

# Sustainability Report 2025





# NET ZERO

Image taken from AESSEAL® Headquarters Treewalk & Wetlands area



# Contents





## 1 Foreword

Sustainability is about taking effective action and bringing others along with you.

At a time when many companies are struggling to keep their heads above water in the present difficult global trading conditions, it is important to emphasize that caring for the environment is not necessarily costly. It may mean just doing things differently.

In fact, it would be a great start if other organizations could make more money and help protect the environment at the same time.

In this report we provide detailed figures and examples of work being carried out on our 2025 journey to go beyond Net Zero, as well as information on our investment and social policies, and on our working environment.

While the report covers 2024, it is also worth noting that in April this year the company decommissioned the last of its natural gas-fired heating systems at its Rotherham headquarters.

At the time of writing, we have also just received the news that AES Engineering Ltd group has won a King's Award for Enterprise in the sustainability category. This is an honour for the entire group and all our 66 subsidiaries operating from 96 branches around the world.

The award recognizes the global impact of our commitment to running a sustainable business and securing the future of our planet, not least through our pledge to invest £29 million by 2029 on environmental projects.

This external recognition encourages us to continue to act and prove that sustainability is good business, not just for us, but for many other companies.

Sustainability is a promise to future generations that we intend to keep. Hopefully, we can persuade others to join us on a journey that leads to industry making a profit while respecting the world and its resources.

Chris Rea, CBE, DL, BSc, CEng, HonFIMechE

AES Engineering Ltd Group, Managing Director



# THE GLOBAL GOALS

For Sustainable Development





Image taken from AESSEAL® Headquarters Treewalk & Wetlands area

“ External recognition encourages us to continue to act and prove that sustainability is not just an empty word. It is a promise to future generations that we intend to keep.”



## 2 Sustainable Operations

As times change new challenges emerge, and if we are to pave the way to a successful future we must continually adapt our priorities, ambitions and the way in which we carry out business.

Success can be measured in many ways. When AES Engineering Ltd started with just five staff over 40 years ago we set ourselves the audacious goal of becoming “the world’s largest manufacturer of mechanical seals”.

With development and growth comes responsibility and, armed with a deeper understanding of the escalating climate crisis, the global group, now with around 2,000 employees and operations in almost 100 countries, made the decision to change the way it operated.

The environment had always been on our radar, but in 2020 we realized it was time to lead by example. We quickly reduced our own carbon footprint via solar panels, battery storage, electric vehicles and other conservation measures and, just as importantly, we began to actively encourage our supply chain to work more cleanly and set out to help customers be more sustainable.

As the fourth largest global manufacturer of mechanical seals and one of the strongest players in the ‘reliability’ sector, which advises industry on how to make industrial processes more sustainable, AES Engineering’s board decided that the group was uniquely placed to influence industry’s attitude towards environmental investments.

Now our business model is to work with major global industries to help them improve their reliability and sustainability.

We make mechanical seals, bearing protection and water management systems, and provide monitoring and reliability advice in challenging industrial environments all over the world, which means we can have a positive influence wherever we work.

In line with our new vision, we set out to become a trusted source of information for all industry, whether or not they were currently our customers.

This we have continued to do with added momentum. So much so that our mission became “To become the leading global reliability business, delivering solutions to help industry save water, energy, cut pollution and create a better world.”

As a result, the AES Engineering Group’s dedication to fostering a safe, ethical and community-oriented workplace while minimizing our environmental footprint and engaging stakeholders became central to our mission.





## Five years on and where are we?

Well, the COP29 climate change conference is behind us and unfortunately the news for the future survival of life on this planet continues to be grim. Those who believe in helping search for a long-term solution need to work harder.

Tree planting and preservation alone, even combined with reducing our carbon footprint, are not going to be the solutions to climate change, but the planet needs our help and every contribution is precious.

Our organization is investing in environmental projects because it is the right thing to do and we are truthsayers – we committed to investing £29 million by 2029 on environmental projects and we will.

People do business with people, but they can't if there isn't a planet for us to live on.

This section outlines our commitment to sustainability and our journey to becoming one of the first major global engineering companies to achieve Net Zero on all three Scopes (direct, indirect and supply chain energy use).

“Tree planting and preservation alone even combined with reducing our carbon footprint are not going to be the solution to climate change, but the planet needs our help and every contribution is precious.”



## Benefits of sustainability

In today's socially conscious landscape, our customers and employees place great importance on corporate governance and sustainability.

In 2020, AES Engineering began to advocate even more actively for global warming prevention strategies through the launch of Betterworld.Solutions. This knowledge-sharing initiative encourages businesses to adopt environmental policies and share success stories of emission reductions and cost savings with their customers.

At present 24 organizations take part as Betterworld.Solutions members, ranging from small and large UK (including Rotherham-based) companies to the Japanese machine tools giant DMG Mori. We need more, and we must encourage those who have already joined to share their progress.

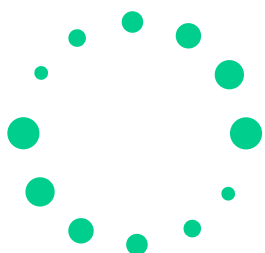
Betterworld.Solutions serves as a vehicle for environmental campaigning with a difference, aiming to influence directors of global businesses, and encourage them to do the right thing by showing that many environmental investments can help to improve reliability and profitability as well as benefiting the planet. This motivation is driven by a passionate desire on the part of AES Engineering to ensure that the business legacy for the next generation includes a planet that continues to be habitable.

Profit is a strong motivator and, while many additional actions are needed that cannot and should not be driven by self-interest, all positive steps towards Net Zero need to be encouraged, especially where there are doubters of climate change, many influenced by social media misinformation.

The Betterworld.Solutions website encourages visitors to not only download the policy but also share any examples they have of where they have helped their customers reduce their impact on the environment.

