

4. Development Details:

Please provide details of the proposed development for which an exemption under Section 5 of the Planning and Development Act is applied for.

(Note: only works and uses listed and described under this section will be assessed under this Section 5 Application. Use additional sheets if required.

Proposed Ground Investigation (GI) programme comprising the drilling of 2 No.
boreholes and collection of 16 No. soil sampling via hand auger holes.
The activities are located within the Silvermines Mountains West Special Area of
Conservation and the Slievefelim to Silvermines Special Protected Area.
Proposed floor area of proposed works/uses: N/A sqm

5. Legal Interest of Applicant in the Land or Structure:

<i>Please tick appropriate box to show applicant's legal interest in the land or structure</i>	A. Owner	B. Occupier
	C. Other <input checked="" type="checkbox"/>	
<i>Where legal interest is 'Other', please expand further on your interest in the land or structure</i>	Long-lease	
<i>If you are not the legal owner, please state the name and address of the owner</i>	Name: AutoDiesel Services Limited Address: Dock Road, County Limerick	

Signature of Applicant(s) Darren Quinn

Date: 28/03/2025

Note: If the proposed development consists of works to a (Proposed) Protected Structure and/or any structure within the curtilage of a (Proposed) Protected Structure, an application for a Section 57 Declaration may be more appropriate.

GUIDANCE NOTES

- (1) All queries on the form must be completed and the form must be accompanied by the relevant fee. The amount of the fee is currently **€80.00**.
- (2) This application should be accompanied by **TWO COPIES** of the following documentation
- OSI Site Location Map with the site outlined clearly – 1:1000 in urban areas and 1:2500 in rural areas
 - Floor Plans & Elevations at a scale of not less than 1:200
 - Site layout plan indicating position of proposed development relative to premises and adjoining properties
 - Other details e.g. brochures, photographs if appropriate.

(All dimensions must be given in metric scale and drawings should be accompanied by a brief description outlining the use of the proposed development)

- (3) Where a proper and complete application is received, a decision must be conveyed to the applicant within four (4) weeks except where additional necessary information is required.

This application form and relevant fee should be submitted to:

Planning Section, Tipperary County Council, Civic Offices, Limerick Road, Nenagh, Co. Tipperary	<u>OR</u>	Planning Section, Tipperary County Council, Civic Offices, Emmet Street, Clonmel, Co. Tipperary
Enquires:		
Telephone 0818 06 5000		
E-Mail planning@tipperarycoco.ie		

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Date _____	
Received by _____	

Planning Section
Tipperary County Council
Limerick Road
Nenagh
Co. Tipperary
E45 A099

Monday, 31 March 2025
[By Email]

Dear Sir/Madam

RE: SECTION 5 DECLARATION –Ground Investigation Works at Gortshanroe and Garryard West, Co. Tipperary.

1.0 INTRODUCTION

1.1 Section 5 Declaration Request

The Applicant, Siga-Hydro Ltd.¹, has retained Tom Phillips + Associates² to seek a Declaration from Tipperary County Council (TCC) as per the provisions of Section 5(2)(a) of the Planning and Development Act, 2000 (as amended) ('the Act') for a proposed ground investigation (GI) programme (drilling of 2 No. boreholes and collection of 16 No. soil samples) at the proposed site of a hydro-electric power station in the townlands of Gortshanroe and Garryard West, Co. Tipperary.

We are seeking this Declaration in order to establish whether the carrying out of ground investigation works are, or are not development and are, or are not, exempted development within the meaning of the Act and the Planning and Development Regulations 2001 (as amended) ('the Regulations').

TPA consider that the works outlined below are development within the meaning of the Act under Section 3(1). However, it is our view that said works are exempted development as specified in Schedule 2 Part 1 of the Regulations, as described in Section 4.2 below.

The question to be determined by TCC is as follows:

'Does the carrying out of ground investigations as proposed constitute development, and if so, is it or is it not exempted development?'

The works are described in greater detail below and are shown on the enclosed drawings.

¹ 24 Cecil Walk, Kenyon Street, Nenagh, Co. Tipperary E45 NN73

² 80 Harcourt Street, Dublin 2, D02 F449

1.2 Overview of Proposed Works

A Declaration is sought for the carrying out of ground investigations works which will comprise 2 No. boreholes within the identified site, these boreholes being located within the Silvermines Mountains West Special Area of Conservation (SAC) or Slievefelim to Silvermines Special Protected Area (SPA).



Figure 1.1: Plan showing location of No. 2 borehole and No. 16 soil samples (source: SLR Consulting)

The purpose of the drilling activity is to complete boreholes to a specified depth, to record information on underlying ground conditions in the overburden and bedrock; and to allow for the carrying out of appropriate testing, sampling and reporting, as required. The proposed locations of the boreholes will be checked for underground services and accessibility prior to

commencement, and where appropriate locations may be moved slightly to for improved accessibility and to avoid areas of uneven terrain.

In addition to the boreholes, soil sampling via 16 No. hand auger holes will also take place, see Figure 1.1 above for the location of the proposed soil sampling (indicated by green dots).

The Appropriate Assessment (AA) Screening Report prepared by SLR Consulting Ltd. (SLR) describes the drilling and supporting equipment to be employed in the ground investigations.

Appendix B of the AA Screening Report contains the data sheet for the drilling equipment for further information.



Figure 1.3: Beretta TP21 drilling rig (source: SLR Consulting)



Figure 1.4: Morooka MST110C low pressure-bearing transport vehicle (source: SLR Consulting)

Throughout the drilling procedure for the boreholes, the working area around each borehole location will have ground protection mats put in place to maintain safe working conditions. These ground protection mats are lightweight, ca. 36 kg, and can be easily handled by two people and put in place at the borehole site to keep the drill rig level in order to maintain safe working conditions.

Section 3.2 of the AA Screening Report contains further detailed information regarding the drilling process and water management of the ground investigation works proposed.

2.0 SITE LOCATION AND SURROUNDING CONTEXT

2.1 Site Location

The Silvermines Hydroelectric Power Station Project (“the Project”, “Silvermines Hydro”) is a hydroelectric pumped storage power (“PSP”) project designed to repurpose and transform a former historic mine site into one of Ireland’s leading energy facilities within the townlands of Gortshanroe and Garryard West, County Tipperary. The overall project site is approximately 145 ha in size. The location of the Project is presented in Figure 2.1 below.



Figure 2.1: Site Location and site boundary of the Project (source: SLR Consulting)

Pumped storage technology is widely recognised as a clean, safe, and reliable method for electricity storage and generation. It works by using two water reservoirs at different heights. Water is pumped from a lower reservoir to a higher reservoir when there is excess electricity. When electricity is needed, the water flows back down through turbines to generate power. The Proposed Development will be capable of storing over 2000MWh of energy with a generating capacity of 296MW.

The Silvermines Hydro project is strongly supported in the *Tipperary County Council Development Plan 2022-2028*, Planning Objective 10-H states that:

“It is an objective of the Council to support the development of a proposed Hydroelectric Power station at Silvermines as identified in the European Network of Transmission Systems Operators for Electricity plan for 2018 to 2028, subject to compliance with normal planning and environmental criteria, in co-operation with statutory and other energy providers.”

The proposed project site comprises both brownfield and greenfield areas and includes the former Magcobar mine site, and the upper slopes of Silvermines Mountain. The upper slopes of the Mountain are designated as both a Special Protection Area (SPA) and a Special Area of Conservation (SAC) (see Figure 1.2). The SPA extends further north into the Site area compared to the SAC.

In order to support the environmental assessment of the hydro-electric power station a ground investigation programme (GI) is required. The purpose of the drilling activity is to complete boreholes to a specified depth, to record information on underlying ground conditions in the overburden and bedrock; and to allow for the carrying out of appropriate testing, sampling and reporting, as required.

The purpose of the soil sampling is also to collect samples for appropriate testing. The analyses of the samples will be used to inform the design of the proposed development.

2.2 Site Context relating to Proposed Works

The ground investigation project site overlaps with the Slievefelim to Silvermines Mountain SPA and Silvermines Mountains West SAC Natura 2000 sites at the upper portion of the lands which is where the ground investigation works are proposed to be undertaken. The ground investigation project site sits within the overall Silvermines Hydro site.

The AA Screening Report identifies at Section 3.4 other SPAs and SACs within proximity of the site with potential source-pathway-receptor links to be affected by the proposed development, though it is determined that there would be no likely significant effects on these Natura 2000 sites.

The location of the works subject to this Section 5 Declaration Request are indicated in Figure 2.3 below.

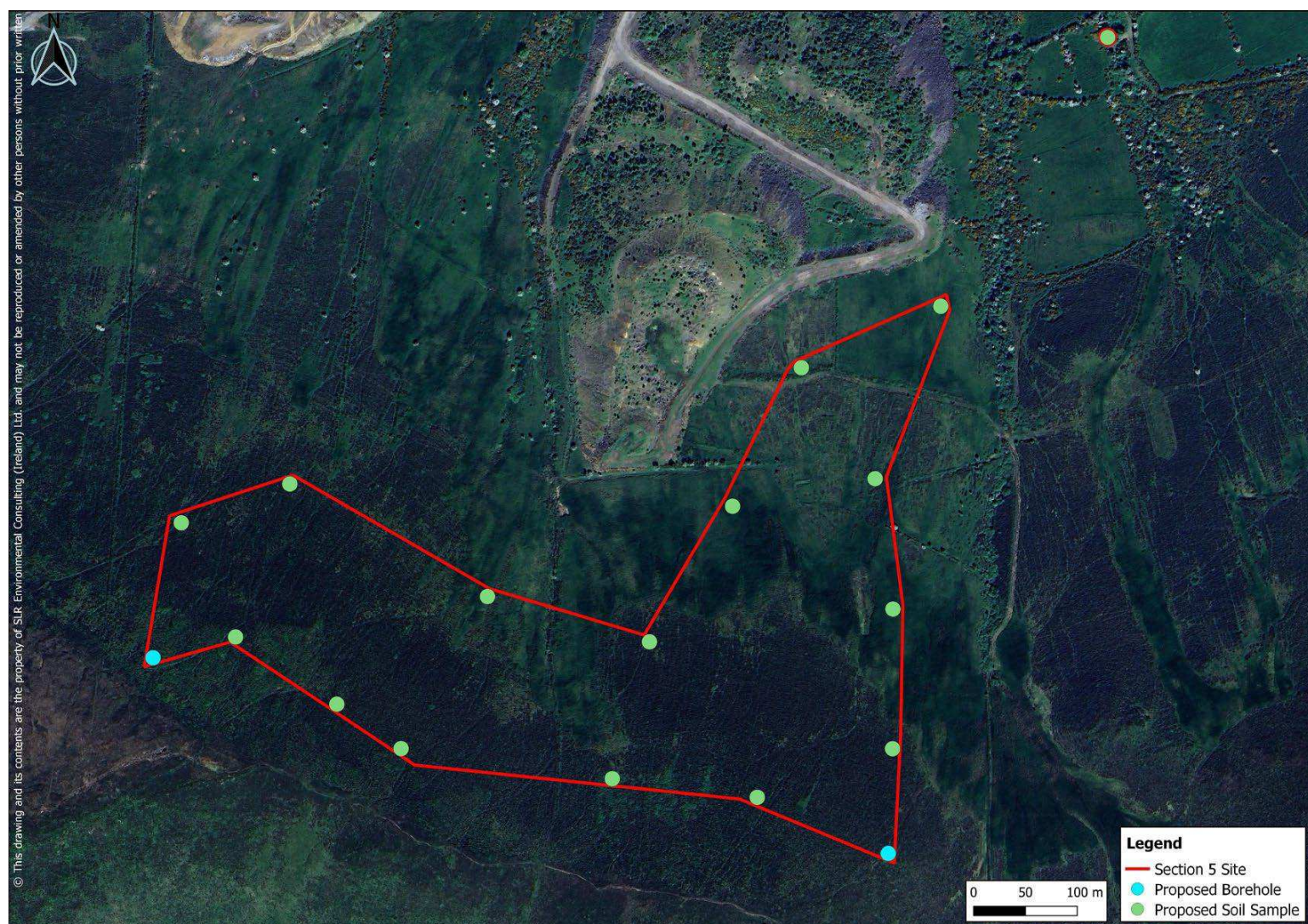


Figure 2.2: Proposed works area. (Source: SLR Consulting).

2.2.1 Slievefelim to Silvermines Mountain SPA

The Site Synopsis for the SPA published in 2015 by the NPWS described the European site as consisting of a variety of upland habitats, though approximately half is afforested. Roughly one-quarter of the site is unplanted blanket bog and heath, with both wet and dry heath present. The remainder of the site is mostly rough grassland that is used for hill farming, with some stands of deciduous woodland also occurring, especially within the river valleys.

The Site Synopsis identifies the site as “one of the strongholds for Hen Harrier in the country” and defines the “mix of forestry and open areas provides optimum habitat conditions for this rare bird,” which is listed on Annex I of the EU Birds Directive. The early stages of new and second-rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to c. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests where small birds and small mammals appear to be the most frequently taken prey.

2.2.2 Silvermines Mountains West SAC

The Site Synopsis for the SAC published in 2015 by the NPWS described the European site as reaching an altitude of 489m, making this steep ridge of Old Red Sandstone visibly very prominent in the landscape when viewed from the Nenagh to Limerick Road. The site includes the summit and slopes, mostly above 200m, to the west of an extensively afforested area south of the town of Silvermines.

The Site Synopsis provides that the main habitats that occur within Silvermines Mountains West SAC are heath (mostly wet heath but some dry heath) and unimproved upland grassland. The wet heath is particularly well developed with tall stands of Heather (*Calluna vulgaris*) and a high cover of bog mosses (*Sphagnum spp.*). From east to west there is a gradation from wet to dry heath, and from peaty to mineral soil. Dry heath, characterised by Western Gorse (*Ulex gallii*) and Bell Heather (*Erica cinerea*), is also found on the more steeply sloping ground below the summit ridge and on outcropping rock exposures. Gorse (*Ulex europaeus*) has invaded dry heath areas on the sides of some of the streams. Patchy remnants of blanket bog occur on the summit plateau in places and there is evidence of extensive former peat-cutting here.

SLR have undertaken ecological surveys of the project site area since 2024, further details of which are included in Section 2.5.2 of the AA Screening Report. It has been noted during the habitat survey and heath condition assessment survey work carried out by SLR in July 2024 and September 2024, respectively, that there were very few indicator species for wet heath recorded within the areas proposed for the ground investigation works, and the habitat is identified to be Unfavourable Bad (red) status by a clear margin regarding European Dry Heath [4030].



3.0 PLANNING ASSESSMENT

3.1 Nature of Development

The proposed development relates to ground investigation works (drilling of 2 No. boreholes and 16 no. collection of soil samples) as described further in Section 1.2 above and in the accompanying AA Screening Report. The drilling equipment to be employed is designed to be as low impact as possible so as not to have a significant effect on the surrounding area.

3.2 Planning History

There is no recent planning history on the site, but a number of historical permissions are identified below.

TCC Ref: No.	Summary of Development Description	Decision	Decision Date
51351	Erection Of Workshop & Stores Building	Grant	10/02/1966
514550	Erection Of Ore Crushing Plant	Grant	28/10/1975
5120730	Sanitary Landfill Facility at the Old Magcobar Quarry Site	Refusal	10/11/1999
	Part 8 Rehabilitation Scheme for works at Magcobar	Grant	2007

Table 1: Relevant Planning History of the subject site.

Historical copper-lead mining activities dating from the 18th and 19th centuries are known to be present to the north of the proposed ground investigation site. No historical mining operations are known to occur within the area of the proposed ground investigation site.

Later barite (barytes) mining took place at Magcobar between 1963 and 1993, producing ca. 5.13 Mt of barite, mainly from the open-cast, with underground mining from 1989 until its closure. The underground mine was accessed from inside the open-cast mine on its western side and extended for ca. 100 m below the surface.

The extracted barite was exported and used as an additive in drilling fluids. In 1972 Ireland was the world’s fifth largest producer of barite³. Figure 3.1 presents the footprint of the former Magcobar mine site, showing the Magcobar open-cast mine which now forms a waterbody some 70 m deep. The Magcobar mine represents the last of the mining carried out in the Silvermines district. Around the same time as the Magcobar mine operated, the underground Mogul zine-lead mine located to the north of the site was in production between 1968 to 1982, producing ca. 10.8 Mt at 7.36% zinc and 2.70% lead.

³ “Genesis of the Ballynoe Barite Deposit, Ireland, and Other British Stratabound Barite Deposits”, PhD Thesis, John Russell Barrett, University of London, February 1975.



Figure 3.1: Section 5 site context with the former Magcobar Mine Site (Source: SLR Consulting).

Mining in the wider Silvermines district can be traced back over 1,000 years. A wide range of minerals were extracted, including lead, silver, copper, barytes, zinc and sulphur. Remains of all these extraction processes can be seen in the area with the presence of rock dumps, engine houses, tailings, adits, shafts, underground workings and open-cast workings.

With regards to the Magcobar site, the rehabilitation works required were limited as Magcobar was considered the most benign of the former mine sites in the Silvermines district. The nature of the rehabilitation works carried out at Magcobar included the following:

- Repairing and installing fencing onsite to prohibit access to the open-cast and old settlements ponds;
- Reshaping dump SP05a;
- Fencing historical archaeological (mining) sites;
- Backfilling a small subsidence feature to the northwest of the site;
- Removal and/or making safe buildings onsite (only the former workshops remain today); and
- Minor earthworks (e.g. for landscaping and stability of dumps).

3.3 Legislative Context – Relevant Definitions

“Development”

Section 3 (1) of the Act sets out that:

“‘development’ means, except where the context otherwise requires, the carrying out of any works on, in, over or under land or the making of any material change in the use of any structures or other land.”

“Works”

‘Works’ is defined in the Act as follows:

“‘Works’ includes any act or operation of construction, excavation, demolition, extension, alteration, repair or renewal and, in relation to a protected structure or proposed protected structure, includes any act or operation involving the application or removal of plaster, paint, wallpaper, tiles or other material to or from the surfaces of the interior or exterior of a structure.”

The next consideration, therefore, is whether the proposed development constitutes exempted development within the meaning of the Act. In our opinion the relevant part of the Act that relates to the proposed development in Article 6 of the Planning and Development Regulations 2001, as amended, which provides that;

“Subject to article 9, development of a class specified in column 1 of Part 1 of Schedule 2 shall be exempted development for the purposes of the Act, provided that such development complies with the conditions and limitations specified in column 2 of the said Part 1 opposite the mention of that class in the said column 1”.

Having regard to the above definitions it is evident that the proposals described in this submission comprise ‘works’ and ‘development’.

Schedule 2, Part 1, Class 45

Class 45, Schedule 2, Part 1 of the Planning and Development Regulations (2001), as amended reads as follows:

“Any drilling or excavation for the purpose of surveying land or examining the depth and nature of the subsoil, other than drilling or excavation for the purposes of minerals prospecting.”

Based on the description of the works under Section 1.2 above, it is clear that the proposed works would not constitute drilling or excavation for the purposes of mineral prospecting and relate to investigative works to inform a future application at this site.

3.4 Article 9 Restrictions on Exemption do not Apply

Article 9 of the Planning and Development Regulations 2001 (as amended) sets out a number of restrictions which can ‘de-exempt’ development that would otherwise constitute exempted development. The proposed development does not fall within the scope of any of the restrictions due to the nature, scale and location of the proposed development.

(1) Development to which article 6 relates shall not be exempted development for the purposes of the Act-

(a) If the carrying out of such development would

(i) Contravene a condition attached to a permission under the Act or be inconsistent with any use specified in a permission under the Act,

(viiB) Comprise development in relation to which a planning authority or An Bord Pleanála is the competent authority in relation to appropriate assessment and the development would require an appropriate assessment because it would be likely to have a significant effect on the integrity of a European site,

(c) If it is development to which Part 10 applies, unless the development is required by or under any statutory provision (other than the Act or these Regulations) to comply with procedures for the purpose of giving effect to the Council Directive,

3.4.1 Consistent with Conditions

There is no recent planning history at the site, notwithstanding this it is not considered that the development is in conflict with or contravenes a condition attached to a permission under the Act. The development subject to this Section 5 declaration request relates to ground investigations and complies with Article 9(1)(a)(i).

3.4.2 Appropriate Assessment

As described further below in Section 3.5.1, the development would not have any likely significant impact on a Natura 2000 site, and screens out for appropriate assessment. The development is therefore consistent with Article 9(1)(a)(viiB).

3.4.3 Environmental Impact Assessment

As described further below in Section 3.5.2, the development would not have any likely significant impact on the environment given its modest scale. The development is therefore consistent with Article 9(1)(c).

3.5 Appropriate Assessment/Environmental Impact Assessment are not Required

Section 4(4) of the Regulations stipulates a further ‘de-exemption’ in circumstances where an Appropriate Assessment (AA) or an Environmental Impact Assessment (EIA) would be required in respect of proposed development:

‘Notwithstanding paragraphs (a), (i), (ia) and (l) of subsection (1) and any regulations under subsection (2), development shall not be exempted development if an environmental impact assessment or an appropriate assessment of the development is required.’

3.5.1 Appropriate Assessment

An AA Screening Report was prepared by SLR Consulting Ltd. and accompanies this Section 5 Declaration Request.

Section 3.3 Identifies the potential impact factors as a result of the proposed development:

- Loss or damage of habitat from the movement of the tracked, low pressure bearing transport vehicle.
- Water discharge resulting in pollution of local watercourses and ground water.
- Noise and vibration resulting in disturbance of wildlife.
- Potential to injure or kill ground nesting birds and mammals.

An initial assessment identified that there are potential impacts on Silvermines Mountains West SAC from a loss of habitat and on Slievefelim to Silvermines SPA from noise and vibration affecting bird species arising from the drilling and soil sampling works and the use of a tracked vehicle moving the drilling equipment across the site. A subsequent assessment of the potential impacts found the proposed works would not result in any damage or loss of habitat, and any noise and vibration will be localised and temporary in nature. See sections 3.5 and 3.6 of the AA Screening Report for detailed information.

