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Existing Development

2.1 The overall planning application area covers approximately 12.2 hectares (c. 30.15 acres) and comprises the existing sand and gravel pit and several agricultural fields currently under pasture with some intervening areas of scrub / vegetation. The general site layout is shown on **Figure 2-1**.

Existing Sand and Gravel Pit

2.2 The existing sand and gravel pit is located within the northern portion of the application area and covers c. 1.2 hectares and includes the existing entrance onto the L10317.

2.3 The existing pit consists of a single face extraction area typically 8m in height. Ground levels rise from the entrance at c. 194m AOD westwards to the toe of the existing face along the western boundary where ground levels are c. 200-203m AOD. At the site entrance, the existing gate is set back from the edge of the public road, with the area between the gate and road consisting of a concrete hard surface. The internal access route from the entrance gate to the extraction area consists of hardcore road. There are no structures within the existing pit.

2.4 No previous planning permissions have been granted on the lands for sand and gravel extraction, and in relation to the existing sand and gravel pit, it is recognised that the pit was in use for sand and gravel extraction prior to October 1, 1964, and the introduction of the Planning and Development Act. The Planners report from the Section 261A quarry review process carried out by all Planning Authorities in 2012 concluded the following:

- Section 261 of Planning & Development Act 2000 (as amended) – Quarry Registration (site ref. QY05/10).

  The subject quarry was registered under Section 261 of the Planning and Development Act, 2000 and conditions were imposed on the quarry in accordance with Section 261(6)(a)(i).

- Pre 1964 Land Use Rights

  The Planning Authority accepted the pre 1964 land use rights of the operators under Section 261 by imposing conditions on the operation of the quarry under subsection 6(a)(i).

  As the quarry operated on site before October 1, 1964 (evidence shown on OS map 11-9, dated 1965) and aerial photographs from 1995, 200 and 2004 along with the GPS survey carried out on site on January 4, 2012 show that an intensification of operations or abandonment of use has not occurred, it is considered that the quarry has retained its pre 1964 land use rights as defined in Waterford Co. Co. v John A. Wood Lt. (1999) referred to above.

  Therefore, as the Planning Authority is satisfied that this quarry commenced operations before October 1, 1964 and that the development is such that in the opinion of the Planning Authority, the activity is consistent with bona fide pre 1964 land use rights and that no intensification or abandonment has taken place in the opinion of the Planning Authority, it therefore considers that the EIA or Habitats Directive which came into force on February 1, 1990 and 26 February 1997, respectively, and the Slieve Bloom SPA, which was advertised on November 5, 2007, do not apply to this quarry and therefore no notice will be issued by the Planning Authority under Section 261A (3)(a), (4)(a) or (5)(a).

- Section 261A of Planning & Development Act 2000 (as amended) – Quarry Review Process Recommendation.

As the Planning Authority is satisfied that this quarry commenced operations before October 1, 1964 and that the development is such that in the opinion of the Planning Authority, the activity is consistent with bona fide pre 1964 land use rights and that no intensification or abandonment has taken place in the opinion of the Planning Authority, it therefore considers that the EIA or Habitats Directive which came into force on February 1, 1990 and 26 February 1997, respectively, do not apply to this quarry. Accordingly, Section 261A does not apply in this instance.

Extension Lands

2.5 The proposed extension extraction operations (c. 8 hectares) are intended to gradually advance through the existing agricultural lands to the south of the existing pit, as shown on **Figure 2-1**. The extension lands are undulating, and ground levels are variable from c. 205m AOD adjacent to the existing pit to the north, falling south-eastwards to c. 195m AOD, before rising to 205m AOD and again falling away to c. 180m AOD in the southeast corner of the site.

2.6 The extension lands are bisected internally with native hedgerows, gorse and bramble scrub and some immature broadleaved woodland mixed with gorse scrub. There is a small pond (c. 20m in diameter) located along the eastern site boundary, outside of the proposed extraction area which will be retained.

2.7 Two low-voltage overhead powerline (10kv/20kv) routes bisect the application site which provide power to the local residences and farms. One line runs NW to SE and the other runs NE to SW and they intersect near the centre of the extension extraction area. There are currently 5 no. electricity poles located within the proposed extension extraction area. The poles within the proposed extraction will be relocated to divert the overhead lines around the periphery of the extraction area. These works will be carried out by and in consultation with ESB Networks.

2.8 The application area includes an extensive deposit of sand and gravel which is proposed to be extracted and processed on site.

Proposed Development

Development Overview

2.9 The proposed development being applied for under this planning application is shown in plan on **Figures 2-2** and **2-3**, and in cross section on **Figure 2-4**, and will consist of:

- Continued use and extension to existing permitted sand and gravel pit registered under Section 261 of the Planning & Development Act 2000, as amended (site ref. QY05/10) within an overall application area of c. 12.2 hectares;
- Extraction of sand and gravel (dry working) over an area of c. 8 hectares with processing and washing of material on site (closed loop water recycling system with associated silt storage lagoons 1,952.25m^2), and all ancillary works and structures;
- Site facilities consisting of mobile processing plant, portacabin site office (6.25m²), portacabin welfare facility (18.9m²), serviced portaloo toilet, bunded fuel storage and refuelling pad with hydrocarbon interceptor, weighbridge, wheelwash, water supply borehole, perimeter berms, vegetation planting and fencing;
- Access to the site will be via the existing sand & gravel pit entrance;
- Restoration of the site to agricultural lands; and

- The proposed extraction operational period is for 10 years plus 1 year to complete restoration (total duration sought 11 years).

Construction Phase (Provision of Ancillary Facilities, Screening Berms, Fencing & Topsoil Stripping)

2.10 The overall extraction development plan is shown in **Figure 2-3**. It is anticipated that the construction stage works as outlined below would be carried out within a 6-month period.

- Installation of site facilities consisting of mobile aggregate processing plant, portacabin weighbridge office, portacabin welfare facility, serviced portaloo toilet, refuelling pad with hydrocarbon interceptor, weighbridge, wheelwash and water supply borehole.
- Construction of silt storage lagoons associated with the washing plant closed water recycling system.
- Construction of perimeter screening berms using soils stripped from the Phase 1 extraction area. The screening berms will be c. 2m in height and will be located along the northern boundary of Phase 3 adjacent to residence R1, and along the eastern boundary of Phase 2 adjacent to residences R2/R3.
- Provision of acoustic fencing adjacent to residences R1 to the north and R2/R3 to the east. The acoustic timber fencing will be c. 2-3m in height and will be constructed with high quality boards in such a way that eliminates gaps that sound can easily travel through. Further details of the proposed fencing are provided in **Appendix 2-A**.
- Vegetation planting with native species will be carried out around the periphery of the application area as shown on **Figures 2-3** & **2-5**. The planting will be carried out in Year 1 to allow the maximum time for the vegetation to become established. The vegetation will be retained indefinitely following the completion of sand and gravel extraction operations at the site.
- Re-routing of the 5 no. electricity poles located within the proposed extension extraction area to traverse the periphery of the site. These works would be carried out by ESB Networks.

Operational Phase (Sand & Gravel Extraction / Processing – Phased Extraction)

2.11 The proposed operational phase will see sand and gravel extraction carried out within an overall extraction area of c. 8 hectares. The final extraction scheme is shown in plan on **Figure 2-3** and in cross section on **Figure 2-4**. It is proposed that extraction would be carried out over a 10-year period at an average rate of 80,000 tonnes per annum.

2.12 Extraction within the existing pit was previously 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 sloping from northwest (c. 205m AOD) to southeast (c. 175m AOD). It is proposed to extract the sand and gravel in 3 phases as shown on **Figure 2-2** and outlined below and where extraction operations will progress in an anti-clockwise direction from Phase 1 to Phase 3.

2.13 To minimise the visual impact and mitigate any potential impacts from noise and dust emissions it was decided that the deposit itself could provide maximum screening to outside views and adjoining land uses from the working area. As can be seen in **Figure 2-2** the centre of the development area is proposed to be worked first during Phase 1. Extraction thereafter will radiate out in an anti-clockwise direction from here which will have the benefit of leaving the external portions of the extraction areas to provide natural screening. Commencing the sand and gravel extraction operations in the southeast area (Phase 1) will allow for the perimeter acoustic fencing, screening berms and vegetation to be established

at the earliest opportunity along the northern and eastern boundaries closest to the residences R1 and R3.

2.14 A description of the extraction phases is provided below:

Phase 1

- Extraction Area c. 2.4 hectares.
- Stripped topsoil used to construct screening berms to north and east application boundaries and used in the settlement pond construction with the balance stored on pit floor for use in Phase 1 pit slope restoration when extraction operations advance to Phase 2.
- Provision of acoustic screening fence adjacent to nearest residences (R1 to north and R3 to east), and stockproof fencing along the remaining application boundary.
- Vegetation planting with native species to provide additional perimeter screening along the northern and eastern application boundary in Year 1 to allow vegetation to become established.
- Provision of site welfare and ancillary structures – office, toilet, weighbridge, wheelwash, carparking area, bunded fuelling area/hydrocarbon interceptor, mobile processing plant and associated closed system settlement lagoons.

Phase 2

- Extraction Area c. 3.6 hectares.
- Stripped topsoil used in Phase 1 restoration works with balance stored on pit floor for use in Phase 2 pit slope restoration when extraction operations advance to Phase 3.
- Extraction carried out primarily in direction from west to east.

Phase 3

- Extraction Area c. 2.0 hectares.
- Stripped topsoil used in Phase 2 pit face restoration works with balance stored on pit floor for use in Phase 3 pit slope and final pit floor restoration.
- Extraction carried out primarily in direction from south to north.

Restoration Phase (Reinstatement to Agricultural Lands)

2.15 Upon the cessation of extraction operations it is proposed to return the worked lands to agricultural grazing lands with some dedicated peripheral areas for natural habitat after-uses included – refer to **Figure 2-5**.

