CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION

SLR Consulting Ireland Ltd was commissioned by Boliden Tara Mines DAC (BTM) to undertake the Introduction Chapter of the Environmental Impact Assessment Report (EIAR) for the proposed buttressing works to be undertaken on sections of the dam walls of the Randalstown Tailings Storage Facility (TSF) associated with the Tara Mine. The application site is the TSF located in the townlands of Simonstown, Randalstown and Sillogue, Navan, Co. Meath. The works are proposed to be undertaken with a view to increasing the stability of the embankment dam structure in line with recent enhancements of industry standards.

1.1.1 Purpose of this Document

This EIAR is submitted to An Bord Pleanála as a result of a third-party planning appeal (Ref: ABP-315173-22) following a grant of planning permission by Meath County Council (Ref:22/331) in October 2022. The original planning application was not accompanied by an Environmental Impact Assessment Report (EIAR). Notwithstanding this, an Environmental Report was submitted by the applicant in support of P. Ref: 22/331. During consideration of the appeal, An Bord Pleanála has deemed that a mandatory Environmental Impact Assessment (EIA) process was required and submission of an EIAR describing the conclusions of it would be necessary for the purpose of enabling determination of the appeal. The objective of this EIAR is to report on the findings of the assessments undertaken during the EIA process and to ensure that An Bord Pleanála fully understands the significant effects (if any) the proposed development is likely to have on the environment before making its decision.

1.1.2 Proposal

Boliden Tara Mines DAC (BTM) is proposing the following engineering works at the Randalstown Tailings Storage Facility (TSF) in Co. Meath:

- The construction of a reinforcement buttress to sections of the extant embankment walls of the TSF.

1.1.3 Background to the Applicant and the Existing TSF

Boliden Tara Mines DAC (Tara Mines), the largest operating zinc mine in Europe, is located at Knockumber, 2 km west of Navan in County Meath and 50 km northwest of Dublin. The mine exploits a zinc-lead orebody that lies between 50 and 1000 metres below the surface and extends over an area of 6.5 kilometres by 1.5 kilometres, which was discovered in 1970 by the Tara Exploration and Development Company Limited (a Company formed in Canada in 1953 by four Irishmen). Development of the orebody commenced in 1973 and production of zinc and lead concentrate commenced in 1977. The original ore reserves (calculated in 1971) in the entire orebody amounted to 69.9 million tonnes grading 10.09% Zn, 2.63% Pb. Mining continues today at a rate of between 2.1 and 2.6 million tonnes of ore each year, resulting in approximately 400,000 tonnes of zinc and lead concentrate.

BTM is now part of the Boliden Group, acquired in 2004, which is a leading supplier of critical metals for climate transition infrastructure projects. Zinc, in particular, is a key metal in enabling green technologies such as solar and wind power. The organisation implements a range of policies and commitments to ensure responsible production methods and is accredited to international environmental, health and safety and energy standards such as ISO14001, ISO50001 and ISO 45001[1].

The Tara Mine facility consists of the underground mine, an aboveground ore processing facility on a footprint of approx. 72 hectares, and an aboveground tailing storage facility on a footprint of 250 hectares, part of which is the subject of this planning application. All site activities are operated and controlled under Environmental Protection Agency Industrial Emissions License (IEL) P0516-04 issued by the Environmental Protection Agency (EPA).

The approximate National Grid Reference of the Knockumber mine site is 284877E, 267985N and of the Randalstown Tailings Storage Facility (TSF) is 285160E, 271557N.

Underground ore deposits in the mine are extracted through drilling and blasting of rock. Broken ore is initially processed and crushed below ground before being brought to the surface processing facility.

[1] https://www.boliden.com/operations/about-boliden/our-policies-and-commitments/

Once processed, the ore is pumped as a fine powder to flotation cells as aqueous slurry. Chemical additives are introduced to the flotation cells to aid in differential flotation of target minerals and selective depression of waste minerals.

Once the target minerals have been extracted, the waste (i.e. 'tailings') stream is cycloned to separate coarse sand from finer slimes. Concrete is added to the coarse materials and pumped to the worked out underground mine areas as backfill. The remaining fine materials are pumped as an aqueous slime to the TSF, approximately 2.8 km north of the mine, which acts as a large sedimentation/aeration pond where solids settle for permanent storage and clear water at the surface is drawn off for recirculation to the processing plant. Excess water is discharged under conditions of Industrial Emissions Licence (IEL) P0516-04 to the river Boyne.

