



Ramp Retaining Wall Improvement Works – award of contract

Committee Strategy and Programmes

Date of meeting 18 February 2022

Date of report 2 February 2022

Report by Director of Subway

1. Object of report

To recommend that the Committee approves the award of a contract for ramp retaining wall improvement works to Mackenzie Construction Limited.

2. Background

During the last modernisation of the Glasgow Subway in the late 1970s and early 1980s, a ramped access route was constructed between the Broomloan Depot and the Govan-Ibrox section of the subterranean railway system, removing the requirement to lift the cars via crane in and out of the subterranean system. Twin tracks run on a ramp that, over approximately 170m, falls from surface level down to approximately 5m below surface level. Retaining walls and parapet walls to the north, south and east of the ramp are constructed of reinforced concrete. A reinforced concrete overbridge spans across the ramp, connecting northern and southern areas of the yard.

To provide assurance of the on-going fitness for purpose of the retaining walls, SPT engaged suitably qualified engineers to undertake a detailed survey and assessment of both the North and South Retaining Walls. As well as visual inspection, the survey included intrusive works to determine the condition of the concrete and identify any issues such as corrosion of the reinforcement bars. The survey identified areas of concrete deterioration, some evidence of corrosion, and localised breakdown of protective coatings and joints. This level of deterioration is in line with expectations given the age of the materials and now requires improvement works to ensure good structural condition is maintained and the life of the walls is extended.

3. Outline of proposals

3.1 Scope of services

Following the survey work, COWI UK Limited was appointed to develop a bill of quantities for the retaining wall improvement works along with accompanying reference designs. SPT used these to invite contractors to tender for a works contract that includes:

- Concrete repairs to address local defects including cracks and spalling;
- Treatment of exposed reinforcement bars and reinstatement of cover;

- Application of corrosion inhibiting coating and protective (anti-carbonisation) coating;
- Removal of vegetation and improvements to construction joints;
- Facilitation of inspection (at height) of limited additional locations excluded from the original survey, specifically the overbridge and east wall, and undertaking such works as are identified to be required to address defects discovered in these areas;
- Robustly controlling and assuring the quality of all materials and activities pertaining to the works, and providing SPT with comprehensive records in support of on-going and future asset management; and
- Fulfilling the role of Principal Contractor in accordance with Construction, Design and Management (CDM) Regulations 2015.

3.2 Tender assessment process

The procurement route to market was a restricted (two stage) procedure conducted under the Utilities Contracts (Scotland) Regulations 2016. At stage one, the Single Procurement Document (SPD) was issued via Public Contracts Scotland in August 2021. Following evaluation, four organisations were invited to stage two - Invitation to Tender (ITT). The ITT was issued in September 2021, with proposals from all invited organisations received in November 2021.

The ITT was issued as an NEC Engineering and Construction Contract Option B – priced contract with bill of quantities. In addition to costed bill of quantities, for each activity bidders were required to provide rates that will apply where there is a requirement for works to be undertaken on areas that are yet to be surveyed (namely the overbridge and east retaining/parapet wall).

The award is to be based on the most economically advantageous tender against a 60:40 quality:cost split. Quality was given a higher rating as experience and confidence in relevant engineering skills and site management were seen as key requirements, particularly given the anticipated demands of delivering these works concurrently with the Subway Modernisation Programme and in ensuring the continuous operation of the Subway on a daily basis

The evaluation results are as follows:

Contractor Name	Quality Score	Price Score	Total Price + Quality
MacKenzie Construction Limited	60	40	100
Restek UK Limited	58	39	97
Freyssinet Limited	58	34	92
VolkerLaser Limited	49	39	88

When assessed against the tender award criteria, the MacKenzie Construction Limited tender of £473,386 was deemed to be the best overall submission as shown above. In particular, this submission was successful in outlining the measures the contractor intends to take in order to control and assure the quality of the works. The submission also demonstrated the contractor’s awareness of a range of potential threats to the success of the project and it highlighted the measures that the contractor intends to implement in order to minimise the associated risks.

4. Conclusion

The submission by MacKenzie Construction Limited was assessed to be the most economically advantageous tender taking account of both quality and price as outlined in the tendering criteria.

5. Further information

SPT's consultant (COWI UK Limited) will continue to provide technical and design support throughout the term of this works contract.

Given the invasive nature of the work, effective contract management will be in place to ensure robust risk and change control during contract delivery. However, further discovery around the exact condition of the infrastructure may result in higher levels of required remedial work than currently anticipated. Appropriate allowances for identified risks and contingency are therefore recommended to be included in the approved budget.

Upon Committee approval, it is estimated that on-site works will commence in spring 2022 and last approximately four months.

6. Committee action

It is recommended that the Committee approves the award of a contract to MacKenzie Construction Limited for improvement works to the ramp retaining walls with a contract award of up to £473,386 (excl. VAT) plus a budget allowance for risk and contingency for the scope of works tendered.

7. Consequences

Policy consequences	<i>None identified.</i>
Legal consequences	<i>Contract will be awarded subject to the conditions of contract contained within SPT's ITT.</i>
Financial consequences	<i>The costs for the ramp retaining wall improvement works will be accommodated within the capital budget, under project 10375 "Tunnel & Infrastructure Works". This project is funded from the Subway Infrastructure Fund (General Fund – Earmarked Reserve).</i>
Personnel consequences	<i>None identified.</i>
Equalities consequences	<i>None identified.</i>
Risk consequences	<i>Requirement for works to be delivered in order to ensure effective on-going management of risks to the retaining walls.</i>

Name Antony Smith
Title Director of Subway

Name Valerie Davidson
Title Chief Executive

For further information, please contact *Graeme Cameron, Infrastructure Asset Engineer* on 0141 333 3624.