

Cabinet
Council

7th January 2025
14th January 2025

Name of Cabinet Member:

Cabinet Member for Jobs, Regeneration and Climate Change – Councillor J O’Boyle

Director approving submission of the report:

Director of Innovation

Ward(s) affected:

All

Title: Coventry Very Light Rail

Is this a key decision? Yes

Yes - the proposals involve financial implications in excess of £1m per annum.

Executive summary:

Following successful development and trials of track and vehicle, Coventry’s groundbreaking Very Light Rail is now ready to be tested in an on road live environment. This will be a crucial step in our mission to develop and deliver an affordable tram system, with a target cost of £10m/km. This report seeks approval to let a contract for the construction and operation of a 220m long single track demonstrator on Greyfriars Road and Queen Victoria Road.

This initial section of track, which will test the track and vehicle in a live setting, is intended to be completed in Spring 2025 with the vehicle in operation for a four week period. This will provide an opportunity for local people, along with other interested parties, to ride on the vehicle in a controlled environment and provide feedback.

The purpose of the on street showcase / or demonstrator is to do the following:

- trial and optimize installation methods on a live road
- prove that the track can be installed in significantly less time and at much reduced cost compared to conventional tram systems
- provide assurance to utility companies that it is possible for their apparatus to remain under the track
- monitor and collect data on track performance
- stimulate commercial interest

Recommendations:

Cabinet is requested to recommend that the Council:

- 1) Provide approval to proceed with the installation and operation of the four week on road test in Greyfriars Road/Queen Victoria Road, which is funded within the existing CVLR approved budget.
- 2) Provide approval to proceed with securing the necessary Statutory approvals to construct the on road test in Greyfriars Road/Queen Victoria Road.
- 3) Delegates authority to the Director of Law & Governance, The Director of Finance and Resources and the Director of Innovation following consultation with the Cabinet Member for Jobs, Regeneration and Climate Change to enter into all necessary legal agreements for the on road test in Greyfriars Road/Queen Victoria Road.
- 4) Delegates authority to the Director of Law & Governance, The Director of Finance and Resources and the Director of Innovation following consultation with the Cabinet Member for Jobs, Regeneration and Climate Change to agree the award of contract(s) and for the Council to enter into all necessary contracts, including but not limited to construct and operate the on road test in Greyfriars Road/Queen Victoria Road.
- 5) Delegates authority to the Director of Law & Governance, The Director of Finance and Resources and the Director of Innovation following consultation with the Cabinet Member for Jobs, Regeneration and Climate Change to enter into the appropriate lease agreements for associated infrastructure required to deliver and promote the CVLR system.

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List of Appendices included:

The following appendices are attached to the report:

Appendix 1 – CVLR on road test location map

Background papers:

None

Other useful documents

Council: Implementing the Devolution Agreement – Provision for Mayoral West Midlands Combined Authority 31 May 2016

Cabinet: City Centre South 24th January 2017

Cabinet: Connecting Coventry Strategic Transport Investment Programme 24th January 2017

Cabinet: 2018/19 Transportation and Highway Maintenance Capital Report, 6th March 2018

Cabinet: Coventry Very Light Rail, 12th October 2021

Cabinet: Transportation and Highway Maintenance Capital Programme, 15th March 2022

Cabinet: City Region Sustainable Transport Settlement, 6th September 2022.

All previous reports are available via the Council's website:

<http://democraticservices.coventry.gov.uk/mgListCommittees.aspx?bcr=1>

Has it or will it be considered by Scrutiny?

No

Has it or will it be considered by any other Council Committee, Advisory Panel or other body?

No

Will this report go to Council?

