

s47F - personal privacy



MANSFIELD SHIRE

Our Ref: E3634

Mansfield Shire Council
Private Bag 1000 Mansfield 3724

Telephone 03 5775 8555

Facsimile 03 5775 2677

Email council@mansfield.vic.gov.au

ABN 74 566 834 923

09 February 2016

hvspp@infrastructure.gov.au.

Dear Sir/Madam,

Heavy Vehicle Safety and Productivity Programme Round 5

Please find attached our application for the above Programme Round Five. The following supporting documents are also attached:

- HVSP R5 Criteria and Proposal Form
- HVSP R5 Part B Summary Sheet
- Exhibit 1 to 13

The proposed roads form a critical part of the Mansfield Heavy Vehicle Bypass. The bypass route was identified in the "Mansfield Heavy Vehicle – Alternative Routes Planning Study" commissioned by VicRoads in 2010. The study highlighted the need to develop a suitable route to accommodate freight movements outside of the Mansfield Central Business District (CBD) and residential areas.

Council has been very proactive in constructing elements of the Mansfield Heavy Vehicle Bypass. Over the past two years Council has invested more than \$1.2M to replace an old, inadequate bridge and has also constructed a sealed road capable of carrying B-Double Trucks.

Council's future capital works programme includes an allocation \$2.7M over the next four years to complete the missing elements of the Heavy Vehicle Bypass Route. The work planned for the 2016/17 financial year relates to this funding application. The project includes replacing two low-level water crossings with structures suitable for B-Doubles and Road Trains.

The completion of the bypass will be celebrated by the Mansfield community. It will reduce the noise, dust, and vibration from the movement of heavy vehicles through the CBD and through residential streets which are not designed for this purpose. Mansfield has grown significantly in recent times and continues to grow. The CBD can no longer cope with the movement of heavy vehicles which clog the streets and have become a safety risk and a concern to residents. Currently trucks pass the Mansfield Hospital and the Primary School, creating significant noise and safety issues.

The proposed bridge works will replace the current low level crossing along the identified bypass. These crossings are subject to flooding and subsequent closure during heavy rain events. The proposed work will address this issue by providing higher level structures.

The planned route will provide a direct link for freight movements coming from Melbourne to the industrial area in Mansfield and onto Mt Buller, negating the need to negotiate the busy Mansfield town centre. The bypass will also reduce the overall maintenance costs for Council maintained residential streets which are accessible by heavy vehicles. In addition it will provide shoppers and visitors of town with a safer environment by removing trucks from the town centre.

I trust you will consider this application favourably.

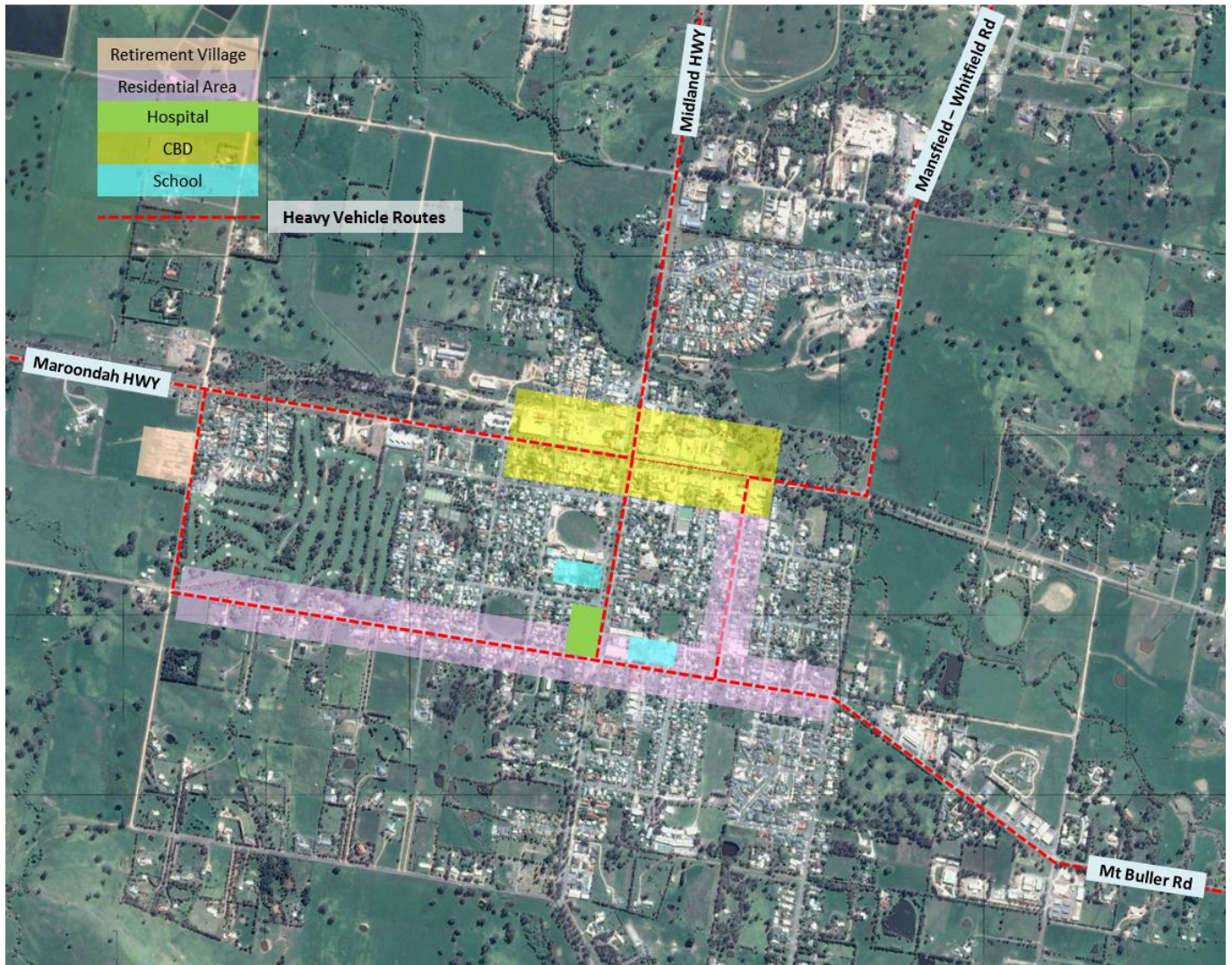
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Engineering & Works Manager

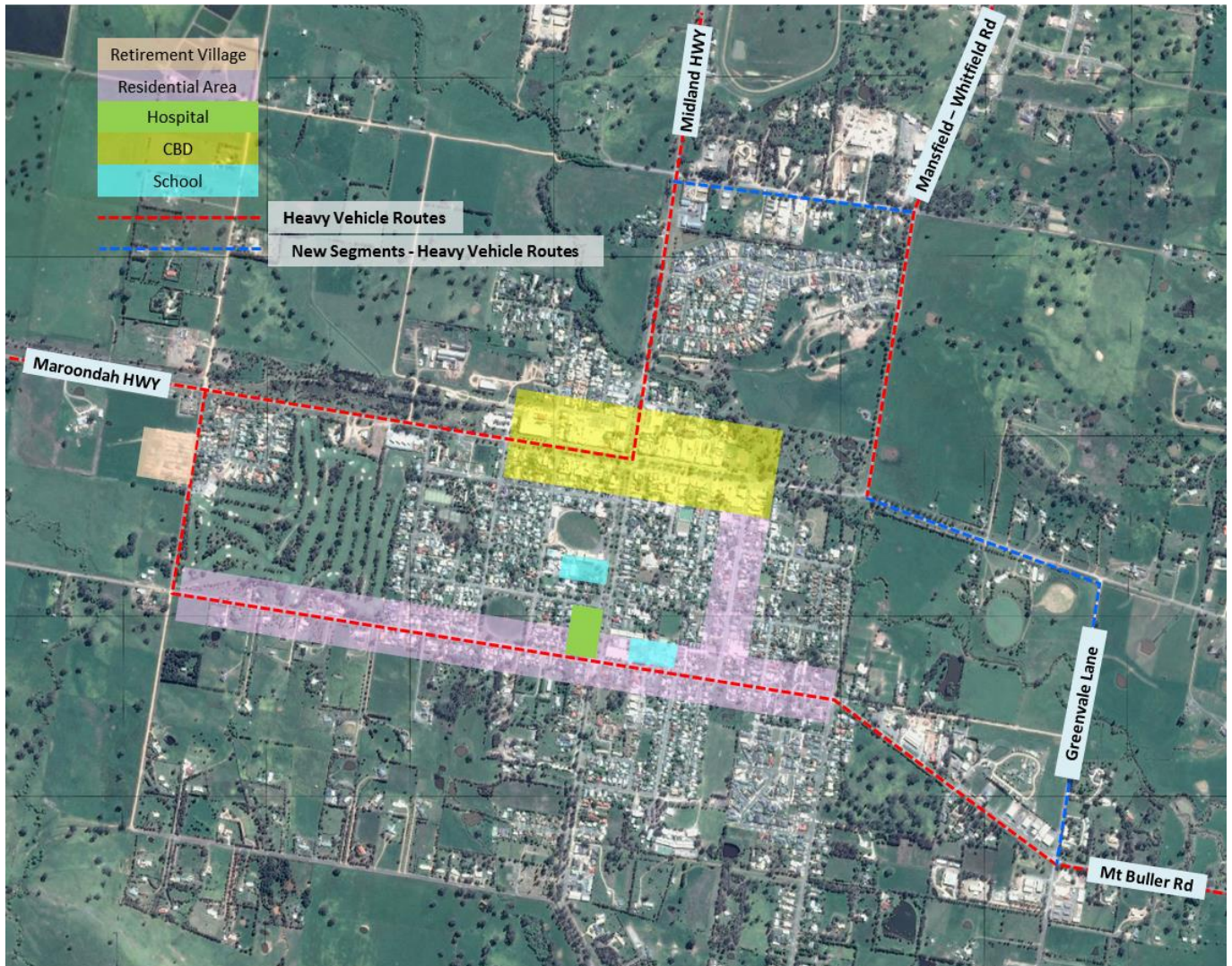
Location Map

The heavy vehicle routes within Mansfield Township in 2012 are depicted in the figure below.



