CLG Report feedback to bidders – Northern Community Members

The Greensborough Road Corridor (Lower Plenty Road - M80)
– S.M.A.R.T. Taxpayer Design

There has been widespread support for a N.E. Link project in the local community, with the promise of removing and re-directing ‘through’ traffic from local roads, thereby returning, in our case, the Greensborough Rd corridor to the local community to provide the opportunity to:

- re-establish & re-integrate Community links;
- preserve and enhance local amenity;
- preserve and enhance the open spaces and natural environment the Community values so highly; and
- realise future potential to plan and grow as a fully cohesive Community.

Unfortunately, the northern section of proposed Reference Design from Lower Plenty Road to the M80 by NELP (fmr NELA) not only fails to meet my and the local Community's aspirations, but seems to greatly understate the this reference Design's impact on the local community's Cultural, Social, Landscape, Visual and Recreational Amenity and the area’s much Valued Natural Open Space Character that has attracted and binds much of the Community here.

Despite NELP’s extensive consultation process, the local Community's opposition to the Reference Design is widespread and growing. Many have conveyed to CLG members that they consider the Consultation Process to have been more of a carefully choreographed ‘Marketing’ exercise with one way communication and no interactive consultation. There is a wide spreading perception that adverse aspects of the Reference Design have not been well articulated and that many of local Community’s concerns and questions conveyed about the Reference Design by CLG members over the past 12-18 months have been ignored and have gone unanswered; and that any critical feedback, no matter how constructive, has been actively discouraged and even falsely depicted, resulting in the original design concept for the north end of the project remaining little changed despite widespread concern and now growing opposition. NELP has offered the Community little justification for the design decisions they have made. There is a strong & growing perception that NELP has been focused primarily on delivering 'a major road project through an area not planned for such a road and within a Community that did not sign up for it' and that the current Reference Design not only fails to meet the local Community's aspirations for the project, but may actually result in a worse situation for the community than currently exists.

These unanswered concerns centre on:

A. The Reference Design's surface footprint of over 31Ha (310,000sqm) along the Greensborough Road corridor. The resulting issues include:

- the 'unnecessary' clearance of almost 11 hectares of mature vegetated land within the Simpson Army Barracks, including several specimens over 100 years old will severely impact the little natural beauty left along Greensborough Rd, and replaces this with a ‘cut and cover’ tunnel with around 1-1.5 metres sandy loam soil profile that cannot
support the existing tree species that are to be demolished;

- the loss of the Banyule Creek as a natural watercourse which would be routed over the proposed ‘cut and cover’ structure,

- the ‘cut and cover’ tunnel impeding surface & groundwater flow and greatly reduce the catchment and water quality of the Banyule Creek, that feeds the Warringal Wetlands downstream in Heidelberg;

- the ‘unnecessary’ loss of habitat for the established native land and aquatic fauna to the area, possibly putting stain on animal communities in adjacent natural areas including the nearby Plenty River corridor;

- severe and ‘unnecessary’ social & economic disruption during construction by impeding links across the Greensborough Road corridor, detouring traffic through local streets and requiring contaminated spoil to be transported on local roads. The surface excavation proposed will generate years of dust & noise nuisance to adjacent residents & businesses. Watsonia Village shops will be economically impacted by further isolating around 30% of their current customer catchment. Previous experience from the construction of the Watsonia Rail Trench and Greensborough By-pass indicates that isolated customers establish new shopping links during construction and do not return. The same will be true for Watsonia Primary School whose current student catchment straddles the Greensborough By-pass. The proposed Construction Methodology & Operations may impact Defence activities within the Simpson Barracks;

B. Instead of removing traffic from the Greensborough Road corridor, the Reference Design will widen the current surface road corridor by 45-80 metres near Lower Plenty Road and by around 30 metres at the north end, including a 30m wide x 8-12 m deep trench. This resulting issues include:

- **Increased** cultural, psychological, as well as physical separation of the communities either side of Greensborough Road. People would be reluctant to cross 60 metres of noisy carriageway when alternative may exist on ‘their’ side of the road through an easier & more pleasant route. This would adversely affect the economic viability of Watsonia Village and the Long Term enrolment of Watsonia Primary School, and also would impede the established and growing social & economic links between the Simpson Barracks and Banyule Communities. It may also impact on future Defence activities in the Simpson Barracks;

