

INQUIRY INTO SYDENHAM-BANKSTOWN LINE CONVERSION

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1. Introduction, conclusions, recommendations

1.1 Introduction

1.1.1 This is my second round of comments to the Inquiry.ⁱ

1.1.2 It builds on my earlier submission. It outlines and comments on:

- the NSW Government submission to the Inquiry (part 2);
- transcripts of testimony from Mr Wardrop, Mr Hounsell and myself at public hearings 7 November 2019 (part 3);
- transcripts of testimony from NSW Government representatives at public hearings 7 November 2019 (part 4); and
- terms of reference in light of the above (part 5).

1.2 Summary

1.2.1 The NSW Government submission and transcripts to date have done nothing to dispel doubts about Sydney Metro. In fact, that submission and testimony heighten concerns about NSW urban rail policy since 2012.

1.2.2 The author's testimony noted Sydney Metro uses the wrong fleet - rapid transit - for commuter rail tasks while the commuter fleet operated by Sydney Trains is inappropriately tasked with rapid transit functions. It referred to an unexplained policy of attempting to make these arrangements permanent and irreversible. NSW policy is delivering a transport type of upside-down world met by Alice in Wonderland and through the Looking Glass.

1.2.3 Sydney Metro is not a normal metro or rapid transit system. Its purpose is not rapid transit. It may forever prevent expansion or development of other railways in Sydney.

1.2.4 Its abnormality was confirmed by NSW Government representatives who argued Sydney Trains should do the 'heavy lifting' - in contrast to claims Sydney Metro was chosen because of capacity considerations.

1.2.5 The representatives further confirmed this by referring to a 'strategy' of converting branch lines to Sydney Metro. As branch lines are relatively less used by passengers and trains, it means Sydney Metro should perform tasks where relatively low capacity is presently needed – again in conflict with previous claims.

1.2.6 Neither the Government's submission nor testimony offered any proper explanation for matters that place Sydney Metro at odds with Australian and international practice.

1.2.7 Nor did its submission or testimony go towards explaining fundamental contradictions between Government announcements and what has been done.

1.2.8 Neither its submission nor testimony suggested any contemplation of obvious options that would have mitigated or overcome the deleterious effects of Sydney Metro decisions – options such as 'Bradfield' standard tunnel sizes; extension to Strathfield as suggested by international experts; routing to the airport.

1.2.9 The only Government attempt to explain why an option had been ignored – its comments about the Sydney airport option – was so stupid and so in conflict with other explanations as to suggest a farrago of flippant falsehoods.

1.2.10 At the public hearings Government representatives intimated a motive behind Sydney Metro is to minimise the ability of future Governments to influence rail services.

1.2.11 Rail expert Mr Wardrop said he was mystified why Metro had been adopted in Sydney. A Committee member observed - in response - there seems to be a metro faction in the NSW bureaucracy that is hegemonic. Mr Wardrop agreed this seems to be the case.

1.2.12 The possible motives in 1.2.10 -1.2.11 - to minimise Government influence and advance a bureaucratic faction - are the most logical explanations so far for the peculiar Sydney Metro and bizarre Government explanations.

1.3 Conclusions

1.3.1 Sydney Metro is not a rapid transit or metro system. Its peculiarities make it subject to doubts and criticisms that could not be levied against a normal rapid transit system. Far from dispelling such doubts, evidence to the Inquiry from the Government raises substantial new questions and criticisms.

1.3.2 Sydney Metro introduces the most significant – probably negative - transport issues in Australia since at least World War 2. This reflects its adverse permanent impact on the existing rail system. It also reflects its strange running of long-distance commuter services with a fleet appropriate only for another task – short distance rapid transit - and its attempt to be irreversible. Among the consequences are diminished opportunities for generations of Western Sydney residents.

1.3.3 Among the implications for this Inquiry is that decisions about Sydenham – Bankstown extension are not merely, or even primarily, about that locality. Rather they concern permanent allocation of half of Sydney's critical harbour crossing - global arc rail capacity to a rapid transit fleet on a single route with ramifications throughout the metropolitan area.

1.3.4 By not substantiating - in some cases by contradicting - its previous claims, and by not rebutting other views, it could be inferred the Government has conceded to the Inquiry:

- Sydney Metro does not have the capacity previously claimed;
- Sydney Metro compares unfavourably with Sydney Trains;
- Its decisions on Sydney Metro extension, CBD route, and to Bankstown were made without regard to proper analysis;
- Its decisions were concerned with installing its Sydney Metro somewhere rather than with meeting Sydney's transport or development requirements.

1.3.5 The Government's submission to the Inquiry was further evidence of the validity of my principal concerns: its indifference to the welfare and prospects of the people of Western Sydney; lack of care for what it tells the community.

1.3.6 The circumstances of Sydney Metro being a potential disaster for the metropolitan area – especially Western Sydney, the absence of any reasonable official explanation for its strange characteristics, and the implications for permanent allocation of harbour crossing – global arc rail capacity mean it would be irresponsible to countenance any extension at this time, least of all to Bankstown.

1.3.7 Rather, the right course is for the Inquiry to recommend a stop to all work and planning on railways in Sydney until a properly constituted independent and expert review advises Parliament on the implications of Sydney Metro and about options for the future.

1.3.8 This supports recommendations of my first submission, with two modifications.

1.3.9 Former recommendation (i) can now be omitted.

1.3.10 Given the failure of the NSW Government to provide evidence about reasons for and effects of Sydney Metro, a new recommendation (iv) is added.

1.3.11 As ever, comments and corrections would be most welcome. I would be happy to expand on the above in writing and in person.

1.4 Recommendations

- i. An expert public inquiry, independent of the NSW Government, be established to report to Parliament on:**
 - a. implications of Sydney Metro and related NSW policies and proposals, including for Western Sydney rail; and**
 - b. options for public transport policies and projects affecting Sydney.**
- ii. There be no Government consideration of, or action on, any Sydney passenger rail project including extension of Sydney Metro, prior to Parliament deliberating the report of the expert public Inquiry (arising from recommendation ii).**
- iii. If, notwithstanding the above, work on Sydney Metro is to continue, this Inquiry should find that conversion of the Bankstown line to Sydney Metro is the worst possible option.**
- iv. This Inquiry require the NSW Government publish all material relevant to every claim made in its submission.**

2. NSW Government submission

2.1 Establishing Sydney Metro trajectory

2.1.1 The NSW Government submission referred to *Future Transport 2056* and the *Greater Sydney Plan* as the overarching strategy within which Sydney Metro is framed.ⁱⁱ

2.1.2 It said the trajectory for Sydney Metro was established in 2012 via *Sydney's Rail Future*. *Sydney's Rail Future* preferred:

'a Metro network integrated with the existing (rail) network',

over three other options one of which was an:

'independent metro network'.

2.1.3 The submission claimed the reason for the trajectory was the existing rail network could not cope with estimated demand. A first step was a conclusion that network needed support by a:

'separate, independent "differentiated" system'.

2.1.4 The submission said the next step was assessment of various:

'differentiated service opportunities',

the best option for which was one:

'integrated with the existing network'.

2.1.5 Rapid transit / metro railways operate in other cities. The submission presented a sample comparison of metros: Seoul, London, Shanghai, Singapore, Tokyo, Hong Kong, Paris and Amsterdam. The sample only compared claimed line length. There was no explanation of how the sample was derived or the relevance of line length.

2.2 City and Bankstown extension

2.2.1 The submission said the City and Bankstown extension of the North West Sydney Metro was justified by a business case conforming with NSW and Commonwealth guidelines. The business case document has not been published, but a summary has.

2.2.2 The submission said the business case was reviewed and approved by some bodies: *'overseen by a crossagency committee including representatives of NSW Treasury, Infrastructure NSW and the Department of Planning, Industry and Environment'.*

The review and approval have not been published.

2.2.3 The submission said:

'Analysis of the project's benefits was undertaken by specialist expert advisers'.

The advisers remain unidentified. Their analysis has not been published.

2.2.4 It further said:

'the business case was independently reviewed under the NSW Government's Infrastructure Investment Assurance Framework and the panel considered that it "provides a compelling and comprehensive justification for the project".'

This review has not been published. The submission did not identify its authors.

2.2.5 The business case was reviewed by Infrastructure Australia which recommended the City etc. Sydney Metro as a high priority project.

2.2.6 Infrastructure Australia was quoted by the submission saying the business case:
'presented a comprehensive assessment that details the rationale for the final project route and station locations.'

2.2.7 The submission noted Infrastructure Australia was:
'confident that the benefits of the project will exceed its estimated costs'.

2.2.8 It quoted Infrastructure Australia's then Chief Executive, Mr Davies:
'The positive assessment of the Sydney Metro City & Southwest business case reflects that this is a sound investment for Sydney—an investment that will enhance the productivity and connectivity of a city ...'.

2.2.9 The submission noted the base case for Sydney Metro included extension along the Bankstown line:

'Base Case – Sydney Metro on the T3 Bankstown Line to Cabramatta and Lidcombe, and the T4 Eastern Suburbs and Illawarra Line to Hurstville.'

2.2.10 It claimed there was exploration of options of extending Metro to Sydney Airport, including by conversion of the existing Airport line. These options were rejected as having:
'Some disadvantages, as well as constructability issues. Variations were explored in subsequent analysis to attempt to overcome disadvantages.....'

and they would:

'Provide excessive capacity for T8 Airport Line patronage, while inadequately addressing network demand and relieving broader network capacity constraints.'

2.2.11 It claimed unless Sydney Metro is extended to Bankstown the Government would:
'not be able to look to provide.....'

- *Dulwich Hillwill not have lifts.....*
- *Stations such as Belmore will continue to have 4 trains per hour, instead of the 15 per hour.....*
- *2 additional services per hour from Revesby, providing additional capacity for 2,400 more people in the peaks.....*
- *Unable to increase the frequency of services in the future to 24 trains per hour, providing additional capacity for 7,400 more people in the peaks.....*
- *(re Illawarra) additional suburban trains per hour, providing an additional 2,400 seats per hour.....' etc.*

2.2.12 The submission stated reasons for deciding on the Bankstown conversion were to:
'improve rail network reliability by reducing the number of rail lines sharing the same existing tracks and will facilitate much needed capacity increases from the west and south west.....
unlock capacity at Central Station platforms and enable the relocation of train paths on the City Circle.....
significantly reduce platform and train crowding.....