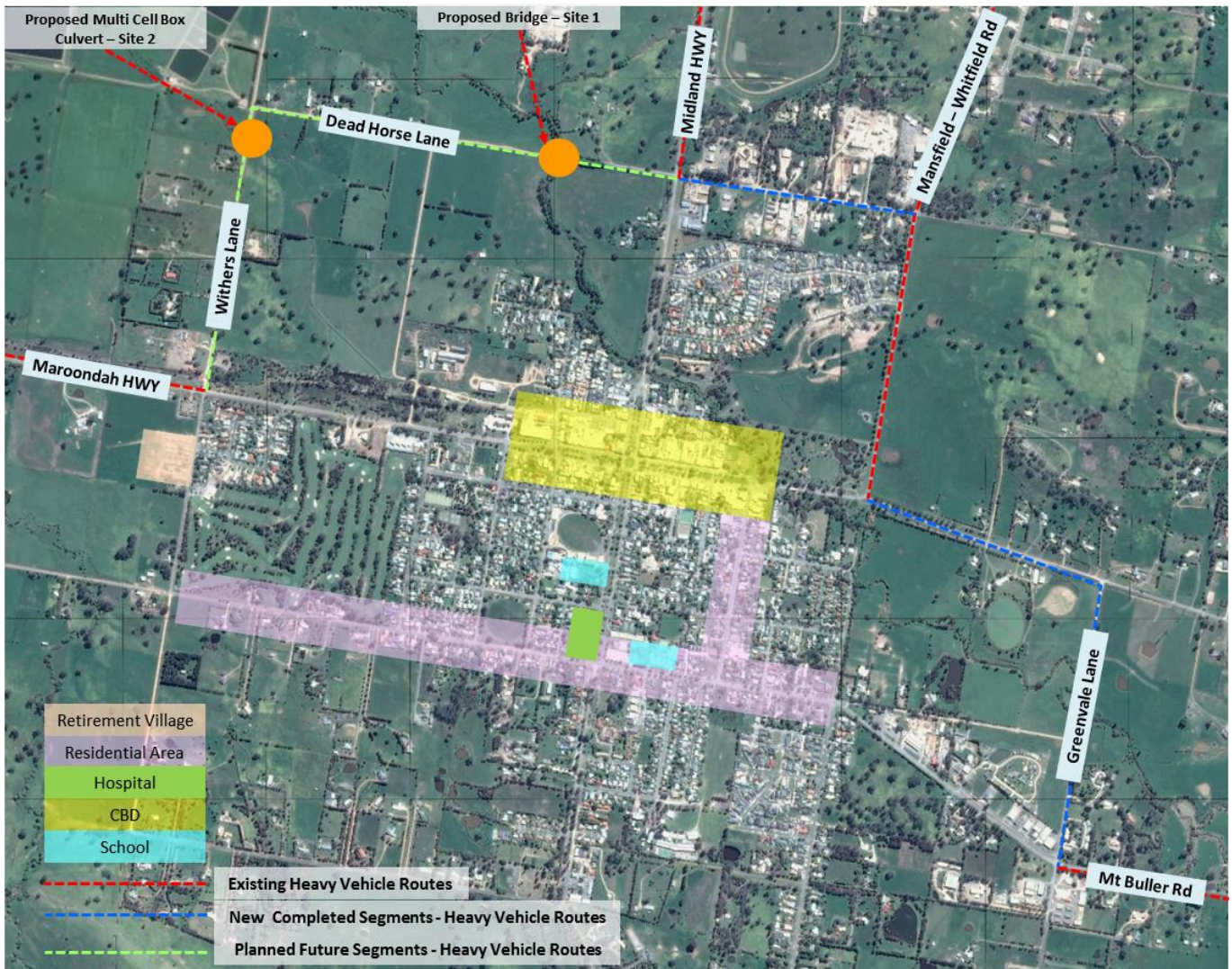
The figure above shows that the designated heavy vehicle routes penetrate residential and shopping areas in addition to impacting schools and hospitals along the route.

Council is active in developing a safe heavy vehicle bypass route outside Mansfield's residential areas, local streets and busy shopping areas. Council upgraded Greenvale Lane by replacing an existing timber bridge with a B-Double standard bridge and upgraded an unsealed section to a sealed road. The modified Heavy Vehicle Bypass Route is depicted in the figure below.



The upgrade of Greenvale Lane provides for heavy vehicles to bypass of the eastern part of Mansfield Township. This eliminates the need to travel through a part of the Mansfield CBD.

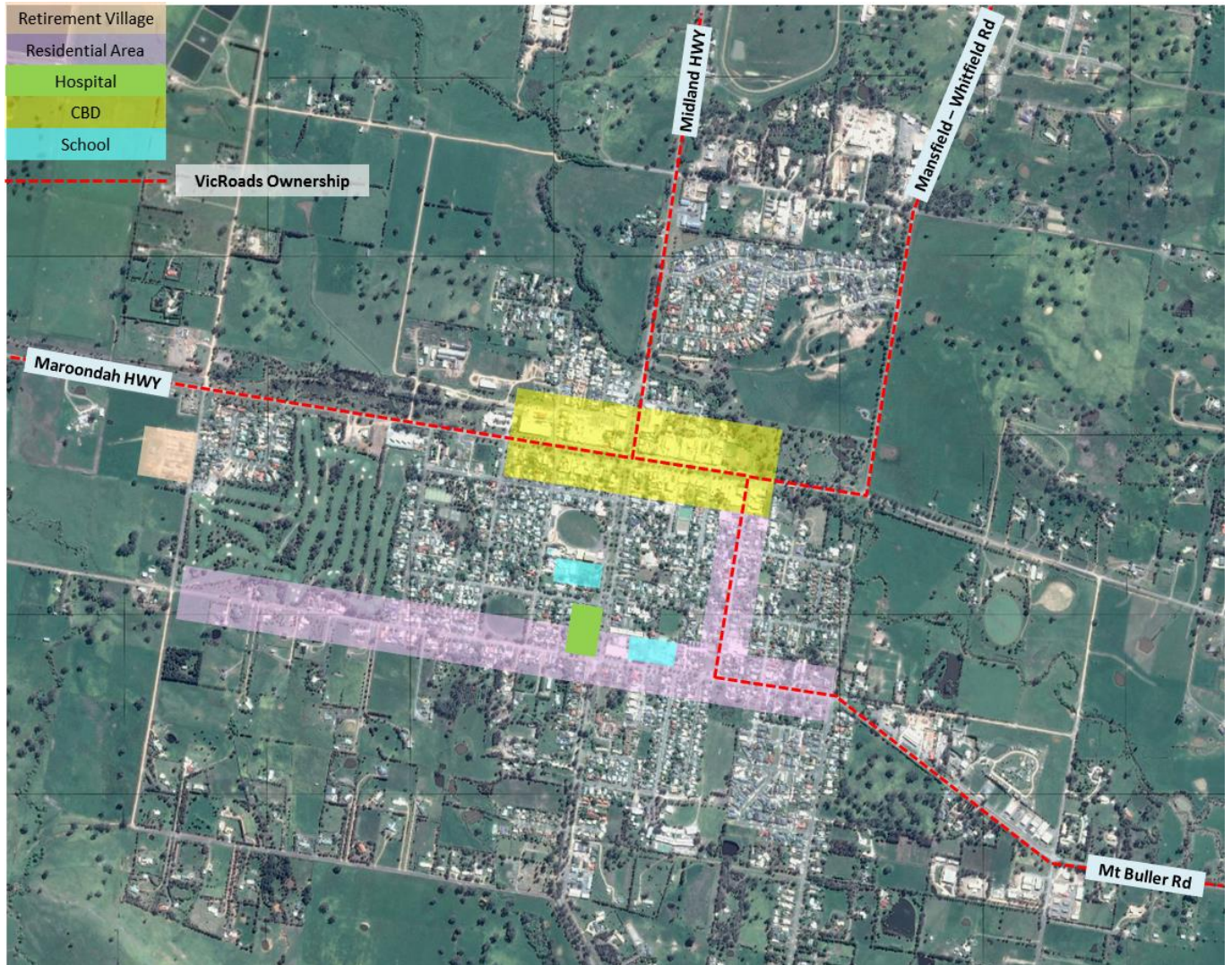
The ultimate bypass route is depicted in the figure below.



The completion of the Heavy Vehicle Bypass Route will provide a safe and efficient route outside the Mansfield Township. This will improve pedestrian safety and the quality of life for the residents and business in the Township.