2.16 Restoration activities will be carried out after extraction operations have ceased. Redundant pit faces will be regraded from c. 1:1.5 (34°) to a final profile of between c. 1:2.5 (22°) and 1:3.5 (16°). The pit floor and slopes will be grass seeded. Provision is made for a 1 year final restoration period to carry out such works.

2.17 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.

2.18 **Please note** it is not proposed to import material onto the site for operational or restoration purposes.

Aggregate Reserve Assessment

2.19 A detailed topographical survey of the site was commissioned by Breedon (refer to **Figure 2-1**). The survey data was used to produce a 3D digital terrain model using a quarry design software package called LSS. In preparing the design, standard criteria were adopted with regard to face heights and bench widths, stand-offs to the site boundaries etc. with the sand and gravel pit extension design provided in plan on **Figures 2-3** and in cross section on **Figure 2-4**).

2.20 The total recoverable reserve of sand and gravel from within the proposed development extension design scheme is estimated to be c. 800,000 tonnes.

Table 2-1: Estimated Material Volumes

Materials	Estimated Quantity
Topsoil & Overburden (stripped and stored separately on site for restoration works)	51,000 tonnes
Sand & Gravel (to be extracted, processed and exported off-site)	800,000 tonnes

Duration of Extraction

2.21 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 concrete and asphalt plants, with the remainder being transported directly to the market.

2.22 In light of these and other variables, the definition of fixed output rates and duration is challenging. It is anticipated that the average annual extraction rate will be in the order of 80,000 tonnes per year.

2.23 A planning permission duration of 10 years is sought for the development (sand and gravel extraction and processing) and a further 1 year to complete final restoration of the site.

Site Screening and Boundary Treatment

2.24 Perimeter screening berms along the northern and eastern boundaries of the extension extraction area will be constructed using the stripped topsoil and overburden soils from Phase 1 in the vicinity of residences R1 and R2/R3.

2.25 The boundary of the proposed extension area will be secured by stock-proof post & wire fencing except where an acoustic fencing structure will be constructed in two locations, each c.150m in length along the application boundary with residences R1 to the north and R3 to the east. In addition, operational landscaping will be provided in the form of hedgerow / tree planting along the northern and eastern and southeastern boundaries – locations of which are provided in **Figures 2-3** to **2-5**. Details of trees to be removed during the development of the extension area are provided on **Figure 2-8**.

Removal of Topsoil & Overburden Soils

2.26 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 and settlement ponds, landscaping works or stored in stockpiles on the pit floor until it can be used in the final restoration.

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

2.28 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.

Hedgerows/Treelines (Phased Removal / Reinstatement)

2.29 Refer to **Figure 2-9** for an indication of the hedgerows and associated trees, as well as treelines and scrub areas to be removed, to facilitate the proposed extraction of sand and gravel from the extension area. The trees are deemed to be exempted from obtaining a felling licence should the planning permission be obtained, as set out in the Forestry Act 2014.

2.30 It is proposed to remove c.310m of internal low-cut hedgerows and tree lines, as well as some individual or small groups of trees/vegetation consist of c.0.4 ha. of immature woodland (dominated by hazel, with some ash, sycamore, blackthorn, hawthorn and holly), c.1.7 ha. of gorse and c.750m² willow within the site on a phased basis to facilitate the proposed development.

2.31 The proposed landscaping plan is shown on **Figure 2-5** and the proposed restoration plan is shown on **Figure 2-6**. In mitigation, 315m of a more diverse native hedge will be planted on commencement of the development, along part of the extraction outline and a further 370 m across the restored pit floor in the approximate location of the hedgerows to be removed.

2.32 It is further proposed to plant c.1,700m^2 of native trees in various blocks around the periphery of the extraction area.

2.33 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. Laois.

Site Drainage

2.34 An existing surface water drainage channel flows along the southeastern landholding boundary parallel to the L1031 local road in an easterly direction before entering the Killeen river further east of the application site. There is no surface water drainage infrastructure within the site. Rain falling across the existing site percolates down through the existing ground surface as recharge to groundwater.

2.35 The existing pit area was previously worked dry above the underlying groundwater table. The proposed sand and gravel extension area pit floor levels will be maintained above the high groundwater level, with the proposed pit floor level within the extension area sloping south-eastwards from c. 205m AOD to 175m AOD. Surface water collecting in the pit floor will percolate naturally into the underlying ground.

2.36 A hydrological / hydrogeological assessment has been carried out to determine what the requirements are for the proposed development, regarding a water regime. It addresses mitigation measures to eliminate and/or minimise the potential impacts, if any, on surface water and groundwater. These measures will be incorporated into the pit design and operation, (refer to EIAR chapter 7 – Water).

Stability of the Pit

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

Extraction and Blasting

2.38 There will be no blasting associated with the proposed development.

Method of Extraction

2.39 It is proposed a load, haul, dump method of extraction system will be used. A wheeled front-end loader will be used to excavate the previously stripped sand and gravel deposit. The material from the working face will then be directly fed into the mobile processing plant by the same loader.

2.40 The final working of the deposit is shown on **Figure 2-3** and the phased working is shown on **Figure 2-2**. The advanced stripping of topsoil and overburden, followed by sand and gravel extraction will take c.10 years to complete. Final site restoration will be achieved over the subsequent 12-month period years giving a development term of 11 years.

Sand and Gravel Processing Method

2.41 The sand and gravel processing methods will consist primarily of washing and screening, using a mobile processing plant, to produce a range of aggregates for sale and distribution by the company. The processing plant will operate in a closed loop water circuit with silt disposal lagoons to minimise the need for excessive take of groundwater and to eliminate the need to discharge process water from the site.

2.42 Once washed and screened, the aggregate will be stockpiled on the pit floor to await transportation off site for use in concrete / asphalt production, or for direct sale to the market.

Dispatch of Aggregate Product

2.43 Aggregate from the screened stockpiles will be loaded by means of a mechanical loading shovel directly to incoming HGVs (trucks). Trucks leaving the site will be directed through the weighbridge where loads dispatched off-site will be weighed and recorded. The dispatch office will monitor the movement of incoming and outgoing road trucks and will also be responsible for the issuing of dispatch dockets.

2.44 Prior to leaving the site, all road trucks will pass through a wheel wash to minimise dust / mud nuisance on the public carriageway. It is envisaged that the site access road will be hard surfaced from the exit of the wheelwash facility to its junction with the public road.

Pit Working Hours

2.45 The proposed hours for operations (extraction, processing and haulage) at the site will be 07.00 hours to 18.00 hours Monday to Friday inclusive and 07.00 hours to 14.00 hours on Saturdays. No operations will be carried out on Sundays or Public Holidays[1].

Employment

2.46 The proposed development will provide employment for 1 direct employee plus a number of sub-contractors, hauliers and service providers.

Site Infrastructure

Site Access and Security

2.47 The proposed development will use the existing access to the existing sand and gravel pit. This access is located on the local road L10317 along the northeastern site boundary.

[1] DoEHLG 2004 Quarry & Ancillary Activities Guidelines for Planning Authorities – Section 4.7 (b)

2.48 There is no other vehicular access to the proposed development. The access gate will be locked outside operational hours.

Parking & Hardstanding Areas

2.49 All HGVs utilising the site will be confined within the application area. There will be adequate provision for HGV parking to ensure that there is no queueing of HGV's on the public road outside the pit.

2.50 Adequate car parking provision (6 no. spaces) for employees, contractors and visitors will be provided in a dedicated area on a hardcore surface adjacent to the weighbridge office.

2.51 A hardstanding area and hydrocarbon interceptor is to be provided around the proposed bunded fuel storage area. The bunded diesel storage tanks will be used to service the power supply generator and the site vehicles.

Wheelwash

2.52 A wheel wash facility will be constructed in close proximity to the site entrance and adjacent to the proposed weighbridge and the new unit 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, the location of which is shown on **Figure 2-3**.

2.53 The section of internal road between the wheelwash and the site entrance will be hard-surfaced.

Weighbridge

2.54 In order to track and record the amount of material exiting the site, all HGV traffic will be directed across a weighbridge, the location of which is also indicated on **Figure 2-3**.

Offices and Ancillary Facilities

2.55 Two prefabricated portacabin structures will be transported to the site and will act as site offices, and canteen/cloakroom for staff use. Surface water run-off from the roofs will directly percolate to ground.

2.56 A portable toilet system, placed on a concrete pad will be located adjacent to the welfare portacabins. The portaloo will be inspected on a regular basis and when necessary it will be emptied by a licensed contractor and the material disposed at an authorised facility.

2.57 Fuel oil will be stored in a bunded tank with an adjacent concrete pad (with hydrocarbon interceptor) to facilitate refuelling.

2.58 A super-silent diesel generator will be used to provide power to the processing plant on site.

2.59 A water supply borehole will provide process water for the wheelwash and other operations. Potable bottled water will be supplied by a contractor for consumption by persons onsite.

Utilities and Services

2.60 The ancillary site infrastructure will be powered by mains electricity from the ESB's national grid via a new connection to the existing power lines in the area. This will be done in consultation with ESB Networks through standard connection arrangements. A super-silent diesel generator will be used to provide power to the processing plant.

2.61 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.

2.62 The provision of a serviced portaloo on site will negate the requirement for installing a septic tank / propriety effluent treatment system.

2.63 Drinking water will be supplied by means of bottled water. An on-site well will supply water for the sinks and will be used as a top-up supply to the closed system silt lagoons and wheelwash.

2.64 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 CO_2) 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.

Lighting

2.65 Lighting will be provided at the site as necessary. This will include fixed downlights outside the office / welfare facilities and processing plant; and mobile lighting on the machinery used within the pit void. All lighting would only be in use for wintertime operations, when darkness has fallen, within the proposed site operating hours of 07.00 hours until 18.00 hours Monday to Friday and until 14.00 hours on Saturdays. There will therefore be a period where such lighting will be required for up to 1 hour in the morning and up to 2.5 hours in the evening, during periods in winter. Any night-time light pollution caused by the proposed development will therefore be of brief duration during winter months and is not considered significant.