(as it) does not share operations with other lines or rail freight. It would therefore be less complex to convert and segregate from the existing rail network when compared with other lines.....

less infrastructure work.....

Reduced rail network complexity unlocking the capacity constraint presented by the existing network configuration at Sydenham and into the City Circle.'

2.2.13 The submission offered support for the reasons in 2.2.12 (above) by many mentions of capacity. Some of these referred to infrastructure and some referred to trains.

2.2.14 The submission mentioned 'line' / 'lines' many times. These comments variously referred to the different concepts of infrastructure e.g. *'up to 15 branch lines into this limited CBD capacity'* and of train operations e.g. *'three lines that share the City Circle loop.'*

2.2.15 The submission's mention of 'branch' lines in Sydney appears to be novel for relevant NSW Government publications. However, testimony from NSW Government representatives (4.1.9 below) make it critically significant in that the strategy is now supposedly to be to convert branch lines to 'bespoke' Sydney Metro.

2.2.16 The submission claimed the Sydney 'suburban' rail network is complex with:
'only two lines through the city'.

2.2.17 It drew a conclusion about the Bankstown Line from mentions of capacity and lines:
'The T3 Bankstown Line creates a significant bottleneck for the existing rail network.'
It claims extension of Sydney Metro to Bankstown will 'unlock' capacity in the CBD, on top of the addition of new Sydney Metro capacity in the CBD.

2.2.18 The submission stated Sydney Metro will have:
'the capacity to run a metro train every two minutes each way through the centre of Sydney – a level of service never before seen in Sydney.'

2.2.19 It also stated:
'Stations west of Bankstown will continue to be serviced by Sydney Trains.... on the redesigned T3 Bankstown Line.'

2.3 Omissions from the submission

2.3.1 Several matters were not addressed by the submission. The more notable include:

- a. Sydney Metro's determining characteristics of tunnel diameter and CBD route;
- b. Estimates of Sydney Metro carrying capacity – it only refers to train numbers;
- c. Comparison of Sydney Metro and Sydney Trains seating and carrying capacity;
- d. The net impact of (any) Sydney Metro project on rail capacity.

2.3.2 Any claim as to the confidentiality of the 'business case' – as distinct from its summary – would have lapsed at this stage of the project. Another omission was
e. Non-publication of the business case.

2.3.3 Also omitted were:

- f. Assessments that led to the initial Sydney Metro decisions (2.1.2 - 2.1.4 above);
- g. An explanation of the international comparison (2.1.5);
- h. The cross-agency review (2.2.2);
- i. The identity of advisers (2.2.3);
- j. Analyses and reports by advisers and others (2.2.3);
- k. The review of/under the assurance framework, and its authors' identities (2.2.4);
- l. Infrastructure Australia's (full) assessment (2.2.5);
- m. The source of operational and policy claims (2.2.9 - 2.2.18);
- n. Advice on operational and policy claims (2.2.9 - 2.2.18).

2.4 Comments on the submission

2.4.1 Apart from stating that trains will continue to operate to stations west of Bankstown (2.2.19 above) – which while supported in NSW Government testimony, conflicts with the relevant diagrams in *Future Transport 2056* and *the Greater Sydney Plan* - the submission adds little factual support to what the NSW Government has previously told the public.

2.4.2 However, the submission's unsupported propositions and errors indicate haste in its development and chaos in policy making.

2.4.3 The submission's claim about the primary decision, to introduce its Sydney Metro (2.1.2 - 2.1.4 above) is oxymoronic. How can there be: an integrated, independent, separate network / system? The submission is clearly confused.

2.4.4 The submission provided no reason for eschewing the obvious option of augmenting the existing rail network or by supplementing the network with interoperable infrastructure.

2.4.5 Its comparison of the length of a few metro lines in other cities (2.1.5 above) was misleading. It is as pointless as observing, for example, the main south line is 600km long.

2.4.6 Any reasonable technical comparison of rapid transit/metro would depict essential characteristics e.g. distance between stations; train frequencies; line layout and intersections; type of service. These would cover the entire system rather than a single line. The submission failed to do this.

2.4.7 More relevant than a technical comparison (of 2.1.5 and 2.4.6 above) would be a contextual comparison of systems' functionality, for example: population / density; whether the system has transit or commuter functions. Possible contextual measures would indicate: displacement of other specified 'modes' notably walking and car use; passenger on-board time; passenger standing time; design and actual train loads as % of seating; directions of passenger travel. The submission failed to do this.

2.4.8 Such a functional analysis / comparison would indicate Sydney Metro intends to and does serve a commuter function – that it is a misapplication of technology.

2.4.9 A most basic error of the submission and previous official documents arises from the failure to identify the implications of Sydney Metro's small tunnels and CBD route. This failure means opportunity costs were ignored. It invalidates all assessments of the project.

2.4.10 The failure to deal with opportunity costs represents either extraordinary ineptitude in assessments – of not identifying costs - or the proponent not advising assessors of the facts and implications – opportunity costs - of tunnel dimension and CBD route.

2.4.11 The submission's use of quotes from Infrastructure Australia were out of context. Infrastructure Australia's claim of a '*comprehensive assessment of final project route*' (2.2.6 above) not only lacks any evidence – but the evidence that is available suggests there was no relevant consideration of the most vital part of the route – through the CBD.

2.4.12 That Infrastructure Australia was '*confident*' benefits would exceed costs (2.2.7 above) was only because final financial cost estimates were not known – a situation unique among Infrastructure Australia's endorsements to at least that time.

2.4.13 Such '*confidence*' – i.e. absence of fact - underlines that Infrastructure Australia did not relevantly apply the essential concept of any assessment - opportunity cost.

2.4.14 The submission omitted the following from Infrastructure Australia's summary assessment:

'Infrastructure Australia would have expected a more quantitative comparison of the plausible alternatives given the scale of the project.'

This means plausible alternatives were not examined. It is further confirmation of failure to appreciate opportunity costs and of the apparent uniqueness of Infrastructure Australia's positive recommendation.

2.4.15 Points 2.4.11 - 2.4.14 (above) do not support the comments attributed to Infrastructure Australia's former Chief Executive.

2.4.16 The use of a base case in which any extension of Sydney Metro is assumed (2.2.9 above) is contrary to accepted practice. Rather, accepted practice would assume no extension.

2.4.17 The inclusion of extension of Sydney Metro along the Illawarra line to Hurstville in the base case (2.2.9 above) was ludicrous. That base case could not be acceptable to decision makers - for reasons outlined in my submission – and therefore was inappropriate.

2.4.18 The submission did not indicate exploration of the metro extension suggested by Infrastructure NSW and several international experts – to Strathfield instead of Bankstown. Nor does it provide any reason for not exploring that option.

2.4.19 The submission's reasons for rejecting an extension via Sydney Airport (2.2.10 above) include nonsense and conflicts with facts. Part of the reason given for rejecting an extension via Sydney Airport – that such extension would provide excessive capacity – is at odds with NSW Government announcements of providing Sydney Metro style services to Western Sydney Airport.

2.4.20 To explain 2.4.19 (above), conversion of the CBD-Sydney Airport line segment to Sydney Metro would involve around 10km of pre-existing infrastructure. The Kingsford Smith airport is around 10-15 minutes from the CBD by rail. It handles around 45 million airline passengers annually. Rail demand on the segment is supplemented by increasingly large populations at Mascot and Green Square etc. This might be compared with the Government's plan to install around 20km of new Sydney Metro infrastructure, starting around 50km from the CBD, progressing further outwards along a route with very low population to an airport that is yet to open.ⁱⁱⁱ

2.4.21 Airport rail services should be by single-deck trains. Such trains and systems have lower capacity than double-deck trains that currently serve Sydney. NSW policy for rail to Sydney Airport - to continue with inappropriate trains - demonstrates another conflict between policy and the submission's reason for not extending Sydney Metro to the Airport.

2.4.22 Further (to 2.4.21 above), there is now the possibility of running single-deck trains on the Airport line without conversion to Sydney Metro or associated costs. However, the submission failed to acknowledge this.

2.4.23 In conjunction with 2.4.17 - 2.4.22 (above), this failure to acknowledge the possibility of running single deck trains on the current Airport line is further evidence for the view that the NSW Government is concerned with identifying places for its particular peculiar Sydney Metro rather than having appropriate transport systems for Sydney. It is evidence decision making is not about double-deck v. single-deck trains etc., but rather it is about Sydney Metro. The failure would be more egregious were the old claims of 2.4.48 (below) correct.

2.4.25 The submission's claims of Government inabilities in the absence of Sydney Metro extension (2.2.11 above) intermingle single and double negatives so badly as to be unintelligible – even if they were true.

2.4.26 Some claims of Government inabilities (2.2.11) are untrue. An example is the supposed necessity of Sydney Metro for the installation of station lifts.

2.4.27 Other examples of errors in the submission include seating numbers, which on some suburban trains are implied to amount to 1,200 - a number the submission otherwise (wrongly) implied to be the seating and standing capacity of a suburban train.

2.4.28 The 1,200 number (in 2.4.27 above) was directly contradicted in testimony by NSW Government representatives (4.1.16 below).

2.4.29 The submission's comments on lines and capacity (2.2.12 – 2.2.17 above) included substantial mistakes, are confused and apparently are based on a false premise.

2.4.30 An example of a substantial mistake was a given reason for rejecting alternatives to Sydney Metro extension to Bankstown – that the existing line does not share operations with freight (2.2.12 above). This 'reason' is wrong in three respects. First, some of the Sydenham-Bankstown segment's corridor and alignment are shared with freight trains. Second, it was implicitly contradicted by NSW Government representatives in testimony (4.1.18 below). Third, most potential Metro-extension alternatives to Bankstown - Airport segment, East Hills segment, CBD-Strathfield - do not have freight trains in their corridors.

2.4.31 Confusion (referred to in 2.4.29 above) is illustrated by:

'There are only two lines through the city (the T1 North Shore Line, the T1 Western Line and the T9 Northern Line, and the T4 Eastern Suburbs & Illawarra Line)....'

To identify two lines, the submission cited four. It also omitted the City Circle which – properly considered – is another 'line' (or perhaps three 'lines') through the city.

2.4.32 Confusion is further seen in the oxymoronic claim (referred to in 2.4.3 above) which was presented as the foundation of the introduction of Sydney Metro.

2.4.33 More confusion arises from the submission's failure to differentiate capacity from capacity utilisation (e.g. in 2.2.12 above).