The AA Screening Report concludes that on the basis of objective evidence and in view of best scientific knowledge, that while there are limited impacts arising from the proposed drilling of boreholes and soil sampling activities, these impacts have been fully assessed, will be small scale, slight, temporary and will not give rise to any likely significant effects from the project alone or in combination with other plans or projects on any European site. The findings of the Report demonstrate that the competent authority, in this case Tipperary County Council, can determine beyond reasonable scientific doubt that an Appropriate Assessment is not required.

3.5.2 Environmental Impact Assessment

The various classes and thresholds of development for which an EIA is required are listed in Schedule 5 of the Regulations, as Annex I and Annex II projects.

Given the modest scale and temporary duration of development, it is considered that there is no likely significant effect on the environment.

4.0 DOCUMENTS SUBMITTED WITH THIS SECTION 5 DECLARATION

In addition to this Planning Cover Letter, this Section 5 Request is accompanied by the following documents and drawings:

- Fully completed Tipperary County Council Section 5 Request application form;
- Drawing Register; Drawings completed by SLR.
- OS Map;
- Site Layout Plan;
- Site Location Map;
- AA Screening Report completed by SLR.

5.0 CONCLUSION

In summary, we submit that the carrying out of ground investigation works is exempted development having regard to Class 45 of Schedule 2, Part 1 of the Planning and Development Regulations 2001 (as amended).

We trust that sufficient information is provided to assess the Request and we look forward to a favourable decision in due course. Please do not hesitate to contact us with any queries.

Yours Sincerely,



Stephen Barrett
Director
Tom Phillips + Associates



Appropriate Assessment Screening Report

Silvermines Hydro Electric Power Station – Ground Investigation Works

Siga-Hydro Limited

24 Cecil Walk
Kenyon Street, Nenagh,
Co. Tipperary, Ireland
E45 NN73

Prepared by:

SLR Environmental Consulting (Ireland) Ltd

City Gate, Mahon 1000, Cork, T12 W7CV

SLR Project No.: 501.065310.00001

Client Reference No: 913500

28 March 2025

Revision: 02 Final

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
00 Draft	16 December 2024	Kathryn Robson / Michael Bailey	Andrew Torsney	
01 Draft	22 January 2025	Kathryn Robson / Michael Bailey	Andrew Torsney	
01 Draft	20 March 2025	Kathryn Robson / Michael Bailey	Andrew Torsney	
02 Final	28 March 2025	Kathryn Robson / Michael Bailey	Andrew Torsney	Barry Balding
	Click to enter a date.			

Basis of Report

This document has been prepared by SLR Environmental Consulting (Ireland) Ltd (SLR) with reasonable skill, care and diligence, and taking account of the timescales and resources devoted to it by agreement with **Siga-Hydro Limited** (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

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Acronyms and Abbreviations

AA	Appropriate Assessment
cSAC	Candidate Special Area of Conservation
EC	European Commission
EPA	Environmental Protection Agency
GI	Ground Investigation
INNS	Invasive Non-Native Species
LSE	Likely Significant Effects
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
pNHA	Proposed Natural Heritage Area
QI	Qualifying Interest
SAC	Special Area of Conservation
SCI	Species of Conservation Interest
SLR	SLR Consulting Ireland
SOP	Standard Operating Procedures
SPA	Special Protection Area



1.0 Introduction

1.1 Background

SLR Consulting Ireland (“SLR”) was commissioned by Siga-Hydro Limited (the “Client”) to prepare an Appropriate Assessment (“AA”) Screening report for a proposed ground investigation (“GI”) programme for the drilling of Geotechnical / Hydrogeological boreholes at the proposed hydro-electric power station in Silvermines, Co. Tipperary, hereafter referred to as ‘the Project’.

1.2 Purpose of Report

The purpose of this report is to provide supporting information to assist the Competent Authority, in this case Tipperary County Council, to carry out an Appropriate Assessment for likely significant effects on the integrity of European sites resulting from the Project in Silvermines, Co. Tipperary.

1.3 Project Overview

The Silvermines Hydroelectric Power Station Project (“Proposed Development”, “Silvermines Hydro”) is a hydroelectric pumped storage power (“PSP”) project designed to repurpose and transform a former historic mine site into one of Ireland’s leading energy facilities within the townlands of Gortshanroe and Garryard West, County Tipperary.

Pumped storage technology is widely recognised as a clean, safe, and reliable method for electricity storage and generation. It works by using two water reservoirs at different heights. Water is pumped from a lower reservoir to a higher reservoir when there is excess electricity. When electricity is needed, the water flows back down through turbines to generate power. The Proposed Development will be capable of storing over 2000MWh of energy with a generating capacity of 296MW.

In order to determine the feasibility of the hydro-electric power station a ground investigation programme is required. The ground investigation will comprise of drilling and soil sampling. The purpose of the drilling activity is to complete boreholes to a specified depth, to record information on underlying ground conditions in the overburden and bedrock; and to allow for the carrying out of appropriate testing, sampling and reporting, as required. The drilling activity will take place within the (Section 5) Project site boundary (Figure 1, below).

1.4 Site Description

The Project is centred at Irish Grid Reference R87F, ca. 0.6 km west of Silvermines village. A large area of the Project site is located just south of historical mining works including the now flooded Magcobar Pit. No mine operations have been undertaken in the vicinity of the Project site since 1993.

The entrance to the Project site is located along the R499 regional road which runs along the north of the Project site. There is an unnamed road to the south of the Project site which runs from the L2110 local road at Longstone towards Rockforest.

The topography of the Project site ranges from ca. 90 to 540 m above sea level. The southern area of the Project site comprises part of the northern slope of Silvermines Mountain.

A river waterbody (EPA Name: Erinagh; EPA Code: 25E37) runs from south to north through the centre of the Project site, eventually flowing into the Kilmastulla River to the north of the Project site.

Most of the habitats within and surrounding the Project site are comprised of wet grassland, with dry heath habitat forming the upper slopes of Silvermines Mountain, and scrub and buildings and artificial surfaces occurring on the former Magcobar mine site. Other habitats include agricultural grassland, artificial lakes and ponds, and eroding/ upland rivers. The upper



slopes of Silvermines Mountain is designated as both a Special Protection Area (SPA), the Slievefelim to Silvermines Mountains SPA [004165], and a Special Area of Conservation (SAC), the Silvermines Mountains West SAC [002258] (Figure 1). The SPA extends further north into the Site area compared to the SAC.



Figure 1: SAC and SPA within the Section 5 Project Site boundary

1.5 Evidence of Technical Competence and Experience

SLR Associate Ecologist Michael Bailey and SLR Senior Ecologist Kathryn Robinson prepared this report, and SLR Technical Director Andrew Torsney carried out the technical review.

Michael Bailey BSc (Hons) MSc MCIEEM is an Associate Ecologist with SLR and has worked in ecological consultancy in Ireland and the UK and also internationally since 2003. Michael Bailey holds a BSc. in Biology and Ecology from the University of Ulster and an MSc. in Quantitative Conservation Biology from the University of the Witwatersrand in Johannesburg, South Africa. Michael has prepared ecological reports including Appropriate Assessment (AA)



screening reports and Natura Impact Statements (NIS) for a wide range of projects in Ireland and the UK and is a full member of CIEEM.

Kathryn Robson BSc (Hons) MSc is a Senior Ecologist with SLR, and has 7 years of experience as a professional ecological consultant. Her project experience has primarily been in the renewable energy sector, mainly onshore wind farms, at all stages of the development process, from design to completion. Kathryn is competent in undertaking most terrestrial ecology surveys, with survey experience focused on ornithology and bat surveys. Kathryn holds a MSc in Ecological Management and Conservation Biology, and a BSc in Biological Sciences, both from Queen's University Belfast.

Andrew Torsney BSc, MRes, PhD, ACIEEM is a Technical Director at SLR. Andrew has undertaken Appropriate Assessments for a number of national regional and local plans as well as project level assessments. Andrew is a technical specialist in AA processes and has undertaken review processes for competent authorities such as the Department of Public Expenditure and Reform and several County Councils, such as Dun Laoghaire Rathdown and Kilkenny. Andrew has also delivered training on the role of county councils in the AA process, as well as having authored NIS reports for a variety of project types.

1.6 Relevant Legislation

1.6.1 Habitats and Birds Directives

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation (SACs) and a precursor designation Sites of Community Interest (SCI). Similarly, Special Protection Areas (SPAs) are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, SACs, SCIs and SPAs are referred to as the Natura 2000 network. The Natura 2000 Network is the minimum required to conserve certain habitats and species which are listed in the Directives.

Under Article 6(3) of the Habitats Directive, an Appropriate Assessment (AA) must be undertaken for any plan or project that is not directly connected with or necessary to the management of a Natura 2000 site but is likely to have a significant effect thereon, either alone or in combination with other plans or projects. An AA is an evaluation of the adverse effects of a plan or project, alone or in combination with other plans or projects, on the integrity of a Natura 2000 site, and the identification, where necessary, of avoidance or mitigation measures to preclude adverse effects on the integrity of the site.

Article 6, paragraph 3 the Habitats Directive states that:

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

Article 6, paragraph 4 goes on to deal with the special circumstances for the granting of consent for plans and projects which would have an adverse effect the integrity of the site(s) concerned.

1.6.2 European Communities (Birds and Natural Habitats) Regulations 2011

Pursuant to the Habitats Directive, Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, similarly sets out the requirements for screening assessments, the circumstances under which an AA is required and the further implementation of Article 6(3) and 6(4) of the Habitats Directive.



It defines a “European Site” as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. European sites may therefore include sites which may intended to become part of the Natura 2000 network as well as those already within that network.

Regulation 42 has 22 paragraphs, with selected text provided below.

Regulation 42(1) requires that ‘*a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.*’

Regulation 42(2) expands on this, stipulating that a public authority must carry out a screening for AA before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken.

Regulation 42(6) requires that ‘*the public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site*’.

Regulation 42(3)(a) gives the public authority the power to direct a third party to provide a Natura Impact Statement (NIS) and Regulation 42(3)(b) allows it to request any additional information that it needs to complete the screening assessment or AA. Regulation 42(5) goes on to make clear that the NIS should include such information as the public authority considers necessary to enable it to undertake the AA and to ascertain if a project or plan will affect the integrity of a Natura 2000 site. In addition to the information, Regulation 2(1) provides a definition of a Natura Impact Statement as “*a report comprising the scientific examination of a plan or project and the relevant European Site or European Sites, to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an Appropriate Assessment*”.

Regulation 42(11) makes clear that the AA must be carried out by the public authority and that it must include its conclusion as to whether the project or plan would adversely affect the integrity of a Natura 2000 site, and that this must be done prior to consenting the project. Regulation 42 (12) makes clear that the competent authority should, *inter alia*, consider the Natura Impact Statement when undertaking the AA.

Regulations 43 and 45 then go on to deal with Article 6(4) of the Habitats Directive.

2.0 Methodology

2.1 General Approach

The methodology used in this report is based on guidance provided by the National Parks and Wildlife Service (NPWS [DoEHLG], 2010), the Office of the Planning Regulator (OPR, 2021) and EC Guidance (EC, 2018) (EC, 2021) on the application of Article 6 of the Habitats Directive.



The 2021 EC guidance describes a series of stages and steps which should be completed when carrying out the assessment and these are followed here with minor modifications. The assessment applies only to European sites. More specifically, it only applies to the qualifying interest features of such sites i.e. the features which are the reason that the site was designated.

2.2 Overall Assessment Method

This report assesses potential effects on European sites following a standard source-pathway-receptor model, where, for an effect to be established, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) – e.g. pollutant run-off from proposed project.
- Pathway(s) – e.g. groundwater connecting to nearby qualifying wetland habitats; and,
- Receptor(s) – e.g. qualifying aquatic habitats and species of European sites.

In the context of this report, a receptor is an ecological feature that is known to be utilised by the qualifying interests or special conservation interests of a European site. A source is any identifiable element of the proposed project (as outlined in Section 3.0) that is known to interact with ecological processes. A pathway is any connection or link between the source and the receptor.

This report provides information on whether direct, indirect and cumulative adverse effects could arise from the proposed project.

2.3 Pathways - Ecological Connections

2.3.1.1 General overview of connection rationale

A population of a mobile species that is a qualifying interest of a European site could also use habitat within or in the vicinity of a project site. If such a population is sometimes present within a project site, it is ecologically connected to the relevant European site. For example, ecological connections may include populations of birds, mammals, migratory fish and other species form the QIs of a European site.

Other examples of potential ecological connections include habitat connections either directly or as 'stepping stones'. Also, a project site may support a population of the same species as within a connected European site which occasionally exchange individuals. Furthermore, a project site may support populations of species which are prey/ food or hosts to the QIs of a European site.

2.3.1.2 Ecological Connections – Zone of Influence

NPWS guidelines (NPWS, 2010) and the Office of the Planning Regulator's Practice Note PN01 (OPR, 2021) suggest that a 15 km study area is adopted, but a case-by-case basis is undertaken when assessing the potential for source-receptor connectivity between a project and European sites.

While an initial 15 km study area was adopted for SACs, a different approach was undertaken for SPAs.

In the absence of any specific European or Irish guidance in relation to establishing ecological connectivity to SPAs, NatureScot guidance (formerly Scottish Natural Heritage or 'SNH') (SNH, 2016) was consulted. This document provides guidance in relation to the identification of ecological connectivity between development sites and SPAs. The guidance takes into consideration the distances species may travel beyond the boundary of relevant SPAs and provides information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects. It goes on to state that *"in most cases the*



core range should be used when determining whether there is connectivity between the proposal and the QIs". Where SPAs and developments are separated by a greater distance than the core foraging ranges for the SPAs listed QI species, there is no likely ecological connectivity to the development.

According to NatureScot guidance (SNH, 2016), the core foraging distances of wintering grey geese (greylag goose *Anser anser* and pink-footed goose *Anser brachyrhynchus*) from SPAs is 15-20 km. This represents the largest foraging range of all the species listed in this guidance document recorded in Ireland. It is acknowledged that information on core foraging ranges is not available for all Irish SCI species. In such cases, the 15-20 km core foraging range for grey geese has been adopted as a precautionary approach.

Thus, all SPAs within 20 km from the Project were considered for ecological source-receptor connectivity.

Airborne emissions were considered using the approaches outlined in IAQM guidance (IAQM, 2019) (IAQM, 2014), which suggests that air pollution and dust from road schemes are only likely to be important for sensitive European sites within 200 m and 500 m, respectively.

2.3.1.3 Hydrological and Hydrogeological Connections

The Cross River intersects the proposed cable route. The Cross River flows into the River Shannon and ultimately, Lough Derg. There is potential hydrological connectivity between any European site located downstream of the Project site.

The project is located within the Funshinagh groundwater body. There is potential hydrogeological connectivity between the Project and any European site located within this groundwater body.

Hydrological connectivity beyond 20 km was also searched for using GIS to identify any European sites downstream of the project connected via watercourses.

2.4 Stage One: AA Screening

The methodology for the screening assessment follows that set out in EC (and other) guidelines and is based on the data, surveys and assessments described within. In summary this will comprise:

Step 1: Ascertaining whether the Project is directly connected with or necessary to the management of a European site. Typically, this applies only to a management plan, or parts thereof, which has the purpose of maintaining or restoring the conservation interest of a European site, and which would not have a negative effect on any other European site.

Step 2: Identifying the relevant elements of the Project and their likely impacts, which is subdivided into:

Step 2, Part 1: An outline description of the Project, including construction, operation and decommissioning, containing enough information for potential impact pathways to be understood, and the Project site and its surroundings, focussing on the habitats and species that may form part of the qualifying interest of a European site.

Step 2, Part 2: An identification of the aspects of the Project which have the potential to affect European sites, either alone or in combination with other projects and plans. This may include for example emissions to air and water, noise and increases in recreational activity (Sources).

Step 3: Identifying which (if any) European sites may be affected, considering the potential effects of the Project alone or in combination with other plans or projects, which is subdivided into:

Step 3, Part 1: Generating an initial list of European sites to be considered in the screening process, which are those which are potentially connected (via a Pathway) to the Project site including (i) any which overlap with the Project site or are close enough to experience



increased noise, vibration, light, visible human activity or invasive species; (ii) those that may have downstream connectivity via watercourses or groundwater to the Project site or transport routes; (iii) those that may receive deposition of pollutants as a result of emissions to air from the Project or transport routes; (iv) those which may support migratory or mobile species populations which may also use the Project site or its environs; and (v) those which may receive additional recreational activity once the Project site is inhabited.

Step 3, Part 2: Compiling basic information on the European sites identified in Part 1, including a list of qualifying interest features/special conservation interest (the Receptors), their conservation objective if known (maintain or restore), the distance and direction from the Project site (including transport routes) and how it is or is not connected, using the Source-Pathway-Receptor model, to the Project site (including transport routes). Likely significant effects can be immediately excluded for any European sites and any qualifying /special conservation interest features which clearly lack a pathway or where it can be demonstrated there is a very weak pathway, such that any effects would not be appreciable.

Step 4: Assessing whether likely significant effects (LSE) on all European sites can be ruled out, in view of their conservation objectives.

Step 4, Part 1: Assessing LSE for the Project alone, determining whether there is a risk that the Project could undermine the conservation objectives for the qualifying interest features/special conservation interest for those European sites for which a pathway has been identified. This is a scientific determination which considers whether the maintain or restore objective applies and both direct and indirect effects. If there is any uncertainty or detailed investigation or mitigation are required, LSE are assumed.

Step 4, Part 2: Assessing LSE for the Project in combination with other projects and plans. Along the same lines as Part 1, this considers whether the effects of the Project, if not capable of undermining the conservation objectives on their own, could do so cumulatively with other projects and plans. It also considers whether the risk of undermining conservation objective is elevated when cumulative effects are considered.

Conclusion: Stating whether likely significant effects arising from the Project, alone and in combination with projects and plans, on European sites can be excluded, and if they cannot, which European sites and which qualifying interest features/special conservation interest are at risk from significant effects, and the relevant impact sources and pathways. If the latter, an AA will be required. The conclusion will not consider any mitigation measures designed to avoid likely significant effects on a European site.

2.5 Baseline Information

2.5.1 Ecological Desk Study

An ecological desk study was undertaken comprising an online search for (i) SACs and SPAs within 2 km of the project site; (ii) Annex I habitats and Annex II species (of the Habitats Directive) within 2 km of the Project site; and (iii) Annex I bird species (of the Birds Directive) within 10 km of the Project site. A 2 km search distance for habitats was chosen as the activities of the GI works will be very restricted to specific locations within parts of the Site that fall within the SAC. A 10 km search distance for bird species was chosen to ensure that potential impacts on SPAs was fully assessed. The desk study area was extended where possible links to European sites and species populations occurred due to emissions to water, changes to hydrology, or mobile or migratory species populations.

Online resources included ecology data held by the National Biodiversity Data Centre, the National Parks and Wildlife Service, the Environmental Protection Agency ("EPA"), the Ireland Wetland Bird Survey ("IWeBS") and Ordnance Survey Ireland (Geohive).



2.5.2 Field Surveys

A number of ecology surveys have been carried out since the start of the field survey season in early 2024. These surveys have covered habitat and species assessment including bird, bat, invertebrate and habitat surveys. A summary of the surveys undertaken at the Project site to date are listed in Table 2-1 below.

Table 2-1: Summary of ecology surveys at Silvermines in 2024

Survey	Brief description	Timing	Reference
Habitat survey	Fossitt habitat classification survey	July 2024	Smith et al., 2011 Fossitt, 2000
	Heathland habitat condition assessment	September 2024	Smith et al., 2011 Fossitt, 2000
Bat survey	Night-time bat walkover	Autumn 2024	Collins, 2023
	Static detector surveys	July 2024	Collins, 2023
Bird surveys	Breeding raptor surveys	April to July 2024	Hardey, 2013
	Moorland breeding bird surveys	April to July 2024	Calladine <i>et al.</i> , 2009
	Meadow pipit (<i>Anthus pratensis</i>) counts	May and June 2024	Birdwatch Ireland, 2012 ¹
	Common Bird Census	April to June 2024	Bird Survey Guidelines ² and Common Bird Census (CBC) methodology ³
Invertebrate surveys	Marsh fritillary larval web survey	September 2024	Marsh fritillary monitoring scheme ⁴ .

2.6 Sources of Information

2.6.1 For the Project Alone

Sources of information for the assessment of the Project ‘alone’ include:

¹ <https://birdwatchireland.ie/our-work/surveys-research/research-surveys/countryside-bird-survey/>

² <https://birdsurguidelines.org/methods/survey-method/#:~:text=Generally%2C%20surveys%20of%20the%20breeding,species%20will%20have%20tailed%20of>
 Last Accessed 28/03/2025

³ <https://www.bto.org/sites/default/files/u31/downloads/details/CBC-instructions-g100.pdf> Last Accessed 28/03/2025

⁴ <https://biodiversityireland.ie/surveys/marsh-fritillary-monitoring-scheme/> (last accessed August 2024)



- Article 17 and Article 12 reports completed by the National Parks and Wildlife Service⁵;
- Site Synopses, Conservation Objectives and Standard Data Forms for the Natura 2000 sites⁶; and
- Environmental Protection Agency (EPA) Maps⁷.

