

01

Welcome

Thank you for visiting this public information event for the Silvermines Hydroelectric Power Station Project (Silvermines Hydro). The project is transforming a former mining site near Silvermines, County Tipperary, into a cutting-edge clean energy facility to produce pumped storage hydropower.

It will support the EU and Ireland by promoting energy diversity and improving security of energy supply. Ireland has committed to reducing carbon dioxide emissions by 51% by 2030 based on 2018 levels, and transitioning the country to becoming a climate neutral economy. More widely, Europe has a vision of becoming the first climate-neutral continent by 2050. To help achieve these goals, more renewable energy needs to be generated, and electricity storage projects are an essential part of this. The project is therefore important within the European energy market and will help the European Union achieve its energy and climate targets.



The European Union has designated the Project as a Project of Common Interest (PCI). The EU's Connecting Europe Facility (CEF) awarded Silvermines Hydro €4.3 million in 2023 to co-fund important environmental and design studies for the permitting of the project.

Community Engagement

This event forms part of our ongoing commitment to keeping the community and stakeholders informed as the project develops.

The pre-application consultation process is split into two key stages. **Stage 01**, the Concept Consultation, took place in May/June 2025 and introduced the draft design concept for the proposed hydroelectric power station. This stage was to share early design proposals and gather feedback on key development considerations and challenges.



Community Liaison — Kark Cashen & Laura McSherry

Our previous public event in Silvermines generated valuable feedback across a broad range of topics, including traffic and access, water management, construction activity, education and training opportunities, and the Community Benefit Fund.

There was particular interest in the potential development of a visitor centre on site and in understanding the proposed location of the off-site substation.

In response to that interest, we are hosting this additional focused event to provide further information on these key areas.

Stage 02 will involve the Main Design Exhibition, and be held later in the year, presenting the more detailed project proposals and demonstrate how feedback has been considered and addressed.

Project Timeline



Main Design Exhibition

This focused exhibition provides an opportunity to:

- Present updated information on the proposed off-site substation location.
- Share early ideas for a potential visitor centre and gather your feedback before designs are progressed further.

A comprehensive Main Design Exhibition covering the project will take place at a later stage.



02

Concept Plan

To help visualise what the Silvermines Hydroelectric Power Station Project will look like, our design team has prepared this initial concept plan. The plan will be updated and informed by your feedback received during the public consultation process.

Green Infrastructure

Building on the surrounding areas of native vegetation, the proposed development has the potential to significantly enhance the local biodiversity, fostering a richer and more diverse ecosystem. By incorporating a variety of native plant species and creating new habitats, the development will support the regeneration of local flora and fauna, providing critical resources such as food, shelter, and nesting sites for wildlife. Additionally, the creation of new hedgerows, woodlands, and field margins will contribute to improving ecological connectivity, allowing for greater movement and interaction between wildlife populations. These measures will not only help preserve the existing biodiversity but will also provide opportunities for the establishment of new species, enhancing the resilience of the ecosystem to environmental changes.

Safety

The upper and lower reservoirs will have safety barriers to prevent causal access to the water.

Your thoughts and ideas:

We welcome your thoughts, ideas and suggestions on the project. It is important that we understand all the issues that impact on the community during the construction stage and when the site is fully operational.

Opportunity for trail improvements

The proposed development offers the potential to enhance existing trails along the ridgetop summit, including trail upgrades and viewpoints overlooking the upper reservoir and the wider landscape. Views from these elevated lands above the upper reservoir have the potential to enhance the degree of scenic amenity afforded here. Opportunities include the development of an upper reservoir viewing platform, the enhancement of trails to improve accessibility, and the installation of trail signage.

Retention of Open Upland Character

The more elevated lands in the southern extent of the site will be managed in line with the surrounding sloping elevated lands, with areas of moorland allowed to naturally regenerate. The embankments surrounding the northern extent of the upper reservoir will be replanted with areas of native scrub to soften the surrounding engineered embankments and blend with the existing upland vegetation

Natural Regeneration

Areas of spoil will be shaped to regenerate naturally, allowing for the re-establishment of native plant species and the restoration of the land's ecological balance. This passive approach will promote natural succession and encourage a diverse range of flora and fauna to thrive in the area. Active management of these areas will be essential to ensure the successful regeneration process.



Basis of Design - Power Station

Silvermines Hydro will be capable of storing over 2000 Mega-watt-hours of energy with a generating capacity of 296 Megawatts - enough to power around 185,000 households or 21,000 small businesses every day.

