LS GIG GLOBAL INTERCONNECTOR GROUP

Proposed sub-sea cable and onshore underground power transmission manufacturing facility

—

Placing the North East at the heart of the UK's clean energy transition

Consultation document
May 2025

Contents

Foreword

As the UK moves towards a cleaner, greener future, it is vital to develop the infrastructure needed to support this transition. As more clean energy is generated, we need to deliver more effective ways to transport and store this energy.

A central part of that infrastructure is the continued development of advanced sub-sea cables. These cutting-edge cables will enable the efficient transfer of energy from offshore sites to the mainland, and to areas where it is needed most. There is not a moment to lose in the development of these cables, especially in the UK.

The UK Government has set a clear objective to reach net zero by 2050, which will require a wholesale shift to clean energy across the UK. As part of that, it is vital to develop effective ways to transport this energy both from sources such as offshore wind farms – and from other countries providing the energy – into homes, factories, and public spaces.

By developing this technology within the UK, we would not only enhance its national infrastructure but also build greater resilience within its energy systems, ensuring a more secure and independent pathway to a decarbonised economy.

That is why LS Eco Advanced Cables has put proposals for a new sub-sea cable and onshore underground power transmission facility here in South Tyneside. Working with the Port of Tyne, the project would provide 500 direct jobs, and many more across the wider supply chain for local people - many of which would be highly skilled. Not only that, but it would play a key role in helping to decarbonise the UK economy* and put the North East firmly on the map as part of the UK's clean energy transition, with key infrastructure central to that transition.

As part of developing our proposals, we want to hear from local people, businesses, organisations, community groups and beyond.

Your views will help us shape and refine our proposals to ensure they reflect the needs and priorities of local people and businesses before we submit a formal planning application.

Thank you for taking the time to read this document and provide your thoughts. This document sets out all you need to know about the project, the people behind it, and how you can get involved in the consultation and provide your views.

Sangdon Lee

Director, LS Eco Advanced Cables Ltd

*Job creation may vary depending on market growth and demand.

Introduction

The UK is on a journey away from fossil fuels and towards clean, green, and reliable energy for all. A vital part of this transition is the development of sub-sea cables to transport the power that keeps our lights on.

Investing in renewable energy infrastructure would not only strengthen the UK's energy security, but it would also drive innovation and establish the UK as a world leader in clean energy, driving exports and boosting the economy. The UK Government is aiming for 43 GW - 50 GW of installed offshore wind capacity by 2030, which is enough to power nearly every home in the country. To do that, we need fast and powerful cables to transport the energy from wind farms to homes, shops, and factories across the UK.

We are seeking your views on the proposed delivery of a world-leading cable factory at the Port of Tyne. This would mean that this essential infrastructure is developed on UK shores – supporting a truly home-grown energy transition and increasing the reliability of our energy supply.

This document provides an overview of the proposed development, outlining its objectives, site plans, and the potential effects on the surrounding area.

Following consultation, we will consider your feedback and incorporate relevant feedback into the final proposals to ensure the development aligns with community needs and expectations. We will then submit a full planning application to South Tyneside Council, who will make the final decision on whether to grant planning permission for this project.

The proposed development at a glance

We are proposing to deliver a world-leading facility to produce high voltage direct current (HVDC) and alternating current (HVAC) cables at the Port of Tyne. HVDC power cables are designed to carry electricity over long distances with minimal energy loss. HVAC cables are the type of cable used for onshore electricity transmission here in the UK.

The proposed site would produce cables for under-sea and underground onshore electricity transmission, efficiently transporting energy from offshore wind farms across the UK and between countries. This approach avoids on-land powerlines (i.e. pylons) and would take renewable energy created from wind and solar farms to homes and businesses.

The site would include a series of ancillary facilities and, at the centre of the project, a 202 metre tall tower – a vital step in the production process allowing LS to make the longest, safest and most reliable cables when buried at the bottom of the ocean or underground where they will be designed to last for many decades.

What the proposed facility means for you

This investment is a long-term economic and environmental strategy.

This facility would become a valuable and profitable local business. Once operational, the factory will be able to produce cables to 525kV – the highest sub-sea voltage export cable, which is the main transmission voltage for UK onshore transmission. The proposed development would provide lasting environmental and economic benefits, with sub-sea and onshore underground cables set to be in consistently high demand, and a technologically vital product for renewable energy production – which is only set to increase.

