

Memorandum 03:

Meeting Held between Transit New Zealand and Roding New Zealand to Review the Sign Stand Trial Progress – 2 October 2007

Present:

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| Jeff Kaye | Roding New Zealand |
| Ray Edwards | Roding New Zealand |
| Alan Stevens | Roding New Zealand |
| Dennis Davis | Transit New Zealand |
| Stuart Fraser | Transit New Zealand |

History

Through the Code of Practice for Temporary Traffic Management (CoPTTM), Transit New Zealand set timings for the introduction of temporary sign stand bases that met similar safety standards to those required of permanent signs, namely the ability to snap off or collapse at no more than 100mm. These standards were modified to 150mm after contractors explained that the 100mm target was impracticable. The time for compliance was extended from 1 July 2005 for Level 1 signs and 1 July 2006 for level 2/3 signs to 1 December 2006 for both level 1 and Level 2/3.

Early in 2007 Roding New Zealand and Transit New Zealand representatives met to discuss lack of suitable Level 2/3 sign bases. It was agreed that Roding New Zealand would run a trial to evaluate available stands and to avoid unnecessary expenditure on unsuitable models.

Following a Roding New Zealand letter to Transit NZ of the 11th of August, Transit New Zealand's response and Stuart Fraser's attendance at the meeting of the Auckland Area Traffic Management Association, this meeting was called to review progress to date and discuss the current proposed transition period.

Review of the L2/3 Stand Bases

- Roding New Zealand members explained that only 8 contractors had registered for the trial and at this stage only a few reports had been received.
- Roding New Zealand members were concerned about what could be considered compliant and what was not compliant. (A detailed list of the points raised is attached as Appendix 1). Discussion concentrated on the following concerns:

- The addition of sandbags could negate the effective of a complaint stand by interfering with the way it collapses.
- Some stands would not always collapse correctly even without sandbags.
- Further concerns were raised regarding:
 - Health and Safety:
 - The design of some of the stands currently did little to avoid crushing fingers.
 - The weight of some stands, they should not be heavier than the current “crows feet” stands (20kg??)
 - The durability of some of the stands on offer.

Courses of Action

The following course of action was agreed

- The current trial would focus on:
 - Stability and falling action of the stands when naked (no sandbags).
 - Durability of stands.
 - Ease and safety of handling, bases are to weigh no more than current stand bases (weights to be provided).
 - Sandbagging the best ways to sandbag:
 - To gain stability, and
 - To ensure the sandbags are unlikely to impede the sign collapse into a low profile.
- Transit will approach OPUS Central Laboratories to investigate a wind tunnel trial to assess stability and collapse, guidance with respect to sand bag placement. (A detailed description of the trial is at Appendix 2)

Timetable

It was agreed that the current timeline for the introduction of the new sign stands would remain in place for the moment, but leave provision for a review following completion of the independent testing which is hoped will be finalised by the end of November 2007.

It was acknowledged that the issues surrounding the introduction of the proposed new requirements for sign stands and bases was not about the reluctance to change but rather about the availability of suitable compliant products. Safety within the industry is paramount and all parties agreed that the most appropriate measures must be considered to ensure that best practice is not compromised.

The safety of road users and road workers must be an integral part of all activities carried out on the road from planning through to completion.

Proposed Changes to the Field / On Site Testing

- Stuart Fraser and Alan Stevens will meet to amend and re-issue the original memorandum; it will include the following items.
- Reporting procedures / requirements on manual handling issues.
- Reporting on any additional health and safety issues.
- A maximum weight for a sign base will be set - should not be significantly heavier than the old "Crowsfoot" type base and not heavier than say 20kg.
- Reporting on increased time and / or losses in productivity due to the "new" equipment.
- Reporting on the serviceability / durability of the "new" equipment - maybe compared to the "old" "Crowsfoot" type bases

It was agreed to review the full implementation programme including the provision of a reasonable transition period following the completion of the additional testing

