

# Abellio London Bus

*A 'Transport UK Group' Company*

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## Zemo Partnership – Zero Emission Bus Workshop

St Mary's University - 24<sup>th</sup> May 2023

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# Transport UK Group Overview

- A management buyout deal between Abellio UK and Nederlandse Spoorwegen was signed in August 2022 and completed on 28<sup>th</sup> February 2023.
- The resulting **Transport UK (TUK) Group** is a new UK-owned and managed company taking over all of Abellio UK's existing services.
- TUK will:
  - continue to serve millions of rail and bus passengers in London, Liverpool, the Midlands and East Anglia;
  - build on the successful, award-winning legacy of the past twenty years;
  - be more agile in decision-making: adapting to regulatory changes and taking advantage of new opportunities;
  - be more innovative in approach: delivering on changing passenger needs and working towards a sustainable, safe, and reliable low emissions travel experience; and
  - be more proactive in influencing the future of UK rail and bus services, providing a voice and extensive knowledge to help shape the debate on UK rail industry reform.
- TUK is committed to playing a vital, long-term role in the future of UK rail and bus services.



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- 53 contracted routes with TfL (circa 10% market share), each route operated for a 7yr term
- 800+ vehicles operating c32 million miles per annum
- 145 million customer journeys per annum
- 118 ZEBs in service, moving to 200+ in Dec 2023
- 2,500 staff, operating from 6 depots
- Ultra fast DC chargers and infrastructure being installed across all operating centres

Electrified 2021




**Hayes Depot**

24hr Electrified 2023




**Southall Depot**

24hr Electrified 2019




**Walworth Depot**

24hr Electrified 2022




**Battersea Depot**

24hr Electrified 2023




**Beddington Depot**

Electrified 2023




**Twickenham Depot**

Operating 800+ buses across 6 depots in Central, South and West London

c29% of fleet zero emission from Spring 2024 onwards

- Walworth – 51% zero emission
- Battersea – 28% zero emission
- Hayes – 21% zero emission
- Twickenham – 21% zero emission
- Southall – 19% zero emission
- Beddington – 8% zero emission

# Embracing the Change

- All new build Abellio sites since 2019 are future proofed for infrastructure and ducting requirements.
- Investment in sophisticated scheduling software to optimise driver duty efficiency aligned to EV duty cycles and charge windows.
- Deployed a range of vehicle, battery, telematics and infrastructure technologies to establish the 'best fit' for each site, whilst still providing fleet flexibility between route contracts:
  - 4x manufacturers vehicles in service (Wrightbus, Caetano, Switch & ADL/BYD)
  - 3x charger manufacturers installed (Alpitronics, Siemens, Phihong)
  - DC charging by default, with AC deployed for bespoke solutions
  - Static battery installations plus non-intrusive charger packaging/positioning to minimise footprint
- Engaged with the right partners early, to collaborate on finding the right solutions for power, charger deployment, vehicle specification and financing options.

# Key Considerations

- Start from the end and work back:
  - Build a model for 100% ZEB solution by site to establish best technological fit (EV/FC etc) and total depot ZEB capacity
  - Plan for next generation vehicle requirements (expected range, charge/refill speed, interoperability)
  - Break solution down into phases, based on available power timelines and/or route/vehicle contract life cycle
- Keep your technology options open:
  - Stay flexible with how you deploy your technology; a tailored solution might provide great operational efficiency but can limit how assets are deployed should the operating environment need to change
- Pick your delivery partners early and ensure full strategic alignment:
  - Fully assess the interdependencies of each partner and ensure all parties remain fully aligned at every step
  - Make sure your contracts don't have more moving parts than your buses
  - The Zemo Partnership is a superb conduit to find the right partners for the full spectrum of delivery requirements