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INTRODUCTION

1.1 This Environmental Impact Assessment Report (*EIAR*) provides supporting information to accompany a planning application to Meath County Council by Kilsaran Concrete Unlimited Company (also referenced as Kilsaran) in respect to their existing quarry extraction operations at Rathcore Quarry, near Enfield, County Meath.

1.2 The planning application is being made to permit the continued quarrying activity and deepening of the existing extraction area, and consists of the following main elements:

- continued use of the existing quarry, including storage of overburden and continuation of related limestone processing;
- small lateral extension and further deepening by two benches of the existing quarry void;
- provision of a new rock milling plant; and
- restoration of the site.

1.3 The existing quarry development is located within the townlands of Rathcore and Connellstown, Enfield, Co. Meath. Permission was previously granted in 2002 by An Bord Pleanála (planning ref. 01/1018 & ABP PL17.127391) to extend the quarry at depth over an area of c. 9.7 hectares to a permitted depth of 75m AOD, along with some ancillary storage and operational processes.

1.4 The proposed development being applied for under this planning application comprises of:

- Permission for continued use of the previously permitted developments under P. Reg. Ref. No's. 01/1018 (PL17.127391); 95/1416 (PL17.099325) and 91/970 (PL17.089787) to include the existing quarry, drilling, blasting, crushing and screening of rock and related ancillary buildings and facilities;
- Permission for continued use of the previously permitted developments under P. Reg. Ref. No. TA/120923 consisting of a discharge water treatment facility comprising two lagoons (30m x 13m), an oil interceptor, a reed bed (27m x 10m) and a concrete canal with "V" notch weir;
- Permission for a small lateral extension of c.0.9 hectares from the existing quarry area of c.9.7 hectares as permitted under P. Ref. 01/1018 (PL17.127391) to give an overall extraction footprint of c.10.6 hectares;
- Permission for the deepening of the overall extraction area (c.10.6 hectares) by 2 no. 15m benches to a final depth of c.45m AOD from the current quarry floor level of c.75m AOD as permitted under P. Ref. P. Ref. 01/1018 (PL17.127391);
- Permission for a proposed new rock milling plant to be enclosed within a steel-clad building (c.575m² with roof height of 22.5m and exhaust stack height of 28.2m);
- Replacement of existing septic tank with a new wastewater treatment system and constructed percolation area;
- Restoration of the site to a beneficial ecological after-use; and
- All associated site works within an overall application area of 31.1 hectares. The proposed operational period is for 20 years plus 2 years to complete restoration (total duration sought 22 years).

1.5 The application site location is indicated on an extract from the 1:50,000 scale Ordnance Survey Discovery series map in **Figure 1-1**.

1.6 The planning application is made in accordance with the requirements of the Planning and Development Regulations 2001 (as amended).

RATIONALE FOR PLANNING APPLICATION

1.7 Planning permission (applied for under planning ref. **TA/161227** *ABP-PL.249132*) was sought in November 2016 for further development at Rathcore Quarry primarily for the continuance of use of the existing permitted development, a small lateral quarry extension and deepening of the quarry by a further two benches (30m depth extension in total) from the existing permitted depth of 75m AOD to a final depth of 45m AOD. The proposed development life was to be 23 years.

1.8 Meath County Council issued a conditional notification of grant decision in August 2017, with condition no. 2 stating a permitted time period of 23 years and a permitted extraction depth of 45m AOD.

1.9 First and third party appeals were lodged with An Bord Pleanála ('the Board') in September 2017. In August 2018, the Board (generally in accordance with the Inspectors recommendation) decided to refuse permission for the following reason:

"Having regard to the limited information on file regarding the arrangements for the treatment of discharge waters, the location of the quarry in a karstic environment and the limited investigation and understanding of the complex hydrogeological conditions obtaining on site and in the wider area, the Board is not satisfied that the proposed development would not give rise to the pollution of surface water bodies, adversely impact on water supplies in the vicinity of the site or have a significant adverse effect on St. Gorman's Well, a County Geological Site, and its related ecology. The development would, therefore, be contrary to policies of the Meath County Development Plan 2013 to 2019 and to the proper planning and sustainable development of the area."

Basis of new planning application

1.10 This new application seeks to extend the life of the quarry development by approximately 20 years (operational) and to secure the continued supply of aggregates and lime to the construction market.

1.11 The details of the proposed new development being applied for now are outlined above, for development similar to the development previous sought under planning ref. **TA/161227** (ABP-PL.249132), i.e.

- **Extraction depth**: by a further 2 no. 15m high benches from the existing permitted extraction depth of 75m AOD to a proposed depth of 45m AOD.

1.12 The only minor differences relate to:

- **Lateral extension**: inclusion of a small lateral extension area of c. 0.9 hectares to give an overall extraction footprint of c. 10.6 hectares. The previous application sought an extension area of c. 1.1 hectares to give an overall extraction footprint of c. 10.8 hectares; and
- **Overall Time period**: of 23 years previously sought is reduced to 22 years (20 years extraction plus 2 years for restoration).
- **Lime Plant**: inclusion of a new rock milling plant located within the existing quarry void.

1.13 There are no proposals as part of this planning application for:-

- any increase in the existing annual extraction rate at 350,000 tonnes as currently carried out under planning ref. 01/1018 (PL17.127391);
- any increase in the existing HGV traffic levels as are currently associated with the existing permitted development, or
- any additional site facilities or infrastructure (other than the new lime milling plant proposed to be located on the existing quarry floor and replacement of existing septic tank with a new wastewater treatment system and constructed percolation area) over and above what is currently permitted at the site by the previous grants of planning permission under planning refs. TA/120923; 01/1018 (PL17.127391); 95/1416 (PL17.099325) and 91/970 (PL17.089787).

1.14 The proposed development for continuance of use and extension of the extraction area is considered beneficial in planning terms by:

- securing adequate reserves of high quality limestone rock at an existing established and permitted site;
- securing the continued supply of limestone aggregates and lime dust from the site and thereby providing local employment security into the future;
- reducing the need for development of 'greenfield' sites at other locations within the county where there is little or no previous extractive industry land-use; and
- eliminating the need for haulage of materials by road from other quarries within, and outside the county, with potentially longer haulage distances and increased traffic levels on the wider road network.

ABP refusal reasons (P. Ref. TA/161227/ABP-PL17.249132) addressed in new planning application

1.15 The item of refusal which relate to hydrology and hydrogeology at the site are addressed in detail in Chapter 7 (Water) of the EIAR and outlined here below for completeness.

1.16 Kilsaran asked David Ball to complete a hydrogeological assessment at Rathcore Quarry (Hydrogeological Investigation of Rathcore Quarry (2019-2022)) following the An Bord Pleanála's refusal of the application to deepen Rathcore quarry in 2016. The reasons for the refusal related to the hydrogeology of the quarry and the potential of the development to impact St. Gorman's Well, a warm spring, located c. 1.6km to the west. The resulting Hydrogeological Investigation Report is a significant body of work and presents a very detailed assessment which relies both on historic geological/hydrogeological data as well recent hydrogeological investigations. The full Hydrogeological Investigation Report including a detailed Executive Summary is attached as **Appendix 7-A** in Chapter 7 (Water) of the EIAR.

