

tie Mediation Statement

Infraco Response / Counter Documentation

Response to Mediation Statement - Comments on "9 – Infraco Default"

9.1 Intro - RTNs

Infraco has responded robustly to each RTN.

9.2 On-Street Trackform

Outline Infraco Statement on On-Street Trackform and Princes Street:

- 1) tie select Rheda as the trackform during tender phase. tie carried out review of Rheda during tender stage through their expert consultants (TSS) and procured Rheda as part of the Infraco Contract.
- 2) Design progressed by Infraco during preferred bidder stage and upon contract award.
- 3) Rheda trackform design submitted to tie in line with Schedule 14 for approval in 2008 (refer SDe timeline)
- 4) Development Workshop process identifies extent of misalignments with the civils design
- 5) Following tCO for misalignments, civils redesign undertaken including Roads design (revised App 7/1) and track improvement layer in line with DMRB and other appropriate standards
- 6) Cross sections of integrated trackform developed for Princes Street and issued IFC to tie (refer JCh timeline)
- 7) Initial IDR / IDC undertaken for Princes St (ahead of Princes St works) which gave confidence in the complete design
- 8) Defects identified following Princes St Works. Reasons for defects explained elsewhere in this document
- 9) Infraco carried out Continuous Improvement Review including review of design and Princes Street Construction works with experts from UK and Europe
- 10) Review confirmed design was fit for purpose
- 11) Review also offered CEC a more robust solution that would improve long term maintenance requirements.

On-street trackform: Infraco has breached its obligations in relation to the design of the On-street trackform in a number of ways, including the following:

- (a) Infraco delayed in developing and completing the design of the On-street trackform following formation of the Infraco Contract on 14 May 2008;

Infraco did not delay completing the trackform design. Refer SDe supporting files and chronology. tie's statement is rejected.

Data available via submittal overview, additionally see also e-mail KDI to Frank McFadden 14 November 2008. First track development workshop was held 19 November 2008

- (b) Infraco delayed in producing its report on the trackform following the ground investigations which took place in June 2008;

The GI does not impact on the trackform design. This statement from tie is incorrect. The GI carried out in June 2008 (following tie instruction) was to inform the Roads design (separate Development Workshop). Infraco Proposal was for shallow depth roads construction and the

GI was to confirm / verify this proposal. GI was in line with initial SDS design and indicated that full depth reconstruction would be required in part. Roads Development Workshop process undertaken and new Appendix 7/1 developed by tie, CEC and Infraco. This was approved for Princes St by CEC prior to commencement of traffic running.

Furthermore, refer tie / CEC requirement for full depth roads construction for roads design and yet they do not believe a track improvement layer is required to support trackform.

Refer SDe supporting files and chronology for trackform workshop. tie's statement is rejected.

- (c) Infraco delayed in holding the development workshop provided for by clause 4.7 of the SDS Novation Agreement in relation to On-street trackform design;

The Development Workshop process is a tripartite process (tie, BSC and SDS) and should be led by tie. Infraco held internal BSC – SDS workshops and then drove the process with tie. There was no delay on the part of Infraco. tie's statement is rejected.

Refer SDe supporting files and chronology for trackform workshop.

First track development workshop was held 19/11/2008 (notes attached). Second meeting was 22/01/2009 (notes attached)

- (d) Infraco delayed in producing its report following the development workshop;

Refer SDe supporting files and chronology for trackform workshop. tie's statement is rejected.

BSC produced two reports – first one on 28 January 2009 based on the development workshop held 19/11/2008 and the final report 12 March 2009 following receipt and validation of the SDS estimate.

- (e) Infraco delayed in producing the first drawings showing its trackform design until May 2009, a full year after contract formation;

Refer SDe supporting files and chronology for trackform workshop. tie's statement is rejected.

- (f) Infraco further delayed in producing the Issued for Construction Drawings in relation to On-street trackform until April 2010. Moreover, these drawings have still not been approved by CEC;

Refer SDe supporting files and chronology for trackform workshop. tie's statement is rejected.

