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## Frequently Asked Questions

November 2025



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### INTRODUCTION

The Tees Valley Energy Recovery Facility (TV ERF) is an important infrastructure project for the North-East which will allow the seven participating councils (Darlington, Durham, Hartlepool, Middlesbrough, Newcastle, Redcar & Cleveland and Stockton) to have full control over the management of waste from across the region that is left over after recycling (known as “residual waste”) - ensuring it is managed safely, reliably, sustainably and affordably over the long term.

Please note that all information in this document is correct at the time of publication (November 2025) but may be subject to change at any time as the project progresses.

### FREQUENTLY ASKED QUESTIONS

#### **What is the Tees Valley Energy Recovery Facility (TV ERF)?**

The TV ERF is a critical and essential piece of infrastructure for the North-East which will provide the region with a safe, reliable, sustainable and affordable treatment solution for its “residual” waste (the rubbish left over after recycling), helping move towards the goal of sending zero waste to landfill.

#### **Where will it be located?**

The facility will be located at the *Teesworks* site in Redcar, on part of the former British Steel works at Grangetown. The project will support the regeneration of this industrial brownfield site, creating hundreds of jobs during the construction period and up to 50 permanent positions once operational.

#### **Why this location?**

After a detailed analysis of 176 potential sites for the TV ERF across the Tees Valley, this location was chosen because it is allocated for waste management infrastructure in the Local Development Plan and has excellent connections to both the National Grid and the local road network. This location also offers potential for the TV ERF to export low-carbon heat, as well as electricity, to future nearby users and, in the longer term, the possibility of connecting to the Northern Endurance Partnership (NEP) carbon capture and storage (CCS) infrastructure as part of the East Coast Cluster.

#### **Who will the facility serve?**

The TV ERF will serve more than one and a half million residents living in the Tees Valley, Newcastle, and Durham by generating energy from the rubbish left over after people have recycled all they can. This leftover rubbish is known as “residual waste”. Treating rubbish this way avoids the need to send it to landfill and ensures we can all live and work in a clean and sanitary environment.

## **How much residual waste will the facility treat each year?**

Each year, it is envisaged that the new facility will process up to 450,000 tonnes of residual waste from the region and use it to generate up to 49.9MW of electricity – enough to power the equivalent of 60,000 homes.

## **How is this facility being procured?**

Seven local authorities (Darlington, Durham, Hartlepool, Middlesbrough, Newcastle, Redcar & Cleveland and Stockton) are working in partnership to develop the TV ERF project.

The existing residual waste treatment solutions of the seven partner authorities are due to expire over the next few years and this provided an excellent opportunity for the joint procurement of a new, long-term, resilient, solution within the full control of the partner authorities that will deliver economies of scale to each of the partners.

Following an extensive competitive procurement process, Viridor was selected as Preferred Tenderer in July 2025 and is expected to be awarded a 29-year contract to design, build, finance and operate the facility in accordance with its Tender response, with the potential to extend this contract by a further eleven years.

Hartlepool Borough Council led the tender process, which was overseen by a governance board representing all seven councils.

## **What stage is the procurement at?**

Viridor has been appointed Preferred Tenderer and the project partners are working towards “Financial Close” (the signing of contracts), which is anticipated in early 2026. This contract will be between Viridor and a Special Purpose Vehicle (SPV) company established by and between the seven partner authorities. The SPV company will be wholly-owned and directed by the partner authorities.

Once Financial Close has been achieved, full construction of the TV ERF is also expected to begin in 2026.

Viridor was granted an Environmental Permit by the Environment Agency in July 2025, to operate the facility, and the facility has full planning consent which was activated through preparatory construction works to the site access points earlier this year.

## **Why can't waste going to the TV ERF be recycled?**

The TV ERF is designed to only treat the waste left over after recycling has taken place or, in other words, everything discarded as general rubbish. Even under the most ambitious future local recycling performance scenarios there will still be a proportion of left-over “residual” waste that needs to be treated through energy recovery – which provides a more sustainable alternative to landfill. The partner authorities will continue to help residents recycle all they can, but everyone has a role to play to help recycle more, including manufacturers, consumers, local authorities and the recycling sector.

