1988-1991

2023 Retrospective

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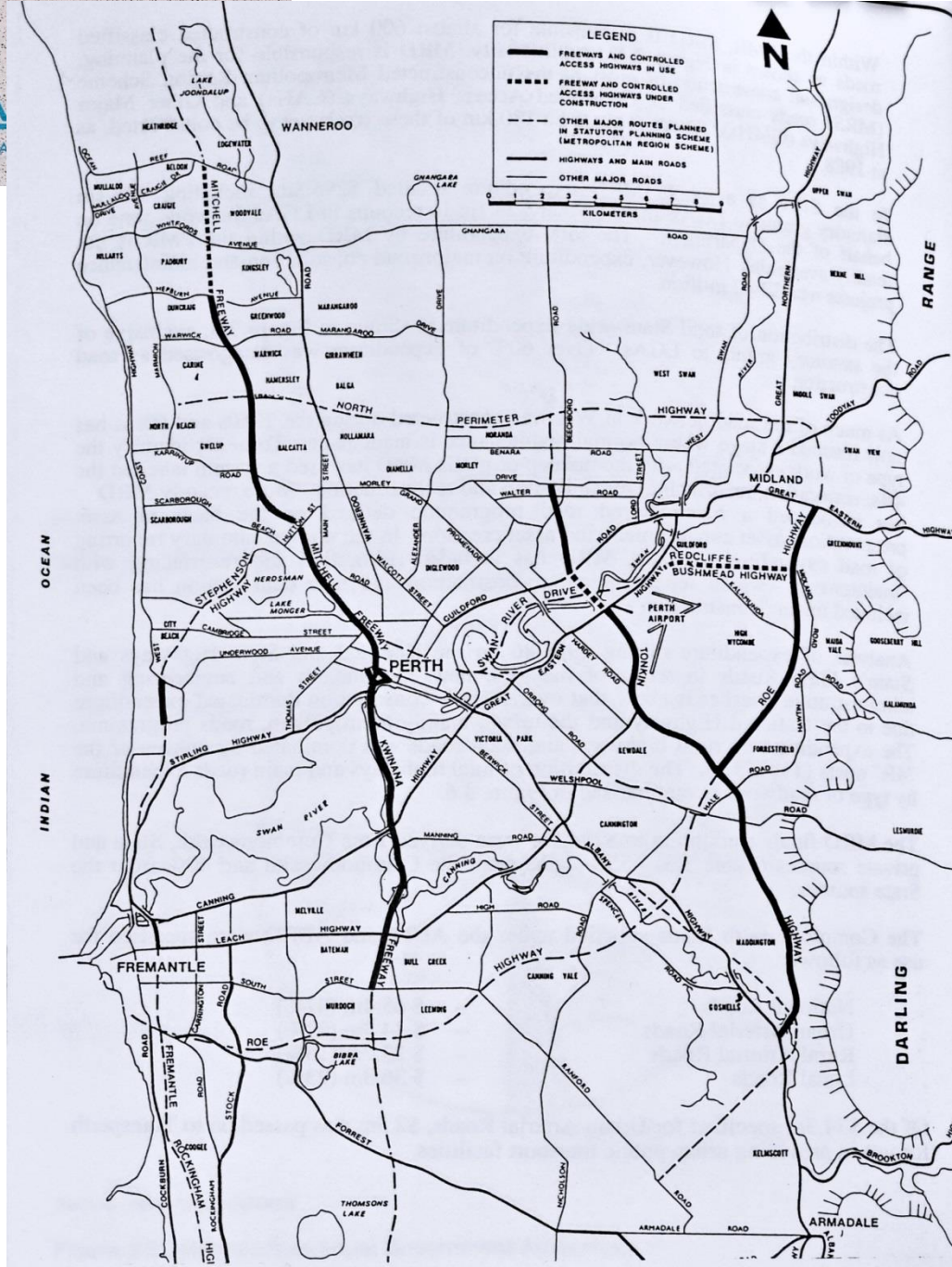
This presentation

- **Introduction – the genesis of the RRR**
- **RRR first stage - Preliminaries**
- **Stage 2 - 2021 Land use studies**
- **Stage 3 - 2006 Transport analysis**
- **Stage 4 - Reviewing Road Reserves**
- **Looking back from 2023**


Hay St West
EXIT
Market St
EXIT 500m
2
Mitchell Fwy
CENTRE LANES
40
Charles St
EXIT 800m

Perth in 1986 – Road network



Source : MRD.

Figure 3.4: Main Roads Department – classified Metropolitan roads – 1986.

