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*Battery and Hydrogen Vehicles -
The future is here*

Jeff Vehicles

Impact Report 2025

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Message from the Founder

From the age of 13, I wanted to be an electronic engineer. My university degree course introduced me to the challenging engineering problems and sustainable benefits of electric trains. That has stayed with me in my 50 year railway career. The last 20 years has seen me pursuing a dream of replacing diesel trains with electric, battery and hydrogen trains. As a consequence, I have had the honour since forming Jeff Vehicles of helping design the UK's pioneering hydrogen trains. HydroFLEX 1 marked a major milestone in UK rail innovation – the country's first full-size hydrogen-powered train. Designed for long-range, heavy-duty applications, green hydrogen offers a zero-emission alternative to diesel, with lower storage volume and weight compared to battery systems. Produced using renewable electricity from solar or wind to split water, the process yields hydrogen – compressed and stored for transport use – and oxygen, which can be repurposed for medical applications.

Jeff Vehicles Ltd has been proud to contribute to this breakthrough, supporting Porterbrook, Vanguard Sustainable Transport Solutions, and the University of Birmingham in the design and integration of hydrogen fuel cell and battery systems.

Building on this success, Jeff Vehicles was involved in the development of HydroFLEX 2 which became the UK's first commercially ready hydrogen train, a key step towards mainstream adoption of zero-emission rail solutions.

My interest in electric cars stems from 2010 when I drove my first one.

Experience of designing hydrogen trains and using electric vehicles drives everything that is done at Jeff Vehicles Ltd to further sustainable transport.

At our core, we are tackling one of the biggest challenges of our time: eliminating petrol and diesel from the UK's roads and railways.

Through electric and hydrogen solutions, we're working to drastically cut carbon emissions and improve air quality - building a sustainable transport system fit for future generations.

We are proud to be part of a movement that is reshaping the future of transport - making it cleaner, smarter, and more accessible. Our mission is bold, but necessary. And with every project, every partnership, and every breakthrough, we move one step closer to a zero-emission future.

Thank you for being part of this journey.

Professor Jeff Allan
Founder



Founder's electric car 2010

Why an Impact Report?

To demonstrate our commitment to transparency and accountability, and to highlight the steps we've taken over the past year to make our business a genuine force for good, we will begin publishing annual Impact Reports on our website.

This report will outline our strategies for driving continued positive impact and improvement, while also assessing our performance against the previous year's commitments.

The goal is to provide our stakeholders with a clear understanding of our efforts as a socially and environmentally responsible business, and to inspire others in the industry to embrace similar commitments.

Our Mission and Values

At Jeff Vehicles Ltd, our mission is clear: to eliminate petrol and diesel cars and diesel trains in the UK with electric or hydrogen alternatives, significantly cutting carbon emissions and improving air quality. We commit to advancing hydrogen fuel and electric vehicle technologies for a sustainable transport system for future generations.

We believe that clean transport is not only possible, but essential. By reducing carbon emissions and improving air quality, we can build a more sustainable future for everyone.

Drawing on decades of engineering expertise and innovation, we are delivering practical, high-performance solutions for zero-emission mobility. From designing cutting-edge hydrogen trains to supporting electric vehicle adoption through real-world testing and record-breaking endurance drives, we are committed to pushing the boundaries of what's possible.

Our work is guided by five core values:

■ Sustainability

We prioritise long-term environmental impact in every decision we make

■ Excellence

We apply the highest technical and ethical standards to everything we do

■ Innovation

We challenge convention, using science and engineering to solve tomorrow's transport problems today

■ Public Good

We believe that cleaner transport should benefit communities, not just markets

■ Integrity

We are transparent, honest, and grounded in evidence and experience

We're not just reimagining vehicles, we're helping to reshape the entire transport system. Because the road to net zero starts with action.