2.6.2 For the Project In-Combination

Sources of information for the plans and projects for the 'in-combination' assessment were as above and also include:

- Tipperary County Development Plan 2022 – 2028⁸;
- Limerick Development Plan 2022-2028⁹;
- Tipperary County Council planning portal¹⁰,
- Limerick City and County Council planning portal¹¹; and
- myplan.ie¹²

⁵ <https://www.npws.ie/publications/article-17-reports?msclkid=0c19d260b00a11ecaf5a935da63f219b> (last accessed December 2024)

⁶ <https://www.npws.ie/protected-sites> (last accessed December 2024)

⁷ <http://gis.epa.ie/> (last accessed December 2024)

⁸ <https://www.tipperarycoco.ie/planning-and-building/development-plan-consultation/tipperary-county-development-plan-2022-2028> (last accessed December 2024)

⁹ <https://www.limerick.ie/council/services/planning-and-property/development-plan/limerick-development-plan-2022-2028> (last accessed December 2024)

¹⁰ <https://eplanning.ie/TipperaryCC/searchexact> (last accessed December 2024)

¹¹ <https://www.eplanning.ie/LimerickCCC/searchtypes> (last accessed December 2024)

¹² <https://myplan.ie/> (last accessed December 2024)



3.0 Stage One: Screening

3.1 Step One: Management of European Sites

The proposed Project consists of the construction of a hydro-electric power station. Therefore, it is not connected with, or necessary for, the management of a European site.

3.2 Step Two - Part One: Project Description

3.2.1 Proposed Development - Ground Investigation Works - Drilling

The ground investigation works for the Project will comprise the drilling of a series of boreholes over the Site (Figure 2). Boreholes HYDRO006 and HYDRO007 are the only boreholes located within the SAC and SPA. The collection of soil samples is described in Section 3.2.2.

Figure 3 shows the proposed access route that the drill rigs will use to navigate to the borehole locations (HYDRO006 and HYDRO007) within the SAC / SPA. Access is along a forest road which is accessed from a public road. The forestry road itself is not within the SAC, but is within the SPA. The route from the edge of the SAC to the proposed borehole location at HYDRO006m is ca. 160 m in length; and ca. 870 m in length for HYDRO007, giving a combined estimated distance of travel of ca. 1,030 m in the SAC, this will include tracking of the rig over the existing vegetation.

The purpose of the drilling activity is to complete boreholes to a specified depth, to record information on underlying ground conditions in the overburden and bedrock; and to allow for the carrying out of appropriate testing, sampling and reporting, as required. The locations of all boreholes will be checked for underground services and scanned by CAT (Cable Avoiding Tool) prior to commencement of the drilling, and where appropriate, borehole locations may be moved slightly to avoid underground services and/or areas of uneven terrain.

Drilling Standard

The drilling and sampling of boreholes will be carried out in accordance with BS 5930:2015+A1:2020, Code of Practice for Site Investigation¹³.

This British Standard gives recommendations for the investigation of sites for the purposes of assessing their suitability for the construction of civil engineering and building works and of acquiring knowledge of the characteristics of a site that could affect the design and construction of such work and the security of neighbouring land and property.

Drilling Equipment

It is proposed that the boreholes will be drilled using an electrically powered Beretta TP21, which consists of modular components, including hydraulic powerpack, water flush mono pump, electrical control panel and mast (Figure 4). The rig and supporting equipment will be transported to and from each drill site by a tracked, low pressure bearing transport vehicle suited to such terrain, such as a Morooka MST11OC which is a specially designed low pressure bearing transport vehicle which exerts minimal pressure on the ground over which it drives (Figure 5). This vehicle is also best suited to driving up the steep slopes and over the dense vegetation found on the Silvermines mountain. Please refer to the Standard Operating Procedures (SOP) in Appendix B for more detailed information.

Throughout the drilling procedure, the working area around each borehole location will have ground protection mats put in place to maintain safe work conditions. These ground protection mats are lightweight (ca. 36 kg) and can be easily handled by two people and can be put in place at the borehole site to keep the drill rig level in order to maintain safe work conditions.

¹³ NASI (National Standards Authority of Ireland)



The area of each of the borehole sites will be ca. 50 m², this includes the rig and work area around the rig.



Figure 2: Plan showing location of proposed borehole locations (HYDRO006 & HYDRO007 are within the SAC & SPA)



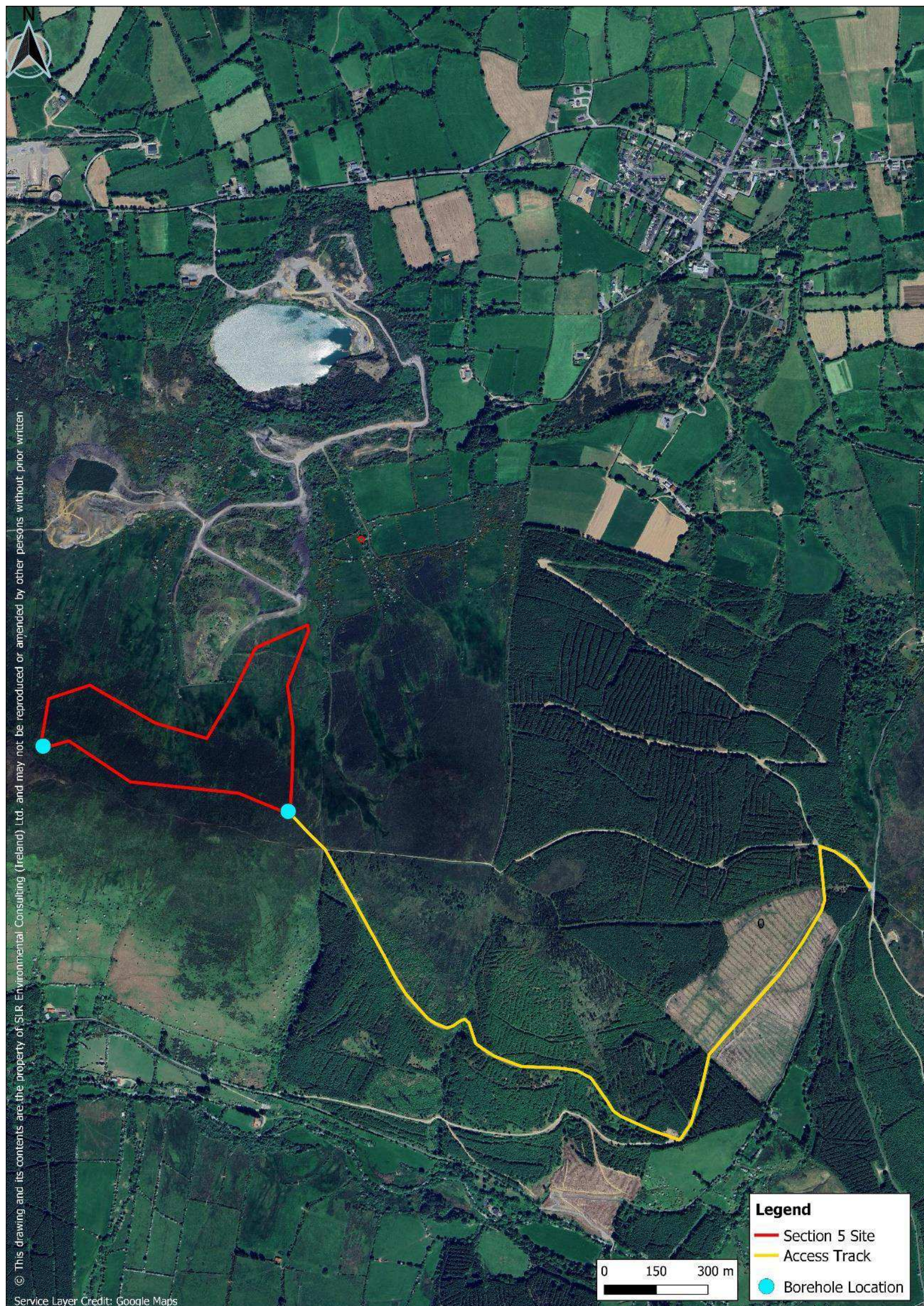


Figure 3: Plan showing proposed access route along forestry track to boreholes HYDRO006 & HYDRO007





Figure 4: Beretta TP21 drilling rig



Figure 5: Morooka MST11OC low pressure-bearing transport vehicle



Positioning Drill Rig at Borehole Location

Once the drill is in position at the proposed borehole location, the lead driller will extend the hydraulic jacks (legs) of the drill rig onto steel circular base plates positioned on wooden blocks to spread the weight of the drill rig, resting on ground protection mats positioned around the borehole collar location. The jacks will extend as far as required in order to position the drill rig into a stable position for drilling purposes. If the gradient of the ground surface is too steep the location for the borehole will be moved to more level ground. The lead driller will then use the drill rig controls to hoist the mast of the rig into the vertical position and lock it into place for drilling purposes.

Drilling the Borehole

All rods, casing and inner tubes will be lifted into place using the drill rig's own wire-line winch and will be clamped tight with wrenches, while hydraulic gears will drill the rods vertically into the ground.

Once the drill rig is correctly positioned steel casing will be lowered to ground level and inserted into the ground by rotation using the rig's hydraulics. When the casing reaches its position in the ground, the core barrel will be lowered into the steel casing until it catches/locks itself into position. The drive head attached to the drill head of the drill rig allows the lead driller to start to rotate the drilling head.

When the core barrel is full the drive head will be removed, and a latching device will be lowered down inside the casing to retrieve the core barrel. When the core barrel is removed from the hole it will be lowered onto a pair of stands via the drill rig's winch.

The back end of the core barrel will then be removed and the core carefully placed in a core box. Timber markers will be used at the start and end of each core run to record the depths of the samples.

Once the core is removed from the core barrel, the barrel will be reassembled and reintroduced into the hole, with another length of casing attached and the process started again.

Water Management

Water is used to keep the drill bit cool and remove arisings (fragments of soil and rock that come back up to surface with water flush) from around the cutting face of the bit.

Water for drilling will be provided from a mobile water bowser parked on an existing hardstand area. The water will be pumped from the water bowser through a pipe to a holding tank located on Ground Protection Mats adjacent to the drill rig. A suction hose will then continuously feed water from the holding tank into the drill string (Figure 6).

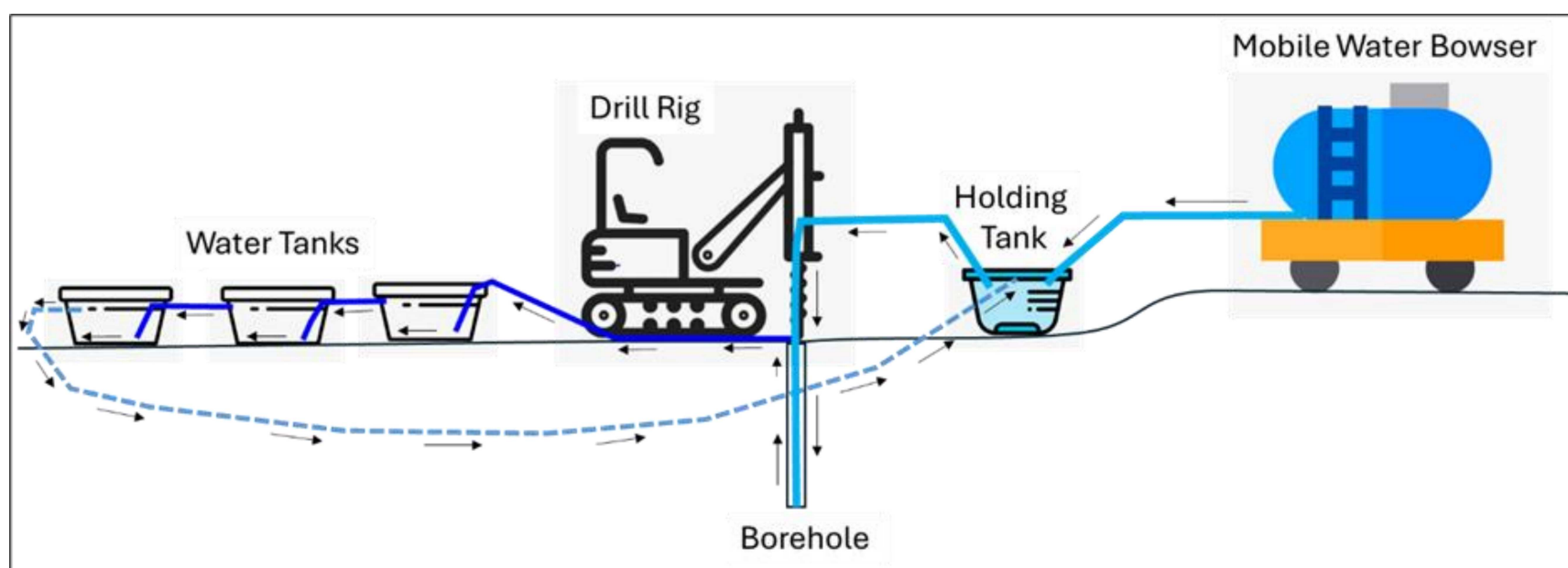


Figure 6: Schematic diagram of water management system used when drilling cored boreholes

The 'flush' water will be re-circulated during the drilling process, which will reduce the overall volume of water needed in the borehole. Once the outer casing is inserted into the overburden,



a ca. 0.5 m length of casing with a 50 mm diameter pipe attached to the side will be screwed onto the casing which will act as a spill off point. The 'tapped' water will then spill into the first of three interconnected plastic tanks (Figure 7). The tanks will be connected by approx. 1 m length of 1 inch diameter hose with a textile filter at either end for trapping silt.



Figure 7: Typical set-up of water tanks at a drill site

Some of the suspended fines will settle out in the first tank, the overflow will then discharge into the second tank where more settlement will occur and then overflow into the final tank by which time most of the fines will have settled out. The water will then be recycled into the rotary core process by a suction pump that will relay the water from the third settling tank to the holding tank near the drill rig which will in turn be sucked into the drill string for reuse.

Upon completion of coring the borehole the settled fines will be removed from the base of each of the tanks and placed in plastic bags for disposal / removal off-site.

It is further noted that the water used for re-circulation will likely be 'lost' down the borehole during the drilling process when drilling takes place above the water table. Where drilling takes place below the water table, water return will not be lost, and so minimal additional water will be needed during the drilling process.

To reiterate, all water used in the drilling process will be stored in tanks sitting on Ground Protection Mats adjacent to the drill rig, ensuring that water used in the process will remain a closed circuit.

On Completion of Drilling

On completion of the borehole, the casing and rods will be removed from the borehole using the winch and placed on the Morooka MST110C.

The mast will then be dropped to the horizontal position, using the hydraulic ram and the jacks will be retracted to the neutral position. The borehole will then be backfilled / sealed with bentonite compressed pellets made from highly swelling sodium bentonite, which when placed in the hole, form a flexible, non-toxic impermeable seal. All core samples will be removed by



the Morooka MST11OC and transported back to the closest hardstand area for logging, sampling and subsequent removal off-site.

3.2.2 Proposed Development - Ground Investigation Works - Soil Sampling

The ground investigation works for the Project will also comprise the collection of soil samples (Figure 8) located within the SAC / SPA.

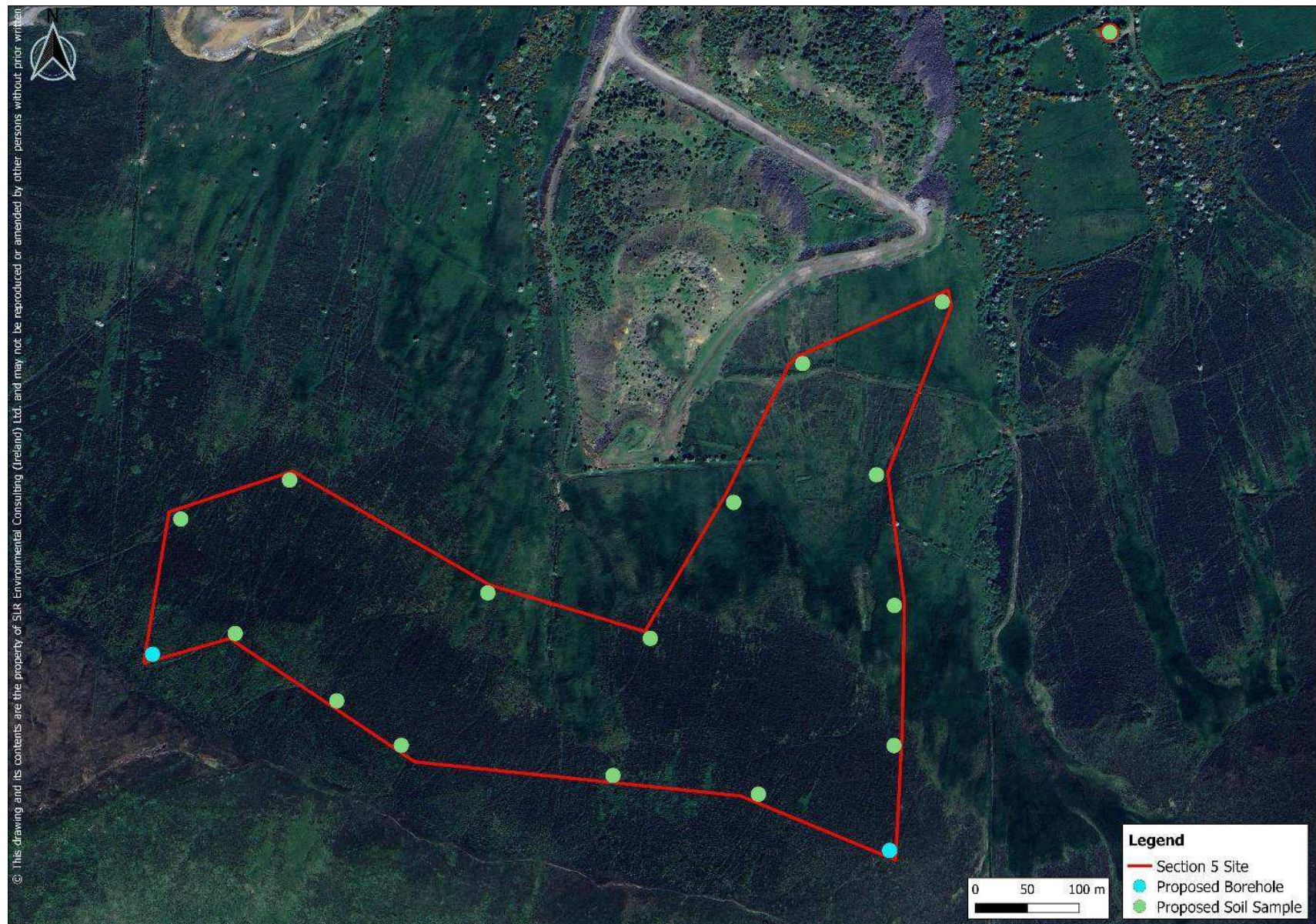


Figure 8: Plan showing location of proposed soil sampling locations

Soil Sampling Standard

The soil sampling standard is based on the Specification for Ground Investigation in Ireland published by Engineers Ireland (2nd Edition 2016). BS EN ISO 22475-1 is the British Standard used for soil sampling.

This British Standard gives recommendations for the investigation of sites for the purposes of assessing their suitability for the construction of civil engineering and building works and of acquiring knowledge of the characteristics of a site that could affect the design and construction of such work and the security of neighbouring land and property.



Sampling Equipment

It is proposed that the soil samples will be recovered using a hand-held Dutch auger or similar (Figure 9) to allow maximum penetration. Soils overlying the SAC / SPA are typically < 0.5 m in thickness.



Figure 9: Example of a Hand-held Auger

Soil horizons will be identified, described, photographed and sampled, with the location of each sample location will be surveyed using a RTK GPS system.

Samples will be collected in secure and labelled containers before being sent to an accredited laboratory for analyses.

Hand-held augers provide an effective and simple method of soil investigation and sampling. They may be used for any purpose where disturbed samples are to be collected, and are valuable in connection with shallow groundwater level determination and indication of changes in strata, and for advancement of a hole for insertion of undisturbed sample collection devices. The ability to hand auger and achieve depth ranges are dependent on ground water conditions, soil characteristics, and the equipment used.

3.3 Step Two - Part Two: Potential Impact Factors

The proposed development has the potential to result in the following effects:

- Loss or damage of habitat from the movement of the tracked, low pressure bearing transport vehicle e.g. Morooka MST110C.
- Water discharge resulting in pollution of local watercourses and groundwater.
- Discrete soil loss at the location of the hand-augered holes as material is required for testing.
- Noise and vibration resulting in disturbance of wildlife.



- Potential to injure or kill ground nesting birds and mammals.

The habitats and species listed as features of interest of any European site in proximity to the project must therefore be assessed for affects from potential impact factors listed above, and these effects are considered further below.

3.4 Step Three: Identification of Relevant European Sites

The first step in identification of relevant European sites for further assessment is to identify those that will be at risk from likely significant effects where a Source-Pathway-Receptor link exists between the proposed development and the European site.

The relevant European sites are identified through a review of the nature and scale of the Project, the Project location relative to European sites, presence of ecological (including mobile and migratory species) and landscape connectivity, such as along waterways, hedgerows and treelines between the Site and the European sites, known impacts and effects likely to arise as a result of this type of project, distance from European sites and the qualifying interests of the European sites.

Table 3-1 provides a list of European sites which were selected for initial consideration of Source-Pathway-Receptor links (see Map in Appendix A); a description of each site; their qualifying interests; and any Source-Pathway-Receptor links.



Table 3-1: Description of European Sites with Potential Source-Pathway-Receptor Links

European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
SACs				
Silvermines Mountains West SAC [002258]	Overlaps with southern section of the Project site	Habitats <ul style="list-style-type: none">Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]European dry heaths [4030]Calaminarian grasslands of the <i>Violetalia calaminariae</i> [6130]	Loss or damage of habitat – the movement of the tracked, low pressure-bearing transport vehicle along the proposed drilling routes has the potential to damage the heath or Calaminarian grasslands habitats found within the SAC. Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies. Noise and vibration resulting in disturbance of wildlife – there are no wildlife species listed as QIs for this SAC which will be affected by noise of vibration. Potential to injure or kill ground nesting birds and mammals – there are no wildlife	Y

¹⁴ When measured in a straight line over the shortest distance between the site and Natura 2000 site.