- Visual degradation of the Greensborough Road Corridor that would preclude the long hoped Visual improvement along Greensborough Road;

- Precluding the possibility to improve develop the Greensborough Road corridor for local traffic movement and improved community links, thereby impeding the potential for greater Community integration either side of the roadway, including increased use of the Simpson Barracks Lands in the future, as this will now be restricted to ‘Green bridge’ locations. This will permanently limit the future potential of the Macleod, Watsonia, Greensborough & Yallambie Communities;
Greatly reducing the area of the already over-crowded Watsonia Car Park, thereby precluding the possibility of greatly increasing future parking capacity to increase public transport patronage, thereby reducing local network vehicle movements downstream. The Reference Design’s proposal for a multi-level car park may increase parking capacity by 50 cars, but would preclude future expansion. Furthermore, it would visually isolate Watsonia Village from around 30% of their current customer catchment east of the roadway, is block its hilltop views to the Dandenongs, which is currently a valued feature of the Village;

Introducing increased light pollution due to increased roadway & signage lighting. Unless properly controlled, this would impact on adjacent properties and remaining parklands;

Worsening noise levels to Communities flanking the Greensborough Road corridor due to increased daytime traffic volumes, and especially at night as NEL will not have the curfews for trucks that currently exist;

Not greatly improving naturally dispersed exhaust pollution, despite a likely reduction in local traffic congestion and the increased usage of low pollution vehicles, due to increased traffic volumes and the inclusion of slow lanes for trucks due to the Reference Design’s road grades. This will mainly involve larger trucks most of which would remain diesel. Natural exhaust dispersion would mean exhaust gasses would be ejected at ground level in obstructed airflows resulting in more concentrated pollution levels being deposited in properties flanking the roadway. Slow lanes are proposed next to Watsonia Primary School;

Greatly degrading the established visual character and open space amenity of the area and especially along the Greensborough Road corridor, which our Community values so highly. This impact is greatest to properties facing the proposed Noise Barriers.

C. The Reference Design (Lower Plenty Rd – M80) is unnecessarily complex to build & use, unnecessarily invasive & disruptive to the local Community, proposes Contract Methodology that discourages innovation to achieve the best quality design and represents poor ‘Value for Money’ for the Victorian taxpayer in general and the Banyule Community in particular. Community Members have expressed the following concerns:

The layout, especially north of Lower Plenty Road, does not discourage ‘Rat-Running’ of through traffic through local roads, and does not encourage diversion onto the Public Transport at Watsonia where the N.E. Link crosses a major rail line.

The road profile for the NE Link carriageway in the Reference Design is unnecessarily undulating with some steeper grades necessitating the inclusion of slow lanes for trucks. This will increase transport operating costs and increase localised noise & pollution as the truck accelerate up the grades.

The inclusion of 5no 60m wide ‘Green bridges over a trenched roadway may cause midday glare issues to north travelling drivers;
• The design is unnecessarily complex and employs many construction methods. This will be reflected in increased project management and construction costs, because of the increased plant and workforce required, the resultant increased construction footprint of the project and complex interfaces between different construction processes;

• The use of ‘Cut & Cover’ tunnel construction is unnecessarily invasive. It not only adds construction complexity and costs to the project, but greatly increases the surface footprint of the project, which has caused many of the local Community’s aforementioned Economic, Environmental & Social disruption issues.