In 2025 we will be working towards encouraging other businesses to join and to urge those who are already members to share the news of the positive work they have been undertaking.

AES Engineering Group's sustainability strategy shows how we have translated our commitment to these values into action, providing a focused and practical framework. Where applicable, we use third-party standards and accreditations to ensure rigorous control, management, and independent auditing of our actions.



# *Betterworld.* Solutions



By adhering to these principles and fostering a culture of innovation and responsibility, AES Engineering Group is setting out to lead by example in the pursuit of a sustainable future.

AES Engineering Group's sustainability strategy encompasses the following priorities:

- Enhancing the health, safety, and wellbeing of our employees
- Developing our people and providing high-quality employment opportunities
- Protecting the environment by reducing our own and our customers' impact
- Providing benefits to local communities, especially to those less advantaged
- Respecting human rights
- Operating in an ethical and transparent manner

We are proud to lead by example and in July our Factory for the Future in Rotherham was voted Sustainable Development of the Year at the South Yorkshire Property Awards. The building extends and modernizes the previous plant, doubling it in size, to create a 175,000 square foot state-of-the-art factory designed as a global showcase for sustainable manufacturing.

Project spending includes £5.8 million (\$7.5 million) of 'green-only' investment, such as solar panels, battery storage, and other energy-saving or environmental measures and brings total spend on the site to almost £70 million (US\$88 million).

In April the company decommissioned the last of its natural gas fired heating systems at the factory.

“Our organization is investing in environmental projects because it is the right thing to do and we are truthsayers. We committed to investing £29 million by 2029 on environmental projects and we will.”







Replacing old cladding and roofing with new materials enables as much power as possible to be utilized from the building's 3,000 solar panels and 2.2MW of batteries, meaning the entire site is operated without natural gas.

This has resulted in an annual reduction in CO<sub>2</sub>e emissions of approximately 102.8 tonnes per annum and a reduction of 60 per cent of natural gas used by AESSEAL plc.

Meanwhile, AESSEAL Australia's headquarters building in Brisbane was certified under the BREEAM (Building Research Establishment Environmental Assessment Method) sustainability scheme – the first building in the country to receive such an accolade.

BREEAM is a way of evaluating a building's specification, design, construction and use in a range of categories including energy and ecology. Each category focuses on reduced carbon emissions, low impact design, adaptation to climate change, ecological value and biodiversity protection.

AESSEAL Inc. was also awarded the 2024 Tom Ballard Advanced Energy Leadership Award, which celebrates outstanding leadership and achievement in progressing the advanced energy economy in the U.S. state of Tennessee.

A significant factor in gaining the accolade was the Battery Energy Storage System (BESS) paired with a 500+kWh Photovoltaic (PV) Grid, a pioneering installation at the U.S. manufacturing headquarters in Knoxville. As one of the first of its kind in the region, this system enhances the reliability of renewable energy sources, playing a critical role in achieving the company's ambitious sustainability goals.





## Our Net Zero journey

The AES Engineering Group's journey towards becoming one of the first major engineering companies worldwide to achieve Net Zero on all three Scopes (direct, indirect and supply chain energy use) is one of our proudest achievements.

We have now achieved it four years running. This year a solar farm in India and the purchasing of carbon offset credits were among the reasons we went below Net Zero again.

Over the year we reduced our own direct and indirect energy emissions and helped customers reduce their carbon footprint by 200,401 tonnes CO<sub>2</sub>e. This brings the net positive impact over the four years to more than one million (1,114,032) tonnes CO<sub>2</sub>e.

The race towards Net Zero is not without its detractors, with claims that the concept is misunderstood and reaching Net Zero for an individual company or organization is not well-defined. There is currently no universally recognized scheme to audit companies end-to-end on all three scopes, with most efforts ending at Scope 1 and Scope 2, which are relatively easy to achieve with a combination of energy-saving measures backed by the purchase of 'offsets' that have been criticized in some quarters.

Net Zero on 'supply chain, products and services' is the most difficult target to achieve, but it is also the most significant; in our case the Scope 3 carbon footprint proved to be around 25 times greater than that of Scope 1 and Scope 2 combined. (See [Appendix 2](#) and [Appendix 3](#)).

While using knowledge-sharing and the group's buying power to encourage positive change among suppliers can be successful, the supply chain carbon 'penalty' remains very significant, and for this reason is often overlooked or set aside by companies keen to emphasize their environmental credentials.





As previously mentioned, by combining the emissions created on the supply side with the emissions saved because of group activities (**Appendix 2** and **Appendix 3**), we first achieved Net Zero on all three scopes in 2021. Every year since, the group has documented the detailed and time-consuming work that goes into making a credible 'Net Zero' claim.

This difficult journey, in many respects pioneering, has been worthwhile, not only for the planet, which desperately needs attention, but also because it has been recognized by our customer base. This is reflected both in our improved financial performance and the funding that we dedicate to environmental and social matters.

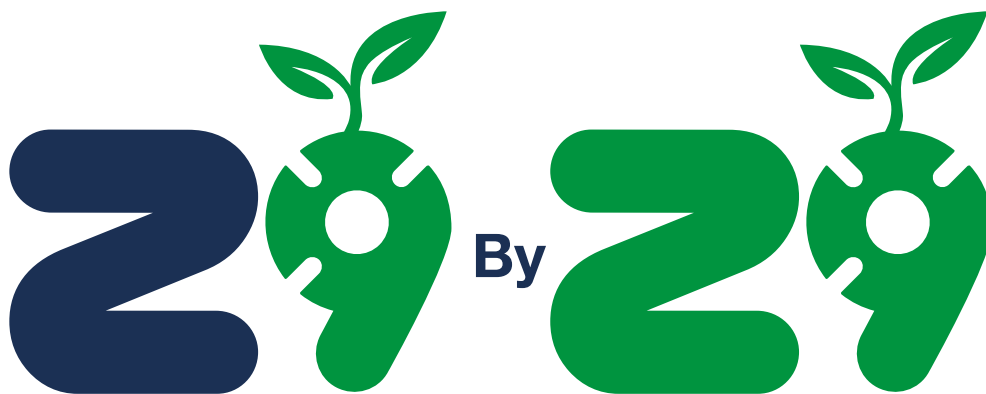
The group prioritizes sustainability in its capital investments and has published its investment policy to Prevent Global Warming (see **Appendix 1**) through technological changes and strategic investments.