Yes 14th January 2025

Report title: Coventry Very Light Rail

1. Context (or background)

- 1.1 Coventry Very Light Rail (CVLR) is a pioneering research and development project, supported by West Midlands Combined Authority (WMCA) and the Department for Transport (DfT) with a £40.5m funding allocation as part of the City Region Sustainable Transport Settlement (CRSTS). The project is gaining widespread attention due to its innovative and cost effective unique trackform and prototype vehicle, which is sustainably powered. The project has developed and both track and vehicle have undergone extensive testing, amassing a wealth of data and learning. The vehicle has completed 1000km test miles at the Black Country Innovative Manufacturing Organisation (BCIMO) and a section of track has been laid at the Council's own depot, where it has had well over a million tonnes pass over the test track at Whitley. We are now at the point where the next step will be to construct a test track on a live road to prove the track installation and removal methodology.
- 1.2 CVLR will contribute to the delivery of the priorities within the One Coventry Plan (2022 to 2030) by making public transport more attractive through the provision of an affordable tram system, which is fully accessible with zero emission at point of use. This Coventry innovation offers the potential to create a new manufacturing sector, attracting inward investment to the city, creating new highly skilled jobs and training opportunities
- 1.3 As well as offering a solution for Coventry, CVLR could benefit many towns and cities world-wide in the drive to combat climate change. Evidence suggests that rail based public transport systems stimulate modal shift, more than other forms of public transport, thanks to their permanence and quality of service. An integrated transport network, providing appropriate sustainable alternatives for individual journeys, is necessary if the UK is to meet its challenging Net Zero targets.
- 1.4 The project is generating world-wide interest, with approaches from interested parties who are keen to see the track and vehicle demonstrated to prove the concept of a lower cost, easier and quicker to install trackform.
- 1.5 There are three trial sites for the trackform, all of which are generating positive results. This has already led to further innovations which will increase the commercial potential of the project by enabling a wide variety of trams to use it as well as the prototype CVLR vehicle. As this is a research and development project, it is important that there is independent scrutiny of the test results and an independent review panel (IRP) has been established.
- 1.6 It is critical to showcase the technology and build the market for the product, which, if successful, will create jobs and a new manufacturing sector in the region.
- 1.7 The next critical step is to prove the concept on a city centre road. With the agreement of WMCA and DfT, and the support of the IRP, it is planned to build a 220m demonstration track on Greyfriars Rd and Queen Victoria Rd. The principal purpose of this demonstrator will be to show that the track can be installed quickly and to work with utilities to prove one of the unique selling points – that the utilities can

remain in place: this in turn will provide confidence that we are on target to deliver very significant savings compared to conventional tram systems with a target cost of £10m/km.

- 1.8 There will be a further, more detailed report at a later date, on the progress of the CVLR project as well as the next steps, after a successful live environment test.

2. Options considered and recommended proposal

Option 1 - Recommended – Approve the installation and operation of the 220m short track on Greyfriars Road/Queen Victoria Road to enable the live on road test.

- 2.1. The purpose of this demonstration line is to:

- demonstrate that CVLR can be built within the cost envelope and within the planned timescales.
- showcase the CVLR technology and system over a limited period to local people, accessibility groups, politicians, funders and stakeholders.
- demonstrate CVLR technology as a system to potential investors and promoters of other systems.
- provide an onboard experience and invite feedback from users which will inform the project going forward.
- work with utilities to demonstrate that CLVR track will not increase loading on their apparatus (it is expected the track will reduce stresses on apparatus) and to trial methods of removal and reinstatement of track to facilitate access in the event of emergencies (such as a burst water main).
- collection of technical data to enable further innovation in the trackform.

- 2.2. In conjunction with providing proof of concept in a live environment for the track form, the Council will also be operating the CVLR vehicle on the innovative track during a period next summer. This will allow the Council to also demonstrate the vehicle operating in a controlled live environment.

- 2.3. It is intended that the vehicle will be operational for a period of four weeks, at set times during the day, between the hours of 10am and 3pm. It will offer opportunities for people, partners and possible future investors chance to experience the system via escorted, promotional rides.

- 2.4. The cost of the on road test can be accommodated within the current approved budget. A change control to cover this was approved by DfT in October 2024.

Risk Mitigation

While the list is not exhaustive, the main risk mitigations in relation to risks captured in section 5 of the report are set out below.

- 2.5. Constructing a shorter section of track initially, reduces risk and cost, while providing data to enable further already approved and secured funding to be drawn down.

