

24th August 2022

Purpose of Note

This note addresses the proposal raised by Tim Weller at WMCA Transport Scrutiny Sub-Committee on 14th July 2022:

“I am asking for a slight change in policy so that the Wednesbury - Brierley Hill extension continues along the railway line from Dudley (Castle Hill) down onto the main railway line between Worcestershire, Dudley, and Derby at Cinder Bank Roundabout where it will continue to Harts Hill tram stop. But from there it's due to leave the railway line to go into the Waterfront and Merry Hill, but as I see it the problem is that there is a 400m wide canal embankment that takes Dudley's no. 1 premier canal and it is a lovely public open space, it's the nearest thing that Merry Hill has to a nature reserve.

I've got my landscape enhancement scheme at one end against the iron wall which holds up the high plateau which is designated for residential development. If you [WMCA] continue with your current policy of putting the tram across this 400m embankment it will take quite a large corner of that land, a brownfield site that is desperately needed for housing. I'm suggesting that you keep the tram on the railway line - it still could have a tram stop at Brierley Hill, another one at Withymoor and end up at Stourbridge Junction, which joins up with the national railway network and you will also save £100 million because that is the cost for a concrete and steel double-track standard gauge track.

So please consider this revised infrastructure proposal with the tram line staying on the railway line all the way into Stourbridge Junction and that would save the trees, environment and would save £100m”

Wednesbury – Brierley Hill Metro Extension History

Centro's Twenty-Year Public Transport Strategy (1999) first set out a proposal for a Midland Metro link from Wednesbury to Brierley Hill, connecting with Metro Line, just east of Wednesbury Great Western Street stop. This was based on a review of an original three-line Metro network proposed by West Midlands Passenger Transport Authority in 1988.

The Wednesbury – Brierley Hill Metro Line 1 extension (WBHE) was subsequently included in regional, sub-regional and local land use plans, as well as transport plans and strategies throughout the 2000's. It was also included in the 2016 WMCA strategic transport plan “Movement for Growth”. This is shown in the plan's Figure 4.3 Metropolitan Rail and Rapid Transit Network:

<https://www.tfwm.org.uk/who-we-are/our-strategy/movement-for-growth-strategic-transport-plan/>

Figure 4.3: Metropolitan Rail and Rapid Transit Network Map



Metro Wednesbury – Brierley Hill secured £207m from the Government’s Transforming Cities fund in December 2017 and was given final full business case approval by WMCA Board in March 2019.

Transport and Works Act Order Powers were granted in 2005 for the Wednesbury to Brierley Hill extension. These allowed the authority to design, construct and operate the extension. At the time of promoting the Secretary of State held a public inquiry with an independent inspector to explore the merits, benefits, aims and objectives into the scheme. The inquiry also aimed to identify any necessary mitigations related to implementing the project. The scheme was granted the Powers to progress based on the proposed alignment which included leaving the railway corridor at Round Oak and progressing to serve Waterfront, Merry Hill and Brierley local area residents, businesses, retail and leisure facilities.

Any changes to the fundamental proposals of the extension as granted by the Secretary of State would require a new or revised Transport and Works Act Order submission and a public inquiry would be required to examine if the aims and objectives continue to be achieved.

In developing the scheme design to date, thought has been given to climate change, sustainability and reducing the project's carbon footprint where possible. Design measures include soft landscaping features, sustainable material choices and building methodology that has as minimal impact as possible.

Current Status

Construction

Construction of WBHE started in 2020, with work now on site in various locations including Castle Hill, Dudley Town Centre and Parkhead Viaduct over the Dudley Canal.

Funding

The West Midlands Combined Authority Board has recently reaffirmed its commitment to the whole WBHE scheme. The first phase will be ready to open as planned with trams serving Dudley town centre in 2024. The West Midlands Combined Authority and partners will continue to actively seek funding and develop additional funding mechanisms to allow the construction of the second phase to Brierley Hill at the earliest opportunity.

