

Depot Protection System – Award of Contract

Date of meeting 14 June 2024

Date of report 8 May 2024

Report by Director of Transport Operations

1. Object of report

To recommend that the Committee approves the award to Story Contracting Limited a contract for the design and installation of a Depot Protection System at Broomloan Depot.

2. Background to report

Maintenance of the Subway rolling stock is undertaken at the Broomloan Depot, principally within a designated Maintenance Shed. The Maintenance Shed includes a series of five tracks (roads), each of which incorporates a 'pitted area' where the rails are elevated above ground level, allowing access to the underside of the rolling stock for inspection and maintenance activities.

With introduction to the Subway of a new signalling system and fleet of rolling stock, the majority of the yard at Broomloan Depot will be designated as an 'automated area' in which train movements, powered via the third rail, can be managed without onboard intervention. The Maintenance Shed will remain a 'non-automated area' – rolling stock movements will require onboard intervention and, in the absence of third rail, shunting is facilitated by battery-powered track mobiles. Therefore, an automated/non-automated boundary will be created to the south of the Maintenance Shed. Effective management of this boundary and of movements within the non-automated area is essential in order to ensure safe depot working conditions. To meet this requirement, it is proposed that a Depot Protection System is introduced.

Based on consideration of operational requirements and associated hazards, SPT has defined technical requirements for a Depot Protection System and developed a concept of operations. Working in conjunction with the main contractor for the Subway Rolling Stock and Controls System project (the Hitachi and Stadler joint venture, ANSTA), SPT has defined a position on each road to the south of the Maintenance Shed where rolling stock will be brought to a stop by the new signalling and control system. A driver can access the train at this position on each road via dedicated walkway and platform.

As part of the mitigation against the risk of a train overrunning the stopping point and continuing into a potentially populated area of the Maintenance Shed, a derailer is to be installed at a defined offset from the stopping position. The derailer will normally be raised, preventing a train from passing. To allow train movements, the derailer will be lowered by a depot operative via a control panel only when prerequisite conditions are met such that the movement can be undertaken safely. Prerequisite conditions will include suitable status of relevant depot equipment, such as roller shutter doors and lifting equipment, to which the Depot Protection System will be interfaced. When the derailer is lowered, warnings (audible and visual) will be raised in the relevant area of the Maintenance Shed and the driver will be provided with a proceed indication. The Depot

Protection System architecture will include measures to ensure control and security of the system, including through provision of suitably defined user authority levels.

3. Outline of proposals

3.1 Scope of services

Based on the technical requirements and concept of operations for the Depot Protection System, SPT has defined a required scope of services which includes:

- (i) Detailed design of the Depot Protection System, including track and wayside equipment, cabling and containment routes, user interfaces (including control panels), equipment interfaces, and overall system architecture. Design will include specification of equipment, informed by assessment of reliability and availability requirements, to ensure that the system meets anticipated operational demands and is suitable for use within the depot environment.
- (ii) Installation, testing and commissioning of the Depot Protection System in accordance with the agreed design. This will include provision of all measures necessary to ensure installation is undertaken safely (for example, with adequate provisions for working at height over pitted areas) within the operational depot, whilst minimising disruption to maintenance facilities.
- (iii) Handover of the Depot Protection System to SPT, supported by provision of required operating and maintenance instructions, definition of tooling and spares requirements, and delivery of required training.
- (iv) Options for provision of on-going support after handover including, for example, technical support, maintenance delivery, and spares supply. Specific requirements are to be subject to agreement subsequent to definition of detailed design.

3.2 Procurement process

In September 2023, approval was granted (Strategy and Programmes Committee, Agenda Item 11) for the award of a contract to Story Contracting Limited for track and civil works within the yard at Broomloan Depot. This award of an NEC3 Engineering and Construction Short Contract followed a tendering exercise in which tenderers were asked to submit proposals for delivering a series of fixed scope activities and to confirm capabilities and experience for delivery of a number of (non-committed) optional scope activities.

At the time of issue of the Invitation to Tender (ITT) for the yard track and civil works, definition of the requirements for the Depot Protection System was not sufficiently mature to allow SPT to seek costed proposals; accordingly, the Depot Protection System was included within the tendered scope of services as a non-committed optional scope. Through the tendering process, Story Contracting Limited demonstrated experience relevant to delivery of aspects of the Depot Protection System and outlined intent to supplement this expertise by appointing and working alongside specialist suppliers, should the option be instructed by SPT.

In December 2023, SPT issued to Story Contracting Limited a specification of requirements for the Depot Protection System, supplementing and further detailing the requirements included in the initial ITT. As requested by SPT, a costed proposal was provided, including a programme that seeks to realise opportunities for cost savings through delivery in conjunction with the previously awarded yard works scopes. The proposal demonstrates plan for fulfilment of SPT's defined technical requirements, with Story Contracting Limited drawing on in-house capabilities and an experienced specialist supplier to ensure quality through each stage of the scope.

4. Committee action

The Committee is recommended to approve the award to Story Contracting Limited a contract for the design and installation of a Depot Protection System at Broomloan Depot. The contract will be awarded through the existing contract for yard track and civil works and will be for a value of up to £823,968.

5. Consequences

Policy consequences	<i>None identified.</i>
Legal consequences	<i>Contract awarded under existing contract, which has been awarded subject to the conditions of contract contained within SPT's ITT.</i>
Financial consequences	<i>The costs for the Depot Protection System will be accommodated within the capital budget, under project 10375 "Tunnel and 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>None identified.</i>
Climate Change, Adaptation & Carbon consequences	<i>None identified.</i>

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