Hydrogeology – Potential impacts on water supplies in the vicinity of the site

1.17 Residences in the vicinity of the site area are on groundwater well supplies. A groundwater well survey was undertaken previously by SLR Consulting in February 2017 and identified a total of 21 private wells within the vicinity of the quarry (as shown in **Figure 7-2** in Chapter 7). The groundwater levels in the private wells have been monitored by Kilsaran on a monthly basis since November 2006. The private supply wells are pumped wells and therefore the groundwater level will vary with abstraction rates for the households and this is reflected in the monitoring results.

1.18 With the deepening of the quarry void, the pumping rate will be increased to ensure that the floor of the quarry remains dry and workable. The increased pumping rate, estimated to be at a maximum of 5,000 to 6,000m3/day when the lowest bench of the quarry is being worked to 45mOD will result in a lowering of groundwater levels at the quarry. This reduction of groundwater levels also has the potential to affect groundwater levels in nearby private wells.

1.19 The potential effect of drawdown on groundwater levels and in local wells was assessed in the Hydrogeological Investigation Report (Ball, 2022; refer to EIAR Chapter 7, **Appendix 7-A**). During recent site investigations, groundwater levels in on-site and offsite boreholes were recorded during a long, high-rate pumping tests which aimed to simulate the potential effects associated with the proposed quarry dewatering during a variety of meteorological conditions. The report concluded that:

- During the pumping tests the water levels fell by c. 4m in the onsite (quarry) boreholes and c. 2m in some local private wells.
- 5 no. of the monitored local wells are shallow wells which draw water from the local sand and gravel aquifer. No water levels effects were recorded in these shallow wells during the pumping tests. The lack of water level response in these shallow wells indicates that the local sand and gravel aquifer is separated from the underlying Waulsortian Limestones by a low permeability layer. This layer is likely to comprise of boulder clay which was noted to overlie the bedrock at the edge of the quarry. Therefore, these shallow wells have no potential to be impacted by the proposed additional quarry dewatering which will be solely located in the bedrock aquifer.
- 10 no. of the monitored local wells are deep boreholes which draw water from the bedrock aquifer i.e. karstified Waulsortian limestones. Water level impacts in the magnitude of c. 2m were recorded in many of these local private wells during the pumping tests. During the proposed quarry dewatering a similar drawdown of water levels will occur in these deep bedrock boreholes. However, these bedrock boreholes are deep and are sourced from a network of deep fractures and karst conduits. A drawdown of c. 2m will not impact flow into these boreholes from the deeper conduits, which will remain open and continue to provide sufficient flow into the borehole. Therefore, there is limited potential for the proposed dewatering to impact on the yield of these local bedrock boreholes.

1.20 The groundwater level responses of the individual local wells to the pumping tests and the potential for the proposed dewatering to impact the water supplies are summarised in **Table 7-17** in EIAR Chapter 7.

1.21 The assessment concludes that the water level drawdown of c. 2m will not affect the supply volume to the wells and there is considered to be no effect likely to the overall well supplies in the area as a result of the proposed quarry deepening to 45m AOD.

Hydrogeology – Potential significant adverse effect on St. Gorman's Well, a County Geological Site

1.22 In karstified aquifers there is a close interaction between the groundwater and surface water. The karst features mapped by the GSI in the local area comprise of springs, the closest of which is St. Gorman's Well, located c. 1.6km to the west of the application site. The proposed deepening of the quarry and the associated lowering of groundwater levels has the potential to affect groundwater levels in the Waulsortian Limestones. This could have an indirect effect on groundwater levels and spring flows at St. Gorman's Well.

1.23 The potential effect of drawdown on groundwater levels and flow at St. Gorman's Well was assessed in the Hydrogeological Investigation Report (Ball, 2022; refer to EIAR Chapter 7, **Appendix 7-A**). During the long-term (5-months, 140 days), high-rate pumping test completed in 2020, designed to

simulate the effects associated with further dewatering, groundwater levels in boreholes adjacent to St. Gorman's Well were monitored. In relation to St. Gorman's Well, the Hydrogeological Investigation Report concluded that:

- The warm water flowing from St. Gorman's Well originates from a deep Cenozoic aged fault system which brings the water to sufficient depths to be warmed to 20°C. This fault is associated with a deep 'U-shaped' conduit system. Water flows down and along a 'U-shaped' conduit when rainfall recharge occurs at the inlet, which raises water levels to a level higher than that at St. Gorman's Well. This pressure drives water from depth to the surface when the head (i.e. the pressure) is sufficient. The exact source or location of the inlet to this deep conduit is unknown. In his assessment, David Ball states that it may be related to a northeast-southwest orientated strike-slip fault which runs under Ballinakill Hill to St. Gorman's Well.
- The origin of the warm water is unlikely to be from the Rathcore Quarry area. The natural groundwater levels at the quarry are only slightly elevated with respect those at St. Gorman's Well. We note that the elevation of the base of the well casing at ground level is c. 75mOD (i.e. the same as the current floor of the quarry). This does not create sufficient pressure to drive the water down to a great depth and to then push it back to the surface at St. Gorman's Well.
- In addition, water level monitoring results showed that the pumping tests did not impact water levels or spring flow at St. Gorman's Well during winter conditions when there is adequate groundwater recharge. In summer conditions when there is limited recharge and the spring is not flowing, there is the potential for quarry dewatering to slightly lower groundwater levels at St. Gorman's Well. However, this slight seasonal summer reduction in groundwater levels would not affect the functionality of the spring which only flows in winter.

1.24 Due to the separation distances involved, the site specific geological and hydrogeological knowledge of the local area and groundwater levels, and with the knowledge of how the proposed pumping will impact groundwater levels in the area of St. Gorman's Spring, it is concluded that there will be no residual effect on St. Gorman's Well as a result of the proposed development.

St Gorman's Well - Biodiversity

1.25 A site visit to St. Gorman's Well was conducted in January 2024 by SLR Project Ecologist Jake Matthews. The aim of this survey was to gain a better understanding of the potential ecological value of this offsite location, which has previously been noted as a warm spring and a candidate National Heritage Area (NHA), hereby referred to as a cNHA.

1.26 A cNHA is described as a pre-pNHA designation; meaning that the site could be considered for a site survey and assessment, and, if biological evidence is sufficient, then proposed as an NHA. A cNHA is not a statutory designation.

1.27 Details are provided in EIAR Chapter 5 – Biodiversity (para. 5.63 to 5.85) and summarised below:

- The 2024 survey found very little evidence that the well is of high ecological value;
- No aquatic plant species were noted within the well, and the flora evident at the time of the survey represented those typical of neutral grasslands of low ecological value and there was little difference noted between the species composition on the banks and within the well pond;
- There was no evidence of aquatic invertebrate presence due to the well pond being dry. The monitoring of groundwater levels in the adjacent boreholes since 2013 has shown that the well pond rarely holds significant levels of water for long periods and is dry during the late spring-summer months (see Figures 5.19 and 5.38 in the Hydrogeology Investigation Report 2022 in EIAR

Chapter 7, **Appendix 7-A**). As such, the well pond depression is not anticipated to provide suitable breeding habitat for smooth newts.