¹⁵ For SPAs, the bird species that are the reason for designation are Species of Conservation Interest (SCIs) and for SACs the habitats and species that are the reason for designation are its Qualifying Interests (QIs). For convenience, the term qualifying interest or QI is used here for both SPAs and SACs.

⁹ Protected Sites in Ireland | National Parks & Wildlife Service (npws.ie)



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
			species listed as QIs for this SAC which may be injured or killed by the drilling works.	
Lower River Shannon SAC [002165]	0.7 km, WSW	Habitats <ul style="list-style-type: none"> Sandbanks which are slightly covered by sea water all the time [1110] Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] 	<p>Loss or damage of habitat – there will be no loss or damage to the habitats in the SAC as it does not fall within the area of the proposed drilling and soil sampling works.</p> <p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – otter is the only terrestrial wildlife species listed as QIs for this SAC; otter are not likely to be in the location/habitats of the proposed drilling or soil sampling works and will be sufficiently distant to be affected by noise or vibration.</p> <p>Potential to injure or kill ground nesting birds and mammals – otter is the only terrestrial wildlife species listed as QIs for this SAC; otter are not likely to be in the location/habitats of the proposed drilling and soil sampling works and are not likely to be injured or killed by the drilling works.</p>	N



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
		<ul style="list-style-type: none"> Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] <p>Species</p> <ul style="list-style-type: none"> <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Petromyzon marinus</i> (Sea Lamprey) [1095] <i>Lampetra planeri</i> (Brook Lamprey) [1096] <i>Lampetra fluviatilis</i> (River Lamprey) [1099] <i>Salmo salar</i> (Salmon) [1106] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349] <i>Lutra lutra</i> (Otter) [1355] 		
Silvermine Mountains SAC	1.3 km, ESE	<p>Habitats</p> <ul style="list-style-type: none"> Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] 	Loss or damage of habitat – there will be no loss or damage to the habitats in the SAC as it does not fall within the area of the proposed drilling or soil sampling works.	N



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
[000939]		<ul style="list-style-type: none"> Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] 	<p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – there are no wildlife species listed as QIs for this SAC which will be affected by noise of vibration.</p> <p>Potential to injure or kill ground nesting birds and mammals – there are no wildlife species listed as QIs for this SAC which may be injured or killed by the drilling or soil sampling works.</p>	
Keeper Hill SAC [001197]	1.3 km, S	<ul style="list-style-type: none"> Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] Blanket bogs (* if active bog) [7130] 	<p>Loss or damage of habitat – there will be no loss or damage to the habitats in the SAC as it does not fall within the area of the proposed drilling or sampling works.</p> <p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – there are no wildlife species listed</p>	N



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
			<p>as QIs for this SAC which will be affected by noise of vibration.</p> <p>Potential to injure or kill ground nesting birds and mammals – there are no wildlife species listed as QIs for this SAC which may be injured or killed by the drilling or soil sampling works.</p>	
Bolingbrook Hill SAC [002124]	3.3 km, ESE	<p>Habitats</p> <ul style="list-style-type: none"> Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] 	<p>Loss or damage of habitat – there will be no loss or damage to the habitats in the SAC as it does not fall within the area of the proposed drilling or soil sampling works.</p> <p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – there are no wildlife species listed as QIs for this SAC which will be affected by noise of vibration.</p> <p>Potential to injure or kill ground nesting birds and mammals – there are no wildlife species listed as QIs for this SAC which may be injured or killed by the drilling or soil sampling works.</p>	N



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
Clare Glen SAC [000930]	12.9 km, SW	Habitats <ul style="list-style-type: none"> Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] <i>Trichomanes speciosum</i> (Killarney Fern) [1421] 	<p>Loss or damage of habitat – there will be no loss or damage to the habitats in the SAC as it does not fall within the area of the proposed drilling or soil sampling works.</p> <p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – there are no wildlife species listed as QIs for this SAC which will be affected by noise of vibration.</p> <p>Potential to injure or kill ground nesting birds and mammals – there are no wildlife species listed as QIs for this SAC which may be injured or killed by the drilling or soil sampling works.</p>	N
Glenstal Wood SAC [001432]	14.0 km, SSW	Habitats <ul style="list-style-type: none"> <i>Trichomanes speciosum</i> (Killarney Fern) [1421] 	<p>Loss or damage of habitat – there will be no loss or damage to the habitats in the SAC as it does not fall within the area of the proposed drilling or soil sampling works.</p>	N



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
			<p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – there are no wildlife species listed as QIs for this SAC which will be affected by noise of vibration.</p> <p>Potential to injure or kill ground nesting birds and mammals – there are no wildlife species listed as QIs for this SAC which may be injured or killed by the drilling or soil sampling works.</p>	
Slieve Bernagh Bog SAC [002312]	14.5 km, WNW	<p>Habitats</p> <ul style="list-style-type: none"> Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] Blanket bogs (* if active bog) [7130] 	<p>Loss or damage of habitat – there will be no loss or damage to the habitats in the SAC as it does not fall within the area of the proposed drilling or soil sampling works.</p> <p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – otter is the only terrestrial wildlife</p>	N



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
			<p>species listed as QIs for this SAC; otter are not likely to be in the location/habitats of the proposed drilling or soil sampling works and will be sufficiently distant to be affected by noise or vibration.</p> <p>Potential to injure or kill ground nesting birds and mammals – otter is the only terrestrial wildlife species listed as QIs for this SAC; otter are not likely to be in the location/habitats of the proposed drilling or soil sampling works and are not likely to be injured or killed by the drilling or soil sampling works.</p>	
SPAs				
Slievefelim to Silvermines SPA [004165]	Overlaps with southern section of the Project site	<ul style="list-style-type: none"> Hen Harrier (<i>Circus cyaneus</i>) [A082] 	<p>Loss or damage of habitat – the movement of the tracked, low pressure-bearing transport vehicle along the proposed drilling routes has the potential to damage the heath or Calaminarian grasslands habitats found within the SAC. Hen Harrier utilise these habitats and may be affected by a loss of habitat.</p> <p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p>	Y



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
			<p>Noise and vibration resulting in disturbance of wildlife – there is the potential that Hen Harrier may be affected by the noise and vibration caused by the drilling or soil sampling works.</p> <p>Potential to injure or kill ground nesting birds and mammals – despite Hen Harriers being in the area, it is very unlikely that they will be injured or killed by the drilling or soil sampling works and are more likely to avoid the area during drilling and sampling activities.</p>	
<p>Lough Derg (Shannon) SPA [004058]</p>	11.5 km, NNW	<ul style="list-style-type: none"> • Cormorant (<i>Phalacrocorax carbo</i>) [A017] • Tufted Duck (<i>Aythya fuligula</i>) [A061] • Goldeneye (<i>Bucephala clangula</i>) [A067] • Common Tern (<i>Sterna hirundo</i>) [A193] • Wetland and Waterbirds [A999] 	<p>Loss or damage of habitat – there will be no loss or damage to the habitats in the SPA upon which the SCIs are dependant.</p> <p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – this SPA is sufficiently distant such that no SCI bird will be affected by the noise and vibration caused by the drilling or soil sampling works.</p> <p>Potential to injure or kill ground nesting birds and mammals – this SPA is sufficiently</p>	N



European Site	Distance ¹⁴	Qualifying Interests ¹⁵ and Conservation Objectives	Connections (Source-Pathway-Receptor)	Considered Further in Screening (Y/N)
			distant such that no SCI bird will be injured or killed by the drilling or soil sampling works.	
Slieve Aughty Mountains SPA [004168]	19.2 km, NW	<ul style="list-style-type: none"> Hen Harrier (<i>Circus cyaneus</i>) [A082] Merlin (<i>Falco columbarius</i>) [A098] 	<p>Loss or damage of habitat – there will be no loss or damage to the habitats in the SPA upon which the SCIs are dependant.</p> <p>Water discharge resulting in pollution of local watercourses and groundwater – all water used in the drilling works will be retained in a closed system and there will be no discharge and no pollution of surface or groundwater bodies.</p> <p>Noise and vibration resulting in disturbance of wildlife – this SPA is sufficiently distant such that no SCI bird will be affected by the noise and vibration caused by the drilling or soil sampling works.</p> <p>Potential to injure or kill ground nesting birds and mammals – this SPA is sufficiently distant such that no SCI bird will be injured or killed by the drilling or soil sampling works.</p>	N



3.5 Step Four - Part One: Assessment of Likely Significant Effects for Project 'Alone'

The initial assessment in Table 3-1 has identified that there are potential impacts on Silvermines Mountains West SAC [002258] from a loss of habitat, and on Slievefelim to Silvermines SPA [004165] from noise and vibration affecting bird species, arising from the drilling and soil sampling works and the use of a tracked vehicle moving the drilling equipment across the Site.

All other European Site are sufficiently distant from the Site not to be affected by the proposed drilling works.

Tables 3-2 and 3-3 below examine the conservation objectives for all of the QIs/SCIs set out for both Silvermines Mountains West SAC and Slievefelim to Silvermines SPA and assess whether the impacts of the drilling and soil sampling works is likely to give rise to significant effects on these conservation objectives.

3.5.1 Silvermines Mountains West SAC

The 2015 site synopsis for Silvermines Mountains West SAC (NPWS 2015) describes the site as being to the north of Keeper Hill and includes the summit which reaches an altitude of 489 m, and slopes, mostly above 200 m, to the west of an extensively afforested area south of the town of Silvermines. The main habitats that occur within Silvermines Mountains West SAC are heath (mostly wet heath but some dry heath) and unimproved upland grassland. The wet heath is particularly well developed with tall stands of Heather *Calluna vulgaris* and a high cover of bog mosses *Sphagnum* spp.. Dry heath, characterised by Western Gorse *Ulex gallii* and Bell Heather *Erica cinerea*, is also found on the more steeply sloping ground below the summit ridge and on outcropping rock exposures.

A number of small streams and flushes descend the slopes. Gorse *Ulex europaeus* has invaded dry heath areas on the sides of some of the streams. Patchy remnants of blanket bog occur on the summit plateau in places and there is evidence of extensive former peat-cutting here.

Calaminarian Grassland vegetation is extensive (0.9 ha) and well developed at Shallee, an extensive old lead mine on the northern side of the site, with much the largest of the four Irish populations of the rare moss *Ditrichum plumbicola* and a tiny amount of the rare liverwort *Cephaloziella nicholsonii*.

Upland grassland is widespread on the lower mountain slopes, in many of the upper fields and on the steep south-facing slopes. Grassland also extends up onto the ridge at the western end of the site. Parts of the lower southern slopes are covered with dense Bracken *Pteridium aquilinum*.

The site also provides useful habitat for Hen Harriers which are known to use these uplands as part of a wider range between Silvermines and Slieve Felim to the south. Hen Harriers are uncommon birds and are listed under Annex I of the E.U. Birds Directive.

The vegetation at this site is in good condition, with low grazing pressure throughout and no signs of over-grazing. One fifth of the site was burned in 2003 and there is evidence of former burning in another fifth. Former peat-cutting has occurred on the summit plateau and parts of the northern slopes. Afforestation, which is widespread to the east of the site, remains the greatest threat.



Table 3-2: Assessment of the potential impacts on the Conservation Objectives for the Qualifying Interests of Silvermines Mountains West SAC

Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
Northern Atlantic wet heaths with <i>Erica tetralix</i>	To maintain favourable condition of Northern Atlantic wet heaths with <i>Erica tetralix</i>	Habitat area	Area stable or increasing, subject to natural processes	<p>It was noted from a habitat survey and condition assessment of the SAC within the project site boundary carried out by SLR in July 2024 and September 2024, respectively, that there were very few indicator species for wet heath recorded within the areas proposed for the drilling works, and the habitat is identified to be Unfavourable Bad (red) status by a clear margin regarding European Dry Heath [4030] (SLR 2024).</p> <p>As mentioned in Section 3.2.1 narrow tracks from the Morooka MST11OC will be made across this habitat totalling a distance of ca. 1,030 m in length with a track width of ca 1.5 m. In addition, each drill site will be ca. 50 m² giving a total of 100 m² for the 2 drill sites. Therefore, an approximate area of 1,645 m² of habitat will be temporarily disturbed during the drilling works.</p> <p>As soil sampling will take place with a handheld auger, an area ca. 15 x 15 cm² will be affected temporarily at each sampling location.</p> <p>Given that the area has limited and/or unfavourable wet heath habitat and that all vegetation will be temporarily flattened with the chance to naturally recover in the next growing season, the proposed drilling & soil sampling works will not result in a loss of habitat area.</p>
		Habitat distribution	No decline, subject to natural processes	As above.
		Ecosystem function: soil nutrients	Maintain soil nutrient status within natural range	The drilling and soil sampling works will not result to any physical damage to the soil structure and soil pH and nutrient levels will not be altered by the proposed works. Therefore, this attribute will not be affected by the proposed works.



Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
		Community diversity	Maintain variety of vegetation communities, subject to natural processes.	<p>The SLR habitat survey and condition assessment showed that diversity of wet heath vegetation communities within this SAC is limited.</p> <p>Given that the area has limited and/or unfavourable wet heath habitat and that all vegetation will be temporarily flattened with the chance to naturally recover in the next growing season, the proposed drilling and soil sampling works will not result in a loss of community diversity.</p>
		Vegetation composition: cross-leaved heath	Cross-leaved heath <i>Erica tetralix</i> present within a 20m radius of each monitoring stop	<p>The SLR habitat survey and condition assessment showed that there is no cross-leaved heath <i>Erica tetralix</i> present within the area of the SAC where the proposed drilling and sampling works will occur.</p> <p>Given that the area has limited or no cross-leaved heath <i>Erica tetralix</i> present and that all vegetation will be temporarily flattened with the chance to naturally recover in the next growing season, the proposed drilling and soil sampling works will not result in a loss of vegetation composition: cross-leaved heath.</p>
		Vegetation composition: positive indicator species	Cover of positive indicator species at least 50%	The proposed drilling and soil sampling works will result in the vegetation along the routes and at the drilling and soil sampling locations being temporarily flattened but with the chance to naturally recover in the next growing season. Therefore, the proposed drilling and soil sampling works will not result in a loss of cover of positive indicator species.
		Vegetation composition: lichens and bryophytes	Total cover of <i>Cladonia</i> and <i>Sphagnum</i> species, <i>Racomitrium lanuginosum</i> and pleurocarpous mosses at least 10%	As above



Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
		Vegetation composition: ericoid species and crowberry	Cover of ericoid species and crowberry <i>Empetrum nigrum</i> at least 15%	As above
		Vegetation composition: dwarf shrub species	Cover of dwarf shrubs less than 75%	As above
		Vegetation composition: negative indicator species	Total cover of negative indicator species less than 1%	As above
		Vegetation composition: non-native species	Cover of non-native species less than 1%	As above
		Vegetation composition: native trees and shrubs	Cover of scattered native trees and shrubs less than 20%	As above
		Vegetation composition: bracken	Cover of bracken (<i>Pteridium aquilinum</i>) less than 10%	As above
		Vegetation composition: soft rush	Cover of soft rush (<i>Juncus effusus</i>) less than 10%	As above
		Vegetation structure: Sphagnum condition	Less than 10% of the Sphagnum cover is crushed, broken and/or pulled up	As above
		Vegetation structure: signs of browsing	Less than 33% collectively of the last complete growing season's shoots of ericoids, crowberry	N/A



Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
			<i>Empetrum nigrum</i> and bog-myrtle <i>Myrica gale</i>	
		Vegetation structure: burning	No signs of burning in sensitive areas, into the moss, liverwort or lichen layer or exposure of peat surface due to burning	The proposed drilling and soil sampling works will not present a fire risk and therefore this attribute will not be affected.
		Physical structure: disturbed bare ground	Cover of disturbed bare ground less than 10%	The proposed drilling and soil sampling works will not result in any increase bare ground cover and therefore this attribute will not be affected.
		Physical structure: drainage	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	The proposed drilling and sampling works will result in some trampling of the vegetation, however, this will be limited to the narrow routes taken by the drilling equipment and as a low-impact vehicle will be used the vegetation will have the chance to naturally recover in the next growing season, the proposed drilling and soil sampling works will not result in any significant signs of or increase areas of heavy trampling.
		Indicators of local distinctiveness	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat and no decline in status of hepatic mats associated with this habitat	The proposed drilling and sampling works will result in the vegetation along the routes to and at the drilling locations being temporarily flattened but with the chance to naturally recover in the next growing season. Therefore, the proposed drilling and soil sampling works will not result in a decline in Indicators of local distinctiveness.
European dry heaths	Maintain favourable condition	Habitat area	Area stable or increasing, subject to natural processes	The proposed drilling and soil sampling works will result in the vegetation along the routes to and at the drilling and sampling locations being temporarily flattened but with the chance to naturally recover in the next growing season. Therefore, the



Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
				proposed drilling and soil sampling works will not result in a decline in habitat area.
		Community diversity	No decline, subject to natural processes	As above
		Vegetation composition: lichens and bryophytes	Number of bryophyte or non-crustose lichen species present at each monitoring stop is at least three, excluding Campylopus and Polytrichum mosses	As above
		Vegetation composition: number of positive indicator species	Number of positive indicator species present at each monitoring stop is at least two	As above
		Vegetation composition: cover of positive indicator species	Cover of positive indicator species at least 50% for siliceous dry heath and 50-75% for calcareous dry heath	As above
		Vegetation composition: dwarf shrub composition	Proportion of dwarf shrub cover composed collectively of bog-myrtle (Myrica gale), creeping willow (Salix repens) and western gorse (Ulex gallii) is less than 50%	As above



Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
		Vegetation composition: negative indicator species	Total cover of negative indicator species less than 1%	As above
		Vegetation composition: non-native species	Cover of non-native species less than 1%	As above
		Vegetation composition: native trees and shrubs	Cover of scattered native trees and shrubs less than 20%	As above
		Vegetation composition: bracken	Cover of bracken (<i>Pteridium aquilinum</i>) less than 10%	As above
		Vegetation composition: soft rush	Cover of soft rush (<i>Juncus effusus</i>) less than 10%	As above
		Vegetation structure: senescent ling	Senescent proportion of ling (<i>Calluna vulgaris</i>) cover less than 50%	As above
		Vegetation structure: signs of browsing	Less than 33% collectively of the last complete growing season's shoots of ericoids showing signs of browsing	N/A
		Vegetation structure: burning	No signs of burning in sensitive areas	The proposed drilling and soil sampling works will not present a fire risk and therefore this attribute will not be affected.



Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
		Physical structure: disturbed bare ground	Cover of disturbed bare ground less than 10%	The proposed drilling and soil sampling works will not result in any increase bare ground cover and therefore this attribute will not be affected.
		Indicators of local distinctiveness	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	The proposed drilling and sampling works will result in the vegetation along the routes to and at the drilling locations being temporarily flattened but with the chance to naturally recover in the next growing season. Therefore, the proposed drilling and soil sampling works will not result in a decline in Indicators of local distinctiveness.
		Vegetation structure: growth phases of ling	Outside sensitive areas, all growth phases of ling (<i>Calluna vulgaris</i>) should occur throughout, with at least 10% of cover in the mature phase	As above
Calaminarian grasslands of the <i>Violetalia calaminariae</i>	Maintain favourable condition	Habitat area	No decline, subject to natural processes	There are no Calaminarian grasslands found in the areas of the proposed drilling and soil sampling locations and therefore there will be no decline in this habitat.
		Distribution		As above
		Physical structure: bare ground		As above
		Soil toxicity: heavy metal content		As above
		Vegetation structure: height and cover		As above



Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
		Vegetation composition: metallophyte bryophytes		As above



3.5.2 Slievefelim to Silvermines SPA

The NPWS Site synopsis (2015) for the Slievefelim to Silvermines Mountains SPA describes it as an extensive upland site located in Counties Tipperary and Limerick, with much of the site over 200 m in altitude, rising to 694 m at Keeper Hill. The site consists of a variety of upland habitats, though approximately half is afforested.

The Slievefelim to Silvermines Mountains SPA is of ornithological importance because it provides excellent nesting and foraging habitat for breeding Hen Harrier and is one of the top sites in the country for the species. The presence of three species, Hen Harrier, Merlin and Peregrine, which are listed on Annex I of the E.U. Birds Directive is of note.

The SPA is one of the strongholds for Hen Harrier in the country. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the E.U. Birds Directive. The early stages of new and second-rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to ca. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests where small birds and small mammals appear to be the most frequently taken prey.



Table 3-3: Assessment of the potential impacts on the Conservation Objectives for the Qualifying Interests of 3.5.2 Slievefelim to Silvermines SPA

Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
Hen Harrier <i>Circus cyaneus</i>	To restore the favourable conservation condition	Population size	Maintain numbers at or above 4–8 confirmed breeding pairs	SLR has carried out Hen Harrier surveys during the summer months of 2024 and also during the non-breeding season of late 2024. To date there has been no evidence of Hen Harrier breeding or roosting within 2 kms of the proposed drilling locations. The noise and vibration impacts arising from the proposed drilling and soil sampling works will be localised and temporary in nature such that there will be no long-term disturbance of Hen Harriers and so no effect on the population size in the area.
		Productivity rate	Restore at least 1.0–1.4 fledged young per confirmed pair	As above.
		Spatial utilisation by breeding pairs	Maintain at least 74-94% spatial utilisation of the SPA by breeding pairs	There will be no habitat loss as a result of the proposed drilling and soil sampling works and therefore there will no change in the spatial utilisation by breeding pairs of Hen Harrier.
		Extent and condition of heath and bog and associated habitats	Restore the extent and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	The proposed drilling and soil sampling works will result in the vegetation along the routes to and at the drilling locations being temporarily flattened but with the chance to naturally recover in the next growing season. Therefore, the proposed drilling and soil sampling works will not result in any change in the extent and condition of heath and bog and associated habitats.
		Extent and condition of low intensity managed grasslands and associated habitats	Restore the extent and quality of this resource to support the targets relating to population size,	As above.