The TSF exists as a ring-dike configuration specifically built to accommodate the storage of waste material from processing. The limestone in the tailings maintains the water at an alkaline pH, which allows the precipitation of all but traces of the metals remaining in solution following processing. The large surface area of the tailings facility provides adequate aeration for aerobic degradation of the organic reagents, so as to assure a low B.O.D. concentration in the water.

Stages 1 to 5 of the TSF is enclosed by earth fill embankment walls which have been constructed from locally sourced natural materials in five main stages since 1974, see details in Table 1-1 below. The embankment walls are constructed of low permeable glacial clay till and armoured with a layer of coarse material on the upstream slope. The walls are engineered to allow water percolate through them and be collected in the internal drainage system. Drainage water is directed to the outer perimeter interceptor channel (PIC) from where it is recycled by pumping back into the storage dam. Stage 6 is a lateral extension to the north of stages 1 to 5 and is a composite lined facility.

The TSF encloses an area of c. 250 Hectares. The application site location is indicated to scale on an extract from the 1:50,000 scale Ordnance Survey Discovery series map in Figure 1-1 at the end of this chapter.

The historic timeline for the construction of the TSF is set out in Table 1-1.

Table 1-1 *Timeline for the Construction of the TSF*

Stage	Planning Permit Ref.	Construction Period	Status
1	73/125	1975 to 1978	Filled and re-vegetated in 1988
2	74/732	1980 to 1983	Filled and re-vegetated in 1988
3	83/464	1985 to 1987	Filled in 2003
4	96/919	1998 to 2006	Raised facility over Stage 1, 2 and 3 tailings. Filled in 2006
5	NA901452	2011 to 2016	Raised Facility over Stage 4A tailings. Filled in 2020
6	NA160408 PL17.247707	2017 to 2022	Lateral Extension to Stages 1 to 5. Extant filling area: filling ongoing

1.1.4 Site Context

The application site lies within the boundary of the existing Randalstown TSF, is approximately 2.5 km^2/250Ha in size and is located approximately 2 km northwest of Navan, and c. 2 km southwest of the small village of Kilberry.

It is of an industrial character associated with the wider Tara Mines complex (of underground mine and surface processing plant, located c. 2.8 km south). The area surrounding the site is predominantly rural and is comprised of farmland, farm dwellings and residential dwellings. It is composed of gently undulating lands between 40m and 90m OD. The TSF is bounded by the Yellow River to the west, the Blakes stream to the northeast and the Simonstown Stream to the east and southeast.

The new Boyne Valley to Lakelands (BVL) Greenway is located on the old railway line running approximately 100 m to the east of the TSF. It is part of a 30km walking and cycling amenity from Navan to Kingscourt, Co Cavan.

The primary access to the TSF site is via an access road that connects with the Donaghpatrick Local Road, L74141, via the R163 Kilberry Road (Kells to Slane Road).

There is a good strategic road network in the immediate area, with the R163, R147 and R162 all surrounding the site, providing onward connection with a number of national routes, including the N51 and N52, and on to the M1 and M3 motorways.

1.1.5 Necessity for the Proposed Development

Boliden Tara Mines (BTM) has recently become a member of the International Council for Mining and Metals (ICMM) and is in the process of adopting the Global Industry Standard on Tailings Management (GISTM)[2] issued in 2020.

A key objective of GISTM is to address the risk of tailings embankment failure through conservative design criteria, independent of trigger mechanisms, in order to minimise potential impacts. Previous industry best practice was to manage the facility to reduce and eliminate trigger mechanisms which could lead to brittle failure of the tailings using effective strength parameters. The TSF is not currently at risk for instability based on the operational practices in place and is designed and assessed to meet a target design criterion, for long-term static slope stability, with a Factor of safety (FoS) of >/= 1.5 using effective strength parameters. Since 2020, GISTM require that this is instead managed through the design.

