



To: The Business, Economy and Enterprise Scrutiny Board (3)

18th December 2019

Subject: Very Light Rail

1 Purpose of the Note

1.1 This note provides the background and current status of the Very Light Rail Project

2 Recommendations

2.1 The Business, Economy and Enterprise Scrutiny Board (3) are recommended to:

- 1) Note the progress made to date on the development of a Very Light Rail Project in Coventry.
- 2) Support the continued development of the Very Light Rail Project in Coventry.
- 3) Identify any further recommendations for the Cabinet Member for Jobs and Regeneration.

3 Information/Background

3.1 Coventry City Council (CCC) and Dudley Metropolitan Borough Council (DMBC) are in collaboration with partners to establish the West Midlands as a world-class business investment location by supporting urban public transport connectivity, developing significant supply chain opportunities and providing a focus for driving up skill levels, focusing on the development of Very Light Rail (VLR) Technology. The Coventry VLR Project will deliver a very light weight mass transport rail solution comprising a modern battery-operated vehicle and innovative track system that is relatively simple and cost effective to construct. The integrated system will be tested at the Dudley Very Light Rail National Innovation Centre (VLRNIC) and once proof of concept is achieved, the first route most likely to be taken forward in Coventry is a route linking the railway station with the main hospital in the city, a route of some 7km.

3.2 The programme consists of 3 projects - all focused on the development of VLR technology in the West Midlands - a world class business investment location. They are:

1. Coventry VLR Vehicle and Track Research & Development (R&D)
2. Dudley Very Light Rail National Innovation Centre (VLRNIC)
3. Coventry VLR First Route

4 Vehicle Research and Development

4.1 WMG has been commissioned by CCC to lead and procure the services of a vehicle design specialist to design and oversee the build of the Coventry VLR vehicle. WMG appointed Transport Design International (TDI) in June 2018 and are supporting the design work with research focused on batteries, electric powertrain, charging, materials, light weighting, Finite Element Analysis, and the regulatory pathway for this novel vehicle. The

vehicle design is well advanced and was signed off at a Design Review Panel Meeting on the 6th August 2019. The design activity is now focused on detailed design of all components such as the car body, bogie, high voltage battery, and interior.



- 4.2 Manufacture of the above vehicle is due to commence in early 2020 through to November 2020 when factory acceptance testing takes place. The vehicle is scheduled for delivery to the VLRNIC site, in Dudley, in Autumn 2020 for initial performance testing and acceptance which will complete in Spring 2021. The vehicle will then need to be tested on the new track form which is programmed to be available from Summer 2021 to commence integrated system testing.

5 Track Research and Development

- 5.1 WMG has been commissioned by CCC to lead and procure the services of a track innovation partner to design the innovative trackform. The specification for the track can be summarised as follows:
- Develop a light weight, shallow form track system of modular design that can be exported to other towns and cities across the UK and globally
 - Have minimal impact on below road surface utilities, taking advantage of the modular design to allow future utilities access
- 5.2 The procurement of the innovation partner is due to be concluded in January 2020 and a 14-month programme to develop the track design will follow.
- 5.3 Once the track has been designed and factory tested, a 325m test track will need to be installed at Dudley VLRNIC for integrated system testing to take place.

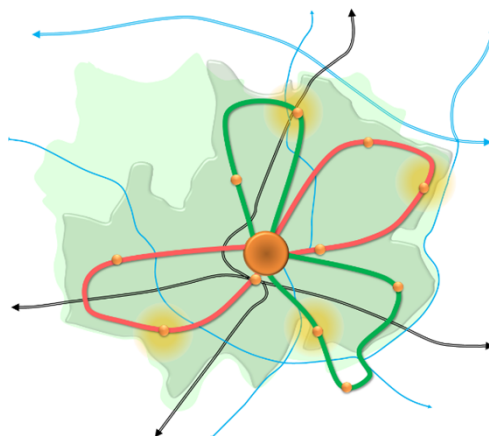
6 Very Light Rail National Innovation Centre

- 6.1 Work to complete the VLRNIC in Dudley in time for performance testing from Autumn 2020 is underway, with the construction of the Retaining Wall (required to support the Midland Metro Extension and create the footprint for the site) commencing in October 2019.

7 Coventry VLR First Route

- 7.1 Two potential corridors have been assessed for feasibility, economic benefits and costs to be delivered as the first route:
- City Centre to Warwick University via the railway station
 - Railway Station to University Hospital Coventry and Warwickshire (UHCW)

- 7.2 These routes connect major employment sites, development sites and potential strategic park and ride sites with the city centre and the railway station, which is under redevelopment as a major transport interchange.
- 7.3 The feasibility work indicates that the UHCW route will yield the greatest benefits and is therefore most likely to be taken forward for implementation for the first route (Outline Design and Business Case Development currently underway). Subject to the success of the first route, the network will be expanded as per the image below and will include links to strategic locations such as University of Warwick, Jaguar Land Rover and HS2 interchange.



Nicola Small
VLR Programme Manager
Nicola.small@coventry.gov.uk