

EMU and EMU Maintenance & Stabling Facility Update

Recommendations

It is recommended that the board:

- i. Receives this report.

Executive Summary

The EMU Project is progressing within budget and two to three weeks behind program. The assembly of the first train is well under way and the first vehicle for the second train is about to enter the assembly line. The design activities are coming to a satisfactory close, and the manufacturing activity is well established. The next four weeks will see all the equipment fitted to the first vehicle and testing commence.

The EMU Maintenance & Stabling Facility (M&SF) Project is progressing consistent with budget and timelines. The focus is starting to shift to fitting out in readiness for the first train. The train wash will be delivered 20 weeks behind programme however this will not adversely affect the overall EMU M&SF Project readiness programme.

The various AT workstreams (EMU Project, EMU M&SF Project, Operational Readiness, IT, Power Supply, Finance, Communications, HR) meet with the Chief Executive fortnightly to address key issues and risks.

Background

EMU Project

The bodysHELLs for the three vehicles for the first train are all manufactured and are moving along the assembly line, with equipment being fitted as they progress. There are two assembly lines working in parallel, each with five work stations, each workstation focussed on particular equipment and processes.

Equipment installation is progressing well, with the floors and windows installed and the piping and wiring of the vehicles well underway. As can be seen from the photographs following, the wiring of the vehicles is a major task and occupies a significant portion of the assembly time.

BodysHELLs for the second train are now finished and being painted and these will move onto the assembly line at an initial rate of one vehicle per week, rapidly increasing to three vehicles per two weeks over the first few trains. This rate will continue until the 29th train when the rate will accelerate to three vehicles per week for the remainder of the build.

The design of the train systems is almost complete, with some final work being done in relation to the information that is presented to the driver through touch screens.

The first vehicle will be on the assembly line until the end of April when it will be moved into the test bay. The other two vehicles for the first train will join the first in mid May and testing of a complete train will then commence. Testing is due to be completed by early July and the first train will then be packed and shipped, nominally a two month exercise which will see the first train arriving here in early to mid-September.

The assembly is currently between two and three weeks behind the baseline program. CAF implemented a recovery program in January 2013, following early delays in steel supplies, reducing the programmed delay.

Since then, CAF have kept to the overall revised program through the various stages of manufacture, but the day to day position changes as problems are encountered or things go better than expected.

The next eight weeks are the most uncertain of the entire program, as equipment is offered up to the vehicle for the first time, problems are identified and interfaces are sorted. Auckland Transport is well placed to support and assist CAF through this period, with Auckland Transport representatives in Spain who can discuss issues as they arise and quickly agree solutions.

The following photographs were taken in early April 2013 and capture the situation at that time.

Fig 1: The first two vehicles on the assembly line



Fig 2: The 25kV roof equipment installed on the first train



Fig 3: The assembly workshop



Fig 4: End view of the vehicle



Fig 5: Vehicle being wired. Floors and windows installed



Fig 6: External view of a vehicle, windows fitted



Fig 7: Driver training simulator.



The driver training simulator, (pictured above), will be shipped from Spain in mid April and will be installed in the main building at Wiri in June.

EMU Maintenance and Stabling Facility (EMU M&SF)

There is only one concrete pour left to do on the floor of the building. The metal cladding is almost finished and glazing is being installed. Internal walls are going up in the offices and mechanical and electrical services are well advanced. Ancillary buildings are being constructed (graffiti wash, train wash, cleaners' building). Most major plant has arrived in New Zealand and is going through procedures at the port.

The contract is on programme for completion on 28 June 2013 with CAF, Veolia and AT coming in straight after that to fit out their respective spaces.

Progress on the project is shown in the photos below.

Fig 1: The bridge to the drivers' platform was lifted in over the Easter block of line



Fig 2: Trackwork and overhead line is well advanced and construction of the perimeter fence has commenced



Fig 3: The overhead walkway is well advanced



Fig 4: Fitout in the offices is progressing with builders works and electrical and mechanical first fix well under way

Strategic Context

The EMU and EMU M&SF projects address the Sol target regarding "*prioritising and optimising investment across transport modes*".

Issues and Options

EMU Project

The main issue for the EMU Project continues to be the very demanding program for the first few trains. The project is focussed on this as a key risk and will continue to proactively manage this risk.

EMU M&SF Project

The main issue on the EMU M&SF Project has been the bankruptcy of the train wash supplier (Ceccato) and the subsequent poor performance and bankruptcy of the main contractor for the train wash (Autowash). AT has recovered from this at a modest cost (\$130k) but the train wash will be 20 weeks late (end of November). The first train to arrive can be washed in the graffiti wash bay until the train wash is fully commissioned.

Financials

EMU Project

The EMU Project forecast is within the original budget of \$533m.

EMU M&SF Project

The EMU M&SF Project forecast is within the original budget of \$96.3m.

Risks and Mitigations

EMU Project

The key risk for the EMU Project is unexpected delay due to problems emerging during assembly and testing of the trains. Both AT and CAF appreciate the significance of this risk and are resourced to minimise the impact of any problems as they emerge.

EMU M&SF Project

Construction risks are reducing as the heavy construction activity is tailing off. Risks being managed now include last minute design changes, approvals and licencing.

Next Steps

EMU Project

The next steps are completion of assembly and testing, approval of the train design by KiwiRail, as Access Provider, and certification by NZTA as the Regulator. The Project team

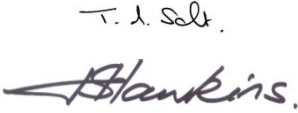

is working closely with the Operator, Veolia, and the Rail and Maritime Trade Union to secure final approvals and to agree the testing and commissioning activities.

EMU M&SF Project

The next steps are to continue to proactively manage the construction to completion and ensure a smooth handover to the Operations Team.

An opening ceremony will be held soon after the main contract completion in early July.

Document Ownership

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