Our B Corp Journey So Far

We're excited to share that we've begun our journey toward becoming a Certified B Corporation. Our values and mission closely align with B Lab's commitment to using business as a force for good; this certification provides a rigorous framework with which to assess our impact, drive meaningful improvements, and hold ourselves accountable to our actions.

Certified B Corporations are for-profit businesses that meet high standards of social and environmental responsibility, transparency, and accountability. They strive to balance profit with purpose, ensuring that their operations benefit all stakeholders - not just shareholders.

By pursuing this certification, we're taking a deep, honest look at how we operate, with a strong focus on enhancing our policies and processes to create a positive impact on our team, customers, suppliers, community, and the environment. To support us on this journey, we've partnered with transformacy, a leading corporate sustainability consultancy specialising in B Corp certification. Their expertise will help us not only meet the certification criteria but also implement meaningful, lasting improvements that benefit all those connected to our business.



We look forward to sharing our continued progress towards building an impactful business that prioritises people, the planet, and ethical governance.

Impact Areas

The B Corp certification assessment, known as the B Impact Assessment (BIA), evaluates performance across five key areas of impact: Community, Workers, Customers, Environment and Governance. We've structured our report around these categories to facilitate clear year-on-year comparisons and align our efforts with other B Corp businesses.

In addition, we have mapped our actions and commitments against the [UN Sustainable Development Goals](#) for comparison against organisations not following the B Corp process.



Embracing these isn't just about saving the planet, it's about securing our future and fostering a global community.

Annual Highlights

Milestones

HydroShunter: The Next Chapter

Jeff Vehicles Ltd is now advancing hydrogen rail with HydroShunter, set to become the UK's first hydrogen-powered locomotive. This is a joint project led by Vanguard Sustainable Transport Systems Ltd and Severn Valley Railway. This project represents a new frontier in sustainable freight and industrial rail transport. In the last couple of years Jeff Vehicles has carried out the vital role of electrical design and determining top level software functions. This year, testing has begun and Jeff Vehicles has been providing support here too.



Electrical testing of HydroShunter

Electric Cars, Bikes, Vans and Trucks

written by Jeff Allan
illustrated by Maddie Cottam-Allan



Front Cover of the Free Book

Electric Cars, Bikes, Vans and Trucks: 11th Edition

In 2025, Jeff Vehicles Ltd published the 11th edition of Electric Cars, Bikes, Vans and Trucks, a free e-book first released in 2016. Since its original publication, the landscape of electric mobility has evolved dramatically and now includes electric trucks for the first time. The latest edition reflects this transformation, expanded to meet growing public interest and the urgency of climate action. At the time of writing the book web page has recorded 8800 readers

The book provides clear, practical guidance for anyone considering an electric vehicle, helping readers navigate key considerations such as battery range, charging infrastructure, total cost of ownership, and environmental

impact. By demystifying the transition to electric transport, it empowers individuals to make informed, confident choices that align with their values and lifestyles.

Drawing on real-world insights and expert analysis, the e-book continues to be a trusted resource for those looking to embrace cleaner, smarter mobility.



The free book was entered for the EDIE awards in 2025 and was shortlisted in the communications category.

The judges gave the following feedback “The judges welcomed the timely advice on EVs, as well as the focus on larger vehicles, which can often be treated as a separate issue. In a strong category, the judges were looking at the impact and reach that the entries were able to reach, and they recommend that Jeff Vehicles continue to circulate and update this publication for even greater impact.”

Events

Showcasing Innovation and Leadership

The Greatest Gathering 2025

From 1st to 3rd August, HydroShunter and HydroFLEX 2.0 were proudly showcased at The Greatest Gathering in Derby, a flagship event of the Railway 200 campaign. Celebrating 200 years since the opening of the Stockton & Darlington Railway, the event honoured rail’s transformative legacy while spotlighting its sustainable future. Jeff Vehicles Ltd joined Porterbrook, Vanguard Sustainable Transport Solutions, Severn Valley Railway and Enspered Consulting to present a bold vision for zero-emission rail, inspiring the next generation of rail innovators.