When there is excess electricity in the Electricity Grid (usually at night), water will be pumped through pipes (penstock) from the lower reservoir to the upper reservoir. When electricity is needed, the water flows back down through turbines - it is the spinning of these turbines that creates the electricity. This process repeats itself again and again within a closed loop, circulating water between the two reservoirs. The electricity generated then enters the Electricity Grid to supply electricity across the country.

Hydroelectric power stations use the kinetic energy of moving water to generate electricity. Hydroelectric Pumped Storage is a type of energy storage that helps to reduce greenhouse gas emissions and mitigate against climate change.

Construction of the project is expected to take ca. 4 years to complete, with the construction of the upper reservoir taking place prior to the re-profiling of the existing pit lake (the 'lower reservoir'). The water from the existing lower reservoir will be pumped to the upper reservoir once the upper reservoir is completed. Reprofiling of the existing lower reservoir will involve drilling, controlled blasting, excavation and transport of materials for reuse onsite as construction / fill material and for landscaping purposes.

Key components of the project include upper and lower reservoirs, penstocks, turbines and generators.

The storage capacity for the project is approximately 3,100,000 m³ of water, with a range in head between the upper and lower reservoirs of between approximately 266 and 340m.

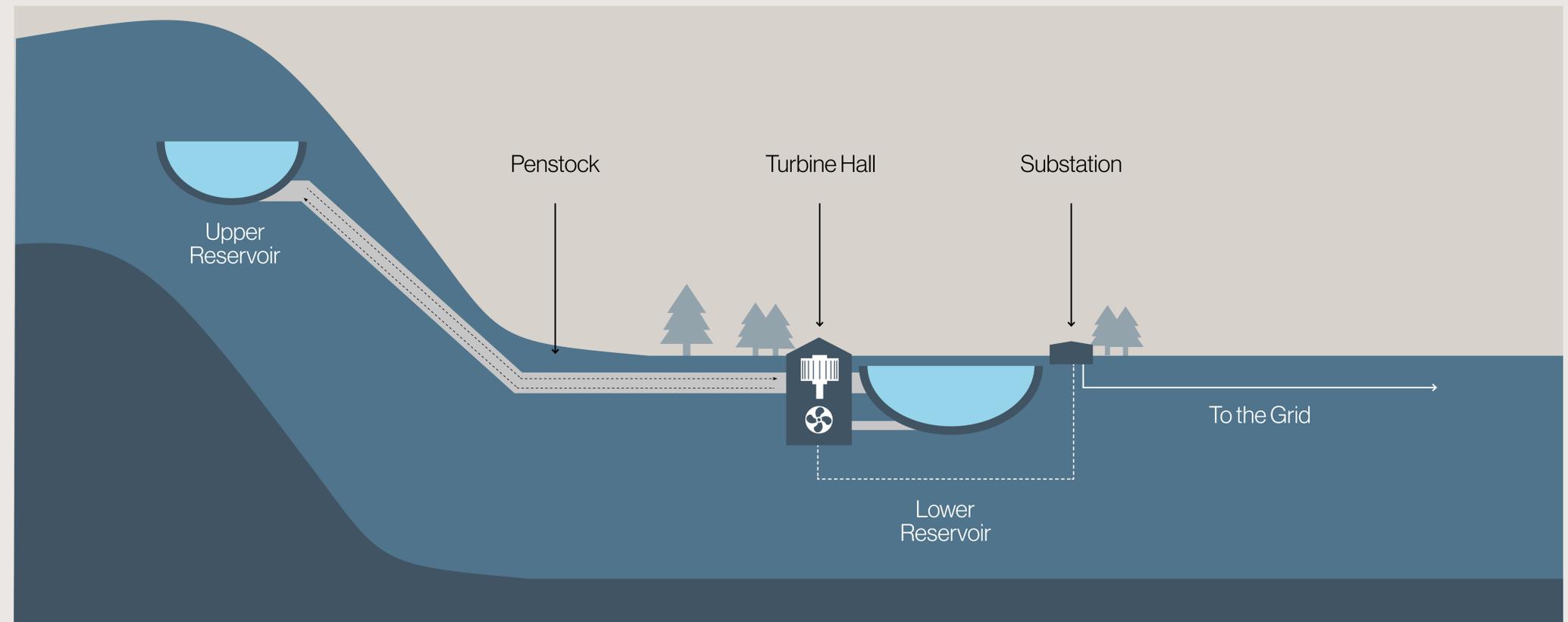
The top operating level of the upper reservoir will be approximately 410 m OD, with the base operating level of the lower reservoir being approximately 70 m OD.