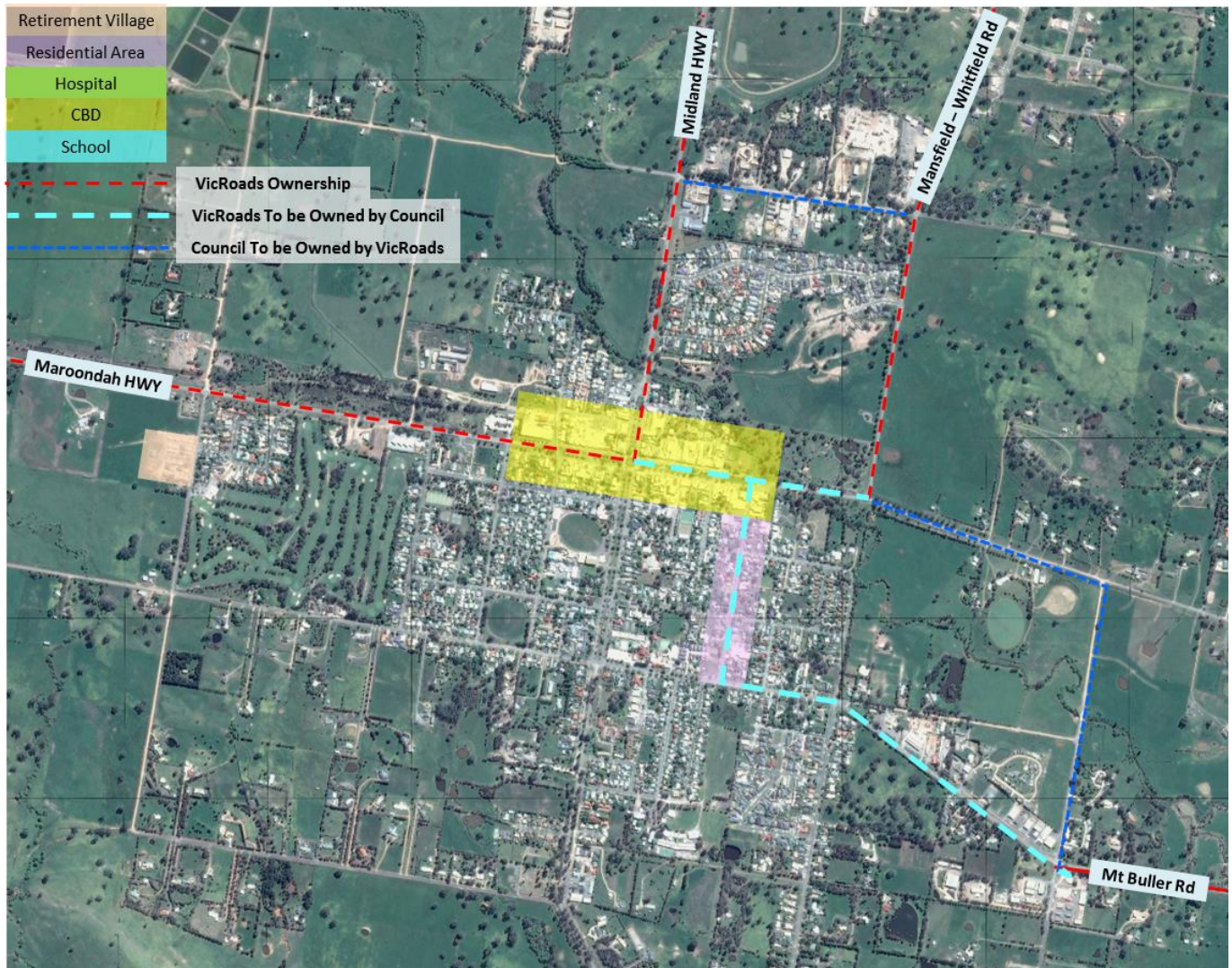
Council has committed budget allocations to complete the missing segments of the bypass over the next 5 to 7 years. Part of this commitment includes a 50% budget allocation to replace the first low level crossing on Deadhorse Lane with a bridge structure (site one) and the second level crossing on Withers Lane with multi-cell box culverts. The new structures proposed will be adequate to carry B-Doubles and Road Trains.

Parallel to our efforts in completing the bypass, Council is working with VicRoads on a road ownership exchange. The objective of the exchange is to consolidate Council authority and ownership on the roads with the CBD and residential areas in Mansfield. The current VicRoads ownership in Mansfield is depicted in the figure below.



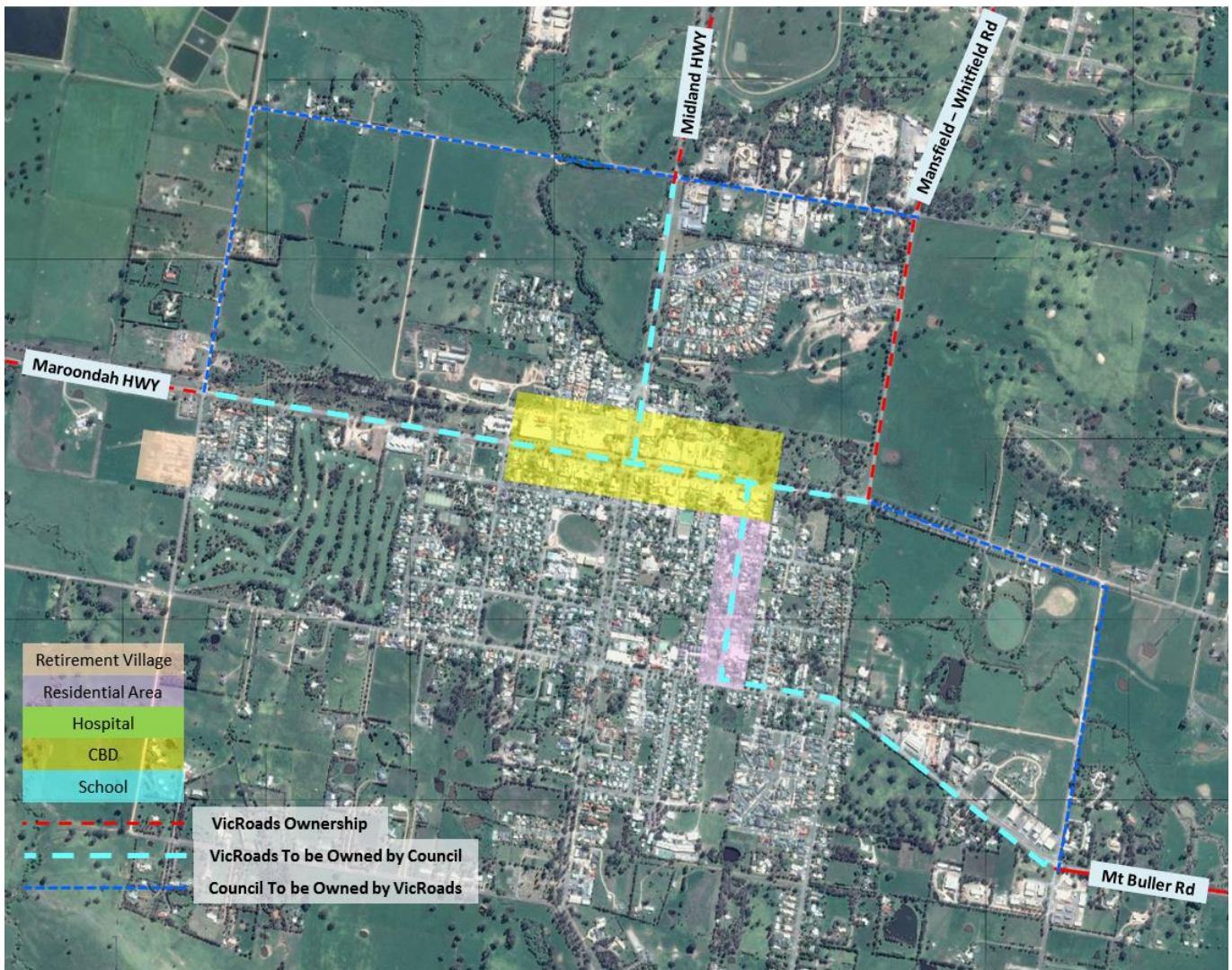
VicRoads is supportive in principle of the road ownership initiative. They completed similar efforts with other Councils in Victoria.

The proposed road ownership exchange Stage 1 is depicted in the figure below.



The proposed exchange will satisfy a key VicRoads objective of maintaining control on the roads that facilitates the movements of through traffic.

Stage 2 of the road ownership exchange will follow the completion of the next stage of the bypass. The full proposed road ownership for Stages 1 & 2 is depicted in the figure below.



The completion of the road ownership exchange will provide improvements to Mansfield, and will have significant benefits long term. The bypass will enable the development and the expansion of the town further to the north, and will provide improved access to the adjacent land owners.

The proposed Heavy Vehicle Bypass Route is one of the long term strategic objectives of Council.



Australian Government
Department of Infrastructure
and Regional Development

HEAVY VEHICLE SAFETY AND PRODUCTIVITY PROGRAMME (HVSPP) ROUND FIVE

PROGRAMME CRITERIA AND PROPOSAL FORM

PART A

Please ensure that you submit both Part A and Part B of the proposal form.

Part A is a word document and Part B is an excel spreadsheet.

Both Parts are required to assess your proposal.

Proposals submitting only one Part will be deemed ineligible.

Closing Date: 10 February 2016 at 11:59pm

Proponent Name	Mansfield Shire Council
Project Name (Max of 7 words)	Mansfield Shire Heavy Vehicle Bypass
Australian Government funding sought	\$700,000
Total Project Cost	\$1,400,000

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PROGRAMME INFORMATION

The Heavy Vehicle Safety and Productivity Programme (HVSPP) aims to contribute to the productivity and safety outcomes of heavy vehicle operations across Australia. State, territory and local governments are eligible to apply and where appropriate, are encouraged to work together on priorities.

