{2e}, it is assessed that proposed operations would be c. 0.00699% of Ireland's annual CO_{2e} emissions for the duration.

3.7 Noise & Vibration

The existing noise levels at noise sensitive locations in the vicinity of the site and haulage routes was determined through initial monitoring at representative locations. Industry standard predictions of noise levels associated with proposed activities during the construction and operational phases was then used to calculate potential noise impacts arising at sensitive locations.

The design of the proposed development has incorporated measures from the outset to minimise the potential for noise disturbance to its nearest neighbours. This will be achieved through extraction operations commencing on the floor of the existing pit and gradually advancing southeast, thereby using the existing face as an acoustic screen.

Additional proposed mitigation measures include general best practice mitigation along with specific measures in respect of mechanical plant and vehicle movements.

The nature of onsite operations (i.e. no blasting, piling or drilling) and the distance to the nearest noise sensitive locations is such that the risk of vibration impacts occurring during either the construction or operational phases is negligible.

Noise monitoring is undertaken typically twice per year at 6 noise sensitive locations around the overall landholding. Noise levels attributable to the extant operations is considered to be well within the limits set out in the approved monitoring strategy; noise control measures in place for the existing sand and gravel operations are therefore deemed to be satisfactory.

There have been no complaints received by the Site operators with regard to noise in the local area; demonstrating that noise levels beyond the site boundary at locations of exposure are considered to be acceptable.

3.8 Material Assets

The material assets assessment comprises the consideration of existing resources pertinent to the proposed development and the application site that are not addressed elsewhere in the EIAR and the likely development impacts on those resources. On this basis, it includes a review of utilities such as electricity, telecommunications, gas, water supply infrastructure and sewerage, as well as waste management arrangements.



The proposed development is not predicted to have any negative impacts on any other services / utilities.

The works in the area of the underground higher voltage cable running inside the southwestern boundary of the new proposed extension area will be carried out in close consultation with ESB Networks. No excavation works will be carried out within the buffer zone (i.e. within 5m either side of the route). Excavation works at the site do not require any blasting.

Waste arising at the site will be disposed of by appropriately authorised waste collection services for each stream, in line with the Environmental Management System for the site.

3.9 Cultural Heritage

The study involved detailed investigation of the archaeological and historical background of the development site, the landholding and the surrounding area extending 1 km from the development boundary. This area was examined using information from the Record of Monuments and Places of County Meath, the Meath County Development Plan, lists of excavations and cartographic and documentary sources. A field inspection was carried out on 13 March 2025 to identify and assess any known archaeological sites and previously unrecorded features and possible finds within the area of the application site.

The site is situated in the townland of Murrens, the civil parish of Moylagh and the barony of Fore. There were no Protected Structures, sites in the Sites and Monuments Records or National Inventory of Architectural Heritage buildings identified in the application site or in the wider study area.

There are no Recorded Monuments located within the application site, but there is Recorded Monument- ME014-026---- a Cashel with an internal house foundation (ME014-026001-) - in Annagh townland situated c.170m southwest of the application site. It is considered too far distant to be directly or indirectly affected by the proposed development. Potential effects on the setting of the monument will be mitigated by the retention of the treeline on the western side of the application site.

There is a possibility of the survival of previously unknown sub-surface archaeological deposits or finds within the proposed extension area. As this is an area of former forestry plantation from which the trees were for the most part previously felled and removed, there is significant woody debris which makes geophysical survey difficult here, as the branches and roots, etc would interfere with the sensor apparatus. It is recommended that all topsoil-stripping in this area should be monitored by a qualified archaeologist under licence from the National Monuments Service.

3.10 Landscape & Visual

A landscape and visual impact assessment (LVIA) of the proposed development was completed in accordance with accepted best practice guidance and involved both desk and field study. The application site is located immediately south-east of the existing pit within the Murrens townland, approximately 6km south of Oldcastle and 7km north-east of Castlepollard. The R195 regional road passes just over 100 m to the east.

The application site will be accessed from the existing Murrens Pit to the north-west, the ancillary facilities of which will be used for the processing of the extracted material. A conveyor belt system is in use to transport the extracted material from the southern end of the existing pit to the processing facilities, near its northern end.

The site is substantially screened by the existing vegetation along its boundaries and adjoining vegetation, i.e. forestry plantations to the south and east, as well as topography. Except for along the boundary with the existing Murrens Pit, the existing boundary vegetation will be retained, to provide continued screening. A restoration scheme was prepared, comprising the restoration of the pit floor to agricultural grazing land and natural regeneration on the pit slopes,



as well as native hedge planting to break up the large area into smaller compartments and to provide habitat linkage.

It is proposed to extract the sand and gravel from the extension area, commencing on the floor of the existing pit and gradually advancing southeast, thereby using the existing face and the surrounding hedgerows and forestry as a visual screen between the site and nearest residential properties to the southeast along the R195 road.

A study area of approximately 3km surrounding the application site was identified during the desktop study, based on the Zone of Theoretical Visibility Map (refer to EIAR Figure 13-2). As the ZTV mapping did not indicate any visibility of the application site from the Loughcrew Hills, these were not included in this assessment. It should be noted that the visual envelope, i.e. the area from where the application site is visible, is much smaller than the study area, due to intervening vegetation and topography. Nevertheless, the 3km study area is maintained for the purposes of providing landscape context.

Photography and visual representations have been prepared in accordance with industry standards to enable an understanding of the landscape and visual impacts of the proposals. Six viewpoint locations were selected to represent the range of available views.

Three protected views and prospects identified in both the Meath and Westmeath County Development Plans 2021-2027 are within the study area:

- Meath County Development Plan

Viewpoint 94: View South East - Moylagh Castle from local road to east of R195.

This viewpoint is not directed towards the application area and was therefore not considered further in the assessment.

- Westmeath County Development Plan

V29 is approximately 4 km to the south-west of the application area

V31 is approximately 4.5 km southeast of the application area

Neither of these views are directed towards the application area and were therefore not considered further in the assessment.