The length of the buried penstock (pipe) between the two reservoirs will be about 1,250m.

The facility will have a storage capacity of over 7 hours. In addition, the project will include an administration building, maintenance workshop, stores, passive water treatment facility, underground cables, two substations (one on-site and a second off-site adjacent to the 220 kV line) and security offices.

A visitors' centre will be developed to create a destination for visitors to learn about the project.

Schematic Diagram Pumped Storage Scheme



Pumped storage technology is trusted around the world for its effectiveness in balancing supply and demand, making it a key component in many national electricity transmission systems. It is widely recognised as a clean, safe, and reliable method for electricity storage and generation.



Grid Connection

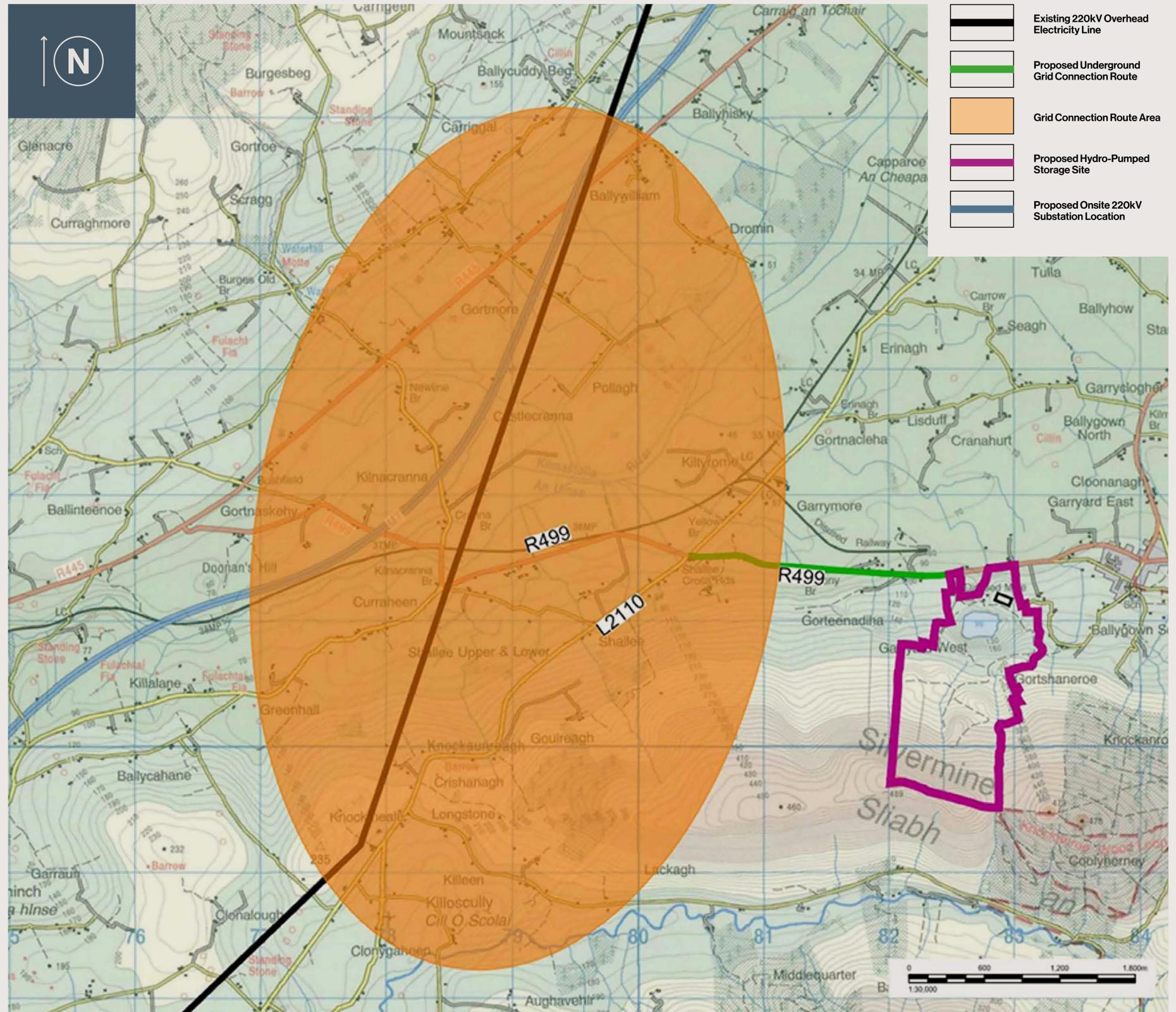
The project will require a grid connection to the Electricity Grid. The design of the connection is ongoing and will be completed in consultation with EirGrid and other stakeholders.