Qualifying Interest	Conservation Objective	Attributes defining Conservation Condition	Target defining Conservation Condition	Effect of Drilling & Soil Sampling Works
			productivity rate and spatial utilisation	
		Extent and condition of hedgerows	Maintain at least the length and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	As above.
		Age structure of forest estate	Achieve an even and consistent distribution of age-classes across the forest estate	As above.
		Disturbance to breeding sites	Disturbance occurs at levels that does not significantly impact upon breeding Hen Harrier	The noise and vibration impacts arising from the proposed drilling and soil sampling works will be localised and temporary in nature such that there will be no long-term disturbance of Hen Harriers.

3.6 Step Four – Part Two: Assessment of Likely Significant ‘In Combination’ Effects

In combination, or cumulative, effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

Other plans and projects that should be considered when establishing cumulative effects are:

- Proposals for which consent has been applied but which are awaiting determination;
- Projects which have been granted consent, but which have not yet been started or which have been started but are not yet completed (i.e., under construction);
- Proposals which have been refused permission, but which are subject to appeal, and the appeal is undetermined;



- Constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline; or
- Developments specifically referenced in a National Policy Statement, a National Plan or a Local Plan.

There are no policies or objectives within the Tipperary County Development Plan 2022-2028 that when considered with the proposed project could give rise to cumulative effects on European sites.

A search of recent (within the last five years) planning applications was carried out in the vicinity of the Site. The majority of recent planning applications within the vicinity of the Site are for small-scale developments and extensions to already existing domestic buildings. These planning applications are sufficiently small in scale to not result in any significant adverse cumulative effects in combination with the Project and have been scoped out of further consideration in this report. Bunkimalta Wind Farm, located approximately 1.9 km south, was granted consent in 2003, however, this consent has now been annulled.

3.7 Conclusions

This AA Screening concludes that on the basis of objective evidence and in view of best scientific knowledge, that while there are limited impacts arising from the proposed drilling of boreholes, and soil sampling activities, these impacts have been fully assessed, will be small scale, slight, temporary and will not give rise to any likely significant effects from the Project alone, or in-combination with other plans or projects, on any other European site including (without limitation) Silvermines Mountains West SAC, Silvermine Mountains SAC, Keeper Hill SAC, and Slievefelim to Silvermines SPA.

It is important to note that none of the Site Specific Conservation Objectives will be undermined and the overall effects will be small scale, slight and temporary. Natural resilience of the habitats will ensure the effects are not significant.

We therefore submit that the competent authority, in this case Tipperary County Council, can determine beyond reasonable scientific doubt that an Appropriate Assessment is not required, as the proposed drilling and soil sampling works required for the Silvermines Hydro Electric Power Station Ground Investigation works, individually or in combination with other plans or projects, will not have a significant effect on any European site.



4.0 References

Calladine, J, Garner, G., Wernham, C. and Thiel, A. (2009) The influence of survey frequency on population estimates of moorland breeding birds, *Bird Study*, 56:3, 381-388, DOI: 10.1080/00063650902984604.

Collins, J. (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). London: The Bat Conservation Trust.

DoEHLG (2010) *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government. Dublin.

European Commission (2018) *Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats Directive' 92/43/EEC*.

European Commission (2021) *Assessment of Plans and Projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC*.

Fossitt, J. (2000) *A guide to habitats in Ireland*. The Heritage Council.

Hardey, J., H.Q.P. Crick, C. Wernham, H. Riley, B. Etheridge, and D. Thompson (2013) *Raptors: a field guide for surveys and monitoring* (3rd edn.). Edinburgh: The Stationery Office.

NPWS (2012) *Conservation Objectives: Lower River Shannon SAC*. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2016) *Conservation Objectives: Slieve Bernagh Bog SAC*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2017) *Conservation Objectives: Keeper Hill SAC*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2017) *Conservation Objectives: Silvermines Mountains West SAC*. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2018) *Conservation Objectives: Bolingbrook Hill SAC*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2018) *Conservation Objectives: Clare Glen SAC*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2018) *Conservation Objectives: Glenstal Wood SAC*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2018) *Conservation Objectives: Silvermine Mountains SAC*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2022) *Conservation Objectives: Slieve Aughty Mountains SPA*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2022) *Conservation Objectives: Slievefelim to Silvermines Mountains SPA*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2024) *Conservation Objectives: Lough Derg (Shannon) SPA*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

OPR (2021) *OPR Practice Note PN01: Appropriate Assessment Screening for Development Management*. Office of the Planning Regulator.

Smith, G.F., P. O'Donoghue, K O'Hora, and E Delaney (2011) *Best practice guidance for habitat survey and mapping*. Kilkenny: The Heritage Council.





Appendix A European Sites

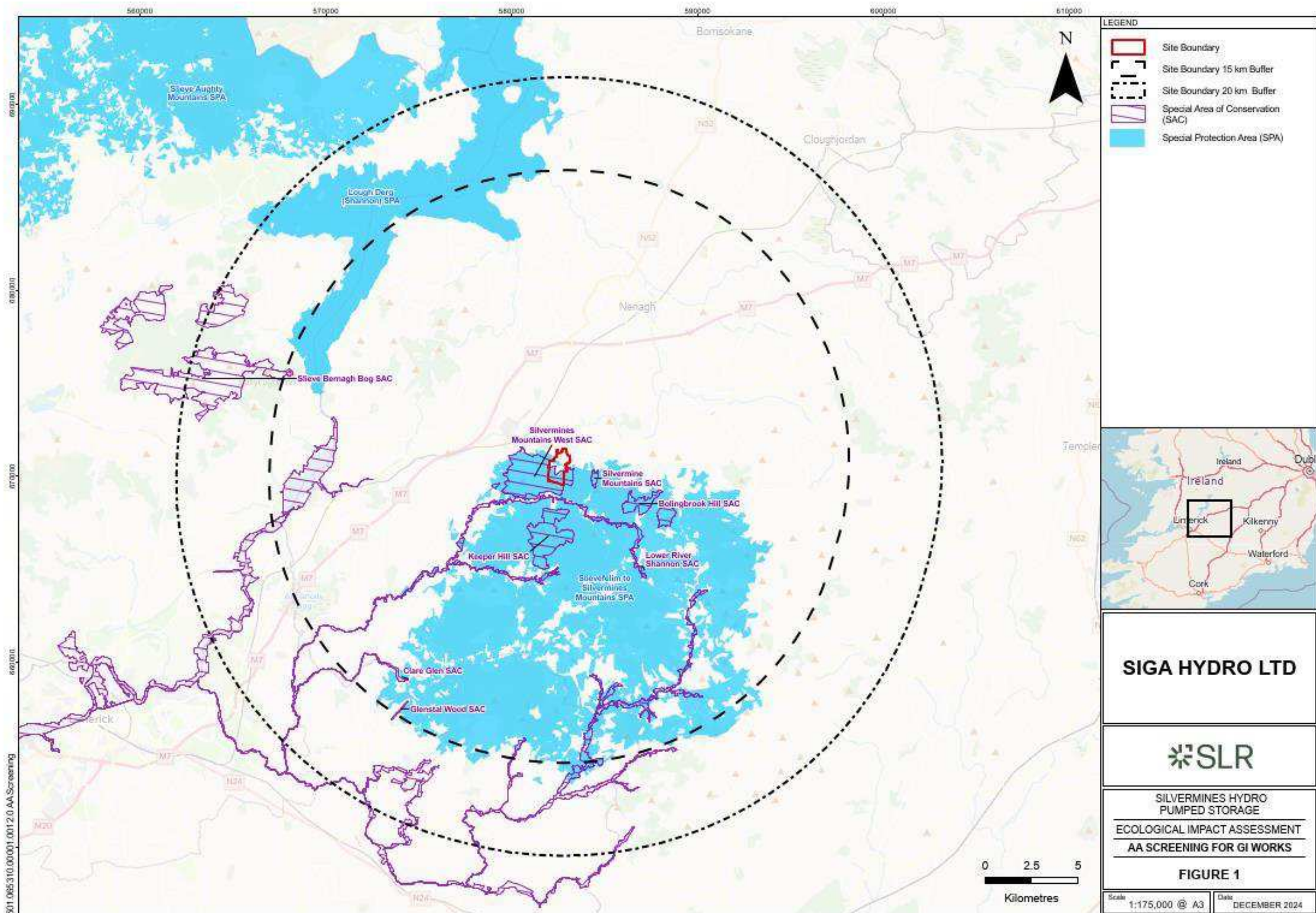
Appropriate Assessment Screening Report

Silvermines Hydro Electric Power Station – Ground Investigation Works

Siga-Hydro Limited

SLR Project No.: 501.065310.00001

28 March 2025





Appendix B Standard Operating Procedures for GI Drilling Works

Appropriate Assessment Screening Report

Silvermines Hydro Electric Power Station – Ground Investigation Works

Siga-Hydro Limited

SLR Project No.: 501.065310.00001

28 March 2025

APPENDIX B


Appendix A: Risk Assessment Method Statement (RAMS)

Appendix B: Beretta Specification & Standard Operating Procedure (SOP)

Appendix C: Specification for Hagglunds All-Terrain-Vehicle & Morooka Rubber Crawler Carrier

Appendix D: Specification for Isotrack Temporary Access and Ground Protection Mats

Appendix E: Specification for Bentonite Pellets

	<div><div>RISK ASSESSMENT METHOD STATEMENT</div><div>Silvermines Hydro Project</div><div>Rotary Core Boreholes</div></div>	<div>Doc Ref: Magcobar-001-Rev.01</div> <div>Date: 20/11/2024</div> <div>Page: 1/12</div>
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1. JOB / TASK DESCRIPTION

Planned Commencement Date: TBC
Planned Completion Date: TBC

This task involves the drilling of rotary core boreholes at the site of the Silvermines Hydro Project, Magcobar, Silvermines, Co. Tipperary.

This task is required to recover overburden and rock core samples and to install groundwater monitoring standpipes.

2. EXACT LOCATION OF THE WORKS (ENSURE ACCESS ROUTES CLEARLY IDENTIFIED)

Please see SOP for the proposed location of the boreholes.

3. LIMITATIONS AND CONSTRAINTS

The site is predominantly undulating open mountain side, with a mosaic of grasses, heather and willow.

Hazards Identified include the following:

Farming		
Stalking/Shooting		
Existing Services		
Archaeology		
Mobile Phone Coverage is good		

Natural Hazards

Leptospirosis	Lymes disease	Presence of deer
Exposure to elements (cold/wind/rain)	Livestock (sheep/cattle/horses)	Watercourses
Uneven and steep terrain		

Environmental Hazards

Refueling of Plant	
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Drilling contractor to assess ground conditions prior to accessing lands to ensure no damage will be caused by machinery by installing Ground Protection Mats (see Appendix D of SOP for specification sheet).

4. PLANT / EQUIPMENT & TOOLS REQUIRED

Note: All plant & Equipment must be visually inspected prior to use, any defects, un-calibrated or untested items must not be used.
Rotary coring rig – see Appendix B of SOP for specification sheet and method statement.
PPE
First Aid Kit & Local Emergency Numbers

5. MATERIALS REQUIRED

N/A

6. SPECIALIST EQUIPMENT (I.E CRANE, SCAFFOLDING)


N/A

7. MATERIAL SECURITY, HANDLING AND STORAGE ARRANGEMENTS







N/A


8. PUBLIC INTERFACE ARRANGEMENTS
N/A

9. ACCESS / EGRESS ARRANGEMENTS	10. WASTE DISPOSAL & HOUSEKEEPING ARRANGEMENTS
The drilling locations will be accessed from the historic Magcobar Mine Site, which is accessed from the R499. Good access throughout the site is provided by historic mine haul roads previously used to move material around the site when mining took place in the 1980s/90s.	These works should not generate any waste and there will be no materials used during drilling or mobilisation.

11. PERSONNEL RESPONSIBLE AND SKILLS REQUIRED			
Skilled Worker	Education / Training / Qualification	Skilled Worker	Education / Training / Qualification
Project Manager Name: TBC	Safe Pass Site Induction		
Other's Name: TBC			
First Aider: Name: TBC	Occupational First Aid		

Please Note: All records of personnel training will be available in the site safety file.

12. PPE						
						
Safety Boots	Eye Protection	Gloves	Hi Vis Vest	Ear Protection	Hard Hat	Other
Yes	Yes	Yes	Yes	Yes	Yes	

	<p align="center">RISK ASSESSMENT METHOD STATEMENT</p> <p align="center">Silvermines Hydro Project</p> <p align="center">Rotary Core Boreholes</p>	<p>Doc Ref: Magcobar-001-Rev.01</p> <p>Date: 20/11/2024</p> <p>Page: 4/12</p>
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17. WORK SEQUENCE

Sequence of Events

1. The drill rig will be mobilised to site by the Drilling Contractor on a low-loader. The drill rig will be unloaded on site to an existing hardstand area (refer to SOP for a plan showing the proposed route of the drill rig onto the Magcobar Site and route to boreholes located on the hillside).
2. Following mobilisation to site, the drill rig will be self-propelled into position over the borehole location by the lead driller. Where ground is deemed to be soft, Ground Protection Mats will be put in place (refer to Appendix D of the SOP) to allow the drill rig to travel to and between borehole locations.
3. The area around the borehole locations will have Ground Protection Mats put in place.
4. To position the drill rig, the lead driller will extend the hydraulic jacks/legs of the rig onto steel circular base plates positioned on wooden blocks, resting on Ground Protection Mats located on the ground. The legs will extend as far as required in order to jack the rig up into a stable position for drilling purposes. If the gradient is too steep the location for the borehole will be moved to more level ground. The lead driller will then use the drill rig controls to hoist the mast of the rig into the vertical position and lock it into place for drilling purposes.
5. Once the rig is correctly positioned steel casing will be lowered to ground level and inserted into the ground by rotation using the rig’s hydraulics. When the casing reaches its position in the ground, the core barrel will be lowered into the steel casing until it catches/locks itself into position. The drive head attached to the drill head of the rig allows the lead driller to start to rotate the drilling head.
6. When the core barrel is full the drive head is removed and a latching device is lowered down inside the casing to retrieve the core barrel. When the core barrel is removed from the hole it can be lowered onto a pair of stands via the drill rig’s winch.
7. The back end of the core barrel will be removed and the core carefully placed in a core box.
8. Once the core is removed from the core barrel, the barrel is reassembled and reintroduced into the hole, with another length of casing attached and the process started again.
9. Drill runs may be shortened and drill speeds varied as the drilling process continues in an effort to improve sample recovery.
10. In-situ tests consisting of Standard Penetration Tests (SPT) may be carried out as instructed by the Client’s Engineer and in accordance with BS5930.
11. Water for drilling will be provided from a water bowser parked on an existing hardstand area. The water will be pumped from the water bowser through a pipe to a holding tank located on Ground Protection Mats adjacent to the drill rig.
12. Water returned from the borehole during drilling will be contained in a series of 3 tanks adjacent to the drill rig, thus preventing silt from being deposited onto the ground. All water used in the drilling process will be stored in tanks sitting on Ground Protection Mats adjacent to the drill rig, ensuring the no water from the drilling process has access to the ground surface.
13. The rig will be inspected each morning and a sign off record maintained of the inspection.
14. Once the rotary rig is in position Heras Fencing will be erected around the rig and it will be setup as per the image below.
15. A Safe Plan of Action will be carried out every morning before drilling operations commences and each member of staff will sign off. An inspection of the rotary rig will take place and the drill rig inspection sheet signed off.
16. The borehole will only be terminated upon instruction from the Client’s Engineer. The backfilling process will be carried out with bentonite grout.
17. A standpipe will be installed to allow monitoring of groundwater over a prolonged period of time and in accordance with the Client Engineer’s instructions as specified.

Rotary Core Rig in Operation




18. RISK CLASSIFICATION


The risks identified Below are evaluated in conformance with the Risk Classification scale:																		
<div><u>Assessment of Hazard(Severity)</u> H = Fatality / major injury or illness causing long term disability M = Injury or illness causing short term Disability, minor injury L = No injury</div>	<div><u>Assessment of Risk(Likelihood):</u> H = Certain or near certain M = Reasonably likely to occur L = Very seldom / never</div>	<div><div>LIKELIHOOD</div><table><tr><td></td><td>L</td><td>M</td><td>H</td></tr><tr><td>L</td><td>L</td><td>L</td><td>M</td></tr><tr><td>M</td><td>L</td><td>M</td><td>H</td></tr><tr><td>H</td><td>M</td><td>H</td><td>H</td></tr></table><div>RISK ASSESSMENT</div></div>		L	M	H	L	L	L	M	M	L	M	H	H	M	H	H
	L	M	H															
L	L	L	M															
M	L	M	H															
H	M	H	H															
<u>If the Risk Assessment Rating (Severity x Likelihood) is above Medium Work will NOT be allowed to Proceed</u>																		

19. HAZARD IDENTIFICATION AND RISK ASSESSMENT

Risk Assessment carried out in accordance with the Management of Health & Safety at Work Regulations (NI) 2000								
HAZARD IDENTIFICATION & FORESEEABLE RISKS	(SEVERITY)	LIKELIHOOD	RISK ASSESSMENT	CONTROL MEASURES	(SEVERITY)	LIKELIHOOD	RISK ASSESSMENT	
<ul style="list-style-type: none">Striking of underground services - ESB, Gas, Water, TV.	H	M	H	Prior to carrying out any excavation work, the Client's Engineer will consult the as-built drawings to determine the location of underground services or mains. The area will be scanned prior to any works taking place.	H	L	M	
Causing serious injury due to: <ul style="list-style-type: none">ElectrocutionExplosionFireFlooding	H	M	H	The location of all services will be highlighted to those carrying out the work so that they can adopt the correct procedure for avoiding services, such as moving the borehole at least 5m away, with the permission of the Client's Engineer.	L	L	L	
<ul style="list-style-type: none">Snapping of the hoisting cable while pulling	M	M	M	Cables should be checked before start of shift and any cable with excessive wear should be replaced. Use proper clevis pin and set-screws. Ensure two full turns of cable are always kept on the drum. Stay a safe distance from lines being used for hoisting and pulling. Cables to be certified and inspected regularly in accordance with H&S Plan.	M	L	L	

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<ul style="list-style-type: none"> Damage to limbs while operating the 'SPT hammer' 	M	L	M	<p>Never place your hand on the guide or drive head when the hammer is suspended or in use. Any drive heads and pipe couplings that are worn or splintered must be replaced. Sheave wheels, staff and pins must be checked daily and should be well lubricated and replaced when worn. An exclusion zone of 2 m should be maintained while the test is being carried out.</p>	L	L	L
<ul style="list-style-type: none"> Slipping on mud, bentonite, lubricant or grease 	M	L	M	<p>Keep platforms and working areas free of ice, mud, spilled lubricants and excess tools and equipment. Keep engines and pumps free of excessive dirt, grease, oil and spilled fuel. Use waste containers to dispose of all waste and rubbish. Clean all work areas at the end of each shift.</p>	L	L	L
<ul style="list-style-type: none"> Electrocution while erecting the mast 	H	M	H	<p>Before erecting the mast, be sure that there are no overhead power lines or tree branches in the way. Brace the mast sufficiently. Secure the sheave wheel with lock-nuts and inspect the sheave and axel frequently for wear. All work must be carried out with the company and the ESB policy.</p>	H	L	L
<ul style="list-style-type: none"> Catching clothes, fingers, hand or arm while lifting the SPT rods or casing. 	H	M	H	<p>The driller should take charge of lifting operations and should be in control of the machine so that the danger of someone accidentally engaging the drive during the operation is reduced. The winch operator must check and double check all personnel have hands and clothing clear of the machinery and tools/accessories, before the winch is engaged.</p>	H	L	L
<ul style="list-style-type: none"> Injury to member of public while operating plant 	M	L	M	<p>Do not allow personnel to walk into the work area. When working in public areas, surround the rig with Heras fencing or other protective barriers.</p>	L	L	L
<ul style="list-style-type: none"> Risk of being struck by machine or machine parts 	M	M	M	<p>Wear hi-viz vest, hard hat, steel tipped boots, eye and ear protection at all times. Use a flashing beacon on the machine and stickers at the rear of the machine to warn all personnel that if you can't see the driver he can't see you.</p>	L	L	L
<ul style="list-style-type: none"> Aspergillus 	M	M	M	<p>Aspergillus is a fungus whose spores may be present in the spoil that will be generated from the drilling of boreholes. Any 'dry' or dusty soils should be sprayed with water to maintain the soils in a 'damp' condition and so reduce the risk.</p>	L	L	L

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<p>Manual Handling</p> <ul style="list-style-type: none"> Back strain, slipped disc, hernias, lacerations, crushing of hands or fingers, tenosynovitis, bruised or broken toes or feet, various sprains, strains, etc. 	M	M	M	<p>The selection of persons to carry out manual handling or lifting will be based on the training given. Ensure that access is safe and clear. Training provided should be based on the physical structure of the body and the effect of attempting to handle loads in various positions. All supervisory staff to be given training in the correct methods of handling and lifting loads. Suitable gloves to be made available for handling of materials.</p> <p>Look out for splinters, nails, wire etc.</p> <p>Size up the job noting the weight, centre of gravity, ensure there is a clear space where the load is to be set down and ensure you can see over the load.</p> <p>Stand close to the object and with feet hip width apart, one foot in advance of the other prepare to lift.</p> <p>Bend your knees in a crouch position and with back straight.</p> <p>Pull your chin in and avoid dropping your head forward.</p> <p>A good palmar grip is required, preferable one hand around the front of the load and one hand underneath to prevent the load slipping forward to down.</p> <p>Pull the object close to the chest. an even lift is required to complete the exercise.</p> <p>Do not jerk suddenly or try to exceed your personal lifting capacity.</p>	M	L	L
<p>Extreme Weather</p> <ul style="list-style-type: none"> Exposure leading to hypothermia 	M	M	M	<p>Workers should wear warm waterproof boots and clothing, hats, gloves, warm drinks to be available on site. Equipment to be secured in adverse weather.</p>	M	L	L
<p>Working in Bogland</p> <ul style="list-style-type: none"> Sinking into soft peat, engulfment 	M	M	M	<p>Access & egress to be planned in advance. If any operatives are working in peat bog or swamp/marsh land they must work as a pair and not alone. Rescue lines / ropes must be available. Carry a stick to probe ground conditions.</p> <p>The alarm should be raised immediately if someone falls into a 'bog hole' and the emergency services contacted.</p> <p>If you are sinking lie flat and call for assistance. Access & egress to be planned in advance.</p> <p>Stay on formed tracks and do not traverse slopes</p> <p>Workers to wash hands before eating.</p>	M	L	L