Fuel and Oil Storage

2.66 Fuel and oils will be stored 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 will be in excess of 110% of the combined volume of the tank(s).

2.67 Refuelling will take place adjacent to the bunded fuel storage area on a concrete pad with associated hydrocarbon interceptor attached.

2.68 Spill kits will be provided on site and periodic spill kit training will be provided to staff.

Waste Management

General Waste Management

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

- **Scrap metal** – 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.

- **Domestic Waste** (Canteen Waste) – domestic waste generated at the offices and employee's facility will be collected by a licensed waste collection contractor.

Extractive Waste Management

2.70 Almost all products and by-products arising from the aggregate processing have commercial value. Any waste materials from the site are stored, collected, recycled and/or disposed of in accordance with any requirements of Laois County Council.

2.71 In Ireland, the management of extractive waste is regulated by the Waste Management (Management of Waste from the Extractive Industries) Regulations 2009 (SI No. 566 of 2009). Under these Regulations, quarry operators are required to prepare an Extractive Waste Management Plan (EWMP) which outline the plans and procedures for minimisation, treatment, recovery and disposal of extractive wastes, having regard to the principle of sustainable development.

Description of the Waste Generating Operation

2.72 There is no intention on behalf of Breedon to discard, where possible, any material extracted from the sand and gravel pit at Mounthall. 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.

2.73 Extracted material will fall into the following categories:

Soil and Sub-soil (Overburden) Stripping

2.74 This material will be excavated to expose the underlying sand and gravel resource.

2.75 **Topsoil** – all topsoil stripped will be used to construct perimeter visual/noise screening mounds for later use as part of the final restoration scheme. Any additional stripping of topsoils will be stockpiled on site, again for reuse in final restoration operations.

2.76 **Sub-soil (Overburden)** – this material will be dealt with in a similar manner to the Topsoil listed above.

Settlement Ponds

2.77 The proposed water settlement ponds will be cleaned out as required to ensure adequate capacity within the ponds to allow sufficient retention time to ensure adequate settlement of any fines. All material removed from the settlement ponds will be temporarily stored to allow natural outflow of retained moisture. Following this short storage period the material will be put to a variety of operational or restoration uses within the site.

2.78 An Extractive Waste Management Plan for the site will be prepared prior to commence of the development.

Environmental Controls

General

2.79 Extraction, processing and ultimately restoration activities at the application site will 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 pit are outlined in the relevant EIAR Chapters.

2.80 The existing pit operations are regulated by conditions attached to the Section 261 Quarry Registration process, Ref. QY05/10.

2.81 Any additional control measures, over and above those outlined below, which may be instructed on foot of this planning application, will also be implemented.

Bird Control

2.82 As the process of sand and gravel extraction is free of putrescible (food / kitchen) waste, site activities are not anticipated to attract scavenging birds such as gulls and crows for the duration of works. Accordingly, it is not intended to implement any specific bird control measures at the site as is the case at present.

Traffic Control

2.83 As the planning application relates to continued use and extension of the existing sand and gravel pit operation, the proposed development will utilise the existing site entrance.

Litter Control

2.84 As the proposed development will be largely free of litter, the daily operational activities are unlikely to give rise to problems with windblown litter. Accordingly, there is no requirement to implement any specific litter control measures at the site.

2.85 In the unlikely event that any litter waste is identified, it will be immediately removed off-site to an authorised waste disposal or recovery site.

Odour Control

2.86 As the sand and gravel extraction activities at the site are not biodegradable and do not therefore emit odorous gases, site activities will not give rise to odour nuisance. No odour control has been required for the existing pit or will be required for the proposed development.

Vermin Control

2.87 As the proposed development is free of putrescible (food / kitchen) waste, on-site activities will not attract vermin for the duration of the extraction or subsequent restoration operations. Accordingly, no specific vermin control measures are required.

Fire Control

2.88 In the unlikely event that a fire does occur, the local fire station will be contacted and emergency response procedures will be implemented. A range of fire extinguishers (water, foam and CO_2) 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.

Dust Generation and Control

2.89 In dry, windy weather conditions, site activities may give rise to dust blows across and beyond the existing or planned development site areas.

2.90 The incidence of fugitive dust outside of the operation will be reduced by the proposal to locate mobile crushing and screening plant within the pit void. Generation of fugitive dust is generally limited to periods of very low rainfall (refer to Chapter 8 – Air Quality). Dust generation occurs from three main sources:

- point sources – such as operating plant and machinery;
- line sources – such as roads and conveyors; and

- dispersed sources– such as pit floors and stockpiles.

2.91 In order to control dust emissions, the following measures will be implemented:-

- water will be sprayed from a tractor drawn bowser on dry exposed surfaces and stockpiles (paved roads, unsealed haul roads and hardstand areas) as required;
- areas of bare or exposed soils will, insofar as practicable, be kept to a minimum through the phased extraction proposals;
- all HGV's exiting the site will be routed through the proposed wheelwash. This will minimise the transport of fines by HGVs over the access / egress road and the public road network;
- periodic sweeping of the internal paved site access road and surrounding public roads will be carried out as required by a mechanical road sweeper;

2.92 These dust mitigation and management measures are in accordance with the DoEHLG (2004) and EPA (2006) guidelines for the sector.

Noise Generation and Control

2.93 The sources of noise located within the planning application area will primarily be related to machinery / plant operation.

2.94 The potential for noise generation from the application area will be reduced by locating the processing plant within the pit floor void. This means that the potential for noise generation from activities associated with the operation of the plant such as movement of vehicles and maintenance will be reduced – refer to EIAR Chapter 10 Noise & Vibration.

2.95 In addition to the above the following good house-keeping measures will be put in place in order to reduce noise emitted from plant and machinery as much as possible:

- all machinery used will be CE certified for compliance with EU noise control limits;
- the machinery will be regularly maintained, with regular checking of any muffler systems and servicing or replacing as required. It will also ensure any loose or damaged panels or covers that suppress noise are fixed or replaced immediately;
- if there are further noise-reducing modifications available for any machinery, they will be fitted wherever practical (e.g. rubber-decked screens, rubber chute linings etc.);
- haul road grades will be kept as low as possible (</= 1:10) to reduce engine / brake noise from heavy vehicles.

2.96 These noise mitigation and management measures are provided in accordance with the DoEHLG (2004) and EPA (2006) guidelines for the sector.

Environmental Monitoring

Environmental Management System (EMS)

2.97 The sand and gravel pit will establish an environmental management system (EMS) with a copy of the typical table of contents for the EMS for the site provided in **Appendix 2-B**. An EMS will be implemented prior to commencement of the development should planning permission be granted.

2.98 Should planning permission be granted for the site, the EMS will be updated and finalised to incorporate the requirements set out in any relevant conditions attached to the permission such as limit values for environmental emissions arising from the site activities.

Environmental sampling, monitoring and testing will generally be undertaken by external consultants as and when required as is typical at other Breedon Ireland extraction operations. Records of environmental monitoring and testing will be held by Breedon Ireland and submitted to the Local Authority as required.

2.99 Environmental noise, dust and water monitoring will 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.

Dust Monitoring

2.100 Dust monitoring will be carried out at Mounthall at the 4 dust monitoring station locations, D1 – D4 at the periphery of the application site area. These locations are similar to those used in the baseline assessment (refer to EIAR **Figure 8-1**).

2.101 The dust monitoring gauges will be located close to emission sources or potentially sensitive receptors located beyond the site boundary. It is proposed that the dust monitoring stations will remain in place for the duration of extraction and processing operations at the site. Monitoring will be undertaken on a quarterly basis using the industry standard Bergerhoff method of monitoring.

2.102 Baseline monitoring and experience from similar types of development indicate that, subject to implementation of appropriate mitigation measures (as described in Chapter 8 of the EIAR), the development can comply with the DoEHLG (2004) / EPA (2006) recommended total dust deposition threshold of 350 milligrams per day (averaged over a 30 day period).

Noise Monitoring

2.103 Noise monitoring will be carried out at the site at 4 noise monitoring stations, N1 – N4, similar to those used in the baseline assessment (refer to EIAR **Figure 10-1**).

2.104 The noise monitoring locations will be sited close to potentially sensitive receptors located beyond the site boundary. It is proposed that the noise monitoring survey will be carried out for the duration of extraction and processing operations at the site on an annual basis.

2.105 Baseline monitoring and experience from similar types of development indicate that, subject to implementation of appropriate mitigation measures (as described in Chapter 10 of the EIAR), the development can comply with the noise threshold limit of 55 dB(A) recommended in the EPA (2006) environmental management guidelines for the sector. The mitigation measures are in accordance with the 'best practice / mitigation' measures described in Section 3.2 of the DoEHLG (2004) guidelines.

Water Monitoring (Groundwater / Surface Water)

2.106 The following monitoring activities will be carried out to demonstrate that the development is not having an adverse impact on the surrounding environment and will document any improvements in water quality

- Surface water quality monitoring to be undertaken on a quarterly basis for the duration of the proposed development;
- Groundwater levels in all boreholes will be monitored on a quarterly basis for the duration of the proposed development;
- Groundwater loggers installed in five boreholes will continue to provide for continuous groundwater level monitoring and logger downloads will be undertaken on a quarterly basis for the duration of the proposed development; and

- Groundwater quality monitoring is to be undertaken on an annual basis for the duration of the proposed development.

Proposed Landscape Management & Final Restoration

Proposed Landscape Management Measures

2.107 The principal landscaping aims are:

- the physical and visual integration of the existing site and associated features into the surrounding landscape;
- screening to minimise visual intrusion and to reduce any significant negative aspects regarding the visual impact of the proposed development on adjacent sensitive receptors;
- positioning of proposed new constructed facilities on site to reduce visual prominence.