The application site is located within LCT 1 - 'Hills and Upland Areas' and LCA 18 - 'Lough Sheelin Uplands' of the Meath Landscape Character Assessment. The second of the general recommendations made for LCT 1 reads: "To have due regard to the positive contribution that views across adjacent lowland areas and landmarks within the landscape make to the overall landscape character."

LCA 18 is classed as being of 'High' Landscape Value, i.e. 'Areas which are considered to be of value by virtue of their positive characteristics, sense of place or local associations. These areas may be of regional or local importance'. In the case of this LCA it has been afforded 'Regional' Landscape Importance.

LCA 18 is further classed as being of a 'High' Landscape Sensitivity, i.e. 'A vulnerable landscape likely to be fragile and susceptible to change. Frequency and sensitivity of users is likely to be high. The introduction of change is likely to significantly alter the character to the extent that it would be difficult or impossible to restore.'

The proposed development will be an extension to the existing Murrens Sand and Gravel Pit, and will be worked instead of the southern end of the previously granted extension area. Therefore, overall the area of ground affected by mineral extraction works will not be increased. Also considering the low landscape impact predicted and that there will be no visual impacts, due to the proposed extension, the cumulative landscape and visual impacts with the existing pit, as well as the adjoining third party quarry is considered minimal and not significant.



The proposed development will be fully screened in views from the surrounding area, by topography, as well as the adjoining forestry plantations and tree-lined hedgerows. The proposed restoration of the site to a mix of an agricultural and natural habitat use, including diverse native hedge planting, will compensate the loss of some vegetation on site and its integration into the local landscape. These elements comprise the main mitigating features integrated into the development design, ensuring that the landscape and visual effects are kept to a minimum. Considering no visual impacts and no significant landscape impacts were identified, no further mitigation measures are considered necessary during the operational stage of the proposed development

3.11 Traffic

PMCE Ltd provided an assessment of the traffic impacts associated with the proposed development, which comprised a review of the local road network, including the L68181, L1759, L68131, L28092 and the R195. The site will be accessed from the L68181 Local Road via the existing pit entrance.

The L68181 is approximately 7 m wide and there are no existing footways or public lighting on either side of the road.

Predicted traffic volumes were based on assumptions on likely trips generated by the proposals and from data obtained from traffic counts undertaken in the vicinity in February 2025. Based on the projected maximum of 500,000 tonnes of sand and gravel to be extracted per year, a total of 200 daily Heavy Goods Vehicle trips and 84 daily Light Vehicle trips are expected to arise from the proposals. These are already permitted under the existing planning consent.

Link capacity analysis was carried out on the L68181 within the vicinity of the site. It was determined that the link road assessed will continue to operate within capacity for each of the assessment years 2025 (Opening year), 2030 and 2040.

Junction Capacity Analysis was undertaken at the site access junction on the L68181, the L68181/L68131 junction, the L68131/R195/L28092 Crossroads and the L68181 / L1759 junction. The results of the Junction Capacity Analysis indicate that all of the junctions assessed will operate within capacity for each of the assessment years 2025 (Opening year), 2030, and 2040.

The assessment therefore indicates that the development will have a negligible impact on traffic flows on the existing road network due to the relatively low volumes of traffic being generated by the development.

Visibility at the access junction, in both directions, was determined to meet, and exceed, the requirements of TII Guidance.

3.12 Interactions

A matrix and associated commentary is provided in Chapter 15 of the EIAR, which acts as a checking mechanism to ensure that there are no potential additional impacts from the interactions of impacts that are dealt with within the individual assessment chapters of the EIAR.

3.13 Mitigation and Monitoring

Chapter 16 of the EIAR provides a summary of mitigation and monitoring commitments set out within the technical chapters. This is intended to assist Meath County Council in determining the planning application and identifying any planning conditions that it may wish to impose on any future planning permission.