To ensure successful adoption of GISTM, the applicant undertook various additional studies and investigation in 2019 and 2020 (see Technical Memo in Appendix 1-A) which resulted in a recommendation to construct a reinforcement buttress to ensure the long-term stability in line with higher standards of industry practice. This practice is to evaluate stability using peak undrained shear strengths and with further analysis using residual undrained shear strengths. The proposed construction of a buttress around the perimeter of Stages 1 to 5 of the TSF as described in Chapter 3 of this EIAR has been endorsed by the Independent Tailings Review Board (ITRB).

In order to comply with the criteria set out in GISTM and BTM membership of ICMM requirements, BTM needs to ensure the facility meets this higher threshold through an industry

[2] The Global Tailings Review convened by the United Nations Environment Programme (UNEP), the Principles for Responsible Investment (PRI) and the International Council on Mining and Metals (ICMM) launched the **Global Industry Standard on Tailings Management**.

tried and approved mechanism i.e. construct supporting buttress to increase the factor of safety to:

- >/=1.5 for the peak strength undrained scenario and to
- >/=1.1 for the residual strength undrained scenario which is now required

In engineering terms, a factor of safety (FoS) indicates how much stronger a structure actually is compared to what it needs to be for an intended load, i.e. the higher the Factor of Safety, the greater the stability of the structure.

Given the nature of the proposals and the improvements in safety that they are intended to provide, the assessment of reasonable alternatives has been limited to the three available technical options described below.

1.1.6 Examination of Alternatives

The requirement to improve the stability of the upstream raises of the TSF was identified based on the tailings being characterised as loose and contractive. Contractive tailings have the potential for brittle failure and potentially liquify either during dynamic or static liquification when subjected to a trigger event.

- Dynamic liquefaction occurs as a result of seismic activity, the risk of which is very low in Ireland.
- Static liquefaction occurs when the dam wall has already failed for other reasons and the tailings statically liquefy under the large strains as a result of loss of confinement.

Although the potential for this triggering to occur is considered unlikely, GISTM requires that this be addressed.

The three primary options available prevent brittle failure are the following:

- Densification of the tailings to prevent the potential for liquefaction to occur
- Desaturation of the tailings to similarly prevent liquefaction.
- Buttressing the embankment that prevents failure even if the tailings liquify

Both Densification and Desaturation of the tailings are invasive techniques and would pose an unacceptable risk to the existing raise foundation infrastructure of the facility. The construction of a buttress on sections of the extant embankment walls was, therefore, considered to be the best alternative to ensure long term stability with no risk to the facility and the option endorsed by the ITRB. Refer to Figure 1-2 for Tailings Facility and Proposed Buttress Layout Plan.

Figure 1-2 *Tailings Facility and Proposed Buttress Layout Plan*

The 'do nothing' scenario would represent a situation where none of the potential environmental effects outlined in this EIAR would occur, but an opportunity to provide the highest level of stability of the TSF, taking into account climate change scenarios, would be lost. Whilst failure of the extant TSF embankment is considered unlikely in the 'do nothing' scenario, it is considered preferable to ensure the environmental risks of failure of the TSF are kept to the absolute minimum possible.

In terms of alternatives to minimise the potential environmental effects associated with the construction of the buttress, three possible options of varying duration, for the construction programme have been proposed. The predicted impacts of all three options on the surrounding road network was assessed in the Traffic and Transport Assessment, in which Option A proposes the shortest construction period of 1.5 years (823,296 tonnes per annum), Option B proposes a construction period of 2 years (617,472 tonnes per annum) and Option C proposes the longest construction period of 3 years (411,648 tonnes per annum).

1.1.7 EIA Regulations

Directive 2011/92/EU as amended by Directive 2014/52/EU (the EIA Directive) sets out the requirements for environmental impact assessment ("EIA"), including screening for EIA. Projects listed in Annex I of the EIA Directive require mandatory EIA while projects listed in Annex II require screening to determine whether an EIA is required or not. Annex I and Annex II of the EIA Directive have been transposed into Irish Law in the Planning and Development Regulations 2001 to 2018 and in particular Schedule 5 (Part 1 and Part 2).

Screening for Environmental Impact Assessment

The start of the EIA process involves deciding whether an EIA needs to be undertaken or not.

Development projects can be placed into one of the following two categories:

- Those projects that exceed the thresholds laid down in planning policy and therefore have a mandatory requirement to undertake EIA; and
- Those projects that are sub-threshold and must be assessed on a case-by- case basis to determine whether they are likely to have significant effects on the environment.

