

Major Projects
NSW Department of Planning, Industry and Environment
GPO Box 39
SYDNEY NSW 2001

4 November 2020

Our ref DAL 183700

Dear Sir/Madam

**Submission to M12 Motorway Amendment Report October 2020
State Significant Infrastructure Application Number: SSI – 9364**

1. We act on behalf of:
 - a. Ms Rosaria Maria Barca, the registered proprietor of the property known as 20 – 22 Cecil Road Cecil Park NSW 2178;
 - b. Ms Nazzareno Barca, the registered proprietor of the properties known as 16, 24-26 and 28 Cecil Road Cecil Park NSW 2178; and
 - c. Ms Mimma Barca, the registered proprietors of the property known as 18 Cecil Road Cecil Park.
2. We are instructed to make this submission in objection to State Significant Infrastructure Application SSI – 9364 (**Application**) and, in response to the M12 Motorway Amendment Report dated October 2020 (**Amendment Report**) for a new dual-carriageway motorway to connect the M7 Motorway with the Western Sydney Airport.
3. In preparing this submission, we have considered the Environmental Impact Statement dated 2019.
4. We understand the proposal has been amended to include a realignment of Wallgrove Road north of the intersection with Elizabeth Drive to accommodate the M7 Motorway northbound entry ramp. The proposed Wallgrove Road realignment is shown on Sheets 3 and 4 of Figure 2-1 in the Amendment Report.
5. The newly aligned Wallgrove Road will run along the length of the creek fronting the above-mentioned properties owned by our clients.
6. The realignment of Wallgrove Road will have significant impacts on the natural environment as it will result in the destruction of the creek, the dam and entire bushland adjacent to the creek and will have adverse amenity impacts including visual and acoustic impacts for our clients.

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7. Our clients have engaged Mr Dominic Fanning, Ecologist of Gunninah to assess the impacts of the Amended Proposal on biodiversity and the natural environment. We intend to supplement these submissions following receipt of Mr Fanning's report.
8. Our clients have also engaged Ken Dobinson, Traffic Expert of Dobinson & Associates to prepare a response to the Amended Proposal. We **enclose** a copy of Mr Dobinson's submission dated 16 October 2020.
9. Mr Dobinson does not support the realignment of Wallgrove Road at its southern end to connect to Cecil Avenue and Elizabeth Drive as there are viable alternative options available with minimal environmental impact compared to the proposed route. The alternative routes are also likely to reduce costs associated with decommissioning the dam and relocating the creek.
10. Mr Dobinson has included an opinion on the most viable route available to minimise disturbance to our clients and to minimise environmental impacts including the protection of the creek fronting our clients' properties.
11. Based on discussions between our clients and Transport for NSW on 26 October 2020, we are instructed that Figure 2-1 in the Amended Report does not accurately depict the location of the newly realigned Wallgrove Road. Mr Dobinson has included in his report a further alternative location in respect of Wallgrove Road which has been provided by Transport for NSW. This alternative option is not included in the Amendment Report.
12. Based on the above, we submit the Amendment Report is misleading and should be updated and renotified to give our clients and the public an opportunity to provide submissions based on what is proposed.
13. Our client has not been provided with any road designs other than a conceptual roundabout design at the intersection between Cecil Road and Wallgrove Road (See **Figure 1** below).