HydroShunter at the Greatest Gathering

Community

Community and Civic Engagement

Community is at the heart of everything we do. It means collaboration, shared purpose, and mutual support. Whether we're developing sustainable transport solutions or showcasing innovation at public events, we strive to connect with people, listen to their needs, and build trust. We believe progress is strongest when it's inclusive, bringing together industry, education, and local voices. For us, community is not just a network, but a living force that drives change and reshapes the future of transport.



**Moseley in Bloom
Platinum Sponsor**

Civic Contributions and Social Responsibility

Jeff Vehicles Ltd is committed to civic engagement through a range of meaningful initiatives. These include financial donations to charitable causes, pro bono services, and volunteer work. We maintain active partnerships with charitable organisations and participate in community-based groups that reflect our values.

In the last year, Jeff Vehicles has volunteered 36 hours to pro-bono work supporting a local inventor who is developing a novel means of retrofitting petrol cars to be electric.

Jeff Vehicles has donated to our local community to fund flowers and the annual Christmas lights in nearby Moseley, becoming a platinum Sponsor to Moseley in Bloom and Moseley in Lights.

Collaborating for Shared Progress

Over the past two years, we have taken deliberate steps to collaborate with stakeholders to improve social and environmental outcomes. One of our key contributions has been the development and dissemination of public resources designed to help other organisations enhance their performance in these areas. We are particularly proud of our free e-book! This reflects our belief in shared progress and collective responsibility.

This year we have also been supporting Beyond COP 21 School Initiatives by demonstrating sustainable transport in exhibitions and workshops for Truro High School for Girls and Malvern St James Girl's School.



**School Exhibition on
Sustainable Transport**

Community

Ethical Supply Chain Practices

We conduct formal evaluations of our Significant Suppliers, those representing 80% of our purchasing volume. Our screening process verifies compliance with local laws and regulations, with a particular focus on social and environmental standards. We also assess governance practices, including ethics and anti-corruption policies.

All Significant Suppliers are required to complete a custom assessment developed by Jeff Vehicles Ltd, ensuring alignment with our values and expectations.

Fair Standards for Independent Contractors

We maintain clear policies for independent contractors working fewer than 20 hours per week or on time-bound engagements. These individuals are verified to be working across multiple clients or have been offered employment. All contractors are paid much more than the living wage, calculated using regional wage data, reflecting our commitment to fair labour standards and ethical engagement across our operations.



Our Customers


Customer Partnerships and Impact

Our customers are our partners in progress. They share our vision for a cleaner, smarter future and challenge us to deliver innovative, reliable solutions that meet real-world needs. We work closely with each customer to understand their goals and tailor our technologies to support them. Their trust drives our ambition, and their feedback shapes our evolution. Together, we're redefining what's possible.

Addressing Social and Economic Challenges

Jeff Vehicles Ltd designs and delivers solutions that directly address pressing social and economic challenges. Through our support in the design, build, and testing of hydrogen-powered trains, we help clients reduce their environmental footprint while contributing to positive social outcomes, including job creation and community development.

We have established a robust framework to manage the value and impact our services create for customers. This includes formal quality control processes, structured feedback and complaint channels, and ongoing monitoring of customer satisfaction.




Steve Hunter • 1st 4mo ...

Supply chain consultant and owner at Ven...

Thanks for the acknowledgment [Prof. Jeff Allan](#) Good to see the new chapter about Trucks. 🚚

This is my go-to reference for all things electric vehicles. Great publication.

Like 🔄 2 | Reply 1



Prof. Jeff Al... ✓ **Author** 4mo ...

CEO of Jeff Vehicles Ltd

[Steve Hunter](#) thanks that's very kind of you.

Like | Reply | 72 impressions

Example of feedback on the free book

Customer Satisfaction and Continuous Improvement

Customer satisfaction is a key performance indicator across our operations. We monitor satisfaction levels, share results internally, and set specific improvement targets, all of which were successfully met in the past year. We proactively incorporate customer testing and feedback into product design and maintain formal programs focused on continuous improvement, including efforts to reduce unintended negative impacts.