It would have a significant impact on the local, regional, and national economy; providing 500 direct jobs and many more across the supply chain in a range of functions, including in high-skilled areas such as engineering and management.

In addition, the proposed development would support a substantial number of roles during the construction process.

All of this would draw significant investment, helping to future-proof the region's economy, putting it on the map as a centre for innovation, at the heart of the UK's journey to net zero.

Who is involved in this project?

LS Eco Advanced Cables Ltd (LSEAC), a joint venture between the Global Interconnector Group and LS Group, is developing the proposals for this facility onsite at the Port of Tyne. More information on all three organisations can be found below:

- **Global Interconnector Group** supports the development and delivery of net zero and energy security initiatives.
- **LS Group** is one of the world's leading manufacturers of high voltage cables, with over 33 subsidiaries worldwide and more than 60 sales and production sites in over 21 countries. LS Group supplies cables to the world's largest wind farm at Hornsea in the UK and to National Grid and its partners.
- **LS Eco Advanced Cables Ltd** is a UK based joint venture between LS Group and Global Interconnector Group intended to develop a production facility in the UK.
- **The Port of Tyne** serves as one of the UK's key deep-sea ports and handles a wide range of cargo, including containers, bulk goods, and car imports. It is also an important site for renewable energy, including offshore wind farm support. The Port is involved in various industrial and logistical operations that contribute to the economy of the North East of England.

Background – the journey to decarbonising the UK electricity grid

The UK has a significant demand for electricity and is committed to moving away from the use of fossil fuels to meet this demand, with a legally binding target to achieve net zero emissions by 2050. This means that the total greenhouse gas emissions would be equal to the emissions removed from the atmosphere, with the aim of limiting global warming and resultant climate change.

To achieve this, we need a fundamental shift to an almost entirely clean energy supply – but investing in renewable energy infrastructure will also strengthen the UK's energy security, foster innovation, and promote economic growth, all while creating a greener, more resilient future.

Sub-sea and onshore underground cables will play a critical role to achieving this both internationally and nationally – increasing both resilience and profitability.

Cleaning up and scaling up Britain's energy supply

Nationally, the Government has a target of 43 GW - 50 GW of offshore wind by 2030 – which could power almost every UK home. Sub-sea and onshore underground cables play an essential role in delivering energy from these projects, transporting clean energy from the development's source to homes, shops, and industrial centres.

The UK plans to phase out natural gas as an electricity source to coincide with the roll out of new nuclear power capacity at Hinkley Point C and Sizewell C.

In the meantime, however, the roll out of electric vehicles and other technologies, the phase out of gas boilers for domestic heating and demand from uses such as AI computing, and data centres, is expected to result in a significant increase in electricity demand.

Some of this increased demand will likely be offset by the adoption of hydrogen as a fuel source, improvements in energy efficiency, and scalable and efficient energy storage, but a wide range of secure, low carbon and reliable sources of energy will be required to support the energy demand of the UK's economy and domestic markets.

Did you know?

The UK's current direct electricity connections with other countries provide about 9.8 gigawatts of power. This accounts for roughly 13% of the total electricity generation capacity available in the UK.

The UK's role on the world stage

Interconnectors, which are increasingly moving to HVDC usage, offer the opportunity to share clean energy with other countries - exporting excess energy to other markets during periods of higher power production (when higher wind speeds generate surplus energy, for example); and enabling the UK to import clean power should UK supplies become low.

Great Britain is currently directly connected to Ireland, France, the Netherlands, Belgium, Norway, Denmark, and Northern Ireland and indirectly to many countries across continental Europe. Existing direct connections provide around 9.8GW (gigawatts), equivalent to around 13% of the UK generating capacity.

What are international interconnectors?

Interconnectors are high-voltage cables that connect the electricity grids of different countries, allowing them to share power. Most modern interconnectors use HVDC because it provides more stability and efficiency for long distances.

These cables enable the UK to import and export electricity with neighbouring countries. These connections help balance supply and demand, improve energy security, and support the transition to renewable energy by providing access to surplus power from other regions.

The proposed development

The proposed facility would see a world-leading advanced manufacturing cable production plant built at the Port of Tyne.