Proposals should be well developed, with appropriate levels of project scope, planning and approvals already underway.

- Construction must commence by **June 2017** and be completed by **30 June 2019**. For the purposes of these documents, 'construction' means actual on ground works at the project site and/or the fabrication of major components off site.
- The HVSPP will contribute a maximum of 50% of the total project cost. You must confirm that arrangements are in place to contribute at least 50% of the total project costs if the proposal is successful. Proponents must confirm this commitment in their proposal and provide evidence of matching funding within **60 days** following the announcement of successful projects.
- Construction must have not begun on the site of the project prior to receiving confirmation from the Department that the project may commence; however planning and design work can be undertaken.

Failure to comply with any one of these requirements may result in funding for the project being withdrawn by the Department.

Proponents are encouraged to discuss priorities with local communities, relevant industry stakeholders, Regional Development Australia committees and state road agencies early in the process.

Where projects seek to improve access for higher productivity heavy vehicles, proponents must provide assurances that all efforts will be made to ensure regulatory access through the National Heavy Vehicle Regulator is also gained.

OBJECTIVES

The key objective of the HVSPP is to contribute to the improvement of the productivity and safety of heavy vehicle operations across Australia through funding infrastructure projects for heavy vehicles. The specific HVSPP objectives are to:

- increase productivity of heavy vehicles by enhancing the capacity of existing roads and improving connections to freight networks; and
- improve the safety environment for heavy vehicle drivers.

What types of project activities are included;

- upgrades to existing road infrastructure such as, re-alignment of roads or increasing the load carrying capacity of existing roads
- upgraded and new rest areas;
- upgraded and new de-coupling/assembly areas;
- projects that use technology (including ITS) to improve transport outcomes; and
- demonstration projects such as, small infrastructure or technology projects that can inform future transport needs.

What types of project activities are NOT included;

- construction of new or upgrades to existing bridges;
- enhancements to livestock sale yards;
- Projects already commenced or in receipt of funding from other Australian Government programmes (including disaster relief);
- ongoing operational and maintenance costs; and
- projects consisting solely of planning and design.

PROPOSAL FORM

All eligible proposals for funding under the HVSP will be assessed as part of a competitive, merit-based process. The Department will use the information provided in this proposal form to check eligibility and assess projects against the criteria.

Funds are limited and therefore meeting eligibility and assessment criteria does not guarantee funding. Proposals that best address all the assessment criteria will have the greatest likelihood of being recommended for funding.

HOW TO COMPLETE THE PROPOSAL FORM

The proposal form has been designed to gather as much relevant information as possible to accurately assess all the proposals to a high standard. It also seeks to gather and use data for the ongoing management, monitoring and evaluation of the successful projects and the programme itself.

The relevant criteria are set out within the form, followed by specific questions. Proponents should answer all relevant questions in the proposal form concisely and where required, in the specified format. While there is no word limit; more detail would be expected for more complex proposals costing over \$2million.

- Please ensure you read all the questions first before commencing your responses.
- Proposals are assessed on the basis of the answers to questions in the proposal form.
- Some sections of the form require information in a specific format and provide Guidance, Examples and/or Tips on responding to questions and addressing the Criteria.
- Pictures, maps and other relevant material can be attached to the submission email and should be referenced within the proposal form.
- Such material can be used to provide context and/or to demonstrate key points made in addressing the criteria (e.g. location of services, heavy vehicle routes or detours).
- Attachments will be considered as supporting evidence only.
- Do NOT respond to questions with “See Attached” or “data can be provided on request”.

Detail on how to submit proposals is at page 12, including technical matters. If you need any clarification please call the HVSP programme general enquiry number on 02 6274 6758 or send an email to HVSP@infrastructure.gov.au

For probity reasons, the Department will not provide advice or guidance (i.e. it is unable to provide comments on draft proposals) that could be seen as giving an unfair advantage to one proponent over another.

ELIGIBILITY

The HVSP will contribute a maximum of 50% of the total project cost.

Proponents must contribute at least 50% of the total project costs if the proposal is successful.

- Proponents must confirm this commitment in their proposal and provide evidence of matching funding within 60 days following the announcement of successful projects.
- Proponents can form partnerships with state/territory/local governments and/or industry to meet the matching funding requirement – third party funding must be identified in the proposal.
- In the event that third party funding (e.g. through a state government programme) is not able to be confirmed within 60 days of announcement, proponents must confirm in their proposal that they will be responsible to contribute the full 50% matching funding or the Department may withdraw funding.

All proponent and other contributions must be cash only. In-kind contributions will NOT be considered.

Construction must have not begun.

For the purposes of this proposal, ‘construction’ means actual on ground works at the project site and/or the fabrication of major components off site. Construction prior to Departmental advice that your project can commence will result in funding for the project being withdrawn by the Department.

Funding will NOT be provided for any of the following:

- construction of new or upgrades to existing bridges;
- enhancements to livestock sale yards;
- projects where construction has already commenced;
- projects that have received or are receiving funding under another Australian Government programme (including Black Spot Programme, Roads to Recovery, National Stronger Regions Fund and disaster relief);
- projects that include ongoing operational and maintenance costs; or
- projects consisting solely of planning and design.

If successful, construction MUST commence by June 2017 and be completed by 30 June 2019.

BEFORE YOU START – COMPLETE THE ELIGIBILITY CHECKLIST

If you answer NO to any question below the project is NOT eligible for this Round of the HVSP

Are you a State, Territory or Local Government?	Yes
Can you confirm that arrangements are in place to contribute at least 50% of the total project costs within 60 days following the announcement of successful projects?	Yes
If you are seeking third party funding, will you be in a position to contribute these funds within 60 days following the announcement of successful projects if third party funding is not available?	Yes
Can you confirm ALL costs are for a project aimed at improving a heavy vehicle productivity and/or safety?	Yes
Can you confirm that construction works will commence by <u>June 2017</u> and be completed by <u>30 June 2019</u> ? (<i>Construction means – actual on ground works at the project site and/or the fabrication of major components off site.</i>)	Yes
Can you confirm the project is NOT receiving funding under another Australian Government programme (including Black Spot Programme, Roads to Recovery, National Stronger Regions Fund or disaster relief)?	Yes
Can you confirm the project is NOT for new/upgrades to bridges, enhancements to livestock sale yards, maintenance and/or ongoing repairs or solely planning and design?	Yes
If successful, can you confirm you will NOT start construction before finalising the terms of the funding agreement with the Department?	Yes

THE ASSESSMENT PROCESS

The Department will assess proposals against the programme criteria to develop a merit list representing best value for money and make recommendations to the Minister for Infrastructure and Regional Development who will make decisions on funding under the *National Land Transport Act 2014*. The value for money assessment and decisions by the Minister may take account of the overall mix and funding source of projects.

Proposals that were successful under Round Four were generally more strategic and provided quality analysis and clear evidence about the benefits of the proposal and how they align to the programme objectives.

For projects of \$2 million or less, please limit responses to each criterion to one and a half pages.

ASSESSMENT CRITERIA

CRITERIA 1 – Improved Productivity and Safety

The specific HVSP objectives are to:

- increase productivity of heavy vehicles by enhancing the capacity of existing roads and improving connections to freight networks; and
- improve the safety environment for heavy vehicle drivers.

Proposals will be assessed and scored on the degree to which the project meets the above programme objectives and the quality of the evidence you provide to support the claims. You should describe the details of the project concisely and if you refer to attached documents or refer to other sources please make specific reference to the relevant page or section of those documents or sources.

Proposals should indicate clearly what evidence and data is being used to support claims. Where possible you should indicate what data or standards will be used to measure the productivity and safety improvements and/or benefits of the project, such as;

- Reduced heavy vehicle operating costs, improved load carrying capacity, reduced travel distance or travel times, Benefits Cost Ratio and robust telematics data for productivity improvements
- AustRoads Standards, robust telematics data and recognised national heavy vehicle crash data calculations for road safety improvements.

Describe how the project will contribute to the objectives of the programme.

Will the project facilitate integration with key freight networks? And how?
<p><i>Provide details:</i></p> <p>The route will provide a direct link between two VicRoads arterial roads without the need to pass through the busy town centre of Mansfield. One of these roads (Maroondah Hwy, B320) is a national key secondary road freight route. The second road (Midland Hwy, C518) links to a second key secondary route to the north of Mansfield (Midland Hwy, B300), and via the B300 to a key freight route (Hume Freeway, M31). Note that currently, the B320 secondary route terminates in the centre of Mansfield, not in the key freight areas.</p> <p>The main objective of the proposed bypass is to link the main freight routes leading to Mansfield with the key freight areas within Mansfield, and to provide a safe and viable alternative for heavy commercial vehicles currently travelling through the busy and expanding town centre. The area being bypassed is also a residential area and includes the Mansfield Hospital and several schools.</p> <p>The proposed route will improve access for emergency services to the north-western section of the township. The bypass will provide a viable option to avoid the town centre for all through-traffic during high traffic periods, notably the busy ski season, and the many festivals and markets that are held within</p>

the town centre.

The bypass will play a significant role in maintaining the movement of all through traffic, including heavy vehicle traffic, during the Mansfield Targa Rally, during which time the town centre is closed to through traffic and used as a car rally circuit.

Supporting evidence:

Please find attached [Exhibit 1](#), which shows the location of existing heavy vehicle routes, and the proposed new route.

Key Freight Route information accessed via federal Department of Infrastructure and Regional Development's Key Freight Routes Map.

Will the project increase access for higher mass loads (HML) and high productivity vehicles (HPV)?
And is it aligned with the Heavy Vehicle Regulator's access management operations?