The Screening Assessment undertaken by the applicant prior to submission of planning application Ref: 22/331 concluded that the proposed development was not listed in Annex 1 (EIA Directive) or Schedule 5 (Part 1) of the Planning and Development Regulations and therefore did not require mandatory EIA.

An assessment against Schedule 7A of the Planning and Development Regulations 2001-2018, together with Schedule 7 'Criteria for determining whether development listed in Part 2 of Schedule 5 should be subject to an Environmental Impact Assessment' was undertaken to form the basis of a conclusion that EIA was not required in relation to Sub-Threshold development.

During consideration of the planning application by Meath County Council, the planning authority requested further information as to the source of the imported soil to be used in the proposed development. It was stated that if any material considered waste was to be imported at an annual rate greater than 25,000 tonnes per annum, the proposed development could be subject to EIA under Part 2, Schedule 5 11 (b) of the Planning and Development Regulations.

Prior to submission of the Further Information response, the applicant undertook consultation with the Environment Department of Meath County Council, and obtained confirmation that the proposed construction material did not constitute waste and confirmed that EIA was not considered a requirement. The applicant's response was deemed acceptable.

During consideration of the application during the appeal process (ABP-315173-22), An Bord Pleanála advised the applicant that it considered EIA necessary under Part 2, Schedule 5 Class 2 (c) of the Planning and Development Regulations. Furthermore, the proposed development would trigger a requirement for a subthreshold EIA under Class 10(g) of Part 2. Schedule 5 of the Planning and development Regulations 2001, as amended. Please see Appendix 1-B for EIA Screening Report which sets out the requirement for EIA.

An Appropriate Assessment screening of the proposed buttressing works was undertaken with Phase II Appropriate Assessment undertaken, and a Natura Impact Statement prepared.

Additionally, a Water Framework Directive (WFD) Screening Assessment was undertaken to identify any potential risks the Proposed Development should pose to the quality of the surrounding water environment (Refer to Appendix 7.B).

1.1.8 Role of Government and Statutory Bodies

Responsibility for the protection of the environment and the regulation of planning issues lies primarily with the Department of Housing, Local Government and Heritage. Other Government departments, statutory bodies and special interest groups also exercise important control functions. The responsibility for further regulation in the natural resource sector, including mining, is currently administered by the Department of the Environment, Climate and Communications. Other bodies with responsibility in relation to mining development are the Health Service Executive and the Health and Safety Authority, however, the extent of their involvement varies with the circumstances of individual proposed developments.

Local Authorities have the major role in terms of enforcement of planning legislation at the county and local level. An Bord Pleanála has responsibility for the proper planning of strategic development and the determination of appeals against planning decisions made by local authorities. The major environmental management responsibility for improving and protecting the environment lies with the Environmental Protection Agency (EPA). Once planning permission is granted for development, applications can be made to the EPA for relevant

IE/IPC licence or waste permit/licence that are relevant to the specific development. In the case of the proposed development, an Article 27 determination will be made to the EPA prior to the re-use of on-site materials (greenfield soil) for the project. This application will be conducted by the Engineering and Construction (E&C) contractor. Greenfield soil to be used as construction material will be accepted at the application site under conditions specified in the Company's IEL P0516-04[3].

The applicant will seek approval from the EPA to use mine rock as a construction material in the proposed construction works under conditions in existing IEL P0516-04[4].

The existing activities at Tara Mine and its associated infrastructure, including the TSF, are controlled by Meath County Council through planning conditions associated with extant planning permissions, and by the EPA through monitoring and control conditions associated with the applicant's IE Licence No. P0516-04. The monitoring data that has been collected over time as part of these requirements facilitates a valuable resource of baseline data on the environmental conditions in the vicinity of the facility and a sound basis to predict the likelihood of significant impacts from the proposed development.

1.1.9 Content of the EIAR

To facilitate best practice and compliance with the EIA regulations, this EIAR has been prepared in accordance with the 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' published by the Environmental Protection Agency (EPA) in May 2022.

