North West Rail Link

Environmental Impact Statement 2 - Stations, Rail Infrastructure and Systems

Submission Form

This form can be used to make a submission about the proposed North West Rail Link – Environmental Impact Statement 2 – Stations, Rail Infrastructure and Systems. The NSW Department of Planning and Infrastructure (DPI) will take account of your views when considering the Environmental Impact Statement that is now on exhibition.

Once you have completed your submission return to DPI:

- By mail Major Projects Assessment, Department of Planning & Infrastructure, GPO Box 39, SYDNEY NSW 2001.
- By fax 02) 9228 6355
- Email plan_comment@planning.nsw.gov.au

Transport for NSW cannot accept submissions on behalf of DPI. **Submissions close Monday 3rd December 2012.**

Before posting your submission, please note the following:

- Fields marked with a * are compulsory. Anonymous comments are not able to be accepted as submissions, subject to the Act - please enter your name, email address and physical address accurately.
- You may request that your name be withheld from public display by ticking the box at the bottom of this form.
- If there is not enough room on this form for your comments, you can add extra pages.

Name*	
Title	MR
First Name	BOB
Last Name	MASTERS
Your Details	
Email*	bolmasters 8888 a yahoo. com. an
Organisation	LINK NSW BY RAIL
Position in Organisation	
Address*	
Address 1	10/7 NURMI AVE
Address 2	
Suburb	NEWINGTON
State	NSW
Postcode	313]

GLADYS ----WILL YOU ADOPT A RAIL MASTERPLAN FOR NSW?

RATIONALE.

Transport for NSW needs to adopt a long-term, 100-year, sequential rail plan for Sydney and major regional centres. It is illogical, inefficient and unnecessarily expensive to continue building ad hoc rail projects given that there is still no long-term masterplan. The people of NSW should know what the overall plan is and how it will affect them.

MAIN FEATURES OF THE MASTERPLAN.

- A 100-year plan.
- Sequential 5-year plans, with periodic reviews to allow flexibility.
- East Coast Fast Train corridor through Sydney.
- Five ECFT stations. Northwest Central @ Schofields (4 train lines), St. Marys, Badgerys Creek Airport (3 train lines), Southwest Central @ Leppington (3 train lines), Campbelltown.
- Badgerys Creek Airport to be developed in stages. Stage 1 for regional airlines. Later stages dependent on need and funding.
- Second-tier, heavy rail network to remain generally unchanged.
- An alternative, independent and integrated third-tier metro network.
- Integration between the all three tiers to be maximised.
- Emphasis on orbital, north to south lines. First orbital line Beecroft to Revesby.
- Utilisation of Bradfield's existing but unused platforms and tunnels.
- Sixteen metro lines proposed for Sydney- @ 40 kms every 5 years.
- Corridors should be preserved and properties acquired now. Not in 50 years.