- There was no tufa formation observed in the well pond depression, which would be expected in an Annex I habitat Petrifying springs with tufa formation. Furthermore, National Parks & Wildlife Service Study of the Extent and Conservation Status of Springs, Fens and Flushes in Ireland 2007[1] and guidelines for the assessment of Annex I Priority Petrifying Springs in Ireland[2] were consulted to determine whether the well likely qualifies as Annex I habitat. These sources were used to provide a list of positive and negative indicator species with regards to identifying this Annex I habitat. No positive indicator species were identified during either the 2024 survey or an earlier 2003 survey. The following species were present as negative indicator species:
    - Dactylis glomerata;
    - Urtica dioica; and
    - Rubus fruticosus agg.

Therefore, St Gorman's Well has been assessed not to be Annex I habitat Petrifying springs with tufa formation.

1.28 For the reasons above, the St. Gorman's Well site was discounted from further assessment in the Ecological Impact Assessment provided in EIAR Chapter 5.

Hydrology – Potential pollution impacts on surface water bodies

1.29 During the operational phase of the proposed development, runoff from the extraction area and pumped groundwater will be directed to a sump in the quarry floor. En route to the sump, surface water will increase in turbidity due to the collection of sediment particles. Waters may also be contaminated with any leaked hydrocarbons on the quarry floor. Any release of untreated water has the potential to affect water quality in the local downstream receiving waters (*i.e.* Blackwater River and its tributaries and the River Boyne). Discharge from the quarry currently operates under a discharge licence which sets out several emission discharge limits with respect to water quality.

1.30 Monitoring of discharge water quality in accordance with the discharge licence has shown that the site is compliant with the existing discharge emission limits. An assimilation capacity has been completed for the proposed development (maximum discharge rate of 6,000m^3/day) and has shown that there is limited potential for effects (refer to Chapter 7 Water, **Appendix 7-G**).

1.31 The release of effluent from wastewater treatment systems has the potential to effect groundwater and surface water quality.

1.32 With the implementation of the mitigation measures outlined in EIAR Chapter 7, the existing and proposed water treatment systems and the ongoing discharge monitoring, it is considered that there will be no significant effect on receiving water quality as a result of the proposed development.

Natura Impact Statement (NIS)

1.33 An Appropriate Assessment Screening Report and Natura Impact Statement (NIS) has been undertaken by SLR Consulting Ireland and is enclosed with the planning application documentation.

[1] Foss, P.J. 2007 Title: National Parks & Wildlife Service Study of the Extent and Conservation Status of Springs, Fens and Flushes in Ireland 2007. Internal report for the National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Ireland.

[2] Denyer, J., Eakin, M., & Gill, M. (2023). Guidelines for the Assessment of Annex I Priority Petrifying Springs in Ireland. Irish Wildlife Manuals, no. 142. NPWS, Department for Housing, Local Government and Heritage, Ireland.

1.34 The Natura Impact Statement, based on the best available scientific information, shows that, considering the proposed mitigation measures, the proposed development at Rathcore Quarry will not undermine the conservation objectives for the River Boyne and River Blackwater SAC or SPA, either alone or in-combination with other projects or plans.

THE APPLICANT

1.35 The planning application and accompanying supporting documentation has been prepared by SLR Consulting Ireland (SLR) on behalf of Kilsaran Concrete Unlimited Company (hereafter referred to as 'Kilsaran' in the EIAR).

1.36 Founded in 1964, Kilsaran is a wholly Irish-owned company, whose business is primarily in the production of materials for the construction industry.

1.37 The company manufactures paving and walling, pre-mixed dry products, pre-cast concrete, ready-mix concrete, concrete blocks, trowel-ready mortar, aggregates, asphalt and macadam, hard core and fill materials for the Irish and UK markets as appropriate. The company also undertakes surfacing contracts for road construction, building and civil engineering works.

1.38 The company now employs over 900 people directly; it operates twelve hard rock quarries and a similar number of sand and gravel pits. Kilsaran manufactures various concrete products from 20 locations, mainly in the east, midlands and south of the country. The company also has three asphalt plants located strategically within extractive sites throughout its operational area.

1.39 The company's intention in preparing and applying to extract rock and sand & gravel at this location is to continue to secure the substantial financial investment by the company in the local area and provide a local source of aggregates to supply their existing readymix concrete batching plant on-site.

Environmental Commitment

1.40 Kilsaran Concrete has an Environmental Policy statement which has been communicated to employees and contractors. The company recognises that the successful implementation of this policy depends on the ongoing commitment of all those working in the organisation, and on this basis has won a number of awards in recognition to their commitment to the environment.

1.41 The company is committed to achieving industry leading environmental standards and has established an in-house environmental management system (EMS) at all of its operation sites.

1.42 Kilsaran Concrete is a member of the Irish Concrete Federation (ICF) and as a member commits itself to the principles of the Federations Environmental Code, which states:

"ICF members will minimise production of waste and where appropriate consider its beneficial use including recycling. They will deal with all waste in accordance with the relevant legislation and other controls in place, including waste contractors with valid Waste Collection Permits".

THE SITE

Site Location

1.43 The application site at Rathcore Quarry is an existing operational quarry lying about 1 kilometre southwest of the village of Rathcore, and c. 3 kilometres northwest of the town of Enfield, refer to **Figures 1-1** to **1-3**. The village of Rathcore comprises of a handful of houses and a public house,

grouped around the intersection of two roads. The quarry site is situated to the east of a local county road (L6226), which joins the R148 c. 2km to the south of the site and the R159 c. 3.5km to the southeast of the site via the L62253. Access to the site is directly from the L6226 local county road which leads directly into Rathcore village to the north.

Site Description

1.44 The rock quarried at Rathcore is Waulsortian Limestone (WA) or sometimes referred to as Reef Limestone. This type of rock is pale in colour, massively bedded very pure calcium carbonate rock. Its properties make it an extremely suitable concrete aggregate, it is relatively easily crushed down in size and has little or no silica, so it has a low wear factor on plant and machinery.

1.45 The massive bedding means that once crushed it produces a good round aggregate, essential in the making of strong concrete and it is particularly suitable for the production of a manufactured sand because of its homogeneous nature.

1.46 The high purity calcium carbonate limestone produces a top quality agricultural lime to regulate soil pH and improve nutrient availability to plants giving more efficient fertilizer application.

1.47 The existing quarry comprises of the existing void contained within a small hill. A large open area comprises the main entrance, which turns generally northwards towards a group of buildings. These comprise a small office and associated weighbridge, canteen, service shed, truck washing facility and storage tanks. The ground level in the vicinity of the weighbridge is c. 86mOD.

1.48 To the north of the office/canteen area is the main processing and screening facility for the quarry stone. The fixed processing plant comprising a generator, various conveyor belts and crushing equipment, together with a screening house is present. Immediately adjacent to this processing facility is the location for the stockpile storage of the processed quarry materials, ranging from agricultural lime dust, to larger sizes of crushed material. The ground level in this area is at c. 90 metres.

1.49 The quarry extraction void is located to the south of the fixed processing plant / stockpile storage area and is broadly rectangular in shape in a north - south direction. The quarry is broadly worked in a southerly direction in 2 no. benches to c. 90mOD and c. 75mOD respectively. The existing permitted quarry floor level is 75mOD as permitted under planning permission P. Ref. 01/1018.