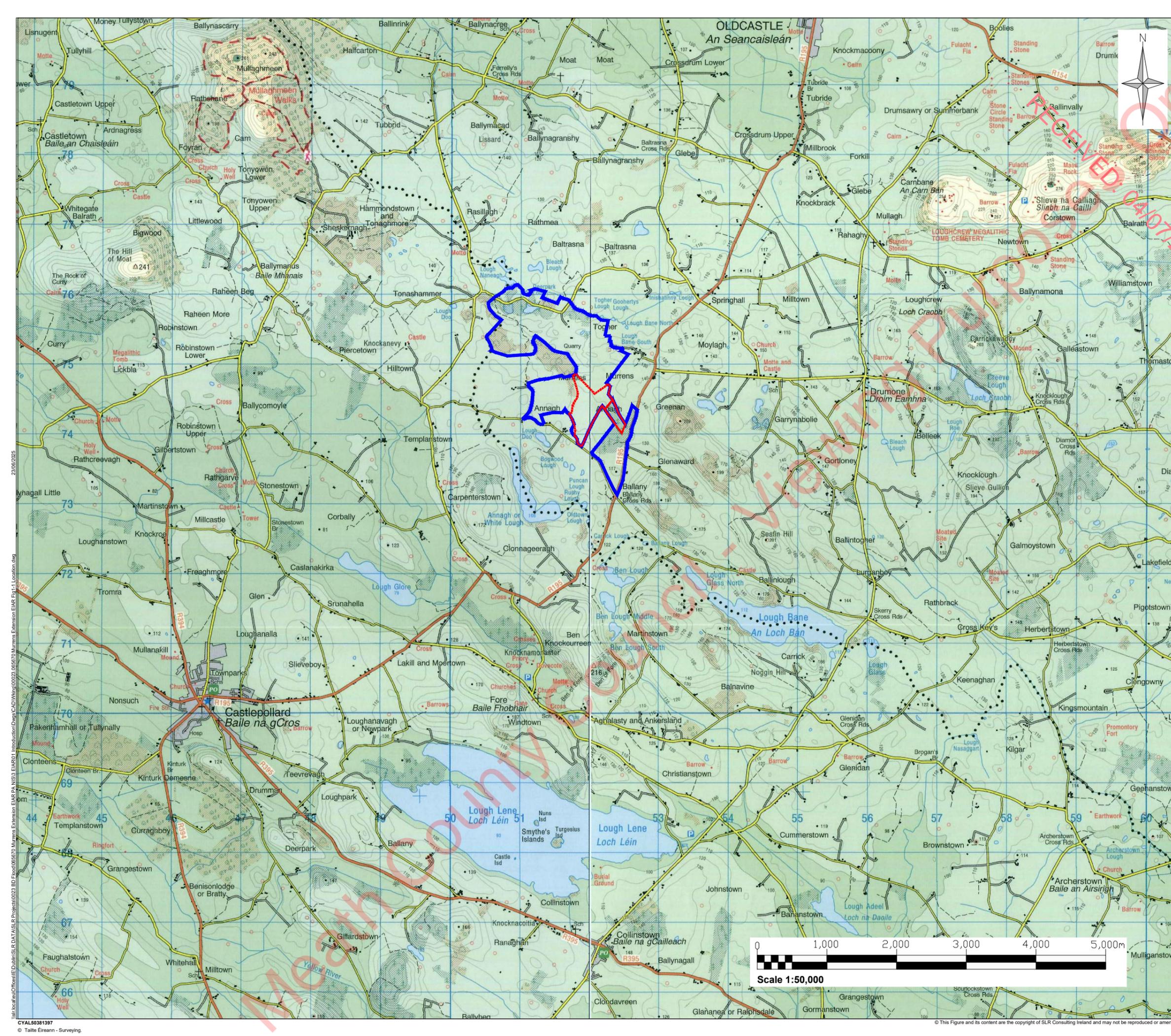
Figures

NTS Figure 1	Site Location Map
NTS Figure 2	Site Location & Site Notice Map
NTS Figure 3	Site Location & Site Notice Map
NTS Figure 4	Existing Site Layout
NTS Figure 5	Proposed Site Layout
NTS Figure 6	Proposed Restoration Layout

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Notes:
 1. Based on 1:50,000 scale Tailte Eireann Discovery series maps 41 & 42

- Legend:**
-  Landholding
 -  Planning Application Area (c. 5.8 hectares)
 -  Planning Permission Area P. Ref. KA/141129

Rev	Amendments	Date	By	Chk	Auth



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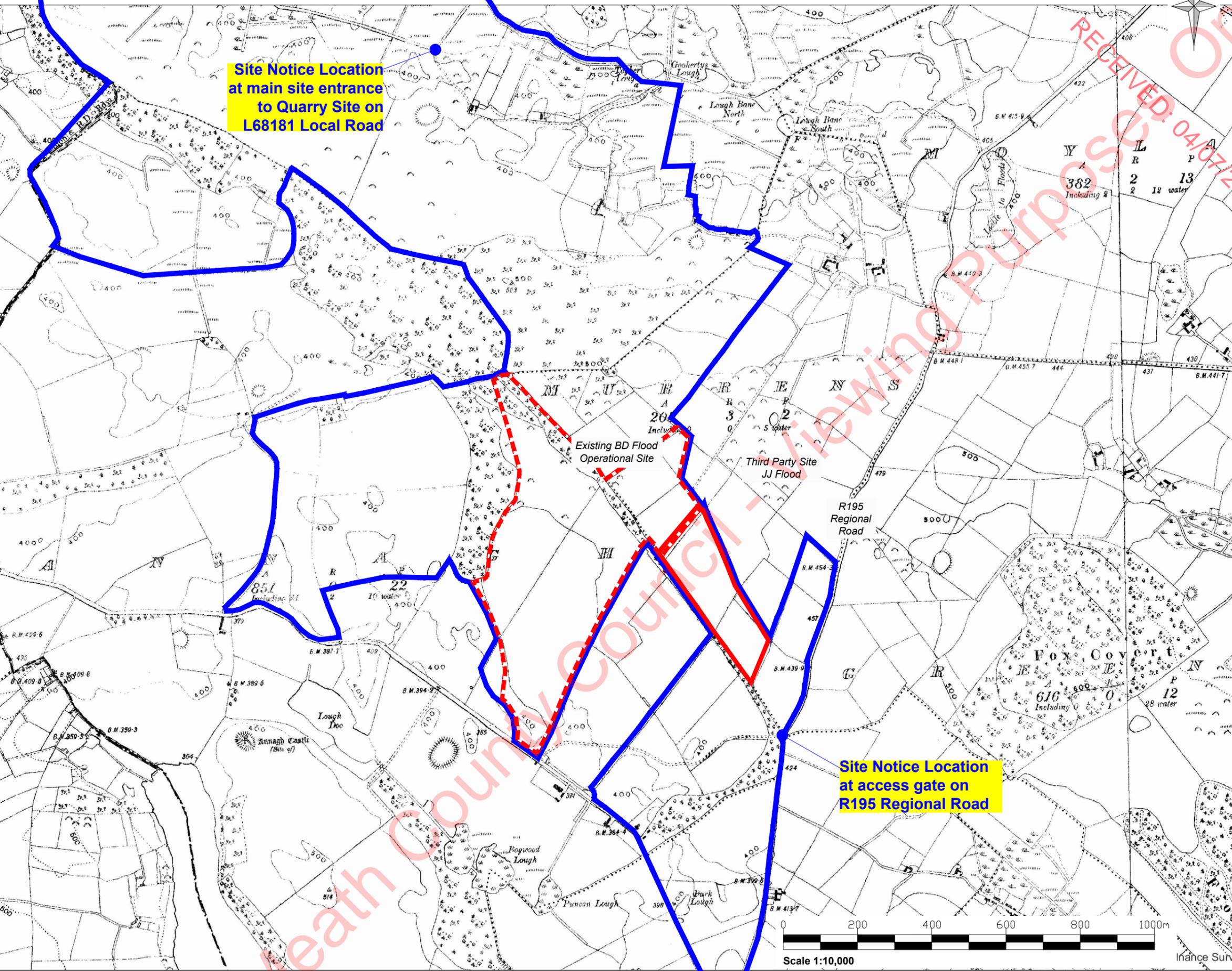
Project
 Sand & Gravel Pit Extension
 The Murrens, Oldcastle, Co. Meath