2.4.34 The false premise (re 2.4.29 above) arises from failure to differentiate infrastructure from services – 'track' from 'trains'. This is evident in the quote in 2.4.31 (above). The quote presumably intended to say there are two network lines – track pairs - through the city, and/or there are four service lines – origin/ destinations – for trains passing through the city. (For the reasons of 2.4.31 above, both such statements would be wrong).

2.4.35 The confusion and false premise betray a fundamental misconception: the existing rail network's fact of junctions creates a capacity constraint (2.2.12 above). That misconception leads to major analytic errors such as: supposition that isolation of infrastructure lines is a precondition for 'turn-up and go' services; that 'turn-up and go' services are desirable to maximise infrastructure capacity.

2.4.36 A track with a junction cannot have less capacity than a similar track without a junction. This is most simply demonstrated by trains not using the junction. It is not necessary to remove the junction for the track to be operated as if there was no junction.

2.4.37 The junction allows trains to merge, disperse, pass or overtake, increasing track capacity. A most important corollary is: infrastructure interoperability, a junction being an example, increases network capacity. An interoperable network has more capacity than the equivalent (distance etc. of) independent, separated, differentiated etc. tracks. This was the key land transport reason for Australia becoming a federation.

2.4.38 The misconception (of 2.4.35 above) embodies a false comparison – of one track (with a junction) against two tracks – by observing one track (with a junction) is unable to carry as many trains as two tracks. This mistake can be seen in the Government's submission e.g. 2.2.16 and 2.4.31 (above).

2.4.39 Any real analysis would dismiss an a-priori proposition that junctions create network capacity constraints. It would make clear that train operations do not change track capacity but affect capacity utilisation and the capacity available for other purposes. It would focus on whether train operating plans – service patterns - on the network unduly utilise track capacity. It would conclude the only way to 'unlock' the capacity of a central segment is to decrease its capacity utilisation, and the best way of so doing while enhancing service levels is to ensure any new infrastructure is interoperable with and facilitates some bypass of existing traffic. This is done in all other modes and public infrastructure.

2.4.40 Analysis should then seek to understand the network wide implications of ways to decrease capacity utilisation on one of its central segments. In the case of Sydney rail, the cause of reduced capacity utilisation of the existing network in the CBD would be removal of Bankstown trains. Yet this does not require degradation of the capacity of that network via conversion of the Bankstown segment to Sydney Metro.

2.4.41 The net effect on Sydney rail capacity – of the existing network and Sydney Metro combined – of the Bankstown line conversion is not as presented by the submission. The conversion does not increase existing network CBD capacity, but reduces its utilisation.

2.4.42 Any assessment of the net effect on Sydney rail network capacity would need to offset the reduction in capacity of the existing network's Bankstown segment and the tracks etc. that connect with it against Sydney Metro infrastructure on the segment.

2.4.43 A competent analysis, of the type warranted for decisions the magnitude and peculiarity of Sydney Metro, would specify the net effect on future Sydney rail capacity by quantification of future opportunities jeopardised or lost for all train types combined. For Sydney, this would include quantification of transport opportunities foregone as a result of Sydney Metro non-interoperability - e.g. small tunnels - and as a result of Sydney Metro CBD route. Issues such as conversion of Bankstown would be assessed as a resultant of this.

2.4.44 An key implication of any competent analysis is that for the foreseeable future – for very many years - a Sydney harbour crossing will not be properly used unless several service lines feed into it. This is as much the case for Sydney Metro as for the existing network.

2.4.45 Demand on the Bankstown line is low relative to other lines. In conjunction with sections 2.4.31 – 2.4.44 (above), this means a new asset (Sydney Metro CBD and harbour crossing) with an extraordinary high opportunity cost – possibly orders of magnitude greater than its financial cost - is in danger of being very badly misallocated by the planned Bankstown extension of Sydney Metro.

2.4.46 Proper use of the Sydney Metro harbour crossing and CBD assets – at near 30 trains per hour in each direction sustained over peaks - will require abandonment of the ‘turn-up and go’ claims made in the submission. Among other things, this underlines the irrelevance of presented analyses, assessments and evaluations of Sydney Metro proposals such as noted in 2.4.8 - 2.4.20 (above).

2.4.47 The submission provided no evidence of an analysis adequate – even competent - to the issues at hand. Indeed, the failure of it and previous Government statements and assessments to mention the relevant issues suggests there has been no such analysis.

2.4.48 It is pertinent to note the submission’s claim of Sydney Metro providing a level of track capacity – a train every two minutes – never before seen in central Sydney (2.2.18 above) has long been contradicted. In the early 1960s there were claims of trains every two minutes on the City Circle. Those claims imply the capacity of the City Circle track then exceeded what is now claimed for Sydney Metro. They underscore the apparent failure to consider single deck operations for Sydney Airport (2.4.22 above). They may also imply conversion to Sydney Metro reduces the train carrying capacity of the Bankstown tracks.^{iv}

2.4.48 Given 2.4.32 – 2.4.48 (above), the submission is deficient in not providing any information to substantiate its claims as to capacity. Nor does it do more than offer assertions as reasons for conversion of the Bankstown segment (2.2.12 – 2.2.17 above).

2.4.49 In these circumstances, it should be presumed each of the submission’s aims re conversion of Bankstown could be better achieved by alternative Sydney Metro routes and/or, more significantly, by infrastructure interoperable with the existing network.

2.5 Submission - conclusion

2.5.1 It is likely the submission was conceived with some intention of countering the by-now well-known critical questioning of Sydney Metro. However, it did not try to address:

- The two determining characteristics of tunnel diameter and CBD route;
- Estimates of Sydney Metro carrying capacity – it only refers to train numbers;
- Comparison of Sydney Metro and Sydney Trains seating and carrying capacity;
- Questions and concerns about Sydney Metro including those raised by its own experts;
- The idea of extension to Strathfield made by Infrastructure NSW and some experts;
- Errors in cited documents e.g. *Sydney’s Rail Future, Future Transport 2056*).

2.5.2 The submission included significant errors and exhibited confusion. Its central assertions appear to be based on false premises. It did not provide – produce - evidence from which its contentious claims could be checked.

2.5.3 Much information in the submission is unreliable. Its arguments should not be accepted without further substantiation. Its explanation for extension of Sydney Metro to Bankstown should be rejected until reliable evidence is produced.

2.5.4 In the absence of further information, it could be inferred the NSW Government - via its submission - effectively conceded:

- a. Sydney Metro does not have the capacity previously claimed;
- b. Sydney Metro compares unfavourably with Sydney Trains;
- c. Its decisions on Sydney Metro extension, CBD route, and to Bankstown were made without regard to adequate analysis;
- d. Its decisions were concerned with installing its Sydney Metro somewhere rather than with meeting Sydney's transport or development requirements.

2.5.5 The submission provides further evidence of the validity of my principal concerns: Government indifference to the welfare and prospects of the people of Western Sydney; lack of care by the Government for what it tells the community.

3. Transcript of session I participated in

3.1 Introduction

3.1.1 This section comments on and clarifies some of the remarks of the transcript of the first session of public hearings on 7 November 2019.

3.2. Nature of Sydney Metro

3.2.1 *'Mr AUSTEN: Meanwhile, the real character of metro— small tunnels, a CBD route and takeover of other tracks—is apparently forbidden.'*

3.2.2 While the transcript records the word metro (lower case), Sydney Metro is not a metro but a commuter railway. It operates trains configured like those used on metros. It would be preferable for the transcript to use the term Sydney Metro.

3.2.3 My intention here was to say: 'talk about the real character of Sydney Metro....'.

3.3 Bradfield's legacy

3.3.1 *'Mr HOUNSELL: When Bradfield designed our heavy rail network, he created a core that has kept our city competitive for 80 years.'*

3.3.2 Dr Bradfield's design of the rail network was interoperability. It had tunnels larger than those necessary for the then single-deck Sydney passenger fleet, and his plans allowed for several CBD routes.

3.3.3 These characteristics are the antithesis of and are negated by the design of Sydney Metro.

3.4 Railway expansions

3.4.1 (Mr Hounsell) *'Sydney needs low-cost expansions of our existing railway network to connect more places such as Victoria Road, Dee Why.... Strathfield and Hurstville.....'*

3.4.2 There are many different views about Sydney needs.

3.4.3 Generally, railway building – new routes or expansion – is not low cost.

3.4.4 Few ideas for railway expansions are likely to be economically justified. Fewer proposals consider important urban social effects.

3.4.5 Interoperable infrastructure has lower costs, higher benefits and lower risks – e.g. of redundancy and asset stranding - than *'bespoke'* infrastructure referred to by Mr Collins (in 4.1.9 below).

3.4.6 The defining characteristics of Sydney Metro – tunnel size and CBD route – are likely to dramatically increase the cost and reduce the benefits of future rail expansions in Sydney. These characteristics will render infeasible many proposals to expand railways.

3.5 Business case

3.5.1 *'Mr WARDROP: The prime focus of my submission is what I regard to be the inadequate business case for the metro-isation of the Bankstown line'.*

3.5.2 There is no published business case document for Sydney Metro or any part thereof.

3.5.3 While there is a document including the term 'business case' in its title, it is not a business case in either the public or private sector senses. To illustrate the point: renaming a novel 'a final business case' does not change its fictional nature.

3.6 Railway factions

3.6.1 *'The Hon. ANTHONY D'ADAM: It strikes me that there is a metro faction that has become ascendant in the bureaucracy and its view is now hegemonic in terms of transport planning.*

Mr WARDROP: From the outside that is what it looked like to me.'

3.6.1 Given the now demonstrated falsity of Government capacity etc. arguments – e.g. that Sydney Metro would deliver more capacity than a Sydenham-Chatswood alignment built to interoperable standards – speculations on motives have considerable currency.

3.6.2 In part this is due to an absence of proper explanations of policy. This makes an understanding of motives important for those needing predictability in Government decisions and for those wishing to influence, or contribute to improved, decision making.

3.6.3 There has been speculation Sydney Metro is, or was initiated as, the result of factions in the NSW bureaucracy. Public evidence consistent with this includes: what seems to be an attempt to convince former Governments to introduce Sydney Metro with a permanent break of gauge – small tunnels; a proposed break of gauge and CBD route that would jeopardise development of the network used by Sydney Trains; trenchant and public criticism from (former) very senior rail staff of such proposals.

3.6.4 Other speculations about Sydney Metro motives include privatisation, union busting, property development and simple arithmetic mistakes.