ROAD RESERVES REVIEW
PERTH METROPOLITAN REGION

Introduction – genesis of the RRR

Objectives

The issues identified in the Inception Report led to specific objectives for the study, around which it was designed. These may be summarised as:

- to evaluate alternative long–term land–use strategies (for their transport implications);
- to examine medium–term transport policy options in relation to achieving long–term land–use goals, maximising community benefit while meeting financial and other constraints, and producing new medium–term traffic forecasts;
- to examine the planning process for major roads and the associated process for reserving land and to recommend changes designed to improve the efficiency of the system and its relationship to construction programmes;
- to review the road reserves in the MRS and make recommendations for changes in the light of the findings above.

The second objective, to examine medium–term transport options, has mostly been taken over by the Transport Strategy Committee on Future Perth.

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Preliminaries

- Population forecasting
- Economics: incomes, prices, transport expenditure
- Transport model development – MRD, DoT
- Development Land potential
- Transport networks existing and planned
- Road Reserves facts and statistics

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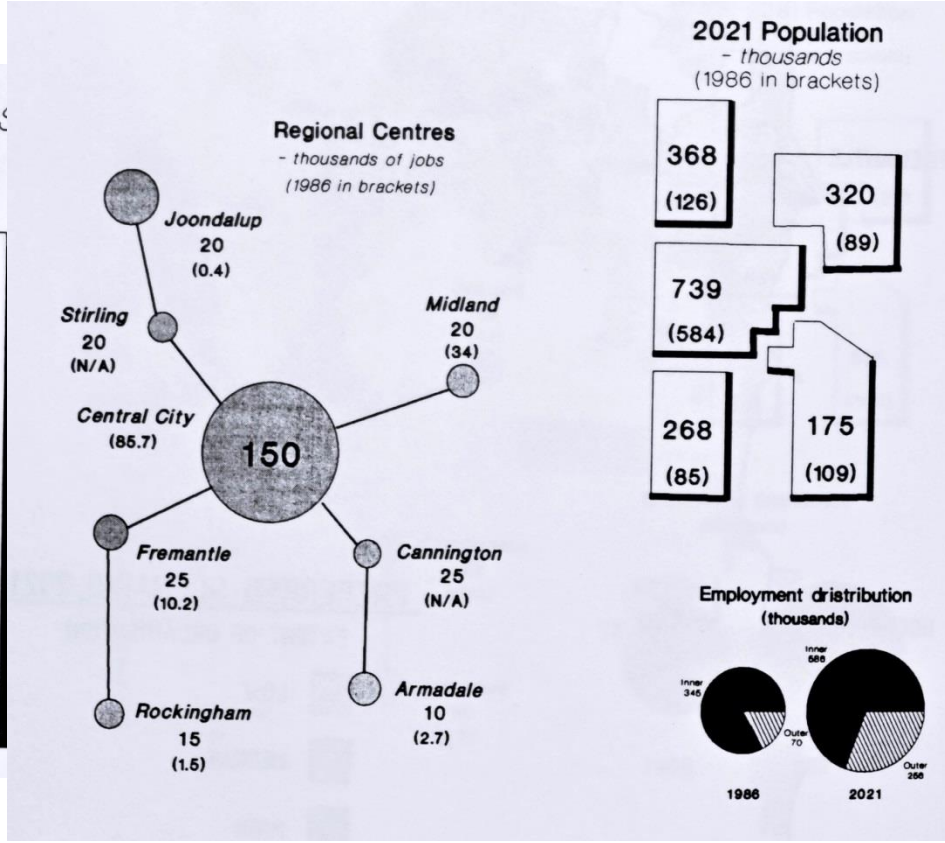
PERTH METROPOLITAN REGION

2021 Land Use tests

Figure 2.12: *Preferred Strategy* - Main Features

- Preferred strategy policies adopted
- 150000 jobs in Perth Central Area
- New NE corridor
- Some consolidation in inner areas
- Less low density peripheral growth
- More employment in inner areas
- Short-term land release areas intensively developed
- Development of Joondalup & Armadale centres is slow



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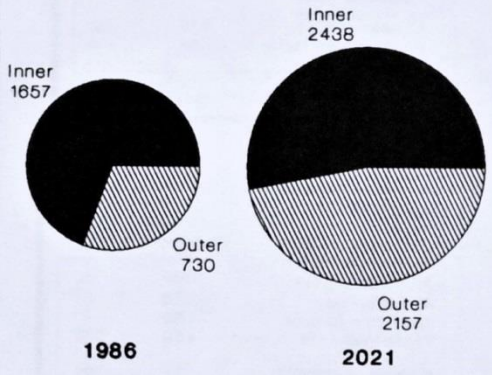
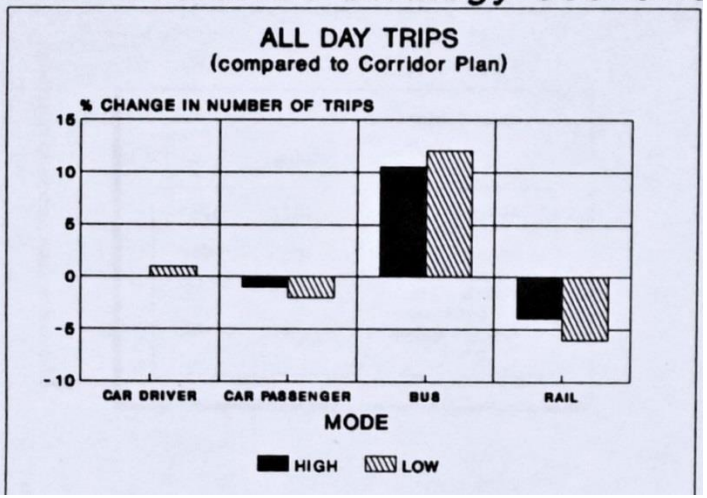
2021 Land Use tests