Figure Title
 Site Location Map

Scale 1:50,000	@ A3	SLR Project No. 501.065670.00001
Designed smcd	Drawn smcd	Checked lh
Date 01/25	Date 01/25	Date 03/25
Date 01/25	Date 03/25	Date 03/25

Figure Number
Figure NTS-1

Notes:
1. Based on 6 inch raster scale Tailte Eireann maps MH014, MH015, WH004



Legend:

- Landholding
- Planning Application Area (c. 5.8 hectares)
- Planning Permission Area P. Ref. KA/141129

Rev	Amendments	Date	By	Chk	Auth



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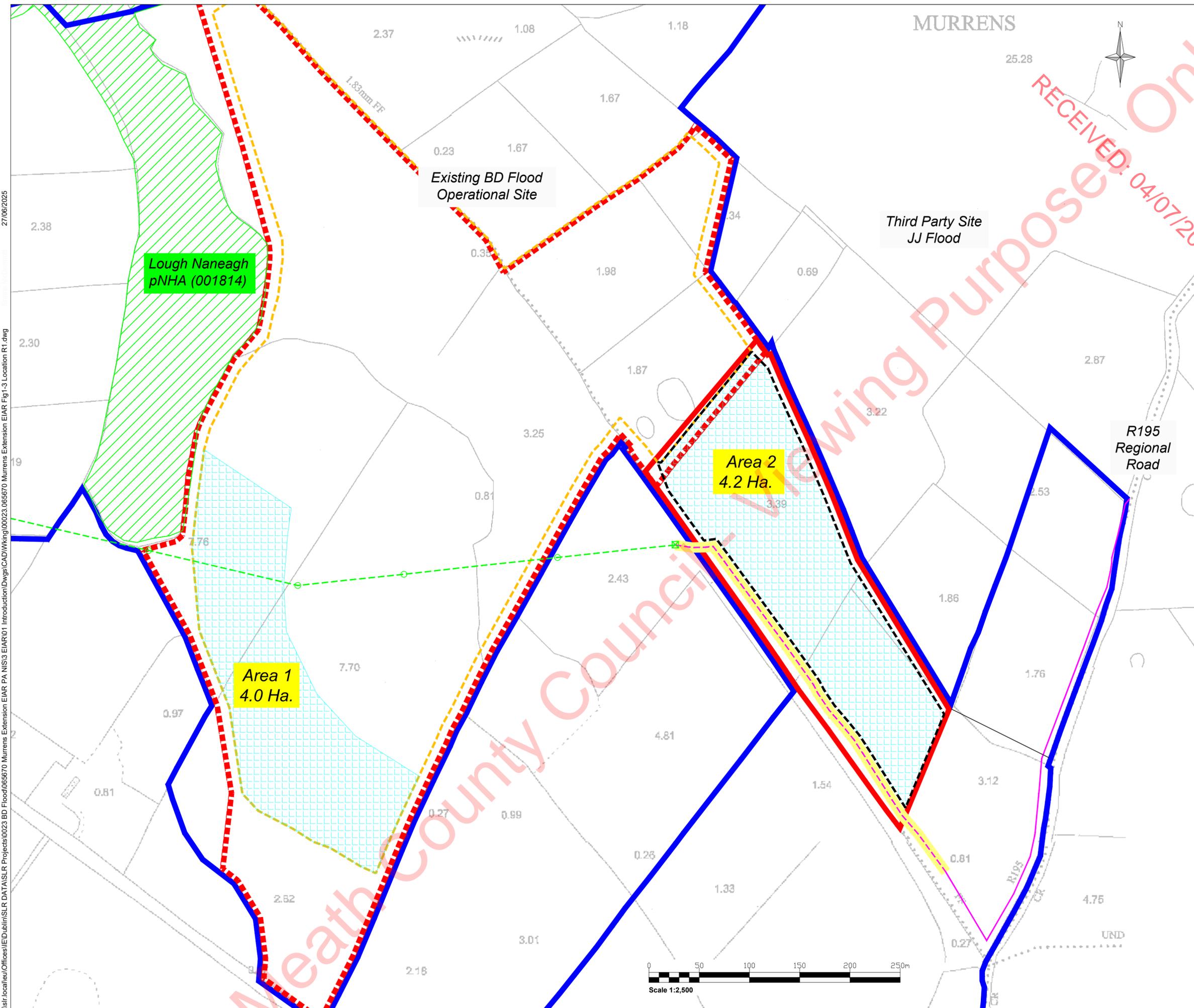
Project
Sand & Gravel Pit Extension
The Murrens, Oldcastle, Co. Meath

Figure Title
Site Location Map

Scale 1:10,000	@ A3	SLR Project No. 501.065670.00001
Designed smcd	Drawn smcd	Checked lh
Date 01/25	Date 01/25	Date 03/25
Date	Date	Date

Figure Number Figure NTS-2	Rev.
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Notes:
 1. Based on *Tailte Éireann* Digital maps 2304, 2305, 2367, 2368

- Legend:**
- Landholding
 - Planning Application Area (c. 5.8 hectares)
 - Proposed Extraction Area (c. 4.2 hectares)
 - Planning Permission KA14/1129 (c. 28.5 hectares)
 - Permitted Extraction Area KA14/1129 (c. 23.9 hectares)
 - 38KV overhead powerline
 - 38KV underground powerline (with 5m buffer each side)