• The Business Case for the proposed Lower Plenty Road Interchange appears ‘courageous’, especially as the most current VicRoads traffic surveys indicate that under 15% of traffic along Lower Plenty Road access either the M3 or M80 (refer attached diagram). To achieve the volumes claimed to justify this interchange would require a substantial increase in traffic volumes along Lower Plenty Road from Eltham to the east and Heidelberg/Rosanna to the west over what NELP has predicted. This could only occur if Eltham was greatly ‘intensified’ or if Melbourne’s North East Boundary was expanded beyond St Andrews, which is counter to the State Government’s Stated Planning Policy. Established driver patterns drivers from Eltham & Rosanna already use more direct routes to access the M80 & M3 (St Helena Rd-Grimshaw St or Fitsimmons Lane from Eltham, and Plenty Rd or Banksia Street from Rosanna) than use the Rosanna/Greensborough Road corridor. Furthermore, the complicated layout of this interchange proposed in the Reference Design makes it difficult & expensive to construct and further dissuade use by motorists, especially when toll costs are factored in. Hence the Business Case to include this interchange in the project is highly questionable at best.

• NELP has claimed the Reference Design marked a ‘minimum standard’ for the final designs as prepared by the tenderers to exceed and improve. However, this is contradicted by NELP’s stated intention to divide the project into 3 distinct packages:
  • Early Works
  • Tunnel Works (as prescribed from the M3 to Lower Plenty Road & not beyond)
  • Surface Works (including works north of Lower Plenty Road and through the Simpson Army Barracks & Watsonia Communities)

Such a proscriptive contract bidding structure would stifle such design innovation by locking in the Reference Design concept. Furthermore, if the Early Works Contract is let before a final design concept is developed, it may either lead to wasteful, unnecessary and costly abortive work and/or may further entrench the flawed Reference Design concept. I would suggest a competitive tender based on a Performance Based Specification Contract with an open brief to link the M3 & M80 along the preferred route would promote the design and methodology innovations sought. Tenders could also be required to test the business case of various components of the project. Such a Contract could prescribe resolving the issues raised by the affected Communities, and better addressing EES objectives. Tenders
could then be Value Managed to achieve the Best Quality Design, thereby providing best ‘Value for Money’ for the Victorian Taxpayer.

In summary, while there is widespread support and some impatience for a North East Link project within the local community along the Greensborough Road Corridor, the same community has major concerns and is voicing growing opposition to the current Reference Design.
THE S.M.A.R.T.* Taxpayer Design by Community Consultation

(refer accompanying Drawings)

In response to the aforementioned Community Concerns about the Reference Design north of Lower Plenty Road to the M80, an alternative design has been independently prepared by the local Community to:

- better address the growing Community Concerns about the Reference Design Proposal and realise their aspirations for the Project along the Greensborough Road corridor; and
- graphically and clearly convey these aspirations to NELP and decision makers on the project.

Unlike the Reference Design, the Community Design (now labelled S.M.A.R.T. Taxpayer Design) has been prepared and regularly updated with active and widespread interactive Community Consultation ensure all the Communities concerns are addressed. It has been unanimously endorsed by many consulted Community Members, including residents, Community Groups, School Groups, Sporting Groups and local Traders as their Preferred Design for the project from Lower Plenty Road to the M80. While maintaining the prosed alignment of the reference Design, the S.M.A.R.T. Taxpayer Design proposes:

- extending the NELA proposed TBM ‘Bored Twin Tunnels’ north of Lower Plenty Road by 3.2 km, under the Watsonia Hill, and a 0.6km long landscaped open trench under Grimshaw Street, in place of NELP’s Reference Design proposal of 1.2km of ‘cut and cover’ tunnel and 3 km of lined open trench roadway;
- diverting the north end of Greensborough Road over the rail alignment using a prefabricated concrete structure to re-establish a permanent surface road network without the need for temporary roadworks and avoiding intrusion into existing School & Open Space; and
- incorporating the structural & planning infrastructure to allow for a future ‘Bored’ tunnel interchange at Lower Plenty Road should the need arise.