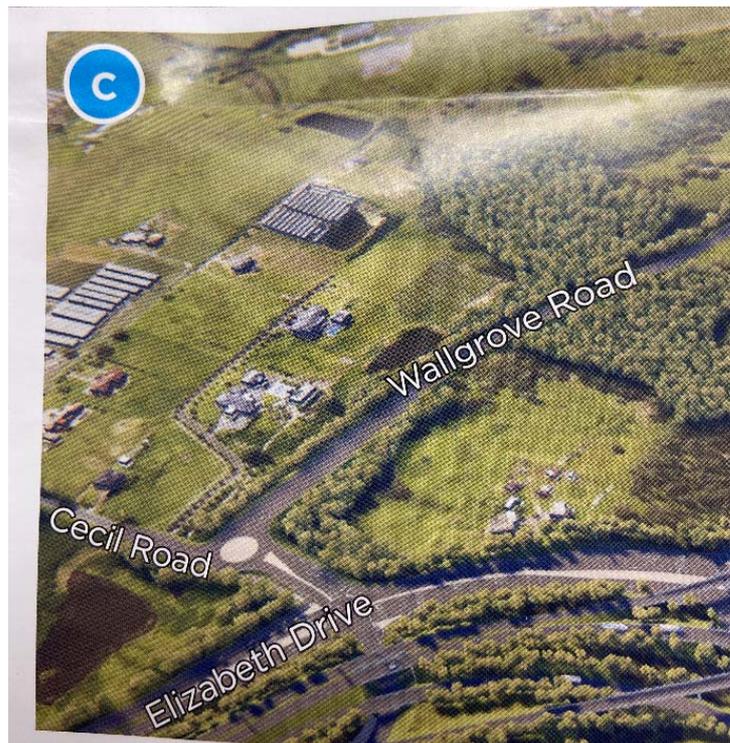


Figure 1: Conceptual roundabout design at intersection between Cecil Road and Wallgrove Road

14. Based on recent discussions with Transport for NSW, our client has been informed the Amended Proposal will not include a roundabout at the intersection between Cecil Road and Wallgrove Road. This is inconsistent with Figure 1 above and what is depicted on Page 4 of Figure A-1 of the Amendment Report which clearly shows a roundabout at the intersection between Cecil Road and Wallgrove Road.
15. We submit that there is no certainty around the roundabout design and its location nor whether the roundabout forms part of the Amended Proposal.
16. Our client has also engaged Gary Rhodes, Town Planner of Rhodes Planning to prepare a submission. We **enclose** a copy of Mr Rhodes' submissions dated 28 October 2020 and we rely upon the submissions made by Mr Rhodes.
17. As foreshadowed above, our clients will be preparing further written submissions to supplement these submissions following receipt of Mr Fanning's report containing an assessment of the ecological impacts of the Amended Proposal.
18. If you have any questions or would like to discuss, please do not hesitate to contact us.

Yours faithfully
Bartier Perry



Dennis Loether | Partner
D 8281 7925 F 8281 7838 M 0402 891 641
dloether@bartier.com.au



Julide Ayas | Lawyer
D 8281 7983 F 8281 7838
jayas@bartier.com.au

Enc (2)

**Proposed M12 Motorway interchange with M7 Motorway at Cecil Park
Response to Amended EIS of 21 October 2020
Impact on Watercourse adjacent to Barcas' Property, Cecil Road, Cecil Park**