1.50 The quarry is worked dry, with a quarry sump on the western side of the quarry floor collecting surface water and inflows of groundwater. Excess water is pumped to a settlement pond, hydrocarbon interceptor and constructed reedbed lying to the west of the site. Water is subsequently discharged off-site under licence via a buried pipe to a water course on the western side of the public road, c. 150m to the west of the quarry.

1.51 The site is reasonably well screened from the public roads near the site by topography, screening mounds and mature vegetation.

Site Access

1.52 The quarry entrance is located on the L6226 local county road to the south of Rathcore village and has good visibility splays in both directions. There is a low stone wall with pillars on either side of the entrance with a post and wire fence set behind the wall. The entrance consists of two metal gates which are recessed back from the road verge to allow vehicles to pull in off the road when the gates are locked. The quarry entrance and internal yard area are surfaced / paved. Directly across from the quarry entrance is another large splayed entrance which leads into an agricultural yard on the opposite side of the road.

Surrounding Land-Use

1.53 The quarry site is surrounded by agricultural lands. The external site boundary and remaining internal field boundaries consist of a combination of mature hedgerows with sporadic mature trees and fence lines.

1.54 Residences within the general area are confined to the public roads. The public road which fronts onto the western landholding boundary runs in a northeast – southwest direction. There are two residences located along this road directly north of the quarry. There is one residence directly opposite the site entrance while there is a cluster of houses located to the southwest of the site at the intersection of the local county roads.

1.55 The quarry development is adjoined by agricultural fields on all sides, both under pasture and arable. St. Gorman's Well, a warm spring, lies c. 1.7km to the west of the site.

1.56 The wider landscape is dominated by a mixture of pasture and arable fields, bound by mostly dense tree lined hedgerows. Field sizes range from small to large, with the smaller fields typically being under pasture and the larger ones used for growing crops. Apart from a number of small blocks of woodland, there are no wooded areas within the surrounding area. Other elements in the landscape include a network of local and regional roads, with associated dispersed residential development, as well as scattered farmsteads.

1.57 The topography surrounding the application site is gently rolling with elevations generally ranging from 70 to 100m OD. The highest elevation in the vicinity of, but outside the application area is a local highpoint of 117m OD immediately to the north-east of the application area.

1.58 The main transport routes through the general area are the R148, just under 2km to the south and the R159, just over 2km to the southeast of the application site. The M4 motorway is located 3km to the south. Further to this, there is a comprehensive network of local roads interconnecting the regional and national roads.

SCREENING

1.59 Screening is the process of assessing the requirement of a project to be subject to Environmental Impact Assessment (EIA).

1.60 Part 1 and Part 2 of Schedule 5 of the Planning and Development Regulations 2001 (as amended) set out the forms of development that require an Environmental Impact Assessment Report (EIAR).

1.61 Paragraph 19 of Part 1 of Schedule 5 states that the following form of development requires an EIA

"Quarries and open-cast mining where the surface of the site exceeds 25 hectares.

1.62 Paragraph 22 relates to changes or extensions. It states:

"Any change or extension of projects listed in this Annex where such a change or extension in itself meets the thresholds, if any set out in this Annex."

1.63 Paragraph 2 of Part 2 of Schedule 5 refers to extractive industry and part (b) of that section states that the following requires an EIA:

"Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares."

1.64 In addition, paragraph 13(a) of Part 1 requires EIA in respect of:

"Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension refer to in Part 1) which would:-

i. result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule and

ii. result in an increase in size greater than –

25 per cent, or

an amount equal to 50 per cent of the appropriate threshold,

whichever is the greater.

1.65 The proposed development relates to the extraction of limestone from an overall extraction footprint area of c. 10.6 hectares, resulting in a requirement for an EIA under Part 2, because the proposed extraction area exceeds the 5ha threshold.

SCOPING

1.66 The need to know the likely areas of potential impact and the appropriate methods by which to evaluate them prior to the commencement of detailed data collection or assessment is crucial in determining the nature and detail of information to be contained in an Environmental Impact Assessment Report (EIAR).

1.67 The application is for continuance of use of the existing permitted limestone extraction development, which was itself the subject of previous EIA, along with a lateral extension to increase the overall extraction area to c. 10.6 hectares.

1.68 A formal pre-planning consultation (ref. P.P. 8123) was held via MS Teams between representatives of the Planning, Environment and Transportation Departments, respectively of Meath County Council and representatives of Kilsaran, SLR Consulting and Hydro Environmental on 15 September 2023.

1.69 With respect to St. Gorman's Well, a County Geological Heritage site, consultation was held with the Geological Survey of Ireland (GSI). Details of the consultation and response are provided in **Appendix 6-A** of EIAR Chapter 6 Land, Soils and Geology.

1.70 Other consultations and informal discussions held by contributors in undertaking their environmental impact assessments are detailed in the specialist environmental sections of the EIAR where relevant, together with details of relevant archives and documentation held by state agencies and organisations.

1.71 The need to know the likely areas of potential impact and the appropriate methods by which to evaluate them prior to the commencement of detailed data collection or assessment is crucial in determining the nature and detail of information to be contained in an Environmental Impact Assessment Report (EIAR).

1.72 The applicant is a long-established operator, who along with their consultants have detailed knowledge and experience of similar types of mineral extraction developments, both locally and nationally.

DIFFICULTIES ENCOUNTERED WITH EIAR COMPILATION

1.73 This Environmental Impact Assessment Report (EIAR) was compiled on the basis of published regional and local data and site-specific field surveys. No difficulties were encountered in compiling the required information.

ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR)

1.74 An Environmental Impact Assessment Report (EIAR) *"means a statement of the effects, if any, which the proposed development, if carried out, would have on the environment".* As such, it is a systematic analysis and assessment of the potential effects of a proposed project on the receiving environment.

1.75 The principal objectives of an Environmental Impact Assessment Report are to:

- identify and / or predict the significant impacts of a development;
- identify what mitigation measures should be incorporated into the development to eliminate or reduce the perceived impacts;
- interpret and communicate the above information on the impact of the proposed development, in both technical and non-technical terms; and
- assist the local Planning Authority in the decision-making process with respect to the associated planning application.

Format of the Environmental Impact Assessment Report (EIAR)

1.76 To facilitate clarity, this EIAR has been prepared in accordance with the 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' published by the Environmental Protection Agency (EPA) in 2022. The EIAR is sub-divided into two volumes. **Volume 1** is the Non-Technical Summary and **Volume 2** is the Environmental Impact Assessment Report itself subdivided into sixteen chapters, as described below. Any associated appendices and supporting information are provided at the end of each chapter of the EIAR where relevant.

1.77 **Volume 2:** The Environmental Impact Assessment Report is sub-divided into:

Chapter 1: Introduction

1.78 An introduction to the development and a brief explanation of the aims and format of the EIAR. It also identifies the various professional consultants who have contributed to this EIAR, and the screening / scoping process carried out.

Chapter 2: Project Description

1.79 Chapter 2 provides:

- Details of the physical characteristics of the whole project, including, where relevant, demolition works, the land-use requirements during construction and operation as well as other works that are integral to the project;
- The main characteristics of the operational and closure / restoration phases of the project e.g., nature and quantity of materials and natural resources.