We aim to inspire other businesses to adopt similar practices and many Betterworld.Solutions members have followed this path with effective results.

For example, Betterworld.Solutions expanded its membership with the addition of the international business consultancy and training company Coaching for Change, which is based in Doncaster.

Coaching for Change said that the aim of the company was to promote sustained and inclusive growth, and they have worked with leading global organizations including PwC, Network Rail and the NHS on strategy, organizational design, team development, change management and operational improvements. With Network Rail this resulted in gains in efficiency which led to savings of more than £5 million in electricity costs.

Having 'green' credentials matters, not just because it is good in its own right, but also because it increases business value. This is an important pointer for sustainability as, when 'green businesses' are seen to flourish, this encourages industry to invest in the environment and helps support the political will to achieve Net Zero for the planet.





## AES Engineering Ltd. Group's Net Zero Timeline

# NETZERO



**2020**

AESSEAL plc reaches UK Net Zero carbon emissions for Scope 1 and 2 emissions.

**2021**

AES Engineering Ltd. Group reaches Global Net Zero carbon emissions for Scope 1, 2 and 3.

To ensure transparency, we sought independent verification of our Scope 1, 2 and 3 emissions and the positive impact of our AESSEAL® Water Management Systems. Independent consultants confirmed that our total emissions for the reporting period and the emissions avoided by our Water Management Systems resulted in a net environmental benefit.

AES Engineering Ltd. Group commits to invest £29 million on environmental projects between January 1, 2021 and April 1, 2029 (29by29).

**2022**

£7,760,206.52 invested in projects as part of 29by29.

**2023**

£13,104,995.31 invested in projects as part of 29by29.

**2024**

£15,947,951 invested in projects as part of 29by29 (by May), including £960,000 in 135 acres of Betterworld Forestry land in Northern Ireland.

**2025**

£21,000,000 invested in projects as part of 29by29, including £4,000,000 on 1,500 acres of land in Scotland as part of the Betterworld Forestry initiative.



## 3 People and Wellbeing

In many industrial regions there is a recognized shortage of skilled engineers. This business's view of training and development, starting from the top, is that it should not be seen as a cost, but as an investment to tackle this problem.

This forms a large part of the reason we attend careers days, visit schools and offer apprenticeships to local young people.

Having a 'grow your own' culture is about taking control of a company's most important resource – the people who make things happen. It's about ensuring that new recruits share your goals and philosophies, and have the skills and attitudes that drive business success, as well as making sure they buy into the values of the company and what drives it forward.

As an engineering company, AESSEAL® relies on a steady stream of engineering talent for its future success. To inspire young people to pursue careers in engineering, AES Engineering Group actively collaborates with local schools, offering firsthand experiences at its manufacturing facilities.

Additionally, the company:

- Gives talks at local schools about engineering careers
- Participates in school STEM events (Science, Technology, Engineering and Mathematics)
- Sponsors schools to attend STEM-based competitions
- Hosts work experience programs for school students
- Provides university bursaries, with a focus on encouraging more women to enter engineering

We have consistently looked to improve our relationship with young people, and in 2024 AES Engineering Ltd engaged with 6,178 students compared with 5,672 students the previous year. This has largely been through GUTS (Get Up To Speed) and STEM events, jobs fairs, careers days and apprenticeship initiatives, as well as visits to schools, colleges and universities across South Yorkshire.

We have already engaged with almost 9,000 students in 2025.

Since 2017, AESSEAL plc has (as of June 2025) recruited more than 300 apprentices across a range of different departments.







“We work hard to minimize any adverse impacts of our facilities and to enhance community benefits that outweigh any negatives. This commitment ensures long-term, stable employment opportunities and career growth for local people.”

Image taken from AESSEAL® Headquarters Treewalk & Wetlands area





## MPDS Monitored Professional Development Scheme

AESSEAL plc is accredited by the IMechE to operate an MPDS scheme to train and develop engineers from technician level to Chartered Engineer status.

Part of the criteria for accreditation is that the scheme must have board level support and/or be championed from the highest level of the business. Of the 516 employees in AESSEAL plc (out of more than 2,000 in the group) 161 are engineers (HNC, HND and above), seven of whom are Chartered Engineers.

AESSEAL® has received an official letter of confirmation from the IMechE to continue accreditation by the IMechE for the Monitored Professional Development Scheme until 2027.

Accredited by

Institution of  
**MECHANICAL  
ENGINEERS**



## Developing talent

AES Engineering places a high value on its employees, recognizing their crucial role in the company's operations. The business is committed to treating all employees fairly and equally, without discrimination. We acknowledge the challenges posed by the skills gap in the industry. To address this, there is constant investment in developing our talent pool, ensuring a sustainable and skilled workforce for the future.

With an investment of over £6.5 million in apprentice training and development alone, and millions more on other staff development schemes, AES is committed to building a highly skilled and knowledgeable workforce. Employees are given their own training programs tailored to their roles within the business.

In producing our previous report in 2023 we identified weaknesses in our outreach program, particularly with the two Sheffield Universities, and as a result we now do much more to provide vacation roles, placements and first job opportunities.

These efforts have been consistently acknowledged, with AESSEAL plc maintaining the Investors in People standard since 1994. This ongoing commitment underscores the company's dedication to fostering a supportive and inclusive workplace environment while nurturing its employees' professional growth and development.