AREA 1 = 4.0 hectares **inside** existing permitted extraction area
AREA 2 = 4.2 hectares **outside** existing permitted extraction area

PROPOSAL TO:

- Not extract **Area 1** and agricultural lands remain in-situ
- Seek permission to extract sand & gravel from **Area 2** in-lieu of Area 1
- No requirement for any amendment of conditions attached to existing permission KA14-1129
 - planning permission term to remain the same
 - permitted annual extraction rate to remain the same

Rev	Amendments	Date	By	Chk	Auth

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Project
Sand & Gravel Pit Extension
The Murrens, Oldcastle, Co. Meath

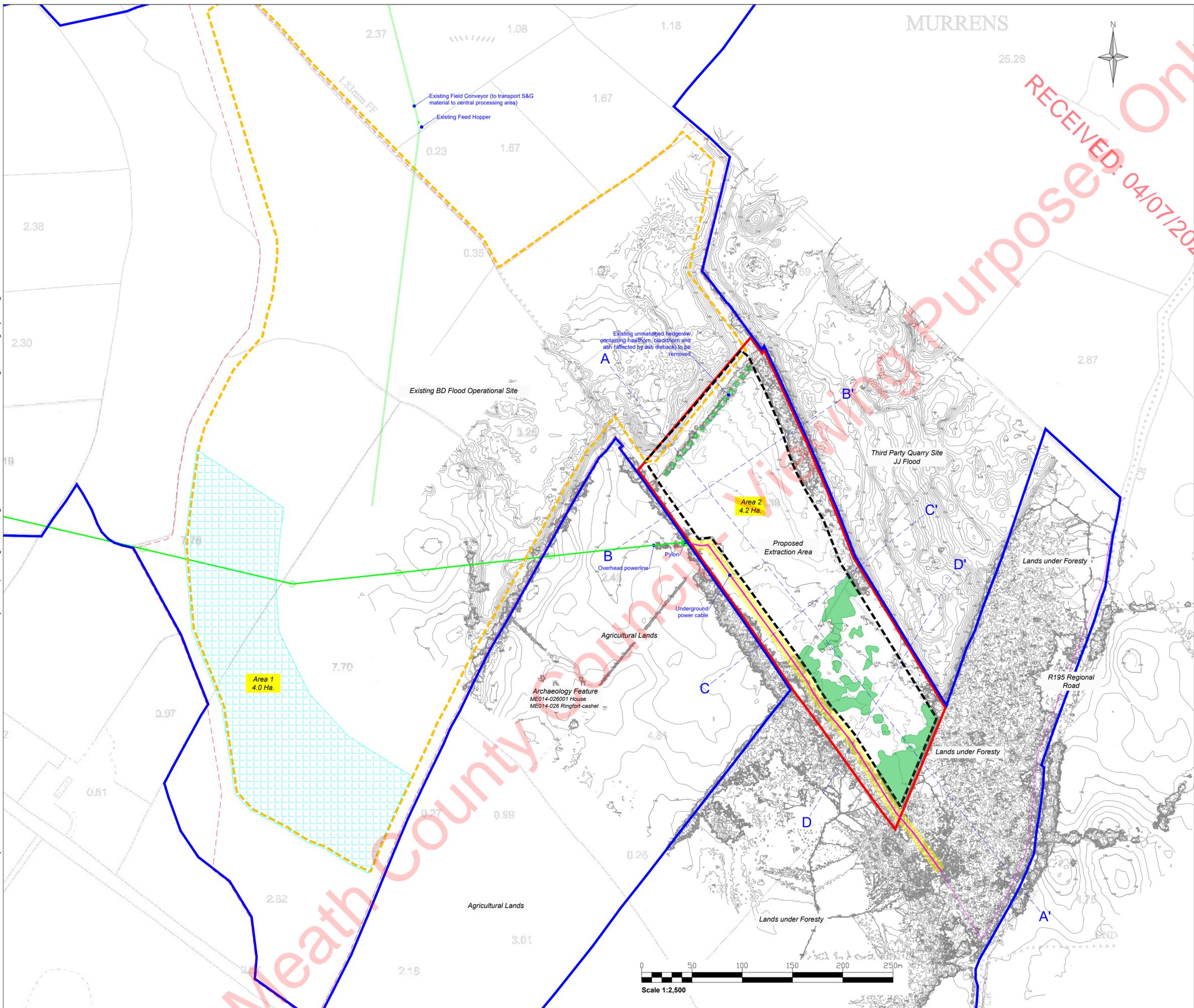
Figure Title
Proposed Application Area

Scale 1:2,500	@ A2	SLR Project No. 501.065670.00001
Designed smcd	Drawn scmd	Checked lh
Date 01/25	Date 01/25	Date 03/25
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Notes:

1. Based on *Taitte Éireann* Digital maps 2304, 2305, 2367, 2368

- Legend:**
- Landholding
 - Planning Application Area (c. 5.8 hectares)
 - Proposed Extraction Area (c. 4.2 hectares)
 - Planning Permission KA14/1129 (c. 28.5 hectares)
 - Permitted Extraction Area KA14/1129 (c. 23.9 hectares)
 - Overhead powerline
 - Underground power cable route (with 5m exclusion zone either side)
 - Areas of vegetation/trees to be removed (primarily consisted of Ash trees infected with ash dieback disease)

AREA 1 = 4.0 hectares **inside** existing permitted extraction area

AREA 2 = 4.2 hectares **outside** existing permitted extraction area

- PROPOSAL TO:**
- Not extract **Area 1** and agricultural lands remain in-situ
 - Seek permission to extract sand & gravel from **Area 2** in-lieu of Area 1
 - No requirement for any amendment of conditions attached to existing permission KA14-1129
 - planning permission term to remain the same
 - permitted annual extraction rate to remain the same