Chapter 3: Reasonable Alternatives

1.80 Chapter 3 provides a description of the reasonable alternatives studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

Chapters 4 - 15

1.81 These chapters provide detailed information on all aspects of the existing (baseline) environment, identify, describe and present an assessment of the likely significant impacts of the proposed project on the environment, recommend mitigation and monitoring measures to reduce or alleviate these impacts and describe the residual impacts and conclusions. The environmental topics are grouped as follows:

- Chapter 4: Population and Human Health
- Chapter 5: Biodiversity
- Chapter 6: Land, Soils and Geology.
- Chapter 7: Water (Hydrology and Hydrogeology)
- Chapter 8: Air Quality
- Chapter 9: Climate
- Chapter 10: Noise & Vibration
- Chapter 11: Material Assets
- Chapter 12: Cultural Heritage
- Chapter 13: Landscape
- Chapter 14: Traffic
- Chapter 15: Interactions

1.82 The associated references, plates, figures and appendices are provided at the end of each of the Chapters 1 – 15, where relevant.

1.83 Chapter 16 provides a summary of all of the proposed mitigation and monitoring commitments as recommended by Section 3.8.4 of the Environmental Protection Agency Guidelines on the Information to be contained in Environmental Impact Assessment Reports.

1.84 A Non-Technical Summary of the Environmental Impact Assessment Report, incorporating all of the above chapters, is provided as a separate and self-contained document in **Volume 1**.

CONTRIBUTORS

1.85 Kilsaran Concrete appointed SLR Consulting Ireland to prepare this Environmental Impact Assessment Report (EIAR) in support of its planning application for the proposed limestone extraction and continuance of use at Rathcore Quarry.

1.86 The contributors who have assisted in the preparation of this EIAR are identified in **Table 1-1** below:

Table 1-1
List of Contributors

Topic	Contributor	Company
Introduction	Shane McDermott *BSc, MSCSI, MRICS*	SLR Consulting Ireland

Topic	Contributor	Company
Description of Development	Shane McDermott *BSc, MSCSI, MRICS*	SLR Consulting Ireland
Alternatives	Lynn Hassett *BSc(Hons), MSc, PIEMA*	SLR Consulting Ireland
Population and Human Health	Lynn Hassett *BSc(Hons), MSc, PIEMA*	SLR Consulting Ireland
Biodiversity	Michael Bailey *MCIEEM, CEcol.* Victoria Molloy *BSc, MCIEEM* Jake Matthews *BSc MSc*	SLR Consulting Ireland
Land, Soils and Geology	Peter Glanville *BA, MSc, EurGeol, PGeo* Nikolina Bozinovic *BSc, MSc* Orlaith Tyrrell *BSc (Geology)*	SLR Consulting Ireland
Water	Michael Gill *BA, BAI, Dip Geol., MSc, MIEI* Conor McGettigan *BSc, MSc*	Hydro Environmental Services
Air Quality	Conor Hughes (MSc. Energy Science) Aldona Binchy *MSc. (Eng)*	SLR Consulting Ireland
Climate	Conor Hughes (MSc. Energy Science) Aldona Binchy *MSc. (Eng)*	SLR Consulting Ireland
Noise	Aldona Binchy *MSc. (Eng)*	SLR Consulting Ireland
Landscape	Anne Merkle *MSc, Dipl. Ing (FH), MILI*	SLR Consulting Ireland
Cultural Heritage	Dr. Charles Mount *MA, PhD. Dip. EIA & SEA Mgmt., MIAI*	Consultant
Material Assets	Shane McDermott *BSc, MSCSI, MRICS*	SLR Consulting Ireland
Traffic	Julian Keenan *Traffic and Road Safety Engineer*	Trafficwise
Interactions	Lynn Hassett *BSc(Hons), MSc, PIEMA*	SLR Consulting Ireland
Mitigation & Monitoring	Shane McDermott *BSc, MSCSI, MRICS*	SLR Consulting Ireland
Planning Report	Lynn Hassett *BSc(Hons), MSc, PIEMA*	SLR Consulting Ireland

1.87 Further to EIAR chapter inputs outlined above, David Ball, an independent hydrogeologist was asked by Kilsaran Concrete to carry out an investigation of the hydrogeology, with particular reference to the quarry, the existing water supplies and St Gorman's Well.

1.88 The Hydrogeological Investigation Report was a detailed and long-running assessment carried out between 2019 and 2022 and was specifically tailored to address the concerns raised by the Board in their refusal of file PL17.249132. The document is a comprehensive document that spans 6 chapters, and comprises 4 volumes with 155 figures and diagrams, and an appendix with 55 drilling logs.

1.89 Mr Ball carried out an investigation, analysis and interpretation of data and report compilation over the period 2019 - 2022. Mr Ball pulled together a large body of existing information and obtained a further large amount of new information from his drilling, pumping tests, and water level monitoring field work. He also, with considerable assistance from the Geological Survey of Ireland (GSI), applied a new methodology for processing recently acquired airborne electrical conductivity data along 48 sections crossing the area obtained by the GSI's Tellus airborne geophysical survey programme. He correlated the data with past and recent borehole logs to obtain a detailed revelation of the hitherto hidden complex geology, structural geology and karst development in the area.

