

Friends of the Avon New Cut (FrANC)

Notes from meeting to discuss Bristol Tram Consortium Ultra Light Rail (ULR) Transit Proposal, held at the Southville Centre on 22nd February 2011

Attended by: John Purkiss (Chair), Sara Worth (vice Chair), Derek Hughes (Secretary), Liz Payze (Treasurer), Roy Gallop, Chantal Chamberlain, Martha Van der Lem, Paul Van der Lem, Margaret Fay, Angie Tonge, Rosie Tomlinson, Peter Tomlinson, Ian Beckey, Celia Bradshaw, Charlie Bolton, Richard Clutterbuck, Heidi Dawson, Caroline Rigg, Toira Spelman, Tony Smith, Jo Young.

1. **Welcome** – John opened the meeting by introducing Keith Hallett and Pip Sheard who, on behalf of the Sustraco Bristol Tram Consortium, had been invited by FrANC to give a presentation on the Ultra Light Rail (ULR) Transit Proposal.
2. **Apologies** – were received from Tess Green and Chris Hanmer.
3. **Presentation on proposed Ultra Light Rail (ULR) Transit System**

The following notes were made from the ULR presentation delivered by Keith and Pip, and the document containing the ULR proposal that was distributed by Pip after the meeting.

3.1 Proposed Route – Ashton Gate to Temple Meads

- The proposed route (see Figure 1) will start at a new Ashton Gate Park & Ride site that will actually be built at Ashton Meadows, situated on railway land between the new flats on the old “MegaBowl” site and the adjacent allotments. Initially, up to 700 parking spaces will be provided, with entry and exit via Brunel Way.
- The route will be developed in two phases. Phase 1 will use the existing rail track between Ashton Gate and the new Museum of Bristol, while Phase 2 will require a newly-laid section of track from the Museum to Temple Meads station. In the event of administrative delays on Phase 2, the Phase 1 route could be developed first to avoid holding up the project.
- The route will terminate at Temple Meads station in the area known as “Plot 6”, adjacent to the station entrance. Plot 6 is seen as having the potential for development as a major transportation hub for main line rail, bus, ferry and ULR services.
- The proposed stops along the first section of the route between Ashton Gate and the Museum appear to be sited in the same locations as the BRT stops, i.e. at the CREATE Centre (at Butterfly Junction) and on the New Cut (near Spike Island Arts Facility). From the Museum, the tramway will then cross Prince Street Bridge, with stops on the second section at The Grove, in Redcliffe (Portwall Lane) and at Temple Meads. All the stops will be equipped with ticket machines.
- The ULR service will operate at 10-minute intervals from 6am to midnight.

3.2 Vehicles and Infrastructure

- The proposed ULR vehicles will be of lightweight construction, but built on a substantial chassis and superstructure. Access for passengers, including wheelchairs, will be by level entry from platforms at each stop with a height of less than 0.5m above street level (accessed by ramp). Entry/exit will be via doors on either side of the vehicle. Figure 2 shows a conceptual design for a

ULR tram vehicle. The ULR vehicle currently operating on the short branch line between Stourbridge Junction and Stourbridge Town is shown in Figure 3.

- Initially, for Phase 1 of the service, vehicles with a 60-passenger capacity will be used, to meet the expected lower patronage. However, it will be possible to couple two of these vehicles together if required to cater for increased passenger numbers. When fully operational, the route will be served by vehicles with a capacity of 200 passengers with seating for 44. The ride quality provided by the ULR system will ensure the safety of standing passengers.
- The ULR vehicles will be powered by an on-board, compact, high efficiency, low emission engine running on natural gas or a bio-methane fuel derived from renewable waste sources. An energy storage system provides the additional power to the drive motors for acceleration, and stores the brake energy recovered during deceleration. This is proven but innovative hybrid technology, expected to give up to 40% fuel savings. The fuel tank containing compressed natural gas will be built into the roof of the vehicle, and will require re-fuelling on a daily basis.
- No significant alterations to the existing rail track between Ashton Gate and the Museum of Bristol will be required. It will, however, be necessary to lay new light rail track across Prince Street Bridge and along The Grove and Portwall Lane to Temple Meads station. Roadworks will be minimised by using a novel track system that can be constructed within the top layer of the roadway, thus avoiding buried services. Because each ULR vehicle generates its own power, no electrification of the track is required, nor is it necessary to include the overhead power cables required for conventional electric tram systems as part of the infrastructure.
- Some strengthening of Prince Street Bridge will be required in order to accommodate the ULR vehicles. Ashton Avenue Bridge will require some refurbishment but is structurally capable of taking light rail traffic. It is assumed that pedestrians and cyclists will continue to use the lower deck of this bridge, alongside the tram track.
- The preferred location for a ULR depot and workshop facilities is at Ashton Meadows. The depot will need to accommodate four vehicles, with a separate workshop and staff “rest room” area.