Our Customers

Supporting Informed Decision-Making

Our services support impactful decision-making by contributing to research, measurement, data collection, and reporting. Verified outcomes show that the majority of our client organisations have achieved transformational improvements, either through the adoption of more impactful business models or through substantive enhancements to their social and environmental performance.

We actively track the number of businesses and nonprofit organisations supported by our solutions. Our business model is grounded in established research and shaped by direct stakeholder engagement.

Driving Industry Innovation

Jeff Vehicles Ltd has introduced innovative solutions that have helped transform the transportation industry, enabling decarbonisation and reducing environmental and social impact. At the time of our initial engagement, these solutions did not exist in the market. Today, they are being replicated by other organisations, amplifying their positive influence across the sector.



Environment

Environmental sustainability is central to our mission and embedded in every project we undertake. We are committed to reducing carbon emissions, promoting clean energy, and designing transport solutions that support a greener future. Our work helps shift the industry toward low-impact alternatives. Sustainability is not just a target, it's a shared responsibility with our partners, customers, and communities. Together, we're building a transport ecosystem that respects the planet and safeguards it for generations to come.

Driving Environmental Impact Through Innovation

Our consultancy services are designed to preserve, conserve, and restore the environment. By supporting the conversion of diesel trains to hydrogen-powered alternatives, we help clients directly reduce CO₂ emissions and contribute to national decarbonisation goals.

Environmental Education and Strategic Guidance

Environmental education is a core, revenue-generating component of our business. Through our publications and consultancy services, we provide specialised knowledge and strategic advice to help solve environmental challenges. Grounded in rigorous scientific inquiry, these offerings support both public awareness and industry transformation.

Sustainable Practices in Virtual Workspaces

We promote environmental stewardship among employees working remotely. Our policies encourage the use of environmentally preferred products and practices, including recycling and energy-efficient behaviours. We provide resources for sustainable home office management and maintain formal procedures for the safe disposal of e-waste and hazardous materials.

For transport, we start with walking or use of E-bikes. For further travel we use electric cars or public transport. We do not use airplanes.



Cycling where possible

Environment

Energy Use and Waste Management

The majority of our total energy consumption is sourced from renewable energy, with a large proportion coming from low-impact renewable sources. This is thanks to the more solar cells and a battery we've installed at our home office.

All hazardous waste, including batteries and electronic equipment, is disposed of responsibly, in accordance with environmental best practices.



Solar Cell and Battery Operation

Measuring Environmental Outcomes

We are committed to making a real and measurable impact on the environment. We carefully track the carbon emissions we save or offset through our services. Our business model is designed with input from industry experts and direct feedback from our partners, ensuring we're always working toward our environmental goals.

To guarantee our services are effective, we measure our results in the short term and manage any potential risks that could slow our progress. Through our own research and feedback from our customers, we know that our services are achieving positive environmental results. Our efforts to educate and consult with clients have been proven to successfully reduce emissions and increase environmental awareness.

Industry Innovation and Replicability

Jeff Vehicles Ltd has played a pioneering role in hydrogen-powered rail transport in the UK. We provided the design work for the country's first and second hydrogen trains and are currently developing the first mainline hydrogen locomotive. These designs were unique at the time of their creation and have since proven replicable, with a third hydrogen train successfully emulated by another organisation using our original concepts. This demonstrates the broader influence and scalability of our innovations.



Governance

Strong governance underpins our integrity, accountability, and long-term success. At Jeff Vehicles Ltd, we are committed to transparent decision-making, ethical practices, and robust oversight across all areas of our operations. Our governance framework ensures compliance with industry standards, fosters stakeholder trust, and supports responsible innovation.

We prioritise safety, sustainability, and inclusivity in our strategic planning, maintaining clear lines of responsibility and performance monitoring. By embedding governance into our culture, we create a resilient organisation, one that can adapt, lead, and deliver meaningful impact now and into the future.

