



Earlsgate Project- A Benchmark for LRES-UK's Success in Digital Confined Space Management



Earlsgate EfW site

**Earlsgate Energy-from-Waste Facility**

The Earlsgate energy-from-waste (EfW) facility in Scotland plays a key role in sustainable energy production by converting approximately 300,000 tonnes of residual waste into green electricity and steam annually. The waste used in this process is sourced primarily from the UK and arrives at the facility by road. Earlsgate is committed to sustainable practices and operates under strict environmental and safety standards, contributing significantly to the circular economy.

Each year, the entire facility undergoes a scheduled maintenance shutdown lasting 3–4 weeks. Safety is paramount during this period with 200–250 contractors working on-site. This case study highlights how LRES-UK utilises the VISICS system to enhance safety during outages. By implementing digital confined space management, LRES-UK minimises risks, improves monitoring, and ensures efficient coordination, setting a new standard for safe and effective maintenance practices.

**A Benchmark for LRES-UK's Success in Digital Confined Space Management**

Earlsgate is the perfect example of LRES-UK's continuous success in executing digital confined space management through the VISICS system. The site showcases how LRES-UK has seamlessly integrated VISICS, leveraging its capabilities to enhance operational efficiency while maintaining the highest safety standards. This success showcases LRES-UK's expertise in safety optimisation, setting an industry standard.

By leveraging the power of the VISICS system, we combine cutting-edge technology with our extensive industry expertise, positioning LRES-UK as a market leader in digital confined space management. This innovative approach not only sets us apart in the market but also empowers our clients to achieve enhanced safety, increased efficiency, and greater peace of mind, knowing that their confined space operations are being closely monitored and managed to the highest standards.

**PROJECT**

**COUNTRY/REGION:**  
Scotland

**INDUSTRY:**  
Energy

**DURATION:**  
05/10/2024-18/10/2024

**TOTAL CONTRACT VALUE:**  
£116,862.12

**SCOPE:**  
Boiler house and turbines 30 contractors, 475 workers

## More People, More Challenges

During the maintenance turnaround, the Earlsgate energy-from-waste facility becomes a hub of activity. Unlike the usual operational team of 15–20 employees responsible for maintaining production, the number of personnel increases significantly during the shutdown. At peak times, up to 30 contractors may be working simultaneously in the combustion boiler alone. This influx of workers brings unique challenges in maintaining both safety and efficiency.

## VISICS Digital Confined Space Monitoring

Earlsgate adopted VISICS digital solutions to address these challenges to enhance safety and efficiency during turnarounds. “Since implementing the VISICS system, the results were immediate and clear—this system will become an essential part of our maintenance operations for future projects. Throughout the outage, we had complete confidence in LRES-UK.” John Black, Plant Manager.

## Benefits and Features

VISICS improves safety by equipping confined spaces with digital access control, alarm and intercom systems, gas detection units, and both outdoor and indoor cameras that can be flexibly deployed. Replacing the need for traditional hole watchers.

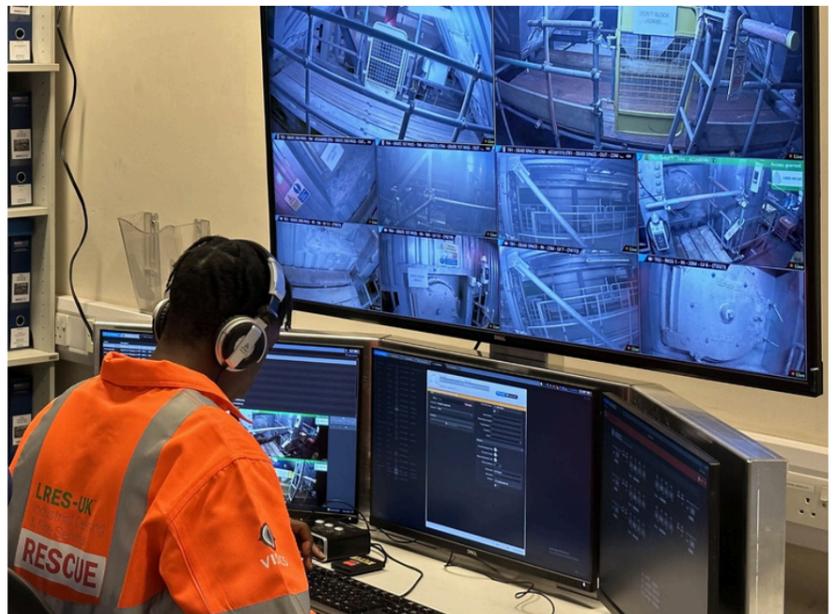
The data and real-time video streams are monitored around the clock in a dedicated trailer outside the facility. Here, VISICS operators oversee the live feed, maintain contact with contractors working in confined spaces, and coordinate with Earlsgate’s operational team when necessary.