High Wind <ul style="list-style-type: none">Branches blown from trees. Herras fencing blowing down. In extreme gusts/high winds drill rods whipped about when raising or lowering into position. Material being blown down from houses or sheds. Over head power lines falling over.	M	M	M	Before entering farm yards check that all shed roofs are intact and no sign of loose sheets of galvanize or roof slates. Make sure all herras fencing is properly secure. If winds are gusting be aware that a gust of wind can catch drill rods when being hoisted - if in doubt do not lift until wind dies down. In case of downed power lines near drill site do not enter drill site - contact ESB and then the site office.	M	L	L
Working in Forestry <ul style="list-style-type: none">Windswept trees (trees blown over by wind)	M	M	M	Keep back a distance of 1.5 x tree height from trees in exposed or open areas.	M	L	L
<ul style="list-style-type: none">Poor visibility	M	M	M	May be difficult to see and more. A torch should be carried to aid visibility. A buddy system should be in place, with no working alone allowed.	M	L	L
<ul style="list-style-type: none">Cutting trees - Chain break or being struck by a machine	M	M	M	Keep at least 100 m away from all harvesting and forwarding equipment. No trees or branches to be cut without prior agreement of th. Areas of exclusion should be set up to ensure that no accidents may happen to third parties. All portable tools should be battery operated or 110kV only. Housekeeping practices should ensure that all areas are kept clean during the working day. Where it is necessary to leave work unfinished at the end of a working day, relevant signage and/or barriers should be put in place. PPE should be worn at all times.	M	L	L

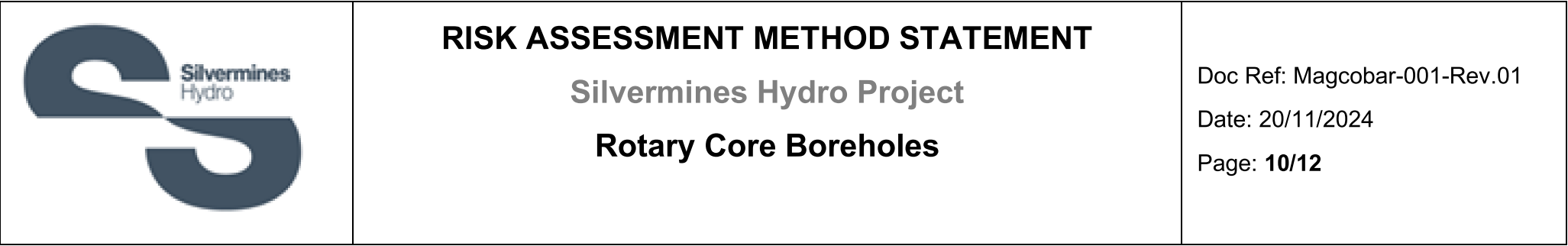
20. RELATED DOCUMENTS			
(LIST DRAWINGS, TECHNICAL SPEC’S ETC THESE MUST BE HANDED OVER TO THE WORKING PARTY & AVAILABLE AT THE POINT OF WORK)			
Doc. Code		Description	
22. DATE & REVISION			
Revision	Date	Originator	

21. TERMS & DEFINITIONS	
Terms / Acronyms / Abbreviations	Definition
PPE	Personal Protective Equipment
MSDS	Material Safety Data Sheet
PICW	Person in charge of works
SSTC	Site safety task card

01	20/11/2024	Drilling Contractor	See 24 below

23. RECORDS	
Form Code	Form Filling Method / File /Record Maintenance
	Including Inspections, Permits to Work and Method statements.

24. ATTACHMENTS / APPENDICES	
Attachment No.	Description
SOP	See SOP for Figures & Appendices.



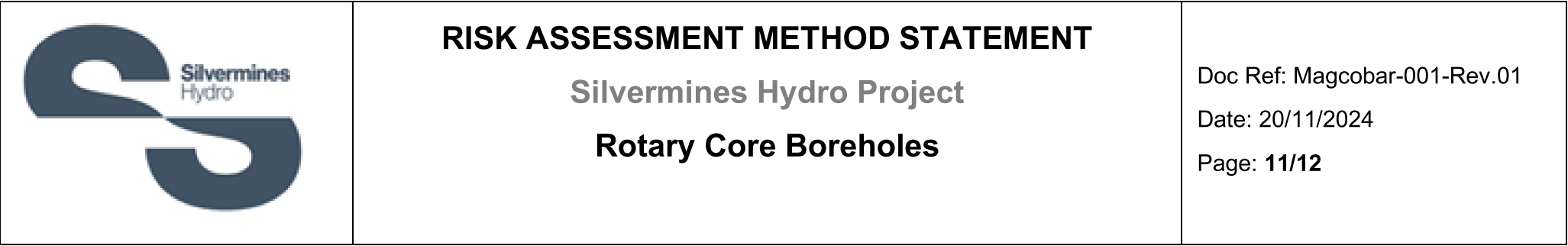
Rotary Core Boreholes

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(NB This section is to be signed by all personnel who are to be engaged in the works.)

We will report to the PICW any proposed deviation to this method

[illegible]



Rotary Core Boreholes

Page: 11/12


List Amendments to Method Statement

Reason for Change

Verification

I agree that I have been re-briefed on the above changes to the method statement in question and confirm that I understand the updated requirements

[illegible]

	<p>RISK ASSESSMENT METHOD STATEMENT</p> <p>Silvermines Hydro Project</p> <p>Rotary Core Boreholes</p>	<p>Doc Ref: Magcobar-001-Rev.01</p> <p>Date: 20/11/2024</p> <p>Page: 12/12</p>
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T21



BERETTA®
HYDRAULIC DRILLING RIGS

POWER PACK	
Unità potenza- Unitès puissance- питания- Unidad potencia- Leistungseinheit	
Diesel engine	Lombardini - Stage V Lombardini - Tier 3
Motore Diesel	
Moteur Diesel	
Дизельный двигатель	
Motor Diesel	
Dieselmotor	
Engine power	19 kW - 25 HP
Potenza motore	
Puissance moteur	
мощность двигателя	
Potencia motor	
Motorleistung	
Oil tank	75 l ; 20 gal
Sebatoio olio	
Réservoir d’huile	
масляный бак	
Tanque aceite	
Öltank	
Fuel tank	20 l ; 5,2 gal
Serbatoio diesel	
Réservoir a carburant	
Топливный бак	
Depósito de combustible	
Treibstofftank	
UNDERCARRIAGE	
Sottocarro- Chenilles- гусеницы- Orugas- Raupenwagen	
Width	600 mm ; 1.96 ft
Larghezza	
Largeur	
ширина	
Anchura	
Breite	
Wheel base	865 mm ; 2.83 ft
Passo cingolo	
Empattement	
Колесная база	
Distancia de rueda	
Radstand	
Shoes width	230 mm ; 9,0 in
Larghezza pattini	
Larghezza patins	
Ширина обуви	
Zapatos anchos	
Schuhbreite	
Max gradeability	35%
Pressione suolo	
Pression au sol	
давление на грунт	
Presion suelo	
Bodendruck	
Max speed	1,5 km/h ; 0,90 mph
Velocità max.	
Vitesse max.	
Макс. скорость	
Velocidad max.	
Max. Geschwindigkeit	

English	Italiano	Français	русский	Español	Deutsch
MAST - Mat- Мачта- Mastil					
Feed stroke			1250 mm ; 4,1 ft		
Corsa utile					
Course utile					
ход вращателя					
Carrera					
Vorschublange					
Total lenght			2130 mm ; 7,5 ft		
Lunghezza totale					
Longueur totale					
Общая длина					
Largo total					
Gesamtlänge					
Pull-up			15 kN ; 3372 lbs		
Tiro-spinta					
Traction					
Маск. тяговое усилие					
Tiro					
Vorschubkraft					
CLAMPS					
Morsa- Mors-тиски- Mordaza					
Clamping diameter			48 - 160 mm ; 1,80 - 6,3 in		
Diametro bloccaggio					
Diamètre blocage					
диаметр захвата тисков					
Diametro bloque					
Durchmesser Sperre					
Clamping force			65 KN ; 14600 lbs		
Forza chiusura					
Force fermeture					
усилие зажима					
Fuerza cierre					
Schließkraft					
WEIGHT 1000 - 1100 kg; 2200 - 2400 lbs					
Peso- Poids- Bec- Gewicht					

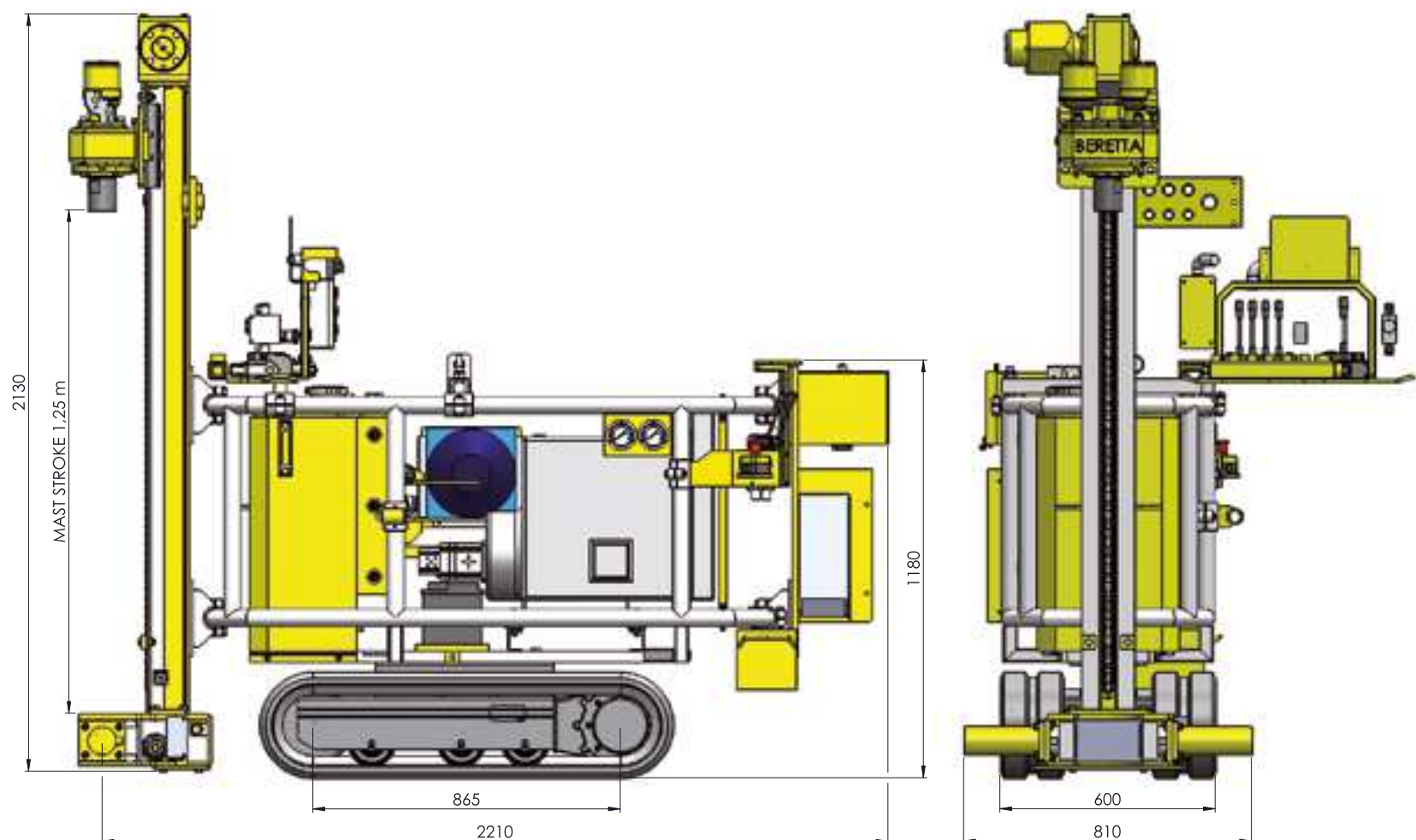


Rotary type 22 - 2V								
(version)	(A)		(B)		(C)		(D)	
SPEED	daNm (lb ft)	RPM	daNm (lb ft)	RPM	daNm (lb ft)	RPM	daNm (lb ft)	RPM
1°	91 (672)	193	115 (849)	154	145 (1070)	123	182 (1343)	96
2°	45 (332)	386	57 (421)	309	72 (531)	247	91 (672)	193
(version)	(E)		(F)		(G)			
SPEED	daNm (lb ft)	RPM	daNm (lb ft)	RPM	daNm (lb ft)	RPM		
1°	230 (1697)	77	287 (2118)	61	343 (2531)	48		
2°	115 (849)	154	143 (1055)	123	171 (1262)	96		

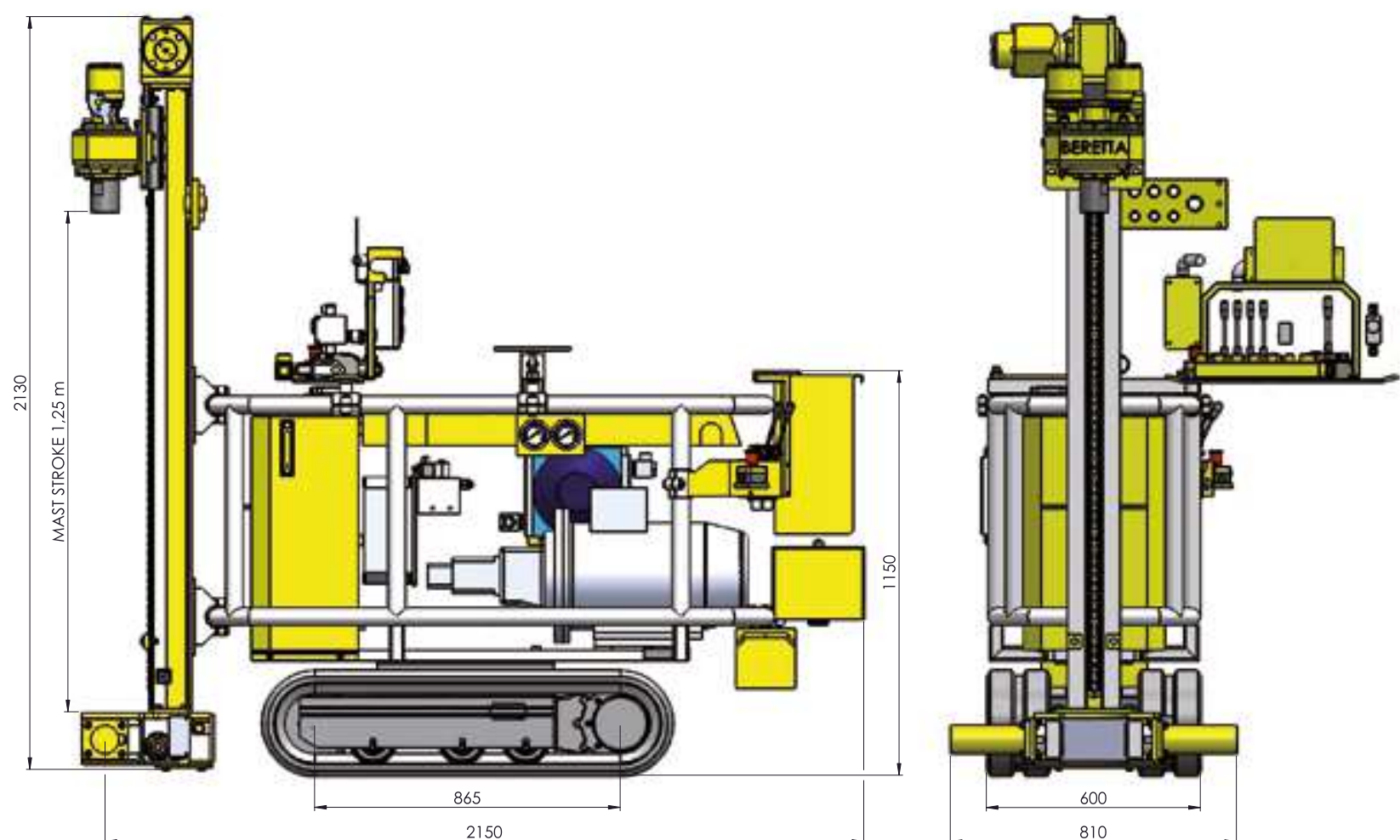


T21

Dimensions - Dimensioni - Dimensions- размеры - Dimensiones - Größe



Optional electric engine version



Sequence of works	<p>All site operatives will make themselves available for the site briefing / induction on the first day of the works.</p> <p>All site operatives to be inducted and briefed on the method statement prior to works commencing.</p> <p>This is to cover the requirement in the contract documents for a tool box talk.</p> <p>All members from drilling team will sign onto the RAMS.</p> <p>No smoking permitted on site except in designated areas.</p> <p>All staff must note speed limits when entering and travelling around the site. Additional care must be taken when travelling on and around the site and all speed limits <u>must</u> be obeyed.</p> <p>Staff and drilling rig operators will then walk the site to observe site specific working conditions.</p> <p>Drilling locations to be set out by client's engineer.</p> <p>Prior to works commencing pre-start checks will be carried out on the drilling rig as per the attached plant pre-start check sheet.</p> <p>All diesel equipment must be refuelled in contractors' compound.</p> <p>Working area</p> <p>All employees are to adhere to good principles of manual handling as per their training.</p> <p>The position of the borehole to be located and marked by the employer's representative.</p> <p>Staff to cat scan all exploratory holes prior to commencement of drilling activities.</p> <p>Overhead powerlines will be avoided.</p> <p>Mark out and establish working area.</p> <p>The working area will be sectioned off to prevent access to unauthorised personnel.</p> <p>If access to the working area is not safe, drilling activities must cease.</p> <p>Drilling rig set up</p> <p>Where drilling locations are easily accessible the rig and mast will be tracked into place over the drilling location using a Bobcat or similar.</p> <p>The mast raised into the drilling position and ground anchors positioned.</p> <p>At drilling locations where access is limited the drill mast will be removed from the Bobcat or similar, disassembled in modular parts and reassembled at the drill location.</p> <p>Once in place the mast will be bolted to the ground and ground anchors extended for stability.</p> <p>Tracking mats</p>
--------------------------	--

	<p>Tracking mats will only be used to protect movement over soft ground / unsupported surfaces.</p> <p>Tracking mats must be placed over all soft ground areas prior to allow movement across them.</p> <p>Mats will be laid side by side along the length of the area to be moved across.</p> <p>When tracking across mats one of the drill crew must act as a designated spotter to ensure the equipment / tracked handler is traversing equally across the mats.</p> <p>Drilling rig</p> <p>A track mounted Beretta T21 rotary rig will conduct the drilling activities on-site.</p> <p>The benefits of the Beretta T21 is the potential for use as a modular rig in difficult access situations.</p> <p>It is a <u>electro/hydraulic rig</u> allowing the remote positioning of a generator power source to conduct drilling activities.</p> <p>Prior to works commencing pre-start checks will be carried out on the drilling rig as per the plant pre-start check sheet.</p> <p>The Beretta T21 rig is fitted with the following safety features:</p> <p>An acoustic alarm and flashing beacon warn that the machine is moving or being set up into operating position at a borehole.</p> <p>Safety cut off switch at the control panel for setting up the machine.</p> <p>Safety cut off switch on the main control panel for performing drilling operations.</p> <p>Borehole drilling</p> <p>Geobor-S continuous wireline core drilling will be used. The outer barrel is rotated allowing tungsten / diamond drill bit to cut into the concrete / rock. At 1.5m intervals the core barrel will be removed from the casing and the core sample placed in a labelled core box. The operation will be repeated until the required depth is achieved.</p> <p>A water flush will be pumped down the inside of the wireline casing to clear cuttings from the borehole to the chosen depth.</p> <p>The water will be held in a clear IBC to allow the driller a clear view of water being used.</p> <p>A diverter will be fitted to the casing head.</p> <p>The water flush with suspended cuttings / arisings will discharge baffled settlement tank, allowing the large particles fall out of suspension and settle.</p> <p>The water will then be recirculated through the drill string.</p> <p>Records of daily drilling activities</p> <p>In addition to conducting drilling activities the master driller will:</p> <ul style="list-style-type: none">• complete a borehole log at the end of each day.
--	---

	<ul style="list-style-type: none">• monitor the standing water level which will be recorded on the drillers log prior to works commencing and at completion of drilling activities daily.• check the verticality of borehole.• monitor hole for ingress of water or loss of pressure during drilling operations. <p>Movement of equipment</p> <p>Drilling equipment will be moved between the borehole locations by a Bobcat T140 or similar tracked handler.</p>
--	--

Appendix C:

Specification: Hagglands BV 206 All-Terrain-Vehicle

The Hagglands All-Terrain-Vehicle is superbly engineered, and not just for trekking snow covered conditions. Fording streams, crawling rock surfaces, swimming deep water, manoeuvring mud and muck or post-disaster debris are no obstacle for this multipurpose vehicle. The unit is even fully amphibious without extra preparation. It's operational in more diverse environments than

The Hagglands trim body, barely exceeding six feet wide and less than eight feet tall, along with its rubber tracks are gentle on tundra and soft dirt, thus minimizing the destruction of vegetation. The rubber tracks also allow the vehicle to travel on pavement without the typical wear and tear associated with steel tracks.