Provide detail:

The bypass will simplify access for Higher Mass Limit (HML) vehicles – both in accessing the main industrial areas of Mansfield, and for vehicles travelling through to Mt Buller. The current main route through the CBD includes a section that is restricted and excludes B-Doubles and B-Triples without permit. Currently, this forces heavy vehicles past schools and the hospital, and through residential areas.

The bypass will enable access for high productivity vehicles to the industrial areas and freight distribution points for vehicles travelling from Melbourne.

The route is designed to provide priority to through traffic, which will reduce the overall journey time (i.e. several intersections exist along the existing routes which increases the total travel time).

The standard of construction and route will integrate with existing Heavy Vehicle routes and align with the regulator's access management operations.

Supporting evidence:

The current heavy vehicle routes through Mansfield Township are hindered by significant side friction from on-street parking, pedestrians, drop-off/ pick-up during school hours. One section through the main shopping area has restricted heavy vehicle access. Please refer to [Exhibit 2](#), which shows the location of high use pedestrian locations which are currently situated on the existing heavy vehicle routes.

Regular permit requests are received by Council via the Heavy Vehicle Regulator's access management system to move heavy freight through Mansfield. The bypass route will reduce the need for a number of these permits, as the route will have fewer heavy vehicle restrictions.

Will the project facilitate improvements to 'last mile' freight logistics (the portion of the supply chain from the final delivery hub to the customer's door)?

Provide detail:

The project will allow heavy vehicles direct access to the light industrial business area established along Dead Horse Lane between the Midland Highway and Mansfield – Whitfield Road. It will also provide better integration with the existing freight operators based on Dead Horse Lane and Mansfield – Whitfield Road, improving their routes and access for local customer deliveries.

Supporting evidence:

Please refer to [Exhibit 3](#), showing the location of the light industrial areas and key heavy freight businesses in Mansfield.

Will the project facilitate improvements in the 'whole of journey' for freight in the overall supply chain?

Provide detail:

The proposed bypass will provide a faster and safer route for heavy commercial vehicles, avoiding Mansfield's busy CBD.

It is estimated that approximately 300 commercial vehicles per day, including 30 heavy vehicles comprising articulated trucks, truck and dog combinations and B-doubles will utilise the bypass.

The bypass will improve travel times for these vehicles and reduce traffic congestion and potential accidents at critical intersections within the Mansfield CBD.

Calculations show an estimated travel time saving over the full length of the proposed Withers Lane-Dead Horse Lane bypass of 74 seconds. For analysis purposes, we are assuming 60 seconds per vehicle.

Supporting evidence:

Please refer to [Exhibit 4](#) for travel time calculation.

Will the project improve safety of heavy vehicle operations?

What is the HV safety issue and how will this project improve safety?

Proposals claiming safety benefits should demonstrate how the project will contribute to heavy vehicle safety in the context of the Safe System Principles identified in the National Road Safety Strategy 2011-2020 (<http://roadsafety.gov.au/>)

Provide detail:

The proposed bypass will provide a safer route for heavy commercial vehicles outside Mansfield's busy CBD. The route is mainly through land zoned for farming and undeveloped residential land. As the residential land is currently undeveloped, the council structure plan provides direction for managing access to the bypass, and avoiding traffic conflicts.

The Heavy vehicle safety issue is primarily that of interaction between heavy vehicles and pedestrians, shopping traffic and town centre events. The bypass will remove a substantial amount of heavy vehicle traffic from the Mansfield CBD and hence improve safety. It will also reduce traffic congestion and potential accidents at critical intersections within the Mansfield CBD.

The bypass is designed to provide safer movements for heavy commercial vehicles. The design for the proposed route adopted Safe System Principles for road design, construction and operation. Significant elements include:

- Limiting the number of access/entry points along the bypass length.
- Provision of sealed shoulders.
- Provision of pavement marking for centreline and edge fog line to mitigate accidents such as running off the road and head-on crashes.
- Adoption of a speed limit that is safe and practical and suits the rural environment for the proposed route.

Council will closely work with Victoria Police towards a continued and strong focus on road rule and speed limit enforcement on the bypass when constructed.

Supporting evidence:

Please refer to [Exhibit 5](#), showing the design layout, and including a typical road cross-section for the proposed route.

Is the project aligned with Government and/or industry strategies and priorities?

Provide detail:

VicRoads commissioned a study into heavy vehicle routes in 2010. The resultant study - “Mansfield Heavy Vehicle – Alternative Routes Planning Study” published in November 2010, highlighted the need to develop a suitable route to accommodate freight movements outside of the Mansfield Central Business District (CBD) and residential areas. A number of alternative routes were investigated and assessed. One of the recommended component routes is the Withers Lane – Dead Horse Lane bypass that is the subject of this funding application.

The route design includes a buffer zone to reduce the visual and noise impact on adjacent land users, which was identified as an issue with existing heavy vehicle movements.

This route has been incorporated into the Mansfield Township Structure Plan, which was endorsed by Council at its Ordinary Meeting of Council held on the 19th of May 2015.

Supporting evidence:

Please refer to Option 4.2, page 15 of [Exhibit 6](#) – the Mansfield Heavy Vehicle Bypass Study commissioned by VicRoads in 2010, and [Exhibit 7](#) - Section 11 of the Mansfield Township Structure Plan.

Has industry and/or the community been consulted on the proposal? If so, what are their views?

Provide detail:

Extensive consultation been undertaken with the following businesses/ operators, via the “Mansfield Heavy Vehicle – Alternative Routes Planning Study”, the community consultation period for the Mansfield Township Structure Plan and specific meetings with industry operators.

Specific businesses and transport operators consulted were:

- Mansfield Construction (quarry operation)
- Shaw’s (livestock transport)
- NF & CR Pigdon (earthmoving contractors)
- Mansfield Premix (plant operators)
- Alpine Civil (earth moving contractors)
- Mt Buller Freight
- FoxAg (fertilizer distributor)
- Mansfield-Mt Buller Bus Line
- VicForests (Hardwood extraction)
- Victoria Farmers Federation (Primary Producers)

The anticipated new route arose from this consultation was refined via feedback given.

Supporting evidence:

Please refer to Section 2.7, pages 7 to 10 of [Exhibit 6](#) detailing Industry consultation and summarising feedback received.

Does this project involve the use of technology, such as In Vehicle Telematics or Intelligent Transport Systems?

Provide detail:

We are currently investigating options to install permanent traffic counters with Metro Count, an Australian company based in WA.

Supporting evidence:

Please refer to [Exhibit 8](#), copy of the correspondence with MetroCount – Western Australia

CRITERIA 2 – Quantified Benefits

Proposals will be assessed and scored on the degree to which the project provides a level of measurable benefits relative to other proposals and the quality of the evidence you provide to support the claims. You should describe the details of the project benefits concisely and provide evidence to support these claims. If you refer to attached documents or refer to other sources please make specific reference to the relevant page or section of those documents or sources. The Department will consider:

- What are the quantifiable benefits of the project; and
- What analysis, evidence and data you have provided to demonstrate the benefits.

Describe the benefits and how they will be measured.

<p>What are the current traffic and/or freight volumes, including proportion of heavy and higher productivity vehicles?</p> <p>Guide: You MUST use the following format “The 20XX AADT is xxx with xx% (xx number) Heavy Vehicles, including XX B-Doubles and XX B-Triples.”</p>							
<p><i>Provide detail:</i></p> <p>The 2013 AADT is 1483 with 2.64% (39 number) Heavy Vehicles including 3 B-Doubles.</p> <p>This is measured on the main current Heavy Vehicle Route through town (from which the majority of heavy vehicles are expected to be diverted to the bypass)</p> <p><i>Additional Information (if available): You should include future projections of vehicle numbers or freight volumes and identify where these are cited.</i></p> <p>The proposed bypass is expected to attract 600 vehicles per day initially, with an annual growth of 2%. The estimated percentage of Commercial Vehicles on the bypass is 33%.</p> <table> <tr> <td>Average Daily Traffic – First year</td> <td>= 600 vehicles per day</td> </tr> <tr> <td>% of Commercial Vehicles</td> <td>= 33%</td> </tr> <tr> <td>Number of Heavy Commercial Vehicles</td> <td>= 195 vehicles</td> </tr> </table> <p>Estimated quantifiable freight volume from agricultural produce likely to move via the bypass is approximately 5,000 tonnes of grain during the harvest, and 10,000 tonnes of livestock, in addition to freight carried by earth moving contractors and freight companies.</p> <p><i>Supporting evidence:</i></p> <p>Please refer to Exhibit 9, containing VicRoads-supplied traffic counts and classifications for the Maroondah Hwy/High St section of the current Heavy Vehicle Route. Analysis in Exhibit 6, pages 6, 11 and 30, using 2009 figures indicates higher heavy vehicle traffic in Mansfield. The more conservative figures from 2013 have been used.</p>		Average Daily Traffic – First year	= 600 vehicles per day	% of Commercial Vehicles	= 33%	Number of Heavy Commercial Vehicles	= 195 vehicles
Average Daily Traffic – First year	= 600 vehicles per day						
% of Commercial Vehicles	= 33%						
Number of Heavy Commercial Vehicles	= 195 vehicles						
<p>Benefit Cost Ratio (BCR) analysis, where available. If a BCR is available, please outline the basis on which this was calculated, and attach worked documents.</p>							
<p><i>Provide detail:</i></p> <table> <tr> <td>Evaluation Period</td> <td>30 Years</td> </tr> <tr> <td>Annual Traffic Growth</td> <td>2%</td> </tr> <tr> <td>Discount Rate</td> <td>10%</td> </tr> </table>		Evaluation Period	30 Years	Annual Traffic Growth	2%	Discount Rate	10%
Evaluation Period	30 Years						
Annual Traffic Growth	2%						
Discount Rate	10%						