This system allows for quick and remote monitoring of confined spaces. “With VISICS, we can assess conditions inside a confined space in minutes with the push of a button. Previously, this would have required physically inspecting the boiler area, leading to significant delays. Now, what used to take hours is resolved in just 15 minutes.” Sean Mason, *Confined space rescue manager*.

In addition to providing digital monitoring solutions, VISICS also manages the issuance of work permits during the maintenance period, ensuring a streamlined and safe process for all personnel involved.

*“The operatives excelled in overseeing the projects with a hands-on approach throughout. We cannot envision a better solution than LRES’s approach to digital confined space managed.”*

Dave McGill, M&O Operations Manager



## The Added Value that we brought to the contract

LRES-UK's expertise and innovative approach provided significant added value during the project:

- LRES-UK has unparalleled experience in implementing the VISICS system, managing over 60 outages annually. Our skilled teams are experts in monitoring and controlling confined spaces, equipped with hazardous awareness training to identify and mitigate risks before they escalate.
- Rapid Deployment: The VISICS system was installed and fully operational within the required timeframe, showcasing LRES-UK's ability to adapt to time-sensitive requirements.
- Enhanced Safety Culture: By automating high-risk monitoring processes, LRES-UK reinforced the client's commitment to safety, which was reflected in staff feedback and audit results.
- Comprehensive Support: LRES-UK provided round-the-clock technical support throughout the shutdown, ensuring any queries or adjustments were addressed immediately to maintain the project timeline.
- Client Collaboration: By involving the client at every stage of the project, LRES-UK fostered a strong partnership, aligning the Visics solution with both immediate needs and future objectives.

## Reports and Insights

With VISICS, the reporting tool is included as standard. This allows for straightforward logging of findings and clear reporting. EarlsGate's operational team noted: "These detailed reports provide immediate insight into areas where safety can be further optimised. They also facilitate constructive discussions with contractors, leading to immediate improvements." Dave McGill, M&O Operations Manager.

## Scope of Work Undertaken

The primary goal during the shutdown was to address key operational challenges while adhering to strict timelines. The scope of work included:

- Confined Space Monitoring Setup: Installation of VISICS confined space monitoring technology to enhance safety and compliance during high-risk maintenance tasks.
- Real-Time Surveillance Deployment: The system's advanced surveillance tools were implemented to monitor multiple maintenance areas simultaneously, ensuring continuous oversight and rapid issue detection.
- Maintenance Coordination: Integration of VISICS technology into the site's workflow to streamline communication between operators and contractors working on tasks such as boiler cleaning, ash extractor repairs, and economiser maintenance.
- Performance Monitoring: Ensuring real-time data collection to track maintenance progress, initiating quick decision-making and keeping the shutdown on schedule.

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## Conclusion

The implementation of our highly qualified operatives to operate the VISICS system during EarlsGate's outage highlights the transformative potential of innovative technology in the energy-from-waste sector. By combining advanced monitoring tools with a client and contractor-focused approach, LRES-UK delivered a solution that not only met but exceeded the client's expectations.

This project demonstrates LRES-UK's ability to adapt to high-pressure environments, delivering safety, efficiency, and cost benefits all whilst working to the clients time-frame. The partnership has set a benchmark for future outages and operations, reinforcing LRES-UK's reputation as a market leader in digital confined space management and industrial services