2021 *Preferred Strategy* scenario

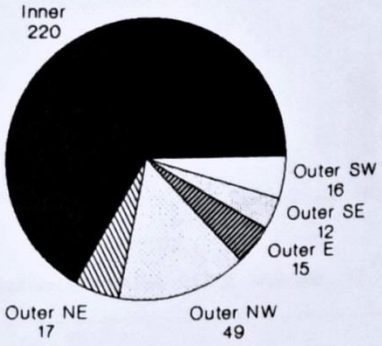
TRIP ORIGINS



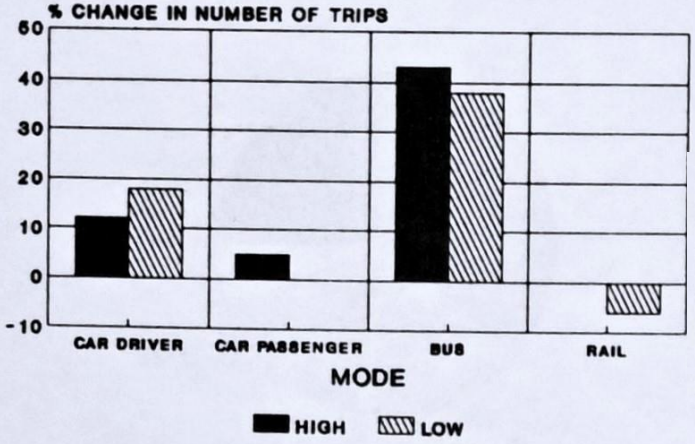
ALL DAY TRIPS
(compared to Corridor Plan)



ORIGINS OF TRIPS TO THE CORE



WORK TRIPS TO CORE
(compared to Corridor Plan)



CAR TRIPS

	High	Low
All trips	0	0
All worktrips	-1	0
Vehicle - km	-2	-1
Average speed	-3	-3

Figures are % difference from Corridor Plan

BUS TRIPS

	High	Low
All trips	+10	+12
All work trips	+31	+27
Work trips to core	+44	+37
Passenger - km	+8	+9
Number of buses	0	+2
AM peak load factor	+9	+11

Figures are % difference from corridor plan

RAIL TRIPS

	High	Low
All trips	-5	-6
All worktrips	0	-8
Worktrips to core	0	-7
Passenger - km	-32	-35
Number of railcars	-24	-24
AM peak load factor	-7	-23

Figures are % differences from Corridor Plan

and Use tests

Our conclusions may be summed up as follows:

- In terms of travel and transport the consolidation and employment location policies of the Preferred Strategy do contribute to certain transport objectives – in particular they were found to:
  - promote the greater use of public transport in
  - reduce total vehicle–kilometre on the road network, particularly in peak periods;
  - minimise public transport deficits and achieve higher returns per dollar of deficit funding;
  - achieve higher levels of accessibility, calculated as travel time, to all of the region.
- Conversely the Preferred Strategy was found to:
  - make less use of committed rail infrastructure;
  - lead to lower speeds on the highway network, in particular in the inner area;
  - lead to more peak spreading and congestion on more inner area roads in the peaks;
  - lead to longer journey times by car.
- Our analysis did not offer any evidence that one regional planning strategy is better than another in terms of:
  - total resources used in travel and transport;
  - fuel consumed;
  - nett public sector expenditure.

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2021 Land Use tests

Putting all these numbers together leads to the conclusion that no clear evidence emerges from our analysis that one future city is more resource–efficient than another. Essentially what this comes down to is that the benefits of more people using public transport in the consolidated cities are outweighed by lower traffic speeds and higher private vehicle operating costs; even in the Centralised city the benefits of extra public transport usage are not sufficient to tilt this balance.

