The Joys of Watching Paint Dry
(Or The Brisbane City Council Pavement Marking Trials)

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Brisbane City Council - Where Are We?

Regional Areas

Brisbane City Council - Overview

- Largest local authority in Australia;
- Area - 1327 km²;
- Population - 898,480 (2001 Census), rapidly growing;
- Roads - 5,550kms, local residential streets to major arterials;
- Pavement marking with estimated value of $18.35M.

BCC Pavement Marking - History/Specification

- Requirements covered by BCC Reference Specification S150 - Roadworks;
  - "Method based" specification;
  - Originally published in 2001, revised 2006;
  - Majority of installation/maintenance by internal provider (Brisbane City Works);
  - Approximately 100kms of new road and associated furniture from contributed assets (developers etc.) per year;
  - Network growing - budgetary constraints;
  - Limited resources for testing and monitoring.

BCC Pavement Marking - Specification S150

- 2001 version of S150 called for pavement marking materials:
  - Waterborne or Solvent Borne Paint: 300-500µm;
  - Hot Applied Thermoplastic: 2mm thick;
  - Glass Beads: Application rate 180g/m², no specific type nominated;
- Only three material types specified;
- No guidance/direction on what to use or where to use it.

BCC Pavement Marking - Specification S150

- 2006 Revisions include:
  - Now four material types included;
    - WB Paint;
    - Thermoplastic Materials (Hot Applied and Preformed);
    - Two-Part Cold Applied Material;
    - Linemarking Tape;
  - Tighter reference to application of Glass Beads;
  - Anti-skid Materials requirements added.
**BCC Pavement Marking - Specification S150**

- **WB Paint Requirements;**
  - 500µm for all Longitudinal and Transverse markings;
  - 375µm for painting islands/kerbs
- **Thermoplastic Materials & Two-Part Cold Applied Material (Longlife Materials);**
  - Max. Thickness 2.5mm, +0.5, -0.0
- **Glass Beads;**
  - Class 'D' (Large Beads) for all markings except;
  - Class 'B' (Small Beads) for islands/kerbs

**BCC Pavement Marking - Specification S150**

- **Glass Bead Application Rate;**
  - All except Islands/Kerbs: 450g/m² Class 'D';
  - Islands/Kerbs: 200g/m² Class 'B';
- **Anti Skid Material to be included on All Transverse Markings;**
  - Applied at a rate of 250g/m²;
- **Guidance on what Material to Use and Where to Use it.**

**BCC Linemarking Trial**

- **Have set-up two Linemarking Test Decks;**
  - Kingsford Smith Drive, Eagle Farm;
    - Major arterial road - provides access from heavy industrial area to Gateway Motorway;
    - 12.5% commercial & heavy vehicles (semi-trailers etc.);
  - Gregory Terrace, Spring Hill;
    - Example of "busy" Brisbane road - suburban route;
    - Estimated AADT/lane: 7,500;
    - 4.5% commercial vehicles (light trucks etc.).

**BCC Linemarking Trial**

- **Trial to test requirements and assumptions in revised Reference Specification S150;**
- **Local trial using internal applicators (except for PMMA) and current work practices and methodologies;**
- **Opportunity to trial effectiveness of new system with longitudinal WB Paint Machine;**
- **Opportunity to trial materials new to BCC (eg. new Linemarking Tape).**

**BCC Linemarking Trial**

- **4 Classifications of Material and RRPM's, total of 26 Products/Systems Installed;**
  - Material 1: PMMA (single and double coat with glass beads and anti-skid material);
  - Materials 2-7: WB Paint, handcart applied, ~300µm thickness with glass beads;
  - Materials 8 & 10: Hot Applied Thermoplastic, Extrusion with glass beads and anti-skid material;
  - Materials 9 & 11: Hot Applied Thermoplastic, Screed with glass beads and anti-skid material.

**BCC Linemarking Trial**

- Materials 12-13, Pre-formed Thermoplastic with glass beads and anti-skid material;
- Materials 14 & 18: Permanent Linemarking Tapes (incorporated glass beads);
- Materials 15 & 17: Temporary Linemarking Tape (incorporated glass beads);
- Materials 16, 19-21: WB Paint, Machine Applied, 500µm with glass beads and anti-skid material;
- RRPM's: 5 types with 2 different application methods (Hot melt pads and Two-pack epoxy)