- Smallest possible tunnels. Diameter 5.6m. Area 24.6m2. Tunnels are needed on every metro line into the future.
- Smallest possible stations. Length 70 m. No need for 163m long stations.
- Smallest possible cost. See Singapore MRT. Cost could be halved.
- The terrain around Sydney and regional NSW is challenging. From hills and mountains to valleys, creeks, rivers and harbours. Often gradients are steep. The type of metro must be the most suitable for these environments.
- One type of metro train should be selected for all of Sydney and NSW. This allows a train on one line to change to any other line when required.
- Alstom Metropolis C830C or Bombardier Movia C931. Used in Singapore.
- Dwell times are extended by trains having aisles, steps and crowded vestibules.
- Heavy rail trainsets, with a high seating ratio, are designed to have long dwell times and are more suited to long trips with limited stops.
- Three-car metro trainsets with a high capacity/high standing ratio and shorter dwell times, are more appropriate for shorter, all-station trips.
- Where metro and heavy rail share a corridor, heavy rail to be "limited stops".
- We should copy the new Singapore MRT lines which use the latest technologies. Eg third rail for power, driverless trains, lightweight trains etc.
- Frequency. A train every 3 minutes is better than a train every 6 minutes which has double the capacity.
- No T-Junctions. This allows trains to change lines, plus some stabling.
- Third middle track at selected stations. Caters for peak periods, emergencies.
- Five Harbour crossings. No "under-water, under the bridge" crossing.
- Avoid the scenario of catching three trains eg Beecroft to North Sydney.
- Ten metro lines proposed for the 4 major regional centres.
- An amended NWRL to fit into the Masterplan. Additional stations Thompsons Corner, Rogans Hill, Parklea, Stanhope Gardens, The Ponds.
- Future extension to Marsden Park.
- The first stage of the amended NWRL to be Northwest Central (at Schofields) to Beecroft (18.8 kms). The second stage to be from Beecroft to Granville (10.6 kms). This is the first 5-Year Plan. The third stage to be from Granville to Revesby (13.5 kms) thereby completing the first orbital line for Sydney.
- No need to change the Epping to Chatswood Line, opened just 4 years ago.
- The line between Rouse Hill and Tallawong Stabling is not required.
- No 4.2 kms bridge towards Rouse Hill Station. Cut and cover, which was originally planned, is more acceptable to the amenity of the community.
- Light rail lines should be planned for each major CBD precinct.
- Express your views to Transport for NSW or to the NWRL Project Team.
- For more details, contact Bob Masters bobmasters8888@yahoo.com.au Link NSW By Rail Project Team

CONCLUSION.

The Snowy Mountains Hydro-Electric Scheme was a major infrastructure project. The dams, tunnels, pipelines, power stations, alignments and gradients were all planned BEFORE it was built. No ad hoc planning. The new third-tier network of metro trains for NSW for the next 100-years also needs to be planned BEFORE it is built. New lines such as the SWRL and the NWRL should be part of the long-term plan.

SYDNEY 100-Year Rail Plan

Fast Train, Heavy Rail, Metro, Light Rail.

1. East Coast Fast Train 2. West Sydney Fast Train 3. Cityrail 4. Barangaroo Metro 5. Sydney Metro 6. Red Metro 7. Central Metro 8. Harbour Metro 9. Circle Metro 10. Botany Bay Metro 11. Eora Country Metro 12. Blue Metro 13. Waratah Metro 14. Southern Cross Metro 15. Green Metro 16. Southwest Metro 17. Blacktown Metro 18. Castle Hill Metro 19. Darug Metro Light Rail

Link Sydney By Rail Project Team

6 Bob Masters 25.10.2012 bobmasters8888@yahoo.com.au

REGIONAL NSW 100-Year Rail Plan

East Coast Fast Train, Metro Trains.

Newcastle

- 20. Newcastle City Metro
- 21. Kotara Metro

Central Coast

- 22. Tuggerah Metro
- 23. Central Coast Metro
- 24. Gosford Metro

Wollongong

- 25. Illawarra Metro
- 26. Wollongong City Metro

Canberra

- 27. Canberra City Metro
- 28. South Canberra Metro
- 29. West Metro

Link NSW By Rail Project Team

© Bob Masters 25.10.2012

bobmasters8888@yahoo.com.au

YEARS HORIVSET BLACK HOWN CH4597000 RYDE PRESAMATTA Tarret -SALES SALES SACRETE S STRATHFIELD SYDNEY 100-Year Rail Plan MARKETTOWN Fast Trum Heavy Rail, Vietro, Ligar Rail. L. Fass Capa Vast France 3. A RESPUBLIC 4 Barangacoo Serro station that a n. Red Mesno HURSTHALLS k. Marbone Marin 4 figge Maria 10 Borany Bay Meiro 14. For a country Metro 12. Blue stora O. Warman Merca 14. Southern Cross Metro 15: fargen Macro In: Southwest Vietro 15. Blacktown Wetro 18. Castie Hill Metra 19. Darug Metra CHARLEMINE Light Rail Link within the Ray Prince France O Ball States 25.000025 Indianases System com in