- (g) the introduction into the trackform design of a reinforced concrete slab track improvement layer to span across voids of up to 1 metre in any direction as part of the trackform design was unnecessary and superfluous;

This was agreed with tie as part of the Development Workshop process. Furthermore, tie signed off and issued a tie Change Order for these design works.

The proposed design for the TIL was challenged rigorously by both BB and Siemens on several occasions. Furthermore, this formed part of a tie Audit was BSC provided details to tie in letter 25.1.201/CBr/4781 on 24 February 2010.

Subsequently, in response to the challenges, SDS provided Infraco with a detailed report justifying the choice and design of the TIL. Refer to ULE90130 SW-REP-00824-Iss2 Rev2

- (h) the design of the duct banks which run adjacent to the tram system requires excessive excavation; and

The depth of the ducts is as per DMRB standards. The ducting design does not require excessive excavation.

- (i) (i) the design which has been produced by Infraco is not compliant with the requirements of the Infraco Contract, and is therefore not complete

Infraco state that the design is compliant with the requirements of the Infraco Contract.

Further details of tie's position are set out in tie Exhibits 19, 20 and 21.

9.3 Princes St

The Princes Street works were instructed to proceed by tie ahead of final IDC / IDR process. Refer "Outline Infraco Statement" under 9.2.

- (a) the asphalt surface course adjacent to the tracks has deteriorated;

Agreed - Refer to presentation 1/12/10

- (b) longitudinal cracks have formed parallel with the tracks;

Agreed - Refer to presentation 1/12/10

- (c) the wearing course between the cracks and the resilient material on either side of the track has broken up;

Agreed - Refer to presentation 1/12/10

- (d) the bituminous bound pavement materials have cracked and broken;

Agreed - Refer to presentation 1/12/10

- (e) there is poor compaction in and around the rail flange

Agreed - Refer to presentation 1/12/10. tie insisted on completion by 29 November 2010.

- (f) there are a number of locations where there is a significant step down from the top of the rail and wearing surface;

Agreed - Refer to presentation 1/12/10

- (g) the regularity and application of the joint sealant is unsatisfactory;

Agreed - Refer to presentation 1/12/10

- (h) the road surfacing is not compatible and integrated with the trackform installation.;

Infraco do not agree with tie's statement. Refer to presentation 1/12/10 and other supporting documentation provided previously to tie and CEC. (Shabu has files with this information).

- tie selected Rheda
- Rheda/Asphalt is a proven system used in Germany and elsewhere
- Proprietary system –integration of trackform elements had already taken place
- Following Princes St defects becoming apparent, expert advice sought.
- Experts endorsed the system together with its use with asphalt.
- Jordan report explains methodology
- Various improvements to MS and ITPs following meeting with Experts
- A more robust solution offered to tie/CEC to improve long term maintenance.

(i) the setts around the tracks are in substandard condition; and

Princes St was opened to traffic without allowing the full curing time required for the setts (in some areas) to be achieved. Time pressures from tie to complete works by 29 November also impacted on the sett laying works.

(j) the drainage channels between the tracks are to be replaced.

Agreed. BSC is not satisfied with the performance of the drainage boxes, therefore BSC will change the drainage box type. It should be noted that tie and CEC approved the drainage box prior to installation on Princes St.

9.4 Princes St Defects

tie state that defects caused by Infraco's defective and incompetent design and/or workmanship. This is incorrect. Refer evidence that issues are due to the time constraints imposed on Infraco by tie and the inclement weather in which Infraco were forced to work by tie.

tie's statement that "Infraco's design for the on-street trackform does not contain any measures to provide a transition between the rigid track and the adjacent flexible pavements" is also incorrect. Infraco proposed and installed "glasstex" to provide this transition. This was also used on Nottingham Tram (NET).