Draft Black Country Plan

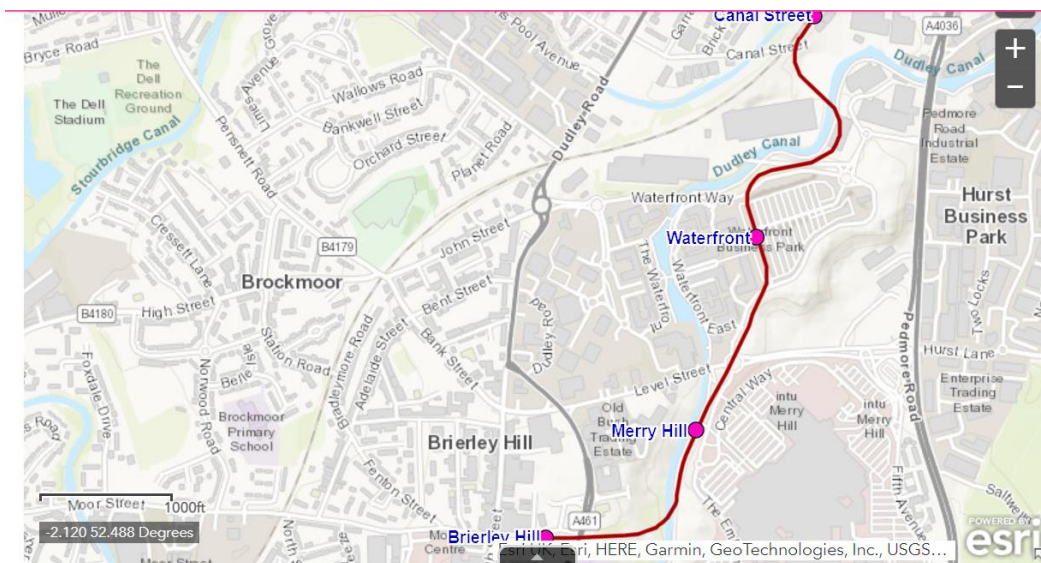
The Draft Black Country Plan (Regulation 18) consultation document, August 2021 includes “Wednesbury – Brierley Hill rapid transit” and “Walsall – Stourbridge tram-train extensions” in its Policy TRAN1 Priorities for the Development of the Transport Network.

<https://blackcountryplan.dudley.gov.uk/t2/p5/>

Proposal from Tim Weller:

A new route variation and new terminus in the Brierley Hill area, avoiding the diversion off the former rail alignment for stops at Waterfront and Merry Hill. This is then extended onto Stourbridge on the freight rail line

Tim Weller gave this proposal at WMCA Transport Scrutiny Sub-Committee on 14 July. This option would see the Metro line use the disused rail alignment and terminate at Canal Street, for which Transport and Works Act Powers exist, or a new Metro stop further southwest on the disused rail alignment in the vicinity of Moor Street. This does not have planning approval. The suggestion is that this line then also progresses southwest to Stourbridge. The line would use the rail alignment shown in the figure below, with no metro section from Canal Street to Waterfront, Merry Hill and Brierley Hill stops as shown below:



The strategic case for the final Business Case for WBHE showed that the main trip attractors of the WBHE between Dudley and Brierley Hill are the Merry Hill shopping centre, Brierley Hill, and The Waterfront. Merry Hill and The Waterfront would not be effectively served by a Metro stop at Canal Street, or in the Moor Street area as proposed by Mr. Weller. These stops would be approximately 1.2 - 1.4 km from Merry Hill shopping centre. This is too far to expect shoppers to effectively utilise the Metro, especially if carrying shopping.

Whilst there would be reductions in capital costs of the scheme, the major loss of patronage from these main trip attractors for the line would make this option unviable (See table 1 below).