ELLYSMIN

			0	(6)	0	0		
	ENST CCAST FAST TRAIN	5.5420	À C	4.	C	1	C	30 24
	TEAIN	11 55 HJ 5:	5 3	9	Č	Ĉ	Ċ	341317
	CITYRAIL BARANGARIC METRIC	+	· Land	7	5)	Į	Ċ	31 248
	SYDNEY	19 33 57 3. 43 66 93 -11	3. 1+		K	1	1	52416
6	RED	3565 35 -7		ę.	24	<u> </u>	7	166 800
7	CENTRAL	42,55 55	~)					15 734
8	HARBOUK	4361 40	3	3	36	5		77 776
51	METRO	DIE 30	2					3/ 248
10	BOTHWE BUT	11 16 22 1						28224

Ŕ

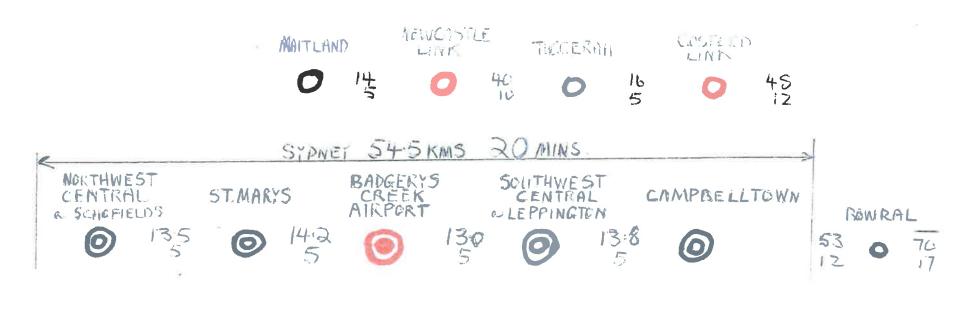
.

5.84 7 4 T 1341142 334 X N. th 1 in 3 15 1 0 1 H 0 rO. 1 1 J. -1 4 2 34 0 Consent 0 7X U 78 1 d + 7 O 1 3) 15 D 0 ŧ 4 -0 Ŧ 5 T int. P. T 63 + 4 5 3 5 10 5 N 3 17 الم ¥ 4 7 -H 0 2 4 ? m -5 SCHOOL SO CNC SS METRO SCHITHWEST METRIC T BLACKTOWN MARS TATA CASTLE HILL CREEN PLIE APTRU METRO PARIE N 1 9 t 3 0 00

15.45 MER 8 1 7 7 134 F 434 1157 5.2 TUTALS

1. East Coast Fast Train

300 KMS/HR 2 MINUTES a STATIONS



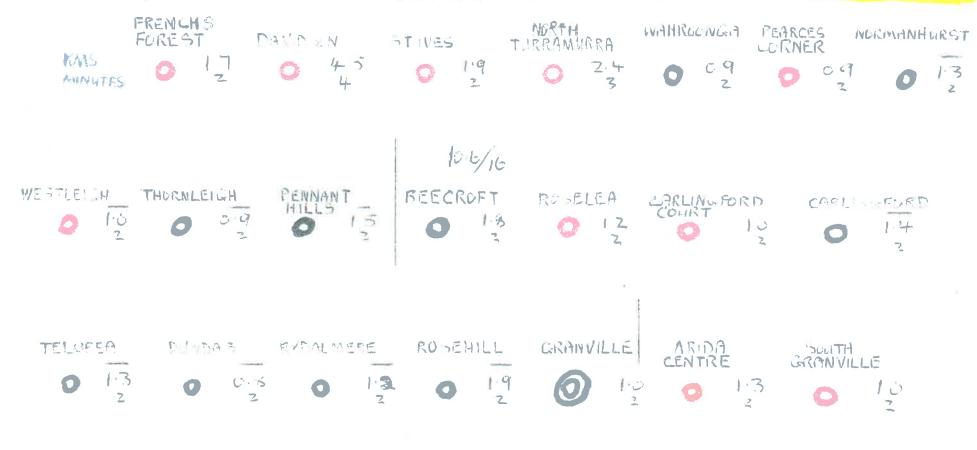




MINUTES 160

STATIONS COST \$ BILLION.