- 2.6. All aspects of vehicle, track and infrastructure system safety are scrutinised and documented at each phase by an external safety company that specialise in innovative track and rolling stock. They provide advice and produce detailed cases for safety. This process then feeds to an appointed Independent Competent Person (ICP) as required under ROGS 2006 (Railways and Other Guided Transport Systems Safety Regulations 2006). The ICP meets regularly with the CVLR teams alongside the independent safety company, and signs off each element of the process, implementing the safety verification scheme for the project and ensuring that relevant industry standards are met where appropriate. Without a letter of no objection from the ICP, the system cannot run.
- 2.7. The location for this initial installation has been chosen to ensure minimal disruption to residents and local businesses, adjacent to existing building works, with access to properties maintained at all times.
- 2.8. As part of the wider approved Coventry City Traffic Management Plan works (CCTMP) a bus gate will be introduced on Greyfriars Road.
- 2.9. During construction, the site will be managed by the contractor. Once construction is completed, the Council will take over the site alongside all of the relevant insurances.
- 2.10. The track will be installed on one side of the road, as a single track, with live traffic on the opposite side of the road, separated by temporary barriers during vehicle operation.
- 2.11. The vehicle will be fitted with an additional onboard braking mechanism to supplement the existing physical and remote brakes. Maintenance and repair of the vehicle will be the responsibility of the Council.
- 2.12. The tram will be travelling at a maximum speed of 20mph for a short period of time. As part of the test approach there will be barriers along the route. The track will be marshalled at all times while the vehicle is operating, with security in place when the vehicle is not operating.
- 2.13. We will procure a competent operator who will hold the relevant licences to operate the system. The operator will be responsible for the operation of the CVLR system under contract to Coventry City Council and will be the duty holder undertaking both the Infrastructure Manager and Transport Undertaking roles under ROGS 2006. As such they will be responsible for ensuring the safe operation of CVLR during the period of operation.
- 2.14. Maintenance and repair of the track and subsystems will be the responsibility of the Council. The Operator will be required to conduct pre-service checks of the track before operation and periodic track checks during operation, and any repair or maintenance works identified to be necessary will be arranged by the Council.
- 2.15. In order for CVLR to run in the city, approvals from utility services are required, so this first short run will be instrumental in providing data to give confidence that the construction proposals are sound and that the long-term impacts of the slab track over their assets are non-existent or minimal.

Option 2 – Not Recommended – Continue with a longer City Centre Demonstrator without undertaking the shorter test section.

- 2.16. This option is not recommended as the opportunity to gain the learnings set out in 2.1 above would be lost. Constructing the test section also means we can demonstrate CVLR technology in the real world in a shorter timescale.
- 2.17. As this is a research and development project, it is essential that we exploit the opportunities we have to not only collect accurate data, but to also provide the necessary evidence to utility companies, to give them confidence that their apparatus can be left in situ, in the vast majority of cases. Making sure the utility companies are on board is an essential part of the business case for CVLR and its wider adoption.
- 2.18. Installation of this first section also means that construction of a longer route will be significantly de-risked meaning faster installation and potentially lower costs thus adding to the commercial potential of the project.

3. Results of consultation undertaken

- 3.1. An engagement process on the proposed city centre cycleway, city centre red route and the CVLR demonstrator took place between 27 November and 17 December 2023. A Street News newsletter was delivered to more than 6,000 properties in and around the city centre via Royal Mail. This contained information about the changes and a link to the Council's Let Talk online page where people could complete a survey to tell us what they thought. Two drop-in sessions were held for people to find out more and ask questions. The on road test will enable local people to experience the CVLR and give us further feedback.

4. Timetable for implementing this decision

- 4.1. The CRSTS funding is a 5-year programme from 1st April 2022 – 31st March 2027. Once approval is obtained, the contracts will be awarded for construction and operation, and delivery will begin as soon as is practically possible.