In addition to the proposed main production building and the associated tower, the development would also comprise additional manufacturing space, testing facilities, materials storage buildings, offices, security infrastructure, cables storage spools and a gantry to convey cable and to load ships at the adjacent quayside.

The facility can be broken down into two specific sections:

- **Section one** would predominantly manufacture cables in a purpose-built manufacturing building, with a footprint of approximately 300m x 115m.
- **Section two** would be a 202m tall tower, which would be used to apply a protective sheath onto the cables.

The proposed site from above

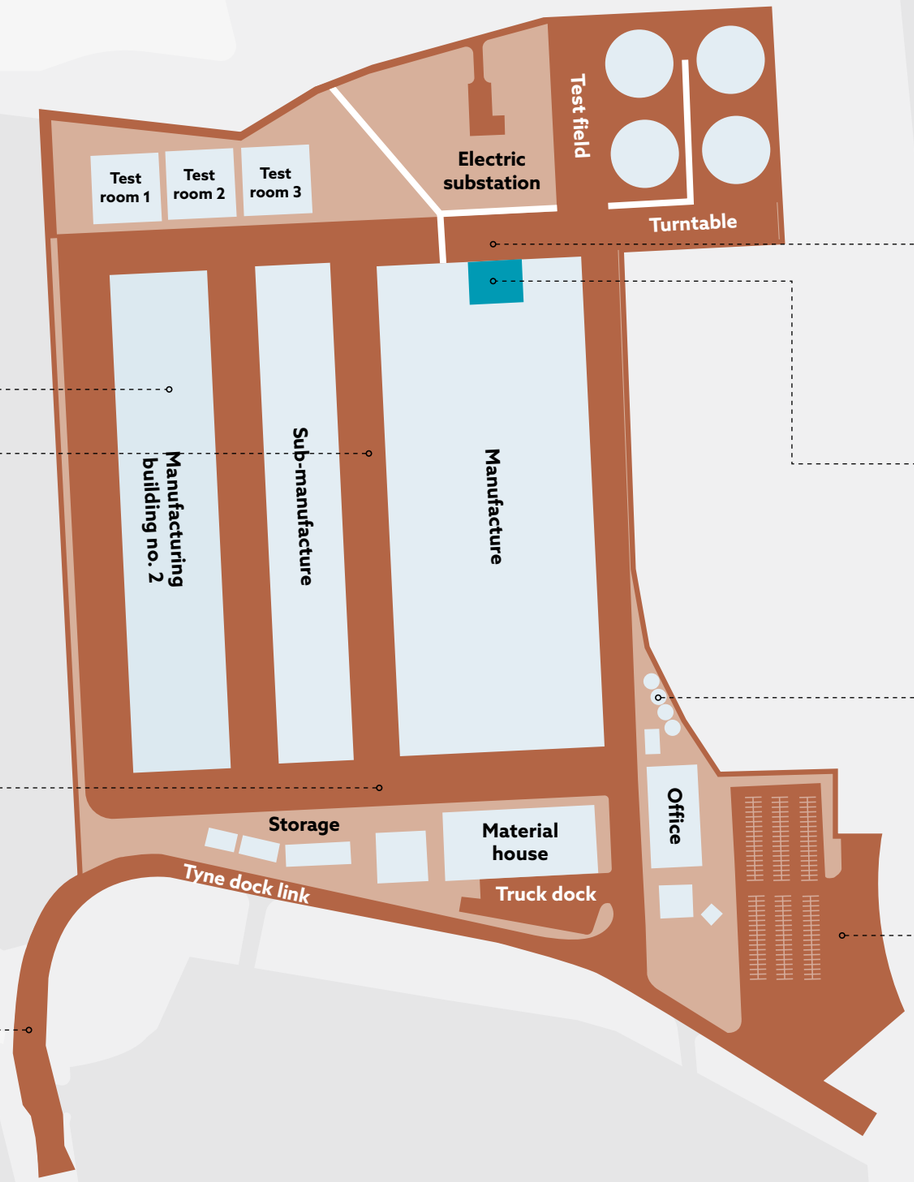
The site is expected to employ approximately 500 staff. Through strong partnerships with local authorities and communities, we are building a workforce in the North East that is equipped for the green economy of tomorrow.

