

## THE TRAIN TOILET WASTE PROCESSING SYSTEM THAT DOES IT ALL ON BOARD, TESTED ON CHILTERN RAILWAYS.

**Cleartrak**, a novel, environmentally safe train toilet system is to be tested in passenger service by Chiltern Railways as part of Innovate UK's First of a Kind (FOAK) Funding Programme.

Garrandale's award of £365,000, funded by the Department of Transport and delivered by Innovate UK, will enable the team, comprising academic partner Cranfield University and established rail partners, Chiltern Railways, DB ESG and Arriva Train Care, to put *Cleartrak* to the test – initially on a test train and then in passenger service.

*Cleartrak*'s impact on the operational resilience of the railway goes far beyond benefitting the environment. Its revolutionary new processes purify and recycle wastewater and reduce solids to safe waste with near zero volume, all whilst trains are on the move.

*Cleartrak* eliminates capital and operational investment in toilet emptying equipment and frees up trains to spend more time in revenue generating passenger service on routes previously not viable.

Tim Brown, Garrandale's CEO is excited about this opportunity and optimistic about the positive impact that **Cleartrak** will have on the Rail Industry. *"With the rail sector worldwide striving towards decarbonisation, Cleartrak technologies will ensure that the environmental gains made by alternatively powered trains will not be wasted by continuing with an outmoded, logistically complex, resource hungry process 'in depot' that takes trains out of service every 2 – 3 days."*

Simon Jarrett, Engineering Assurance Development Manager at Chiltern Railways and Joint Project Manager of the installation and testing process is excited about the nine months long project. *"At Chiltern we are always looking for new ways to enhance our offering to our customers and whilst depot maintenance is not an area of the railways that gets much publicity, it does underpin everything that happens on track."*

*"Cleartrak's revolutionary new process would see trains in service for longer and this increase in capacity, in one of the densest railway networks in the world, could have far reaching benefits for our customers as well as train manufacturers, Rolling Stock Owners and Franchises like ourselves."*

Professor Leon Williams, Head of the Centre for Competitive and Creative Design within the School of Water, Energy and the Environment at Cranfield University and academic lead in the consortium is confident that the numerous benefits of **Cleartrak** will see it soon becoming the new State of the Art. *"Trains are already the most environmental form of travel and with so many major rail projects underway, seeking to open up new routes and opportunities for passengers, Cleartrak could initiate a greater flexibility in how trains are maintained in the future."*

*"For prestigious projects such as HS2, Cleartrak provides a truly innovative alternative to the 30 year old toilet technology currently specified. By retro fitting, legacy rolling stock can also benefit from the clear advantages offered by Cleartrak."*

*"We are confident that Cleartrak will be a depot changer and a game changer."*

Chiltern Railways' Simon Jarrett sums up the collaborative project: *"With over 150 years of rail experience between our core team as well as the expertise from Cranfield's School of Water, Energy and Environment it's going to be a very interesting project and we're hopeful that our evaluation process will prove even more benefits."*

Commenting on the news, James Hornsby, Project Director, from the rolling stock consultancy DB ESG said: *"We are experienced in installing new technologies onto UK train fleets and can utilise new applications, such as 3D scanning to make this process easier. This innovative and environmental toilet waste processing system is just what our industry needs and we are proud to be playing a key role in this project."*

Angel Trains, one of the largest Rolling Stock Leasing Companies confirmed their support for **Cleartrak**, which would afford greater flexibility in how fleets might be cascaded or utilised and in making legacy fleets compliant.

Colin Musisi, Development Engineer at Porterbrook added that *"Porterbrook is always keen to see supply chain innovation and we look forward to seeing the results of this trial."*

Amanda Solloway, MP for Derby North and Parliamentary Under Secretary (Department for Business, Energy and Industrial Strategy) is *"pleased to see local businesses being awarded funding for such exciting and innovative projects and developments in our communities. This is really great news for Garrandale."*