Site Screening Measures

- it is proposed to carry out barrier hedge/vegetation planting in a number of locations along the northern, eastern, and southeastern boundaries to tie into existing dense vegetation along those boundaries. This planting will be carried out as early as possible prior to commencement of development so that it will have matured by the time the extraction works are complete and will function as a secure barrier to prevent access into the site, once restored and provide further habitat connection corridors around the site;
- the planting will be carried out in 2 staggered rows, with the rows 50cm apart and plants within each row 50cm apart (i.e. 4 plants per m);
- the tree stock will be made up from transplants and container grown stock at 40-90cm height, as these are known to establish more successfully;
- 4 Hawthorn, 4 Blackthorn, 1 Hazel and 1 Holly to be planted in random succession every 2.5m;
- all plant handling, planting and establishment works will be carried out in accordance with current best practice;
- works are to take place in the appropriate planting season (e.g. bareroot planting: November to March only) and in favourable weather conditions;
- planting will be carried out by a suitably qualified landscape contractor; and
- establishment maintenance will be carried out for 2 years following the planting works. This will include weed control, replacement planting, watering (if required) and the adjustment of spiral guards.

2.108 In addition to the above, existing dense boundary vegetation is to be retained to keep the site secure. The boundary vegetation will be checked annually; dead trees will be removed and any gaps will be filled with new native planting.

Siting of Processing Plant and Welfare Facilities

2.109 The proposed processing plant will be located on the pit floor (i.e. at an elevation of approximately 185m AOD) and positioned centrally within the void as shown on **Figures 2-2** and **2-3** to provide the maximum distance between the plant and the nearest residences R1 and R3. The pit faces and surrounding perimeter berms and planting will afford maximum screening of the new plant as demonstrated in the cross sections provided in **Figure 2-4**.

2.110 The welfare facilities, weighbridge, wheelwash, fuel storage and settlement ponds are to be located within the existing worked out pit area and will be mostly screened from view by existing pit faces and mature vegetation.

Proposed Restoration Scheme

2.111 As noted previously, the principal activity which will be undertaken at the application site is the extraction and processing of the in-situ sand and gravel with ultimate restoration of lands returned to an agricultural afteruse.

2.112 The final restoration scheme and detail is shown on the restoration plan and cross sections in **Figures 2-6** and **2-7**. A one year period following completion of extraction is being requested in order to carry out final restoration of the site.

2.113 The 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 construction of the silt lagoon and screening berms will be regraded and the general area returned to a beneficial agricultural use over the pit floor.

2.114 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.

2.115 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.

2.116 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). This will be achieved by the following measures:

- on completion of all extraction works, all of the plant and machinery within the site will be removed;
- re-grading to a gradient of 1:2.5 or less of the sand and gravel pit side slopes to achieve a relatively uniform ground level in this area. The re-graded areas will be spread with topsoil and grassed;
- all existing boundary fences and hedgerows will be retained to ensure that the site is secure. The existing gates at the site entrance will be retained and kept locked at all times, except for maintenance access;
- all existing grass and scrub areas which have established along the site boundaries will be protected and retained, as much as possible;
- all additional planting carried out along the northern, eastern and southeastern boundaries of the site during the Phase 1 extraction operations which by now is well established will be retained;
- additional native tree planting may be carried out to the east of the pit, and which will further enhance the ecological corridor link around the site perimeter; and
- it is proposed to replace the hedgerows which were removed during the extraction phases. This will require the planting of native hedgerows over a length of c. 370m within the restored pit floor area to create three fields. The hedgerow will be planted in 2 staggered rows, with the rows 50cm apart and plants within each row 50cm apart (i.e. 4 plants per m). Transplants and container grown shrubs will be planted in random groups of 3-5. One feathered tree will be planted every 10-15m.

Site Management and Supervision

2.117 The Applicant 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.

Long Term Safety and Security

2.118 The existing boundary fences, walls and hedgerows will be maintained in a stock proof state of repair as part of the future agricultural land use. The area will be landscaped and vegetated so as to blend into the surrounding existing landscape.

2.119 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.

Long Term Stability of Pit Faces

2.120 The restoration scheme provides for the re-grading of the external worked out pit faces to a safe angle of repose of between 1:2.5 (22°) and 1:3.5 (16°). This will ensure the long-term stability of slopes and faces.

Long Term Surface Water and Groundwater

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

Decommissioning of Plant and Machinery

2.122 Redundant structures, plant equipment and stockpiles will be removed from site on permanent cessation of extraction activity. Machinery and buildings will either be utilised by the applicant on other sites or be sold as working machinery or scrap.

2.123 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.

Aftercare and Monitoring

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

2.125 A final site inspection 6 months after formal site closure will be carried out to confirm the final site restoration as implemented is functioning.

Figures

Figure 2-1: Existing Site Layout

Figure 2-2: Proposed Phased Extraction Design Layout

Figure 2-3: Proposed Final Extraction Layout

Figure 2-4: Existing & Proposed Cross Sections

Figure 2-5: Proposed Landscape Plan

Figure 2-6: Proposed Restoration Plan

Figure 2-7: Proposed Restoration Cross Sections

Figure 2-8: Proposed Tree / Vegetation Removal Plan

N

Slieve Bloom SPA

Residence (**R12**)

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Killeen River

Existing hard surfaced site entrance

Existing S&G Pit

Quarry

L10317 Local Road

Residence (**R1**)

O/H Powerlines
to be re-directed around extraction area

Limit of proposed extraction (c.8ha.)

Residence (**R2**)

Residence (**R3**)

Killeen River

Drainage Channel

L1031 Local Road

Residence (**R6**)

A
A'
B
B'
C
C'
D
D'

0 50 100 150 200 250m

Scale 1:2,500

Notes:

1. Extract from Ordnance Survey 5,000 scale mapping - sheet numbers 3880, 3881, 3937, 3938

Legend:

- Landowner Boundary (c.32.1 Hectares)
  Third party landowner's land interest
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares)
  under lease agreement from landowner
- Existing Sand & Gravel Pit Area (c.1.2 Hectares)
- Proposed S&G Extraction Area (c.8 Hectares)
- Residential Property
- Agricultural Shed / Other Building (non-residential)
- O/H Powerlines (with 5 no single poles located within the proposed extraction area)
  To be redirected around the extraction void by and in consultation with ESB Networks
- Water course
- Woodland areas
- Slieve Bloom SPA

Rev	Amendments	Date	By	Chk	Auth

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7 DUNDRUM BUSINESS PARK,
WINDY ARBOUR,
DUBLIN,
IRELAND,
D14 N2Y7

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Client
Breedon Ireland

Project
Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title
Existing Site Layout

Scale		SLR Project No.
1:2,500	@ A3	00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date	Date	Date	Date
01/24	01/24	09/24	09/24

Figure Number **Figure 2-1** Rev. **1**

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appendix\02 Project Description\Dwgs\CAD\Wking\00584.065036 EIAR Fig 2-1 (Dwg-4) Existing Layout R1.dwg

12/09/2024

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Slieve Bloom SPA

Residence (**R12**)

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Mounthall
Mounthall

Proposed water supply well for top-up

Concrete Pad (with Interceptor) for refuelling

Carparking

Welfare Facilities

Office and Weighbridge

Existing hard surfaced site entrance

Silt Settlement Lagoons (Closed system)

Hard paved surface *(with surface water fall back into site)*

L10317 Local Road

Hardcore surface

Residence (**R1**)

2m Berm grass seeded (Year 1)

Native species planting (Year 1)

Personnel proof and acoustic fencing (c.150m)

Berm topsoil used in final restoration

PHASE 3

Stripped topsoil used in Phase 2 pit face restoration works with balance stored on pit floor for use in Phase 3 pit slope and final pit floor restoration

Native species planting (Year 1)

2m Berm grass seeded (Year 1)

Stockproof fencing (along full length of red line application boundary)

Mobile Processing Plant

PHASE 2

Stripped topsoil used to construct berms with balance stored on pit floor for use in Phase 1 pit slope restoration when extraction advances to Phase 2

Stripped topsoil used in Phase 1 restoration works with balance stored on pit floor for use in Phase 2 pit slope restoration when extraction advances to Phase 3

Berm topsoil used in final restoration

Limit of proposed extraction (c.8ha.)

PHASE 1

Residence (**R2**)

Residence (**R3**)

Personnel proof and acoustic fencing (c.150m)

Native species planting (Year 1)

L1031 Local Road

Residence (**R6**)

0 50 100 150 200 250m

Scale 1:2,500

Notes:

1. Extract from Ordnance Survey 5,000 scale mapping - sheet numbers 3880, 3881, 3937, 3938

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Proposed S&G Extraction Area (c.8 Hectares)
- Proposed personnel proof and acoustic fencing (c. 200m total) *To provide additional screening to nearest residences Remainder of red line site boundary to have stockproof fencing*
- Proposed screening berm (2m high) *Grass seeded for duration of extraction operations Soils used in final site restoration operations*
- Proposed native species planting *Vegetation to be permanently retained post extraction operations*
- Residential Property
- Agricultural Shed / Other Building (non-residential)
- Proposed Direction of Extraction Operations
- Proposed Stripped Topsoil Management
- Proposed borehole for water supply top-up
- Woodland areas
- Slieve Bloom SPA

Rev	Amendments	Date	By	Chk	Auth

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7 DUNDRUM BUSINESS PARK,
WINDY ARBOUR,
DUBLIN,
IRELAND,
D14 N2Y7

www.slrconsulting.com

Client: Breedon Ireland

Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Proposed Phased Extraction Design Layout

Scale	SLR Project No.
1:2,500 @ A3	00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date: 01/24	Date: 01/24	Date: 09/24	Date: 09/24

Figure Number: **Figure 2-2** Rev.: **1**

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appendix\02 Project Description\Dwgs\CAD\Wking\00584.065036 EIAR Fig 2-2 (Dwg-5) Phased Extraction R1.dwg 12/09/2024

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Slieve Bloom SPA

Residence (

N

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Proposed water supply well for top-up

3m x 90m sightline evelope

Concrete Pad (with Interceptor) for refuelling

Existing hard surfaced site entrance

Carparking

Welfare Facilities

Office and Weighbridge

Wheelwash

Minor vegetation trimming required

Killeen River

Mounthall

Mounthall

L10317 Local Road

Silt Settlement Lagoons (Closed system)

Hard paved surface *(with surface water fall back into site)*

Hardcore surface

Residence (**R1**)

2m Berm grass seeded (Year 1)

Native species planting (Year 1)

Personnel proof and acoustic fencing (c.150m)

Water returned to washing plant

Process water directed to settlement lagoons

Native species planting (Year 1)

2m Berm grass seeded (Year 1)

Stockproof fencing (along full length of red line application boundary)

Mobile Processing Plant

Limit of proposed extraction (c.8ha.)