*Save My Areas Residences and Trees (S.M.A.R.T.)
This S.M.A.R.T. Taxpayer Design best addresses the local Community's aspirations and would better meet the EES objectives that the Reference Design as follows:

- **Social, Business, Land Use and Infrastructure, Landscape, Visual and Recreation Values, Habitat and Biodiversity & Catchment Values.**
  This proposal reduces the construction and operational surface footprint of the project north of Lower Plenty Road by over 85%, while retaining much of the Greensborough Road alignment. This will minimise Social, Economic and Physical disruption to the local Community during construction and preserve the area’s established Woodlands, open spaces, natural habitats, the Banyule Creek catchment and hydrology. Extensive Road Reserve land will be freed up for future development, Community Facilities & Open Space, including increasing the capacity of the Watsonia Station Car Parking, thereby maximising the future potential of these communities. Creative Urban Design could re-establish Watsonia Village more centrally within the surrounding Community;

- **Transport Capacity, Connectivity and Traffic Management.**
  The SMART Taxpayer Design retains the required functionality of the NEL, while freeing up surplus Road Reserve Land. This provides greater opportunities to better integrates connection with Watsonia Rail Station by facilitating increased car parking capacity and incorporating space for a transport interchange, re-establish Community Links across the Greensborough Road Corridor, including the provision of safer, more attractive cycling and pedestrian connectivity. The removal of the Lower Plenty Road interchange would not diminish the functionality of the NEL, would improve the project’s Business Case and would simplify traffic patterns and encourage only local servicing freight to use local roads. The simplified layout encourages M3-M80 traffic to use NEL, then offers greatly increased parking the Watsonia Station to discourage ‘Rat-Running’ to retain the surface network for local traffic. The SMART Taxpayer Design also details upgrading Greensborough Road to a landscaped divided Boulevard to improve the visual amenity of residents and provide turn lanes for smoother traffic flows without impacting on local habitat, open space and woodlands. The now available surface land would even provide space to readily increase the surface road network capacity without major intrusion, thereby offering futureproofing for the road network, not possible with the Reference Design proposal. Traffic management during construction will be simplified as the existing road network would continue to operate without the need for expensive & intrusive temporary roadways, with any upgrade to Greensborough Road done after the NEL tunnels are operating;

- **Health, Amenity & Environmental Quality**
  Placing much of the through traffic below surface level will eliminate local noise and light pollution and allow for controlled exhaust venting to unobstructed airflow heights to better disperse exhaust ventilation. Ventilation structures would be located remotely in open space areas.
By facilitating safer, more cycle and pedestrian linkages for short trips along & across the Greensborough Rd corridor would improve personal wellbeing.

The use of a tunnelled road offers motorists a consistent road environment from the M3 to M80 and eliminates the possibility midday glare issues to north travelling drivers. As surface excavation works will be minimised and remote from businesses & residences, construction nuisance from noise & dust would be minimised;

- **Greenhouse Gases**
  Minimising the need for early works and demolition and reinstatement, using a simplified, more automated Construction methodology and more prefabrication means less on-site plant, which would not only reduce construction costs, especially if the Lower Plenty Road interchange is deleted, but would reduce the project’s construction carbon footprint and embodied energy. Furthermore, extending ‘Bored’ Twin tunnels north of Lower Plenty Road would maintain a consistent low grade that eliminates the need for slow lanes. This means lower fuel use for large trucks as well as cars further reducing the projects operational carbon footprint. Providing greatly increased parking capacity and a transport interchange at Watsonia Station would encourage southbound motorist to use Public Transport options, and by facilitating safer, cycle and pedestrian linkages for short trips would reduce the Community’s carbon footprint. Retaining the established mature woodlands along the Greensborough Road maintains an established carbon sink;

- **Waste Management**
  The SMART Taxpayer Design extends the TBM ‘Bored’ twin tunnels to within 500 metres of Grimshaw Street. This means the constant flow of large trucks transporting tunnel spoil and other construction waste can gain direct access to the M80 without need to travel on local surface roads. This will greatly assist Traffic management during construction and will enable construction operations to proceed continuously without affecting the local residents and businesses.

