Strategy & Programmes Committee

West Street Subway Station – Clyde Metro Interchange Feasibility Technical Study

Date of meeting 21 February 2025 **Date of report** 11 February 2025

Report by Head of Policy & Planning

1. Object of report

To update the Committee on the findings of a technical study carried out examining the feasibility of creating a fully accessible interchange linking West Street Subway with a potential Clyde Metro network utilising adjacent railway infrastructure.

2. Background to report

As members will be aware[1], SPT is currently leading development of the Clyde Metro Case for Investment (CFI), alongside delivery partners Glasgow City Council (GCC) acting on behalf of the Glasgow City region with Transport Scotland (TS) in a project assurance role. In tandem with this, SPT is also investigating potential opportunities for early works that would contribute to the overall Metro programme, supporting transformational change and improving connectivity across the city region.

West Street Subway Station was included in the Metro indicative map published as part of the second Strategic Transport Projects Review (STPR2) as being a possible strategic interchange location, linking with proposals to convert the Paisley Canal rail line to Metro operation and also, via a new link, to the Neilston and Newton rail lines via Cathcart Circle.

CFI Stage 1a has now published the completed Case for Change[2] and has identified a set of four shortlisted network options, currently subject to an extensive stakeholder engagement exercise prior to commencing CFI Stage 2 in March 2025. Contained within two of the four shortlisted network options remains the connection of Clyde Metro with West Street Subway. However, it should be noted that no final decisions have been taken on modes or route alignments yet and these findings may be subject to change as the CFI progresses.

Furthermore, SPT undertook a series of Station Accessibility Audits across all its Subway stations in 2023. The purpose was to assess how well stations performed in terms of ease of use by a wide range of potential users, including disabled people. For West Street, the audit detailed that no passenger lift is provided and recommended exploring options to provide a passenger lift to the platforms.

Subsequently, building on the above, SPT commissioned consultants WSP to undertake a high-level feasibility study into a potential transport interchange between the Subway and proposed Clyde Metro at West Street Subway Station.

[1] https://spt.production.d8.studio/media/mvmgus4n/p200924_agenda7.pdf
[2] https://www.spt.co.uk/media/vpxjoe2k/clyde-metro-cfi-case-for-change-report.pdf

3. Study scope

The scope of the study was to investigate the technical feasibility of creating a fully accessible interchange between West Street Subway Station and the proposed Clyde Metro network. The study was tasked with meeting the following two primary objectives:

- Determine whether an interchange between Subway and the proposed Clyde Metro at West Street is technically feasible, detailing how could this be achieved and;
- Investigate improved station access opportunities for West Street Subway/Clyde Metro interchange.

The scope of the study included a review of potential access options in the context of the current infrastructure, taking into consideration transport and active travel plans, operational requirements, physical constraints, equality and constructability.

4. Outcomes of the study

It is worth highlighting that the study had to take into account several key constraints when examining options including the adjacent electrified Ayrshire & Inverclyde railway line, the M74 motorway viaduct which passes over the site to the north-east boundary and the pedestrianised area directly outside of the station entrance formed by the stopping-up of West Street (no through road). Furthermore, the existing island platform at West Street Station is the narrowest on the Subway network at circa 2.6m wide at its narrowest point and is also curved.

4.1. West Street Subway Station – Improved Accessibility

Options were considered that examined opportunities to provide step-free access at West Street Subway Station and explored a range of potential viable engineering solutions including retaining the existing platform configuration, widening of the existing platform, building of one new edge platform in addition to retaining the existing platform, and building two new edge platforms.

Using the existing island platform, in any form, was not found to be viable as this did not offer the necessary step-free access, while still requiring major engineering works.

Building of new platforms to accommodate lifts was however considered feasible from an engineering perspective and would enable fully step-free access. However, it was considered that this would come at a cost of up to £41.85M and would require significant engineering works requiring the closure of Subway network for a period of up to three years.

4.2. Interchange between West Street Subway Station and the indicative potential Clyde Metro Station location

This examined two options to provide a connection between West Street Subway Station and a proposed Clyde Metro site using either existing infrastructure i.e. the footway along West Street to connect the Subway with the potential Metro site, or alternatively building a new overbridge structure to directly link West Street Subway with the potential Metro site. Both options were considered technically feasible.

A connection at street-level could be relatively simple and straightforward to construct and would help to facilitate positive improvements to the local environment through improved active travel connectivity, improved lighting and introduction of accessible station parking.

Building of a new pedestrian overbridge structure is also feasible. This would also support step-free access but would require more invasive engineering works, including track possessions during construction phase and an estimated 1.5 years to complete. Cost for

providing a street-level connection is estimated up to £1.95M and for a pedestrian overbridge structure, up to £8.04M.

4.3. New Metro Station Access

This examined options to provide lifts at the potential new Clyde Metro station on the existing railway line, giving step-free access. Direct access could feasibly be provided through modular access solutions in line with Network Rail's 'Access for All' scheme and built in a similar design standard as recent lift installations at Port Glasgow and Anniesland rail stations.

Depending on the solution, there may be construction impact on existing railway structures and systems with the proximity to the West Coast Mainline requiring possession works and needing access from road network. It is estimated that to install lifts in this location would cost up to £5.87M and take 1.5 years to complete.

It should be noted that all options examined have been based on drawings and information sourced courtesy of SPT Subway engineering and from Network Rail. As this was undertaken as a high-level study, no physical surveys were undertaken.

The assessment of options examined through the feasibility study, including key findings, indicative costs and considered disruption impacts to be expected during construction are summarised within Appendix 1 below.