Rev	Amendments	Date	By	Chk	Auth



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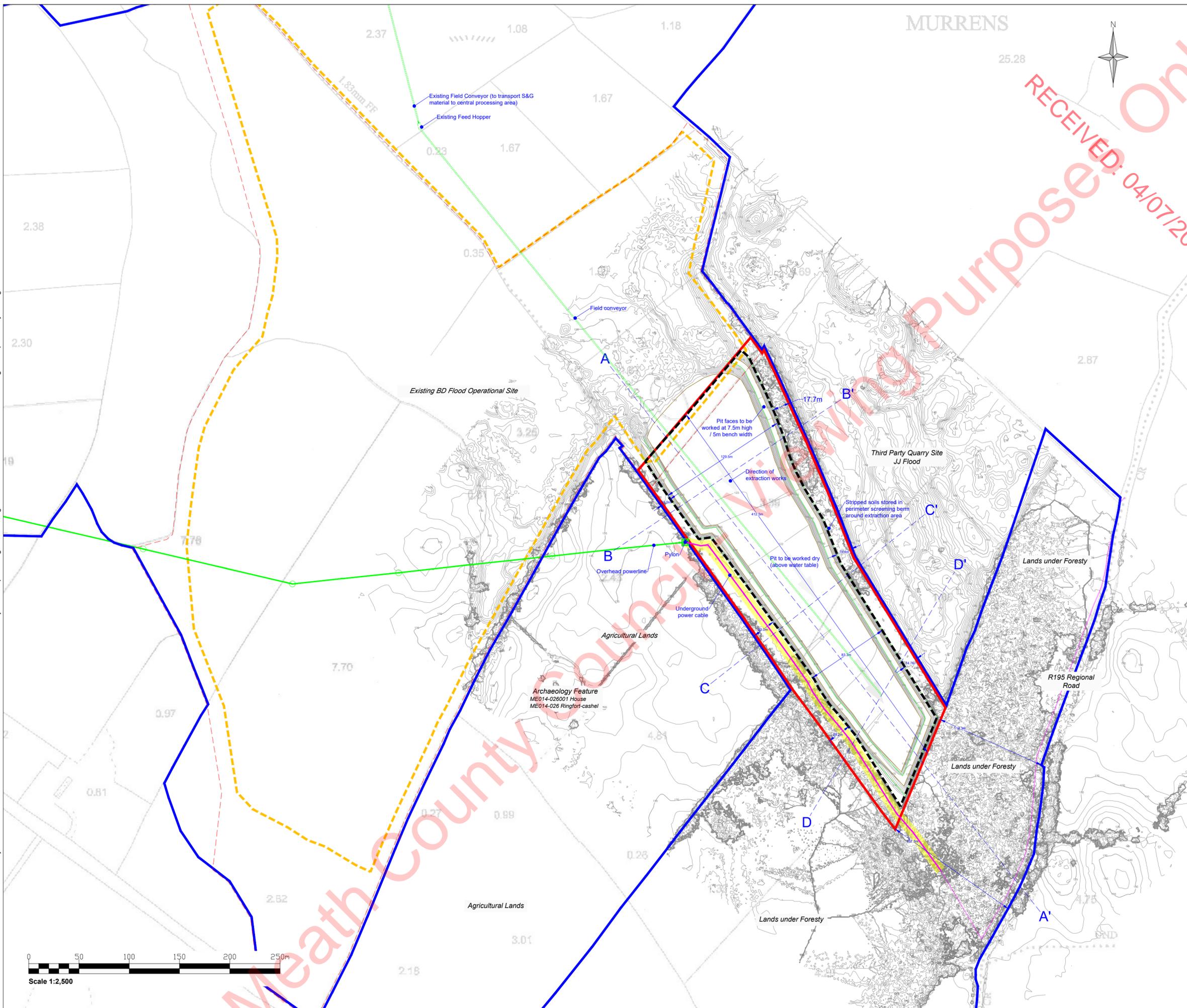
Project
Sand & Gravel Pit Extension
The Murrens, Oldcastle, Co. Meath

Figure Title
Existing Site Layout

Scale 1:2,500	@ A2	SLR Project No. 501.065670.00001
Designed smcd	Drawn scmd	Checked lh
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Figure Number
NTS-4

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MURRENS



Notes:
1. Based on *Taitte Éireann Digital maps 2304, 2305, 2367, 2368*

- Legend:**
- Landholding
 - Planning Application Area (c. 5.8 hectares)
 - Proposed Extraction Area (c. 4.2 hectares)
 - Planning Permission KA14/1129 (c. 28.5 hectares)
 - Permitted Extraction Area KA14/1129 (c. 23.9 hectares)
 - Overhead powerline
 - Underground power cable route (with 5m exclusion zone either side)