## **Is there a better alternative to the TV ERF?**

At present, around the world, residual waste is managed either through landfill or through various types of thermal treatment where the waste is combusted, and there is no viable alternative to these options operating reliably at scale.

Although there are a few emerging alternative treatment technologies for residual waste, for example “gasification”, or converting waste to aviation fuel, these alternatives are in their

infancy; require incoming waste to have a very low proportion of plastic in it to achieve a more sustainable outcome than conventional Energy-from-Waste (EfW); and have not been successfully demonstrated at the necessary scale to reliably meet the region's waste management requirements.

Gasification in particular has been subject to numerous failures and challenges in the few instances where it has been deployed to treat municipal residual waste at scale. The aforementioned technologies are also all variations of a combustion process and produce carbon dioxide and other emissions similar to those produced by the TV ERF. As such, they would not offer any significant benefit over a conventional Energy-from-Waste facility.

In short, there is no viable alternative solution which has been proven at scale, or which is significantly more cost-effective, and which fulfils the same vital role as the TV ERF.

Irrespective of these technologies, the most effective measures that can be taken to minimise the environmental impact of residual waste treatment are to reduce, re-use and recycle as much as possible – which the partner authorities remain committed to alongside securing a residual waste management solution. However, with forecasted population and economic growth over the next 30 years, even under the most ambitious future recycling and waste-avoidance scenarios, hundreds of thousands of tonnes of residual waste produced by people living in the region each year will still require safe treatment – an important role that will be fulfilled by the TV ERF.

### **What are the wider benefits of the facility to the area?**

In addition to providing an essential sanitation service and a sustainable means of treating the region's residual waste, the TV ERF project will contribute towards the regeneration and development of the local area.

The specific section of the *Teesworks* site allocated for the TV ERF is a 22-acre plot known as Grangetown Prairie 2. Locating the facility here, alongside other new circular-economy infrastructure, will contribute to the regeneration and development of the site and support the local economy.

The TV ERF project will also create several hundred jobs during the construction period (peaking at approximately 700 workers on site) and up to 50 permanent positions once operational.

### **How will the project deliver value to the local area?**

In addition to creating employment opportunities, and of course providing an essential public sanitation service, the plant's ability to export heat and electricity to the wider *Teesworks* site could serve as a catalyst for attracting other operators to the site.

Additionally, the partner authorities placed significant weighting on the creation of "social value" in the procurement process. As a result, Viridor's tender response includes some exciting proposals for delivering training and education opportunities as well as other benefits, listed below.

During the construction phase:

- Approximately £1.4 million total social value benefit across a 4-year build period
- £200,000 per annum Community Benefit Fund for local projects (up to a total of £800,000 during the construction phase).
- Approximately £200 million of the Capital Investment to be procured in the UK.
- There will be up to 700 jobs on site (peak), using local accommodation and services.
- There will be significant local material supplier opportunities.

- Meet-the-Buyer events and local capacity building for small and medium-sized enterprises.

During the Operations (Services) phase:

- Approximately £966,000 per annum (indexed) social value benefits.
- There will be a minimum £330,000 per annum spent locally in goods and services, across the 7 LA's areas.
- £100,000 per annum (indexed) community fund made available for local projects, for all seven LA areas to potentially access.
- There is a target for at least 70% of the workforce to live within the partner authority areas.
- Apprenticeships will be in place across the operations period.
- There will be 'Year in Industry' placements, as well as school and local community site visits.

The development of the Facility will deliver approximately £27.5 million Economic Regeneration and Social Value benefits within the geographic boundaries of the seven council areas over the Contract term.

### **Will the ERF require planning permission?**

Yes. Full planning consent has already been granted for the facility proposed by Viridor and preliminary construction work has been undertaken.

### **How does this facility fit within the seven Councils' individual waste strategies?**

The TV ERF project is a critical and essential part of the waste management strategies of the partner authorities and will provide a safe, reliable, sustainable and affordable residual waste treatment solution from 2029 – ultimately contributing towards the councils' shared long-term goal of sending zero waste to landfill.

Prior to initiating the tender process, the respective waste strategies for the Tees Valley authorities, Newcastle City Council and Durham County Council were subject to consultation – both with the public and statutory consultees.

