Temporary Traffic Management Conference 2013

Comparing CoPPTM

with UK and Aus Requirements

July 2013

MWH®

BUILDING A BETTER WORLD

My History/Background

- Works Infrastructure – Kiwi Point
  (November 2006 to February 2007)

- MWH – Wellington
  - (November 2007 to 2009, part-time)
  - (2009 to present, full-time)

- BE Civil (Canterbury, 2011)

Scope - Documents

Documents:

- Traffic control devices manual part 8 Code of Practice for Temporary Traffic Management — ~460 P
- Australian Standard Manual of Uniform Traffic Control Devices Part 3 Traffic control for works on Roads — ~130 P
  - Traffic Control at Work Sites (NSW) — ~420 P
  - Manual of Uniform Traffic Control Devices (Queensland) — ~200 P
  - Traffic Management for Works on Roads (WA) — ~70 P
  - Worksite Safety - Traffic Management (Vic) — ~100 P
- Traffic Signs Manual Chapter 8 Traffic Safety Measures and Signs for Road works and Temporary Situations — ~560 P

2000 P

Scope - Aspects

Aspects not examined:

- Personnel training systems/requirements
- Personal Protective Equipment standards
- Delineation and barrier specifications
- Sign layouts and messages
- Vehicles and attenuator specifications

- Aspects reviewed:
- Layout **Form** and **Use**
- **Sign, Cone, and Taper spacings and lengths**

Overview

- Road Classifications
- Temporary Speed Limits
- Differences between some layout types
- Common NZ Layouts

Road Classifications

New Zealand Classifications

- New Zealand has three categories, with two sub- categories
- Level One – default category with most urban streets and rural roads
  - Low Volume – Roads with less than 500 vpd / 40 vph
  - Low Volume Low Risk – Road with less than 250 vpd / 20 vph and are considered low risk
- Level Two – Urban and Rural, high volume roads with over 10,000 vpd
- Level Three – High volume, high speed, divided, multi-lane roads
- Minimum Network length requirements for Level Two and Three

Australian and UK Classifications

- Australia has three classification categories
  - Two-lane, two-way roads
  - Multi-lane undivided roads
  - Divided roads

- United Kingdom has two classification categories with one sub-categories
  - Undivided roads
    - Minor roads – typically have low speed with less than **400 vehicles per hour**
  - Divided roads

Temporary Speed Limits

Temporary Speed Limits – NZ v Aus

- NZ
  - Common Speed Limits
    - 70 km/h
    - 50 km/h
    - 30 km/h

TSL should not be buffer Zones
TSL should be suitable for the site
TSL should be 20km/h posted speed limit
TSL should match/ traffic lane widths
TSL determine sign/cone/taper spacing etc.

- Australia

  Traffic Calming Measures

  – 80 km/h

    Buffer Zones for other speeds
    Some Change to alignment

  – 60 km/h

    Confined Alignment
    Workers <3m to traffic
    Manual traffic controllers

  – 40 km/h

    Workers <1.2m to traffic

  – <40 km/h

    Unusually High hazard for workers

Temporary Speed Limits – NZ v UK

- NZ
  - Common Speed Limits
    - 70 km/h
    - 50 km/h
    - 30 km/h

TSL should not be buffer Zones

TSL should be suitable for the site

TSL should be 20 km/h lower than posted speed limit

TSL should match/ traffic lane widths

TSL determine sign/cone/taper spacing etc.

- United Kingdom

TSL considered on a case by case basis

TSL should be 20 mph (30 km/h) lower than posted speed limit

TSL signs must be LIT during darkness

Motor/Expressway >= 40mph (65 km/h)

TSL affect offsets and spacings

TSL alter within site for specific hazards.

Differences

Inspections

Australia

- All Levels: 15 min stop, occupy live lane without spotter with 20 seconds clear sight distance.

UK

- Divided Carriageway (L3): 15 min stop off the live lane, 90 min behind protective barrier

NZ – “Mobile Operations”

- LV : No spotter required
- L1 : up to 5 min on live lane, with spotter – must avoid impeding traffic
- L2 & L3 : Static or Mobile closure on Live Lanes, limit to shoulder

Lane Closure – Alternating Flow

Giveway/Priority Control

- UK, less than 840 vph (Minor Road) – NZ less than 1000 vpd
  - Give-take no signage less than 400 vph

Stop/Go – Manual Traffic Control

- UK, not used
- Aus, up to 60 km/h speed environment, controllers “shall be” relieved after no more than 2 hours.

Portable Traffic Signals

- UK, Stop/Go boards, replaces Manual Traffic Control.

Lane Closure – Continuous Flow

Central Lane Closures

- Aus, permitted to maintain peak traffic flow past site, 1 lane per 1000vph.
- UK, permitted for unattended worksites
- NZ, L1 and LV sites, i.e. closing a passing lane.

Taper Spacing

- UK, direct closure of lanes with a single taper

Minimum Lane Widths

- Aus, 3m

Cone Spacing

- UK, cone spacing may be doubled in areas of closure without a worksite or taper.

Mobile Works

Advanced Warning Variable Message Signs

New Zealand State Highway

Typical Layouts

Typical Layouts – Disclaimer

- Limit Sample Size,
- Road networks sampled not representative of all networks,
- Tendency to use “default” layouts and not site specific,
- Single TMP maybe used multiple times – rubbish collection
- Layouts which have been approved, not necessarily carried out

Layouts Used Type

Type	Level One	Level Two	Level Three	Total
Misc	290	290	130	720
Shoulder/Foot path Closure	490	1200	510	2220
Lane Closure Alternating	360	450	30	850
Lane Closure Continuous	210	790	673	1680
Road/Detour	120	200	210	530
Mobile Operations	220	750	650	1620
Total	1710	3700	2219	7630

Layouts Used Lane Closures

Type	Level One	Level Two	Level Three	Total
Giveway/ Priority	0	-	-	0
Stop/ Go Manual	310	360	10	680
Signals	0	0	0	10
Pilot Vehicle	0	0	0	0

Thank-you

Questions