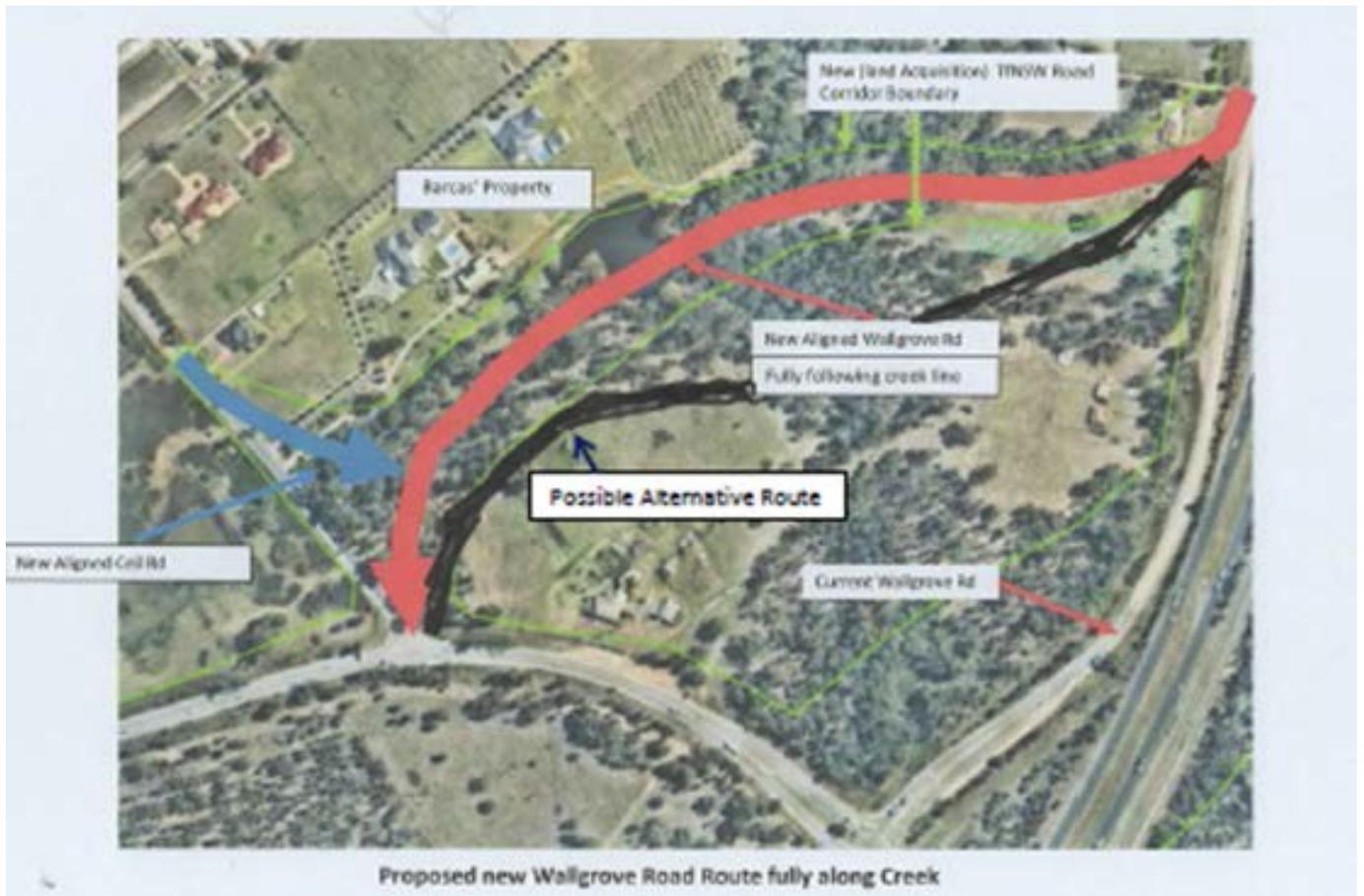
This Report refers to the impact from the most recent variation to the M12 motorway proposal at the interchange with the M7 at Cecil Park, specifically the relocation of Wallgrove Road at its eastern end, and the amended EIS of 21 October 2020 related thereto. A brief CV indicating my accreditation, qualifications and experience, to comment on this proposal is attached.

The revised proposal now runs a new road route for Wallgrove Road along the length of the creek fronting the Barca properties destroying the creek, its large dam and entire bushland adjacent, which can only be described as insensitive, environmental vandalism. This proposal in effect destroys the amenity the family currently enjoys at their residences facing a creek and associated extensive bushland alongside the creek. It also appears to unnecessarily impact environmentally with numerous alternative routes available that minimize this impact and are likely to provide improved traffic operation at reduced cost. This proposal was not included in the original EIS exhibited for the M12.

I provide the following comments.

- Both the current and original EIS provide voluminous volumes of information (the current amended version some 470 pages plus 12 extensive appendices) but yet seem to omit the most vital information for assessment, That is consideration of viable alternatives and cost/benefit assessment; information presented appears in a delightfully presented but difficult form for ready reading making exhibition period from 21 October to 4 November seems ludicrously short; traffic data appears in extensive tables difficult to assess rather than simple line diagrams with traffic numbers for comparison of alternatives.
- It is understood that the present amended proposal at the M7/M12 interchange itself, is primarily to resolve the issue raised in responses to the original EIS of lack of connection between Elizabeth Drive and the future M12.
- Disturbingly, we were verbally advised by TfNSW on 26 October 2020, that the proposal for the Wallgrove relocation at its southern end connecting to Cecil Avenue and then Elizabeth Drive in the amended EIS of 21 October 2020 IS NOT the current one proposed by TfNSW but rather that shown in red on the aerial below ! However this decision is acknowledged as sound as it would provide an undesirable circuitous route for the significant Wallgrove Road route through to Elizabeth Drive; the roundabout at Cecil Avenue would reduce traffic capacity at the southern end, while the Wallgrove Road route along the creek would cause even greater environmental impact than the red route now advised as 'the' current proposal.
- It appears that few if any really viable alternatives to that now proposed involving shifting Wallgrove Road to along the environmentally sensitive creek line were properly considered.

In particular, drawings displayed of the proposed relocation of Wallgrove Road did not justify why very apparent, logical alternatives, such as that shown in black on the aerial below would not be a preferred route for Wallgrove Road.