5. Comments from Director of Finance and Resources and Director of Law and Governance

5.1. Financial Implications

- 5.2. The WMCA is the accountable body for the CRSTS funding and grant agreements are put in place between the WMCA and the Council to agree outputs for each stage, the stage gates have been agreed with DfT and WMCA.
- 5.3. Within the CRSTS funding, a budget has been allocated to progress the research and development of both the vehicle and trackform. Due to the research and development nature of the CVLR scheme, there is a risk of cost overruns. To date, the research and

development has been delivered within the budgets set aside, and contingency has been set aside to account for any potential cost overruns. The CRSTS 1 allocation for CVLR is £40.5m.

- 5.4. The IRP assessed the financial forecasts for scheme implementation before Stage Gate 2 funding of £8.34m was released to construct the showcase. This demonstrator will provide reassurance that the forecast costs are realistic and will thereby reduce the risk of cost overruns. £8.34m is therefore the budget for the city centre demonstrator element of the project
- 5.5. Within the CRSTS Grant Agreements there is a 10% tolerance on cost and programme. Any spend or programme slippage in excess of the 10% tolerance will be dealt with through Change Control.
- 5.6. At present there is a risk that agreements with utility companies will result in the Council being required to give an unlimited indemnity in the event of any damage to their utilities. This risk is provided for within the contingency budget, however this short section test will help to reduce the risk for future construction stages.
- 5.7. There is provision within the allocated budget in the event that such incidents materialise, but it should be noted that the CVLR system operation will be covered by a public liability insurance obtained and held by the Council.
- 5.8. It is envisaged that the tracks would be retained in situ to continue to monitor its long-term performance. We would look to fund any maintenance costs through additional transport scheme funding, or as part of the Highways capital programme.
- 5.9. **Legal Implications**
- 5.10. Certain legal implications associated with installing and operating the on road test have been considered. The key points from the legal analysis are summarised below.

Consenting

- 5.11. The Council as promoter of the on road test should not assume that it can use its powers as highway authority, street authority, etc., as of right but instead should act as a third party would and apply for the relevant consents from itself as highway authority / street authority (i.e. using ethical walls, etc). This will provide greater transparency / resistance to legal challenge.
- 5.12. Planning permission is not required for the road test in the Greyfriars Lane/Queen Victoria Road.
- 5.13. A Transport and Works Act Order (“**TWAO**”) would provide the most certain form of authorisation for the City Demonstrator, but is not deliverable in the necessary timeframe. A careful use of powers under the Highways Act 1980, street works licences and traffic regulation orders should provide sufficient authority and consents to place the necessary works for the road test in the highway.

- 5.14. As with conventional construction works, the Health & Safety Executive (“HSE”) would largely be the health and safety enforcing authority in respect of the construction of new tramways and extensions to existing systems. The Office of Road and Rail (“ORR”) has delegated powers from HSE to look at the implications for operational safety at the time of design and construction of such projects.
- 5.15. The safety verification process required for safety management systems under the Railways and Other Guided Transport Systems (Safety) Regulations 2006 must be followed in relation to the introduction of new or altered rolling stock or infrastructure.

Key Operational Risks

5.16. The key operational risks in relation to the scheme include:

- liability for personal injury or third party property damage caused by (i) operation of the vehicles (to passengers utilising the scheme or to highway users/property on the streets and (ii) equipment embedded within or on the highway (for example, if a pedestrian were to trip and injure themselves). Liability may arise in connection with a claim brought by a third party and/or under health and safety legislation;
- damage caused to the system by third parties (including for example, vandalism and theft);
- liability for nuisance, for example where a claim is brought against CCC in relation to property nuisance or environmental nuisance (such as noise or dust) arising as a result of the City Demonstrator, or under legislation (nuisance is now a statutory offence under section 78 of the Police, Crime, Sentencing and Courts Act 2022);
- liability to third parties and/or at law for environmental damage;
- liability to third parties for damage caused to utilities (for example, if CCC enters into contractual arrangements with utilities providers, it could become contractually liable for damage);
- the system is to remain after the road test in the City Centre. This will require ongoing maintenance and cost implications.
- On-going positive discussions are taking place to have the appropriate insurances in place before the road test takes place.
- There is a live risk register which is updated regularly

Mitigations to the key operational risks listed above are referred to in section 2 under option 1.