3.3 Capability for Future Route Expansion

- Further development (see Figure 4) will depend on approval from Network Rail to share local rail infrastructure., but could include
 - a new Ashton Gate station to serve a reopened Portishead line, with a tram service operating as an alternative to heavy rail offering lower capital and running costs and greater frequency;
 - a rail link between the Portishead line and the ULR Ashton Gate to Temple Meads route, which would connect Portishead directly to the Centre and Temple Meads station;
 - extension of the route from Temple Meads around the City Centre to Broadmead and Cabot Circus. Extensive public consultation will be required to agree the best route and ensure minimal disruption to traffic and businesses;
 - a loop from Temple Meads using heavy rail lines to Parson Street and Bedminster and back to Ashton Gate, making use of tram-train technology.

4. Differences between ULR and BRT

- The ULR Transit system is being proposed as a cheaper and more environmentally-friendly alternative to the Ashton Vale to Temple Meads and Bristol City Centre Bus Rapid Transit (BRT2) scheme currently favoured by Bristol City Council.
- The ULR tram system will not link with the Long Ashton Park & Ride. It does not encroach on Ashton Vale green space, or on Green Belt land. The viability of the ULR proposal is not dependant upon possible future developments south of the Long Ashton Park & Ride such as the building of a new town at Ashton Park, or a new stadium for Bristol City Football Club, or an Arena. However, a tram service could help provide a public transport service for the existing (or a new) stadium, etc.
- As the ULR route will terminate at Temple Meads station, there will be no return circuit via Prince Street Bridge around Broadmead, Cabot Circus and the City Centre. This route extension is proposed as a future development.
- Unlike the BRT2 proposal, the ULR route alongside the New Cut will not be shared with buses from Weston-super-Mare, Clevedon and other such vehicles which currently enter Bristol along the A370. These and the Long Ashton Park & Ride buses will continue to use existing bus routes into the city. This means that the structural alterations to Ashton Avenue Bridge, Vauxhall Bridge and Cumberland Road Bridge, necessary to accommodate double-decker buses, that form part of the BRT2 proposal will not be required.
- The Harbour Railway and its historic civil engineering works alongside the New Cut will be retained. It is envisaged that the seasonal operation of the Harbour Railway will continue and will be integrated with that of the ULR service.
- Access to and from Portishead is assumed to be a key future objective of the ULR proposal, with Ashton Meadows envisaged as becoming a key transport interchange between the private car, ULR, mainline trains and buses.

5. Impact of ULR on the New Cut

- Modifications to Ashton Avenue Bridge to accommodate two ULR tram lines, plus a pedestrian footpath and cycle path which, unlike the BRT2 proposal, would not need to be cantilevered off one side of the bridge.
- The CREATE Centre stop will also be built at Butterfly Junction, so FrANC will seek assurances that the butterfly habitat there will be protected during its construction.
- A single tram line along the path of the existing Harbour Railway will run adjacent to the Chocolate Path, with passing places at Cumberland Road Bridge and at the end of Cumberland Road near Avon Crescent. Consequently, there will be no need to run a tram line along Cumberland Road itself, as is the case with the outbound busway in the BRT2 proposal.
- The environmental consequences of laying ULR track are considered to be less severe than laying a concrete busway.
- It is claimed that ULR vehicle operation will have a very low impact on the environment. Toxic fuel emissions will be reduced significantly because of the low fuel consumption and the use of methane as fuel. Net carbon emissions will eventually be eliminated by the use of biomethane as fuel. Because of the small size of the engine running on gas, and its relatively constant light loading due to hybrid operation, noise levels will be low in comparison to diesel engine-powered buses.

6. Further Information

Further information may be found on the Sustraco Bristol Tram Consortium's website at www.ultralightrail.com. A complete copy of the ULR Proposal provided by Pip Sheard is also attached to this PDF document.