### **Will recovering energy from waste prevent further recycling by the seven Councils?**

Recovering energy from waste only takes place after recycling and is an important component of the waste hierarchy – the policy framework which determines the best environmental solution for dealing with waste. Many councils in the UK, including those with the highest recycling performance, use energy recovery to treat their residual waste. It is therefore complementary to efforts to recycle, re-use and reduce as much as possible.

### **What is 'residual' waste?**

Residual waste is the waste left over after residents and businesses have separated all they can for recycling (through their kerbside collection services and household waste recycling centres for example), so this is typically anything which goes in the general rubbish bin. The waste hierarchy determines that it is preferable, from an environmental perspective, to treat this residual waste by generating energy from it instead of disposing of it in landfill.

### **Is recycling important to the seven Councils?**

Improving recycling performance and championing waste avoidance are key priorities of the partner authorities and these services are operated individually by each council.

The partner authorities anticipate that recycling rates will continue to improve in the region as new national and local policies are introduced, so the TV ERF will not impact upon the pursuit of this higher recycling performance – indeed this has been factored in when specifying the capacity of the new facility.

### **Why can't more waste be recycled now?**

Improving recycling performance to minimise the volume of residual waste is a complex task and everyone has a part to play in achieving this – from manufacturers to retailers, consumers, local authorities and waste management companies. New national measures introduced under the Environment Act and the Government's Resources & Waste Strategy are likely to result in significant changes to all council recycling and waste management services over the next decade with the aim of getting to a national average municipal recycling rate of 65% by 2035. However, implementation of the Resources and Waste Strategy has been significantly delayed and most aspects of these reforms have yet to be implemented.

With or without these reforms, not everything can be recycled though and, even under the most ambitious future local recycling scenarios, there will still be a proportion of residual waste (representing hundreds of thousands of tonnes a year from the region) that will need to be treated through energy recovery to avoid sending it to landfill.

### **Will the facility emit carbon dioxide?**

Waste treatment and disposal is vital for maintaining a sanitary environment and protecting public health but treating residual waste, like most industrial processes, does create greenhouse gas emissions. Overall, on average, recovering energy from residual waste produces less Greenhouse Gas (GHG) than landfill, which is the alternative.

Emissions from treating society's waste are challenging to avoid but, in accordance with the requirements of the procurement, Viridor will be required to reduce carbon emissions year on year throughout the contract through the implementation of a Carbon and Environment Plan, which will include proposals as to how reductions in carbon emissions will be made. This could include increases to the efficiency of the plant; potential future heat-offtake and / or the potential development of an Incinerator Bottom Ash facility in the area.

Residents can directly impact on the carbon emissions produced at the Facility by sorting and separating as much plastic as possible from their residual waste, thereby allowing it to be recycled, rather than being treated at the TV ERF.

Additionally, throughout 2022 and 2023, the TV ERF project partners pursued a bid for Carbon Capture and Storage (CCS) funding support as part of the Government's plans to support carbon capture projects across two new industrial carbon clusters – Hynet and the East Coast Cluster.

In early 2022, the TV ERF project made an application to the Department for Business, Energy and Industrial Strategy (now the Department for Energy Security and Net Zero - DESNZ) under Phase 2: Track 1 of the Government's Cluster Sequencing Process and, in August 2022, the TV ERF project was shortlisted to participate in further due diligence prior to funding awards being made.

Unfortunately, following an announcement by DESNZ in March 2023, the TV ERF was not one of just three projects in the North-East short-listed to commence detailed negotiations in relation to business model funding support.

Success through this process would have enabled the TV ERF to deploy carbon capture and storage technology from the outset – capturing carbon emissions from the plant and storing

them in offshore storage as part of the East Coast Cluster. However, it is anticipated that future CCUS funding rounds will occur and the TV ERF will remain well placed to apply again should the opportunity arise.

### **Will the TV ERF be able to operate without CCUS?**

The vast majority of Energy Recovery plants operating, or planned to operate, within the UK do not make use of carbon capture technology. Because of its location situated within the East Coast Cluster, and its close proximity to planned CCS pipeline infrastructure, the TV ERF is well positioned to make use of CCS should future funding opportunities become available, and it will be designed in such a way that it will be capable of connecting both to CCS infrastructure and local heat networks in future.

