



Subway Rolling Stock - Bogie and Wheelset Overhaul and Wheel Re-profiling – award of contract

Date of meeting 2 February 2018

Date of report 11 January 2018

Report by: Senior Director

1. Object of report

To recommend the Partnership approve the award of a contract for bogie repair, wheelset overhaul and wheel re-profiling for the current Subway rolling stock fleet to Wabtec Faiveley UK-Rail Scotland.

2. Background

2.1 Context and business need

The existing subway fleet comprises 40 individual units which are then formed into 3 car sets configuration for the day to day operation of the subway. The 40 units comprise 32 power cars and 8 trailer cars, with the original power cars built in 1977 for the last subway modernisation. The trailer cars were subsequently purchased in 1987 to increase the fleet size and improve the subway service level.

The subway rolling stock wheels and wheelsets require continuous maintenance as they become worn and subject to damage through age and everyday operation of the steel wheel running on a steel rail. The subway system has particular challenges with a number of sharp turns and gradients emanating from the construction of the original Victorian tunnels. This results in considerable and unusual wear characteristics of the wheels themselves which requires wheels to be re-profiled (using a specialist lathe) as well as eventual replacement of the wheels once beyond the stage they can be re-profiled.

The train bogies (i.e. the structure that supports the train body and provides the traction and braking system and connects to the wheelset) suffer from wear and tear and require regular inspection maintenance and repair.

At present, SPT do not have the equipment/facilities, skills or resources to undertake this work and this has been provided by specialist suppliers to the rail industry, with the previous tender for such works being awarded to Wabtec, based in Kilmarnock¹.

This specialist contracted service is necessary to secure continued bogie repair, wheelset overhaul and wheel re-profiling to ensure these components remain compliant to engineering standards until fleet decommissioning following the planned

¹ Subway Existing Train Bogies – Award of Contract for short term life extension repairs and modifications, SPT Strategy and Programmes Committee, 23 August 2013.

introduction of the new Subway rolling stock. This report sets out the approach taken and seeks approval to award a contract for these specialist services.

3. Outline of proposals

3.1 Procurement strategy

3.1.1 Bogie repairs

The rolling stock power bogies are now nearing end of operational life and have required specialist repairs over a number of years. All previous specialist repairs have been completed by Wabtec. Wabtec has been involved, with SPT, in how the repairs are undertaken and hold the process documentation methodology and design liability for the repairs. Wabtec also have the specialised jigs which enable the bogies to be welded and inspected on completion to ensure bogies are returned to SPT within design tolerances without distortion. Wabtec has a proven, reliable supply chain which ensures efficient approved weld preparation work.

3.1.2 Wheel and wheelset services

SPT wheel size and gauge is unique. Wabtec has the only wheel lathe in Scotland which is capable of re-profiling these wheels. Wabtec recently committed to maintaining this equipment to ensure SPT has this continued support to end of current fleet life.

Wabtec has the experience and skills to check and overhaul wheel bearings and measure axle wear and replace as necessary. Wabtec has gained the experience, skills and knowledge to complete this work over many years. This extensive experience ensures only items which need to be replaced are; this enables SPT wheelsets to be repaired in a safe, efficient and economical manner. SPT monitors and undertakes technical audits on this process to ensure best value is achieved.

3.1.3 Negotiated approach

In summary, due to the uniqueness of the proposed work, the specialised knowledge gained by Wabtec and high degree of operational risk involved, a procurement approach was taken to directly negotiate these services with Wabtec. This will require SPT to publish a VEAT notice in the Official Journal of the European Union (OJEU). The VEAT (Voluntary Ex-Ante Transparency) notice is the notice published to inform the EU that we intend to award a contract without competition. In order to effect a VEAT notice, three conditions must be met (i) consider competition was not required, (ii) publish a "voluntary ex-ante transparency notice" indicating that we intend to sign the contract (a 'VEAT notice'); and (iii) observe a standstill period of 10 days.

This will inform the EU that a single action tender is proposed to be awarded; a standstill period will be observed and thereafter award of contract will be formalised, should the committee approve the award of contract.

3.2 Value assessment

3.2.1 Bogies

A pricing schedule for bogie repairs has been produced based on the estimated repairs required and this is aligned with the current fleet decommissioning plan. SPT Engineering and Maintenance will continue to monitor bogie condition and manage the repairs on priority basis of: severity, urgency, operational requirements and the specific car disposal plan. This will ensure the bogie repair is effectively and efficiently managed until end of current fleet life.

The estimated cost for the total of 60 bogie repairs is: £351,180.

3.2.2 Wheelsets

The price schedule for wheelsets was developed using the previous year's usage and includes the scope for wheel re-profiling, wheelset examination and costs for change of items which are out of specification.

A depot wheel lathe is scheduled to be installed as part of the new rolling stock contract and this will enable wheels to be re-profiled by SPT within the depot without the need to remove the wheelset from the train. SPT Engineering and Maintenance will therefore be able to better control wheel wear and will not require this service to be provided by Wabtec once the new lathe is in place. This will therefore be a reducing cost over the contractual period.

The estimated cost for wheelset repair for the contractual period is estimated to be £68,314 for the first year with future years increasing by a pre-agreed inflationary figure of 2%. The final cost for the wheel profiling will be dependent on exact timing of the new wheel lathe and decommissioning of the existing fleet and therefore a conservative estimate has been used which covers a 5 year period estimated at a total £354,610 as an upper limit for this element of the contract.

4. Conclusions

The existing subway rolling stock requires continual maintenance and particular specialist support for bogie repairs and wheel profiling. Wabtec has extensive experience and knowledge of inspecting and repairing these SPT assets developed over many years and they also have the only lathe in Scotland capable of re-profiling SPT wheels. Wabtec is therefore considered to be the only viable supplier to provide this specialised work and a negotiated approach was taken forward with Wabtec.

The term of the contract would be until the current fleet is removed from passenger service and it has been agreed with Wabtec that this is a diminishing requirement and these terms do not represent a guarantee of business due to the dependency on the existing fleet requirements. However for overall budgeting purposes at this stage the total contract value was estimated over a five year period with approval being sought up to £705,790.

5. Partnership action

The Partnership is recommended to approve the award of contract for Rolling Stock Bogie & Wheel repair works to Wabtec Faiveley UK-Rail Scotland up to a value not exceeding £705,790.

6. Consequences

Policy consequences	<i>Bogie/wheel repair and maintenance is critical in supporting safe and reliable Subway service and it is essential a contract is put in place to support this.</i>
Legal consequences	<i>A VEAT notice will be issued in the OJEU in order to advise that a single action tender has been awarded. Standstill period to be observed.</i>
Financial consequences	<i>The sum is budgeted within the subway revenue operating budgets.</i>
Personnel consequences	<i>None</i>
Equalities consequences	<i>None</i>
Risk consequences	<i>Operational risks will be mitigated through having this specialist support.</i>

Name Charles Hoskins
Title Senior Director

Name Gordon MacLennan
Title Chief Executive

For further information, please contact *Eileen Russell, Head of Engineering and Maintenance* on 0141 333 3305.