**Press Release**

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**An end to ‘leaves on the line’ may be in sight**

A solution to the perennial rail problem of “leaves on the line” is one step closer today after successful trials of a new train braking technology. The new Water-Trak system, developed by CoCatalyst Limited, delivered greatly improved train braking on a specially prepared slippery rail. The trials, supported by Porterbrook and the University of Birmingham, used HydroFLEX – the UK’s first mainline hydrogen powered train. The testing marked the end of a project funded by the Department for Transport through Innovate UK.

Leaves on the line is a long standing and serious issue for performance and reliability across the railway. The annual autumn layer of leaf matter which forms on the rails creates the equivalent of black ice for trains. The CoCatalyst team discovered that leaf coated rails only become slippery if damp noting that trains still stop safely in heavy rain. Water-Trak simply creates rainy-day conditions on the rail surface by spraying a small amount of water from the train onto the track when a slippery rail is detected.

During testing Water-Trak was deployed in a train equipped with modern braking systems and led to a significant improvement in braking on slippery rails. In comparison with normal braking, the technology reduced stopping distance by more than 20% and significantly cut the risk of wheel damage. In fact, several braking runs without Water-Trak had to be interrupted to protect the train wheels, whereas all tests with Water-Trak resulted in safe and controlled braking.

John Cooke of CoCatalyst said: “adding water made the braking far less damaging and much safer. Without Water-Trak it was hard to stop the train”.

Train driver, Robin Hicks of Rail Operations Group added: “it has definitely proved to me that water does slow trains down and stops them in good distance”.

In the coming months CoCatalyst will demonstrate their innovative technology on a section of mainline track near Wigan, working with partners Porterbrook and Northern Rail. It is expected that this new solution to the problem of leaves on the line could roll out across the UK rail network as soon as the autumn of next year.

For more information please visit the Water-Trak website ([www.water-trak.com](http://www.water-trak.com)) or contact CoCatalyst at: info@cocatalyst.com

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Notes to Editors

**About CoCatalyst and Water-Trak Limited**

* Formed in 2008, CoCatalyst Limited, based in Farnborough, Hampshire, is a specialist engineering solutions company that operates in a range of different industry sectors including energy, automotive, aerospace and food. CoCatalyst has been working closely with the rail industry since 2013.
* Water-Trak Limited, set up recently to exploit the patented Water-Trak technology, is the result of a joint venture between CoCatalyst Limited and SCB Associates Limited.

 **About Porterbrook**

* Porterbrook Leasing Company Limited ("Porterbrook") is a leading participant in the rail leasing market and has a rolling stock fleet of almost 4,500 vehicles.
* Since privatisation, Porterbrook has invested over £3bn in the UK rail market. The company is looking to invest more than £1bn in Britain’s railway over the coming years.
* We have successfully introduced over 2,500 new vehicles into passenger service.
* Porterbrook also spends £3m each week on its existing fleets, supporting almost 7,000 jobs in the UK supply chain.
* In October 2014, the Porterbrook Group of companies was acquired by a consortium of investors including Alberta Investment Management Corporation (“AIMCo”), Allianz Capital Partners (“ACP”) on behalf of certain insurance companies of the Allianz Group, EDF Invest and a consortium of Utilities Trust of Australia (“UTA”), The Infrastructure Fund (“TIF”) and Royal Bank of Scotland Group Pension Fund (“RBS”).

**About University of Birmingham**

* The University of Birmingham is ranked amongst the world’s top 100 institutions. Its work brings people from across the world to Birmingham, including researchers, teachers and more than 6,500 international students from over 150 countries.
* The Birmingham Centre for Railway Research and Education (BCRRE), based at the University of Birmingham, is Europe’s largest academic-based group delivering railway science and education. With over 145 academics, researchers and professional support staff, BCRRE provides world class research and thought leadership within railways, and offers an expanding portfolio of high-quality education programmes, including Rail and Rail Systems Level 6 and 7 degree apprenticeships. In 2018 BCRRE became lead partner in the £92m UK Rail Research and Innovation Network (UKRRIN) and in 2019 it absorbed the activities of the Rail Alliance into its offering, increasing its breadth of support for innovation and growth in the rail industry.
* DIGI-RAIL is part-funded by ERDF and the University of Birmingham. DIGI-RAIL brings together national and international rail industry buyers with the region’s businesses and research expertise to solve challenges within the industry and access the increasing number of digital rail commercial/research opportunities that exist in the sector. Digi-Rail provided University of Birmingham enterprise and innovation support to the Water-Trak project
* HydroFlex is the UK’s first hydrogen powered train, jointly developed by Porterbrook and the University of Birmingham. It will be undertaking Innovate UK funded mainline trials in September.