3.6.5 None of the privatisation, union busting, property development or arithmetic error speculations can rationally explain the decisions regarding Sydney Metro small tunnel dimensions and CBD route. Nor can those speculations explain the virtual silence regarding the core issues arising from those decisions.

3.7 1995 metro plan?

3.7.1 *'The Hon. NATALIE WARD: I think 1995 Labor announced a metro plan.*

3.7.2 My (Mr Austen's) position was principal rail economist.

3.7.3 The readily available public record does not show any announcement or consideration of rapid transit / metro in 1995.

3.7.4 Labor formed a new Government in early 1995 and it likely would have taken some time to come to grips with transport and rail issues.

3.7.5 In 1995 the most important NSW and Sydney rail issues were: preparation for the Olympic Games; construction of the Airport Line; negotiation for private operation on or of the Hunter Valley coal rail system; operational establishment of the National Rail Corporation; finalisation of the national competition policy and the introduction of a formal regulatory system for rail safety. Each of these was initiated by the (then) previous Coalition Government.

3.7.6 In mid to late 1995 decisions on the break-up and part-corporatisation of the State Rail Authority – into: Rail Access Corporation; FreightRail Corporation; Railway Services Authority; State Rail - were dominant matters.

3.7.7 In 1998, some three years later the Government, as part of *Action for Transport 2010*, announced a North West Rail line proposal.

3.7.8 The North West Rail line was to be part of the (then) CityRail system. It was to be served by the fleet now operated by Sydney Trains. It was not to be a rapid transit or metro railway.

3.7.9 The most recent authoritative report on Sydney rail, from the 2010 public inquiry chaired by Mr Ron Christie AM, said metro / rapid transit first gained public currency in 2001. This currency was via a (unpublished) report from Mr Christie to the NSW Government suggesting directions for rail following the success of transport in the Olympic Games.

3.7.10 I have been unable to find a public reference to metro / Metro in 1995. Several former colleagues have no recollection of any Sydney Metro announcement at that time. I am happy to be corrected on this point.

3.8 Work for the Department

3.8.1 *The Hon. WES FANG: Mr Austen, when was the last time you did work for the department?*

Mr AUSTEN: I worked for it in 2000 for what it called the transport safety and reliability regulator, which was the railway part of the department with the rail be expertise in the department, until, I think, 2007.

3.8.2 My c.v is at the jadebeagle.com. I worked in - for - the Department between 1993 and 2003.

3.8.3 For the period 2000 to 2003 I was seconded to the Office of the Coordinator General of Rail. This office dealt with rail policy issues.

3.8.4 Between 2003 and 2007 I worked for the 'reliability' area of the NSW Independent Transport Safety and Reliability Regulator, a statutory authority within the Transport portfolio.

3.8.5 The Regulator's reliability function monitored and analysed the performance of railways in NSW. It published studies including on matters relevant to capacity and capacity utilisation. It took over most of Department's former analytic rail functions, with the exception of major new projects which – for a period after 2003 - were undertaken within the Premier's Department.

3.9 Are views clouded by Departmental experience?

3.9.1 *The Hon. WES FANG: you said, "My views are clouded by my experience in the department." Is it possible at all that the negativity that you have against this new metro line is somehow derived from that experience that you had in the department?*

3.9.2 I did not say 'clouded', but said 'coloured'.

3.9.3 The intention was to indicate there were higher priorities. Also, metro/Metro was not apparently officially mentioned while I was in the Department.

3.10 Sydenham bottleneck

3.10.1 *The Hon. WES FANG:part of the reason that we are going down this path is that the Sydenham line itself, where we merge six to four, creates a bottleneck on the network. The installation of the metro lines to replace the T3 will unscramble that bottleneck.*

Secondly, it allows those who are out west to access new parts of the CBD.....

Mr AUSTEN: the Sydenham junction.....was originally presented as part of the reason for the airport line. Sometimes we use the word "line" in the term of track; in other terms of the use the word "line" in the term of service pattern....There is this confusion about operations and infrastructure, which comes up in the terminology.

3.10.2 The NSW Government submission claimed there were two lines through the CBD, and in support of those two lines it cited four lines.

3.10.3 The claim that at (or near) Sydenham six merges to four is an over-simplification.

3.10.4 There are four tracks south of (to) Sydenham at Arncliffe, Wolli Creek and Tempe.

3.10.5 At Arncliffe the four tracks are known as the Illawarra line. Two of these tracks are used for freight trains. The freight trains diverge from the tracks south of Wolli Creek, yet four tracks continue to Wolli Creek.

3.10.6 At Wolli Creek two (of the four) tracks of what is known as the East Hills branch line merge with the four tracks to Sydenham (that no longer carry freight trains).

3.10.7 Those four tracks at Wolli Creek continue to Tempe and just north of there, just south of Sydenham, two tracks from Bankstown – the Bankstown line – merge with the four.

3.10.8 The claim of six tracks merging into four at Sydenham is the same as ‘three lines merging into two’ there. It relies on the merger of one of the East Hills and Bankstown branches with the Illawarra line.

3.10.9 The East Hills line has two tracks passing through the airport which are the tracks primarily used by trains from East Hills and beyond. Hence it is known and is in the passenger timetable as Airport and East Hills line – as this is the dominant service pattern.

3.10.10 For most relevant purposes, only two lines merge at Sydenham because the Airport and East Hills line runs through the airport rather than Sydenham. That diversion of most East Hills line services away from Sydenham was the purpose of the airport rail link.

3.10.11 Hence, at Sydenham six tracks do not relevantly merge into four. Even if they were considered to so merge, the operational merit and necessity of their use as three service lines is far from clear.

3.10.12 There may be other reasons for issues at Sydenham but, if so, they do not arise from the simple claim of a bottleneck resulting from merger of six tracks into four.

3.10.13 In the light of the above, if the Inquiry wishes to investigate whether there are capacity constraints or a bottleneck at Sydenham, it should engage suitably qualified and independent experts.

3.10.14 Were there a bottleneck at Sydenham, it could be mitigated by an additional track pair as a bypass.

3.10.15 A bypass track pair need not be Sydney Metro. A Sydney Metro track pair would be less effective and efficient for a bypass than an interoperable track pair.

3.10.16 The comment about allowing people out west (presumably Western Sydney) to access new parts of the CBD merits attention. The issue is: improving access to the CBD.

3.10.17 Sydney Metro provides several new stations in the CBD. Because of its ‘turn-up and go’ philosophy, these stations can only ever improve access to the CBD for those people on the North West Sydney Metro and South West Sydney Metro. These people comprise only a small fraction of travellers from western Sydney.

3.10.18 The location of those stations has been explained in terms of improving rail coverage of the CBD. However, such explanations are misleading in ignoring the possible permanent metropolitan wide impact of the route which the stations are on (3.14.6 below).

3.10.19 The above two factors (3.10.17 -3.10.18) point to a grave matter. This is: any further improvements of rail access to the CBD, catering for the vast bulk of travellers from Western Sydney, may have been jeopardised if not negated by the route of Sydney Metro.

3.11 Scepticism of the Department

3.11.1 *The Hon. WES FANG:that really concerns me because it is almost as if, if Transport provides a response to a situation, your immediate response to that is to treat it...*

3.11.2 The issues – such as in 3.10.19 – ought to concern.

3.11.3 I do not oppose separation of rail traffics in principle. I have previously argued strongly for separation of freight from passenger tasks in Sydney – via dedicated lines - and supported the formation of the Australian Rail Track Corporation and Southern Sydney Freight Line for this purpose.

3.11.4 Sydney Metro goes far beyond separation of traffics, and even separation of infrastructure - and into permanent separation of corridors. My articles, submissions and testimony point out Sydney Metro statements do not justify this. They also point to statements contradicted by others or the Government.

3.11.5 These articles, submissions etc. include have a standing offer for corrections on fact or interpretation.^v

3.11.6 Sydney Metro raises the most significant – probably negative - transport issues in Australia since at least World War 2. This reflects its adverse permanent impact on the existing rail system. It also reflects its peculiar characteristics of running long-distance commuter services with a fleet appropriate only for another task – short distance rapid transit - and its attempt to be irreversible. Among the consequences are diminished opportunities for generations of Western Sydney residents.

3.11.7 The peculiarities of Sydney Metro mean it is not a rapid transit or metro system. It is open to doubts and criticisms that could not be levied against a normal rapid transit system.

3.11.8 It is not possible to limit the present Inquiry to issues solely occurring on the segment Sydenham-Bankstown issues for three reasons. First, the effects of and reasons for the Bankstown extension will be an extension of those for other Sydney Metro decisions. To understand the effects and reasons of Sydney Metro decisions for Bankstown it will be necessary to understand the effects and reasons for Sydney Metro decisions elsewhere.

3.11.9 The second reason it is not possible to limit the Inquiry to issues on the Sydenham-Bankstown segment is the effects of conversion will spread beyond this segment. At present the focus has been on the gross impact on the segment. More important will be the net impact on the segment. However, the relevant question is not the net impact on this segment but whether one half of all of Sydney's future potential global arc rail capacity should be dedicated permanently and solely to Bankstown.

3.11.10 The third reason is the matters above make inevitable - in the absence of a compelling explanation yet to be given by the Government - a formal commission of inquiry into decisions regarding Sydney Metro.

3.12 Studies of options

3.12.1 *Mr WARDROP: I have to agree (that the issue is not how to extend to Bankstown but where to allocate cross harbour capacity) if we are going to spend money on this very expensive infrastructure...*

The Hon. WES FANG: While I respect your musings, Mr Wardrop, your musings are against an EIS and studies by New South Wales Transport.

3.12.2 The EIS and publications from NSW Transport do not show any consideration of the four most plausible options:

- a. Interoperable rather than a 'bespoke' Sydney Metro harbour crossing and extension to Sydenham and beyond;
- b. Extension of Sydney Metro to Strathfield;
- c. Extension of Sydney Metro to the Airport;
- d. Extension to several locations i.e. not turn-up and go.

3.12.3 Nor does it show proper consideration of extension as part of the East Hills line.

3.12.3 Mr Wardrop's comments are only against the published EIS and studies insofar as those publications are deficient in e.g. ignoring obvious options.

3.13 Unlocking capacity

3.13.1 *The Hon. NATALIE WARD: We need to unlock capacity, do we not? Is that not true?*

3.13.2 It is generally agreed Sydney needs more rail capacity, in particular for commuting. It is likely to need more rail capacity for freight.