Bristol Tram Consortium intend making the ULR an election issue at the Bristol City Council elections to be held in May of this year.

Derek Hughes
Secretary, Friends of the Avon New Cut



Figure 1 Schematic of the proposed ULR Route (Phases 1 and 2)



Figure 2 ULR Vehicle Concept



Figure 3 Stourbridge ULR Tram

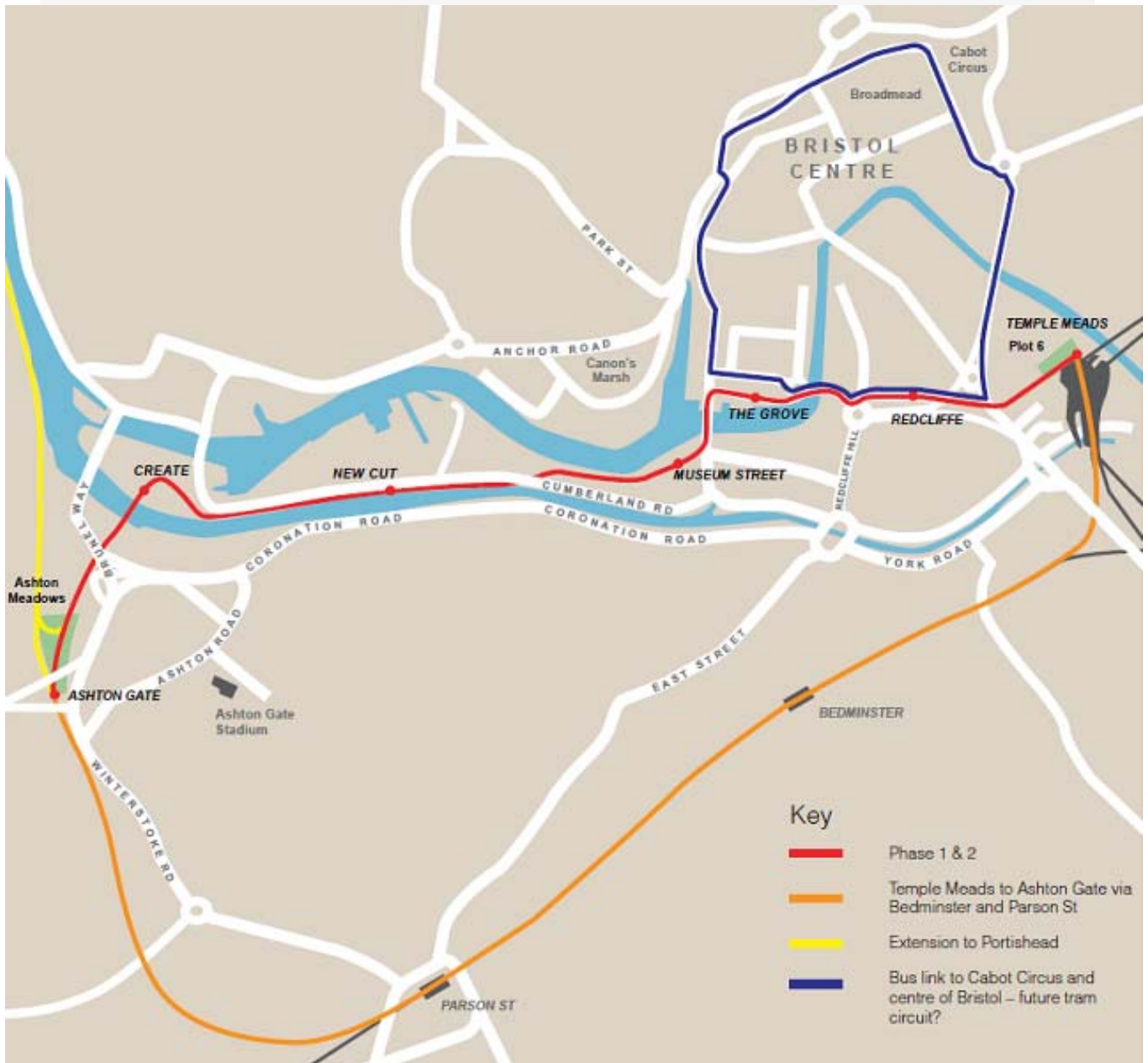


Figure 4 Future ULR Route Expansion Strategy