5. Conclusions

The study reviewed the challenges and opportunities with introducing step-free access to connect both sites and makes recommendations for any feasible interventions at the existing Subway station and possible interchange. The study was designed to inform and to enable better understanding as to the possibilities in the West Street Subway Station area in advance of any future formal Clyde Metro proposals.

This study concludes that a fully accessible interchange facility is technically feasible. However, the interventions required to provide step-free access at the existing West Street Subway station would require major engineering works, significant financial investment and would incur lengthy disruption to the Subway network operations and to the immediate vicinity infrastructure. To facilitate access improvements at West Street, required works would involve Subway track and station closures, the installation of a new platform box down from road level, and the removal of the current brick tunnel structure and installation of a replacement structure.

This would involve major engineering works and disruption at both track and street-levels. Critically, it remains to be established whether it would be possible to undertake required works without lengthy closure of the full Subway; the working assumption is that this would not be possible. It is anticipated that the viability of required accessibility works to the Subway station would be considerably determined by this. On this basis, quick win opportunities for Subway accessibility are considered somewhat limited.

The study has however highlighted the wider possibilities that exist around the immediate vicinity of West Street Subway Station. Step-free access to the existing rail lines proposed for Clyde Metro appear more technically feasible as solutions here would follow the established principles of Network Rail's Access for All projects to provide step free access to existing railway lines.

The outcomes of the feasibility study will be fed into workstreams for the second stage of the Clyde Metro Case for Investment and in tandem, SPT will undertake development to identify any early works which could be progressed to prepare for Metro interchange opportunities, and/or any development of the station and surrounding area which could potentially contribute to other planned or emerging economic regeneration aspirations in the area south of Glasgow city centre.

6. Committee action

The Committee is recommended to note the contents of this report.

7. Consequences

Policy consequences	*None at present.*
Legal consequences	*None at present.*
Financial consequences	*None at present.*
Personnel consequences	*None at present.*
Equalities consequences	*Impact assessments and mitigation proposals will be developed as part of the Clyde Metro development process to improve access to public transport for all user groups.*
Risk consequences	*None at present.*
Climate Change, Adaptation & Carbon consequences	*Appropriate assessments will be undertaken as part of Clyde Metro development however it is expected the project outcomes will have a significant positive impact in reducing carbon emissions from transport.*

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APPENDIX 1 – WEST STREET INTERCHANGE SUMMARY OF OPTIONS

Indicative Cost Ranges:
Low - under £10M
Medium - £10M to £30M
High - over £30M

Option	Description	Feasibility Assessment	Comments	Feasible? Yes/No	Indicative Cost	Estimated Delivery Timescales	Level of Disruption Low/Medium/High Impact
1A	West Street Station Step Free Access	Retain island platform.	Any works at platform level can only be carried out in possessions or a station closure. There is insufficient width to hoard off working areas and construct during operational hours.	No - Discounted as an option	Step free access is not possible for this option therefore no costs associated for this study.	1 year	High Station and line closure required as too little space to work behind hoardings on platform
1B	West Street Station Step Free Access	Widen island platform.	Requires realignments of approach tracks at both ends of the station, impacting existing street level infrastructure, the station building and the M74. Significant service diversions required.	No - Discounted as an option	High £41.85M	4 years, with station and track closure of 3 years.	High Road closures, excavate down from ground level progressively installing props. Station and Track Closure required for at least lower half of excavation: unload both sides of arch equally / install temporary propping to prevent collapse of brick lining. Station closure continues until track level complete, fit out can follow
1C	West Street Station Step Free Access	Retain and use existing island platform and add one new edge platform to either side.	Requires reconstruction of station tunnel from ground level Station and line temporary closures and temporary street closures of West and Scotland Streets. Significant service diversions required.	Yes	Medium £28.59M	2.5 years with station and track closure of 1.5 years	High Road closures, excavate down from ground level progressively installing props. Station and Track Closure required for at least lower half of excavation: unload both sides of arch equally / install temporary propping to prevent collapse of brick lining. Station closure continues until track level complete, fit out can follow
1D	West Street Station Step	Build 2 new edge platforms.	Requires reconstruction of station tunnel from ground level with impacts	Yes	High	3 years with station and	High

Option	Description	Feasibility Assessment	Comments	Feasible? Yes/No	Indicative Cost	Estimated Delivery Timescales	Level of Disruption Low/Medium/High Impact
	Free Access		of wide station box Station and line temporary closures and temporary street closures of West and Scotland Streets Significant service diversions		£33.63M	track closure of 1.5 years	Road closures, excavate down from ground level progressively installing props. Station and Track Closure required for at least lower half of excavation: unload both sides of arch equally / install temporary propping to prevent collapse of brick lining. Station closure continues until track level complete, fit out can follow
2A	Interchange between Subway and Metro	Ground level via West Street	Construction simple and straightforward	Yes	Low £1.95M	0.5 years	Low No possessions required
2B	Interchange between Subway and Metro	High Level Footbridge over NR line	Requires weekend possession of both NR lines, but can be separate weekends	Yes	Low £8.04M	1.5 years	Low to medium Small number of possessions, with decks installed in weekend line closures
3A	New Metro Station Access	New platforms to the East of West Street	Impact on existing railway structures and systems, proximity to WCML requiring possession works, limited access from highway network	Yes	Low £5.87M	1.5 years	Low to medium Retaining walls to be installed to support NR line. Track monitoring and some possessions
3B	New Metro Station Access	New platforms located to the West of West Street	It is unclear if this option is feasible at this time due to unknown constraints related to the future Metro	Yes	Low £5.87M	1.5 years	Medium Mainly in possessions due to proximity to NR lines. OLE portals to be rebuilt, limited access and working room