3.13.3 Whether Sydney needs to unlock capacity – more accurately whether it needs to decrease capacity utilisation on some segments – is a very different question. There are a variety of expert opinions on that matter.

3.13.4 However, the argument Sydney Metro unlocks capacity on the existing rail network is wrong.

3.13.5 Reducing/removing Sydney Trains operations from CBD-Sydenham-Bankstown, which is offered as the effect of Sydney Metro, reduces capacity utilisation of the existing network. It does not activate dormant capacity – it does not unlock (previously unreachable) capacity.

3.13.6 Conversion of the Sydenham-Bankstown segment to Sydney Metro by definition reduces the capacity of the existing network.

3.13.7 Sydney Metro locks-up - locks-out - rather than unlocks capacity in two respects. First, it locks-out essential route capacity from other than Sydney Metro trains.

3.13.8 Second, Sydney Metro locks-out capacity by reducing existing network capacity, by deactivating a segment and by severing a connection among the Illawarra, East Hills/South and Western rail lines.

3.13.9 Capacity of the existing network could be 'unlocked' by infrastructure that adds to that network i.e. interoperable infrastructure. Sydney Metro does not do this. In fact, Sydney Metro does the opposite.

3.14 Western metro

3.14.1 The Hon. ANTHONY D'ADAM: Would a western metro not be a more effective contribution?

3.14.2 There is not any public evidence of proper consideration of extension of the North West Sydney Metro through the CBD and towards the western suburbs by the Government since 2011.

3.14.3 This is despite international experts and Infrastructure NSW in 2012 recommending consideration of a metro – probably with interoperable characteristics - to Strathfield.

3.14.4 It is also despite a west metro being one of two rapid transit proposals by the former Labor Government when headed by Mr Rees.

3.14.5 It is also despite Mr Christie's 2010 inquiry report finding, and two former NSW rail chief executives and two senior managers apparently (re)confirming - to the Government in 2015 - this is likely the best candidate for rapid transit rail services in Sydney.^{vi}

3.14.6 In contrast, the present Government appears to have adopted the other route proposal of the Rees Government, the one trenchantly criticised by Mr Christie's inquiry. This was a CBD route that may prevent expansion of other railways in metropolitan Sydney.

3.14.7 The word 'may' (in 3.14.6 above) reflects an uncertainty borne from the Government not clarifying the matter.

3.14.8 Resolving the fact of whether the Sydney Metro does so (i.e. prevent railways expanding) is the most important matter in transport and land use planning in Australia. It is not possible to develop any coherent national, NSW or Sydney transport plan, or to conduct bona fide consultations on any NSW transport proposal without this question being addressed. Nor is it possible to conduct bona fide consultation regarding Sydney metropolitan land use planning without this question being addressed.

3.14.9 Sydney Metro, because of its break of gauge, locks-up rather than releases capacity (3.13.9 above). A western Sydney Metro with the same break of gauge characteristics would have the same effect.

3.14.10 However, a western (extension of a) railway configured better than Sydney Metro appears to be superior for both Sydney Metro and Sydney Trains than – instead of – Sydney Metro extension to Bankstown. This is because it would allow a much greater reduction in capacity utilisation on the existing rail network in central Sydney.

3.4.11 Such better-than-Sydney Metro configurations (3.4.10 above) would include larger tunnel sizes than Sydney Metro, and were rapid transit fleet to be used, have appropriately spaced stations – i.e. more stops than presently planned - and not be subject to arbitrary and unachievable target transit times.

3.15 Age of the Bankstown line

3.15.1 *The Hon. NATALIE WARD: (parts of the existing rail network like the Bankstown line) is 124 years old.*

3.15.2 Track and signal etc. infrastructure on the Bankstown line is not 124 years old. Renewals make this type of rail infrastructure like the ‘grandfather’s axe’.

3.15.3 However route matters - alignment, formation, and tunnels - have much longer lives than tracks etc. Some may well be over a century old and expected to last much longer.

3.15.4 The implications (of 3.15.2 – 3.15.3 above) should be recognised. Among these: decisions about such matters have permanent effects and need the most careful consideration and public explanation.

3.15.5 For example, the deleterious effects of the hidden decision in the 1880s for Paris Metro to have tunnels to preclude other fleets – aimed at reducing opportunities for people outside Paris to access the city – can still be seen now, around 140 years later.

3.16 Bankstown line capacity

3.16.1 *The CHAIR: is there more capacity on the metro than what you could get with the existing line?*

Mr AUSTEN: There are a couple of things. First of all, when we talk about capacity—exactly what we are talking about—at the moment we are talking about trains per hour. From the western suburbs, trains per hour does not matter. What matters is the number of seats.

3.16.2 Given the commuter service intentions of Sydney Metro – evident by service length, duration and distance between stations - the answer is unambiguously: ‘no’. Conversion of the Sydenham-Bankstown segment does not provide more capacity – which is seating.

3.16.3 If Sydney Metro was considered to be a rapid transit system – which it is not because of service length etc. – the answer would be: ‘most likely no’. This is because the carrying capacity of Sydney Trains – seated and standing - as intimated by Mr Collins, is higher than Sydney Metro.

3.16.4 If Sydney Metro had been configured to be strategically sound - if the CBD and cross harbour capacity did not lock out other railways and if its own capacity was properly allocated - the answer would be: ‘no’. This is because such allocation would not place 30 trains per hour each way on the Sydenham-Bankstown segment. A substantially lesser number would operate – the Government claims a maximum of 15 (during peaks) – and this lesser number has significantly lower passenger carrying capacity than Sydney Trains.

3.17 Interoperability

3.17.1 The Hon. NATALIE WARD: What do you mean by "interoperable"? Is it that they cannot change over? There are different gauges or something?

3.17.2 ‘Interoperable’ in the rail context means several different types of trains can use corridors etc.

3.17.3 Gauge refers not only to the distance between rails, but to dimensions that limit the type of train that can use the infrastructure. Tunnels, stations platforms, overhead wiring etc. are all elements of gauge. Of these, the most permanent aspect of gauge is tunnels.

3.17.4 As Mr Collins inferred, Sydney Metro is ‘bespoke’. This is the antithesis to interoperable. Sydney Metro route – not merely infrastructure - is permanently unusable by Sydney Trains’ existing double-deck fleet.

3.17.5 Since 1901, the national direction has been to unify gauge – the opposite to ‘bespoke’ rail corridors and infrastructure. This has been the direction in each of Australia’s cities, where development of the urban rail system has built on the pre-existing gauge.

4. Transcripts and comments – NSW witnesses

4.1 NSW Government witnesses

4.1.1 The witnesses were: Mr Collins, Chief Executive Sydney Trains; Ms Prendergast, Coordinator General Transport for NSW; Mr Lamonte, Chief Executive Sydney Metro; Mr Parker, Program Delivery Director Sydney Metro. Mr Collins, Ms Prendergast and Sydney Metro are subject to direction and control of the Minister for Transport.^{vii}

4.1.2 Mr Collins indicated the importance of looking at the ‘big picture’ rather than just particular matters associated with the Sydenham-Bankstown segment or even a corridor:

‘Mr COLLINS: that particular corridor has a number of branches off it—Bankstown branch, Waterfall, Cronulla.

It is not just about that; it is about the whole picture of this city. What I want to do is to make sure that some of those core corridors can run successfully—getting people from the South Coast; getting people from Cronulla.....getting people from Penrith...’

4.1.3 In this wider perspective, he argued Sydney needs Sydney Metro’s added capacity. Sydney Metro provides capacity between Sydenham and Chatswood – a route into the CBD:

‘You will end up with another route in. Forget the technology and whether it is metro or city trains. We are building a corridor, another two lanes of the highway, which will be a fantastically quicker highway than the four lanes we have currently into the core of Sydney.’

‘So the brilliant advantage of metro is it does give us.....an alternative and viable route, north to south.’

4.1.4 He argued there was consideration of options:

‘in the 2012 Sydney’s Rail Future we considered all sorts of options, I understand. Certainly, when I arrived in 2013 we considered all those options.’

4.1.5 He affirmed the decision to adopt Sydney Metro was made in 2012 for reasons outlined in Sydney’s Rail Future.

4.1.6 He observed some other cities use a variety of train technologies:

‘look across the world and you will see in Paris, London, Copenhagen, even New York, there is a mixture of technologies.’

4.1.7 To which the Chair responded:

‘No-one is debating the mixture’.

4.1.8 Mr Collins argued Sydney Trains and Sydney Metro have different but necessary roles. The former rather than Sydney Metro is to do the - ‘heavy lifting’. The different role is the reason for Sydney Metro:

‘Mr COLLINS: Some of which is metro, some is heavy lifting, we need both and that is why I think metro is the best option.’

4.1.9 He argued Sydney Metro would assist in ‘untangling’ the existing network. In so doing he indicated an overall direction for the rail networks:

‘the heavy lifters to run the main corridors into centres, removing the branches and utilising those on new bespoke corridors through metro.’

4.1.10 He added a further reason:

‘The difficulty, I think, is that we have so many options. We have so much infrastructure.... We know that if you have too much infrastructure, if you have too many options of where the service goes, every five minutes the timetable may change.’

4.1.11 In his view simplification of services was also important:

‘We want to give people a regular service..... we had over 20 different stopping patterns down the North Shore line and you needed a computer to work out which train you were going to catch. It is really simplifying the network, making it easier for people to understand and providing services, which does mean some form of interchange at key points...’.

4.1.12 Mr Parker argued Sydney Metro increases capacity and is totally independent:

‘Mr PARKER: The City & Southwest is about almost doubling the capacity in the city. ...The real benefits are just that huge lift in capacity. The other benefits include—at the moment, because of the way that the existing network has grown, if there is an issue on the existing network often it knocks on to others. One of the things about why the two systems work so well together is that they are independent. They are totally independent.’

4.1.13 The Hon. Mr D'Adam MLC queried the arithmetic of the Government's claim about raising CBD capacity from 120 to 200 trains per hour:

‘The Hon ANTHONY D'ADAM: The numbers do not seem to correlate.....

Mr COLLINS: I have seen that picture of the funnel one that we were talking about, I think it is? Obviously, it serves a general comment about a number of services...’.

4.1.14 Mr Collins argued Sydney Metro can run more trains than existing double-deckers at least at Sydenham:

‘when you get to Sydenham you have already got—and if we upgraded those other lines—maybe 20 or 24 trains on two major trunk routes coming in. Even the best digital system for heavy double-deck trains with two doors per car, we really could not squeeze in the capacity compared with metro’.