It is envisaged that the power station will connect to the existing 220 kV network in the area. The cable route will connect a 220 kV substation on-site to a second proposed 220 kV substation located within the grid connection study area. Underground cables will connect the substations.

Substation construction and associated grid connection works will be carried out in tandem with the main hydro scheme construction activities. Prior to construction records of services such as water mains, sewers, gas mains and other power cables will be obtained from the relevant service providers to ensure that all new developments between the period of assessment and pre-construction are captured.

To enable cable trenching to be carried out a Construction Traffic Management Plan will be prepared in consultation with Tipperary County Council prior to commencement of works. It is envisaged that these works will be carried out over a ca. 9-month period. The approach will ensure minimal impacts on road users and the public with rolling traffic management phasing. Precast concrete cable joint bays will be installed along the length of the cable route.

The off-site substation will be located adjacent to and connected to the existing 220 kV overhead line. The substation will contain high voltage electrical switchgear as well as control and protection equipment.



Environmental & Planning Considerations

Siga-Hydro is committed to protecting the environment and communities affected by the Silvermines Hydroelectric Power Station Project. An Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) are being undertaken by the design team to understand and assess environmental effects of the project.



Reservoir Excavation & Reprofiling

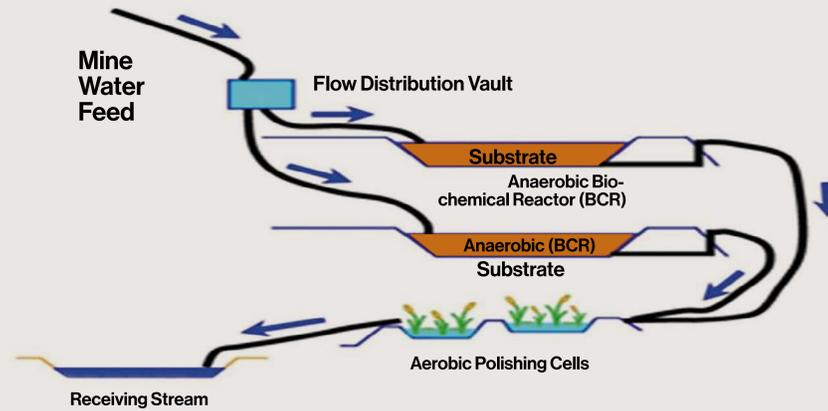
Where rock is excavated to construct the upper reservoir and re-profile the lower reservoir, it will be re-used on-site for construction and landscaping. The rock will be extracted by blasting. Noise and vibration limits will be complied with, and local residences and farms will be given advance notice as required by the Competent Authority.

Water & Drainage

A water management plan is being prepared which will incorporate the existing surface drainage network. This will include a passive water treatment facility (wetland) to manage surface water runoff during construction and operation, thereby reducing sediment entering the water network, particularly during heavy rainfall.

Re-routing of parts of streams on the upper slopes of Silvermines Mountain will be required for the construction of the upper reservoir.

Historical and recent surface water, groundwater and geochemical information is informing an initial water balance for the main project site, which in turn has allowed predictive water flow and geochemical models to be constructed.



Landscaping

A landscape plan will be developed to minimise the visual impact of the project. Features of the plan will include upper reservoir landscaping by carefully constructing it into the hillside, incorporating suitable planting into the embankment, and installing the necessary pipework (penstock) below ground to connect to the lower reservoir.

Ecology

As the upper part of the site sits within a Special Area of Conservation (SAC) and a Special Protection Area (SPA), extensive surveys are being carried out to ensure that the scheme provides significant enhancement and compensation measures to maintain and improve habitats in the area.

Ongoing discussions with NPWS and other key stakeholders have taken place and will continue to do so as the project progresses.

Geology & Historical Mining Activity

A detailed 3D model of the underlying geology and historical mine workings has been constructed based on both historical and recent ground investigations, including the use of geophysics. This will aid in the modelling and assessment of ground stability associated with the upper and lower reservoirs.