Rev	Amendments	Date	By	Chk	Auth



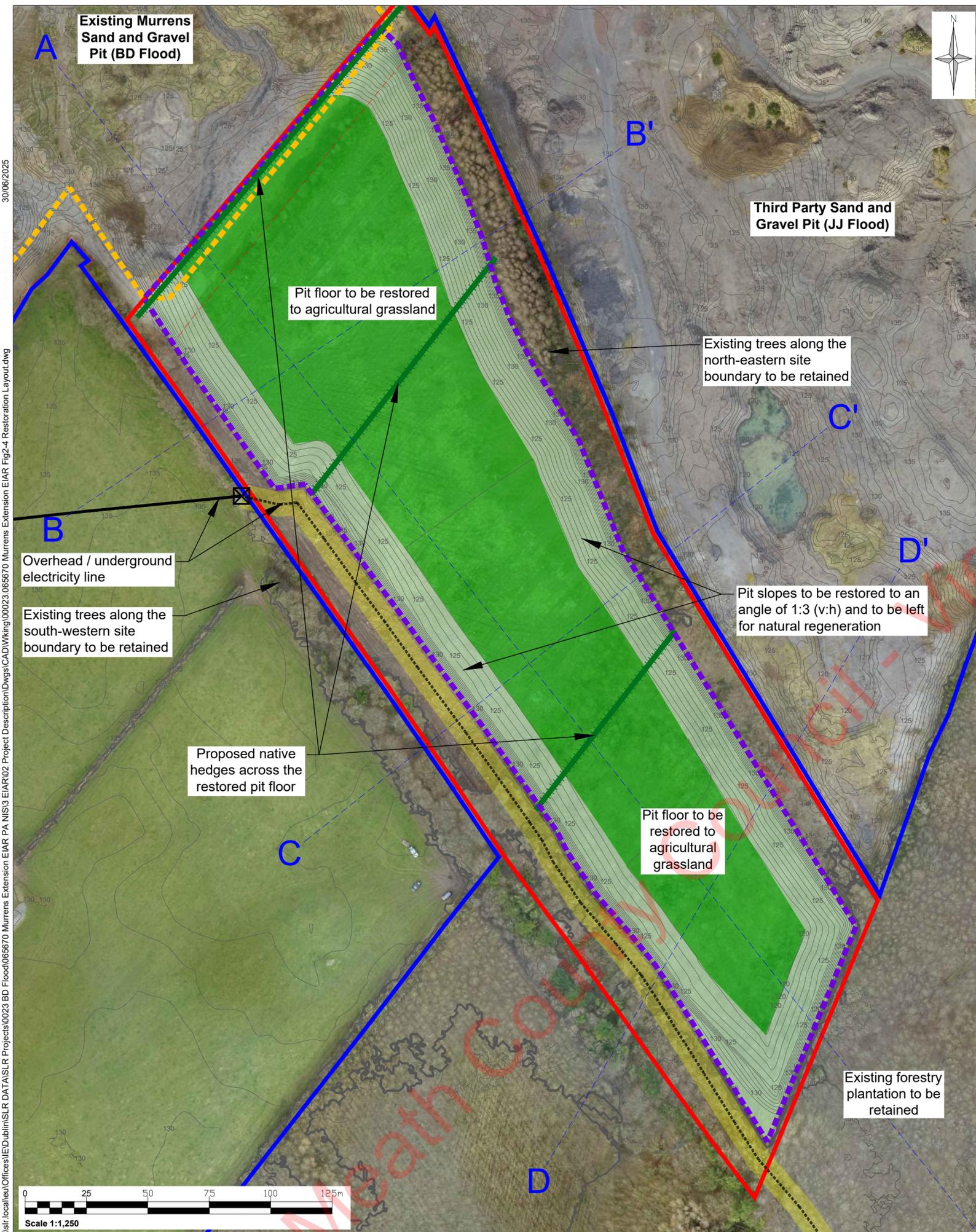
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Project
**Sand & Gravel Pit Extension
The Murrens, Oldcastle, Co. Meath**

Figure Title
Proposed Site Layout

Scale 1:2,500	@ A2	SLR Project No. 501.065670.00001
Designed smcd	Drawn scmd	Checked lh
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RESTORATION PROPOSALS

It is proposed to restore the majority of the proposed extension area of the sand and gravel pit at the Murrens to a beneficial agricultural afteruse, i.e. the pit floor, with some areas of natural habitat, i.e. the pit slopes.

Both are afteruses recommended in the EPA Guidelines: 'Environmental Management in the Extractive Industry' (2006).

This will be achieved by returning the pit floor to agricultural grassland. The pit slopes will be re-graded to 1:3 (v:h) or less and left for natural regeneration. Native hedges will be planted in line with existing hedgerows in the neighbouring fields to the south-west, to compensate the loss of any trees along the north-western site boundary and to break up the large agricultural area. The proposed hedge mix is species rich and made up from species present in the local area, which will augment the biodiversity of the site. The restoration will be carried out on completion of all extraction works. The treelines along the north-eastern and south-western site boundaries, will be retained for the duration and on completion of the proposed development.

Restoration Proposals

The following restoration activities will be carried out to achieve the successful restoration of the site:

- 1. Site Clearance:** All stock material and processing facilities will be cleared from the areas to be restored.
- 2. Re-grading:** Those areas of the site to be restored to agriculture will be re-graded, utilising the overburden material stripped from the extension area and temporarily stored within the existing site (note: the aim is to level out any local unevenness, as well as stabilising any of the steeper pit slopes throughout the site, by lowering their gradient (1:3 v:h or less). Please refer to the contours shown on the plan for an indication of the proposed topography of the site. The final step of the re-grading works will be the spreading of the topsoil stripped from the extension area and temporarily stored within the existing site. All soil handling operations will follow current best practice guidelines.
- 3. Grass sowing:** All areas to be restored to agriculture will be seeded with a suitable agricultural seed mix in the first available season following the completion of the re-grading works and placing of topsoil. Site preparation and sowing specifications to be as per manufacturer's instructions.
- 4. Hedge planting:** Native hedge planting (refer to the Native Hedge Mix below) will be carried out in a number of locations as indicated on the plan. The hedge planting will be carried out into the re-graded and topsoiled ground. The planting mix consists of locally occurring native species that will be locally sourced, as far as possible. All plant handling, planting and establishment works are to be carried out in line with current best practice and by a suitably qualified contractor.

General Planting Notes

All plant handling, planting and establishment works are to be carried out in line with current best practice and to take place in the appropriate planting season (e.g. bareroot planting: November to March only) and in favourable weather conditions. All works to be carried out by a suitably qualified landscape contractor.

Aftercare

It is assumed that the establishment of the grass sward will be managed appropriately by the farmer who will be appointed with the management of the site. With regard to the hedge planting, establishment maintenance will be carried out for 2 years following the planting works (minimum 3 maintenance visits per year; i.e. spring, summer and autumn). This will include weed control, replacement planting, watering (if required) and the adjustment/removal of tree ties and spiral guards.