In 2024 AESSEAL® sponsored the Get Up To Speed with STEM (science, technology, engineering and mathematics) event for the seventh successive year, with the aim of nurturing the next generation of innovators and problem-solvers. This longstanding partnership underscores our unwavering dedication to fostering a passion for STEM among young minds and empowering them to shape a brighter future. As part of the event, we hosted a hands-on mechanical seal workshop, giving students the opportunity to build their own mechanical seals and gain insights into the modular components incorporated within the technology.



In November, North Star STEAM workshops welcomed over 500 young people to Gulliver's Valley in Rotherham, to an event sponsored by AESSEAL® for the fifth consecutive year. The highlight this year was an inspiring talk by Professor Brian Cox, who captivated students with stories about the wonders of the universe.

Again, we hosted an interactive mechanical seal-building workshop in which students competed to assemble seals in record time. The workshop provided a glimpse into the practical, rewarding and fun aspects of engineering, leaving a lasting impression on all who participated.

AESSEAL® also launched a competition in collaboration with The Poetry Society, focused on inspiring young people to envision a sustainable future.

The initiative, aimed at engaging students between the ages of five to 25, involved schools across Rotherham and the surrounding areas and was part of AESSEAL's ongoing commitment to promoting sustainability and encouraging creative thinking about environmental issues.

By using poetry as a medium, the project sparked imagination and drove conversations about what a sustainable future might look like – and it has resulted in the publication of a book in which some of the children's work is featured.

It also means we are engaging with young people, raising awareness of our company and hopefully persuading some that they can pursue a career in Rotherham and receive the support they need without having to leave the area in which they grew up.







## Health, Safety and Wellness

AES Engineering is committed to maintaining an exceptional working environment for all its employees, ensuring facilities are consistently high-standard and safe.

Emphasizing a culture of continuous improvement has yielded positive outcomes in health and safety. Strategies such as thorough risk assessment, ongoing equipment investment, and active employee engagement at all levels have proven effective. This dedication has earned AES Engineering third-party certifications and prestigious awards from leading organizations such as the British Safety Council and RoSPA.



In fact, in 2024 and this year, AESSEAL plc received the RoSPA President's Award for its exceptional health and safety performance, marking its eleventh and twelfth consecutive Gold Award and solidifying its position as a pioneer in maintaining exemplary safety standards within its operations.

The chief quality officer at the National Examination Board in Occupational Safety and Health (NEBOSH) and awards head judge is Dee Arp. She said: "Recognizing excellence in health and safety is essential to ensure we celebrate achievement, but it is also about a culture of care, accountability and continuous improvement. These awards serve as a powerful reminder that employee safety and wellbeing transcend borders. Looking after people so they can go home safe, healthy and happy every day also drives sustainable success and resilience."

She said each RoSPA Award entrant was assessed against rigorous criteria, making AESSEAL® a world leader in shaping safer, healthier workplaces.

In the UK, AESSEAL® initially certified to OHSAS 18001 in 2004, subsequently transitioning to the ISO 45001 standard, showcasing proactive safety management.

AVT Reliability® also earned a RoSPA Gold award in 2023, which was a significant development.

We pride ourselves on the service we offer and that has resulted in AVT Reliability exceeding £20 million turnover in a 12-month period for the first time. A full-service condition monitoring business, AVT has developed and owns the world-beating Internet of Things technology and Machine Sentry Software, allowing remote monitoring of the health of industrial machinery worldwide.

The AVT Group's growth has been driven by a combination of product and business development and acquisitions, and its progress is key to the group's vision "to become the leading global reliability business, delivering solutions to help industry save water, energy, cut pollution and create a better world".

## The Wetlands Sanctuary and Tree Walk

While prioritizing a safe and pleasant workplace environment and the reliability of its products, AESSEAL® actively promotes healthy lifestyles among its staff, enforcing drug and alcohol policies across its sites.

At the Factory for the Future in Rotherham, we have created the 'Wetlands Sanctuary and Tree Walk', which was officially opened in May 2025.

This development not only provides a habitat for wildlife but also features a sustainable urban drainage system that mitigates the impact on the local rivers, Don and Rother.

The sanctuary includes meadowland, woodland, and living-roof habitats, forming a wildlife corridor within an industrial area. This initiative has fostered a thriving ecosystem, regularly attracting lapwings, kestrels, mallards, herons, foxes, stoats, and numerous insect and invertebrate species.

The woodland areas boast hundreds of native trees at various stages of maturity, offering habitats for nesting birds, shelter for animals, and food for invertebrates. To further encourage biodiversity, we have installed owl nesting boxes and a ground-level wildlife hotel.

As part of the 29by29 commitment, the group has invested an additional £250,000 in the 'Tree Walk', a 1km path around the site's perimeter. This area, rich with trees, flora and fauna, provides a tranquil space for employees and visitors to relax and connect with nature. It is also an educational resource, presenting an activity trail for schools, with outdoor spaces designed for informal nature learning sessions.

Additionally there are bird boxes, an insect hotel, hedgehog habitats and two beehives containing thousands of workers. In one of the bird boxes a Great Tit recently hatched six chicks, with footage captured on our camera. Foxes and a kingfisher have also been seen.

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An outdoor meeting area and picnic area have been built to support the health and wellbeing of employees and visitors. We extend our commitment to health and wellbeing to the community and in July of last year AESSEAL® donated £8,500 to Redscope Primary School in Rotherham to support the construction of a Tree Walk on the school grounds which was inspired by our own project.

The Redscope walk aims to provide a unique outdoor learning experience for the children, allowing them to explore and appreciate the beauty of nature in their own school environment.

Our donation will play a crucial role in bringing this vision to life, creating a space filled with trees, plants and wildlife habitats where students can connect with the outdoors, learn about wildlife and develop a deeper appreciation for the environment.