Construction of the Project

The construction of the project will take approximately 4 years. Siga-Hydro understands the need to mitigate disruption during the construction phase as much as possible, and will do this by:

- Preparing a detailed Construction Environmental Management Plan (CEMP) that will be submitted with the planning application.
- Appointing a Construction Liaison Officer as well as a Health and Safety Officer.
- Minimising noise and dust generation.
- Minimising lighting, whilst being mindful of health and safety of people on-site.
- Preventing contamination of watercourses.
- Limiting construction waste.
- Providing parking on-site.
- Providing welfare facilities for employees and visitors.
- Protecting trees and habitats that are to be retained.
- Limiting construction and delivery hours.

The majority of the construction work will take place on-site. There will be off-site works to construct a cable route between the main site's substation and second substation which will be connected to the grid.



Geoheritage

Siga-Hydro recognises the extensive mining heritage that underpins the story of the Silvermines district and is working with the community to preserve and highlight this heritage. The Company is determined to make mining heritage a key educational focus and has already commissioned original research papers that will be published in the richly illustrated book *Silvermines: A Heritage of Mines and Miners*, which will publish in summer 2025.

Mining heritage can help create a sense of place, helping people to interpret past landscapes and their place in them. Heritage research can also inform social, educational, and economic opportunities for communities, especially those that have been significantly altered through time by mining and industrial processes.

In 1945, the **Irish Tourist Association Report** stated: *All around the Silvermines village are traces of the disused workings of mines ... as far back as the 14th century. Above the village ... are acres of a reddish sandy gravel, the waste of the mines on which are situated an old square tower with a high chimney, called the "engine house," large shed; and the tumble-down remains of another old building known as the "counting house."* Even then, the heritage and tourism value of Silvermines was recognised.



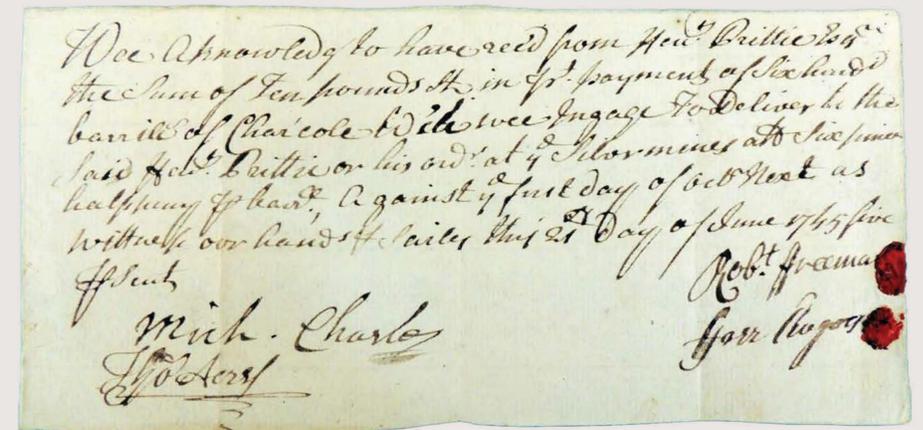
Ordnance Survey Ireland, 1840 showing mining activity and lime kilns. (With permission of OSI)



Perhaps the earliest illustration of mining at Silvermines was captured by Dingley in his travels in Ireland at the behest of the restored Stuarts, circa late 1660s, printed 1681. (With permission from NUIG)



Window tracery, perhaps the last vestige of Dunalley Castle can be seen in Hickey's Bar, Silvermines.



Receipt, 1745, Henry Prittie purchasing barrels of charcoal, perhaps for the smelter, (Prittie/Dunalley Papers, NLI)



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Community Engagement

Listening to the community has been a key part of the Silvermines Hydro project. Our consultation is designed to ensure that local residents, businesses, and stakeholders have the opportunity to share their views, ask questions, and voice any concerns they may have about the project. Gathering feedback is essential in understanding the community's priorities regarding environmental, social, and economic aspects.



Throughout our community engagement events, several key topics and concerns were raised by participants. These questions reflect the community's priorities and help guide us in creating a responsible and sustainable development.

Will I still be able to walk in the area?

Enhanced recreational walking routes with viewing points for the local community and visitors will be created.

Will the reservoirs be fenced?

The upper and lower reservoirs will have safety barriers to prevent casual access to the water.

Will it be loud?

No, once operational, the pumped hydro power station will not cause noise pollution. The penstock, turbine hall and power house will all be underground.

Who owns this project?

The project is co-owned by Siga-Hydro, a Tipperary based company and Foresight Group, an infrastructure investment fund focused on clean energy generation.

What kind of jobs will be available?

During construction, hundreds of jobs in engineering, construction, health and safety and more will be available.