Residence (**R2**)

Killeen Rive

Residence (**R3**)

Personnel proof and acoustic fencing (c.150m)

Drainage Channel

Native species planting (Year 1)

L1031 Local Road

Residence (**R6**)

0 50 100 150 200 250m

Scale 1:2,500

Notes:

1. Extract from Ordnance Survey 5,000 scale mapping - sheet numbers 3880, 3881, 3937, 3938

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Proposed S&G Extraction Area (c.8 Hectares)
- Special Protection Area (SPA) *Slieve Bloom SPA*
- Woodland and vegetation Areas
- Proposed personnel proof and acoustic fencing (c. 200m total) *To provide additional screening to nearest residences* *Remainder of red line site boundary to have stockproof fencing*
- Proposed screening berm (2m high) *Grass seeded for duration of extraction operations* *Soils used in final site restoration operations*
- Proposed native species planting *Vegetation to be permanently retained post extraction operations*
- Residential Property
- Agricultural Shed / Other Building (non-residential)
- Woodland areas
- Slieve Bloom SPA

Rev	Amendments	Date	By	Chk	Auth

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7 DUNDRUM BUSINESS PARK,
WINDY ARBOUR,
DUBLIN,
IRELAND,
D14 N2Y7

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Client: Breedon Ireland

Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Proposed Final Extraction Layout

Scale		SLR Project No.
1:2,500	@ A3	00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date: 01/24	Date: 01/24	Date: 09/24	Date: 09/24

Figure Number: **Figure 2-3** Rev.: **0**

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appends\02 Project Description\Dwgs\CAD\Wking\00584.065036 EIAR Fig 2-3 (Dwg-6) Final Extraction Design R2.dwg 12/09/2024

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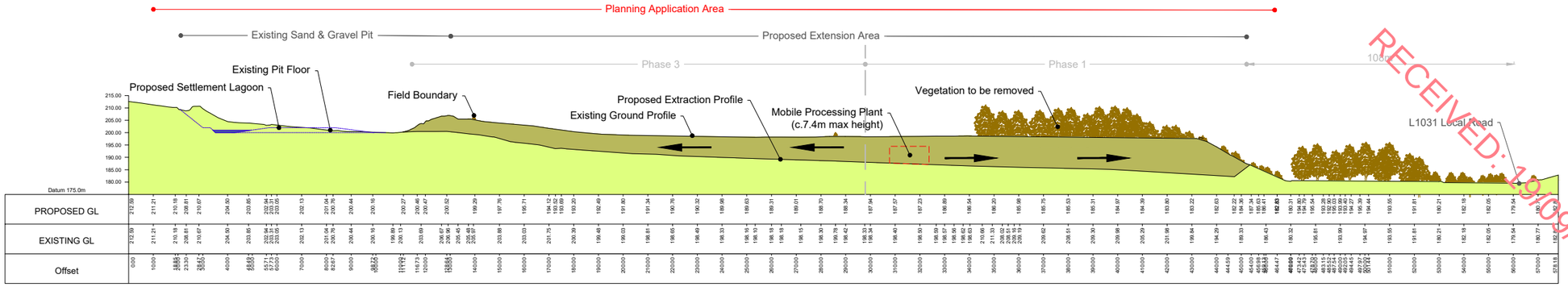
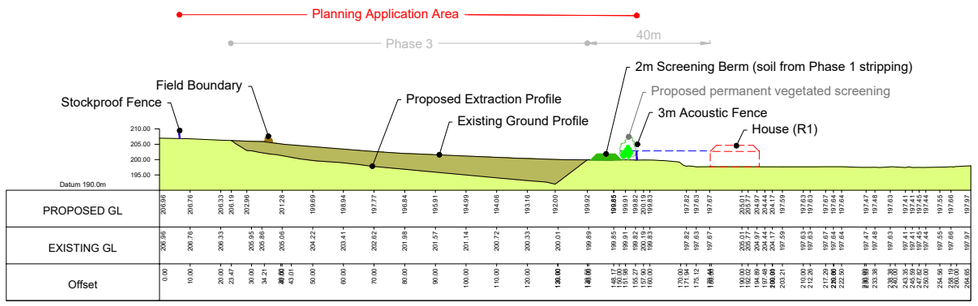
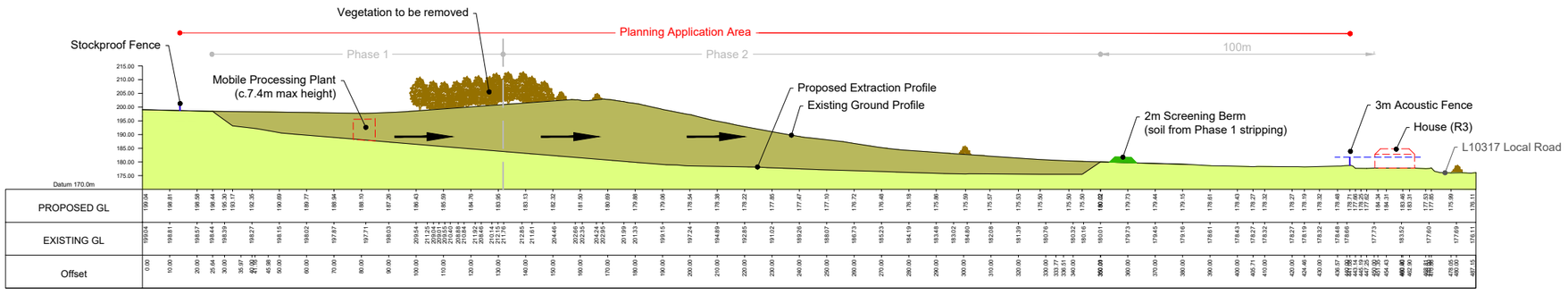


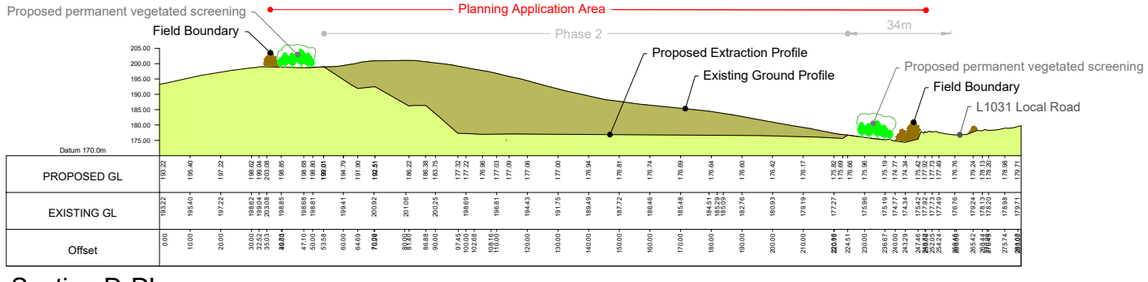
Section A-A'



Section B-B'



Section C-C'



Section D-D'

0 20 40 60 80 100 120 140 160 180 200m

Scale 1:2,000

Notes:

Legend:

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IRELAND,
D14 N2Y7

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Project
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Figure Title
Existing & Proposed Cross Sections

Scale		SLR Project No.
1:2,000	@ A3	00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date	Date	Date	Date
01/24	01/24	09/24	09/24