14. Southern Cross Metro



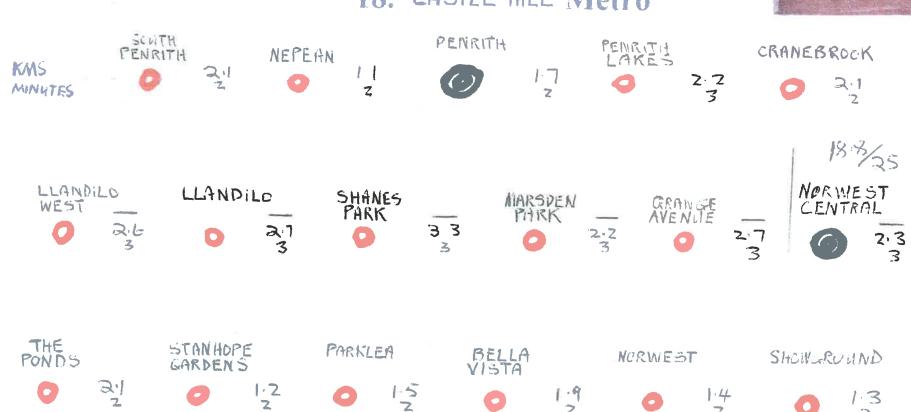




MINUTES 60

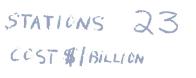
COST #/BILLION

18. CASTLE HILL Metro

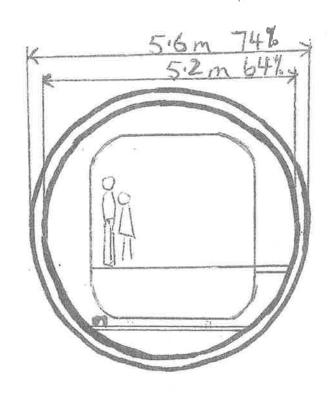








TUNNELS



METRO

NO PANTOGRAPH/CATEMARY.