That alternative seemed much more preferable because it would –

- ✓ Avoid the creek line and bushland with minimal environmental impact compared to the proposed route with horrendous impact
- ✓ Have minimum social impact on amenity of lifestyle for adjacent residents compared to the destructive impact of the proposed route and with lesser overall land take.

- ✓ Be at significant reduced cost across open undeveloped lands compared to the high cost of building along the creek line and relocation of the creek, i.e. improved economical outcome.

In summary it seemed to be a far superior, sustainable route, and there appeared to be no traffic operation or safety issues with this alternative, possibly if anything a slight benefit. There appear to be many more sustainable options clear of the creek line and bushland than the present proposal. A photo of what the present route would destroy is also shown below.

- A variation of the alternative abovementioned presented by TfNSW on 20 August 2020, shown blue on the aerial below, showed a change at the northern end only with assessment seemingly heavily biased to appear to have greater impact than the base proposal. Requests for copies of the varied proposal and assessment were declined as was any concept details for the proposed intersection of the new Wallgrove Road with Elizabeth Drive.
- Nevertheless a variation to the abovementioned TfNSW alternative was prepared which is illustrated below by an alternative centerline in black for Wallgrove Road on the TfNSW blue scheme. Comments thereupon related to the presentation by TfNSW are set out below:
 - Justification for west facing ramps between Elizabeth Drive and the proposed M12 Motorway. It is understood that complementary west facing ramps are planned somewhat slightly further west to those adjacent to the double interchange and the Barca property, sometime in the future. While I have no traffic assessment of forecast traffic for 2036, it is difficult to appreciate why two sets of west facing ramps would be justified even by 2036 to meet demand at that time. It is assumed forecast 2036 traffic demand has been assessed on the basis of planned development in the Western Region of Sydney by 2036, and has taken into account the rail access to the new Airport by that date ? If no demand for two sets of west facing ramps why not bring the second set forward and obviate the need for those now planned near the double interchange - this would save cost and produce a more cost effective project, while at the same time reducing the road complexities that the motorist must negotiate at this location. Further, why are these ramps planned for early development as it seems Elizabeth Drive will provide ready access to the new Airport in its early years ?



- The TfNSW blue alternative moves the northern end of the original proposal but moves nothing at the southern end which is the more critical for impact on the Barca property, the creek, especially dam, and adjacent bush land.
- Alignment of southern end of Wallgrove Road relocation. An alternative alignment for the centreline of relocated Wallgrove Road is shown in black over the TfNSW blue proposal on the sketch below - this alignment brings the connection to Elizabeth Drive at 90 degrees to the same location. Further refinements include -
 - i) Provide the section of Wallgrove Road across the nearby dam length in bridge structure with the bridge only in TfNSW strata title. Retain access under the bridge to provide continuity of the Western Sydney Parklands reserve physically and in ownership across (under) Wallgrove Road
 - ii) Provide a carriageway on the relocated section of Wallgrove Road similar to that proposed on the existing Wallgrove Road planned for 2036 with narrow median and limit the road reserve of the relocated Wallgrove to that for the existing Wallgrove Road formation only i.e. to about 20 metres

These measures will minimize impacts and enhance sustainability of the relocated section, maintain continuity of the land reserve across the relocated road and minimize impact on the adjacent waterway and adjacent bushland with no impact whatsoever on the dam; they also minimize land take for the proposal and reduce cost.

- Elizabeth Drive/new Wallgrove Road/Ramp to M12 Intersection. These comments are made without any information regarding the proposed layout of the intersection, without traffic projections therefor and without any level or contour information. It seems for optimum operation of this signalized intersection, movements under signal control should be reduced to a minimum by providing free flowing left turn slip lanes with long merge lanes onto joining road at -
 - i) Left turn from Wallgrove Road southbound to Elizabeth Drive eastbound
 - ii) Left turn from Elizabeth Drive eastbound to Wall grove Road northbound
 - iii) Left turn from Elizabeth Drive westbound to M12 ramp, and
 - iv) An angled right turn bay from Elizabeth Drive westbound to Wallgrove Road northbound to facilitate ease of this turn

These measures would facilitate movement through the intersection, minimize signal control of movements and optimize level of service through the intersection.

While these thoughts are without the benefit of base or layout drawings, or other desirable information, it is apparent that the black centreline route on the TfNSW blue proposal would be the most sustainable and traffic effective of all routes referred to above. But it is considered with information abovementioned provided even this route could be further refined to the overall benefit of this project.

