

3 October, 1988.

TRAM OPERATIONS DEVELOPMENT DEPARTMENT

DISCUSSION PAPER

ON

PROPOSED STRATEGY FOR INTRODUCTION OF ARTICULATED TRAMS TO SYSTEM

1. INTRODUCTION

This paper identifies a ~~preferred~~ strategy and implementation sequence for the progressive introduction of articulated trams (or light rail vehicles - IRVs) to the ~~suburban tram/light rail transit~~ (LRT) system. A number of potential problems and matching alternative strategies are highlighted. An inherent feature of the proposed strategy is its flexibility to accommodate any injections of priority demands from say MetPlan.

2. BROAD OBJECTIVES

The introduction of articulated trams will not only further update the fleet but will: -

- . Provide an avenue to address heavily-patronised routes.
- . Increase productivity and efficiency through a higher passenger seat to crew ratio.

The intention is that wherever practical, based on loading considerations, articulated trams will replace rigid trams (older "W" Class trams) at the rate of two articulated trams for three rigid trams.

3. FACTORS IMPACTING ON IMPLEMENTATION STRATEGY.

A number of factors have been taken into account in developing the preferred strategy, viz: -

- . Pantograph Conversion Program.
- . Automatic Vehicle Monitoring (AVM) Program.
- . Present Fleet Configuration ("W", "Z" and "A" Class trams, roving and seated conductors, equitable mixes of Z1, Z2 and Z3 Class trams at "Z" Class depot, etc.).
- . Depot capacities and configurations for berthing and servicing IRVs.

4. PROPOSED STRATEGY

The proposed strategy is to progressively introduce the 130 articulated trams to the following routes by the dates indicated.

- . St Kilda-East Brunswick LRT (February, 1989)-Sth Melb/Nth Fitz Depots.
- . Moreland-St Kilda Beach (July, 1989)-Sth Melb/Brunswick Depots.
- . East Coburg-South Melbourne Beach (January, 1990)-Sth Melb/Brunswick Depots.
- . Mont Albert-City (Part operation) (March, 1990)-Kew Depot.
- . North Balwyn-City (Part operation) (April, 1990)-Kew Depot.
- . Bundoora-City (June, 1991)-East Preston Depot
- . Carnegie-City (February, 1992)-Glenhuntly Depot.
- . East Brighton-City (October, 1992)-Glenhuntly Depot.
- . ~~East Brunswick~~-Spencer Street (November, 1993)-Camberwell Depot.
- . Tootak-City (December, 1993)-Malvern Depot.

Other factors considered in developing the above strategy include:

- . Kew Depot capacity - Current property dimensions do not allow for the replacement of all "A" Class trams. A mix of "A" Class and articulated trams is proposed.
- . Port Melbourne LR route - Loading surveys taken on a number of occasions since the introduction of this service indicates that no further capacity is required on this route at this stage.

The detailed plan showing the deployment of articulated trams, the net number of rigid trams saved, and dates of introduction is attached at Annex A.

5. ALTERNATIVE STRATEGIES.

Depending on the success or otherwise of satisfactorily resolving any current or emerging issues or constraints, a number of variations on the preferred strategy are available. These largely would involve the substitution of one route for another, and/or rearrangement of priorities.

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PROPOSED STRATEGY PLAN FOR INTRODUCTION OF

ARTICULATED TRAMS

| ROUTE | EXISTING L.N. | PROPOSED L.N. (RATIO BASIS) | ARTIC. SPARES | ARTIC. ALLOC. | SAVE | ARTIC TRAM ACCUM. | INTRO DATE |
|-------------------------|------------------|-----------------------------------|------------------|------------------|------|-------------------------|---------------|
| ST KILDA-EAST B'WICK | 18 | 13 | 1 | 14 | 5 | 14 | Feb 1989 |
| MORELAND-ST K BCH | 20 | 13 | 1 | 14 | 7 | 28 | Jul 1989 |
| EAST COB-STH MELB BCH | 19 | 13 | 1 | 14 | 6 | 42 | Jan 1990 |
| MONT ALBERT-CITY | 31 | 29# | - | 4 | 2 | 46 | Mar 1990 |
| NIH BALWYN-CITY | 29 | 27# | - | 3 | 2 | 49 | Apr 1990 |
| BUNDOORA-CITY* | 41 | 27 | 3 | 30 | 14 | 79 | Jun 1991 |
| CARNEGIE-CITY | 20 | 13 | 1 | 14 | 7 | 93 | Feb 1992 |
| EAST BRIGHTON-CITY | 19 | 13 | 1 | 14 | 6 | 107 | Oct 1992 |
| EAST BURWOOD-SPENCER ST | 28 | 19 | 2 | 21 | 9 | 128 | Nov 1993 |
| TOORAK-CITY | 19 | 18 | - | 2 | 1 | 130 | Dec 1993 |
| | | | | | | 59 | |

Note: * The proposal provides for the transfer "Z" Class trams operating the Bundoora - City Route to the West Preston - Fitzroy Route.

Includes mix due to depot capacity.

L.N. Largest number required for peak operation.