EXT.DIA 5.6m

AREA 24.63 m²

INT. DIA 5.2 m 73%

AREA 21.24 m²

H 3.68 W 3.20

WT 35T

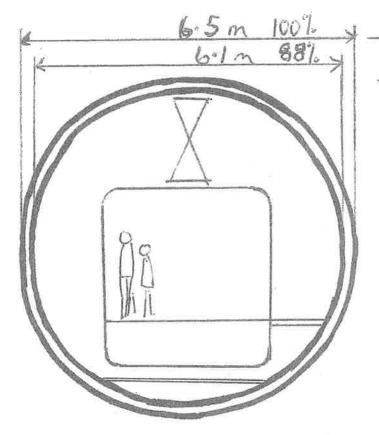
LENGTH 3 CARS 70 m - 43%

CAPACITY 931 148/783

10 TRAINS 9310 1480/7830

SPOIL 3 | MILLIUN TONNES

#0.168/KM



HEAVY RAIL

WITH PANTOGRAPH/CATENARY 1.6 m

EXT DIA 6.5m AREA 33.18m2

INT DIA 6:1 m -> 100%.
AREA 29:22 m2

H 3.68 W 3.20 WT 300 t ? LENGTH SCARS 163 M-160

CAPACITY 78×8 = 624 SEATE + 40×8 = 320 STAN TOTAL 944

GRAINS 5,664 3,744/1920 SPOIL 4:5 MILLION TONNES. \$0.238/KM 114

METRES

CAPACITY

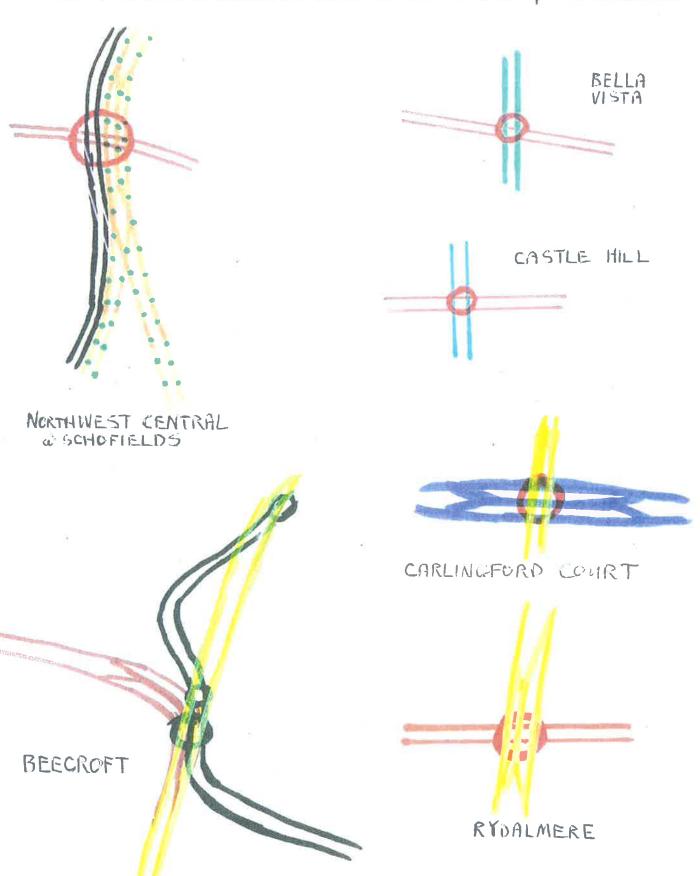
		TRAINSETS 1						
		SEATS STAND		1	6	15	30	
1	HEAVY RAIL DOUBLE-DECK	(11Z) 12 UP (48)	(10x1F)	16	13	-		
	8-CAR	896	160	1,056	6,336	15,840	31,680	
	WARATAH A	p.			1			
2	HEAVY RAIL SINGLE-DECK	(56)	(iox16)	16	IX.	-		
	8-CAR	448	160	608	3,648	9,120	18,240	
	NWRL						$\overline{}$	
3	METRO		,	(240)				
	8-CAR	492	1,428	1,920	11,520	28,800	57,600	
	SINGAPORE							
4	METRO	(4-8)	(2.12)	(260)				
	6-CAR	288	ובדבו	1,560	9,360	23,400	46,800	
	HONG KONG	2					-	
5	METRO	(49)	(261)	(310)	-			
	3-CAR	147	783	930	5,580	13,950	27,900	
	SINGARORE CIRCLE & DOWNTOWN LINES	a.			-			
painments		<u> </u>	1			1	1 L a	

PRIDRITY []

SYDNEY THIRD TIER NETWORK

STAGE & CASTLE HILL METRO - Northwest antrai-Beccroft.

STAGE & SOUTHERN CROSS METRO-Beccroft-Granville.



Alstom Metropolis C830

Loon Wikipedia, the free encyclopedia

The **Alstom Metropolis** C830 are the second generation of communication-based train control (CBTC) rolling stock to be used in Singapore's Mass Rapid Transit (MRT) lines. Alstom was contracted in 2000 (as part of turnkey contract C830) by the Land Transport Authority (LEA) in Singapore to supply the trains for the Circle XIRTTipe.

the automated system version, previously known as "moving block systems". CB1C systems do not require traditional "fixed-block track circuits" for determining train position. Instead, they rely on "continuous two-way digital communication" between each controlled train and a way side control center, which may control an area of a railroad line, a complete line, or a group of lines. Recent studies consistently show that CB1C systems reduce life-cycle costs for the overall rail property and enhance operational flexibility and control.

Despite being similar to the fully underground North Last MRT Line, the decision was made to power the three-ear trains along the upcoming Circle Line by third rail instead of overhead catenary, 40 trainsets of three cars each were purchased for the Circle Line, 1.1.7 \(\chi_{\text{says}}\) s that they will be adding 16 new trains to the Circle Line by 2015.

These cars, although similar to their counterports running on the North East Line, do not feature LCD displays in each car. Also, the front of the train features an extra window cut into the emergency exit door, something lacking in the North Last Line trains, In addition, due to its driverless configuration, there are windows at the front and back of the train, giving passengers a view of the tunnel as the train speeds through.