Figure Number **Figure 2-4** | Rev. **1**

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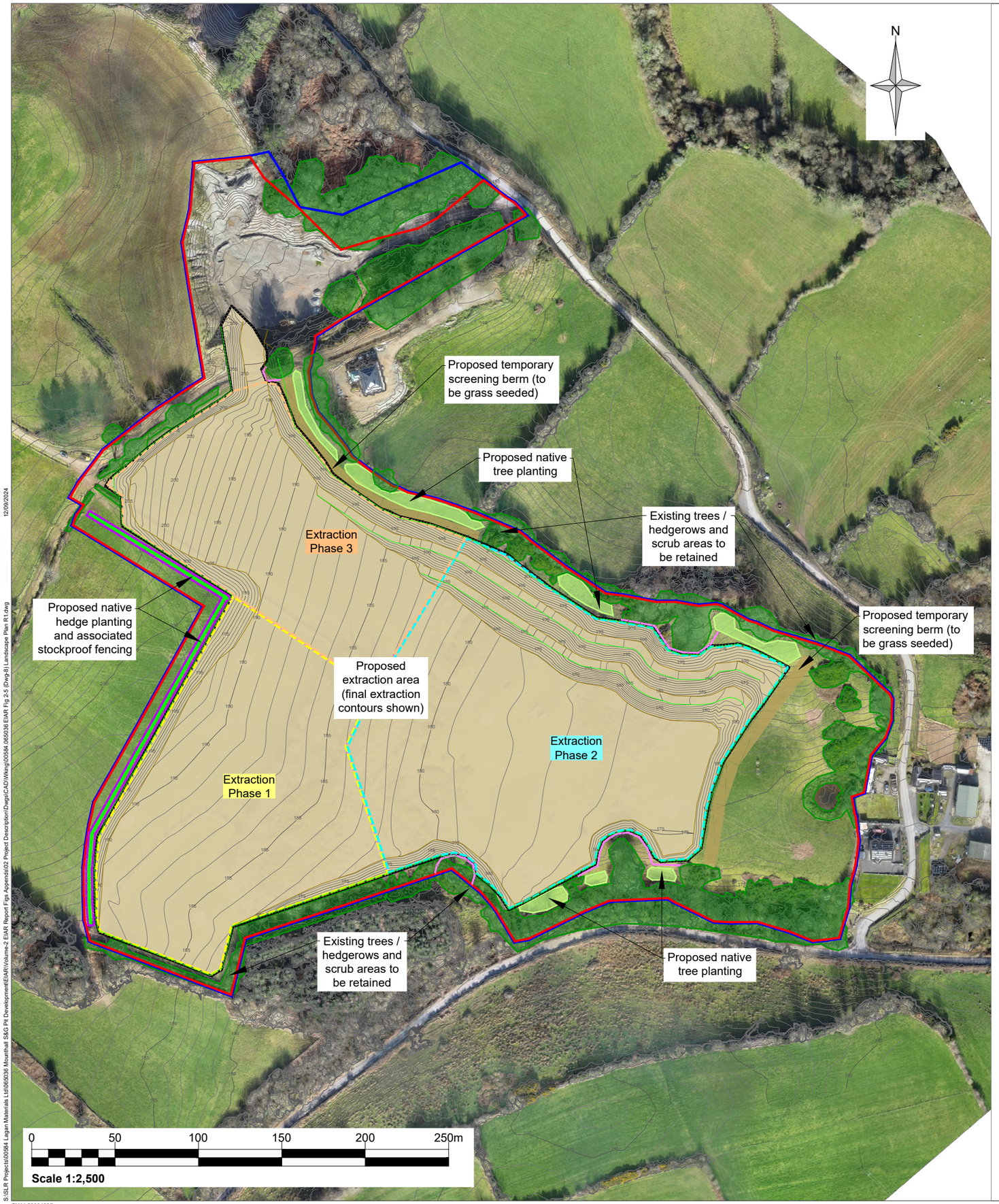

LANDSCAPE PROPOSALS:

The existing trees / hedgerows along the external boundaries, all of which will be retained, provide substantial screening of the proposed extension area. This is with the exception of views from a number of residential properties in the vicinity of the site, which experience views, due to some gaps in the boundary vegetation, as well as the undulating topography of the site, owing to which the more elevated sections are more visible.

In order to augment the existing screening vegetation, it is proposed to install temporary screening berms along a section of the northern boundary and the eastern boundary of the proposed extraction area, using overburden and topsoil stripped from the Phase 1 extraction area. The berms will be grass seeded, as soon as they are completed.

Also, native tree and native hedge planting will be carried out in several locations along the site boundaries, in the first planting season following the commencement of the development. This will soften the appearance of the berms, as well as further support the screening of the proposed development, after a number of years, when fully established. The proposed species all occur locally and are native.

In order to protect some of the mature trees located in the vicinity of the proposed extraction area from damage, tree protection fencing will be installed around their root protection areas, as indicated on the plan (also refer to Figure 2-8), prior to any extraction works taking place in their vicinity.

GENERAL NOTES:

- All plant handling, planting and establishment works to be carried out in accordance with current best practice and to take place in the appropriate 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.
- Establishment maintenance to be carried out for 2 years following the completion of planting (minimum 3 maintenance visits per year; i.e. spring, summer and autumn). Works to include weed control, replacement planting (where required) and the adjustment/removal of tree ties and spiral guards.
- In periods of drought the newly planted trees are to be watered to ensure their survival and establishment.

NATIVE TREE MIX

To be planted at 1.5m centres (i.e. 1 plant/2.25m²; ca. 1,700m^2 in total = 755 plants, rounded to 750). To be planted randomly with no more than 4-6 plants of the same species in one group and to be supplied with spiral guards.

No.	*Plant Name*	*Common Name*	*Height (cm)*	*Age*	*%*
Transplants/Container Grown Shrubs					
75	*Betula pendula*	Silver birch	60-90	1+1	10
150	*Corylus avellana*	Common hazel	60-90	1+0	20
75	*Crataegus monogyna*	Hawthorn	60-90	1+1	10
150	*Ilex aquifolium*	Common holly	60-80	2L	20
75	*Prunus spinosa*	Blackthorn	60-90	1+0	10
75	*Quercus robur*	Pedunculate oak	60-90	1+1	10
75	*Salix cinerea*	Sally	60-120	0+1	10
75	*Sambucus nigra*	Elder	60-90	1+1	10

NATIVE HEDGE MIX

Approximately 315 lin.m. in total. Hedges to be planted in two staggered rows, with plants 40cm apart (i.e. 2.5 plants per m) and rows 40cm apart. 790 plants in total, rounded to 800. To be planted randomly with no more than 3-6 plants of the same species in one group and to be supplied with spiral guards.

No.	*Plant Name*	*Common Name*	*Height (cm)*	*Age*	*%*
Transplants/Container Grown Shrubs					
120	*Corylus avellana*	Common hazel	60-90	1+0	15
160	*Crataegus monogyna*	Hawthorn	60-90	1+1	20
160	*Ilex aquifolium*	Common holly	60-80	2L	20
120	*Prunus spinosa*	Blackthorn	60-90	1+0	15
80	*Quercus robur*	Pedunculate oak	60-90	1+1	10
80	*Salix cinerea*	Sally	60-120	0+1	10
80	*Sambucus nigra*	Elder	60-90	1+1	10

Notes:

Orthomosaic produced from Aerial Photography flown February 2023 by SLR Consulting Ireland (IAA Permit No. 04/2018); www.slrconsulting.com; Tel. +353-1-2964667.
Orthomosaic produced using Ground Control Points; Related to Irish Transverse Mercator Coordinate System and OS Malin Head Level Datum.

Legend:

- Landowner Boundary (c.32.1 Hectares) — *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) — *under lease agreement from landowner*
- Proposed S&G Extraction Area (c.8 Hectares)

Landscape Proposals:
To be carried out on commencement of the proposed development

- Existing vegetation to be retained
- Proposed native tree planting (1,700m² in total)
- Proposed native hedge planting (315m in total) and associated stockproof fencing
- Temporary screening berm (to be grass seeded)
- Tree protection fencing (i.e. sturdy post and wire or post and rail fence; refer to Figure 2-8)

Rev	Amendments	Date	By	Chk	Auth

SLR CONSULTING IRELAND
7 DUNDRUM BUSINESS PARK,
WINDY ARBOUR,
DUBLIN,
IRELAND,
D14 N2Y7

www.slrconsulting.com

Client: Breedon Ireland

Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Proposed Landscape Plan

Scale	SLR Project No.
1:2,500 @ A3	501.00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SH	AM	AM
Date: 01/24	Date: 01/24	Date: 09/24	Date: 09/24

Figure Number: **Figure 2-5** Rev.: **1**

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appends\02 Project Description\Dwgs\CAD\Wking\00584_065036 EIAR Fig 2-5 (Dwg-B) Landscape Plan R1.dwg 12/09/2024

CYAL50381397
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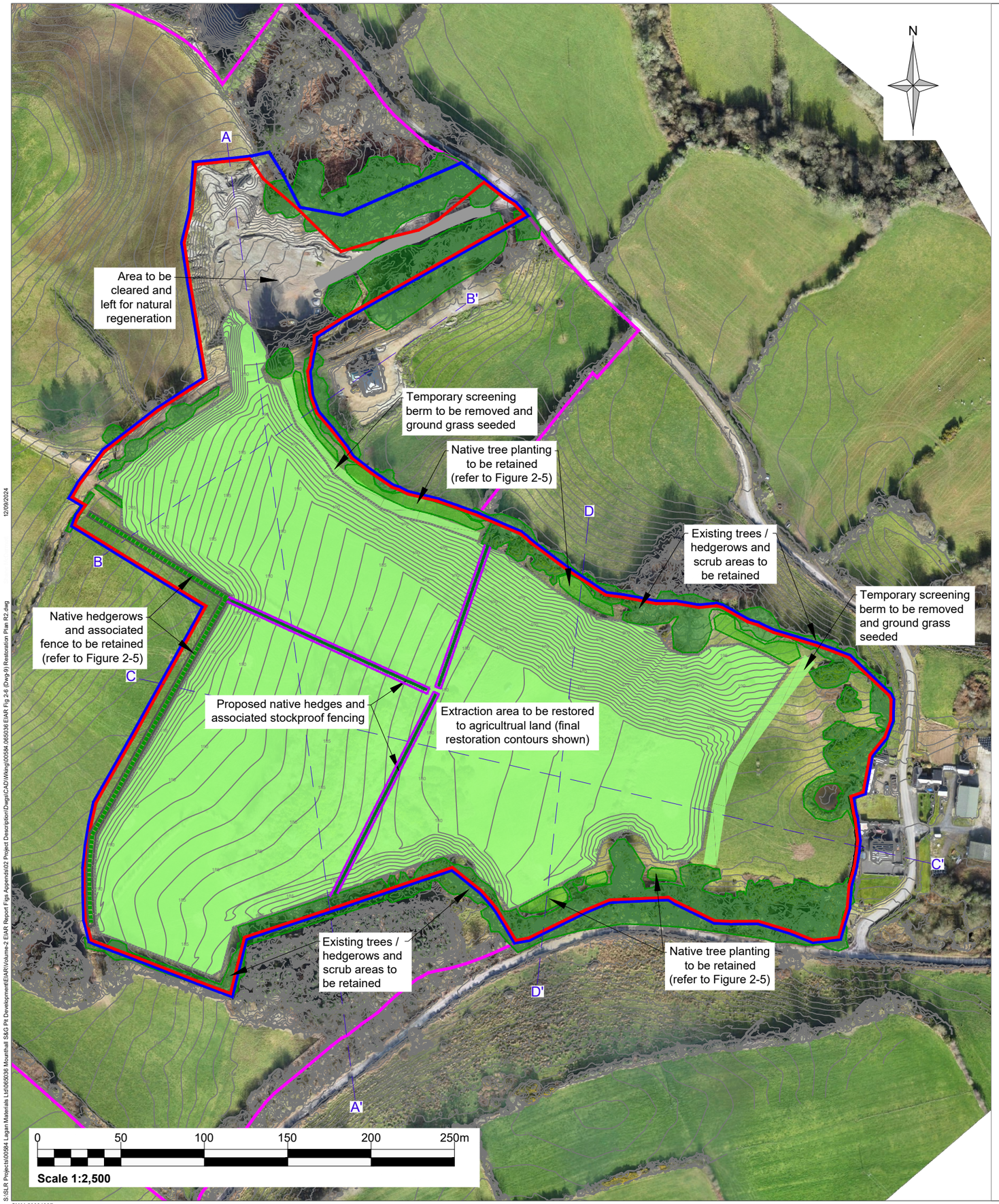

RESTORATION PROPOSALS:

The proposed afteruse of the exhausted sand & gravel pit is as agricultural land (e.g. grazing land), one of the afteruses recommended in the EPA Guidelines: 'Environmental Management in the Extractive Industry' (2006).