The **manufacturing building no. 2** would be located to the west of these buildings.

The proposed **main manufacturing** and **secondary manufacturing facilities** would occupy the centre of the site as far away as possible from the Jarrow Monastery, running north-south parallel to adjacent access roads, Nissan car storage areas and Tyne Grain.

The **south of the site** would accommodate incoming materials storage, a further scrap house, offices and security.

Internal site access, via the A185 road, would be via 17m and 10m wide access roads along with appropriate footways to ensure safe access for site operators.



A **gantry** would transfer cable from the manufacturing facility to the storage reels and on to the quayside to the north.

The **manufacturing tower** would be located to the north of the main test building. To the north of the manufacturing buildings are proposed test facilities both within buildings and external test areas along with finished cable storage on four turntables or reels.

Sprinklers tanks and a pump house would be situated to the east of the site.

A car park for around 400 vehicles is proposed to accommodate staff and visitors and would include main site access, a HGV yard with goods bays, around 25 disabled spaces and around 40 electric vehicle charging bays. Alongside a weighbridge and gatehouse, this would be located to the south of the site with access taken from the internal port road.

Environmental considerations

We have undertaken an initial assessment of a wide range of potential environmental considerations relating to the project. At this point, we are working with South Tyneside Council to understand and explore the scope of these considerations. Before submitting our planning application to the Council, we will finalise an Environmental Impact Assessment to highlight all of these considerations, and where there is likely to be an adverse effect, propose measures to balance and this effect on surrounding communities, landscape, wildlife and heritage.

The environmental considerations we have assessed fall into two categories – both of which are explained in more detail below:

- Key environmental considerations
- Other environmental considerations

Key environmental considerations

We have considered a wide range of potential environmental effects.

We are in the process of developing an understanding of the scale of the effects described below – and what, if any, measures we might take to balance or mitigate this effect. We welcome your views on this and invite you to provide them via the online feedback form, which you can find here: **www.lseac-southtyneside.com**

Built Heritage

There are important historic sites within 5km of the site, including Hadrian's Wall (a World Heritage Site), scheduled monuments, listed buildings, and conservation areas. However, construction is not expected to cause significant harm to these sites.

The proposed 202m high structure could affect the surroundings and views of Hadrian's Wall and historic sites in Jarrow. This requires further assessment, where the development's visibility from key viewpoints will be analysed. The full Environmental Impact Assessment (EIA) will follow national heritage guidelines and consider planning policies. As part of this, a Heritage Statement will provide a detailed analysis of historical records, maps, and site visits to assess potential heritage impacts to ensure these are minimised as plans progress.

Ground Conditions

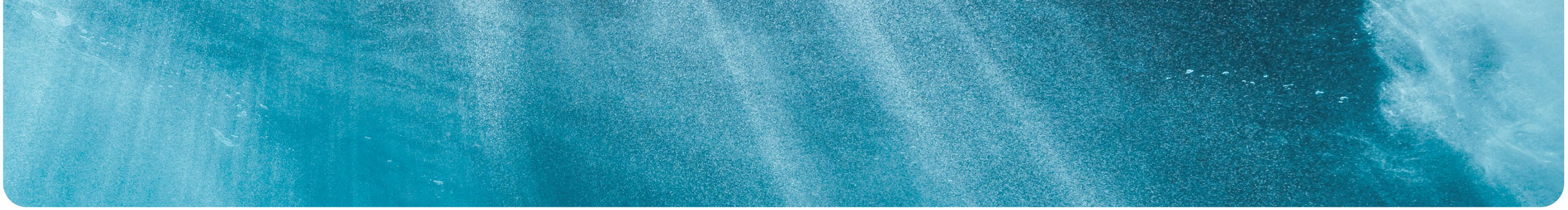
Part of the Port of Tyne site was registered as a landfill in the 1980s, landfill deposits are understood to be approximately 8.4m deep. Our initial investigations indicate that this could include domestic, commercial, and industrial waste. The site's brownfield status, and the fact that the land is relatively compressed, means significant effects are unlikely.

Landscape and Visual Effects

The likely landscape and visual impacts associated with the development during construction include:

- Loss of existing vegetation during demolition and site clearance.
- A tangible presence of construction activity and cranes within the site.
- A reduction in local 'tranquillity' because of construction.