9.7 Structures in Section 5A of the Infraco Works

- a) No design team input
- b) No design team input
- c) No design team input
- d) No design team input
- e) No design team input
- f) No design team input

- g) tie state that Infraco have defaulted as they have failed to satisfy outstanding CEC Informatives, but do not provide any further statement stating which Informatives we have not satisfied. Informatives do not have to be discharged prior to commencing construction.

Furthermore, we are not aware of any Informatives relating to the Section 5A Structures themselves.

- h) tie state that there is an Infraco failure to produce complete approved design. This is responded to within Exhibit 6.1. Section 5A structures referred to in 9.7 are at the following status:

- S21C – all IFC except for E&B that is with tie to instruct. CVI produced that would allow works to progress.

- S21B – awaiting tie instruction for ground improvement works. Structure is at IFC status except for E&B that is with tie to instruct. CVI produced that would allow works to progress.

- S21D – awaiting tie instruction for ground improvement works. Structure is at IFC status except for E&B that is with tie to instruct. CVI produced that would allow works to progress.

- W8 – all IFC except for E&B that is with tie to instruct. CVI produced that would allow works to progress.

- S21E - all IFC.

- i) No design team input
- j) tie state that there is an Infraco failure to obtain SW Approval. This is due to Business Stream / SW issues for which tie are well aware. Raised at Approvals Taskforce and SW meetings. tie formally requested to assist on numerous occasions. tie have not resolved approvals issues with SW. Refer SW Approvals Tracker.
- k) No design team input
- l) No design team input
- m) No design team input

9.8 Gogarburn Retaining wall

- a) tie signed agreement with BAA in February 2008 after majority of design of this area had been completed and issued IFC (no BAA approval required prior to novation). Tie signed agreement that stated there would be “no net detrimental flood risk increase” to BAA/EAL lands. Infraco submitted the design to tie in accordance with Schedule 44. Only once the design was submitted by Infraco in May 2009 did BAA/EAL raise an objection. Design could not be submitted earlier due to ongoing design changes in this area that impacted on the design.
- b) Not issued until May 2009 due to design changes
- c) It was not a requirement to submit the flood model report at that time. The design had to be submitted; however it would not be expected to have to submit all associated reports etc. Any flood model reports could have been requested by tie/BAA as they review the proposed list of design to be issued prior to submission of the design (refer Sch 44). Furthermore, tie

had the SW Halcrow Report dated March 2005 and could have issued this to BAA/EAL. Report out of date as this considered EARL Project and Compensatory Flood Water Storage that tie then instructed out of the design. The instruction by tie to remove the Compensatory Flood Water Storage has resulted in the increased flooding to BAA/EAL. The design for W14C was not out of date in May 2009. The design was amended due to tie/EAL instruction to straighten the wall at meeting on 16 September 2010.

- d) Separately to the instruction above, the design was required to be altered due to survey errors Infraco investigated alternate options to assist in resolving the process. As part of this design review, the design was changed due reduce construction costs and programme – as significant BDDI – IFC changes, this was for the overall benefit of the project. The drawings shown at BDDI did not include for the extent of retaining wall that is now required due to the Edinburgh Airport Canopy & Kiosk.
- e) This is tie’s issue. We can only design within the LOD. We could amend design further to remove flood impact to BAA/EAL (viaduct etc) but this is not reasonable. The flood issue is a balance between different approvals – CEC, SEPA, BAA and third parties - NIL, BAA/EAL, properties, landholders downstream etc. The other key issue is that the increased flood risk to the airport is negligible and only occurs at 1 in 200 year flood when the airport is already in flood!!

Comment [SPN1]: This is the main issue for Infraco. Design had to be modified due to survey issues – fault for this lies with SDS. As part of the design review, we proposed an alternative solution to mitigate programme issues and also reduce costs for tie. Need to consider what we state in this section.

16 Glossary of Terms

tie state “Issued for Construction” is not a contractually defined term”. “Issued for Construction Drawings” is defined within Schedule Part 1 as those Deliverables necessary for the Infraco to **commence** construction of the relevant part of the Infraco Works which have been fully approved by all Approval Bodies...”