First year projected traffic volumes	
Average Daily Traffic - All	600 vehicle per day
Commercial vehicles	195 vehicle per day
Estimated Travel Time saving	60 seconds per vehicle
Net Present Value Benefits (30 years)	
Travel Time Saving - Non-commercial vehicles	\$0.82M;
Travel Time saving – Commercial Vehicle	\$1.64M;
Other savings (Accidents, Maintenance, Noise)	\$0.07M;
Total Savings	\$2.53M
Project Costs	\$1.40M
Benefit Cost Ratio	1.81
<i>Supporting evidence:</i> Please refer to the BCR in Exhibit 10 – Analysis	
How will the project provide capacity for greater efficiency?	
<p><i>Provide detail:</i></p> <p>Reduced traffic congestion via separation of heavy vehicle traffic and local traffic will improve heavy vehicle transport times.</p> <p>Provision of direct heavy vehicle routes into freight terminals and the industrial area will encourage the use of larger vehicles with resultant efficiency improvements.</p> <p><i>Supporting evidence:</i></p>	
How will the project reduce operating costs?	
<p><i>Provide detail:</i></p> <p>The shorter travel time, approximately 60 seconds per vehicle, will reduce overall operating costs per vehicle. The opportunity to improve efficiency by the use of larger vehicles will also enable freight operators to reduce overall operating costs per tonne of freight.</p> <p><i>Supporting evidence:</i> Please refer to vehicle operating costs in Exhibit 10 - Analysis spreadsheet;</p>	
Will the project shorten travel distances and /or time for heavy vehicles?	
<p><i>Provide detail:</i></p> <p>Yes.</p> <p>Average travel time for vehicles travelling to industrial areas in Mansfield from Melbourne will be reduced by an estimated 60 seconds, with no overall change in distance travelled.</p> <p>Heavy vehicles travelling from Melbourne direct to Mt Buller will have an estimated decrease in travel times of 20 seconds and an increase in distance of 2.1 km. The decrease in time is a result of the higher-speed route avoiding the town centre and congestion, in spite of the distance increase.</p> <p><i>Supporting evidence:</i></p>	

Please refer to travel time saving calculation in [Exhibit 4](#).

How will the project improve safety of heavy vehicle operations and/or reduce heavy vehicle crashes?
To what extent will the project address fatigue management?

Provide detail:

The planned route will provide a direct link for freight movements coming from Melbourne to the industrial area in Mansfield and onto Mt Buller, negating the need to negotiate the busy Mansfield town centre.

Separation of the heavy vehicles from local traffic and the town centre will improve the safety of heavy vehicle operation.

The development of a route designed to incorporate heavy vehicle usage ensures that heavy vehicle operational issues and constraints are taken into account. This will make the route easier to use for heavy vehicle operators, reducing fatigue, and reducing crash risk for fatigued operators negotiating the final few kilometres of travel. It will also improve travel for heavy vehicle operators departing the area and enabling drivers to commence journeys with less frustration and risk.

Supporting evidence:

Please refer to [Exhibit 3](#), showing the direct connectivity and access to the light industrial areas in Mansfield.

Are there other benefits to heavy vehicle safety provided by the project?

Provide detail:

There are intangible benefits to the community and residents. Eliminating the movements of trucks outside retirement villages, the hospital and schools, will be perceived as a significant safety and amenity improvement to the township.

The project will provide additional benefits by providing a safer route for heavy commercial vehicle, with limited interaction and side friction from adjacent developments; and through increased safety and reduced noise to pedestrians and shoppers of the commercial area of Mansfield township

The bypass will also reduce the overall maintenance costs for Council-maintained residential streets which are currently utilised by heavy vehicles.

Supporting evidence:

Please refer to [Exhibit 11](#), a letter from s47F - personal privacy – resident of a retirement village on the current Mansfield heavy vehicle route.

CRITERIA 3 – State and Territory Priority/Ranking

State and territory governments will be asked to provide a score of 1-5 for each project within their jurisdiction.

Please note that state and territory agencies will use information provided in the proposal form and any attachments to assist in making these scorings.

CRITERIA 4 – Construction Readiness

Proposals will be assessed and scored on the degree to which the proposal demonstrates that it can be delivered within the required timeframes – **construction works MUST commence by June 2017 and be completed by June 2019.**

Proposals will be ranked relative to other proposals and the quality of the evidence you provide to support the claims. The Department will consider:

- What planning documents, including preliminary or final designs have been completed;
- What progress has been made to gain relevant Development and other approvals such as environmental, cultural and heritage;
- What risks have been identified and steps for managing those risks, including scope, construction, approvals, financial and delivery; and
- What are the project costs and are they supported by independent advice or a quantity surveyor.

You should describe the details of the construction readiness concisely and provide evidence to support these claims. If you refer to attached documents or refer to other sources please make specific reference to the relevant page or section of those documents or sources.

FUNDING – Provide details on matching funding, who will be providing it?, is it confirmed?, when will it be available?, and what are your contingency plans if it is not forth coming?

Provide detail:

The matching funding will be provided by Mansfield Shire Council. The funding is confirmed. The funding will be available in the 2017/ 2018 financial year.

Supporting evidence:

Please refer to page 46 in [Exhibit 12](#) Shire Strategic Resource Plan.

PLANNING - Briefly outline what project planning and/or scoping has already been undertaken? What remains to be finalised?

Provide detail:

Project scoping and initial design work has been completed.

Bridge funding for waterway crossings has been secured and bridge construction is planned for the 2016/17 financial year.

Council and community consultation has been completed and Mansfield Heavy Vehicle Planning Study approved

Mansfield Structure Plan which references the Heavy Vehicle Bypass has been adopted by Council

Topography Survey has been completed

Hydraulic Modelling has been undertaken, and the Goulburn-Broken Catchment Management Authority consulted and an in-principle agreement made.

VicRoads have been consulted and results of consultation incorporated into bypass road design.

Supporting evidence:

Please refer to [Exhibit 7](#) Mansfield Town Structure Plan, [Exhibit 5](#) example design of bypass roads.

NOTE: Only attach **a maximum of two** documents to support this claim.

<p>APPROVALS - Briefly outline what Approvals are required for your project and what steps are being taken to obtain and manage these approvals?</p>
<p><i>Provide detail:</i></p> <p>Hydraulic Modelling Completed and approved by CMA</p> <p>Planning approval - internal</p> <p><i>Supporting evidence:</i></p> <p>Please refer to Exhibit 13, email chain showing CMA approval for waterway works</p> <p><i>NOTE: Only attach <u>a maximum of two</u> documents to support this claim.</i></p>
<p>DESIGNS - Briefly outline what Design work has already been undertaken? And what additional design work is required to commence construction?</p>
<p><i>Provide detail:</i></p> <p>Detailed Design has been completed. This includes:</p> <ul style="list-style-type: none"> • Geometric Design (horizontal & vertical alignment); • Pavement design; • Hydraulic modelling; • Structural design. <p><i>Supporting evidence:</i></p> <p>Please refer to Exhibit 5, example design of bypass roads.</p> <p><i>NOTE: Only attach <u>a maximum of two</u> high level designs, schematics or diagrams</i></p>
<p>RISKS - Have any major risks (scope, approvals, costs, delivery) been identified that would impact on timely delivery (commencing construction by <u>June 2017</u> and completion by <u>June 2019</u>) and how are these being mitigated?</p>
<p><i>Provide detail:</i></p> <p>All necessary investigations and detailed design preparations are in place, and no risk issues have been identified that will impact the commencement and completion of the project within the agreed time (i.e. project to commence within 12 months and completion by June 2019).</p> <p><i>Supporting evidence:</i></p>

Project Costs

Project costs are required to assist with assessment and management of projects. Note that the Department may seek additional information from the proponent, or third parties, to verify costs.

If this project proposal is successful, final costs will be settled with the proponent from the information provided below and in accordance with relevant provisions contained in the Notes on Administration. Note that contributions from all parties must be confirmed at that stage. This is a guide only of likely project cost items. Please include costs for additional items against the “Supplemental” category and provide comments.

Costings

What methodology was used to determine the costings? (e.g. reference to similar projects, first principles cost estimates etc.).
<p><i>Provide detail:</i></p> <p>Council has also completed projects of similar nature, in 2014 and 2015; these project had similar cross-section and pavement design</p> <p><i>Supporting evidence:</i></p>
If a contingency of over 10% is used you MUST specify the basis for the contingency and justify the cost estimate below. Contingencies of over \$1m MUST be supported by independent advice.
<p>Contingency %: 2% Contingency Amount: \$24,000</p> <p><i>Basis for the contingency:</i> Based on previous experience with similar projects (i.e. contingency for soft spots, unexpected severe weather events etc.).</p>
Are costings supported by independent advice, (e.g. Quantity Surveyor?), or other qualified personnel with previous construction experience? If so, please provide details.
<p><i>Provide detail:</i></p> <p>The costing is supported by independent advice from experienced contractors in constructing similar projects.</p> <p><i>Supporting evidence:</i></p>

Schedule

Please provide information on key dates for construction of your project and the expected date for provision of the Post Completion Report, this payment date should match the date for payment under the 'Funding Profile' financial year provided in Part B of the proposal form.

These dates will inform assessment of Criteria 4 – Construction Readiness. Milestone payments are discussed further in the 'Funding Arrangements' section.