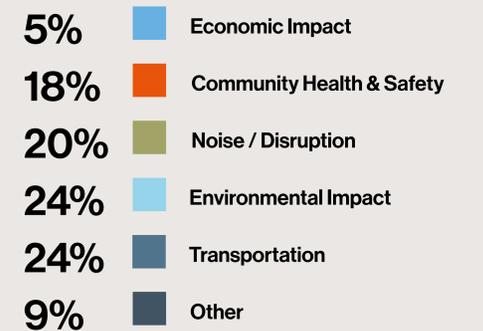
Once operational, we expect as many as 50 jobs in maintenance, engineering, and management.

Approximately 120 community members visited our events in December 2024, of which 67 people provided written feedback.

The information was recorded and is important to us. Feedback received has been communicated to the design teams and will form part of the public consultation process.

In summary, 50% of respondents expressed no concerns, 39% of respondents highlighted areas of interest. The remaining 11% had no comment.

Community Feedback



Next Steps:

Your thoughts and insights are important to us as the project continues to take shape. You're welcome to share your views by speaking with the Silvermines project team during the exhibition or by filling out a feedback form at the event or through the website.



Community Benefit

Siga Hydro is dedicated to supporting the Silvermines Community in all their efforts, working together to achieve their goals and ensure lasting success. To formalise this commitment, we are introducing a Community Benefit Policy that will serve as a guiding framework for establishing a Community Benefit Fund.

Our Objective

Siga-Hydro aims to create as little disturbance as possible to the local community during the construction and operation of the project, however we recognise that, at times, this can involve some disruption to the local community. We place significant value on the community involved with and affected by our project and are committed to supporting its long-term community development. We will establish a phased community benefit fund to support local projects and the wider community.

In establishing the Fund, Siga-Hydro's objectives are to:

- Create long-lasting socio-economic and environmental benefits within and around the community most affected by the project.
- Support the community to deliver projects that build community wealth and wellbeing and ensure that the community remains a vibrant place to live, work and visit.
- Provide robust governance of the Fund in order to enable the community to focus on planning and delivering projects that make a real difference.



When will the fund be available?

The Community Benefit Fund will become live once the project receives planning permission. Siga-Hydro will then invite expressions of interest for suitable projects for funding once the construction work starts.

What could be funded?



Sports and Recreation: Recreational opportunities that promote physical activity for all ages, from children to seniors.



Senior Services: Services and activities that support and engage older adults.



Youth Development: Programs that foster growth and opportunities for young people.



Cultural and Historical Preservation: Activities that celebrate and preserve local heritage, involving all generations.



Environmental Protection: Efforts to protect and restore local ecosystems, engaging younger people in sustainability.



Artists and Creative Spaces: Initiatives that support local artists and provide creative spaces for community engagement.



Community Health and Safety: Projects that enhance well-being and safety, including creating safer spaces like playgrounds.



Shared Vision Masterplan

Future of Innovation and Community Connection

Silvermines is a historic village in County Tipperary with a rich mining legacy dating back over a millennium. Shaped by the extraction of silver, lead, zinc and barite, the landscape reflects centuries of industrial activity set within the Slieve Felim mountains.

The shared vision reimagines the site as a multifunctional destination combining a visitor centre, mining exhibition space, field school, outdoor walking trails, viewing platforms, picnic areas, and a hydroelectric power station. This integrated approach creates significant new social and economic opportunities for the region.

Socially, the vision aims to encourage community engagement through educational programmes, research facilities, workshops and classrooms linked to geology, ecology and industrial heritage. Outdoor amenities promote recreation, wellbeing and inclusive public use of the landscape. The project strengthens local identity by preserving and interpreting Silvermines' cultural and history.

Economically, the visitor centre and amenities have the potential to increase tourism, supporting local businesses such as cafés, accommodation providers and craft enterprises. The field school and research facilities can attract academic partnerships and long-term educational investment.

The hydroelectric power station introduces renewable energy infrastructure, creating skilled employment opportunities while positioning Silvermines as a forward-looking example of sustainable rural regeneration.

This information outlines a strategic vision for discussion purposes only. Any future development will be subject to detailed design, funding availability, stakeholder consultation, and required approvals.