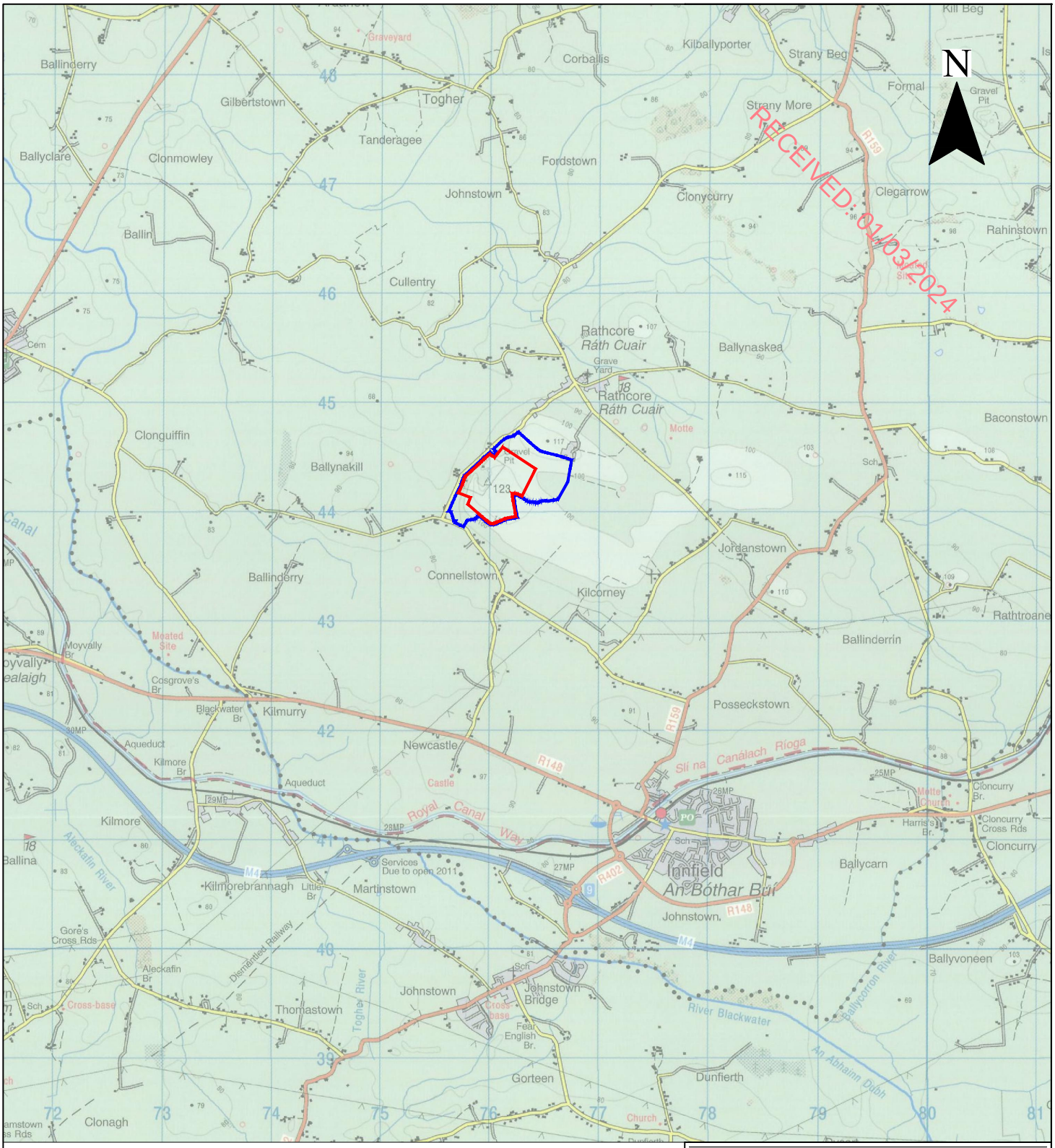
1.90 The resulting Hydrogeological Investigation Report is a significant body of work and presents a very detailed assessment. The total document is 448 pages long. It includes 145 no. full page illustrations, graphs, maps, and cross-sections, and the graphical representation of the logs of 55 boreholes drilled during the investigation. Chapter 5 of the report, which assesses in detail all the existing and new information on the spring and from the boreholes at the St Gorman's Well site, and also analyses the recent changes in rainfall in the area, is over 150 pages long.

1.91 The full report is provided in **Appendix 7-A2** of Chapter 7 (Water) of the EIAR, with an Executive Summary provided in **Appendix 7-A1**.

1.92 Each contributor to the EIAR has been fully briefed about the proposal and the background to it. They have also visited the site and are familiar with the local environment. They are considered to have the necessary competent experience, expertise and knowledge for the preparation of each topic area of the EIAR.

1.93 Kilsaran Concrete has also provided detailed background knowledge of the site, environmental monitoring data and has carried out a review of the EIAR.

FIGURES



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Extract from Ordnance Survey Discovery Series Mapping 42 & 49

CYAL 50381397

LANDHOLDING BOUNDARY (c.53.8 HA.)

APPLICATION AREA (c.31.1 HA.)

Kilsaran
ideas taking shape

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KILSARAN CONCRETE UNLIMITED COMPANY

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

RATHCORE QUARRY

RATHCORE / CONNELLSTOWN TOWNLANDS

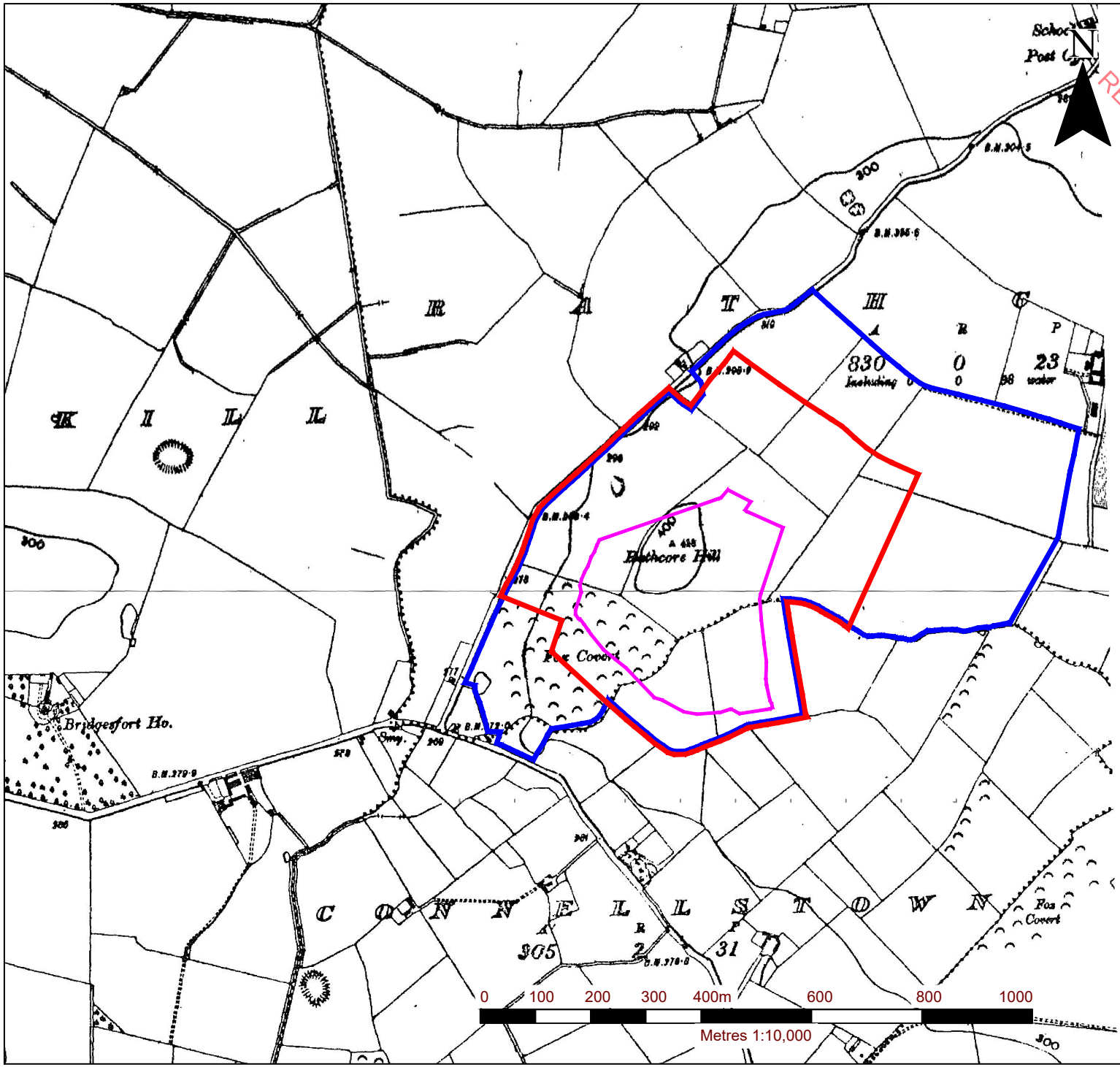
ENFIELD, CO. MEATH

SITE LOCATION MAP

FIGURE 1-1

Scale	Date
1:50,000 @ A4	FEBRUARY 2024

00036.064960 Rathcore EIAR-Fig1-1.dwg



NOTES

Extract from Ordnance Survey 6 Inch Scale Mapping

CYAL 50381397

LEGEND

- LANDHOLDING BOUNDARY (c.53.8 HA.)
- APPLICATION AREA (c.31.1 HA.)
- LIMIT OF EXCAVATION (c.10.6 HA.)