Embedding Impact in Decision-Making

Social and environmental impact is a core measure of success at Jeff Vehicles Ltd. This commitment is embedded in our decision-making processes and prioritised even when it may not directly contribute to profitability. We believe long-term value is best achieved through responsible, sustainable business practices.

Mission and Governance Structure

Our formal corporate mission statement is:

“Our mission is to eliminate petrol and diesel cars and diesel trains in the UK with electric or hydrogen alternatives, significantly cutting carbon emissions and improving air quality. We commit to advancing hydrogen fuel and electric vehicle technologies for a sustainable transport system for future generations.”

These principles guide our operations and are shared publicly and internally.

Transparency and Public Reporting

Transparency is a cornerstone of our governance. We publicly disclose beneficial ownership, financial performance, social and environmental performance, and Board composition. Our annual impact reports detail our social and environmental programmes, including specific, quantifiable outcomes.

Legal Commitment to Stakeholder Consideration

To ensure our values endure, we have amended our corporate governing documents to legally require consideration of all stakeholders in decision-making. This framework supports our long-term commitment to responsible business practices, regardless of changes in ownership or leadership.



Future Plans

We've made progress towards our goals and are confident that the benefits we've shared are just a small preview of what's to come; we can always do more to elevate our social and environmental initiatives.

Together, we can make this journey a success, creating a business that benefits everyone it touches.

Our dedication to continuous improvement drives us to set even higher goals for the year ahead. Below, we outline our key ambitions for the next 12 months:

B Corp Accreditation

We are currently working towards achieving B Corp certification, further solidifying our commitment to high standards of social and environmental performance, transparency, and accountability.

As part of this process, we have created several new policies and processes and defined significant commitments to improve our operations. Over the next year we will work hard to implement these and monitor our impact to ensure we achieve the goals we have set.

Social Targets

We have focused our commitments for the next 12 months on achieving quantified social targets outlining our community, customer and employee-related goals. These include:

- **Charitable Giving**
Increase our positive impact on causes we care about, by increasing our annual contribution to impactful organisations to over **£600**.
- **Volunteer Days**
Contribute **more than 40 hrs** of staff time to local initiatives and impactful organisations.
- **Customer Satisfaction**
Gain Customer feedback following submission of every invoice submitted.

Future Plans

Environmental Targets

To measure the impact of the policies and processes we have put in place this year to reduce our environmental impact, we have also set environmental targets for the next 12 months:

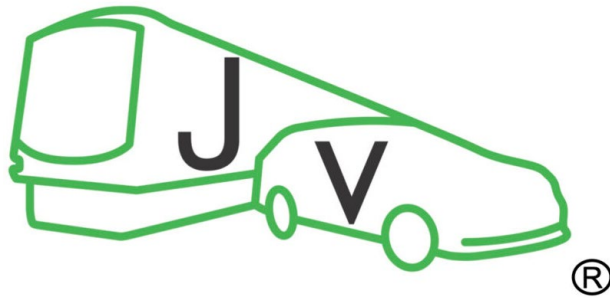
- **Waste**
Ensure **100%** of our hazardous waste (e.g., batteries and electronic items) are disposed of responsibly, safely, and in compliance with environmental standards, in order to minimise any associated negative environmental impacts.
- **Energy Conservation**
Set energy reduction targets.
- **Carbon Emissions & Offsets**
Calculate our 2024/25 baseline carbon emissions and set reduction targets.
- **Sustainable Procurement**
Share our Supplier Policy with **100%** suppliers

We will continue to be involved in rail projects to eliminate diesel trains and progress the content and readership of the free book.

Impact Reports

We will be creating another Impact Report **12 months** from now to detail our progress against the previously outlined targets. We also hope to include further improvements in our processes and policies.

By focusing on these priority areas, we aim to continue leading by example and deliver meaningful outcomes for all our stakeholders over the next year.



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