## Redscope Primary School

### Ethical Business Practices

Ethical governance is a priority of the AES Engineering Ltd. Group. AESSEAL® values individuals for their capabilities, providing equal opportunities based on merit, diligence, and dedication to AESSEAL's core values.

The company embraces diversity, fostering an inclusive environment where race, religion, gender, sexual orientation, gender identity, national origin, age, disability, or other legally-protected statuses are respected without bias. AESSEAL® unequivocally opposes harassment, bullying, child labor, and any form of unfair treatment which undermines trust and contradicts its principles.

AESSEAL® condemns dishonest practices that distort markets and waste resources, and rejects corruption and fraud. Employees are encouraged to report unethical conduct through multiple channels, including a compliance committee and an independent hotline provided by Expolink. The most recent certificate achieved by the business was ISO27001 for its Information Security Management System. This certification enhances AESSEAL's ability to securely manage information, business processes, information systems, and facilities supporting its products and services. This proactive approach underscores AESSEAL's dedication to maintaining high standards of information security and operational integrity.

The following policies can be found within the AESSEAL® corporate website:

- Anti Bribery & Corruption Policy: <https://www.aesseal.com/en/resources/policy/anti-bribery-and-corruption-policy>
- Human Rights Policy: <https://www.aesseal.com/en/resources/policy/human-rights-policy>
- Ethics Policy: <https://www.aesseal.com/en/resources/policy/ethics-policy>
- Gender Pay Gap: <https://www.aesseal.com/en/resources/policy/gender-pay-gap>
- Modern Slavery Policy: <https://www.aesseal.com/en/resources/policy/modern-slavery-statement>



## Trust Champion in Business

In 2019, AESSEAL® received the prestigious Lord Mayor's Dragon Award for Business of Trust, a national recognition honouring companies contributing to a legacy of trusted business within the community.

The award was achieved in a competitive field including global investment firms, international communications companies, and major banks, and underscores our commitment to responsible business practices.



## Supporting Our Community

It is important that AES Engineering operates as a responsible neighbour, developing and maintaining positive relationships with key stakeholders and supporting the communities in which we operate.

We work extremely hard to minimize any adverse impacts of our facilities and enhance community benefits that outweigh any negatives. This commitment ensures long-term, stable employment opportunities and career growth for local people, reinforcing our role as a valuable member of the community.

Challenges in raising brand awareness locally with people who may not be familiar with our business have been addressed by prioritizing community investment initiatives.

One significant step includes AESSEAL's longstanding sponsorship agreement with Rotherham United Football Club, whose stadium serves as a focal point for community events and activities, as well as housing around 9,000 people at each home match.

In June 2023, a group of "Diamond Partners" – AESSEAL®, Hughie Construction, IPM Group, Mears and Steelphalt - pledged their financial support to highlight Rotherham Hospice on RUFC's first team kit instead of a commercial sponsor. The hospice says that as a result it has seen a huge increase in the number of visitors to its website and social media channels, and has also received significant additional corporate support.

Last year Bluebell Wood Children's Hospice was the beneficiary and for the 2025-26 season AESSEAL® agreed to continue with this financial support with the honour reverting to Rotherham Hospice. The hospice will feature on RUFC team shirts and AESSEAL® has also gifted other benefits as part of the sponsorship package. Rotherham Hospice director of income generation and communications Debbie Coulson said: "To see our new logo and refreshed identity proudly displayed on the shirt is a powerful symbol of progress, pride and partnership."

"We're incredibly thankful to the local businesses whose generosity has made this possible, and to Rotherham United for choosing us - two local institutions side by side. This moment isn't just about visibility, it's about unity. It's about Rotherham coming together to support its club and its hospice, and to ensure our care can continue for the next 30 years and beyond."





## Charitable Giving

Charitable donations at AES Engineering are conducted with strict ethical standards to prevent misuse or conflicts of interest.

To bolster our commitment to local communities, the group has established several funds managed by the South Yorkshire Community Foundation, the region's largest grant giving charity which every year supports hundreds of community projects across the county, and has given out around £40m since 1986. Those benefiting range from youth organizations to bowls clubs and this year the foundation has supported 97,000 people.

AESSEAL plc manages assets through the SYCF totalling around £1.8 million (US\$2.3 million) and from 2021 to 2024 over £200,000 (US\$255,000) annually was donated to local charities. Additionally, the AESSEAL® Lieutenantcy Fund, launched in 2022 with £500,000 (US\$628,000) disbursed in five annual instalments, further underscores our ongoing support.

In 2022-23, £1,769,565 was awarded including a total of £137,809,81 to 35 Rotherham applicants, with the main priorities being crime and safety, disadvantage and inequality, work and the local economy and mental health.

AESSEAL® Lieutenantcy Fund made 17 grants totalling £136,306.58 in 2023 to the likes of the Brecks Community Hub; Active Fusion; Community Together Rotherham; HOPE - The South Yorkshire Fire and RTC Trauma Support Group; The Family Works; Boys and Girls Clubs of South Yorkshire; the South Yorkshire Chaplaincy and Listening Service; In2Change South Yorkshire Ltd; S62 Community Together Rotherham and United 4 Communities.

AESSEAL® Charitable Trust Community First Endowment Fund South Yorkshire grants went to Thurcroft Welfare Band; Rotherham Carers Forum; Kiveton Park Independent Advice Centre; Libre Digital; The Serenity project in Wath upon Dearne, which offers training in hairdressing, beauty, holistic practices, and health courses to improve employment skills for young people and adults; The Work-Wise Foundation and Endeavour Training.

SYCF said:



“Your actions and commitment towards the region impact and improve the lives of some of the most vulnerable individuals within South Yorkshire and the UK. The region would not be flourishing as it currently is, if not for your support.”



AES has also invested in initiatives such as sponsoring scholarships and bursaries for female engineers to study engineering at Sheffield Hallam University.