## VISICS CASE CONFIGURATION

**10x**

Power Distribution Units

**51x**

Access Control Units

**16x**

Cameras Inside confined space

**46x**

Cameras Outside confined space

**51x**

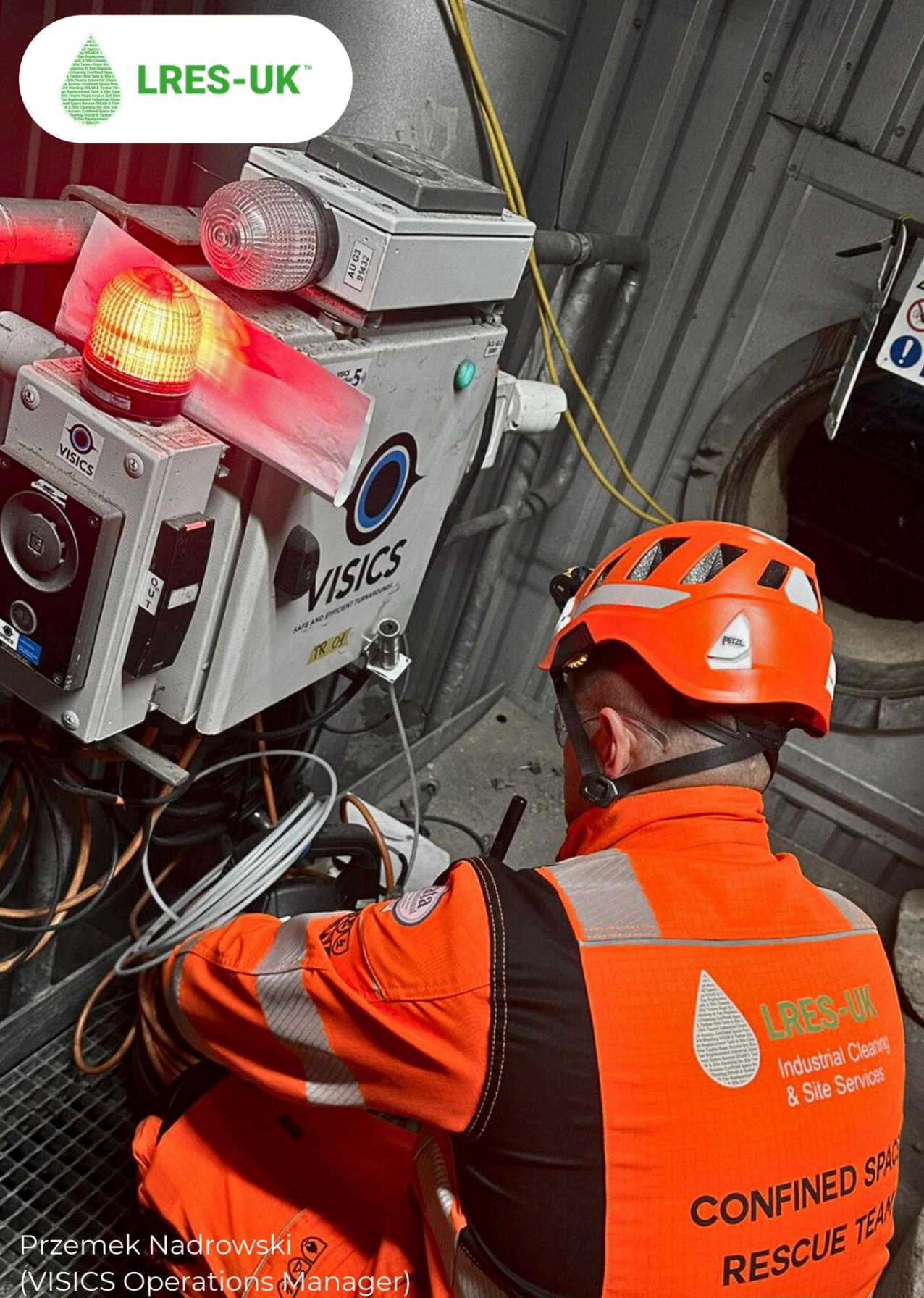
Badge Units

**19x**

Alarm Units

**23x**

Gas Detection Units



Przemek Nadrowski  
(VISICS Operations Manager)

### Trusted by Experience: Operative-Led Confined Space Safety

Confined space work in energy-from-waste facilities presents significant safety challenges. At the heart of our approach is our commitment to integrity, reliability, trust and leveraging the expertise of our Rescue & VISICS operatives who themselves have done the tasks that require monitoring.

To elevate safety standards, not just with our own operatives but with all contractors on site, We made the choice to utilise our operatives skills sets, on-site experience and their IRATA & FREC 3 qualifications and use these operatives for to the operation and management of the digital confined space monitoring system. The technology does not only enhance operational safety, but it is also designed to foster trust among our operatives, demonstrating that its primary role is to protect, not to scrutinise. We enforce this demonstration by managing the system with experienced operatives who have carried out the disciplines required to conduct a successful outage and hold FREC 3, C&G High Risk Confined Space Rescue & IRATA qualifications.