During operations, the tower would be a prominent new feature within the landscape, visible both locally and from a distance.



Other environmental considerations

After reviewing carefully, we do not anticipate any significant effects in the following areas. However, we would welcome feedback on any of these areas if you feel they could impact you. To provide this feedback, you can access the online feedback form which you can find on our consultation hub here: **www.lseac-southtyneside.com**.

Air Quality: Overall, no significant air quality effects are considered likely, but an Air Quality Assessment will evaluate potential impacts during construction and operation.

Archaeology: No significant environmental effects are considered likely in relation to below ground archaeology during construction or operation. Below ground impacts and the requirement for further archaeological works will be assessed within an Archaeological Desk-Based Assessment.

Major Accidents and Disasters: The proposed development does not pose significant safety risks. It is outside Newcastle Airport's restricted airspace, which is particularly relevant to the proposed tower and is far from high-risk industrial sites. The facility would not store hazardous materials, and road and vessel safety measures would be in place. Assessments are underway to ensure the tower's height does not impact airport operations, with adjustments possible if needed. Further consultation with Newcastle Airport will continue.

Ecology and Biodiversity: The proposed development is designed to minimise impact on birds that use the Tyne and inhabit the local area, with the risk of birds colliding with the tall building deemed low due to its careful design. Any effects on protected species would be managed through thoughtful landscaping to support local wildlife.

Greenhouse Gas and Climate Change: The development is not expected to significantly impact climate change or greenhouse gas emissions. The site is a brownfield area with no carbon-storing plants or soils, but the design includes measures to address climate risks like flooding, heatwaves, and storms.

Noise and Vibration: The proposed development is not expected to cause significant noise or vibration issues. Some temporary noise from construction is unavoidable, but it would be managed through a Construction Environmental Management Plan to minimise disruption. Once the facility is operational, noise from equipment and activities would be controlled through design and engineering solutions. Any potential noise from vehicles or vessels is expected to be minimal due to the site's location. Further noise assessments would help refine the design.

Traffic and Transport: A detailed Transport Assessment has been undertaken to assess the potential impact of the development on the local highway network and to ensure that the development has suitable transport provision for all modes of travel. The assessment concludes that the impacts of the development on local traffic will be minimal and the site can be accessed via a range of modes of travel. Any construction related traffic would be managed through a Construction Traffic Management Plan to ensure minimal impact on local residents. Through a Travel Plan, future employees of the site will be encouraged to travel to/from the site via walking, cycling and public transport. A car park with suitable provision for future employees will also provided, including disabled bays and EV charging. A Transport Assessment and Travel Plan will be submitted with the planning application.

Water Environment: With proper drainage and design measures, no major water-related impacts are expected. A Flood Risk Assessment and Drainage Strategy will be submitted with the planning application.

Wind Microclimate: A wind tunnel study would be conducted to confirm conditions, and any necessary design adjustments would be made, however no significant environmental impacts are expected.

Waste: The project would generate minimal waste during both construction and operation. Most construction components would be pre-manufactured off-site, reducing on-site waste. Excavated material from foundation work is expected to be reused on-site where possible, with any excess managed appropriately. Operational waste from the cable manufacturing process would be recyclable. A Construction Environmental Management Plan would outline waste disposal measures, and a waste management plan would be created before construction begins.

Have your say

We want to create a legacy that brings jobs, builds skills, and puts the North East at the heart of the UK's clean energy transition. Your feedback would help shape the next steps in this development, and we invite you to share your thoughts on our plans.

You can provide feedback via the following methods:

Our consultation hub: **www.lseac-southtyneside.com**

Send in a physical copy of the feedback form to us:
Freepost SUBSEA CABLE PROJECT CONSULTATION FEEDBACK

Attend one of our consultation events, where you can discuss your questions with the project team. Events will be held at:

- **Tuesday 27th May, 4.30 - 8.30pm:**
  One Trinity Green, Eldon St, South Shields NE33 1SA
- **Wednesday 28th May, 4.30 - 8.30pm:**
  Cedarwood Trust, The Avenue, Avon Avenue,
  North Shields, NE29 7QT

Our consultation will run between 14th May 2025 and 18th June 2025.

Please note that we may not be able to include any feedback received after 11.59 on Wednesday 18th June in our review.