4.1.15 The Chair sought to clarify the term ‘capacity’, asking whether the limit was 20 double-deck trains per hour on the Bankstown line with the best possible signalling:

‘Mr COLLINS: Best possible with this type of train with digital signalling.’

4.1.16 Mr Collins was asked about the seating and standing capacity of trains. For double deckers:

'We have a lot of seats, 800 and something seats, on most of our trains. On a really crammed train you almost squeeze in 1,600 or 1,700 people. It is much different from metro because obviously they have a lot more standing capacity but the issue is, even if I managed to tweak out 24 trains per hour out of a digital system the dwell time management, the ability to get people on and off when you have literally got 16 double doors to get people out as opposed to three doors per car on metro...'

4.1.17 Mr Collins asked: why not continue Sydney Metro beyond Sydenham? His reason for extending it from Sydenham to Bankstown:

'Because it minimises the disruption. The disruption for customers.'

4.1.18 Mr Parker gave a reason for not extending from Bankstown to Lidcombe:

'Mr PARKER: When you get past there (Bankstown) and you get towards Lidcombe, that track is used for both passenger and freight. You cannot mix a metro with a freight because of the different signalling systems.'

4.1.19 Mr Collins was asked what would happen to train services west of Bankstown – would they be replaced by buses?

'No, absolutely not. We have a good rail network, obviously lots of future options in the long-term but in the short-term I believe we have to continue to service those stations west of Bankstown.'

4.1.20 He was asked about Government maps of future transport services that did not show stations and lines to the west of Bankstown:

'I do not have the map in detail. Sometimes those stations disappear because of scale and printing the diagram, but as far as I am concerned the intention in the future for those locations is to remain as rail-served stations.'

4.1.21 He was asked when commuters in affected areas will know about future services:

'within the next 12 months we would certainly be ensuring that we are well planning the future of, obviously, the current and future heavy rail network.'

4.1.22 A question was posed about connecting Sydney Metro to the west:

'The Hon. ANTHONY D'ADAM: What about the option of connecting the north-west metro through to the proposed western metro?'

Mr LAMONTE: Thanks very much. This was a planned—the next stage of the city through to Bankstown.'

4.1.23 The Hon. Ms Ward MLC asked about whether Sydney Metro would cause additional car traffic. Ms Prendergast's response referred to the construction phase of the project:

'The Hon. NATALIE WARD: ...heard some evidence somewhere about metro causing additional cars to be on the road. I cannot reconcile that. Is that the case?

Ms PRENDERGAST: The EIS would have outlined traffic reductions but I can tell you the experience with the Epping to Chatswood line. Obviously we closed that for seven months to upgrade it for Sydney Metro Northwest. We had 124 pink buses in.....'

4.2 Comment – the big picture and analogies

4.2.1 Mr Collins was right in seeking to direct attention to the big picture (4.1.1 above). The comments in this and following sections are limited to that picture, rather than claims and counter claims about topics like Sydenham Junction.

4.2.2 While the Inquiry's terms of reference focus on the Bankstown extension, they are not so limited. It is impossible to understand issues surrounding the extension without referring to the wider context.

4.2.3 The view on a need for additional central Sydney rail capacity – forgetting about the technology – (4.1.2 above) is almost universally shared.

4.2.4 However, other remarks need careful interpretation.

4.2.5 The analogy with a highway (4.1.2 above) which could be taken to suggest Sydney Metro is adding new lanes. Such suggestion would be wrong. A better analogy is: Sydney Metro is a new road unusable by vehicles presently on the highway.

4.2.6 The analogy of Sydney Metro is of adding two lanes to an existing four-lane highway. A better analogy would be Sydney Metro being a two-lane road isolated, separated and not able to carry the vehicles of an existing six-lane highway.

4.2.7 The suspect analogies presented to the Inquiry are consistent with absence of comment on determining characteristics of Sydney Metro – small tunnel size and CBD route.

4.2.8 The claim of Sydney Metro's '*brilliant*' advantage - a viable and alternative route – is inexact. Such an advantage is not related to Sydney Metro but to a new route. Were Sydney Metro interoperable with Sydney Trains – were its tunnels able to take Sydney Trains – it could be an alternative route. However, its tunnels are too small for that.

4.3 Comment - options

4.3.1 The transcript has the claim the Government looked at all sorts of options. It does not report which. Hence there continues to be no evidence the Government looked at any proper options – such as augmentation of the network used by Sydney Trains, a normal metro, or Sydney Metro extension to the Airport or to Strathfield.

4.3.2 The transcript appears to be careful in describing the options Mr Collins considered. His comment in 4.1.4 (above) '*when I arrived in 2013 we considered all those options*' only implied reconsideration (in 2013) of options considered in 2012. That is, it does not imply reasonable options not considered in 2012 were later considered (in 2013).

4.3.3 The transcript has what could be considered a distracted answer to a question about an extension to the west (4.1.22 above). This is not evidence that reasonable route options were considered.

4.3.4 Further, as there was not any reference in transcript comments to the pivotal decisions (tunnels size and CBD route), it might be inferred options to these matters were not properly considered either.

4.3.5 The transcript does not have any Government representative being asked about the possibility of re-introducing single-deck operations on the existing rail network. Rather, the discussion was binary – Sydney Trains double-deck, Sydney Metro single deck. This binary is patently false.

4.3.6 The transcript at various times distinguished between various train types, and their aspects such as doors (e.g. 4.1.15, 4.1.16 number of doors). The transcript does not have representatives questioned, or opining on, the potential for modified double-deck trains to deal with issues claimed to limit the existing fleet.

4.4 Comment – contradictions and ignorance of reasons

4.4.1 The transcript reference to *Sydneys' Rail Future* as the basis for decisions is disturbing. My submission demonstrated that document argued for a fundamentally different approach than that adopted. That there was no acknowledgement of this difference means the Government was making a claim that 'black is white'. This suggests problems.

4.4.2 One such problem may be Government representatives' ignorance of decisions, reasons for them and what the public has been told. Transcript comments are consistent with this possibility:

- The treatment of matters previously presented as central to decisions as '*obviously a general comment*' (4.1.13 above);
- Contradiction of Government claims about the capacity of Sydney Trains services – previously the Government claimed such trains could hold only 1,200 passengers whereas the transcript has the claimed number to be 1,600 to 1,700 (4.1.16);
- Lack of awareness of the content of official publications (4.1.20);
- Failure to address simple business implications of a proposal for at least four years after its summary 'business case' was published (4.1.21).

4.4.3 Government representatives' ignorance of reasons may also be a factor in their not mentioning the determining Sydney Metro characteristics of tunnel size and CBD route.

4.5 Comment – a branch-line strategy

4.5.1 The transcript described a novel approach to rail development in Sydney. Part of this involved 'heavy lifters' which apparently meant Sydney Trains double-deck fleet i.e: '*Some of which is metro, some is heavy lifting, we need both....*' (4.1.8 above).

4.5.2 Yet the Government consistently claimed Sydney Metro has greater capacity than Sydney Trains. If believed, this means the transport heavy lift should be undertaken by Sydney Metro.

4.5.3 The transcript also had *'the heavy lifters to run the main corridors into centres, removing the branches and utilising those on new bespoke corridors through metro.'* (4.1.9 above). This critically important statement, while somewhat ambiguous, suggests a new – and strange – metropolitan and city shaping policy.

4.5.4 Given 4.5.3 (above), Sydney Trains' double-deck fleet would operate on main corridors between centres. As centres have not been defined, it is unclear where those trains will operate. However, it is far from clear the transport task between centres is intended to be commuting. With a 'tiered' railway such as expounded by the Government, it is also far from clear Sydney Trains commuter services are the best fit for such a task.

4.5.5 The transcript had Bankstown, Waterfall and Cronulla as being on rail branches. (e.g. 4.1.3 above). Richmond, East Hills and Leppington can also be considered to be on branches.

4.5.6 The NSW Government submission asserted, without evidence or nomination, there are *'up to 15 branch lines'*. (2.2.14 above).

4.5.7 Given the intention to convert the Sydenham-Bankstown segment to Sydney Metro, it can be presumed for the purposes of long-term rail planning none of the places on these branch lines – such as Bankstown, Miranda, Revesby, Schofields – are centres.

4.5.8 Presumably the expression *'removing the branches'* does not mean those branches will be closed – except for the Carlingford Branch. If so, the expression *'utilising those'* (in 4.5.3 above) referred to utilising the branches. The expression *'through metro'* therefore meant Sydney Metro would run on branches.

4.5.9 The effect of 4.5.4 – 4.5.8 (above) is the Alice in Wonderland type of transport system I referred to in testimony. For one thing, it implies Sydney Metro, supposedly the highest capacity system, is to operate on the lowest areas of demand and around the outskirts of the metropolitan area with a fleet ill-matched to the dominant commuting task on corridors designed to be unusable by other public transport.

4.5.10 Meanwhile, the highest areas of demand – inner Sydney – will primarily be served by what the Government claims is a lower capacity system.

4.5.11 Lest the Inquiry react that is implausible, the Committee may wish to consider the rail plan for Badgerys Creek. This plan has transposed a commuter line with an airport line, for the given reason of a belief single and double-deck trains cannot use the same tracks.

4.5.12 Lest the Inquiry dismiss 4.5.11 as an aberration, the Committee may recollect the ‘plan’ has the new airport at Badgerys Creek served by a 20km new Sydney Metro rail line to St Marys (some 50km from the CBD) yet the Government gives over-servicing as reason for not considering conversion to metro of a 7km line from the CBD to Kingsford Smith airport (2.4.20 above). It might also note the ‘business case’ did not mention either airport.

4.5.12 In Alice’s parlance, the Government is claiming black is white and has a mock metro.

4.6 Comment - knock-on effects

4.6.1 The transcript has comments claiming the development of the existing network causes ‘*knock-on*’ effects (4.1.12 above). Some might consider a possible inference is Sydney Metro will not suffer these because of its independence and single line.

4.6.2 Presumably the term ‘*knock-on*’ refers to the delay of one train – an ‘incident’ or primary delay – leading to delays of other trains (secondary delays). If so, the inference is incorrect for three reasons.

4.6.3 The inference of 4.6.1 (above) is incorrect first because the ‘*knock-on*’ effect arises from train operations rather than the network.^{viii}

4.6.4 Second, it is incorrect because knock-on effects depend on traffic density and the ability to mitigate by recovery procedures including re-routing of potentially affected trains. An increase in re-routing capabilities would tend to reduce knock-on effects. Such an increase is characteristic of a network of lines rather than a single or independent line.