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ENVIRONMENTAL IMPACT ASSESSMENT REPORT

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RATHCORE / CONNELLSTOWN TOWNLANDS

ENFIELD, CO. MEATH

SITE LOCATION / SITE NOTICE PLAN

FIGURE 1-2

Scale	Date
1:10,000 @ A4	FEBRUARY 2024

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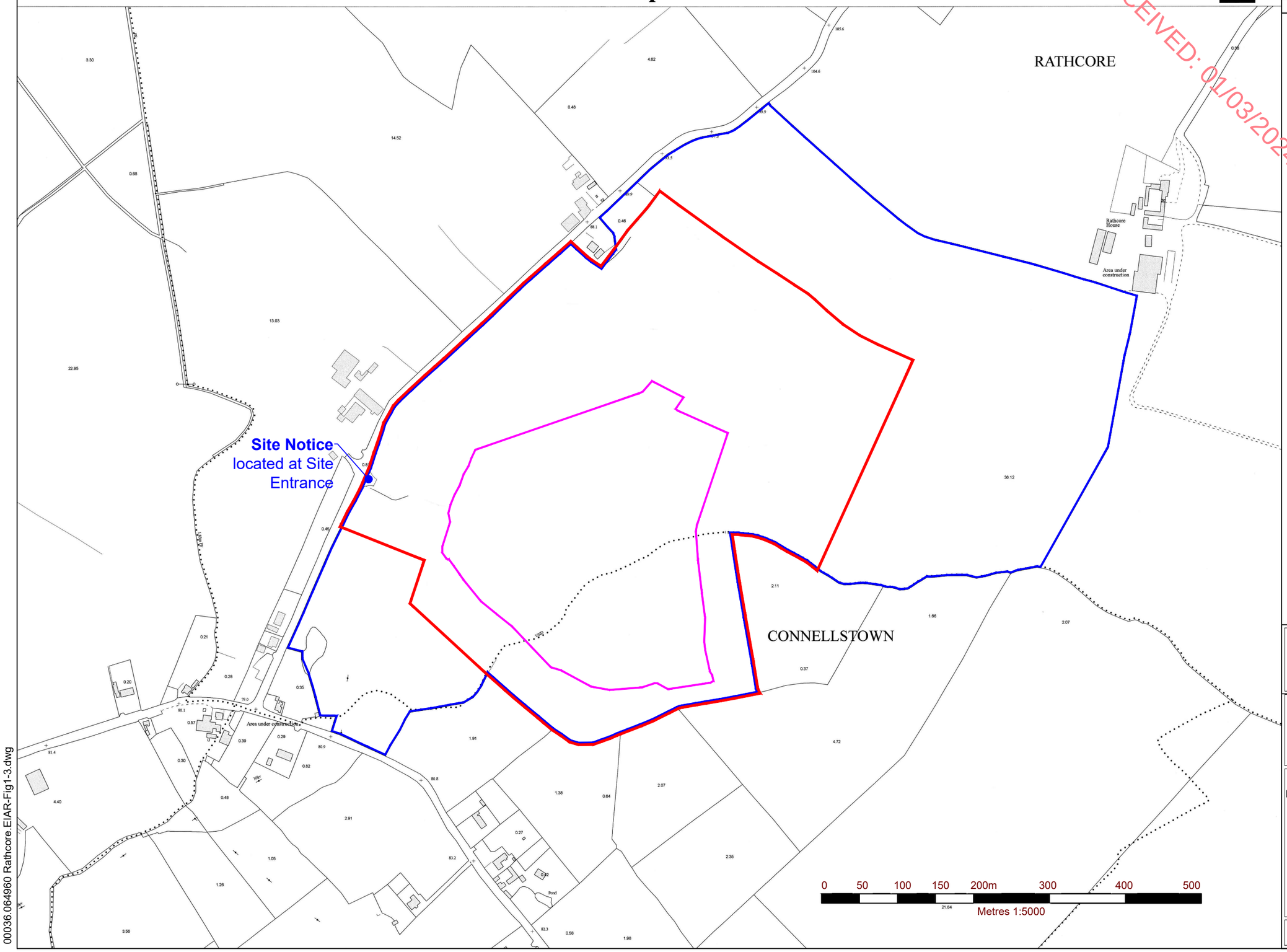
Rural PLACE Map



NOTES

Extract from Ordnance Survey 2500 Scale Digital Mapping
3053-B, 2984-C, 3054-A

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LEGEND

- LANDHOLDING BOUNDARY (c.53.8 HA.)
- APPLICATION AREA (c.31.1 HA.)
- LIMIT OF EXCAVATION (c.10.6 HA.)

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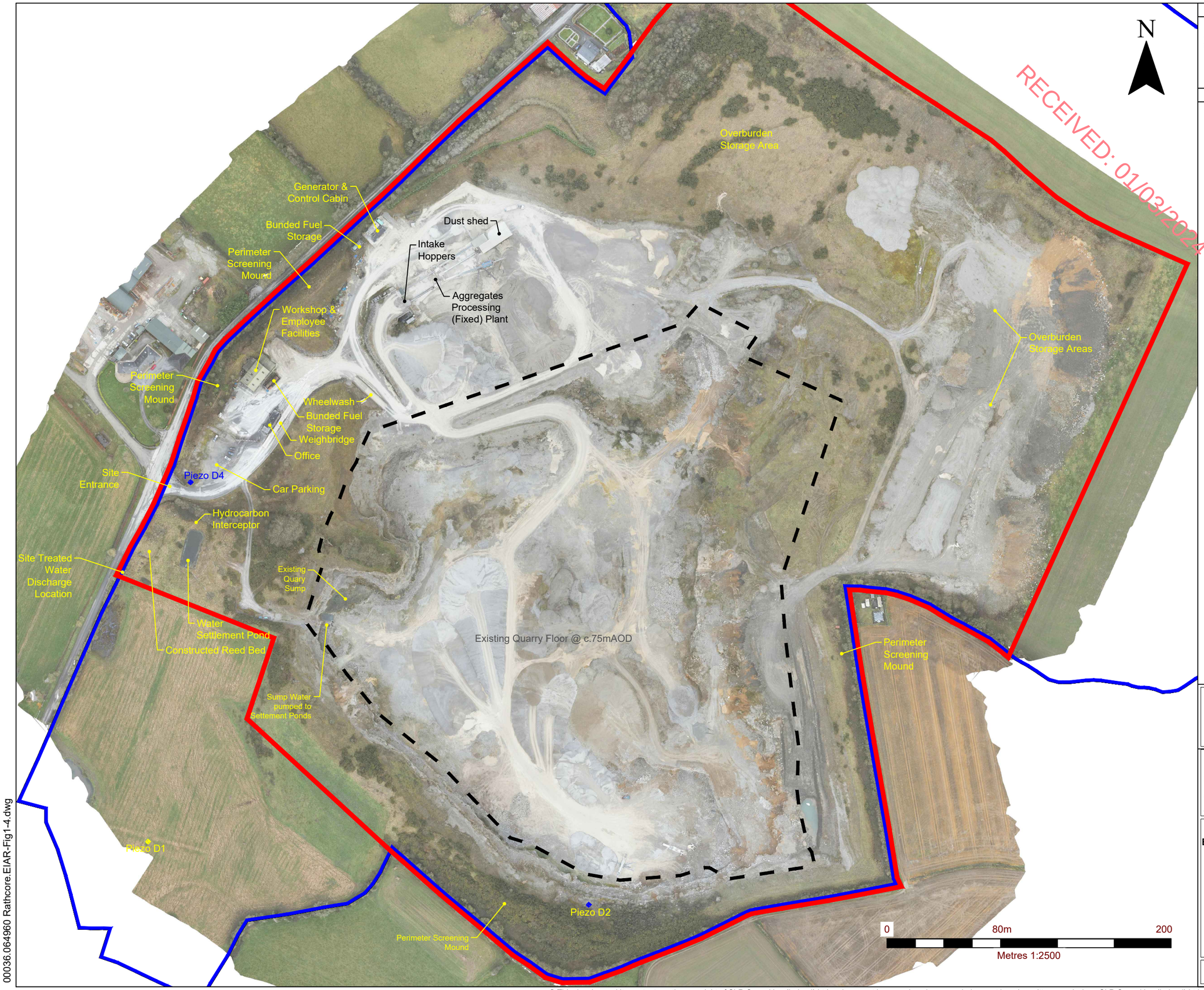
ENFIELD, CO. MEATH