Restoration Phasing

As the majority of the extraction area (in particular the area of Extraction Phase 1) will be used for the processing and storage of material, it is not feasible to restore any sections of the site early. Therefore, all restoration works, i.e. re-profiling of the pit slopes, grass seeding and native hedge planting, will be carried out on completion of all extraction works.

Restoration Activities

Re-profiling of the pit slopes: As part of each of the Restoration Phases, the available overburden material will be used to re-profile the pit slopes to an angle of 2.5:1 (H:V) or shallower. Once done the slopes and pit floor will be covered with the available topsoil (min. 10cm) and will be seeded with a suitable agricultural grazing grass seed mix.

Removal of processing / ancillary facilities: Prior to the restoration of the Restoration Phase 3 area, all plant and equipment will be removed from the pit floor. On completion of all restoration works, the ancillary facilities near the site entrance will be removed. This area will be left for natural regeneration.

Native Hedge Planting: As mentioned above native hedge planting will be carried out in a number of locations on the restored pit floor (refer to plan on the left and planting details below).

Site Security

All existing boundary vegetation and fencing will be retained, as well as the gate at the site entrance, which will be kept locked. Considering that all pit slopes will be re-profiled and the site brought back into agricultural use, security or safety issues are not expected to occur on completion of all restoration works.

GENERAL NOTES:

- All plant handling, planting and establishment works to be carried out in accordance with current best practice and to take place in the appropriate 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.
- Establishment maintenance to be carried out for 2 years following the completion of planting (minimum 3 maintenance visits per year; i.e. spring, summer and autumn). Works to include weed control, replacement planting (where required) and the adjustment/removal of tree ties and spiral guards.
- In periods of drought the newly planted trees are to be watered to ensure their survival and establishment.

NATIVE HEDGE MIX

Approximately 370 lin.m. in total. Hedges to be planted in two staggered rows, with plants 40cm apart (i.e. 2.5 plants per m) and rows 40cm apart. 925 plants in total, rounded to 930. To be planted randomly with no more than 3-6 plants of the same species in one group and to be supplied with spiral guards.

No.	*Plant Name*	*Common Name*	*Height (cm)*	*Age*	*%*
Transplants/Container Grown Shrubs					
140	*Corylus avellana*	Common hazel	60-90	1+0	15
190	*Crataegus monogyna*	Hawthorn	60-90	1+1	20
190	*Ilex aquifolium*	Common holly	60-80	2L	20
140	*Prunus spinosa*	Blackthorn	60-90	1+0	15
90	*Quercus robur*	Pedunculate oak	60-90	1+1	10
90	*Salix cinerea*	Sally	60-120	0+1	10
90	*Sambucus nigra*	Elder	60-90	1+1	10

Notes:

Orthomosaic produced from aerial photography flown February 2023 by SLR Consulting Ireland (IAA permit no. 04/2018); www.slrconsulting.com; Tel. +353-1-2964667.
Orthomosaic produced using ground control points; related to Irish Transverse Mercator coordinate system and OS Malin Head Level Datum.

Legend:

- Landowner Boundary (c.32.1 Hectares) — *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) — *under lease agreement from landowner*

Restoration Proposals:

- All existing vegetation to be retained (including Native Tree Planting carried out on commencement of the development; refer to Figure 2-5)
- Extraction Area to be re-profiled, using material stored on pit floor and in screening berms, and restored to agricultural grassland
- Screening berms to be removed (material used in restoration works) and ground to be grass seeded
- Proposed native hedge planting (370m in total) and associated stockproof fencing

Rev	Amendments	Date	By	Chk	Auth

SLR CONSULTING IRELAND
7 DUNDRUM BUSINESS PARK,
WINDY ARBOUR,
DUBLIN,
IRELAND,
D14 N2Y7

www.slrconsulting.com

Client: Breedon Ireland

Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Proposed Restoration Layout

Scale	SLR Project No.
1:2,500 @ A3	501.00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	AM	AM
Date: 01/24	Date: 01/24	Date: 09/24	Date: 09/24

Figure Number: **Figure 2-6** Rev.: **2**

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appends\02 Project Description\Dwgs\CAD\Wking\00584.065036 EIAR Fig 2-6 (Dwg-9) Restoration Plan R2.dwg 12/09/2024

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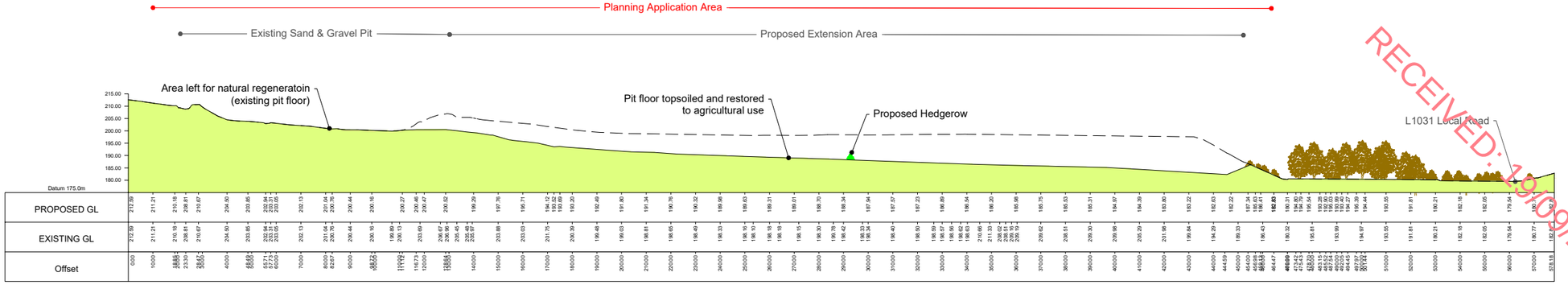
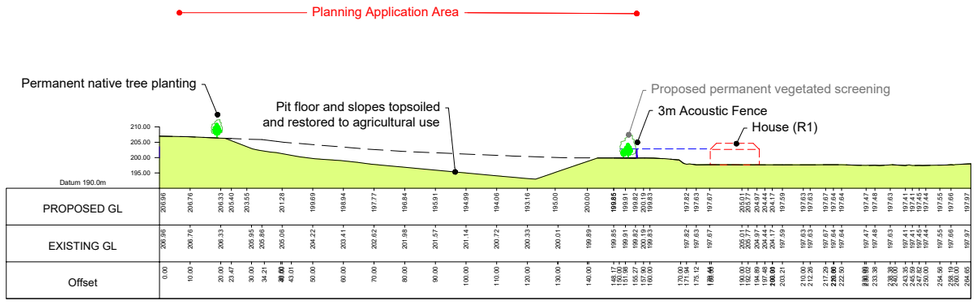
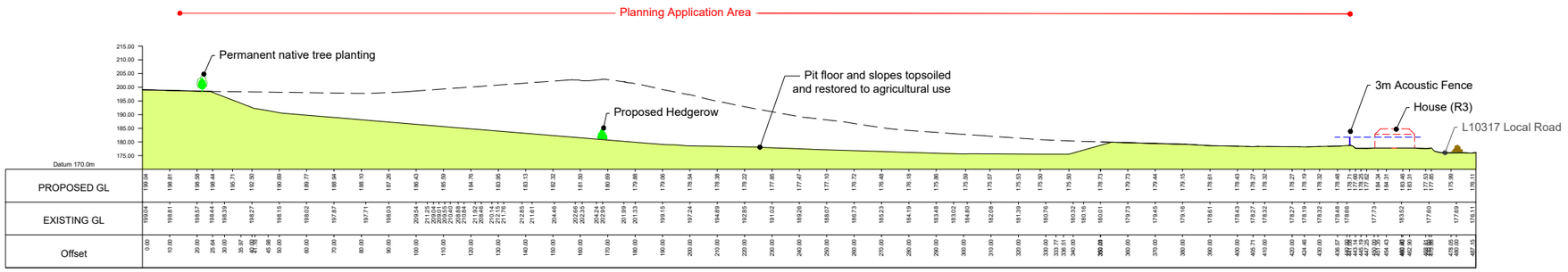


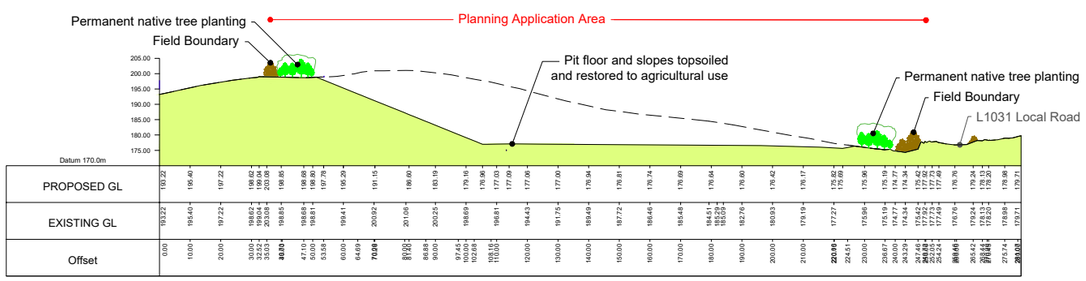
Section A-A'