4.6.5 Notwithstanding these matters (in 4.6.3 – 4.6.4) comments about knock-on effects have some popularity in Sydney. This arises from casual observations that an incident on one Sydney Trains line can be transmitted to other lines – spread - with junctions being given the blame.

4.6.6 However, without (the use of) those junctions the effect of the incident would remain on a single line/track - i.e there would still be a knock-on effect. This may be transmitted further along the line single - extended - than if it was spread. This can be seen on the North West Sydney Metro. The popular view of knock-on effects is an urban myth.

4.6.7 Whether it is better to spread or extend delays may largely be a value judgement which can be exercised by train planning, incident management, and use of junctions. Preventing the making of such a value judgement via commitment to isolation of infrastructure is different matter. Attempting to permanently prevent the making of such a value judgement by ‘*bespoke*’ corridors is a vastly different matter again.

4.6.8 The third reason the inference in 4.6.1 (above) is incorrect is because independent systems - by definition - cannot work together.

4.6.9 Moreover, the transcript claim about Sydney Metro's 'independence' contradicts *Sydney's Rail Future*. It also contradicts the NSW Government submission to this Inquiry which claimed Sydney Metro was to be integrated: '*a Metro network integrated with the existing (rail) network*'.

4.7 Comment – 'bespoke' corridors etc

4.7.1 The term '*bespoke*' (4.1.9 above) is defined as: made for a particular user, for example a tailor - custom made suit.

4.7.2 In the context used in the transcript it implies differentiation of Sydney Metro corridors, tunnels etc - not merely trains - from all other transport forms.

4.7.3 A reason has yet to be given for Sydney Metro '*bespoke*' tunnels, corridors etc.

4.7.4 Sydney Metro running a different type of train or requiring dedicated or separate infrastructure are not reasons for it to be given '*bespoke*' tunnels, corridors etc.

4.7.5 To illustrate the point in 4.7.4 (above): freight trains are different from passenger trains and in some places in Sydney operate on separate corridors and dedicated infrastructure. Yet '*bespoke*' freight infrastructure is limited to terminals – there are no bespoke freight corridors, tunnels etc.

4.7.6 '*Bespoke*' infrastructure, tunnels, corridors etc. are not necessary to prevent 'knock-on effects', even those of urban mythology.

4.7.7 It is hard to conclude other than the discussion of the strategy in the transcript – isolated bespoke branch-lines – is identifying an unprecedented Australian transport and land planning disaster.

4.7.8 One way in which the described strategy could be part salvaged would be for true branches – lightly used lines - to be served by trains other than rapid transit or Sydney Metro and with lower capacity than 8 car double-decks. This might mean single-deck trains on branches - branches continuing to be able to take both single and double-deck trains.

4.7.9 The approach outlined in 4.7.8 (above) is consistent with the proposal of Infrastructure NSW and its international experts in 2012. It means abandoning the novel concept of '*bespoke*' corridors much as Australia has attempted to do since the late 1800s.

4.7.10 However, there would remain the grave problems already created by Sydney Metro. Salvaging the situation would require an understanding of what has been done, its effects, and why it has been done.

4.8 Comment – motivations?

4.8.1 The transcript implies a motivation for Sydney Metro unrelated to what the Government previously said. That motivation is: to artificially constrain a future Government's ability to ask for consideration of changes to train services (4.1.10 above).

4.8.2 The full text of the relevant comment is:

'The difficulty, I think, is that we have so many options. We have so much infrastructure. The difficulty is that it is actually getting those core corridors working properly and then looking at what alternatives we have. We know that if you have too much infrastructure, if you have too many options of where the service goes, every five minutes the timetable may change, or people's options. We want to give people a regular service. We have certainly demonstrated that on the North Shore line. We are certainly doing that on the T1 line as well on a regular frequency. I think when I first arrived, we had over 20 different stopping patterns down the North Shore line and you needed a computer to work out which train you were going to catch. It is really simplifying the network, making it easier for people to understand and providing services, which does mean some form of interchange at key points, but as best as we can giving people the services they need.'

4.8.3 The reference to passengers needing a computer to work out their travel is a gross exaggeration and irrelevant. There are indicator boards on Sydney Trains stations showing destinations and stopping patterns of the next few trains. This is also the case for Sydney Metro stations.

4.8.4 The key comments are:

- *'the difficulty is there are so many options';* and
- *'if there are too many options of where the service goes, every five minutes the timetable may change, or peoples options.'*

4.8.5 The comments of 4.8.4 might seem ambiguous. They could be directly referring to options available to policy makers – the possibility to changes of the timetable. Or they might directly refer to options available to passengers in real-time. *'Every five minutes'* might hyperbolically refer to timetable changes frequently requested by Governments, or alternatively to the variety of trains passing through a station.

4.8.6 The former – options available to policy makers – is more likely. For example, the *'difficulty'* is that faced by the train operator, not by passengers e.g. 4.8.3 (above), and the word *'or'* (in 4.8.4 above) indicates people's options differ from potential timetable changes.

4.8.7 However, even if the intention was to directly refer to real time choices faced by passengers – which train to board? - the inferences for motive are the same as outlined below.

4.8.8 The reasoning of 4.8.2 (above) leads from a problem of too many options to a 'solution' of network simplification - such solution making it easier for people to understand and to provide services. The latter phrase means the 'solution' makes it easier to run trains.

4.8.9 The reasoning continues: trains are easier to run because '*simplifying the network*' reduces options of where they can run. Network simplification addresses the cause of the problem which is (implied to be) too much infrastructure.

4.8.10 The reason too much infrastructure supposedly causes the problem is: '*if you have too much infrastructure*' (if) '*you have too many options of where the service (train) goes*'. Hence the reasoning ties simplification of the service pattern (timetable) – options available to passengers – to infrastructure. This fits the wider context of discussion in the transcript – the relation between infrastructure and services.

4.8.11 For urban passenger rail, the service pattern – the timetable - is ultimately controlled by policy makers and delivered by the train operator. Options for the timetable are constrained by infrastructure and fleet. Infrastructure which constrains options for the timetable will limit options available to policy makers.

4.8.13 The transcript example of the 20 stopping patterns demonstrates the fact that simplification of the timetable – services - is possible without new infrastructure constraints. Hence, the logical aim of any new infrastructure constraint is to limit policy options as a mechanism for – to force - service simplification.

4.8.14 In the Government's rail plan, Sydney Metro is designed to limit options for its own timetable and for the timetable of Sydney Trains. 'Turn-up and go' is the expression of very limited options for Sydney Metro's timetable. The plan reduces options for Sydney Trains' timetable by, among other things, Sydney Metro taking over some of its infrastructure.

4.8.15 The transcript comments generally seek to support the Government's rail plan which involves transfer of some infrastructure from Sydney Trains to Sydney Metro – as it implies Sydney Trains has '*too much infrastructure*'. The transfer of infrastructure increases Sydney Metro timetable options, but by less than the reduction in Sydney Trains timetable options. The transfer cannot easily be undone because Sydney Metro infrastructure – and corridor, tunnels etc. – is changed to be '*bespoke*' and incompatible with Sydney Trains. The transfer visibly limits policy makers options for timetables and ultimately rail projects.

4.8.16 However, it is possible that a less visible/talked about feature of the Government's rail plan is a vastly greater constraint on policy making than the infrastructure transfer of 4.8.15 (above). This feature is the Sydney Metro harbour crossing and CBD route, which may effectively preclude options to enhance or develop railways other than Sydney Metro in the metropolitan area, as well as allocate more than half global arc rail capacity to the Bankstown line alone.

4.8.17 The matter in 4.8.16 (above) is outlined in several places above e.g. section 3.14, and the Inquiry should note a very pointed very public warning by Sydney's preeminent rail expert about a similar feature mooted in 2009-10 – a warning in an authoritative report that has been ignored, not mentioned, by the Government.

4.9 Comment – interchange and disruption

4.9.1 The transcript makes a claim that a motivation for Sydney Metro is the necessity and desirability of passenger interchange among trains (4.1.11 above).

4.9.2 Irrespective of the long-standing debate on interchange, the claim (in 4.1.11 above) is contradicted by the very purpose of the Sydney City and SouthWest Sydney Metro: to avoid the need for passenger interchange, for example at Chatswood.

4.9.3 Indeed, further to 4.9.2 (above), the very purpose of the Bankstown extension is presented as avoiding a requirement for passengers to interchange at Sydenham.

4.9.4 Another part of the transcript also undermines the 'interchange' reasoning. This is the claim the reason for extension of Sydney Metro extension is to minimise passenger disruption (4.1.17 above) – if the term 'disruption' relates to interchange.

4.9.5 There is a possible alternative context for the term 'disruption' – to minimise inconvenience during the conversion of a rail line to Sydney Metro. However, this alternative makes less sense, as there would be no such inconvenience if there were no such conversion.

4.9.6 If an extension of Sydney Metro via conversion of some existing line was thought desirable, the inconvenience of construction might be minimised by the conversion process affecting the least number of passengers. Then it might be thought the least patronised lines should be converted – even if it did lead to Alice's Wonderland. However, even that thought may not be right.

4.9.7 Pre-existing configuration may affect levels of inconvenience. Matters such as track and station curvature will affect the engineering difficulty - and duration - of conversion. It will affect how long people are inconvenienced.

4.9.8 A more important configuration matter is likely to be the number of tracks. This is important for two reasons. First, were there a pre-existing four track configuration on a segment to be converted it is conceivable construction inconvenience to passengers – of converting two tracks to Sydney Metro - could be negligible if the other two tracks could remain in continuous operation. Second, the presence of four tracks indicates higher passenger demand and thus some less probability of ending up in Wonderland. The Airport and East Hills line – unlike the Bankstown line - has such a configuration.

4.10 Comment – west of Bankstown and the ‘business case’

4.10.1 The transcript response of questions about services west of Bankstown (4.1.19 - 4.1.21 above), and the statement in 4.3.3 above, are relevant to the question of the ‘business case’.

4.10.2 The response (4.10.1 above) implies the effect of the project on Sydney Trains’ business will not be determined until at least four years after publication of the supposed ‘business case’. This means there has not been any real business case, further confirming that part of my submission.