We have also continued with our annual £20,000 donation to Water Aid, a charity whose work chimes with our own sustainability ambitions.

This year, as well as sponsoring the Get Up To Speed (GUTS) event, which aims to introduce and inspire young people, educators, parents and carers about the world of work in Science, Technology, Engineering and Manufacturing sectors, we also put money into the Pump Industry Awards.

We also backed the Royal Yorkshire Regiment Day to the tune of £3,000 and the Rotherham Advertiser's Apprenticeship Awards.

Our support of Rotherham Hospice extended beyond the Rotherham United shirt sponsorship. We also donated £5,000 to its "Memory Tree" project, which helps people across the town remember close ones who have died.

The Open Gates Outdoors Community, which works with individuals, companies and community groups to widen and diversify participation in the outdoors in and around Sheffield, received a donation.

We also donated to the Give As You Live Kit Walk event.

“This moment isn't just about visibility, it's about unity. It's about Rotherham coming together to support its club and its hospice, and to ensure our care can continue for the next 30 years and beyond.”



## 4 Innovation for the Future

The group has continued to push for global industry to operate reliably and without unnecessary waste of resources or pollution.

In fact, we have greatly increased our efforts in recognition of what is a major challenge with sectors such as oil and gas, water, mining, automotive, chemicals, paper and pulp etc. which are often accused of only being interested in the bottom line.

AES Engineering recognizes that it is in the fortunate position of being able to offer products and services that help businesses operate more cleanly, reliably and profitably.

This often has a beneficial impact on the environment. However, it is not an easy sell. Engineers are notoriously reluctant to change what has worked in the past, even if this involves profligate use of natural resources such as water and energy.

We firmly believe that while these industries supply essential goods and services they can also operate more sustainably. There is no excuse for senseless waste. If you are contributing to the destruction of the planet you are not providing exceptional service.

It is a fact that financial managers, directors and leaders in major industrial sectors often don't know that they are wasting money as well as damaging their expensive equipment and the environment. We can help.

All businesses, including AES Engineering, need to be profitable, or they will ultimately fail with the loss of jobs resulting in a devastating impact on local communities. They also need to keep innovating and investing, not just in people but also in the latest technology, such as AI and robotics, in order to keep ahead of the competition and maintain the sustainable jobs that are so important for the economy.

By investing in pioneering technology and promoting environmental benefits as well as reliability and profitability, we have set out to prove that there is a better way of operating.

AESSEAL® has invested more than £13 million (US\$17 million) on 29 robots to further increase the company's manufacturing efficiency. Twenty six robots have been installed on an order picking system which integrates seamlessly with its management software.

Managing director Chris Rea said: "This is a vote of confidence in the future of high value-added precision engineering in South Yorkshire. We are taking on the world and showing that it is possible to be a successful and sustainable business with a strong social and environmental conscience."







“ We are taking on the world and showing that it is possible to be a successful and sustainable business with a strong social and environmental conscience ”





In December two state-of-the-art DMG MORI NTX1000 robotic cells arrived at the Factory for the Future in Rotherham as part of the group's twin-track plan to invest in technology and staff to become the world's leading reliability business.

These cutting-edge automation cells were the first to arrive following an order for up to six robots costing £7.5 million (\$9.3 million). They have joined the existing robotic cell, which has been in place since 2021.

The group's ongoing investment in AI and robotics goes hand in hand with a commitment to future-proofing employment, with people the most important driver of the business's success

Further recognition of our investment in the future came in December when AES Engineering Ltd was named as the UK North East region's Economic Innovator of the Year in the annual awards run by The Spectator magazine. The awards seek out the most ingenious and promising entrepreneur-founded businesses from every sector and region of the UK.



## Our products and services

The AES Engineering Group of companies helps customers prevent leakage of products into the environment, reduce water and energy consumption and improve the reliability of their machinery and plants, thereby cutting back on unnecessary waste.

With water becoming increasingly scarce and expensive, optimizing water use in industrial processes is crucial. Accurate water balance planning and reducing overall water consumption are critical. Traditional methods like quench and drain systems for controlling seals or gland packing often result in significant water waste. AESSEAL® provides environmentally focused products that minimize such waste, thereby reducing both the environmental impact of customer plants and their operating costs.

This section of our sustainability report sets out to show how our products and services are making a difference to the carbon footprint of our customers, which is in turn a key component on our own journey to continue to be a Net Zero company.





## Investing in Plant and Technology

The ten-acre Factory for the Future site is due to be officially opened in September. Built in 2023, it brings the total investment in Rotherham to almost £70 million. A total of 175,000 sq. ft. of new factory buildings have been constructed to the highest environmental standards and the existing plant is also being updated and refurbished as part of the scheme.

The low-density site is a sign of our commitment not just to the Rotherham area but also to the continuing contribution of precision engineering and reliability services to a greener future for the planet. The investment paves the way for an additional £20 million of investment in and around Rotherham over the next five to ten years depending on the continued growth of our global customer base.

AES Engineering Group also operates manufacturing facilities in the USA, China and India, all equipped with state-of-the-art machining technology, but our global headquarters and main manufacturing operation continues to be in Rotherham.