KEY PLAN



OUTDOOR VISITOR AMENITIES

- ACTIVE AREA
- WALKING TRAILS
- HISTORY OF MINING WALKING TOUR
- NATURE TRAIL
- VIEWING PLATFORM
- PICNIC AREA

VISITOR CENTRE

- VISITOR WELCOME AREA
- GIFT SHOP
- CAFE
- MINING EXHIBITION SPACE
- INTERACTIVE EXHIBITS
- LOCAL ECOLOGY/ GEOLOGY

FIELD SCHOOL

- RESEARCH FACILITIES
- LABORATORIES
- LECTURE SPACE
- WORKSHOPS
- CLASSROOMS

HYDROELECTRIC POWER STATION

- SUBSTATION COMPOUND
- POWER HOUSE
- ADMIN BUILDING
- IPP BUILDING
- EIR GRID BUILDING



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Future Opportunities

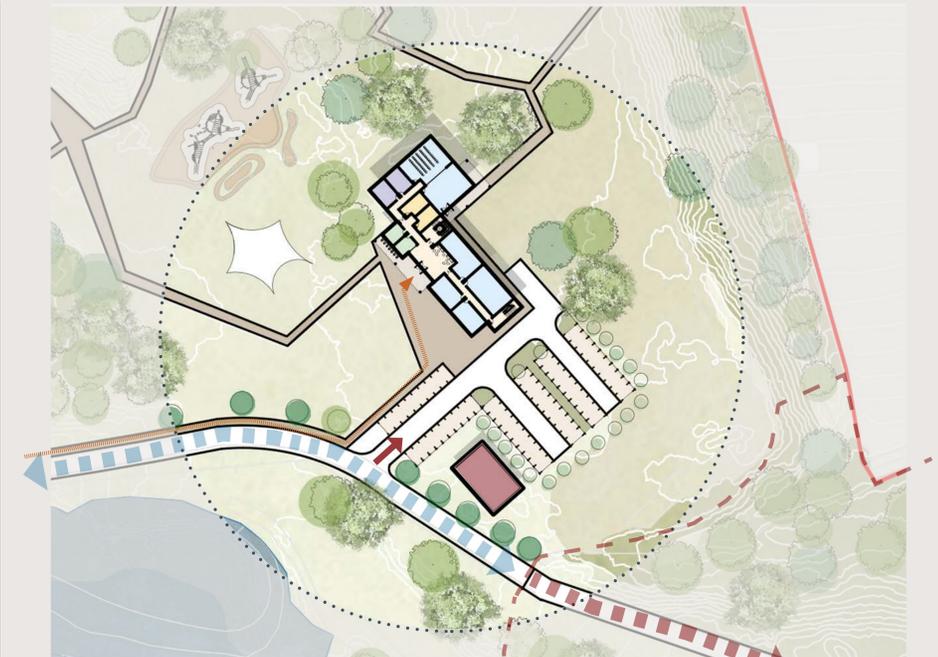
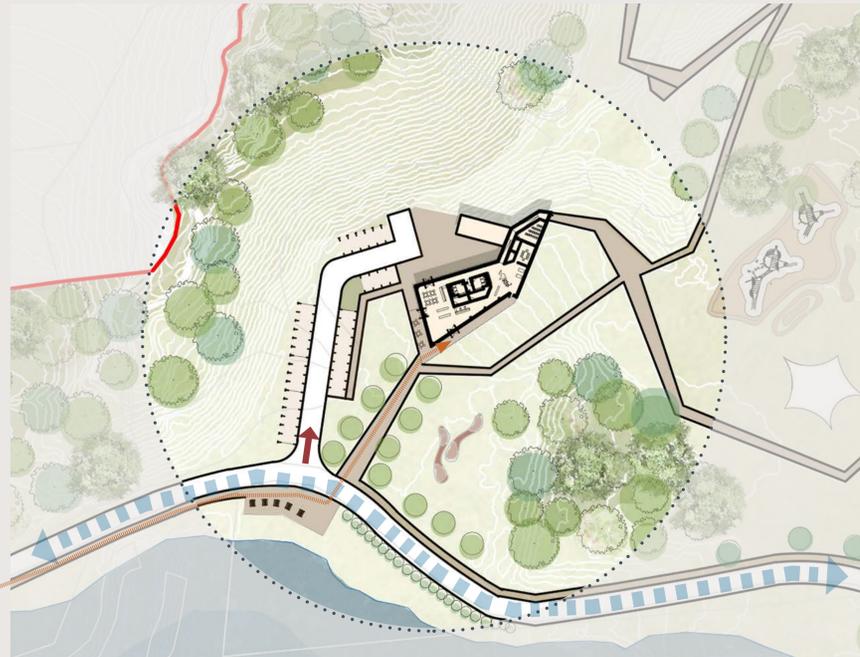
For public amenities

PHASED VISION

Conceived as a landscape-led architectural system that prioritizes minimal intervention and experiential movement. Buildings and outdoor programs are dispersed across the site and shaped by existing topography, vegetation, and circulation patterns. A network of paths and elevated walkways guides visitors through a sequence of spatial experiences, reducing ground impact while reinforcing engagement with the terrain.

