

REVOLUTION VLR

THE FUTURE IS VERY LIGHT RAIL

ALL-ELECTRIC REVOLUTION VLR

Extending the
outreach of rail



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ABOUT RVLR

Revolution Very Light Rail (RVLR) is an innovative, lightweight, cost-effective rail vehicle that provides a compelling alternative to operating traditional heavy rail vehicles on branch lines. Its low mass reduces all aspects of operating costs and can significantly improve the business cases for line reopenings and extensions, enhancing local connectivity.

RVLR's innovative design combines automotive and rail technologies to provide an attractive, environmentally and economically sustainable product that can be deployed rapidly.

RVLR facilitates modal shift and enhanced public transport connectivity. It supports a more affordable, greener future for our railways.



PARTNERSHIP

Transport Design International (TDI) and Eversholt Rail started working together in 2018 as part of a wider consortium led by TDI to design and build Revolution Very Light Rail (RVLR). With the successful completion of this project, TDI and Eversholt Rail established a partnership to bring RVLR to market. Since 2021, we have been working in close collaboration to launch the RVLR Demonstrator vehicle and develop a commercial model for RVLR.

As a partnership, we have worked closely together, learning from and supporting each other as we have conducted vehicle trials and successfully launched the RVLR Demonstrator vehicle. We recognise our strengths as a team and are proud of the way we have combined and used our knowledge and experience across the programme.





PRE-SERIES VEHICLES

Following extensive stakeholder engagement using the RVLR Demonstrator vehicle, Eversholt Rail and TDI are investing in the Pre-Series phase of the RVLR programme.

This significant commitment involves the design, build, integration, testing and approvals of three brand-new all-electric RVLR vehicles and associated lineside charging systems. These are planned to be used for operator-led trials in various locations across the UK.

KEY OBJECTIVES:

- Gain operational experience under a range of service types and locations
- Assist sponsors and train operators in quantifying passenger demand to support business cases
- Continue to raise stakeholder awareness of RVLR's capabilities
- Support transport decarbonisation

TECHNICAL OVERVIEW

1. Bodyshell

- Welded steel chassis
- Interchangeable composite side panels
- Aluminium/composite cabs and roof

2. Battery-only propulsion

- Zero emissions operation
- Lineside fast charging system
- Optimised vehicle range

3. Bogie suspension

- Passenger comfort and vehicle stability
- Proven robustness and durability
- Targeted mass reduction features
- All-electric braking

4. Bidirectional (two cabs)

- Maximised operational flexibility
- Excellent field of view to facilitate safe line-of-sight operation
- Simple, intuitive controls and displays
- Revisions to lower cab front and lighting in line with feedback

5. Reconfigurability

- Straightforward adaptation to stakeholder requirements, including changes to seating/luggage/bicycle storage etc.



SPECIFICATIONS

Passenger capacity:

Up to 56 seated

Up to 26 standing

1 RVAR wheelchair space

Max speed:

62 mph (100 km/h)

Propulsion:

Electric - with on-board batteries, capable of
lineside rapid charging

Dimensions:

Length 18.5m

Width 2.8m

Height 3.8m

Access:

4 single-leaf sliding plug doors (2 per side)

*These elements are a guide and full specification details will be validated as the Pre-Series vehicle design is finalised.



SUSTAINABILITY

Sustainability has been a fundamental consideration in the design of the Revolution Very Light Rail (RVLR) vehicle and its associated support systems. Whole-life environmental and economic sustainability aspects have been given particular attention. This will ensure that business cases for the introduction of rail services operated by RVLR are highly compelling and maximise direct and indirect benefits to communities and regional economies.

MISSION

To deliver a greener, more reliable, high-quality passenger experience which fully supports decarbonisation, modal shift and provides economic sustainability.

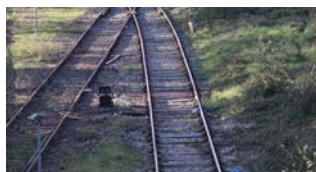


WHOLE-SYSTEM APPROACH

A further significant benefit of an RVLR whole-system solution is its ability to be deployed rapidly. Our purpose-built demonstration facility in Ironbridge exemplifies how a rapid and cost-effective rail solution can be achieved with RVLR. The demonstrator facility was completed in less than six months, with a total investment of less than £400k. This included a new platform, maintenance facility and a marketing suite that is readily adaptable to a station role.



RAPID DEPLOYMENT - IRONBRIDGE CASE STUDY



FEB 2021

Full track inspection completed



JUN 2021

Platform and buildings construction completed



SEP 2021

Ironbridge site launched with Ministerial visit



MAR 2021

Marketing and maintenance buildings ordered



AUG 2021

Safety Management System implemented



OCT 2021

Stakeholder demonstrations commenced

AWARDS & TESTIMONIALS

Since the launch of the Revolution VLR Demonstrator vehicle in 2021, we have had over 450 stakeholders visit Ironbridge and our team has presented RVLR at numerous exhibitions and conferences. Feedback has been overwhelmingly positive, and we have shared some of the comments across these pages.

During this period, the RVLR Demonstrator has won various awards for its technical innovation and design. The Pre-Series program builds directly on this success and the recognition RVLR has had across the rail industry.



450+ Stakeholder Visitors

To demonstration facility since 2021



200+ Passengers

Rail Live 2022



"The winner of the Innovation Award provides a straightforward solution to a large problem of reducing the cost of rail."

JUDGES
RIA RISE Awards

"RVLR is certainly an impressive vehicle, and I can see it having a big impact on local transport systems in the future."

MIKE CLIFFE
Lancashire County Council
Rail Development Manager





"VLR is new technology that offers a glimpse into the railways of the future. This low cost, low emission transport might be the sort of thing you see in your town in years to come."

CHRIS HEATON-HARRIS MP
Former Rail Minister

"The space is very open and not at all restricted, it is easy to turn in. I like the USB ports in the wheelchair space because this isn't always a feature in other modes of transport. Revolution VLR is a lot more welcoming and brighter than other trains that I normally travel on."

PHIL

Group Leader and Wheelchair skills trainer at Back Up



"Putting Britain in the lead in a new space race. There are so many innovative things all wrapped up in this lovely vehicle, and lots of really good lessons to shake up the industry."

JUDGES

Global Light Rail Awards



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