Ken Dobinson
26 October 2020

RESUME' OF KEN DOBINSON
B.E., M.Env.Studies, Grad. Cert. M'gement, Barrister
F.I.E.Aust., F.C.I.T., A.F.A.I.M., M.A.I.TPM

DOBINSON & ASSOCIATES Pty. Ltd.
38/59 Macquarie Drive, Cherrybrook N.S.W. 2126

Ph: (02) 9481 0453
Mobile: 0419 227 466
E-mail: kdob5500@bigpond.net.au

Ken Dobinson is Managing Director of Dobinson & Associates, a private consultancy in management, transport planning and infrastructure development. He was previously Director, Board of Management, Roads & Traffic Authority NSW (RTA).

Ken has tertiary qualifications in engineering, environmental planning, management and law. He is a Fellow of the Institution of Engineers, Australia, a Life Fellow of the Chartered Institute of Logistics and Transport, Associate Fellow of the Australian Institute of Management and Member of the Australian Institute of Transport Planning and Management. His knowledge and experience in management, traffic, transport and land use planning, extends over 60 years.

While in government he delivered Australia its first freeway, the Sydney-Newcastle freeway; he brought the World leading SCATS coordinated traffic signal system across Sydney and later gave Sydney the Sydney Harbour Tunnel and Orbital Freeway around Sydney.

Since entering private practice, he was advisor over 3 years to the Federal Government and Minister for Transport on development of the National Highway system. He was advisor to the 2000 Olympics Co-ordination Authority and leader in developing the transport system for the Olympic site at Homebush Bay.

In recent years he has been involved with development by the private sector. This includes transport infrastructure projects such as the Western Sydney Orbital freeway and the Sydney-Canberra very high-speed train project as well as major city developments, town centres, new towns in Sydney and Newcastle and individual developments throughout the Eastern States.

He directed the innovative research project – ‘Sustainable Transport in Sustainable Cities’- at the Warren Centre, Sydney University covering all aspects of city development and transport, and then involved in its implementation as a Director of 10,000 Friends of Greater Sydney. He was a member of the peer review team for the Victorian Metropolitan Strategy, Melbourne 2030, and was advisor to the ACT Government on restructuring to achieve the Canberra Plan.

In past years, he was a member of the NSW Premier’s Consultative Committee on Ageing, the Accessible Transport Forum and the Mature Workers Advisory Committee which provided advice to the NSW Premier and Government on policy in the respective areas. He was also Advisor to the Federal Minister for Transport. He was a member of the transport panel developing the Metro Strategy for the NSW Government. He was a Judge of the Institution of Engineers Excellence Awards for Infrastructure.

In 2003 he was awarded the Transport Engineering Medal by the Institution of Engineers for his contribution to transport in Australia.

RHODES PLANNING

Town Planning Consultants

SUBMISSION TO M12 MOTORWAY AMENDMENT REPORT OCTOBER 2020 AS IT APPLIES TO NOS.18 TO 28 (LOTS 300 TO 304 DP 1122172) AND THE ADJOINING "RIVER" CECIL ROAD CECIL PARK

This submission is made in respect of the now exhibited Amendment Report 2020 and in particular the proposal for the deviation of Wallgrove Road as it affects Lots 300 to 304 DP 1122127 Cecil Road Cecil Park (the Barca Land) as well as the very significant potential impact of these road works on the "River" and its environs that adjoin the southern boundary of the land. For convenience the following Table 1 indicates the extent of the "Barca Land". This submission contains highlighting in red, which is mine.

Table 1 – Details of the Barca Land

Land	Area	Zoning FLEP	Acquired	Retained	Comments
Lot 300 No. 16 Ms N	10050	RU4 - 1 Ha minimum subdivision	1410	8640 (86%)	Triangular section at south western corner of parent parcel. Does not affect buildings
Lot 303 Nos 24- 26 Ms N	12140	RU4 - 1 Ha minimum subdivision	150	11990 (99%)	Part of access handle for a distance of about 45m from Cecil Road
Lot 302 Nos 20- 22 Ms R	11420	RU4 - 1 Ha minimum subdivision	150	11270 (99%)	Part of access handle for a distance of about 46m from Cecil Road
Lot 301 No.18 Ms M	12890	RU4 - 1 Ha minimum subdivision	1020	11870 (92%)	Part of "access handle" 17m wide for an average depth of 59m from Cecil Road
Lot 304 No 28 Ms N	19890	Western Sydney Parklands	2740 + 1550 = 4290	15600 (78%) of which 1710 is to be leased for construction	Part of Western Sydney Parklands but yet to be acquired for that purpose. About 5% of the Parklands are yet to be acquired