5.17. The independent Review Panel which provides independent technical and financial challenge was procured via the Council's existing Framework Agreement for the provision of Research and Development Services.

6. Other implications

6.1. How will this contribute to the One Coventry Plan?

The CVLR programme will contribute to Council Plan objectives such as improving air quality and reducing the impacts of climate change by providing more sustainable forms of public transport, promoting the Council's 'Age Friendly' aspirations and helping to improve the health and wellbeing of the city's residents.

CVLR will ultimately help to address the plan priority of making streets and open spaces more attractive and enjoyable places to be, as well as improving the transport network and connectivity, encouraging investment in the city to promote jobs and growth, which in turn helps to tackle inequalities. CVLR will also enable access to jobs, leisure and study for local people.

<https://www.coventry.gov.uk/strategies-plans-policies/one-coventry-plan>

6.2. How is risk being managed?

As with all Capital Schemes, CVLR is overseen by the Council's Transport Infrastructure Capital Programme Board, as well as a monthly CVLR Programme Board, both chaired by the Director for Innovation, which provide robust governance, monitor progress, risk and finance. Feeding into the Boards are three steering groups – Vehicle, Track and City Centre Demonstrator Delivery and Operation, each monitor in detail the individual workstreams, with additional monthly cashflow and risk meetings.

CVLR has an established project team in place with a core management team made up of Coventry City Council officers to oversee development and delivery. As part of the key project activities, a programme risk register is established and is regularly monitored, with input by Finance, Legal, Procurement colleagues, and individual project teams to ensure risks are actively managed and mitigations put in place. There is contingency in the budget for each workstream at the appropriate level for stage of development.

To manage physical risks, the Construction and Design Management (CDM) process will be followed to ensure that risks are designed out and that construction takes place by an approved contractor in a safe way.

6.3. What is the impact on the organisation?

The CVLR programme will be delivered using existing resources where possible, utilising professional services where necessary via the ESPO framework. Some of the construction in the programme will be delivered by the Council's Direct Labour

Organisation, but the majority of works will be tendered to external contractors as appropriate.

6.4. Equalities / EIA?

An Equalities Impact Assessment (EIA) is being developed to consider any impacts on protected characteristic groups of the city centre demonstration route and any mitigation required. Once completed, the EIA will be regularly reviewed and updated where necessary. It is acknowledged that by introducing the track onto the existing carriageway that there may be implications for people with disabilities, older people and those using bikes and pushchairs. We will be working with representatives of these groups to understand the best way to mitigate any issues. This may include audio and visual warnings, signage, lighting and anti-slip materials. We will also investigate similar schemes in other towns and cities to make sure that we can understand and use any examples of best practice.

The city centre demonstration route will provide us with an opportunity to engage with representative groups in the city and to invite them to try the demonstrator and provide feedback ahead of any first route in the city.

There are many positives for passengers from protected characteristic groups of a Very Light Rail scheme. These include accessible vehicles and stops, access to employment, healthcare and social activities, improved air quality and links to active travel.

The CVLR programme as part of the Connecting Coventry Programme will ultimately improve economic outcomes and transport in the area. No adverse impact on any group protected under the Equalities Act is anticipated.

Accessibility groups will be invited to ride on the vehicle as part of the trial and their feedback will be incorporated into the next stages of the project. Further EIA work would be undertaken for the wider demonstrator and first routes.

6.5. Implications for (or impact on) climate change and the environment?

CVLR will help address the 'Net Zero' target for transport, as it is zero emission at point of use and will encourage modal shift.

6.6. Implications for partner organisations?

Coventry City Council will work closely with Transport for West Midlands, BCIMO and Dudley Council through scheme development and delivery. Coventry will also work with appropriate research and development partners, procured through the R&D framework, at appropriate stages during scheme development and delivery. A detailed stakeholder analysis has been developed and will help us understand how we best work with partner organisations

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