The EIAR is set out in what the EPA refer to as a Grouped Format Structure, whereby each topic area is assessed in a separate chapter which addresses the existing environment, the characteristics of the proposed development, prediction of potential for impacts and proposed

[3] Conditions 8.13.23 to 8.13.28 and Schedule A of IEL Reg. No. P0516-04

[4] Condition 8.15: Unless otherwise agreed by the Agency, rock used in surface construction works at the installation shall have a maximum sulphide content (measured es S%) of0.1%, or a maximum sulphide content {measured as S%) of 1 % and a neutralising potential ratio, determined on the basis of a static test EN15875, of greater than 3. Condition 8.13.7: Design and construction details, including full method statements and technical specifications, for all basal and side-wall containment engineering works. proposed for any part of the TMF shall be agreed in writing by the Agency prior to construction.

mitigation measures. The EIAR is subdivided into fourteen chapters, as described below. Any associated appendices and supporting information are provided at the end of each chapter of the EIAR where relevant. A non-technical summary of the EIAR is provided both within and separate to the main document to facilitate easily accessible information on the proposed development to the public.

The Environmental Impact Assessment Report is sub-divided into:

Chapter 1: Introduction

Sets out the justification and background of the proposals as well as a brief explanation of the aims and format of the EIAR. It also identifies the various professional consultants who have contributed to this EIAR.

Chapter 2: Screening and Scoping

Sets out details of the EIA process to-date setting out the requirement for the EIA and a summary of consultations and feedback obtained during the assessment of planning application P. Ref. 22/331 by Meath County Council and during local community engagement undertaken in December 2023.

Chapter 3: Description of the Development

Sets out details of the physical characteristics of the whole project, including the nature and quantity of materials and natural resources involved and the land-use requirements during construction and operation as well as other works that are integral to the project.

Chapters 4 - 14

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

Chapter 4: Landscape and Visual Impact Assessment

Chapter 5: Material Assets: Roads and Traffic

Chapter 6: Biodiversity

Chapter 7: Water: Hydrology and Hydrogeology

Chapter 8: Air Quality

Chapter 9: Noise

Chapter 10: Population and Human Health

Chapter 11: Climate

Chapter 12: Land and Soils

Chapter 13: Cultural Heritage

Chapter 14: Interactions

The associated references, plates, figures and appendices are provided within each of the Chapters 1 – 14, where relevant.

1.1.10 EIA Methodology & Guidance

The EIAR has been prepared in accordance with the EIA Directive and Annex IV specifically, which requires that the following information be included in an EIAR:

1. *Description of the project, including in particular:*

> *(a) a description of the location of the project;*
>
> *(b) a description of the physical characteristics of the whole project, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;*
>
> *(c) a description of the main characteristics of the operational phase of the project (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;*

(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.

2. *A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.*

3. *A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.*

4. *A description of the factors specified in Article 3(1) likely to be significantly affected by the project: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.*

5. *A description of the likely significant effects of the project on the environment resulting from, inter alia:*

(a) the construction and existence of the project, including, where relevant, demolition works;

(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;

(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;

(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);

(e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;

(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;

(g) the technologies and the substances used.

The description of the likely significant effects on the factors specified in Article 3(1) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project.

***6.** A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.*

***7.** A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.*

***8.** A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council (*) or Council Directive 2009/71/Euratom (**) or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such*

events on the environment and details of the preparedness for and proposed response to such emergencies.

***9.** A non-technical summary of the information provided under points 1 to 8.*

***10.** A reference list detailing the sources used for the descriptions and assessments included in the report.*

It has also been prepared in accordance with:

- Planning and Development Act 2000 (as amended), namely 'Part X Environmental Impact Assessment';
- Planning and Development Regulations 2001 to 2023 (as amended);
  - Part 10
  - Article 94 regarding 'Content of an EIAR'
  - 'Schedule 6 Information to be contained in EIAR Paragraph 1 and 2
- S.I. No. 296/2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018.

The methodology followed in assessment of potential impacts is set out within the respective technical chapters of the EIAR. However, the general approach to assessment of environmental impacts has been conducted in accordance with the guidance set out in the following:

- Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report (EC, 2017);
- Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DoHPLG, 2018); and
- Environmental Protection Agency (2003) Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (Project Type 18).

1.1.11 Definitions of Effects

The methodology/guidance followed in the determination of impact significance is set out within each of the technical chapters of the EIAR. For several topic areas, specific forecasting methods have been developed by professional bodies such as in the case of Biodiversity, where the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines provide a framework for assessing impacts. Where sector-specific guidance has not been available for technical assessments in the EIAR, the framework set out in Section 3.7 of the EPA (2022) Guidelines on the Information to be contained in Environmental Impact Assessment Reports have been followed in describing significance of effects.