Contents

- 1 Serial number
- 🗷 2 Design
- 3 See also
- 4 External links
- 5 References

Alstom Metropolis C830



Alsion Aletropolis C830 trains in Kim Chuan Depor



Interior of the Alstoni Metropolis C830 on the Uircle Uinc.

In service 28	MAIL	(HH) =	(urrem
---------------	------	--------	---	-------

Namber built (120)

$$Me1 = 1 = Me2$$

Alstom Metropolis C830C

From Wikipedia, the free encyclopedia

The Alston Metropolis C830C together with the Alstom Metropolis C751C are the third generation of communication-based train control (CBTC) rolling stock to be used in Singapore's Mass Rapid Transit (MRT) lines. The contract, worth S\$134 million, was awarded to Alstom (as part of turnkey contract C830C) by the Land Transport Authority (LTA) in Singapore to supply additional trains for the Circle MRT Line. The train, a total of 24 trainsets of 3 cars will be delivered starting from 2015. [1][2]

See also

Alstom Metropolis

External links

References

1. ^ "LTA and SMRT Award Contracts for New Trains and Re-Signalling

Alstom Metropolis C830C

In service

2015

Manufacturer

Alstom

Built at

Shanghai, China

Family name

Metropolis

Constructed

2012 - 2015

72

Number built

Formation

3 per trainset

Me1 + T + Me2

Capacity

931 passengers

Operator

SMRT Trains (SMRT

Corporation)

Depot(s)

Kim Chuan

Line(s) served

Circle Line

Specifications

Doors

1,400mm. 8 per car

Maximum

90 km/h

speed

Traction

IGBT-VVVF

system

(Alstom ONIX)

Power output

1.66 MW

Electric system 750 V DC 3rd rail

(s)

Safety system

Alstom solution - URBALIS

control system (ATC/CBTC,

ATO, UTO)

Project" (http://app.lta.gov.sg/corp_press_content.asp? start=5qmktlgi52sor9rc5r00c6xm8pg371lwhgx5hvtwu8381p6o95). February 01, 2012. http://app.lta.gov.sg/corp_press_content.asp? start=5qmktlgi52sor9rc5r00c6xm8pg371lwhgx5hvtwu8381p6o95. Retrieved February 02, 2012.

2. ^ "Alstom to supply 34 Metropolis trains and signaling upgrade to Singapore metro" (http://www.alstom.com/transport/news-and-events/press-releases/alstom-supply-34-metropolistrains-signaling-upgrade-singapore-metro/). February 01, 2012. http://www.alstom.com/transport/newsand-events/press-releases/alstom-supply-34-metropolis-trains-signaling-upgrade-singapore-metro/. Retrieved February 02, 2012.

Bombardier MOVIA C951

I may will prestite the receiver stoppedies

The Bombardier VION (A C951 is a point seen had by Bombarder Transportation for one on die Determinant inter-surgapure orbidals presently being built

73 indinsets consisting of 2 cars each Core purchased at a cost or approximately \$857a). This infiliantian pursuinger service 19 these trains will be delicered between the 2012 to 2016. They will be stabled in Call Bana (Ceparand also on Kim Chamil Tepor.)

Bumburdier beat. Absorn, kawasaki Henry militaries, and Hyundai Rotem in the tendering process as the forces good officied.¹⁵

Contents

- z d i fequation
- # 21 minus
 - # 2 I Design
 - E 2.2 t liber.
- W The Park
- a 41 dentil links
- a 5 Neletences

Operation

(April M\$1 unins are fully automored, to librate are adam, remaing on a system similar to that are cloudly \$300.

Features

(bearing of

The 1951 mins may include several features may were not seen in existing trains. If these features have been incorporated must be mocking of the train as the Land Transport Authorist tumpshine Office.

A come include

· twengementie van greffle:

Reminariller MOVIA (951



Land for a march-open the 1951



mongleure fanction of their or h

inservice.

391

Unantherures

Bophania Carparation

Built of

Changeline of the poster a more beau

Rathern & Shirtzer

Camilly mapte

Stor Lie

Secretary Small

2311

Larmation

.