- **Land Stability**
  The extended ‘Bored’ Twin tunnels would travel from Lower Plenty Road under the Watsonia Hill to an open trench north of the rail line. The tunnel’s horizontal alignment will broadly follow the existing Greensborough Road alignment and be clear of all property lines, while the vertical alignment will provide clear depths of 15-40metres. The geology is ‘rippable’ Silurian Mudstone and Sandstone, which is similar to that south of Lower Plenty Road, so there should be no impediment to maintaining land stability to an extended ‘bored’ tunnel and surface vibrations during construction.
**Simplified Construction Methodology**

This proposal for this section of the project would involve fewer trades and simplified staging than the Reference Design. The broad staging would be:

1. Construction of Greensborough Road diversion over the rail alignment to maintain the existing road capacity during construction without the need for temporary roadways. *(This would involve around 500 metres of ‘bridging’, compared to the Reference Design’s 100 metres of culvert extension. Both would involve some disruption to Rail Services, however, the use of prefabricated components in the Bridging of the Rail trench would reduce time frames for this component)*;

2. The Excavation of a 600metre long x 80 (max) metre wide x 30 (max) metre deep tapering open trench at the Grimshaw Street end of the Roadway and the construction of an acoustic roof to accommodate the TBM assembly, if required, and spoil trucks;

3. Construction of the Grimshaw Street Interchange;

4. The construction of the TBM ‘Bored’ Tunnels, either by continuing the ‘Bored’ twin tunnelling from the south or by commencing tunnelling from the north or from both ends to expedite the tunnelling process. *(Due to the minimal surface construction footprint, work can continue continuously with minimal disruption to the local community)*

5. Construction of improvements to surface infrastructure, including improvements to Greensborough road and Watsonia Rail Car Parking, Cycle Paths, etc. *(Several of these ‘stages’ could occur concurrently)*

**Capital Costs**

Based on figures documented in the BabEng report prepared for the City of Banyule, a longer ‘Bored’ tunnel would provide an economy of scale. This report estimates that the excavation, structural & preparation costs of a ‘Bored’ Twin Tunnel, including the Tunnel Boring Machine, Personnel & Materials at $45,700/m. Therefore the broad excavation and structural costs of this proposal could be as follows:

- Excavation, Structural and Preparation Costs (6400m x $45,700/m) say $300mill
- G’borough Rd Bridging over Rail (500m x 30m x $3000/sqm) say $150mill
- Design Variable (15%) say $ 50mill $500mill

Assuming the cost of roadway paving, landscape works, lighting & ventilation are comparable between the SMART Taxpayer Design and the Reference Design; **this** figure would need to be compared to the Reference Design costs for:

- Property Acquisition & Relocation *(not required in the SMART Taxpayer Design)*
- Early Works for Services Relocations, etc *(minimised in the SMART Taxpayer Design)*
- Site Establishment Costs *(higher land area & costs due to more trades & equipment required)*
- Surface Demolition and Reinstatement *(greatly reduced in the SMART Taxpayer Design)*
• Temporary Roadways \textit{(not required in the SMART Taxpayer Design)}
• 3.5km Trench Excavation and Retaining Walls
• 1.1km Cut & Cover Tunnel Excavation and Structure
• 5 no Green Bridge Structures
• Reconstruction of the Surface Road Network (G’borough Rd) \textit{(not required in the SMART Taxpayer Design)}
• Additional Traffic Management
• Additional Construction Area management
• Additional Construction Trade and Personnel management
• Additional Complexity and Capital Cost of constructing the ‘questionable’ Lower Plenty Road Interchange \textit{(Check the Business case)}.

However, the BabEng costings used above should be compared with historic cost data from recent similar projects such as Westgate twin tunnels in Victoria, the Lane Cove twin tunnels in NSW and the Brisbane Airport twin tunnels on Qld. This data puts the total construction costs of such tunnels, including all roadway paving, landscape works, lighting & ventilation costs, at around $180,000/m for each bored tunnel and $225,000/m for each ‘mined’ tunnel. This would put the total cost of the SMART Taxpayer Design as follows:

• Bored Twin Tunnels (6400m x $180,000/m) $1,150mill
• Mined Tunnels provision for Lower Plenty Rd I/C (1200m x $225,000/m) $ 270mill
• G’borough Rd Bridging over Rail Trench (500m x 30m x $3000/sqm) say $ 150mill
• Grimshaw Street I/C Bridges (2400 sq m x $3000/sqm) say $ 10mill
• Open Trench (Tunnel Portal-Kemston St) (42,000 sq m x $1500/sq/m) $ 60mill
  $1,640mill
• Design Variable & Sundries (say 15%) $ 250mill
  say $1,900mill
• Mined Tunnels to complete Lower Plenty Rd I/C (if req) (1800m x $225k/m) $ 405mill
• Design Variable & Sundries (say 15%) $ 65mill
  say $2,400mill