1.1.12 Difficulties encountered with EIAR Compilation

This EIAR was compiled on the basis of published regional and local data and site-specific field surveys. No difficulties were encountered in compiling the required information. Please also refer to individual topic chapters.

1.2 CONTRIBUTORS

The contributors who have assisted in the preparation of this EIAR are identified in Table 1-2 below. Each contributor has been fully briefed about the proposal and the background to it. They have also visited the site and are familiar with the local environment.

Table 1-2 *Competencies of EIA Contributors*

Topic	Individual Contributors	Years of Experience	Company
Introduction, Screening and Scoping, Interactions	Lynn Hassett *BSc(Hons), MSc, PIEMA, MIEnvSc*	15	SLR Consulting Ireland Ltd.
	Shane McDermott *BSc(Hons), MRICS, MSCSI*	20	
Description of the Development	Ailish McCabe *BAgSc*	23	Boilden Tara Mines DAC
Landscape and Visual Impact Assessment	Rory Curtis *BEng, BA, GDip, MILI*	9	Macroworks Ltd
	Richard Barker	18	

Topic	Individual Contributors	Years of Experience	Company
	BA, PG Dip, MLA		
Material Assets: Roads and Traffic	Alan O'Reilly *BA, BAI, MSc, P.Grad.Dip, CEng MIEI*	10	PMCE Ltd
	Daniella O'Neill *BSc, BSc (Hons), P. Grad. Dip, Adv. Dip.*	10	Coyle Environmental Limited
Biodiversity	Dr. Patrick Moran *BSc, Dip, MSc,PhD*	20	Forest, Environmental Research & Services (FERS) Limited
	Dr Emma Reeves *BSc, PhD*	15	
	Ciarán Byrne *BSc, MSc*	10	
Water: Hydrology and Hydrogeology	Jenny Rush *BA, MSc, PDip, CGeol, FGS*	17	AECOM (UK) Limited and AECOM (Ireland) Limited
	Darragh Reilly *BSc, MSc, PGeo*	10	
	Tim Meadows *BSc (Hons), MSc, PhD*	9	
Air Quality	Brian Sheridan *PhD Eng*	25	Odour Monitoring Ireland Ltd
Noise	Brendan O'Reilly *MPhil (Noise & Vibration) ISEE SFA EAA*	40	Noise and Vibration Consultants Ltd
Population and Human Health	Edward Goulding *BA, MSc*	2	SLR Consulting Ireland Ltd
	Lynn Hassett *BSc(Hons), MSc, PIEMA, MIEnvSc*	15	
	Shane McDermott *BSc(Hons), MRICS, MSCSI*	20	
Climate	Dr Kevin Black *BSc, MSc, PhD*	18	Forest, Environmental Research & Services (FERS) Limited
	Dr. Patrick Moran	20	