### **What is the impact on the project partners of the proposed inclusion of energy-from-waste in the Emissions Trading Scheme (ETS) from 2028?**

At present, as part of its decarbonisation plans, Government is considering proposals to include the incineration and combustion of waste, and other energy recovery from waste in the Emissions Trading Scheme (ETS) from 2028, with voluntary emissions reporting starting from 2026<sup>1</sup>.

No firm commitments are currently in place, and there is a voluntary monitoring period running from January 2026 which will help the UK ETS Authority make further decisions on the details of the scheme – including costs.

If the ETS is ultimately widened to include waste activities, this will place a cap on the volume of emissions allowed from residual waste treatment facilities that will fundamentally increase the cost to all local authorities of residual waste treatment – since it is anticipated that tax adjustments will be made to prevent residual waste from being sent to landfill or export markets more cheaply than domestic energy recovery within the Emissions Trading Scheme.

Strategies to reduce the carbon emissions of energy recovery, and subsequent ETS costs, include recycling and reducing waste as much as possible (particularly for plastics), increasing the energy-efficiency of EfW plants and through carbon capture.

Future ETS costs may potentially support a viable business model for the development of carbon capture at the TV ERF, which will be carbon-capture-ready and subsequently well placed to make use of this technology. It is essential, however, that any application of the ETS to the waste sector goes hand-in-hand with the implementation of reforms to raise national (and local) recycling rates and develop secondary markets for recycled materials – particularly for plastics.

### **Is energy recovery a sustainable source of energy compared with other sources?**

The carbon intensity of energy produced by plants like the TV ERF cannot be fairly compared with other forms of energy generation, such as wind or solar power, since the essential primary purpose of energy recovery is to treat waste material – which other forms of energy generation do not do. The greenhouse gas (GHG) emissions of landfill therefore provide a more accurate basis for comparison since both are designed to treat residual waste. Landfill releases, on average, 200kg more greenhouse gas emissions for every tonne of waste treated compared with energy recovery.

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<sup>1</sup> The incineration and combustion of waste, and other energy recovery from waste includes Advanced Thermal Treatment (ATT), Advanced Conversion Technology (ACT) and other related advanced waste treatment activities; it also includes waste-to-fuel activities, including the production of sustainable aviation fuel (SAF).

## **Does the TV ERF have a grid connection?**

Yes. During the procurement process, the TV ERF faced unforeseen delays due to national capacity constraints within the National Grid, which would have prevented the TV ERF from connecting to the grid at the required time.

However, the project partners worked with National Grid and the regional distribution network operator (DNO) to find a solution and subsequently received updated connection offers which aligned with anticipated construction timescales for the TV ERF. This allowed the procurement to recommence.

## **In 2024, Defra announced that it would be “cracking down” on new “incinerators” and will require them to utilise CCS and Heat networks, among other things. How does this affect the TV ERF project?**

Defra’s Residual Waste Infrastructure Capacity Note and the accompanying announcement published on 30th December 2024 expressed the Government’s intention to introduce additional requirements on new EfW development, but did not include detailed proposals and timelines for many of the new requirements.

However, the TV ERF project partners view the Defra study and announcement as reconfirming the importance of the project for the following reasons:

- The TV ERF secured full planning permission in 2023 and an Environmental Permit in 2024 (granted to Green Recovery Projects Ltd). As such, the TV ERF has likely been factored into Defra’s calculations as consented capacity (as of October 2024). Defra notes that the vast majority of “consented capacity” included in the study comprises “merchant” facilities with no underlying local authority contract, and that this capacity may or may not be delivered in practice because it remains subject to commercial conditions. The TV ERF does not fall into this category, since it will serve a known, demonstrable, local need for treating waste volumes that are under the control of the partner authorities.
- To underscore the long-term local requirement for the TV ERF, the Defra capacity study also refers to Government’s target of achieving a national average residual waste volume of 287kg per person per annum by 2042 – which is approximately a 50% reduction on current levels. This means that, even with dramatically increased recycling rates locally by 2042, and without making an allowance for increased overall waste volumes associated with population growth, the partner authorities can still expect to have to treat more than 400,000 tonnes of residual waste each year through energy recovery, or landfill in the absence of EfW. In practice, this figure is likely to be higher.
- The new TV ERF facility will be more efficient and will operate to significantly tighter emissions limits than existing older facilities – deploying the best available technologies and techniques. It will comply with, and likely exceed, all existing and future regulatory requirements regarding efficiency, emissions and other regulatory factors.
- The TV ERF will be Combined Heat and Power (CHP) enabled, thereby potentially allowing export of low-carbon heat from the facility to surrounding users in future. It has also been specifically designed to be Carbon Capture (CCS) ready, which will enable the deployment of carbon capture technology subject to a viable business case. As outlined earlier in this document, the project partners applied to Government for CCS funding in 2023 as part of the East Coast Cluster, which would have enabled the deployment of CCS from the outset. Unfortunately, no EfW projects