The writer has previously provided planning advice in respect of the subdivision of Lot 3 Section 4 DP 2954 (Parent Parcel – the Barca Land) and consent was granted on the 17th March 2005 for the subdivision of the land into four Non Urban Residential Lots (1 Hectare) and one "Parkland Lot". It is noted that the original application was for six non urban residential. lots (1 hectare) however following comments from the Department of Infrastructure Planning and Natural Resources the application was amended to provide for the

four lots as subsequently approved on the 17th March 2005. The remainder of the land (which became Lot 304) was required by the Department to be retained within the Western Sydney Parklands no doubt because of its proximity to the “River” to the south of the “Barca Land”. Lot 304 remains in the ownership of Ms N Barca.

The consent required the issuing of a Part 3A Permit in respect of works related to the riparian zone required treatment of land forming part of the application in the vicinity of the “River”. Without going into the full details of the Permit it is suffice to say that considerable weight was placed on the importance of the River and the retention thereof.

Despite the considerations undertaken as part of the assessment of the subdivision and the clear importance given to protecting the “River” the exhibited road deviation proposal plays no regard to the “River” and its riparian zone to the extent that it will be obliterated by the proposed road works.

Somewhat surprisingly the EIS does not include any evidence that alternate locations were considered such that the dramatic impact on the natural environment could and should be avoided. In this regard I note the advice of Ken Dobinson in terms of a possible location to the south of the “River” being one option and further comments are provided later in this submission. I would submit that much more weight must be given to the protection of the “River” as expressed in the approval of the subdivision and Part 3A Permit and all opportunities for an alternate alignment must be fully considered based on all issues and not just a convenient location on pure acquisition cost grounds.

We note the EIS as exhibited in November 2019 contained the following description of the scope of works:

5.1 Project scope

Roads and Maritime proposes to build the M12 Motorway between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham, over a distance of about 16 kilometres. The project would provide the main access from the Western Sydney Airport at Badgerys Creek to Sydney’s motorway network and is expected to be opened to traffic before the opening of the Western Sydney Airport. The timing of opening of the M12 Motorway is subject to planning approval and completion of detailed design. However, the project is expected to open in 2025.

The project would include the following key features:

- *A new dual-carriageway motorway between the M7 Motorway and The Northern Road with two lanes in each direction with a central median allowing future expansion to six lanes*
- *Motorway access via three interchanges/intersections:*
 - *– A motorway-to-motorway interchange at the M7 Motorway and associated works (extending about four kilometres within the existing M7 Motorway corridor)*
 - *– A grade-separated interchange referred to as the Western Sydney Airport interchange, including a dual-carriageway four-lane airport access road (two lanes in each direction for about 1.5 kilometres) connecting with the Western Sydney Airport Main Access Road*
 - *– A signalised intersection at The Northern Road with provision for grade separation in the future*
- *Bridge structures across Ropes Creek, Kemps Creek, South Creek, Badgerys Creek and Cosgroves Creek*
- *Bridge structure across the M12 Motorway into Western Sydney Parklands to maintain access to the existing water tower and mobile telephone/other service towers on the ridgeline in the vicinity of Cecil Hills, to the west of the M7 Motorway*
- *Bridge structures at interchanges and at Clifton Avenue, Elizabeth Drive, Luddenham Road and other local roads to maintain local access and connectivity*
- *Inclusion of active transport (pedestrian and cyclist) facilities through provision of pedestrian bridges and an off-road shared user path including connections to existing and future shared user path networks*
- *Modifications to the local road network, as required, to facilitate connections across and around the M12 Motorway including:*
 - *– Realignment of Elizabeth Drive at the Western Sydney Airport, with Elizabeth Drive bridging over the airport access road and future passenger rail line to the airport*