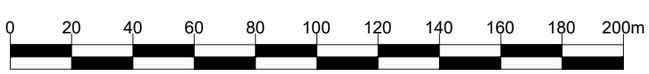
Section B-B'



Section C-C'



Section D-D'



Scale 1:2,000

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Notes:

Legend:

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7 DUNDRUM BUSINESS PARK,
WINDY ARBOUR,
DUBLIN,
IRELAND,
D14 N2Y7

www.slrconsulting.com

Client
Breedon Ireland

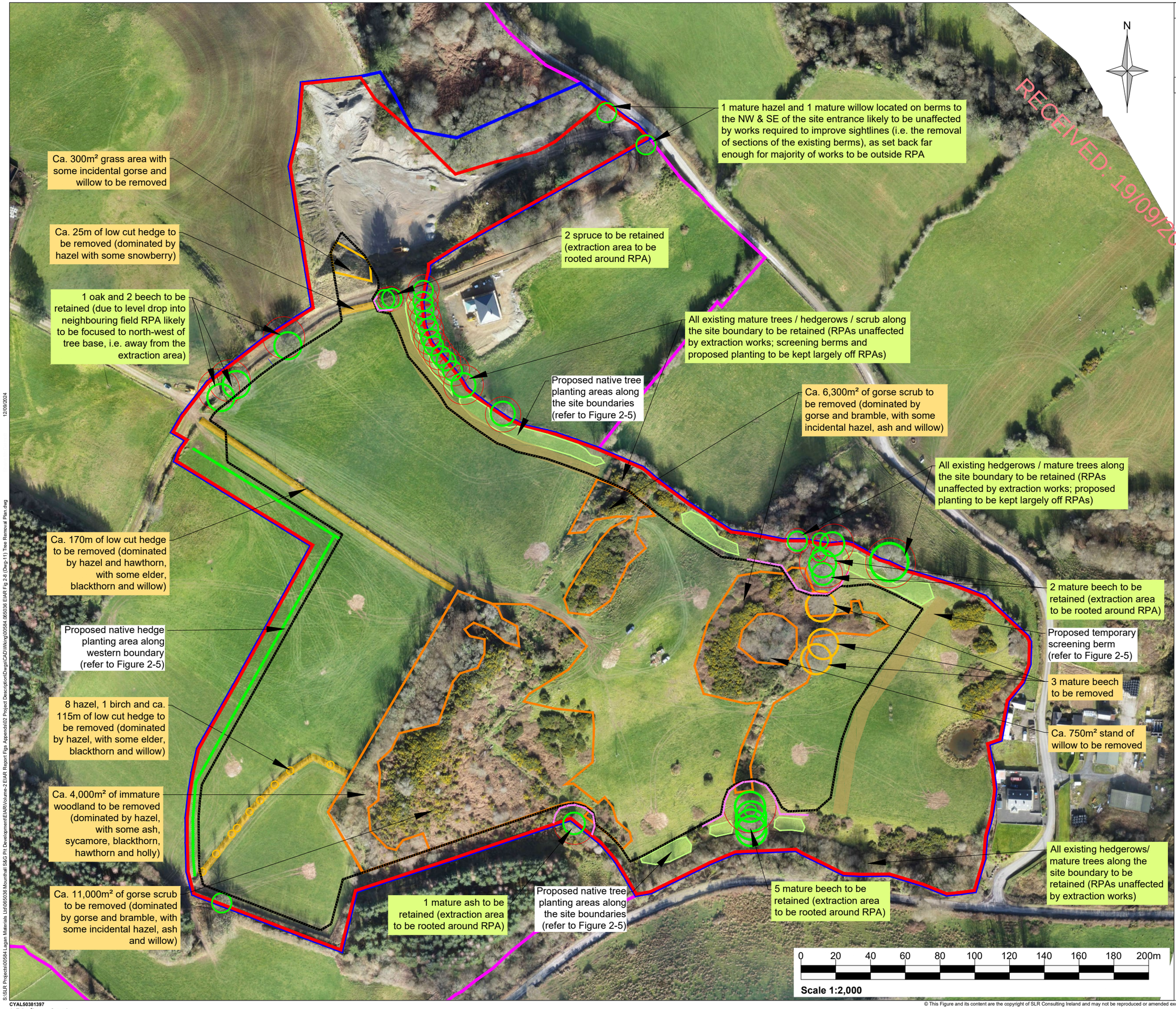
Project
Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title
Proposed Restoration Cross Sections

Scale		SLR Project No.	
1:2,000	@ A3	00584.065036	
Designed	**Drawn**	**Checked**	**Authorised**
SMcD	SMcD	LH	LH
Date	**Date**	**Date**	**Date**
01/24	01/24	09/24	09/24

Figure Number
Figure 2-7

Rev.
1



Notes:

Orthomosaic produced from Aerial Photography flown February 2023 by SLR Consulting Ireland (IAA Permit No. 04/2018); www.slrconsulting.com; Tel. +353-1-2964667.
Orthomosaic produced using Ground Control Points; Related to Irish Transverse Mercator Coordinate System and OS Malin Head Level Datum.

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Proposed S&G Extraction Area (c.8 Hectares)
- Proposed temporary screening berms
- Tree protection fencing (i.e. sturdy post and wire or post and rail fence to be constructed around RPAs of trees to be retained, as indicated, prior to any extraction works taking place)
- Proposed native tree / hedge planting areas (refer to Figure 2-5 - Proposed Landscape Plan for further details)
- Existing tall / mature trees to be protected & retained
- Root Protection Areas (RPA; in accordance with BS5837:2012) of existing tall / mature trees to be retained
- Existing tall / mature trees to be removed
- Existing sections of hedgerow to be removed (310m in total)
- Existing areas of scrub / immature woodland to be removed (refer to text for species present; 22,050m² in total;)

NOTE:

Should planning permission be granted, the trees to be removed identified on this plan are deemed to be exempt from requiring a felling licence in line with the Forestry Act 2014.

As the plants within the hedgerows / scrub areas are interwoven with each other and partially inaccessible, due to the presence of bramble and gorse, it is not feasible to indicate the location of every single individual plant classed as a tree, in line with the Forestry Act 2014. Instead the total length / area of hedgerows / scrub to be removed and tree species scattered along / within them are indicated on the plan.

Please note that gorse does not meet the definition of a 'tree', as per the Forestry Act 2014 and is therefore exempt from requiring a felling licence. Also, hawthorn and blackthorn, if located outside a forest, are exempt from requiring a felling licence.

Rev	Amendments	Date	By	Chk	Auth

SLR CONSULTING IRELAND
7 DUNDRUM BUSINESS PARK,
WINDY ARBOUR,
DUBLIN,
IRELAND,
D14 N2Y7

www.slrconsulting.com

Client: Breedon Ireland

Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Proposed Tree / Vegetation Removal Plan

Scale	SLR Project No.
1:2,000 @ A3	00584.065036

Designed	Drawn	Checked	Authorised
AMe	AMe	SMcD	SMcD
Date 04/24	Date 04/24	Date 09/24	Date 09/24

Figure Number: **Figure 2-8** Rev. **0**

12/09/2024

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CYAL50381397
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Appendices

Appendix 2-A: Acoustic Screening Fence (Typical Detail)

Appendix 2-B: Environmental Management System (EMS)

Appendix 2-A

Acoustic Screening Detail (Typical Detail)

JAKOUSTIC®

Jacksons Fencing

The Jakoustic® reflective barrier reflects the noise away using heavy section planed timber boards with a special profile that has been carefully developed. Boards are constructed in such a way that eliminates gaps that sound can easily travel through. Up to 28 dB* in noise reduction.

- Unique tuning fork design posts
- Attractive timber structure with a planed finish throughout
- Anti climb design and scale design
- High privacy barrier
- Special fixings clamp the acoustic boards between posts
- Can accommodate changes in level or profile
- Complete with capping and counter rail
- Up to 28 dB in noise*
- Category B3 rating
- 34mm thick "V" boards
- Matching pedestrian, swing and tracked sliding gates
- **25-year Jakcure® guarantee**

*Jakoustic® barrier certified laboratory results:

Rating according to BS EN 1793-2:1998
Category = B3
Laboratory sound reduction 28 dB
Superficial mass 25kg/m²

- Heights available with timber tuning fork posts, for general applications away from hills and coasts.
- For barrier heights 2.1m - 4.0m the timber posts are reinforced with a steel spur post, coated black.

HEIGHT (MM)	POST CENTRES (MM)	SPUR POST (MM)	POST LENGTH (MM)
2000	2410	N/A	2900
2500	2410	2000	3400
3000	2410	2500	3900
3500	2410	2700	4400
4000	2410	3300	4900

Steel posts are also available - size subject to site conditions - See "Jakoustic® Commercial & Highway" section

APPLICATIONS

✓ Commercial properties

✓ Construction sites

✓ Sports venues

✓ Residential properties

POST OPTIONS

- Timber tuning fork posts overlength set in concrete as standard

GATES

Matching gates available

FINISHES

- Jakcure® treated timber as standard

Appendix 2-B

Environmental Management System (EMS) Table of Contents

BREEDON IRELAND

SITE NAME

ISO 14001: 2015

1. ENVIRONMENTAL MANUAL

Sample Contents Page

AMENDMENT RECORD

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4.2	Understanding the needs and expectations of interested parties	6
4.3	Determining the scope of the environmental management system	6
4.4	Environmental management system	6
5	Leadership	7
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5.2	Environmental policy	7
5.3	Organisational roles, responsibilities and authorities	9
6	Planning	13
6.1	Actions to address risks and opportunities	13
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7	Support	21
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