from the East Coast Cluster were selected for funding support – but the partners remain committed to pursuing this outcome and await the publication of the Track-1 Expansion documents

### **How do the greenhouse gas emissions of energy recovery process compare with the alternatives (ie landfill)?**

Energy recovery is a lower carbon solution for the treatment of residual waste compared with landfill and, for context, approximately 200kg of CO<sub>2</sub>e (carbon dioxide equivalent) on average is saved for every tonne of residual waste sent to energy recovery instead of landfill – although the relative performance can vary within a range depending on specific local circumstances.

### **Can the facility's future carbon impact be further reduced?**

In future, potentially exporting heat as well as electricity from the TV ERF will increase the plant's efficiency, further improving its performance compared with landfill, while carbon capture and storage technology holds the potential to mitigate remaining net emissions.

Removing as many plastic-based materials as possible from the residual waste stream will also help to reduce carbon emissions from energy recovery and this will most effectively be achieved through greater waste-avoidance and improved recycling performance – which residents will play a significant role in helping to deliver.

### **What emissions are produced by an energy recovery facility?**

Like any other source of energy generation based on the combustion of solid or liquid fuels, the energy recovery process produces emissions. These emissions are predominantly steam, oxygen, nitrogen and carbon dioxide along with very small quantities of pollutants.

### **How are energy recovery facilities regulated?**

Modern energy recovery facilities are among the most heavily regulated industrial installations in the world and must meet strict environmental standards. The TV ERF will use mature, proven and reliable technology to process waste and treat flue gases. In practice, these facilities often operate at just a fraction of permitted emissions levels and, as a result, make only a small, if detectable, contribution to local concentrations of pollutants such that any impact on health from reduced air quality is negligible.

They are regulated and closely monitored by the Environment Agency. In addition, the TV ERF will remain under the governance of the seven partner authorities, who will ensure that all contractual, permit and planning conditions are adhered to throughout the operational life of the facility.

The Environment Agency granted an Environmental Permit to Viridor in July 2025, which allows this experienced operator to run the TV ERF.

### **What control measures will the TV ERF use to minimise pollution?**

The TV ERF will employ a range of industry-standard flue-gas treatment technologies to remove pollutants and particulate matter from the gases produced during the combustion process, before they are dispersed through the stack. These technologies will separate and capture particulate matter and pollutants by filtering them from the gases. The substance left over from this filtration process is known as Air Pollution Control residue (APCr) – which itself can be treated and recycled through specialist processes.



Once the flue gases have been treated, those that are released through the stack are dispersed at height to ensure they are not concentrated at ground level and they are constantly monitored – with strict safety controls in place. The TV ERF will be regulated and closely monitored by the Environment Agency.

### **Do energy recovery facilities represent a public health risk?**

The UK Health Security Agency (Formerly Public Health England) commissioned a study by Imperial College London in 2019 investigating the health effects of municipal waste incineration, which found that modern, well-run, energy recovery facilities are not a significant risk to public health. PHE concluded that “While it is not possible to rule out adverse health effects from these incinerators completely, any potential effect for people living close by is likely to be very small.”

This view is based on detailed assessments of the effects of air pollutants on health and on the fact that these incinerators make only a very small contribution to local concentrations of air pollutants.

### **How will waste material be delivered to the facility?**

It is anticipated that the facility will accept waste material six days a week (although the site will be permitted to accept waste throughout the year except for Christmas Day) and this waste will be delivered via road by both heavy goods vehicles and refuse collection vehicles. This site is well served by arterial routes away from residential areas and these waste transport vehicles are already on the regional road network delivering material to multiple processing sites.