- – *A realignment of Clifton Avenue over the M12 Motorway, with associated adjustments to nearby property access*
- – *Relocation of Salisbury Avenue cul-de-sac, on the southern side of the M12 Motorway*
- – *Realignment of Wallgrove Road north of its intersection with Elizabeth Drive to accommodate the M7 Motorway northbound entry ramp*
- *Adjustment, protection or relocation of existing utilities*
- *Ancillary facilities to support motorway operations, smart motorways operation in the future and the existing M7 Motorway operation, including gantries, electronic signage and ramp metering*
- *Other roadside furniture including safety barriers, signage and street lighting*
- *Adjustments of waterways, where required, including Kemps Creek, South Creek and Badgerys Creek*
- *Permanent water quality management measures including swales and basins*
- *Establishment and use of temporary ancillary facilities, temporary construction sedimentation basins, access tracks and haul roads during construction*
- *Permanent and temporary property adjustments and property access refinements as required.*

There is no reference to the now proposed Wallgrove Road deviation in the above words or any associated map.

Whilst it is acknowledged that an approval under the *Water Management Act 2000* in respect of the “River” is not required surely this does not give the RMS/Transport NSW carte blanche to destroy the natural environment, as now proposed by the deviation, without at least a detailed assessment of viable alternative routes including a cost benefit analysis in terms of land acquisition costs relative to the now proposed environmental impact.

As at 2004 the now Lot 304 was of such environmental importance to preclude the creation of two rural residential lots yet now there is apparently no environmental importance, whilst, for good measure, the proponent is also to destroy the adjoining “River” and its well established riparian zone treatment. The current approach would seem to be solely influenced by time constraints and associated convenience and is offensive in terms of legislation that goes to protecting the environment.

With regard to alternate locations the following section of the amended EIS is provided below:

6.1.3 Assessment of potential impacts

6.1.3.1 Avoidance and minimisation

Where practicable, biodiversity impacts have been avoided and/or minimised during development of the amended project. However, in some instances, biodiversity impacts could not be avoided or minimised due to the design constraints of the amended project.

Here I would say that biodiversity impacts could in fact be avoided as there are clear and obvious alternate routes for the deviation which would not impact on the biodiversity values of the area.

Design constraints of the amended project include:

- *Realignment of Wallgrove Road to connect to Cecil Road, including a connection between Elizabeth Drive and Wallgrove Road via Cecil Road with a signalised intersection with Elizabeth Drive*
 - – *This change would improve intersection performance at the existing signalised intersection of Wallgrove Road and Elizabeth Drive but would require clearing of existing vegetation.*

I ask what if any discussions the RMS/Transport NSW has had with the proponents of No 1111 Elizabeth Drive Cecil Park (the yet to be determined SSD application). The proponents revised EIS (dated 22nd September 2020) says at Page 8:

On 19 September 2019, landowners were approached by Transport for New South Wales (TfNSW) formally opening negotiations for the compulsory acquisition of 26,617m² (or36% of the original site area) of the site to facilitate the realignment of Wallgrove Road.

Provided below, as **Plate 2** is the now proposed subdivision layout for the SSD application. It includes details of the deviation pavement and I am advised that this information has not been provided to Barca albeit an email was received on the 29th October 2020, which provided an indication of the construction alignment as simply an overlay on an aerial photograph.



PLATE 2 – NOW PROPOSED SUBDIVISION PLAN FOR NO 1111 ELIZABETH DRIVE CECIL PARK

In addition the Amended EIS 2020 does not include any information in terms of the road design although it does include an indication of a roundabout at the intersection of the deviation and Cecil Road. Advice received 26th October 2020 indicates this roundabout is not to be proceeded with. So no details of road design other than a conceptual roundabout, which is now not proposed? In my view this simply indicates a rushed approach to amending the EIS to retrofit a pre decided major change without full and proper consideration. The lack of this information also prevents any informed comments in respect of noise and visual impacts.

With respect to noise impact it is noted that:

At section 6.7.1 it is said:

1. *No additional ambient noise surveys were carried out for the amended project, as the amended construction and operational footprints are largely consistent with the project as described in the EIS. Monitoring locations and ambient noise survey results are detailed in Section 7.7.5 of the EIS.*

At section 6.7.2 it is said:

1. *The existing noise environment, including noise catchment areas and noise and vibration sensitive receivers, has not changed since the preparation of the EIS. The noise environment described in Section 7.7.5 of the EIS is still applicable to the amended project.*

Section 6.7.3.1

- *During the night-time, construction work is predicted to have 'high' impacts at some receivers near areas where out-of-hours work would be required. The receivers with 'high' or 'moderate' impacts are generally consistent with the EIS, with the exception of a few discrete areas around the Wallgrove Road realignment in NCA04, the Elizabeth Drive work to the east of the M7 Motorway in NCA02 and adjacent to the ancillary facility AF 10 in NCA10. Receivers in these areas typically have 'high' impacts at the first row or two of receivers, with 'moderate' impacts extending a few rows further away.*

Further extracts are provided as:

6.7.4.3 Maximum noise level assessment

Maximum noise levels resulting from amended project would be generally consistent with those described in Section 7.7.7 of the EIS.