Table 1: WBHE 2031 daily passenger boarding forecasts (Both directions)

Stop name	Passengers
Brierley Hill	420
Merry Hill	1408
Waterfront	194
Pedmore Road	41
Cinder Bank	43
New Road	101
Dudley	2618
Station Drive	826
Tipton Road	450
Birmingham New Road	183

Sedgley Road	709
Dudley Port	756
Horseley Road	725
Great Bridge	1062

The key scheme objectives of WBHE in the final business case are:

- Support regeneration in areas of high deprivation through improved connectivity with areas of opportunity.
- Support economic development by improving the accessibility of (major) employment and residential sites.
- Enhance the prosperity of Black Country residents and businesses through providing better access to employment and a wider workforce.
- Improve the education and skill base of the residents of Sandwell and Dudley by providing wider access to universities and colleges throughout the West Midlands.
- Encourage modal shift from private car by delivering a high quality and reliable public transport service
- Support an integrated transport network through providing seamless interchange; and
- Deliver a high-quality public transport service in a manner that supports local environmental and safety benefits.

<https://corporate.tfwm.org.uk/media/3401/wbhe-d5-b-wbhe-final-business-case-strategic-case-feb-2019.pdf>

Not including Metro stops at The Waterfront and Merry Hill would undermine WBHE’s achievement of these key objectives: it reduces the accessibility of main trip generators and reduces the attractiveness of Metro to achieve modal shift away from car use.

Dudley MBC, as highway and local planning authority, has been involved throughout in the development and design of WBHE. TfWM’s reply to Tim Weller on 8 April 2022 on this element of WBHE stated:

“I am in receipt of your email sent to Dudley MBC dated 16 March 2022 regarding the options for the tram and specifically the embankment structure at Merry Hill.

A wide range of factors were considered in order to finalise a preferred option for the embankment structure. WMCA undertook a design process that considered the varying ground conditions and obstructions, topography, levels, gradient of the structure, surrounding environment, canal clearances and impact, buildability and whole life costs to inform the best solution possible given the local constraints. Therefore, costs are not the only consideration for the selection of a preferred option. Throughout the process key internal and external stakeholders such as Dudley MBC, Canal

and River Trust and Merry Hill shopping centre were included in the process and kept informed of the emerging design solution.

The preferred solution is a combination of a raised deck on piles (or stilts) and at grade concrete trough which was determined by the ground profile between Level Street and the canal bridge, existing gradient and proposed levels required to operate Metro. Other options considered included a reinforced earth structure with either a retaining wall or regrading of the embankment and lightweight mass concrete fill.

WMCA also undertook an urban realm process design that considered the landscaping required alongside the tramway including the most opportune location for trees and shrubs. The proposed soft and hard landscaping solution considers the local constraints and includes mitigation measures identified as part of the Transport and Works Act Order Environmental Statement and where required. Therefore, any loss of existing vegetation and/or landscaping would have been considered in the process and replaced where feasible.”

Dudley MBC is currently in negotiations with the landowner of the Daniels site and the high plateau. They are developing options for residential development on the sites that will integrate with the Metro alignment and proposed stop locations

Brierley Hill - Stourbridge

Progressing Metro onto Stourbridge on the rail freight line was considered by TfWM in 2021. Three options were considered; a light rail option, a tram-train option, and a Very Light Rail option.

There is a live freight rail line between Round Oak terminal in the south of Brierley Hill and Stourbridge. This currently has 3 freight services per day into Round Oak, and 3 out of Round Oak, Monday - Thursday.

Light rail

Metro, as a form of light rail, for this link was shown to be challenging. This is because only a single line would be able to be built in the alignment next to the rail freight line. This means frequency would be low, 2 trams per hour in each direction, possibly 3.

This would mean low patronage, damaging the viability of the business case. A significant amount of infrastructure and track remodelling would also be required at / around Stourbridge Junction – potentially including a new platform.