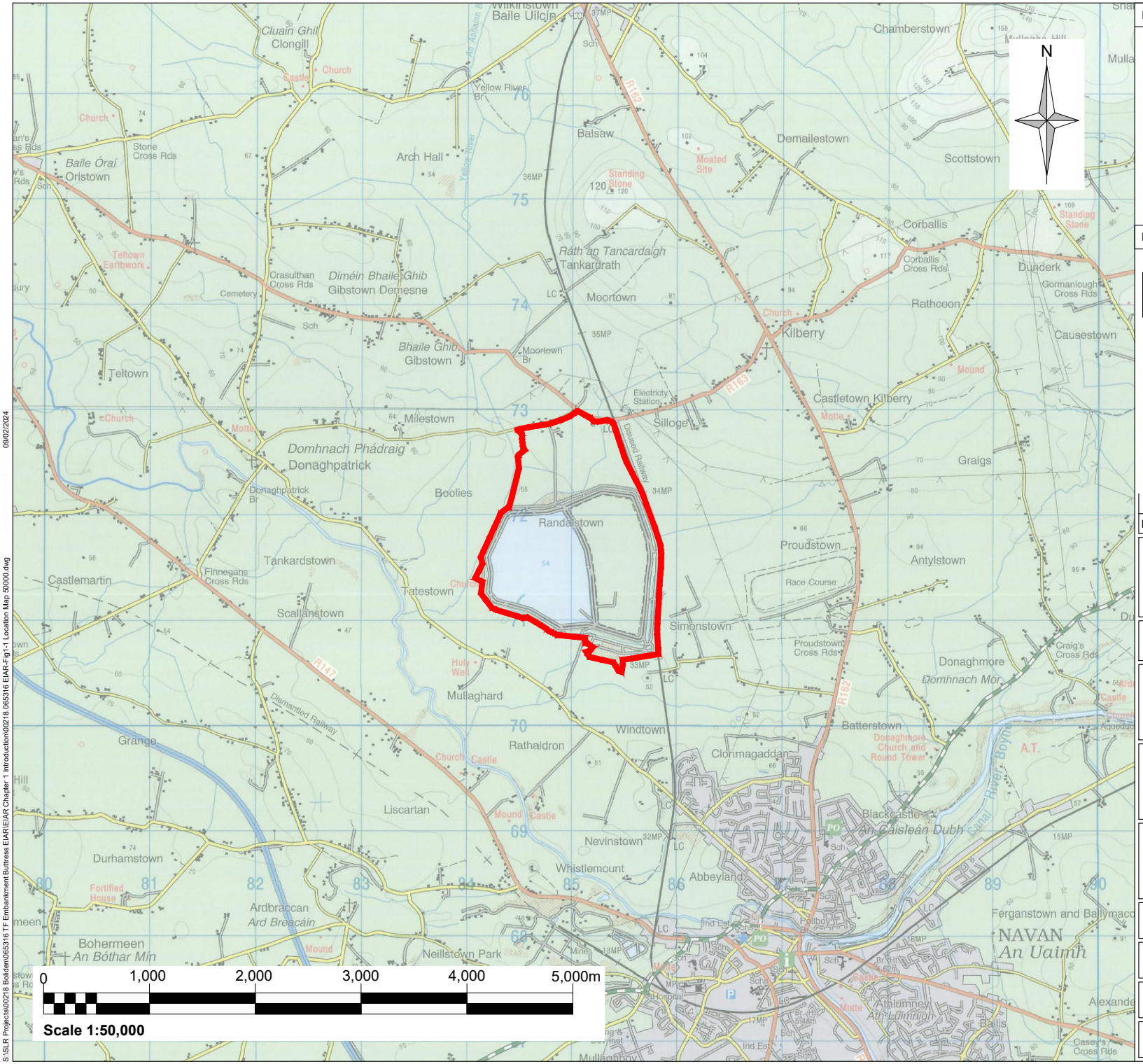
Topic	Individual Contributors	Years of Experience	Company
	BSc, Dip, MSc,PhD		
Land and Soils	Alex Cox *BSc(Hons), PGeo, EurGeol*	11	AECOM (Ireland) Limited
	Kevin Forde *BSc, MSc*	30	
Cultural Heritage	Joanne Hughes *BA, MSc, MIAI*	25	AMS Consultancy
	Breana McCulloch *BA, MES, MIAI*	14	

Appendix 1-A Technical Memo: Proposed Tailings Facility Reinforcement Buttress (November 2022)

Appendix 1-B EIA Screening Report (January 2024)

Figure 1-1 Location Plan (Overleaf)

Figure 1-2 Figure 1-2 Tailings Facility and Proposed Buttress Layout Plan (In text)



Notes:

Extract from Ordnance Survey Discovery Series Mapping No. 42

CYAL 50381397

(c) Tailte Éireann - Surveying

Legend:

Site Boundary

Rev	Amendments	Date	By	Chk	Auth

SLR

www.slrconsulting.com

Client: Boliden Tara Mines DAC

Project: EIAR for Planning Ref. 22/331 Reinforcement Buttress to existing Tailings Storage Facility

Figure Title: Site Location Map

Scale	SLR Project No.
1:50,000 @ A4	00218.065316

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date: Feb 2024	Date: Feb 2024	Date: Feb 2024	Date: Feb 2024

Figure Number: **Figure 1-1** Rev.: **0**

09/02/2024

S:\SLR Projects\00218 Boliden\065316 TF Embankment Buttress EIAR\EIAR Chapter 1 Introduction\00218.065316 EIAR-Fig1-1 Location Map 50000.dwg

XXXXXXXX