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2006 Transport analysis

	TRANSPORT SCENARIO		
	FAVOURS CARS	CENTRAL	FAVOURS PUBLIC TRANSPORT
Income/employee	109	109	109
Value of time	109	109	109
Crude oil cost	127	127	127
Petrol price	112	112	140
Public Transport fares	150	100	100
Parking fees	100	100	150
Car running costs	112	112	122

Source: Road Reserves Review

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PERTH METROPOLITAN REGION

2006 Transport analysis

	1986	2006		
		TRANSPORT SCENARIO		
MODE		FAVOURS CARS	CENTRAL	FAVOURS PT
Car Driver	73.9	74.9	74.7	74.4
Car Passenger	17.6	17.8	17.1	16.9
Car Total	91.5	92.7	91.8	91.3
Bus/Ferry Passengers	7.0	5.3	5.8	6.1
Rail Passengers (1)	1.5	2.0	2.4	2.6
PT Total (2)	8.5	7.3	8.2	8.7

SOURCE: Road Reserves Review

Note: (1) Percentages include allowance for "spark" effect due to electrification of the railway i.e. 15% once only increase in rail patronage.

(2) PT = Public Transport

gure 3.6: MODAL SPLIT, PERTH METROPOLITAN REGION

Reserves – studies

FIGURE 1.3 : MRS ROAD RESERVES BY TYPE & LENGTH

MRS RESERVE TYPE	ROUTE LENGTH		CONSTRUCTED LENGTH	
CAH	309	(25%)	145	(15%)
OMH	366	(30%)	353	(38%)
IRR	548	(45%)	436	(47%)
TOTAL	1223	(100%)	934	(100%)

Reserves – 10 Case Studies

Reserve	Years in MRS	Area (ha)	Property in MRD/DPUD Ownership		Properties to be acquired
			% by area	No of Properties	
Garden Island Expressway	14	93	65	N/A	(9.3ha)(3)
Fremantle/ Rockingham CAH	9	276(2)	17	49	N/A
Fremantle Eastern Bypass	16	39	44	65	70
Western Suburbs Highway	7	71	27	77	66
Stephenson Highway	26	62	35	37	N/A(4)
Roe Highway	26	647	86	280	(89ha)
Canning Highway	26/16 (5)	91	6	61	638(6)
Hepburn Avenue	26	104	32	11	(41.7ha)
Fitzgerald St	26	12	13	10	256(7)
Beaufort St/ Walter Road	26	36	1	2	149(8)

Notes:
1. By area (unconstructed areas only)
2. Assumes downscaled Leda interchange
3. In public ownership
4. City of Perth - parks and recreation land
5. 26 years for OHM section, 16 years CAH section
6. Refers to reserve indicated in MRS; includes 406 part lots
7. Refers to reserve indicated in MRS
8. Based on S3 plans

Figure 4.2: Case studies - land assembly progress

ROAD RESERVES REV

PERTH METROPOLITA

Timescale for reserving land

Implementing Strategic Planning Policy

- greenfields – before rezoning/development but not too far in advance.
- built up areas – when construction is committed.

Implementing the Roads Programme

- greenfields – neutral effects.
- built up areas – not more than 10–15 years ahead of construction

Uncertainty in Planning

- greenfields – neutral effects.
- built up areas – long term (2021) is undesirable.

Community Needs

- greenfields – any time before rezoning/development.
- built up areas – not more than 5 years before construction, although minimisation of planning blight by active property management would extend this period.

Opportunity Costs

- greenfields – any time before rezoning/development, provided construction is within 10–15 years after development.
- built up areas – not more than 10–15 years ahead of construction.

Reserves appraisal based on:

- Road hierarchy/network
- Traffic forecasts 2021,2006
- Timescale
- Capacity standards
- Design standards

Summary of Reserves conclusions:

- Reduce reserve width on 37% of total MRS road length
- Potentially reduce reserve width on further 9% MRS road length
- Reduce overall reserve area by approx 16%, or 30% of remaining reserve area (*ie excluding existing dedicated roads)*
- Reduce potential future land acquisition costs by $200m (1986 prices)

Looking back – and forwards

- RRR fulfilled its objective of reviewing road reserves in the MRS
- The land use analysis increased the scope of the work hugely – but also suggested how difficult it would be to rely on land use planning as a transport policy tool to reduce car dependency.
- The transport analysis needed to be taken further – and updated regularly to include new schemes and evolving technologies
- After 35 years Perth's transport systems are still performing well. But urban sprawl continues – under pressure from developers and supported by rail and freeway extensions
- EVs will be a positive factor – not only environmentally but because they may lead to general application of road pricing
- Automation could threaten public transport – and land use policy - by promoting universal personal mobility

ROAD RESERVES REVIEW
PERTH METROPOLITAN REGION

Looking back

An assortment of PS/2s in various form factors[a]

Also known as	PS/2
Developer	International Business Machines Corporation (IBM)
Manufacturer	IBM
Type	Personal computers
Release date	April 1987; 36 years ago
Discontinued	July 1995
Media	3.5-inch floppy disks · 5.25-inch floppy disks (optional, external drive)