4.10.3 The transcripts have several witnesses referring to a ‘business case’. Those references were to a document with ‘business case’ in its title. For reasons set out in my submission, that document is no evidence of the existence of any business case – of either a private or public sector nature. Calling something a business case does not make it a business case, except when done by Humpty Dumpty in Alice’s Looking Glass.^{ix}

4.10.4 Notwithstanding the transcript, the relevant diagrams in official publications at the time of writing (2 December 2019) do not show a line between Bankstown and Lidcombe/Cabramatta.^x

4.11 Comment – car traffic

4.11.1 The question by the Hon. Ms Ward MLC regarding her inability to reconcile Sydney Metro with an increase in car traffic may have been spurred by my opening remarks. If so, Ms Prendergast’s response to the question is irrelevant.

4.11.2 Those remarks included:

‘Take the recent reports of crowding on the western line. Some 9,000 people stand on 20 actual trains between 8.00 a.m. and 9.00 a.m. On metro’s hypothetical peak capacity, 75 per cent more people would be standing. Actually, they would not be standing; they would drive or stay home.’

4.11.3 The reason is driving or staying home would avoid the discomfort of standing on board trains. Infrastructure Australia recently estimated a negative impact on passengers of standing on board crowded trains to significantly higher than on seated passengers.

4.11.4 The outcome of 4.11.2 – 4.11.3, and the answer to the Hon. Members question is that Sydney Metro projects in or to/from Western Sydney – or for any journeys that take significant time, say over 20 minutes - will result in more car use than railway projects that allow trains with more seats e.g. existing Sydney Trains.

5. Review of response to terms of reference

5(a) the adequacy of the business case and viability of Metro

5.a.1 The essential element of any proper business case for Sydney Metro is examination of the necessity - and opportunity costs - of its core aspects of tunnel diameter and central city route.

5.a.2 While there is a Sydney Metro document with the term 'business case' in its title, the document did not identify opportunity costs nor show consideration of reasonable options. The document is not a business case appropriate for the private or public sector.

5.a.3 The NSW Government's submission and testimony did not refer to any opportunity costs. They did not provide any evidence of the existence of a business case for Sydney Metro. Nor did they provide any evidence on the viability of Sydney Metro.

5.a.4 The inability of the NSW Government to outline a simple and basic element of the 'business case' – the business response of Sydney Trains (to conversion of the Bankstown segment to Sydney Metro) – for over four years after 'approval' of the business case, underlines the so called 'business case' is a sham.

5(b) the consideration of alternatives for improving capacity and reducing congestion

5.b.1 The NSW Government's submission provided an oxymoronic explanation of Sydney Metro. It did not refer to the core aspects of Sydney Metro.

5.b.2 The submission and NSW testimony did not address the conflicting views put in previous Government documents. Indeed, they purported to rely on documents which conflict with the views they put.

5.b.3 They offered contradictory explanations for rejecting several alternatives to the extension of Sydney Metro to Bankstown.

5.b.4 They did not raise the two most obvious Sydney Metro extension options: no extension; extension to Strathfield.

5.b.5 They did not provide any evidence of consideration of real alternatives to Sydney Metro, its core aspects, routes, or conversion of the Sydenham-Bankstown segment.

5(c) the factors taken into account when comparing the alternatives and the robustness of the evidence used in decision-making

5.c.1 The NSW Government submission and testimony did not provide any public evidence of factors on which a competent transport or planning decision maker could rely to make the Sydney Metro decisions made by the NSW Government.

5.c.2 The submission and testimony did not provide any evidence that significant, credible advice regarding key issues was considered by the Government or some of its predecessors.

5(d) whether metro is a suitable means of transport over long distances

5.d.1 Noted rail expert Mr Wardrop gave un rebutted testimony that Sydney Metro uses a fleet that is inappropriate for commuting over other than very short distances.

5.d.2 The NSW Government submission claimed to address this issue but in fact did not.

5.d.3 The only possibly relevant information in the submission - tangential to this issue – was the claimed length of metro lines. In relation to 5(d), it was misleading.

5.d.4 In conjunction with 5.d.2 – 5.d.3 (above), the failure to provide readily available information on the characteristics of metro systems relevant to this issue implies acceptance of the common view that such systems are not suitable means of transport over long distances.

5.d.5 Sydney Metro seeks the functions of a commuter railway yet is unsuitable for commuting and less than optimal for rapid transit.

5.d.6 The design of Sydney Metro jeopardises and may preclude optimal rapid transit and further commuter rail in much of the metropolitan area. It works against rail travel between Sydney and elsewhere. It copies – without apparent reason - the worst infrastructure characteristics of Paris Metro decisions of the late 1800s which France has been trying to mitigate for the past 60 years.

5.d.7 Comments at public hearings by NSW Government representatives were to the effect that ‘branch lines’ are to be (eventually) converted to Sydney Metro. Some such branch lines are a considerable distance from the CBD.

5.d.8 Matters 5.d.4 – 5.d.7 (above) imply there is a policy of using transport to make commuting across Sydney more difficult.

5.d.9 Matters 5.d.4 - 5.d.7 (above) go beyond, even contradict, announced policies such as the ‘three cities’ by working to effectively restrict access of most Sydney residents, especially those in its growth areas, to the best opportunities in the metropolis.

5(e) the consultation process undertaken with, and the adequacy of information given to, community, experts and other stakeholders

5.e.1 The NSW Government submission and testimony did not address the misleading and confused information previously presented to the public. Indeed, they cited offending documents as authority for some propositions.

5.e.2 They did not refer to previous claims about train and service carrying capacity supposedly (at that time) the key reason for Sydney Metro decisions. Indeed, testimony effectively debunked previous claims.

5.e.3 They introduced new contradictions.

5.e.4 The submission was consistent with a pattern observed in my submission to this Inquiry: an increasing disregard about the information provided to the community.

5(f) the impact on the environment and heritage conservation

No comment.

5(g) any lobbying, political donations or other influence of the public or private sector in relation to making that decision

5.g.1 The NSW Government submission and testimony did not provide any information on this issue.

5.g.2 They ignored peculiar aspects of Sydney Metro decisions including: disregard of published expert advice; implausible explanations; indications a consultant reviewed expert work and was acting on behalf of Transport for NSW in advising Infrastructure NSW.

5.g.3 At the public hearings, a Committee member made a suggestion Sydney Metro is the result of factions within the NSW railways. This was not rebutted, and indeed was supported by one witness.

5(h) the tender process for appointing private operators

5(i) the contractual arrangements entered into in respect of the project

5(j) the adequacy of temporary transport arrangements during the conversion process, including for people with a disability

No comment.

5(k) the impact on the stations west of Bankstown

5.k.1 The introduction to the NSW Government submission cited *Future Transport 2056* and the *Greater Sydney Plan* as authoritative sources of information. Both these documents did not depict any rail line to the relevant stations west of Bankstown. They effectively show there will be no train services to those stations.

5.k.2 Despite 5.k.1, the submission states the relevant on the Bankstown line will be served by Sydney Trains. It did not acknowledge the conflict in this position.

5.k.3 NSW Government representatives gave testimony there is no plan to discontinue rail services to the stations in question.

5.k.4 However, this assurance was qualified by the words 'short-term', an unfamiliarity with the Government's document and an inability to specify what (level of) rail services would be provided to the stations.

5.k.5 NSW Government representatives indicated relevant service levels may become public knowledge within the next 12 months.

5.k.6 The inability to specify service levels to the stations should be seen in the context of such specification presenting little apparent complexity or difficulty, and the passing of more than three years since publication of the ostensible 'business case'.

5.k.7 The Government effectively asked for belief that a simple and basic element of the 'business case' – the business response of Sydney Trains – will not be determined for well over four years after 'approval' of the business case.

5.k.8 The matter is unclear. Unless *Future Transport 2056* and the *Greater Sydney Plan* are revised (which they were not at the time of writing – 2 December 2019) it should be presumed the relevant lines will be closed – or at least not served by passenger trains beyond the short term.

5.k.9 The NSW Government submission does not provide any information on the effect of conversion of the Bankstown line on the capacity of the network used by Sydney Trains. It should be presumed the impact will be disproportionately adverse.

5(l) any related matter

5.l.1 The NSW Government submission and testimony confirm the gravity of the situation Sydney and NSW face.

5.l.2 The Sydney Metro decisions permanently divide and reinforce geographic inequities in Sydney. They will reduce access of people in the metropolitan area and beyond to central Sydney much as the similar Paris Metro decisions did from the late 19th century in that city.

5.l.3 The decisions will severely reduce options available for future Governments to improve rail services and to use rail services to mitigate the effects of locational disadvantage.

5.l.4 The NSW Government submission and testimony did not rebut the presumption of an absence of transport and land use reasons for a rapid transit system in Sydney.

5.1.5 Nor did the submission and testimony rebut the claim that Sydney Metro arose out of factionalism in the NSW railways.

5.1.6 They did not provide any plausible explanation for the core Sydney Metro aspects - small tunnel diameters, city route – and commencement with North West rail.

5.1.7 They did not name experts etc. or publish supporting material. The Government's submission is likely to reinforce pre-existing suspicions about Sydney Metro and cause more ill-informed speculation.

5.1.8 The above confirms by far the best option – for operational and public policy reasons - is to terminate Sydney Metro near the CBD.

ⁱ <https://www.parliament.nsw.gov.au/lcdocs/submissions/65643/0030%20Mr%20John%20Austen.pdf>

ⁱⁱ <https://www.parliament.nsw.gov.au/lcdocs/submissions/66187/0071%20NSW%20Government.pdf>

ⁱⁱⁱ <https://www.sydneymetro.info/greaterwest>

^{iv} National Film and Sound Archive of Australia, *All manner of trains*, at <https://www.nfsa.gov.au/collection/curated/all-manner-trains>. See e.g. video at minute 29 and beyond

^v In my first submission I indicated there were around one thousand hundred reads per week. This was based on 'dashboard' information from Weebly.com. Since that submission, information from Weebly indicates a vastly lower readership – currently around 10 per week! I have not explored reasons for the difference.

^{vi} <https://www.transport.nsw.gov.au › files › media › documents › tra-000402>

^{vii} <https://www.legislation.nsw.gov.au/#/view/act/1988/109/part1/sec3b>

^{viii} Even if the primary delay is attributable to an infrastructure fault.

^{ix} <https://www.thoughtco.com/humpty-dumpty-philosopher-of-language-2670315>

^x <https://future.transport.nsw.gov.au/plans/greater-sydney-services-and-infrastructure-plan/future-networks>