SITE LOCATION / SITE NOTICE PLAN

FIGURE 1-3

Scale	Date
1:5,000 @ A3	FEBRUARY 2024

00036.064960 Rathcore.EIAR-Fig1-3.dwg



NOTES

Aerial Photography (2023) provided by Kilsaran Concrete Unlimited Company

LEGEND

- LANDHOLDING BOUNDARY (c.53.8 HA.)
- APPLICATION AREA (c.31.1 HA.)
- LIMIT OF EXCAVATION (c.10.6 HA.)

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SITE AERIAL PHOTOGRAPH (2023)

FIGURE 1-4

Scale 1:2,500 @ A3

Date FEBRUARY 2024

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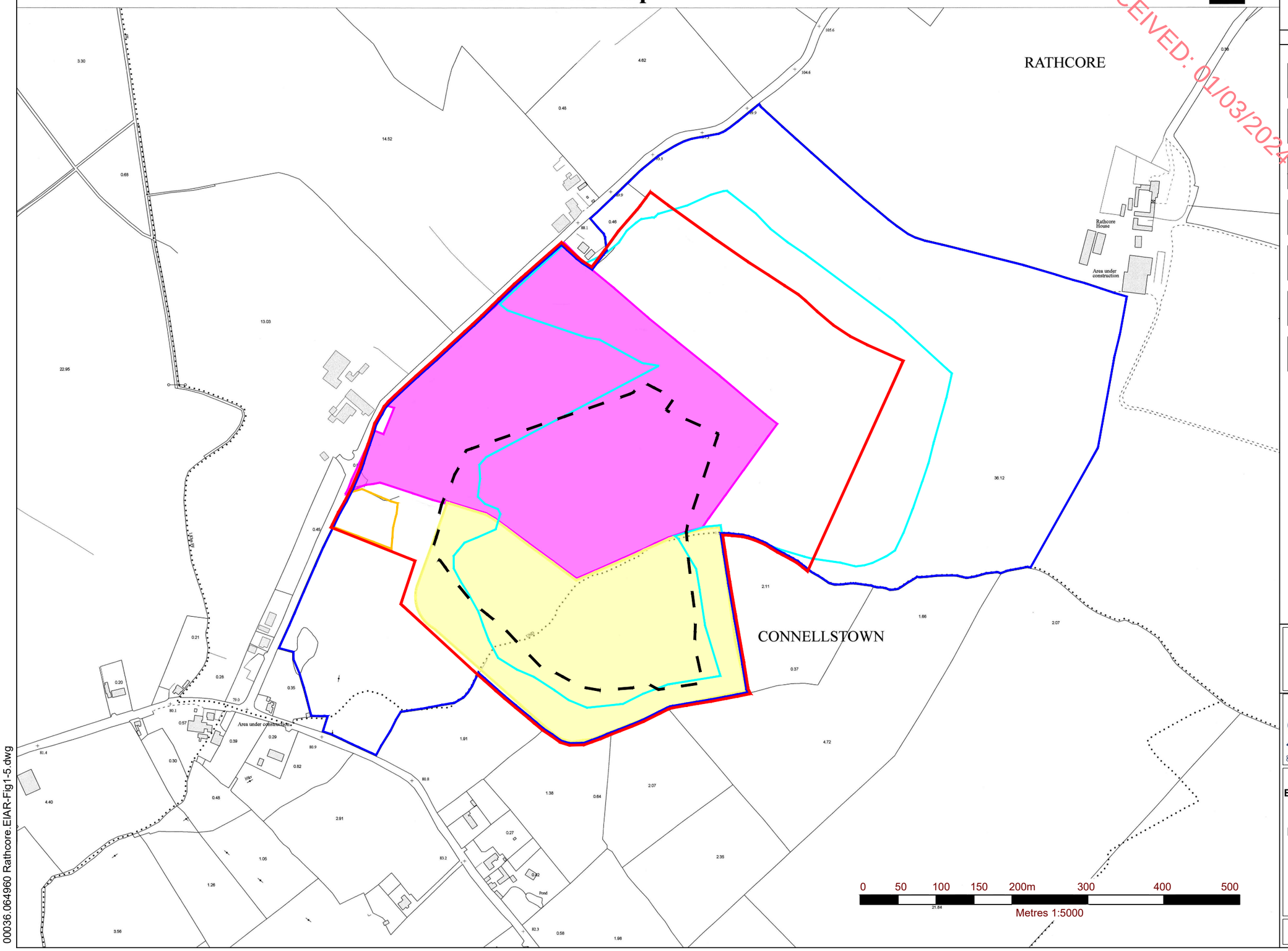
Rural PLACE Map



RECEIVED: 01/03/2024

NOTES

Extract from Ordnance Survey 2500 Scale Digital Mapping
3053-B, 2984-C, 3054-A

CYAL 50381397

LEGEND

- LANDHOLDING BOUNDARY (c.53.8 HA.)
- APPLICATION AREA (c.31.1 HA.)
- LIMIT OF EXCAVATION (c.10.6 HA.)
- PLANNING PERMISSION AREA **P. Ref. TA120923**
- PLANNING PERMISSION AREA **P. Ref. 01/1018 (PL17.127391)**
- PLANNING PERMISSION AREA **P. Ref. 95/1416 (PL17.099325)**
- PLANNING PERMISSION AREA **P. Ref. 91/970 (PL17.089787)**

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SITE PLANNING HISTORY

FIGURE 1-5

Scale: 1:5,000 @ A3
Date: FEBRUARY 2024

00036.064960 Rathcore.EIAR-Fig1-5.dwg