Whether you are a utility, a corporation or a private company, the Hagglands All-Terrain-Vehicle is excellent for transporting employees or cargo because of its two-ton load capacity (up to 4,400 lbs.). The six-passenger BV 206 Cargo model can transport bulky, heavy equipment over the toughest terrain. The rear compartment can load up to three European-style wooden pallets.

- **Transmission:** Auto
- **Track:** 2' Wide Molded Reinforced Rubber
- **Electrical:** 24 Volt
- **Turning Radius:** 26 ft.
- **Height:** 7 ft. 9 in.
- **Length:** 22 ft. 6 in.
- **Width:** 6 ft. 1 in.
- **Seating Capacity:** 6 Front and 11 in Rear Car
- **Payload:** 4400 lb.
- **Empty Weight:** 9500 lb.
- **Maximum Speed:** 34 mph (gas)/ 31 mph (diesel); 2 mph in water
- **Ground Bearing Pressure:** Less than 2 psi or 14 kPa



MOROOKA EUROPE

HIGH EFFICIENCY IN MOTION



MST110C

Max. Payload 11T.

Rubber Crawler Carrier

**CARRIER for SOFT, SANDY and
ROUGH TERRAIN**

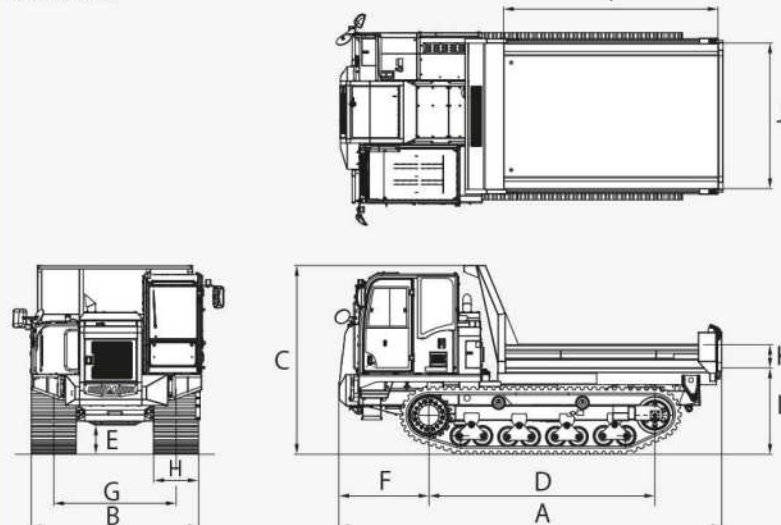


Long and wide rubber crawler to provide low ground pressure as well as stability and excellent traction



Easy Control with HST drive system

Unit : mm



Model		MST110C		<div><div><div></div><div>B</div><div></div></div><div><div></div><div>A</div><div></div></div></div>						
PERFORMANCE				DUMP BODY			TANK CAPACITY			
Maximum Payload	Kg	11,000	Overall Length	I	mm	3,590	Fuel Tank	ℓ	266	
Loading Capacity (Struck)	m³	3.42	Overall Width	J	mm	2,440	Hydraulic Tank	ℓ	125	
Speed1 Low	Km/h	7.5	Overall Height	K	mm	390	DEF Tank	ℓ	33.54	
Speed2 High	Km/h	10.5	Ground Clearance	L	mm	1,440	DRIVE SYSTEM			
Ground Pressure(empty)	kPa	24.5	ENGINE				HST			
Ground Pressure(Loaded)	kPa	43.5	Model	Cummins QSB6.7-4E Tier 4 final Stage 5			GRADEABILITY			
MACHINE DIMENSION		Fully loaded: 36 % (20 degree) Continious								
Machine Weight		Kg	14,200	Nominal Output/rpm	HP(kw)/rpm	249,4(186)/2,000	OTHER			
Overall Length	A	mm	6,420	Torque	N.m/min-1	1,152/1,500				
Overall Width	B	mm	2,850	HYDRAULIC PUMP			Cabin (ROPS/FOPS) Joystick control Hardox Dump Body			
Overall Height	C	mm	3,160	Main Pump	2x variable displacement axial piston pump					
Wheelbase	D	mm	3,790							
Min. Ground Clearance	E	mm	480	Pilot pump	1x gear pump					
Front Overhang	F	mm	1,510							
Crawler Distance	G	mm	2,050	HYDRAULIC MOTOR						
Crawler Width	H	mm	750	Travel Motor	2x Constant displacement axial piston motors					
Crawler Size		mm	750x 150x 66							

Remarks: Specification may be changed without any notice.

MOROOKA EUROPE

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Fax: +49 (0)61529778-15
Web: www.morookaeurope.com

Contact

ISOTRACK L SERIES
PROTECT – BE SAFE

**LIGHTWEIGHT
TEMPORARY ACCESS
AND GROUND
PROTECTION MAT**

ISOTRACK L SERIES PREMIUM
MAN-HANDABLE MAT PROVIDES
SAFE, TEMPORARY ACCESS,
WORK AREAS AND PROTECTION
OVER SOFT GROUND
CONDITIONS AND HARD
SURFACES. TWO PERSONS
LIFT FOR EASY HANDLING AND
INSTALLATION.



ISOKON
INNOVATIVE PLASTICS SOLUTIONS

ABOUT US

Isokon is a European company with more than 40 years' experience in the manufacture of technical plastics.

We have factory plant and equipment that has been dedicated to making extreme duty temporary road access mats since 2009.

Our own technical R & D team works in partnership with independent institutions to provide design innovation and robust testing to ensure mat performance and durability.



KEY BENEFITS

- Man-handable mat – two person lift and easy handling using the hand cut-outs or hand grips
- Fast and easy to install using a choice of connection options
- Solid, compression-moulded high performance thermoplastic material resistant to chemicals and oil and is UV protected
- Flexible but tough and durable mat for long life use
- 100% recyclable at end of life

KEY INFORMATION AND FEATURES

- Each mat has two different, excellent traction surfaces for safe movement of vehicles and pedestrians.
- One surface has the market leading Isotraction™ design for safe vehicle operation in dry or wet conditions.
- Unique elongated connector hole design to enable adjustment if thermal expansion or contraction occurs.
- Customer logo option

APPLICATIONS-MAIN SECTORS

- Utilities
- Construction and civil engineering
- Drilling contractors
- Transmission
- Renewable energy
- Events
- Emergency access
- Temporary road and work areas
- Hard and soft landscaping work
- Sports facilities and recreational grounds
- Pedestrian walkways
- Any project requiring safe temporary access for vehicles, pedestrians and equipment



SAFETY AND EFFICIENCY



- Cost effective and safe option compared to plywood – will not warp or rot.
- Only mat with elongated connection holes – prevent trip hazard when connected mats expand in high temperatures.
- Isotraction™ surface designed is based on tyre manufacturer traction research and has been independently tested to demonstrate superior grip for vehicles compared to other mats.
- Prevent vehicles and workers getting bogged down – avoid costs associated with down time.
- Avoid ground reinstatement costs



General information			
Overall Dimensions	2410 x1200 mm	Handling and Installation	Handhold cut-outs and hand grips for easy handling – two-person lift. No specialist tools or equipment required.
Thickness	Total 20 mm, Core 12 mm	Recycling	100% recyclable
Useable Surface Area	2,89 m²	Safety	Surface structure designs provide excellent traction for vehicles
Weight	36 kg	Environmental	No liquid absorption and chemically inert. Easy to clean / decontaminate
Colour	Black (standard) Other colours subject to minimum order quantity	Load bearing capacity	Ideal for supporting lighter vehicles and equipment up to 20 tonnes on softer ground and more than 50 tonnes on firm ground*
Transport	Standard high cube 40' container 560 mats, Truck standard EU 650 mats	Fire Rating	UL 94HB

* Load bearing capacity is dependent on ground conditions.



Isokon d.o.o.

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SLOVENIJA

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Bentonite Cement Pellets



Bentonite Cement Pellets are used in construction, drilling and tunnelling projects for sealing applications where more strength is required than can be achieved with pure Bentonite alone. This product is used to seal off contaminated land, seal around pipes or tunnels, seal up bore holes, fill voids, protect pipes and cables in conduits or provide a more conductive medium for cable grouting.

Applications

- Borehole sealing
- Borehole decommissioning

Packaging

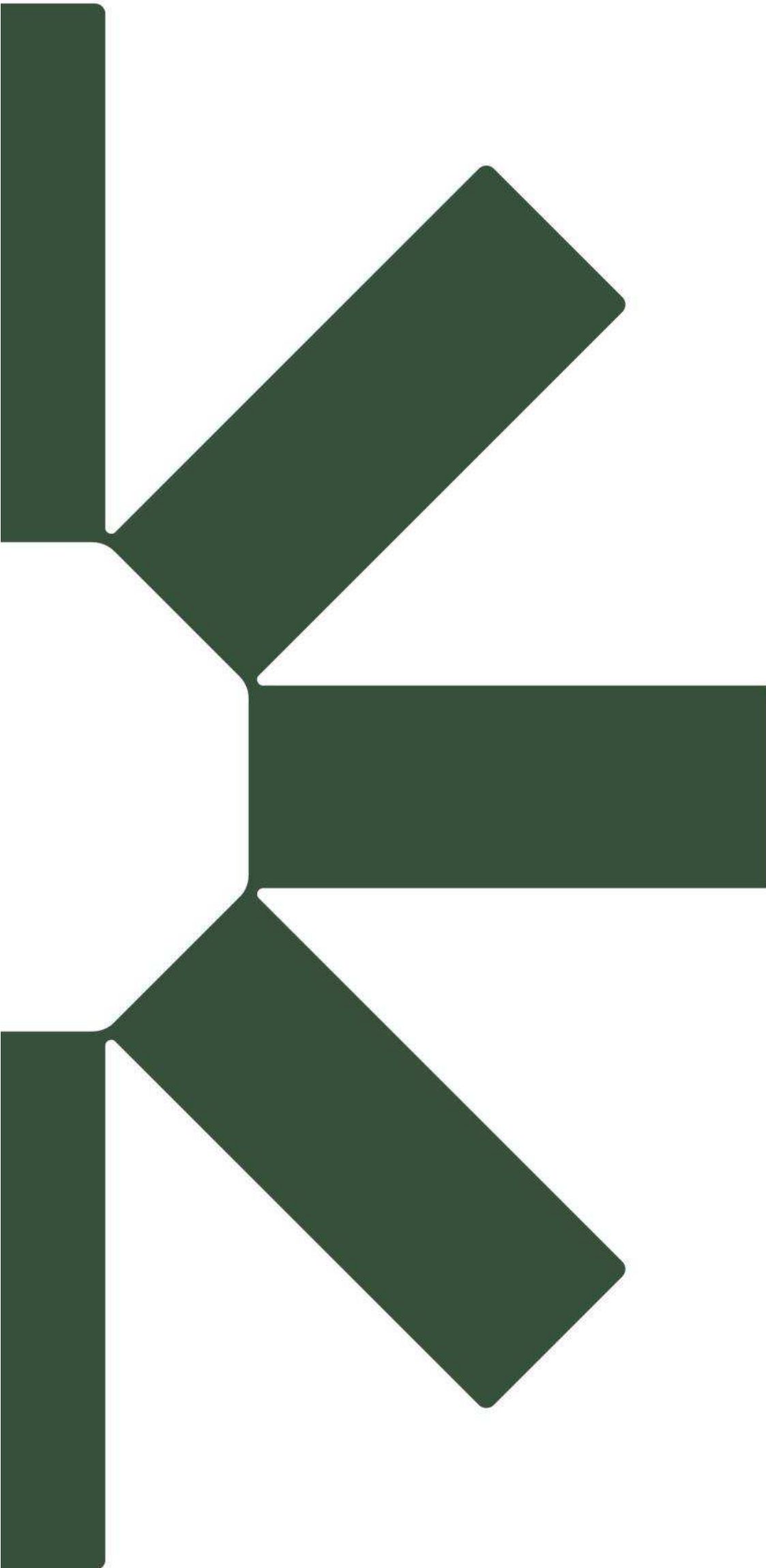
- 25kg waterproof bags
- 40 bags per pallet

Features

- Pre-formed pellet
- No grouting / mixing machines required
- Simple & easy to use
- Environmentally friendly
- Low permeability

Specifications	
Pellet size	8mm (D) 5-15mm (L)
Specific gravity	2.2 – 2.5g/ml
Bulk density	1.05 – 1.10g/ml
Colour	Light grey
Contained swelling vol	Typ. 25- 50% after 48 hrs
Settling velocity	40cm/sec
Swelling onset	2 minutes

Typical Analysis	
SiO ₂	65.5%
Al ₂ O ₃	11.7
Fe ₂ O ₃	6.36
TiO ₂	0.63
CaO	1.01
MgO	3.35
K ₂ O	1.70
Na ₂ O	4.90
Loss on ignition	5.7



Making Sustainability Happen



501_050315_0001_Site Plan Map_140325.dwg

NOTES

Edited from Taha Esmen
Map Series: Map Sheets
1:2,500 (450x24)
1:2,500 (450x24)
1:5,000 (450x24)
Centre Coordinates: 502504.5, 670485.0
Taha Esmen License No: CNA5845033
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LEGEND

PROPOSED SOIL SAMPLING LOCATION

PROPOSED BOREHOLE LOCATION (WATER WELL)

SITE LOCATION

SURVEILLING RESOURCES
CONSULTING ENGINEERS LTD
WINDY ARCADE
DUBLIN 15
T: +353 1 2864475
F: +353 1 2864475
www.slr.ie

SIGA-HYDRO LIMITED
SILVERMINES HYDRO
BOREHOLE AND SOIL SAMPLE
SITE PLAN
DRAWING 2

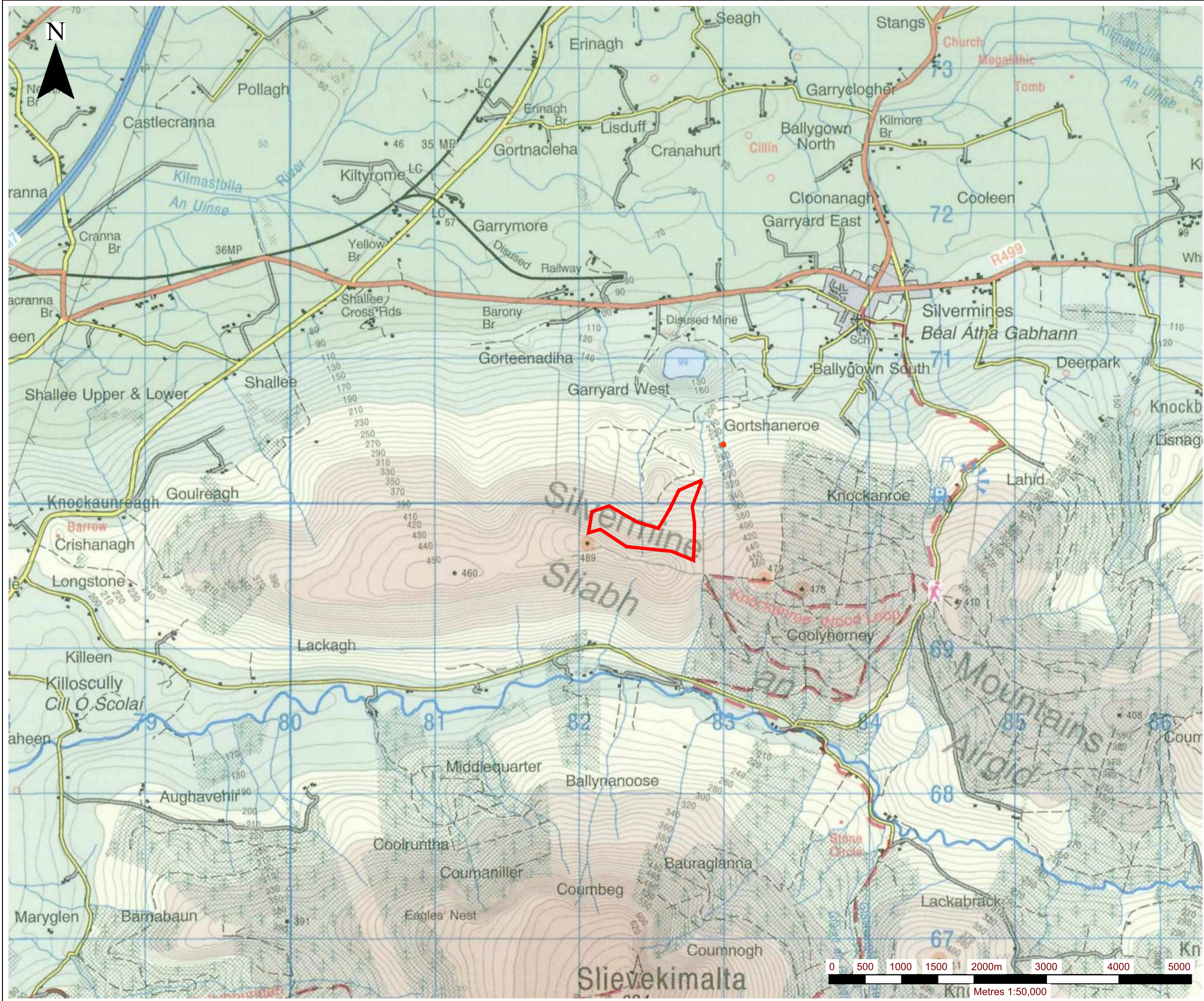
Scale: 1:1,000 (B2) 14/03/2025

0 10 20 30 40m 60 80 100

Meters: 1:1000

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501.065310.0001 Site Location Map 140325.dwg



NOTES

Extract from Ordnance Survey Map Discovery Series
Map No. 59
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LEGEND

SITE LOCATION

SLR

SLR CONSULTING IRELAND
DUNDUM BUSINESS PARK
WINDY ARBOUR
DUBLIN 14
T: +353-1-2964667
F: +353-1-2964676
www.slrconsulting.com

SIGA-HYDRO LIMITED

SILVERMINES HYDRO

SITE LOCATION

DRAWING 1

Scale
1:50,000 @A3

Date
14/03/2025

0500100015002000300040005000

Metres 1:50,000

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Comhairle Contae Thiobraid Árann
Tipperary County Council

Comhairle Contae
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Oifigi Cathartha,
Cluain Meala,
Co. Thiobraid Árann
Tipperary County Council,
Civic Offices, Clonmel,
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tipperarycoco.ie

Date: 1st April, 2025 Our Ref: S5/25/34 Civic Offices, Clonmel

Siga-Hydro Ltd
c/o Stephen Barrett
80 Harcourt Street
Dublin 2
D02 F449

Re: Application for a Section 5 Declaration – Proposed Ground Investigation (GI) programme comprising the drilling of 2 No. boreholes and collection of 16 No. soil sampling via hand auger holes. The activities are located within the Silvermines Mountains West Special Area of Conservation and the Slievefelim to Silvermines Special Protected Area at South of the former Magobar Mine, in townlands of Gortshanroe and Garryard West, Co. Tipperary

Dear Mr Barrett

I acknowledge receipt of your application for a Section 5 Declaration received on 31st March, 2025, in connection with the above.

I wish to advise that you will be notified of a decision on your application in due course.

Yours sincerely


for **Director of Services**

TIPPERARY COUNTY COUNCIL
Application for Declaration under Section 5

Planning & Development Act 2000, as amended
Planning & Development Regulations 2001, as amended

Planning Reference: Section 5/25/34

Applicant: Siga-Hydro Ltd.

Development Address: Site south of the former Magcobar Mine, in the townlands of Gortshanroe and Garryard West, Co. Tipperary.

Proposed Development: Proposed Ground Investigation (GI) programme comprising the drilling of 2 No. boreholes and collection of 16 No. soil sampling via hand auger holes. The activities are located within the Silvermines Mountains West Special Area of Conservation (SAC) and the Slievefelim to Silvermines Special Protected Area (SPA).

1. GENERAL

On the 31st March 2025 a request was made for a declaration under Section 5 of the Planning and Development Act, 2000 as amended by Siga-Hydro Ltd as to whether or not the following works constituted development and if so, whether same was exempted development:

Proposed Ground Investigation (GI) programme comprising the drilling of 2 No. boreholes and collection of 16 No. soil sampling via hand auger holes. The activities are located within the Silvermines Mountains West Special Area of Conservation (SAC) and the Slievefelim to Silvermines Special Protected Area (SPA).

The above works are to be undertaken on lands south of the former Magcobar Mine, in the townlands of Gortshanroe and Garryard West, Co. Tipperary.

The application as submitted includes;

- Section 5 application form.
- Cover Letter.
- Site Location Map and Site Plan.
- Appropriate Assessment (AA) Screening Report.

2. STATUTORY PROVISIONS

The following statutory provisions are relevant to this referral case;

Section 2(1) of the Planning and Development Act, 2000, as amended, states as follows;

“In this Act, except where the context otherwise requires – “development” has the meaning assigned to it by Section 3 and development shall be construed accordingly.”

And,

“works” includes any act or operation of construction, excavation, demolition, extension, alteration, repair or renewal and, in relation to a protected structure or proposed protected structure, includes any act or operation involving the application or removal of plaster, paint, wallpaper, tiles or other material to or from the surfaces of the interior or exterior of a structure”.

Section 3 (1) of the Planning and Development Act 2000, as amended, states as follows:-

“In this Act, ‘development’ means, except where the context otherwise requires, the carrying out of works on, in, over or under land or the making of any material change in the use of any structures or other land.”

Section 4 provides for Exempted Development and Section 4(1) sets out works which shall be exempted development for the purposes of the Planning and Development Act 2000, as amended. Section 4(2)(a) of the same Act states that ‘the Minister may by regulations provide for any class of development to be exempted development for the purposes of this Act.

Section 4 (4) of the Planning and Development Act 2000, as amended, states as follows:-

Notwithstanding paragraphs (a), (i), (ia) and (l) of subsection (1) and any regulations under subsection (2), development shall not be exempted development if an environmental impact assessment or an appropriate assessment of the development is required.