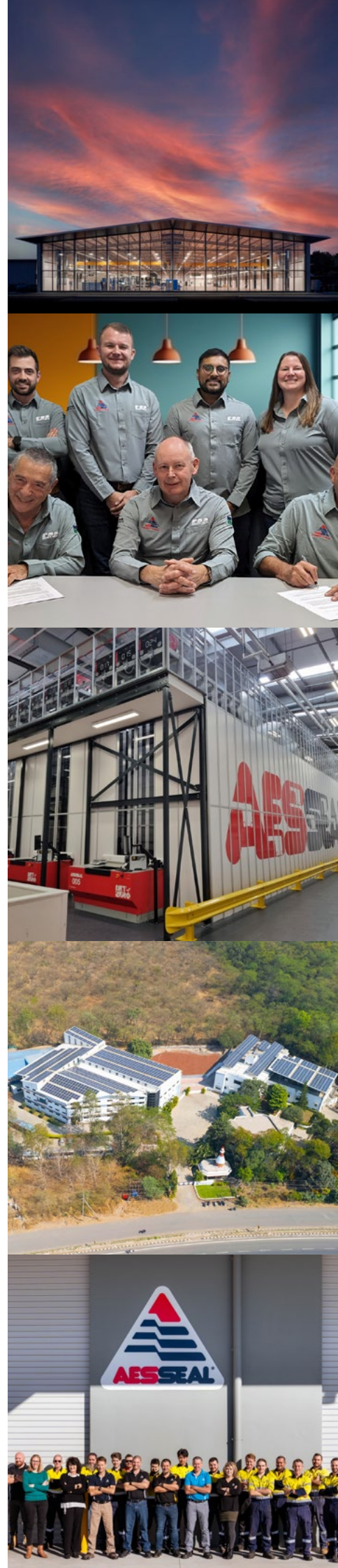
In October we further increased our reliability services and product offering in North America by acquiring a controlling stake in the global marine propulsion shaft sealing company PSS Seal LLC. This latest expansion in the global market follows acquisitions in the Netherlands, Canada, Australia and USA. PSS Seal LLC (PSS), headquartered in Seattle, is a recognized global leader in the reliability and sealing technology sector for marine vessel propulsion systems. The company has over four decades of engineering and manufacturing expertise with an extensive direct and indirect marine channel to market.

The group's digital roadmap includes substantial investment in technology to improve processes and ensure customers are best served. This includes an advanced capability allowing sales engineers to quote accurately on price and delivery at very short notice, with orders being put directly into the production schedule using smart devices.

In line with its commitment to seamless ordering and fulfilment, AESSEAL® had previously switched to the AutoStore system at its Rotherham headquarters.

AutoStore is a state-of-the-art, compact and automated solution that utilizes advanced technology to efficiently store and dispense products. With this innovative system, the Rotherham facility has doubled its stock capacity, managing to fit the equivalent of 17 carousels' worth of inventory into just half of the available grid space.

One of the standout benefits is the fast pickup times as the system operates overnight, positioning parts for easy access and ensuring they are ready for collection at the start of the day, which reduces pickup times by up to one-third. This investment not only allows the group to deliver products faster to customers, but also significantly reduces energy consumption at our Rotherham base.





## Preventing unwanted leaks, emissions and venting

AESSEAL® manufactures products designed to prevent the leakage and emission of potentially harmful substances. These solutions offer added value by significantly saving energy and water, enhancing the performance and lifespan of customer equipment, and reducing downtime.

### EcoGuard

In 2023, as part of our endeavours to tackle the problem of the venting of damaging methane gas, particularly from older facilities in the oil and gas industry, we invented new technology to eliminate or reduce both intermittent and continuous emissions.

Our EcoGuard™ solution, aimed at addressing flaring and venting in oil and gas fields, is made by pump manufacturer Torishima UK in Glasgow and works with our existing leading-edge dry gas seal technology.

Gas compressors use mechanical seals, known as dry gas seals, to prevent large-scale leakage of harmful gases. However, some gas still escapes into the atmosphere during operation. Although these amounts may seem minimal, a typical compressor can release over 6,327 tons of CO<sub>2</sub>e (carbon dioxide equivalent) per year.

Both CO<sub>2</sub> and methane are major contributors to climate change, as they trap heat within the Earth's atmosphere, causing global temperatures to rise. Methane, in particular, is 28 times more efficient at trapping heat than CO<sub>2</sub> and is released in large quantities during oil and gas operations, either through venting or flaring.

EcoGuard™ is a simple and effective way to eliminate emissions from gas compressor drivetrains that use dry gas sealing technology, and it can be easily retrofitted to existing equipment or installed on new systems. The system captures gas that would typically be flared and boosts it for reinjection into the compressor, where it can be reused as fuel gas, preventing its release into the atmosphere.

The system, launched in partnership with Torishima Service Solutions Europe Ltd, ensures that high-pressure, clean gas always remains in the compressor, keeping the gas seal clean and eliminating the need for venting. Its advanced design enables five years of continuous operation without leakage of harmful gases into the atmosphere.





## Reducing Water and Energy Consumption

Industries use vast amounts of water in their manufacturing processes and AES's seal support systems have prevented huge volumes of unnecessary consumption.

A significant portion is used by pump sealing systems and AESSEAL® has developed innovative technology that has saved large customers hundreds of millions of litres of water every year.

A total of 42,000 of these systems have been installed around the world, saving an estimated 1.6 trillion litres of water – enough to supply the population of South Yorkshire for over 20 years. In some processes, closed-loop systems also prevent seal flush water from entering the process fluid, reducing energy usage.

However, engineers won't change what they perceive as having worked in the past without demanding proof that it is warranted. The most convincing evidence we can provide is delivering greater reliability by maintaining a consistent seal environment, especially when this also solves other problems such as a carbon footprint that is too high, or excessive water usage.

AESSEAL's sealing solutions and water management systems are saving an estimated 95 billion litres (25 billion US gallons) of water annually, but only a minority of global industry is using available technology that can help save money and water, and help save the planet.

Both CO<sub>2</sub> and methane are major contributors to climate change, as they trap heat within the Earth's atmosphere, causing global temperatures to rise. Methane, in particular, is 28 times more efficient at trapping heat than CO<sub>2</sub> and is released in large quantities during oil and gas operations, either through venting or flaring.







## 5 Conclusion

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Group-wide AES Engineering now employs over 2,000 people, including 300 sales engineers, based in North America, Australia, India and around 100 other locations. Sales from UK exports are now well over £100 million annually while total turnover has comfortably exceeded £250 million.