### **What is the anticipated impact of vehicles delivering waste to the facility on the local road network?**

The relatively low number and frequency of deliveries to the TV ERF will not have any significant impact upon congestion and a transport impact assessment was carried out as part of the planning application. Furthermore, the transport plans and impact assessment were scrutinised and consulted on as part of the planning process and no issues or objections were raised, nor were any operational conditions imposed.

From a sustainability perspective, there will be significant advances to de-carbonise road transport well within the lifetime of the TV ERF in line with Government targets. This will likely include a transition to electric or hydrogen fuelled refuse collection and heavy-goods vehicles, so transport by road will increasingly offer a more sustainable logistics solution.

### **Is the TV ERF an affordable solution for the partner authorities?**

The TV ERF partner authorities each have a statutory duty to safely manage hundreds of tonnes of residual waste produced in their respective regions every day of the year to ensure that it does not accumulate and pose a threat to the environment or public health.

This is a vital public service and core business for all local authorities. The costs involved are an essential, unavoidable, component of councils' normal expenditure while the capital infrastructure projects needed to deliver these services also come with costs which must be budgeted for and financed – whether out-sourced or delivered directly by an authority.

Subsequently, residual waste treatment costs are already being borne by the partner authorities and the purpose of procuring a new solution is to provide long-term cost clarity at a point when existing long-term solutions are coming to an end.

Teams of subject-matter experts have carefully prepared a detailed strategic and commercial case for the TV ERF, considering many other options, over a period of several years. This innovative partnership will achieve economies of scale for each authority, while the market tender process has delivered the best available operational expertise at the best value for the partner councils as well as providing long-term clarity on costs.

**Recent media coverage has been highly critical of Energy-from-Waste on a number of fronts – does this raise any new concerns among the partner authorities about pursuing the TV ERF project?**

In October 2024, the BBC published two articles on successive days about Energy-from-Waste (EfW) facilities. This resulted in wider media interest in EfW, including at a local level. Much of the content of the original BBC articles focused on the claimed experiences of residents living nearby to just two existing facilities, one of which has been operating safely and successfully on Teesside for nearly thirty years, performing a vital local public sanitation function.

The BBC's coverage was also based on the routine publication of Environmental Permit compliance data by the Environment Agency. The BBC's analysis suggested that the average number of permit breaches per plant had risen from previous reporting years, but failed to provide sufficient context to this. In reality, the number of permit breaches per plant remains low – at an average of just 5 breaches per plant per year – and all permit breaches for conventional EfW plants like the TV ERF were of the lowest risk category, which the Environment Agency considers to represent either no or minor risk to the environment or public health. Bearing in mind these facilities operate 24/7 and process hundreds of thousands of tonnes of waste material every year, a permit breach can be recorded for a single emissions spike recorded over a half-hour period. Consequently, a plant may remain well within its daily average emissions limit despite recording a temporary half hour spike (which is most typically caused by items present in the waste that should not be there – such as gas canisters).

Furthermore, media coverage has insinuated that the energy produced by EfW facilities is more carbon-intensive than coal, and that their continued use is not compatible with net-zero targets. As mentioned previously in this document, the primary purpose of EfW is to treat waste and the secondary purpose is to generate energy as a by-product. The emissions associated with this can only accurately and fairly be compared with the GHG emissions from landfill, which is the only viable alternative option for treating residual waste. Over time we would expect that the carbon emissions associated with EfW treatment will reduce alongside efforts to recycle more and reduce waste – while carbon capture technology offers the potential to completely change the emissions paradigm associated with these vital facilities with the right policy and economic conditions.

Recent media analysis, while generating unfortunate headlines likely to cause unnecessary alarm, is based on public domain information that is freely available and well-known to all of those involved in waste management planning decisions, which is testament to the open and transparent regulation of energy-from-waste facilities. As such, it does not change or influence the partner authorities' position on the project.

A full response addressing the claims made in the BBC's coverage was given by the Environmental Services Association – which represents the majority of UK EfW operators. It is available here: [ESA statement on Energy-from-Waste](#)

## **CONTACT**

More information about the TV ERF project can be found online at [www.tverf.co.uk](http://www.tverf.co.uk)

If you have any further questions not addressed by the website or this document, please use the contact form at [www.tverf.co.uk](http://www.tverf.co.uk) to get in touch with the project team and we will ensure that you receive a response.