Tram-train

A more attractive option is to use tram-trains which can share the rail freight line with freight services and so be run at higher frequencies than single line light rail operations. A significant amount of infrastructure and track remodelling would still be required at / around Stourbridge

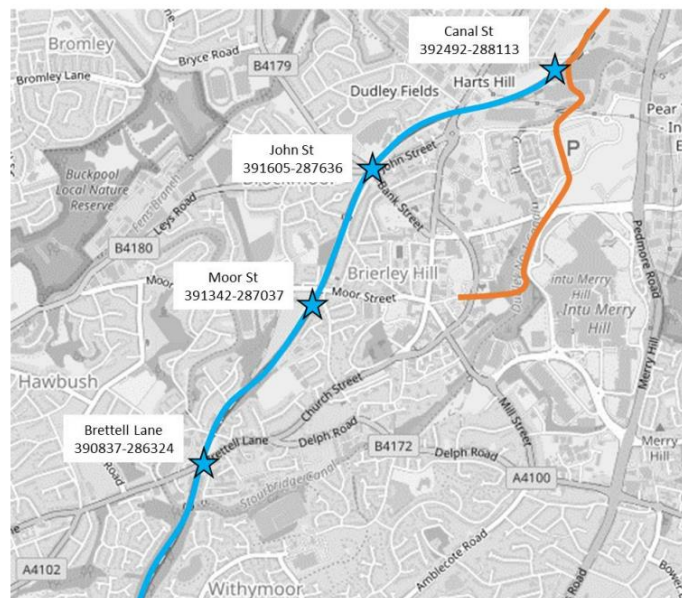
Junction – potentially including a new platform. This presents cost implications, but a tram-train scheme would achieve the greatest benefits of the different options.

This tram-train line could be a part of a longer Walsall – Dudley – Brierley Hill – Stourbridge tram-train line, linking up the strategic center’s of Brierley Hill/Merry Hill – Dudley and Walsall, with rail connections to Worcestershire and the southern part of the Black Country and Birmingham at Stourbridge Junction.

This proposal was considered in the WMITA Black Country Rapid Transit Review 2015 and was included in its set of priorities for rapid transit delivery in the Black Country. These were endorsed by WMITA in December 2015 and were incorporated into the Movement for Growth strategic transport plan.

Very Light Rail

A Very Light Rail (VLR) option was also considered in 2021. This option was of a VLR shuttle service between Canal Street and Stourbridge Junction as shown below. This service would require the operation of a new VLR vehicle type which would operate independently of any other service. Passengers would be able to interchange at Canal Street for onward travel using the WBH extension.



Similar to the issue for light rail, VLR for this link was shown to be challenging. This is because only a single line would be able to be built in the alignment next to the rail freight line based on current information on the VLR system. This means frequency would be low, 2 services per hour in each direction, possibly 3.

A significant amount of infrastructure and track remodelling would also be required at / around Stourbridge Junction – potentially including a new platform. Having to interchange at Canal Street to then travel south again to Merry Hill and The Waterfront, the main trip attractors, also adds time for journeys from Stourbridge, making it less attractive to use.

As Very Light Rail is a new, emerging technology with further research and development currently underway it is recommended that this option could be looked at again once more details on the performance of the system are available.

Conclusions

1. While the option presented by Tim Weller could lower costs for the WBH extension, it would not directly stop at Merry Hill and The Waterfront, two of the line's main attractors. This would impact patronage and thus the overall viability of the scheme.
2. From 2021 assessments, the most promising option to link Brierley Hill and Stourbridge Junction is to share the live rail freight line from Stourbridge Junction to Round Oak terminal with a tram-train and then proceed to join the Metro line to provide direct services without interchange to Merry Hill and The Waterfront . This enables higher service frequencies to attract significant patronage. Light rail and Very Light Rail services would require a separate single line which would only give low frequency services, attracting less patronage. This suggests that the feasibility of tram-train, from Stourbridge to Brierley Hill, and then onto Dudley, Wednesbury and Walsall needs to be explored further.

Further Information

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