Operator

Settle Company of contract bottoms

.

15

e dellan mel koncelient

Liners) veryed

the meet of the

Specificulions

Carring

A Triller

TO THE PERSON AND THE

for leavily

THE PROPERTY OF THE PARTY OF

A new design of straphangers, which is also used in other metros worldwide, offers commuters a steadier grip during train journeys.

- f) Two-tone flooring
 The two-tone flooring is an aesthetically new design.
- 6. Existing features such as two rows of overhead rail with straphangers and triplicated poles are retained for commuters to hold on to during the train journey. These features also serve to encourage commuters to move inwards, away from the doorway.

Environmental-Friendly Train

7. The use of new technology in the train's power generation and drive systems is one of the key features of the environmental-friendly train. The ability to apply regenerative brake over a larger speed range during operation provides higher energy recovery and reduces brake wear. In addition, the application of medium-frequency converters in power generation helps in the reduction of overall energy consumption. There will be a weight saving of 1.4 tonnes per train, which over the life of the train, would translate to an energy saving of approximately 8,000 kilowatt hour per year.

Background

- 8. Contract 951 is for the procurement of 73 three-car trains for DTL. The Contract was awarded to the consortium Bombardier Transportation GmbH / Bombardier (Singapore) Pte Ltd in November 2008.
- 9. The DTL trains are designed in Germany and manufactured in Changchun, China:

About Downtown Line

- 10. At 40 km with 33 stations, DTL is the longest fully underground rail project to date and will run through high-traffic and built-up corridors. With the DTL, the connectivity of the existing rail network will be strengthened. The DTL will facilitate direct travel from the northwestern and eastern areas of the island to the Central Business District and the Marina Bay. It also provides a strategic transport link to support the development of the Marina Bay area.
- 12, DTL is projected to see a daily ridership of around 500k when in full operation.

Last Updated on 22/10/2009

vilm by A. Lapson Change

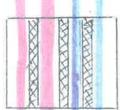
```
II THINNELING UNDER A RIVER"
    IL THAVEL BORING MACHINE LOVAT RMEZZZZ
           "TEM/THANELLING VIDEO"
             "DOWNTOWN LINE 2 ROUTE
   SANLI WWOT NWOOD SHIT SO WOITDMATZNOD"
  ILLAND TRANSPORT ANTHURITY— THE WORLD CLASS II.
          ANIA LESSAMS TASINIA TAMEN
  "SMRT TRAINS-EXCELLENCE in Metron (1994)"
                                LOSGIV SIGHTO
        DOWNTOWN LINE 40KMS & 33 STATIONS
               ALSTUM METROPOUS C830
                 #14c MILLION/Km.
               (HSN) MOITIS 9. +7$ 1500
    Walter Xeature as BRAS BRSAK STATION
            PULLY ANTOMATIC - DRIVERLESS
                 500,000 commuters.
                    FULLY UNDERCROUND
            LETALNIAST SAD E - 2NIAST 04
(ATL) TEANSHER ANTHORITY (LTA)
               3.3 Kms ORBITAL LINE.
    (4) English: Circle Line Part 1/42 Prices - 4)
```

You Tube:

NO T-JUNCTIONS NO DEAD-ENDS RED METRO - BLUE METRO

STABLING FACILITY FUR FOUR TRAINS (RED OR RLUE LINE)

RED METRO TERMINATES



STATION WITH ISLAND PLATFORMS Third Middle Track a Station,

NSW Long-Term Transport Master Plan Submission Response to Discussion Paper

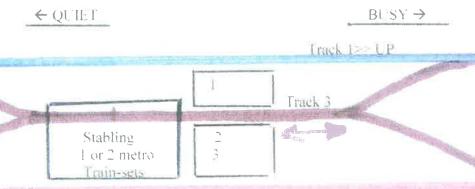
Date Due: 27 4 2012

SYDNEY TRANSPORT

Q4. In solving the transport problems in Sydney, what transport mode should be the first priority for new investment, bearing in mind the need for a socially equitable and environmentally sustainable transport system? A second network of metro trains needs to be started. Metro is clearly the best option for a large number of reasons. The first stage must be on the North Shore Line or in the North West NWRL area.