This means that the broad total capital cost of the SMART Taxpayer Design may be \textbf{~$1.9bn} including provision for a possible future Lower Plenty Rd I/C
\textit{plus \$0.5bn} to complete the Lower Plenty Rd mined tunnel I/C. \textit{(incl. 15% or \$315mill Design Variable Contingency & Incremental Costs)}

It should be noted that these capital costs for the SMART Taxpayer Design would be partially off-set by the realised sale of excess surface land along the Greensborough Road Corridor. This opportunity is not possible in the Reference Design due to its large surface footprint.

While these figures are broad and would need to be verified by a qualified Cost Consultant, possibly during the Tender process; they should be compared to the total capital cost of
procuring the Reference Design from Lower Plenty Rd to Kempston Street, including all costs for the Grimshaw Street I/C and all roadway paving, landscape works, lighting & ventilation; as well as all the aforementioned items listed above.

(Without explanation, none of these cost estimates have been provided by NELP despite many Community Requests to do so).

Given all these factors it is very possible that the total cost of the SMART Taxpayer Design and the NELP Reference Design may be comparable (even favourable if the Lower Plenty Rd I/C is provisioned for possible future completion as suggested in the SMART Taxpayer Design).

- **Project Duration**
  
  As detailed in the aforementioned Construction Methodology, the SMART Taxpayer Design would involve fewer trades, greater automation and simplified staging than the Reference Design. It would have a shorter site establishment period and would require simplified Construction Management. Stages 1, 2 & 3 detailed above could occur concurrently but would need to be completed prior to either:
  - the completion of the Bored Twin Tunnels from the south, or
  - the commencement of Bored Twin Tunnels from the north.

  Based on information documented in the BabEng report prepared for the City of Banyule, Tunnel Boring Machines require around 14 months for the assembly & commissioning of 2 TBM's and the tunnel excavation and lining would progress at around 15 metres/day. The speed would be restricted by the speed of moving the tunnel assembly line that follows the 'cutter head'.

  If only 2 TBM's are used from the south portal in Bulleen that the time to bore and line the additional 3.2km of twin tunnels would be around 210 days or 7 months. Assuming the project construction periods for the roadway paving, landscape works, lighting & ventilation are comparable between the SMART Taxpayer Design and the Reference Design over this proposed additional 3.2km length (say 12 months); this figure would need to be compared to the Reference Design time for:
  - Early Works (*minimised in the SMART Taxpayer Design*)
  - Demolition (*minimised in the SMART Taxpayer Design*)
  - Construction of Temporary Roads (*not required in the SMART Taxpayer Design*)
  - Excavation and lining of the NE Link Trench and 5 no Green Bridges
  - Construction of the Cut and Cover Tunnel Structure
  - Reconstruction of Surface Road Network (Greensborough Road)
  - Reinstatement and Landscape Works

  (Without explanation, none of these time frames have been provided by NELP despite many Community Requests to do so).
It should be noted that the proposed excavation & lining of mined tunnels provision for a future Lower Plenty Rd Interchange would be done after the TBM’s will have passed through the junction areas and could therefore be done concurrently as the TBM’s progressed further along. Hence, this work would not be on the project timeline’s ‘Critical Path’ and affect the project duration. This could also be the case for the cross passage tunnels between the main Twin Tunnels.

If 2 TBM’s are used from each end then each set of TBM’s would bore 3.1km and meet under Lower Plenty Road. If this was done concurrently from each portal, then the time to bore & line the twin tunnels would not increase over the tunnelling time of the Reference Design. Furthermore, a 3.2km section of the Reference Design north of Lower Plenty Rd, including the ‘Cut & Cover’ tunnel, trenched roadway, green bridges and new surface road network, would not be required, resulting in a possible reduction in project duration.