Architectural forms remain low and horizontal, following natural contours to preserve views and visual continuity. The visitor centre mediates arrival and exploration, while the field school supports hands-on learning through flexible educational spaces. Architecture acts as a framework for ecological awareness, allowing the landscape to remain the primary experience.

Bringing this vision to life will require strong partnership with communities and public bodies.



VISITOR CENTRE



OUTDOOR AMENITIES



FIELD SCHOOL



Shallee 220 kV Gas Insulated Substation

(GIS)

Connecting to the Grid

What is Proposed

A Gas Insulated Substation (GIS) is a compact, enclosed high-voltage facility in which electrical equipment is housed within a purpose-built building.

Connection to the Existing 220 kV Network

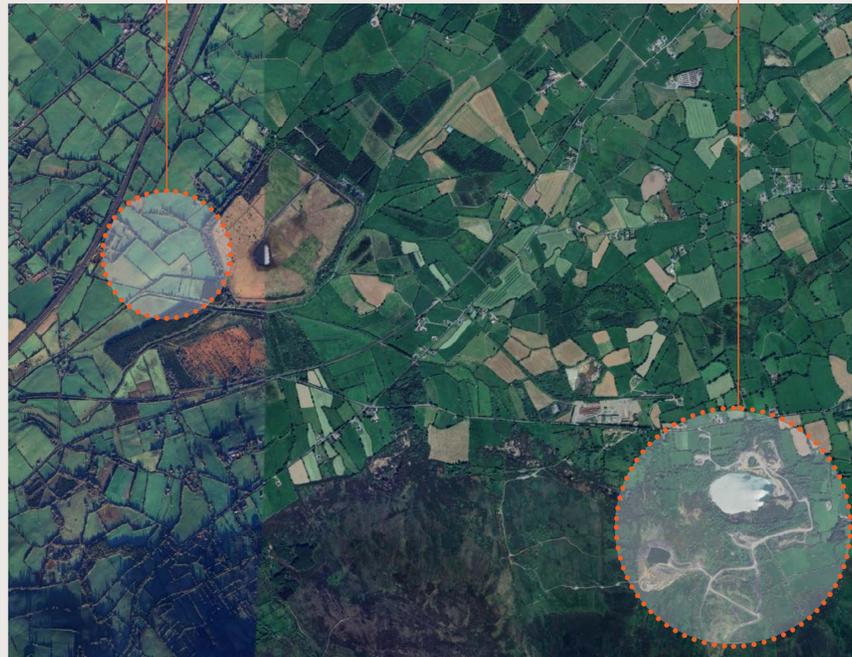
- The existing 220kV overhead line pylon at the site will be removed.
- It will be replaced with two line-to-cable interface masts.
- These interface structures will transition the overhead transmission line down to underground cable.
- The underground cable will enter the new GIS building for connection to the national grid.



3D DESIGN CONCEPT

SHALLEE SUBSTATION
LOCATED APPROXIMATELY
5KM NORTHWEST OF THE
PROJECT SITE

SILVERMINES
HYDROELECTRIC POWER
STATION



CONNECTIVITY MAP

Underground Cable Route

The substation will connect to the Silvermines Hydro Project site via underground cable infrastructure.

The cable route will:

- Follow public roads where feasible
- Cross private lands where necessary, subject to agreement
- All works will be carried out in accordance with statutory requirements and best practice construction standards, with full reinstatement following installation.

Substation Building

The proposed GIS building will be constructed in accordance with EirGrid 220 kV Substation Specification requirements.

The building will contain:

- 8 no. electrical bays compliant with EirGrid standards
- Gas-insulated switchgear equipment
- Control and protection systems
- Ancillary space including storage and welfare facilities
- The design of the building and associated landscaping will reduce environmental and visual impacts.

Site Access, Security and Landscaping

The development will include:

- A dedicated vehicle entrance for maintenance and servicing
- A perimeter palisade security fence
- Hard landscaping within the operational yard
- Soft landscaping and tree/shrub screening along the boundary

These measures are designed to ensure operational security while integrating the facility into the surrounding landscape.

M7 MOTORWAY

INTERFACE
MASTS

SUBSTATION
BUILDING

WOODLAND
SCREENING



SUBSTATION SITE LOCATION