Section 57 (Works affecting character of protected structures or proposed protected structures) is not considered relevant as the Section 5 relates to a change of use only.

Planning and Development Regulations, 2001, as amended

Article 6(1) states;

Subject to Article 9, development of a class specified in column 1 of Part 1 of Schedule 2 shall be exempted development for the purposes of the Act, provided that such development complies with the conditions and limitations specified in column 2 of the said Part 1 opposite the mention of that class in the said column 1.

CLASS 45 Any drilling or excavation for the purpose of surveying land or examining the depth and nature of the subsoil, other than drilling or excavation for the purposes of minerals prospecting.	Conditions/Limitations N/a.
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Article 9 states - Restrictions on exemption

Article 9. (1) Development to which article 6 relates shall not be exempted development for the purposes of the Act— (a) if the carrying out of such development would—

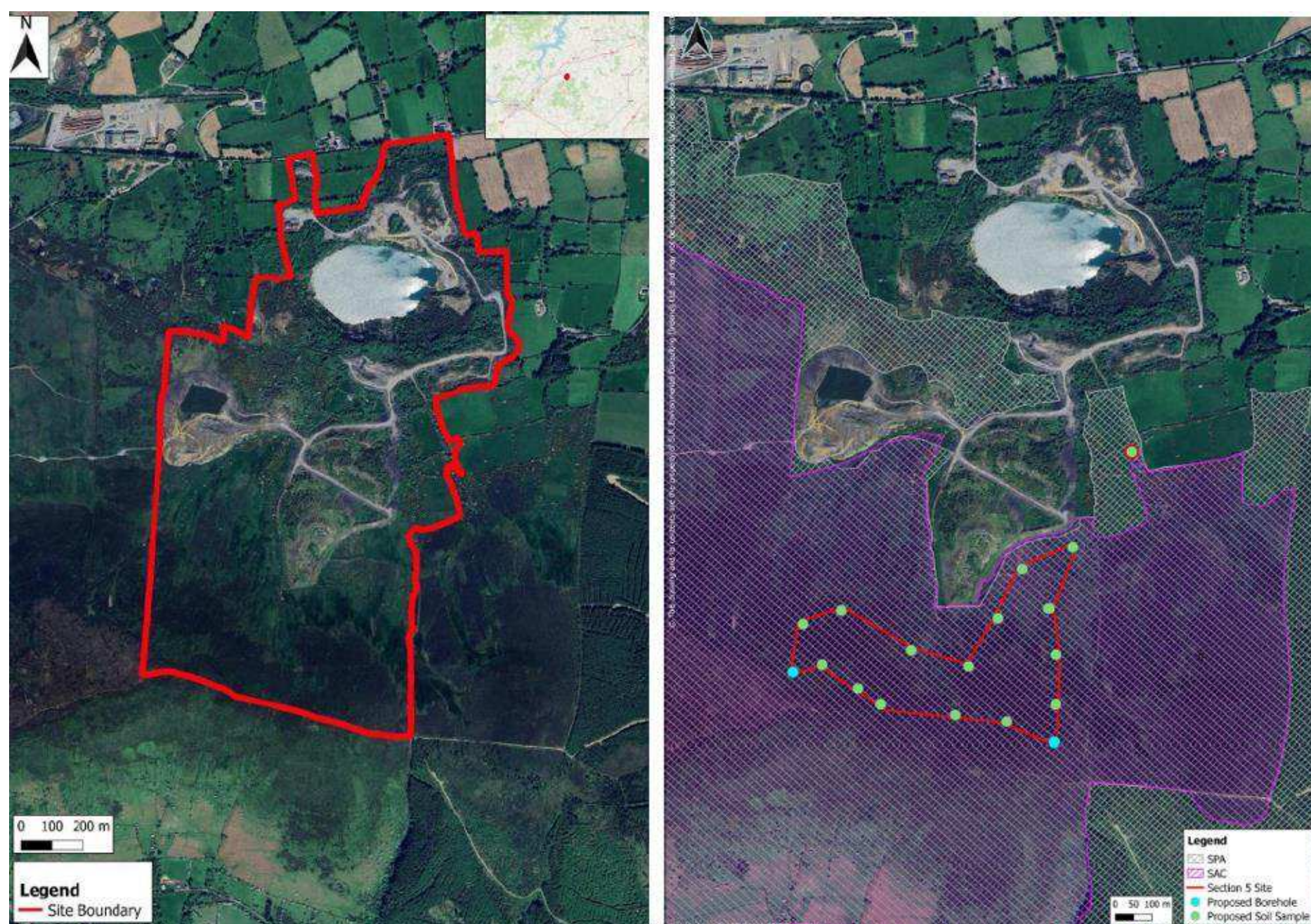
(vi) interfere with the character of a landscape, or a view or prospect of special amenity value or special interest, the preservation of which is an objective of a development plan for the area in which the development is proposed or, pending the variation of a development plan or the making of a new development plan, in the draft variation of the development plan or the draft development plan,

(viiB) comprise development in relation to which a planning authority or An Bord Pleanála is the competent authority in relation to appropriate assessment and the development would require an appropriate assessment because it would be likely to have a significant effect on the integrity of a European site,

3. ASSESSMENT

a. Site Location

The works are to be undertaken on lands south of the former Magcobar Mine, in the townlands of Gortshanroe and Garryard West, Co. Tipperary. See Map below showing site location (left hand side) with development layout shown on map on right hand side.



b. Planning History

51351	Workshop and Stores	Permission Granted
514550	Ore Crushing Plant	Permission Granted
50/1192	Sanitary Landfill Facility	Permission Refused
	Part 8 Rehabilitation Scheme for works at Magcobar	Permission Granted

C. Assessment

A) “Is or is not Development”

It is considered that the above listed proposal constitutes “works” as understood by the Planning and Development Act 2000 (as amended). The above listed proposals therefore constitute “development” within the meaning of the Planning and Development Act 2000 (as amended).

B) “Is or is not Exempted Development”

It is considered that the proposed works avail of the exemption set out under Class 45 of Part 1 of Schedule 2 of the Planning and Development Regulations 2001, as amended.

C) Restrictions under Article 9

Article 9(1) of the Planning and Development Regulations 2001, as amended sets out restrictions on exemptions provided under Article 6 of said Regulations. The restrictions below are of relevance.

*Development to which article 6 relates shall not be exempted development for the purposes of the Act—
(a) if the carrying out of such development would—*

(vi) interfere with the character of a landscape, or a view or prospect of special amenity value or special interest, the preservation of which is an objective of a development plan for the area in which the development is proposed or, pending the variation of a development plan or the making of a new development plan, in the draft variation of the development plan or the draft development plan,

The works area is located within a Secondary Amenity Area as designated under the Tipperary County Development Plan 2022 (TCDP). Views East and West of the R497 are identified as listed views under the TCDP. I am satisfied that the works will not interfere with the character of the area landscape or interfere with the views west of the R497.

(viiB) comprise development in relation to which a planning authority or An Bord Pleanála is the competent authority in relation to appropriate assessment and the development would require an appropriate assessment because it would be likely to have a significant effect on the integrity of a European site,

The proposed development has been screened as to the requirement for Appropriate Assessment (AA) and it has been determined that AA is not required. See Screening Report attached. The details submitted with the Declaration application have been considered undertaking AA Screening.

4. ENVIRONMENTAL IMPACT ASSESSMENT (EIA) & APPROPRIATE ASSESSMENT (AA):

Section 4(4) of the Planning and Development Act 2000 (as amended) states:

Notwithstanding paragraphs (a), (i), (ia) and (l) of subsection (1) and any regulations under subsection (2), development shall not be exempted development if an environmental impact assessment or an appropriate assessment of the development is required.

The proposed development is not a type of development included for under Schedule 5 of the Planning and Development Regulations 2001 (as amended). EIA is not therefore required,

The proposed development has been screened as to the requirement for AA and it has been determined that AA is not required. See Screening Report attached.

5. RECOMMENDATION

WHEREAS a question has arisen as to whether the undertaking of a Proposed Ground Investigation (GI) programme comprising the drilling of 2 No. boreholes and collection of 16 No. soil sampling via hand auger holes on lands south of the former Magcobar Mine, in the townlands of Gortshanroe and Garryard West, Co. Tipperary is development and is or is not exempted development.

AND WHEREAS Tipperary County Council, in considering this referral, had regard particularly to -

- Sections 2, 3 and 4 of the Planning and Development Act, 2000, as amended
- Article 6 and 9 of the Planning and Development Regulations 2001, as amended.
- Class 45 of Part 1 of Schedule 2 of the Planning and Development Regulations 2001, as amended

AND WHEREAS Tipperary County Council has concluded the proposals as presented constitutes “development” within the meaning of the Planning and Development Act 2000, as amended and is “exempted development”. The development satisfies the exemptions provided under Class 45 of Part 1 of Schedule 2 of the Planning and Development Regulations 2001, as amended

NOW THEREFORE Tipperary County Council, in exercise of the powers conferred on it by Section 5 (2) (a) of the 2000 Act, as amended, hereby decides that the above proposal is development and is exempted development.

Senior Executive Planner:



Date: 22/4/2025

HABITATS DIRECTIVE APPROPERIERATE ASSESSMENT (AA) SCREENING REPORT				
STEP 1. Description of the project/proposal and local site characteristics:				
(a) File Reference No:		S5/25/34		
(b) Brief description of the project or plan:		As per Planners Report		
(c) Brief description of site characteristics:		As per Planners Report		
(d) Relevant prescribed bodies consulted: e.g. DHLGH (NPWS), EPA, OPW		No		
(e) Response to consultation:		N/a		
STEP 2. Identification of relevant Natura 2000 sites using Source-Pathway-Receptor model and compilation of information on Qualifying Interests and conservation objectives.				
European Site (code)	List of Qualifying Interest/Special Conservation Interest ¹	Distance from proposed development ² (km)	Connections (Source-Pathway-Receptor)	Considered further in screening Y/N
Lower River Shannon SAC	https://www.npws.ie/protected-sites/sac/002165	Within 15km	None	No
Lough Derg (Shannon) SPA	https://www.npws.ie/protected-sites/sac/004058	Within 15km	None	No
Silvermines Mountains West SAC	https://www.npws.ie/protected-sites/sac/002258	0km	Yes	Yes
Slievefelim to Silvermines Mountains SPA	https://www.npws.ie/protected-sites/sac/004165	0km	Yes	Yes
Keeper Hill SAC	https://www.npws.ie/protected-sites/sac/001197	Within 15km	None	No
Bolingbrook Hill SAC	https://www.npws.ie/protected-sites/sac/002124	Within 15km	None	No
Silvermine Mountains SAC	https://www.npws.ie/protected-sites/sac/000949	Within 15km	None	No
Clare Glen SAC	https://www.npws.ie/protected-sites/sac/000930	Within 15km	None	No
STEP 3. Assessment of Likely Significant Effects				

(a) Identify all potential direct and indirect impacts that may have an effect on the conservation objectives of a European site, taking into account the size and scale of the project under the following headings:

Impacts:	Possible Significance of Impacts: (duration/magnitude etc.)
<p>Construction phase</p> <ul style="list-style-type: none"> Existing habitats will be compressed/flattened from the movement of machinery to the borehole drill areas and formation of the standing areas for the drilling plant and associated Infrastructure. Borehole drilling will generate noise and some vibration that could cause temporary displacement of bird species. Soil samples will be removed by auger, resulting in ground disturbance. 	<p>The Appropriate Assessment Screening Report prepared by SLR Consulting that accompanies the S5 application notes that the works areas have limited and/or unfavourable wet heath habitat and are unfavourable Bad status for European Dry Heath. The site surveys found no Calaminarian grasslands in the borehole and soil sampling locations.</p> <p>The proposed drilling & soil sampling works will not result in a loss or reduction of Wet or Dry Heath habitat area.</p> <p>Vegetation that is temporarily flattened and can recover in the following growing season.</p> <p>The works will not give rise to any permanent negative effects on the habitats within the SAC nor will the proposals effect their diversity.</p> <p>The works are temporary and limited in duration. No loss of waters will occur that will impact on water quality. The extents of works area are small.</p> <p>The Appropriate Assessment Screening Report prepared by SLR Consulting that accompanies the S5 application notes that surveys undertaken during the summer months of 2024 and also during the non-breeding season of late 2024. showed no evidence of Hen Harrier breeding or roosting within 2 kms of the proposed drilling locations.</p> <p>Noting the above and the temporary nature of the project, its limited duration and localised extents of same it is considered that the noise and vibration impacts arising from the works will not result in significant displacement or disturbance impacts to the Hen Harriers such that their use of the area would be significantly</p>

	<p>impacted or that their population numbers would be effected.</p> <p>The development will not result in habitat reduction or loss. Therefore no reduction in the Hen Harrier foraging habitat will arise.</p>
<p>Operational phase e.g.</p> <ul style="list-style-type: none">• The development does not have an operational phase. See impacts under Construction Phase above.	<p>See above discussion of relevant impacts</p>
<p>In-combination/Other</p>	<p>No potential in combination or cumulative impacts that would result in significant effects on the Silvermines Mountains West SAC and Slievefelim to Silvermines SPA sites in view of their conservation objectives.</p>

(b)Describe any likely changes to the European site:

<p>Examples of the type of changes to give consideration to include:</p> <ul style="list-style-type: none">• Reduction or fragmentation of habitat area• Disturbance to QI species• Habitat or species fragmentation• Reduction or fragmentation in species density• Changes in key indicators of conservation status value (water or air quality etc.)• Changes to areas of sensitivity or threats to QI• Interference with the key relationships that define the structure or ecological function of the site	<p>No changes to the Silvermines Mountains West SAC and Slievefelim to Silvermines SPA will arise. There will not be any reduction or fragmentation of habitat area or any reduction in species density.</p> <p>The Wet and Dry Heath species in the SAC will be disturbed but the impacts of same is not considered significant noting the limited distribution of these species. Any disturbance will be temporary and the species can recover post works.</p> <p>The development will not result in significant displacement or disturbance impacts to the Hen Harriers noting surveys undertaken recorded no breeding Hen Harrier species within 2km of the works area.</p>
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(c) Are ‘mitigation’ measures necessary to reach a conclusion that likely significant effects can be ruled out at screening?

☐ Yes

☒ No

STEP 4. Screening Determination Statement

The assessment of significance of effects:

Describe how the proposed development (alone or in-combination) is/is **not likely** to have **significant** effects on European site(s) in view of its conservation objectives.

On the basis of the information on file, which is considered adequate to undertake a screening determination and having regard to:

- the nature and scale of the proposed development,
- the limited duration and extents of the works area and works methodology,
- the nature of habitats presents in the works area,

it is concluded that the proposed development, individually or in-combination with other plans or projects is not likely to have significant effects on the Silvermines Mountains West SAC and Slievefelim to Silvermines Mountains SPA or any other European site, in view of the said sites' conservation objectives.

An appropriate assessment is not, therefore, required.

Conclusion:			
	Tick as Appropriate:	Recommendation:	
(i) It is clear that there is no likelihood of significant effects on a European site.	<input checked="" type="checkbox"/>	The proposal can be screened out: Appropriate assessment not required.	
(ii) It is uncertain whether the proposal will have a significant effect on a European site.	<input type="checkbox"/>	<input type="checkbox"/> Request further information to complete screening <input type="checkbox"/> Request NIS <input type="checkbox"/> Refuse planning permission	
(iii) Significant effects are likely.	<input type="checkbox"/>	<input type="checkbox"/> Request NIS <input type="checkbox"/> Refuse planning permission	
Signature and Date of Recommending Officer:	Jonathan Flood Senior Executive Planner	Date:	22/4/2025

EIA Pre-Screening			
Establishing a development is a 'sub-threshold development'			
File Reference:		S5/25/34	
Development Summary:		As per planners report	
Was a Screening Determination carried out under Section 176A-C?		<input type="checkbox"/> Yes, no further action required <input checked="" type="checkbox"/> No, Proceed to Part A	
A. Schedule 5 Part 1 - Does the development comprise a project listed in Schedule 5, Part 1 , of the Planning and Development Regulations 2001 (as amended)? (Tick as appropriate)			
<input type="checkbox"/> Yes, specify class _____		EIA is mandatory No Screening required	
<input checked="" type="checkbox"/> No		Proceed to Part B	
B. Schedule 5 Part 2 - Does the development comprise a project listed in Schedule 5, Part 2 , of the Planning and Development Regulations 2001 (as amended) and does it meet/exceed the thresholds? (Tick as appropriate)			
<input checked="" type="checkbox"/> No, the development is not a project listed in Schedule 5, Part 2		No Screening required	
<input type="checkbox"/> Yes the project is listed in Schedule 5, Part 2 and meets/exceeds the threshold, specify class (including threshold): _____		EIA is mandatory No Screening required	
<input type="checkbox"/> Yes the project is of a type listed but is <i>sub-threshold</i> : _____		Proceed to Part C	
C. If Yes, has Schedule 7A information/screening report been submitted?			
<input type="checkbox"/> Yes, Schedule 7A information/screening report has been submitted by the applicant		Screening Determination required	
<input type="checkbox"/> No, Schedule 7A information/screening report has not been submitted by the applicant		Preliminary Examination required	
Signature and Recommending Officer:	Date of	Jonathan Flood Senior Executive Planner	Date: 22/4/2025

Original

TIPPERARY COUNTY COUNCIL

DELEGATED EMPLOYEE'S ORDER

File Ref: **S5/25/34** **Delegated Employee's Order No:** _____

SUBJECT: Section 5 Declaration

I, Dave Carroll, A/Director of Services, Tipperary County Council, by virtue of the powers delegated to me in accordance with the provisions of Section 154 of the Local Government Act 2001, as amended by Schedule 1, Part 1 of the Local Government Reform Act 2014 under Chief Executive's Order No. 41983 dated 17th April, 2025, hereby order that pursuant to the provisions of the Planning and Development Act 2000, as amended, that an application under Section 5 from Siga-Hydro Ltd., C/o Stephen Barrett, 80 Harcourt Street, Dublin 2, D02 F449, re: Proposed Ground Investigation (GI) programme comprising the drilling of 2 No. boreholes and collection of 16 No. soil sampling via hand auger holes. The activities are located within the Silvermines Mountains West Special Area of Conservation (SAC) and the Slievefelim to Silvermines Special Protected Area (SPA) at Site south of the former Magcobar Mine, in the townlands of Gortshanroe and Garryard West, Co. Tipperary is development and is exempted development.

AND WHEREAS Tipperary County Council, in considering this referral, had regard particularly to –

- Sections 2, 3 and 4 of the Planning and Development Act, 2000, as amended,
- Article 6 and 9 of the Planning and Development Regulations 2001, as amended,
- Class 45 of Part 1 of Schedule 2 of the Planning and Development Regulations 2001, as amended.

Tipperary County Council has concluded that the proposals as presented constitutes "development" within the meaning of the Planning and Development Act 2000, as amended and is "exempted development". The development satisfies the exemptions provided under Class 45 of Part 1 of Schedule 2 of the Planning and Development Regulations 2001, as amended

NOW THEREFORE Tipperary County Council, in exercise of the powers conferred on it by Section 5 (2) (a) of the 2000 Act, as amended, hereby decides that the above proposal is development and is **exempted development**.

Signed:  _____

Date: 24/04/2025

Dave Carroll

A/Director of Services

**Planning and Development (including Town Centre First),
Emergency Services and Emergency Planning and
Tipperary/Cahir/Cashel Municipal District**



Comhairle Contae Thiobraid Árann
Tipperary County Council

Comhairle Contae
Thiobraid Árann,
Oifigí Cathartha,
Cluain Meala,
Co. Thiobraid Árann
Tipperary County Council,
Civic Offices, Clonmel,
Co. Tipperary
E91 N512

Comhairle Contae
Thiobraid Árann,
Oifigí Cathartha,
An tAonach,
Co. Thiobraid Árann
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Date: 24th April, 2025

Our Ref: S5/25/34

Civic Offices, Nenagh

Siga-Hydro Ltd.,
C/o Stephen Barrett,
80 Harcourt Street,
Dublin 2, D02 F449.

Re: Declaration under Section 5 of the Planning and Development Act 2000

Dear sir/madam,

I refer to your application for a Section 5 Declaration received on 31st March, 2025 in relation to the following proposed works:

Proposed Ground Investigation (GI) programme comprising the drilling of 2 No. boreholes and collection of 16 No. soil sampling via hand auger holes. The activities are located within the Silvermines Mountains West Special Area of Conservation (SAC) and the Slievefelim to Silvermines Special Protected Area (SPA) at Site south of the former Magcobar Mine, in the townlands of Gortshanroe and Garryard West, Co. Tipperary

WHEREAS a question has arisen as to whether the proposed development is or is not exempted development:

AND WHEREAS Tipperary County Council, in considering this referral, had regard particularly to –

- Sections 2, 3 and 4 of the Planning and Development Act, 2000, as amended,
- Article 6 and 9 of the Planning and Development Regulations 2001, as amended,
- Class 45 of Part 1 of Schedule 2 of the Planning and Development Regulations 2001, as amended.

Tipperary County Council has concluded that the proposals as presented constitutes “development” within the meaning of the Planning and Development Act 2000, as amended and is “exempted development”. The

development satisfies the exemptions provided under Class 45 of Part 1 of Schedule 2 of the Planning and Development Regulations 2001, as amended.

NOW THEREFORE Tipperary County Council, in exercise of the powers conferred on it by Section 5 (2) (a) of the 2000 Act, as amended, hereby decides that the above proposal is development and is **exempted development**.

NOTE: Any person issued with a Declaration of a Planning Authority may refer the Declaration for review to An Bord Pleanála, 64 Marlborough Street, Dublin 1, within four (4) weeks of the date of issue of the Declaration and on payment of the prescribed fee.

Yours sincerely


for **Director of Services**