However, maximum noise levels are predicted to increase by up to 15 dB at dwellings adjacent to the realigned Wallgrove Road in NCA04, compared to up to eight dB at these receivers in the EIS. This is due to the realigned Wallgrove Road moving closer to the dwellings in the amended project than the project as described in the EIS.

Some of the receivers identified in the assessment may be eligible for consideration of additional noise mitigation based on the predicted L_{Aeq} road traffic noise levels. While receivers are not triggered for consideration of additional noise mitigation by maximum noise levels alone, selection of feasible and reasonable mitigation measures during the detailed design stage would take the change in maximum noise levels into consideration where a receiver qualifies for consideration of additional mitigation

6.7.5 Environmental management measures

Noise and vibration impacts associated with the amended project are generally consistent with impacts described in the EIS and would therefore be managed through the implementation of the proposed management measures described in Section 7.7.9 of the EIS. Where management measures differ from those listed in the EIS, these are described in the sections below.

6.7.5.1 Operational noise mitigation management measures

Road traffic noise levels would be reduced to meet the NCG noise criteria through the use of feasible and reasonable mitigation. An assessment of operational mitigation measures in Appendix G forms a preliminary feasible and reasonable assessment to inform the detailed design stage of the project. A summary of the preliminary assessment for pavement selection, noise barriers and architectural treatment is provided below.

A preferred noise mitigation option (low noise pavement, noise barriers, architectural treatments, or a combination of these) **will be determined during detailed design taking into account whole-of-life engineering considerations** and the overall social, economic and environmental benefits. The preference will be given to noise mitigation measures that reduce outdoor noise levels and the overall number of at-property treatments.

In-corridor mitigation – noise barriers

The process for considering the use of noise barriers is described in the NMG (Roads and Maritime 2015a) and would be considered where there are four or more closely spaced triggered receivers. As a guide, noise barriers are considered to be a reasonable noise mitigation option where they are capable of providing a noise attenuation benefit (referred to as an insertion loss) of:

- Five dBA at representative receivers for barrier heights of up to five metres
- Ten dBA at representative receivers for barrier heights above five metres high and up to eight metres high.

In certain situations, the requirements for the barrier cannot always be met. In this case, further feasible and reasonable assessment is undertaken to identify alternative noise mitigation options.

At this early stage in the amended project, the barrier analysis has used the predicted noise levels from the concrete road surface scenario, as this results in the highest road traffic noise levels and represents a worst-case assessment.

*During the assessment of the EIS, several barrier arrangements were investigated throughout the alignment. Two additional barriers (NW.07 and NW.08) which were not investigated as part of the EIS that have been included in the amended design assessment due to either additional triggered receivers being identified as part of the amended assessment or, design changes as part the amended assessment which allows barriers in new locations to be considered. The assessment concluded that three noise barrier locations (NW.02, NW.03, NW.04) would be considered further in detailed design based on the predicted noise benefit. These are described in **Table 6-46** and the indicative locations for option 2 (with Elizabeth Drive connections) are shown in **Figure 6-48** as this is the worst case scenario.*

The EIS as amended indicates a Noise Barrier (NW07) whilst Table 6-46 describes the location as “Along the northern boundary of the realigned Wallgrove Road, extending 360 m from Cecil Road” and then says “Not found to be reasonable as it does not achieve the principles of the NMG”. This barrier does not then appear to be further considered and no details of possible treatment are provided.

Whether this noise assessment was based on a roundabout being provided is unknown.

In terms of visual impact, the absence of design plans prevents any reasonable assessment of visual impact. The location and level of the proposed road pavement relative the corridor boundaries coupled with potential noise barriers (apparently yet to be determined) does not enable any assessment of visual impact mitigation opportunities.

Submitted for consideration

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Rhodes', with a large, stylized flourish on the left side.

Gary Rhodes
Consultant Town Planner
0418645978
grhodes@saludell.com.au

28th October 2020