Water management

Surface water within the site (which will be worked above the water table) will either run-off into the pond areas or infiltrate naturally into the underlying ground. Long-term water management will therefore not be necessary.

Site Access and Security

For the duration of the proposed development and as part of the restoration activities, it will be ensured that all boundaries of the existing sand and gravel pit, as well as the proposed extension area are secured by either dense vegetation and/or post & wire/rail fencing.

Native Hedge Mix

Hedges to be planted in two staggered rows, with plants within each row 50cm apart (i.e. 4 plants per m) and rows 50cm apart. Total length to be planted is 375 lin.m. = 1500 plants. Transplants to be planted randomly in same species groups of 5-20 (at least 6 different species per 30m section). All plants to be supplied with spiral guards or alternatively hedges to be protected with rabbit proof fencing.

No	Plant Name	Common Name	Height (cm)	Age/Pot Size	%
<i>Transplants</i>					
225	Corylus avellana	Hazel	60-90	1+0	15
225	Crataegus monogyna	Hawthorn	60-90	1+1	15
150	Eonymus europaeus	Spindle	60-90	1+1	10
150	Ilex aquifolium	Holly	60-80	2L	10
150	Malus sylvestris	Crab Apple	40-90	1+1	10
225	Prunus spinosa	Blackthorn	60-90	1+0	15
75	Quercus robur	Pedunculata Oak	40-60	1+1	05
150	Rosa canina	Dog rose	40-60	1+1	10
150	Sorbus aucuparia	Rowan	60-90	1+1	10

Notes:
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Legend:

- Land Interest Boundary
- Planning Application Area
- Permitted Extraction Area KA14/1129 (c. 23.9 hectares)
- Proposed Extraction Area (c. 4.2 hectares)
- Underground electricity line and associated buffer area

Restoration Proposals

- Pit floor to be restored to agricultural grassland
- Pit slopes to be left for natural regeneration
- Proposed native hedges

Rev	Amendments	Date	By	Chk	Auth
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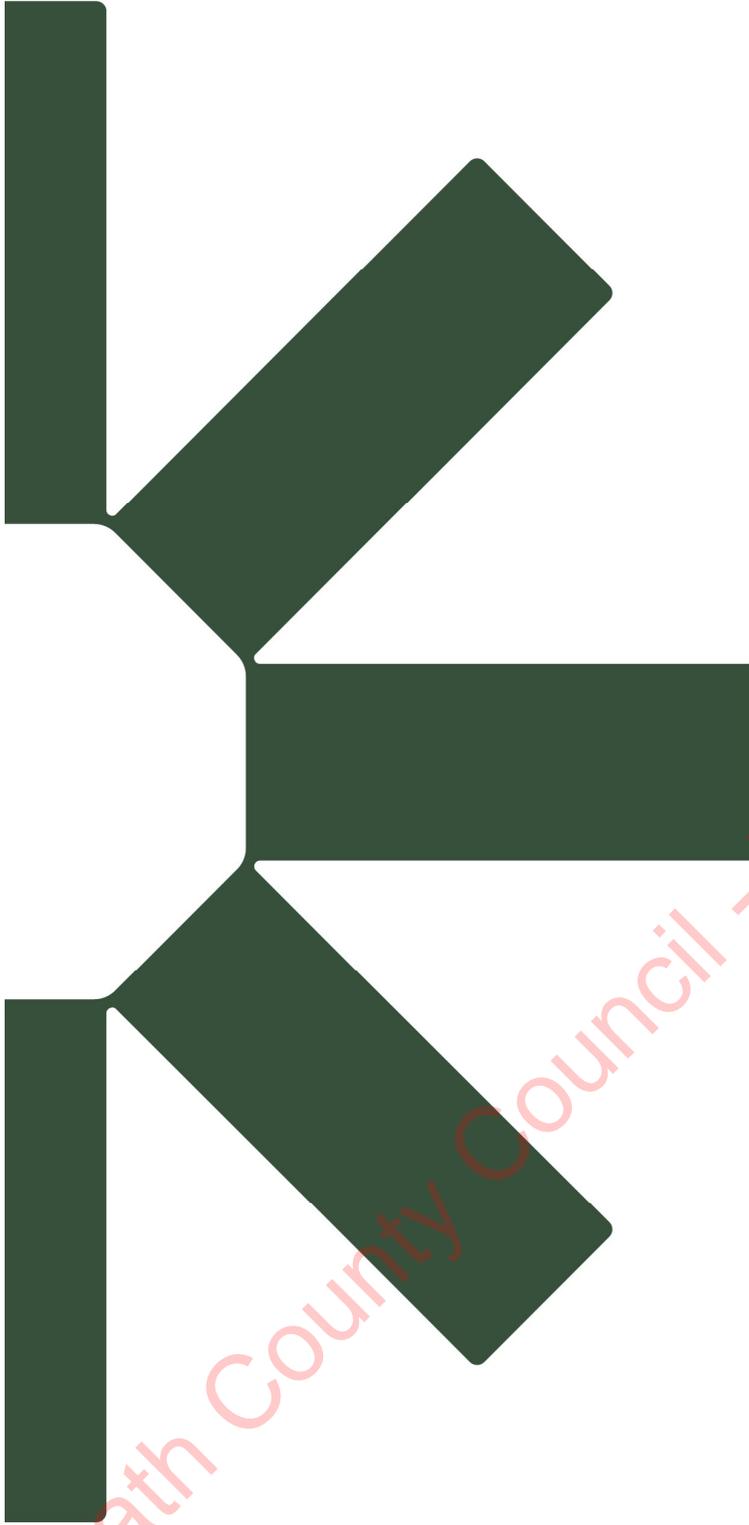
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Project
Sand & Gravel Pit Extension
The Murrens, Oldcastle, Co. Meath

Figure Title
Proposed Restoration Plan

Scale 1:1,250	@ A2	SLR Project No. 501.065670.00001
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Date 04/25	Date 04/25	Date 05/25
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