Project Stage	Date	Comments
1. Commencement of Final Designs and Plans	Oct 2015	Final design and plans were completed in Oct 2015
2. Commencement of Construction	June 2017	
3. Completion of Construction	April 2018	
4. Provision of Post Completion Report	May 2018	

PROJECT ADMINISTRATION

The Department may request further information to assist with the assessment or management of a proposal at any time. The Department may impose conditions on funding.

Successful projects and payments to successful proponents will be managed through state and territory governments under the National Partnership Agreement on Land Transport Infrastructure projects and the related Notes on Administration, available at

<http://investment.infrastructure.gov.au/publications/administration/>

Funding Arrangements for Successful Projects

After the project has been approved for funding by the Minister, the Department will contact successful proponents to confirm the status of projects, confirm funding and costings and agree to milestones for payment.

If construction has already commenced on a project before terms have been agreed to, the project will be deemed ineligible and will not receive funding

Proponents must provide evidence of matching funding within 60 days following the announcement of successful projects, after that the Australian Government reserves the right to withdraw its offer of funding.

Milestones and related payments will be proposed by the Department based on the size and complexity of projects and information provided in the proposal, particularly under 'Schedule' in Criteria 4:

- Given the large number of projects, and as project reporting and payments will be managed through state/territory governments, the Department will seek to streamline the number of milestones and payments.
- For smaller projects that can be completed within one financial year, the default position is payment on the provision of a Post Completion Report i.e. a single payment on completion.
- Larger projects and projects with cashflows over two years may have further milestones, but these will be based on substantive work being undertaken.

Proponents can either agree to the proposed milestones or seek to negotiate milestones that better reflect project schedules and cashflow requirements. Payment against milestones will be made only after proponents have demonstrated the milestone has been met. The Department will also identify evaluation reporting required within the Post Completion Report.

The Department will only enter into an agreement with the proponent (a single entity), who will be wholly responsible for the performance of the project.

CONFLICT OF INTEREST

Each proponent will be required to declare as part of their proposal that to the best of their knowledge there are no actual or perceived conflicts of interest that would impact on or prevent the proposal from proceeding if funding were approved under the HVSP.

A conflict of interest may exist, for example, if the proponent or any of its personnel:

- has a relationship (whether professional, commercial or personal) with a person who is able to influence the project appraisal process, such as a departmental officer;
- has a relationship with, or interest in, an organisation, which is likely to interfere with or restrict the proponent in carrying out the proposed activities fairly and independently; or
- has a relationship with, or interest in, an organisation from which they will receive personal gain as a result of the provision of funding under the HVSP.

Should a proponent subsequently identify an actual, perceived or potential conflict of interest, they must inform the Department in writing immediately.

Does the proponent or any of its personnel have an actual, perceived or potential conflict of interest? (If yes, please provide details separately with the proposal.)	No
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HOW TO SUBMIT A PROPOSAL

Please ensure that you submit both Part A and Part B of the proposal form.

- Part A must be submitted as a **WORD DOCUMENT**.
- Part B must be submitted as an **EXCEL SPREADSHEET**.

Both forms are required to assess your proposal. Proposals submitting only one Part will be deemed ineligible.

Email Part A and Part B to the HVSPF email address hvspp@infrastructure.gov.au. Ensure the email is clearly marked with the Project Name and only send **ONE Proposal** per email.

Attachments to your proposal should be emailed in PDF format. Other formats may be corrupted during transmission.

Do not post your proposals. Only emailed proposals will be accepted. Confirmation of receipt of proposals will not be sent. You should set up a "Request a Delivery Receipt" within in your own email transmission.

Emails are limited in size to 10MB and will not be accepted through the Department's email gateway if they exceed that size.

All proposals **MUST** be received by 11:59 pm local time on 10 February 2016. No proposals will be accepted after this time.

Note: No Information Technology or programme support will be available after 4.30 pm AEST on the closing date, so please ensure that you submit your proposal early to receive support if required.

Email enquiries can also be sent to hvspp@infrastructure.gov.au or you can contact us by phone on 02 6274 6758.

PROPOSAL SUMMARY	
Dept Ref No.	
State	VIC
PROPONENT DETAILS	
Proponent Organisation <small>(Name of Department or Council)</small>	Mansfield Shire Council
Contact Name:	Amer Tawfik
Job Title:	Engineering & Works Manager
Telephone:	03 5775 8546
Email:	amer.tawfik@mansfield.vic.gov.au
Postal address:	Private Bag 1000, Mansfield VIC 3724
For Local Councils Only	<i>Details of the Mayor for official correspondence</i>
Mayor's Title	Mr
First name	Paul
Surname	Sladdin

SUMMARY - PROJECT DETAILS (Short, Concise answers)	
Project Name	Mansfield Heavy Vehicle Bypass
Project Activity	Upgrades to existing road infrastructure
Brief Project Description	Construct a heavy vehicle bypass for Mansfield Township
Australian government funding sought - \$,000	\$700,000
Total Proponent funding - \$,000	\$700,000
Total Project Cost - \$,000	\$1,400,000
Construction Start date - <small>(Construction means – on ground works at the project site and/or the fabrication of major components off site.)</small>	<i>This MUST be before June 2017</i>
Construction Completion date	<i>This MUST be before 30 June 2019</i>
Location Latitude <small>MUST be decimal</small>	Start (-37.049901°) - End (-37.043357°)
Location Longitude <small>MUST be decimal</small>	Start (146.071861°) - End (146.089815°)

MEETING THE PROGRAMME OBJECTIVES		
Productivity	Response	Brief Comments <small>(Less than 20 words)</small>
Will the project increase access for higher mass & productivity vehicles?	Yes	<i>The bypass will simplify access for Higher Mass Limit (HML) vehicles</i>
Will the project facilitate integration with key freight networks?	Yes	<i>The route will provide a direct link between two VicRoads arterial roads</i>
Will the project facilitate improvements to 'last mile' logistics?	Yes	<i>It will increase access to the main industrial areas of Mansfield</i>
What is the estimated financial benefit <u>per year?</u> - <u>In \$</u>	\$226,000	
Whats is the BCR? <small>(Where available)</small>	1.81	
Will In-vehicle Telematic data be used <small>(Where available)</small>	Yes	<i>will be utilised in the future</i>
Safety	Response	Brief Comments <small>(Less than 20 words)</small>
Will the project improve safety of heavy vehicle operations?	Yes	<i>It will reduce traffic congestion and potential accidents at critical intersections within Mansfield CBD</i>
Has AustRoads standards and/or crash data been used to measure safety improvements?	Yes	<i>AustRoads design guidelines adopted for the design</i>
Will In-vehicle Telematic data be used <small>(Where available)</small>	Yes	<i>will be utilised in the future</i>
Other Benefits	Response	Brief Comments <small>(Less than 20 words)</small>
What are the major freight tasks or commodities on the route? - <u>Max 3</u>	Stock, Earth Moving Contractors, Freight	
Is the project aligned with industry priorities and/or strategies?	Yes	Consultation with users of heavy commercial vehicle and the wider community supported the need for the bypass
Is the project aligned with state/territory priorities and/or strategies?	Yes	<i>VicRoads is supportive of the bypass</i>
Have you initiated changes with the Heavy Vehicle Regulator to reflect improvements made by the project?	Yes	<i>In progress</i>

ASSESSMENT DATA		
Road infrastructure – upgrades	This <u>MUST</u> be a number	Brief Comments <small>(Less than 20 words)</small>
What is the current load limit? <small>In Metric tonnes</small>	18	suitable for fire engine access
What will be the Post Construction load limit <small>In Metric tonnes</small>	100	suitable for B-Double
Current Traffic volume? <small>As AADT</small>	5	<i>Jun-15</i>
Est. Post Construction Traffic <small>As AADT</small>	600	2019
Current Heavy vehicle AADT?	2	<i>When and how was this measured</i>
Est Post Construction Heavy vehicle AADT?	195	
Length of any detour that will be removed? <small>In km</small>	0	
Length of any additional HML access to be opened up? <small>In km</small>	3	

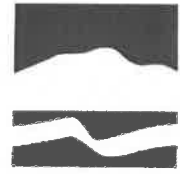
Rest Areas or De-coupling Bays – upgraded or new	Numbers Only	Brief Comments <small>(Less than 20 words)</small>
What is the current maximum capacity of the area? <small>(number of semi's, b-doubles etc.)</small>	0	the existing alignment is not suitable for semies and b-doubles
What will be the maximum capacity of the area after this project? <small>(number of semi's, b-doubles etc.)</small>	1800	The proposed bypass will have the capacity to cater for 1800 vehicles in both direction
What is the current average daily use? <small>(Number of heavy vehicles using the area)</small>	2	
What will be estimated average daily use after project completion? <small>(number of heavy vehicles using the area)</small>	195	
What, if any, facilities will be upgraded? <small>(toilets, lighting, picnic areas etc.)</small>		No new facilities are planned as part of this project; however, it will open the opportunity for new petrol station and lunch area in the future.
Distance to the nearest rest or de-coupling area?	2	