The concept of a THIRD MIDDLE TRACK a STATIONS needs to be studied. It would have several advantages to the efficiency of the new metro network.

- Emergencies at stations can be resolved.
- Breakdowns can be stabled.
- Trains can change to the other two tracks.
- Frains can reverse direction.
- Peak capability can be doubled.
- Stabling capability for 1 or 2 trains.
- Allows closure of one track during operational hours.
- Allows closure of Platform 1 or Platform 2.3 during operational hours.
- Allows more services towards busy area.
- Allows track repairs near station on one track.
- "Limited stops" metro services could be developed in busy areas by building several consecutive stations with this station design.
- Stations with a third middle track could be build at regular intervals and at strategic locations, perhaps every fifth station.



Track 2<< DOWN

Bob Masters — Link NSW by Rail Project Team — Fel. 96471419 bobmasters8888 a yahoo.com.au

Greiner's traffic plana real choker, says expert

Jacob Saulwick TRANSPORT

A PLAN to build motorways across the west, inner west and south of Sydney is a throwback to 1950s transport planning that will quickly lead to congested roads, says one of the state's most respected transport figures.

In rare public comments, the former chief road builder and rail bureaucrat, Ron Christie, has delivered a scathing critique of the plan being proposed by the head of Infrastructure NSW, Nick Greiner, as part of its 20-year strategy for the state released this month.

Mr Christie's critique argues the strategy includes no plan to allow commuters to switch between the new M4 and M5 motorways and public transport. It also says the plan for the train



Critical of the new strategy ...
Ron Christle. Photo: Fiona Morris

system is deficient. "What is plan B when both the M4 and M5 run full in a few years' time after completion?" Mr Christie said.

His comments carry the rare

smh .com.au On the web Read Ron Christie's full analysis of the infrastructure NSW proposal

authority of one who has led the state's road and public transport arms. As a former chief executive of the Roads and Traffic Authority, he led the construction of the Eastern Distributor,

He also oversaw the widening of the M4 from four lanes to six between Penrith and Westmead before the Olympics in 2000. After the M4 was widened, it immediately became clogged again.

"That example indicates that without other measures, just taking a roads approach to the problem is doomed to fail," he said. "It is back to the 1950s. It is a real LA-type solution."

The state infrastructure strategy was built around new M4 and M5 motorways – dubbed WestConnex – to run through inner west and southern Sydney.

The government has since adopted the project but is yet to respond to Infrastructure NSW's other suggestions.

Infrastructure NSW, chaired by Mr Greiner, a former premier, argued against adding new lines to Sydney's train network beyond the south-west and north-west rail links already under development.

Infrastructure NSW argued that most journeys in Sydney were by car, therefore the city needed more motorways before new public transport projects.

But Mr Christie said that without investment in public transport, roads would inevitably become clogged. There was no plan to allow motorists to use the new motorways then change to public transport. The plan offered little detail on how to deal with congested traffic coming off the motorways.

"The report attempts, but not convincingly, to mount the argument that motorway extensions towards centres of activity do not in themselves attract more private transport," Mr Christie said.

"Experience is that they do, especially if there is a failure to develop a high-class public transport alternative."

Mr Christie was also the coordinator-general of rail and ran transport operations during the Olympics. He has not commented on transport issues since chairing the *Herald's* independent transport inquiry in 2009-10.

He said the motorway plan condemns drivers to sharing

road tunnels with large truck heading to and from Port Botany

"The mixing of trucks and private vehicles in a confined tunne increases safety risks but also presents ventilation challenges, he said. Infrastructure NSW could have considered a separate tructumnel for the eastern extension of the M5, he said.

A spokeswoman for Infra structure NSW said: "Mr Christle is entitled to his opinion but the state infrastructure strategy is al about generating fresh ideas fresh thinking and moving or from past failures."

She said the strategy did offer ways to reduce congestion near the airport and Port Botany, and options for interchanges betweer WestConnex and public transport would be considered as part of detailed project development in coming months.