Also, regardless of tunnelling duration, it should be noted that unlike the Reference Design, the SMART Taxpayers Design’s minimal surface footprint means that the modified existing surface road network along Greensborough Road would continue to operate unimpeded during construction, so the tunnelling work could proceed 24/7 with minimal disruption above. Furthermore, the extended tunnel alignment under Greensborough Road would avoid existing structures, and should be deep enough to avoid vibration issues.

Stage 5 detailed above could be done concurrently and would not be on the project timeline’s ‘Critical Path’.
Conclusion

- There has been widespread support for a N.E. Link project in the local community, with the promise of re-directing through traffic from local roads, thereby returning the Greensborough Rd corridor to the local community to preserve and enhance local amenity. However, it seems NELP’s objectives seem to be focused primarily on delivering another road project. This is exemplified when the NEL Business Case places a zero value on acquiring open & public lands, which greatly conflicts with the Community’s values in this case;

- The proposed Reference Design by NELP fails to meet both the local Communities aspirations, and will cause extensive and unnecessary social and economic disruption to the Banyule Community, as well as significant visual damage to the Simpson Barracks Woodlands.

- The proposed Contract Bidding structure will stifle the design innovations sought and the Scope of Early Works predetermines the final bid designs and entrenches the Reference Design approach. This short changes the Victorian Taxpaying Community by not encouraging quality innovative design result that reduces future obsolescence and provides best ‘Value for Money’.

  A better, more interactive public consultation process, as was used in past projects including the current Westgate Tunnel project by Transurban, may have addressed many of the Community Concerns, and I suspect greatly improved the projects credentials against the objectives of the EES Evaluation;

- Unlike NELP’s Reference Design, the S.M.A.R.T. Taxpayer Design has been prepared with active and meaningful and widespread ongoing Community consultation, and therefore, best reflects the Community’s aspiration for the N E Link project. It shows that the N E Link can be cost effectively constructed along the preferred alignment without compromising the project’s functionality, and without needlessly and irreparably disturbing the natural and visual values of the area, without the needless disruption the chosen construction methods will inflict and without further dividing local communities. By minimising the project’s surface footprint along the Greensborough road corridor, it would better address the objectives of the EES evaluation. It also provides better futureproofing of the road network, not possible with the Reference Design proposal.

- Furthermore, if it is corroborated that the business case for the Lower Plenty Road interchange is questionable, then the S.M.A.R.T. Taxpayer Design without the Lower Plenty Road Interchange (or with provision for a future less intrusive interchange as detailed), would not only greatly reduce construction costs and improve the Business Case for the project as a whole and ensure the project not only fully complied with its infrastructure objectives, but would fully satisfy the Community’s objectives and the objectives of the EES evaluation and offer the Victorian Taxpayer better ‘Value for Money’ than the Reference Design.
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N.E. LINK S.M.A.R.T. TAXPAYER DESIGN - Watsonia Village Centre (Extended TBM Tunnel UNDER Rail Line)

26 April 2019

Prepared for NELA CLG

Drawing Master Plan (with backgd) Scale 1:2000 at A1

Drawing no MP 07 Issue D

Project no 17 - 504

Master Plan (with Backgd)
N.E. LINK S.M.A.R.T. TAXPAYER DESIGN - Watsonia Village Centre (Extended TBM Tunnel UNDER Rail Line)

26 April 2019  |  Prepared for: NELA CLG

Drawing | Master Plan (without Backgd) | Scale 1:2000 at K11  |  Drawing no | MP 08  | Issue D
N.E. LINK S.M.A.R.T. TAXPAYER DESIGN - Lower Plenty Road Section (Extended TBM Tunnel UNDER Rail Line)

Prepared for: NELA CLG & with Banyule Community

Drawing: Master Plan (with Backgd)

Scale: 1:2750 at A1

Drawing no: MP 09

Issue: E

08 June 2019

Project no: 17 - 504
S.M.A.R.T. TAXPAYER DESIGN for N.E. LINK - Lower Plenty Road Section (Extended TBM Tunnel UNDER Rail Line)

05 June 2019
Prepared for NELA CLG & with Banyule Community
Drawing Master Plan (without Backgd) | Scale 1:2750 at K11

Drawing no MP 10 Issue E