Detailed List of Points Raised

- In respect of the memo sent out requiring organisations to register their interest in the Sign Supports and Stands Trial, only eight responses have been received, one of which was from a manufacturer or supplier of the equipment being trialled.
- Little formal feedback has been received but a number of issues are emerging surrounding safety for operators and road users alike.
- It was questioned whether we are trying to set a standard for temporary signs supports and bases that is much higher than that applied to permanent signs?
- The main aim is to have signs that remain standing as long as possible, taking into account the velocity of the wind and turbulence from passing vehicles.
- The number of equipment suppliers in NZ is limited at this stage. In addition, none of the prototype equipment has been found to be fully compliant in meeting the stated requirements.
- The quality of equipment currently being promoted (and probably expected to become commercially available) is questionable in terms of compliance with the requirements of the CoPTTM. Further questions exist around their serviceability and durability (how long will they last when compared to the previously most used "Crowfoot" type base) and how acceptable they are in terms of usability.
- Many of the "new" type of equipment poses a health and safety risk to workers, in that they are too heavy (possibly up to 30kg - a manual handling risk) and due to the rotating or swinging leg actions a finger/ hand crush risk (companies can supply documentation of the type of injury even at this early stage of the trials). It appears that this issue had not been considered by Transit NZ but is of concern to them.
- The storage and transportation of the "new" type prototype bases will require the retro refitting of vehicles to accommodate the equipment. The initial refit will add significant cost to the industry, but will also have ongoing cost implications due to the extra handling time the new equipment requires.
- To date the prototype sign bases being used have proved to be cumbersome for workers to handle and deploy resulting in a loss of production due to increased time to install and uplift. It has been found that extra personnel are required to effectively handle the equipment safely.
- As well as the extra staff requirements, the use of the new sign bases has resulted in greater time to install and uplift closures

increasing the exposure of the temporary traffic management crews to greater time in live lanes.

- The increased time required to place and remove closures is also resulting in reduced working time on the road, which can be a very significant issue in the Auckland region.
- It was acknowledged that a base without any sandbags or ballast attached must when in a fallen state due to wind effects or collision with the sign be 100% compliant at all times - the thinking at this stage is that none of the prototype equipment will fully comply with the requirements.
- It was further acknowledged that the prototype sign bases when ballasted with sandbags will exceed the 150mm height allowance some percentage of the time when they have fallen over. This measure needs to be determined by conducting additional tests in a controlled environment.
- The equipment currently being promoted as commercially available at this stage is generally much more costly when compared to the "Crowsfoot" base with the suggestion being that in some cases the difference was almost double.

Trial Description

- Transit NZ agreed to fund additional testing by an independent organisation, probably Opus Central Laboratories using their wind tunnel facility.
- In conjunction with this Group and Transit NZ, Opus Central Lab will be asked to write a scope for the proposed tests and then undertake the testing of bases.
- Prototype bases will be measured against the "crowfoot" type base for stability and relative safety once toppled.
- All suppliers wishing to market equipment must submit their base for testing. This will be limited to level 2 and 3 equipment at this stage.
- All stands and bases are to have their weight recorded.
- Testing will include maximum wind strength before movement or collapse of the equipment occurs measured in a least four directions. The trials need to cover all circumstances in which the signs may be utilised.
- Testing will be conducted without ballast and with sandbags of varying numbers.
- The records of the testing for each base will include a percentage compliance figure with the 150mm collapsed height both with and without sandbags to determine an acceptable level of compliance.
- Recording of the height of a leg(s) jammed by sandbags and the direction of the protrusion relative to the direction of approaching road users.
- Following the completion of the initial testing, the processes used and the information required is to be documented to set the limits and testing criteria for testing of signs bases that may come onto the market in the future.
- During the wind tunnel testing, experimentation with different methods of applying ballast or sandbags is to be conducted. It is hoped that some best practice suggestions may become apparent from which a guideline document can be developed.