In turn, the group has pledged to invest £29 million by 2029 on environmental measures that will both help the business and the planet. A total of £21 million has been spent to date on energy saving, solar energy and planting 109,000 trees in a project called Betterworld Forestry, and there's much more to come.

British manufacturing has been through a difficult period with low productivity threatening the future of jobs, and we should never underestimate external threats such as the Covid pandemic, the Ukraine-Russia war and the uncertainty surrounding US trade tariffs.

Our business model, planning for a sustainable future, as well as caring for customers, has helped drive AES Engineering forward and enabled us to double down on our support for the environment.

We can, and will, do more.

My personal hope is that our example will help persuade industry worldwide that seeking profit does not have to come at the expense of a long-term future for our planet.

Chris Rea, CBE, DL, BSc, CEng, HonFIMechE  
AES Engineering Group, Managing Director



“We must continue the battle to persuade others that seeking profit does not have to come at the expense of a long-term future for our planet.”







## Appendix 1

### Investment Policy to Prevent Global Warming

If you want to help, a good first step would be to encourage your company board to adopt a policy with a similar spirit to “An Investment Policy to Prevent Global Warming (PPGW)”. This policy can be considered as being freely available. There is no requirement to acknowledge any individuals in AES or the corporation.

Chris Rea, CBE, DL, BSc, CEng, HonFIMechE

AES Engineering Group, Managing Director



ENVIRONMENTAL TECHNOLOGY

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## Investment Policy To Prevent Global Warming

The health of the Earth is essential to not just  
business, but also species survival.

The Health, Safety and Welfare of all the stakeholders in our Group is the primary concern of the Board of AES Engineering Ltd.

The Group has consistently put sustainability projects first for capital investment and has now decided to debate and publish an investment policy to prevent global warming through technological change and investment decisions.

- Any sustainability project will be given priority over other capital investment with a similar Return on Investment.
- Any sustainability project with a reasonable chance of getting a Return on Investment of 8 years or less, should be brought to the attention of the AES Engineering Ltd. Board
- A written decision on any such project is mandatory within 3 months of project submission.
- All global business heads have local spending authority. Any sustainability project with a higher value should be immediately referred to the Board of AES Engineering Ltd.
- As a Board we undertake to use our personal and corporate presence to influence policy makers to legislate the requirement for such a policy for all businesses with more than 250 co-workers.
- Current or potential supplier input is welcomed, including their use of the global hotline where necessary.

The Board of AES Engineering Ltd. encourages the use of the global “hotline” on 0800-374199 or by email on [aessteelhotline@expolink.co.uk](mailto:aessteelhotline@expolink.co.uk) to assist with the discreet implementation of this policy where necessary.



**C. J. Rea**  
Managing Director

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## Appendix 2

### Emissions Avoidance:

AES Engineering Ltd. Group, after conducting a full GHG Inventory inclusive of Scope 3 emissions, is aware of the wider impact beyond what would normally be considered when assessing company emissions.

When considering the wider impact a single organization may have on emissions it is also important to consider the emissions impact of the products or services sold by that company.

Total avoided emissions as a result of the sale of products during the reported time frame are assessed to be **312,358.5** tonnes. This is the total of avoided emissions over the entire lifespan of the products sold during this window.

Process	Total LCA Savings (Tonnes CO <sub>2</sub> e)
Water Saving Systems	37,372.4
Steam Turbine Seals	2,456.9
Evaporative Processes	272,529.3
<b>Total</b>	<b>312,358.5</b>

For more information check out the GHG Avoidance Report on [aes seal.com](http://aes seal.com).



## Appendix 3

### Scope 1, 2 and 3 Summary 2025

Scope	Category	CO2e (Tonnes)
1	Fleet Emissions	1,877.53
1	Natural Gas	480.69
1	Other Consumed Fuels	128.88
1	Fugitive Emissions	61.73
<b>1</b>	<b>Scope 1 Total</b>	<b>2,548.83</b>
2	Purchased Electricity (Location-based)	2,969.84
2	Purchased Electricity (Market-based)	1,637.91
2	Purchased Heat	6.03
<b>2</b>	<b>Scope 2 Total (Location-based)</b>	<b>2,975.88</b>
<b>2</b>	<b>Scope 2 Total (Market-based)</b>	<b>1,643.94</b>
3	Category 1: Purchased Goods and Services	69,996.53
3	Category 2: Capital Goods	4,622.89
3	Category 3: Fuel and Energy-Related Activities Not Included in Scope 1 or Scope 2	1,628.73
3	Category 4: Upstream Transportation and Distribution	28,772.77
3	Category 5: Waste Generated in Operations	132.56
3	Category 6: Business Travel	3,134.57
3	Category 7: Employee Commuting	2,458.09
3	Category 8: Upstream Leased Assets	223.39
3	Category 9: Downstream Transportation and Distribution	847.63
3	Category 10: Processing of Sold Products	0.00
3	Category 11: Use of Sold Products	520.39
3	Category 12: End-of-Life Treatment of Sold Products	85.08
<b>3</b>	<b>Scope 3 Total</b>	<b>112,422.62</b>
1 and 2	Scope 1 and 2 Total (Location-based)	5,110.55
1 and 2	Scope 1 and 2 Total (Market-based)	3,868.38
3	Scope 3 Total	112,422.62
<b>All</b>	<b>All Scopes Total (Location-based)</b>	<b>117,947.33</b>
<b>All</b>	<b>All Scopes Total (Market-based)</b>	<b>116,615.40</b>

\*Market-based figures reflect the fact that AES buys 'green electricity' coming from renewable sources. Location-based figures do not take this into account and are therefore regarded by some experts as a more accurate picture of a company's carbon footprint. For more information check out the GHG Inventory Report on [aesreal.com](https://aesreal.com).





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When printed, fully recyclable materials have been used.