PROJECT COSTS						
Project Cost Category	2015-16 - \$000,	2016-17 - \$000,	2017-18 - \$000,	2018-19 - \$000,	Total	Comments
Project management					0	
Design & Investigation					0	
Planning and Approvals					0	
Consultants/Professional Contractors					0	
Applicant supplied insurances, fees, levies					0	
Property purchase price		10000			10000	
Property purchase transaction costs		5000			5000	
Business compensation					0	
Environmental offsets					0	
Environmental works					0	
Traffic Management & temporary works			10000		10000	
Public utilities adjustments			15000		15000	
Bulk earthworks			62000		62000	
Retaining walls					0	
Drainage					0	
Bridge costs					0	
Tunnels					0	
Pavements			\$1,270,000		1270000	
Finishing works			19000		19000	
Traffic signage, signals and controls					0	
Additional items					0	
TOTAL PROJECT BASE COST	0	15000	1376000	0	1391000	
Contingency amount (if applicable)			24000		24000	
Escalation (if applicable)					0	
TOTAL PROJECT COST (2015-16 Dollars)	0	15000	1400000	0	1415000	

FUNDING PROFILE						
Funding Source	2015-16 \$000,	2016-17 \$000,	2017-18 \$000,	2018-19 \$000,	Total	Comments
Australian Government			700000		700000	
State / Territory Government					0	
Council		15000	565000		580000	
Other			120000		120000	
Total	0	15000	1385000	0	1400000	

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Our Ref: E3919



MANSFIELD SHIRE

28 September 2016

Mansfield Shire Council
Private Bag 1000 Mansfield 3724

Department of Infrastructure
Heavy Vehicle Safety and Productivity Programme
by email: hvspp@infrastructure.gov.au

Telephone
03 5775 8555

Facsimile
03 5775 2677

Email
council@mansfield.vic.gov.au

ABN 74 566 834 923

Dear Sir/Madam,

RE : HEAVY VEHICLE SAFETY & INFRASTRUCTURE PROGRAMME

Please find attached the completed Offer of Funding relating to the Heavy Vehicle Safety and Productivity Programme Round 5 grant for Mansfield Shire Council's Heavy Vehicle Bypass.

As the bypass is planned for commencement in June 2017, and Council budgets are developed on a yearly basis, the current Council budget does not reflect the council component of the project funding. However, it is included within the long-term financial plan adopted by Council at a special meeting on 28 June 2016.

We have attached the relevant pages of the plan as adopted by Council that reflect the intended expenditure on road upgrades, which includes the bypass. This also indicates Council funds available for road expenditure, including the bypass. In short, we are able to fund the bypass without additional borrowing.

On reviewing the bypass plans, it has become clear that the grant submission should have identified that the project will be completed in March 2019, still within the grant condition deadline, and not April 2018 as originally submitted. We ask that the Department accepts this amendment.

The project design and estimated costing is complete for the bypass. The design and schedule will undergo a final review and can then be put out for tender after the Council elections are finalised and the new Council declared.

We are very pleased to have been offered the grant and look forward to improving heavy vehicle safety and productivity in Mansfield through the implementation of this project

Yours Sincerely

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Australian Government

Department of Infrastructure and Regional Development

HEAVY VEHICLE SAFETY AND PRODUCTIVITY PROGRAMME ROUND FIVE

OFFER OF FUNDING

Council Name	Mansfield Shire Council
Project Name	Mansfield Shire Heavy Vehicle Bypass

1. Project Details

Proponent Name	Mansfield Shire Council
Project name	Mansfield Shire Heavy Vehicle Bypass
Project description	Construct a heavy vehicle bypass for Mansfield Township
Australian Government Funding Amount	\$700,000 <i>[as advised in the Minister's letter]</i>
Total Project Cost	\$1,400,000
Matching Funding amount	\$700,000
Matching Funding source	Council funds
Name of contact person	s47F - personal privacy
Position of contact person	Acting Engineering and Works Manager
Postal Address	Private Bag 1000, Mansfield, Victoria, 3724
Contact Phone No.	s47F - personal privacy
Contact Email	s47F - personal privacy

**This form MUST be completed and returned to the Department by
30 September 2016.**

2. Introduction

Congratulations on the success of your proposal for funding under the Australian Government's Heavy Vehicle Safety and Productivity Programme (HVSPP) – Round Five. This Offer of Funding

outlines the funding for your project, the relevant administrative arrangements, reporting requirements and payment milestones under the Programme.

The *National Land Transport Act 2014* requires projects to meet the eligibility conditions of the Programme prior to formal approval. You will be required to provide evidence of matching funding and confirm that construction will commence by June 2017 and be completed by 30 June 2019 in this Offer of Funding.

Failure to comply with any of these conditions may result in funding for the project being withdrawn.

Construction must not begin prior to receiving confirmation from the Department that the project may commence (construction means actual on ground works at the project site and/or the fabrication of major components off site). Tenders cannot be accepted, however planning and design work can be undertaken at this stage.

As outlined in the Programme Criteria and Proposal Form, successful projects and payments to state, territory and local governments will be managed through state and territory governments under the *National Partnership Agreement on Land Transport Infrastructure Projects* and the related *Notes on Administration*.

Please note that for Councils, an appropriate funding arrangement (e.g. a separate deed) between local and state governments may also be required.

3. Confirmations from Proponent

Has construction commenced? <i>NB: No actual on ground works at the project site is to have commenced. Internal Planning and design work can be undertaken at this stage.</i>	No	Internal planning and design work undertaken.
Have any tenders been accepted relating to this project? <i>NB: No tenders are to be accepted until the Project Agreement is received.</i>	No	If yes, please provide details
Is planning and development of this project sufficiently advanced to ensure commencement of this project by June 2017?	Yes	Please provide details, for example, planning, approvals and designs etc. including dates or expected dates of these. Designs complete. Preliminary Tender Schedules complete.
Have any new risks been identified that could delay this project being completed?	No	Outline any new risks identified and how these are being managed.
Has the project budget been confirmed?	Yes	Please provide any relevant documentation.
Has the matching funding been confirmed?	Yes	For State/Territory – Confirmation by a person authorised to commit the funding to this project. For Councils – Evidence of a resolution through documented Minutes, or provision in the budget with line item/s clearly marked

		<i>One or both of these documents <u>MUST</u> be attached as evidence</i>
Will a public tender for the project construction works be issued?	Yes	<i>If No, please complete the 'Request for Exemption form' at the end of the document and return with this form.</i>

The National Land Transport Act 2014 requires all works greater than \$100,000 to be subject to public tender.

This obligation can be satisfied in some cases by selecting contractors under a pre-existing panel arrangement, where it can be demonstrated that the pre-existing panel arrangement was the result of a public tender process. Alternatively, proponents can apply to the department for an exemption from going to public tender, if they believe one of the exemption categories applies.

A proponent seeking an exemption from the requirement to use a public tender process must seek approval for the exemption. The request for approval must detail the:

- scope of works for which the exemption is being sought;
- value of these works;
- intended entity to undertake these works;
- category under which the exemption is being sought and
- detailed supporting reasons for the exemption, clearly demonstrating your claims against the exemption criteria.

A 'Request for Exemption' form is at [Attachment A](#).

5. Milestones and Payments

Please note that Milestones payments scheduled in May or June will not be accepted.

Payments are made against full completion of milestones. In the table below please indicate your proposed milestones and payment amounts. No payments will be made against signing of contracts/tenders.

For projects receiving \$1 million or less in Australian Government funding, the guiding calculations are:

- The first milestone payable against construction commencement is limited to 40 per cent of the total amount of the approved Australian Government funding.
- The remainder is payable against a second milestone, payable upon practical completion and submission of a satisfactory Post Completion Report.

For projects receiving over \$1 million in Australian Government funding, the guiding calculations are:

- The first milestone payable construction commencement is limited to \$400,000
- There is to be a maximum of three milestones
- Where there are three milestones, the last milestone is to have a minimum of 30% of total amount of the approved Australian Government funding for Practical Completion and Submission of a satisfactory Post Completion Report.

Milestones	Nominated Month/Year	Amount
Commencement of Construction	Jun 2017	Nil
Milestone 1 - Payment claim for commencement of construction – not in May or June (Maximum 40% of total Australian Government funding)	Apr 2018	\$280,000
Completion of Construction	Mar 2019	Nil
Milestone 2 - Presentation of an acceptable Post Completion Report - not May or June	Apr 2019	\$420,000
Maximum Australian Government Funding		\$700,000

The Department will review these and discuss them with you if they are not appropriate.

Payments will be processed following the receipt and acceptance of the milestone claim. Councils should note that it may take around six weeks for state governments to receive funds from the Australian Government once a milestone is claimed. A further period should then be allowed for state government to forward the funds to Council under any arrangements in place.

Information on how to meet and submit milestone claims will be provided in the Project Agreement.

6. Monthly Reports

A condition under IMS and as part of the funding arrangements is the requirement to provide a brief monthly report on the progress of projects. Monthly reports should be sent to the hvspp@infrastructure.gov.au inbox by the end of each month and copied to your state contact – you will be advised who your state contact is in the Project Agreement.

Templates to complete monthly reports will be provided as part of the Project Agreement.

7. Post Completion Reports

All proponents will be required to complete a Post Completion Report. This template is based on the template report from the *Notes on Administration for Land Transport Infrastructure Projects 2014-15 to 2018-19* and will be provided. When completed, this should be sent to the hvspp@infrastructure.gov.au inbox and copied to your state contact – you will be advised who your state contact is in the Project Agreement.

Templates for Post Completion Reports will be provided as part of the Project Agreement.

8. Signage

It is a requirement of Australian Government funding that signage must be displayed on either side of the project works. Photographic evidence will be required to confirm commencement of construction for payment of the first milestone.

Please refer to the Print and Signage Guidelines on the Department's website at <http://investment.infrastructure.gov.au/publications/administration//index.aspx>.

9. Events (Public Recognition)

Under the *Notes on Administration for Land Transport Infrastructure Projects*, all publications, promotional and advertising materials, public announcements and activities in relation to a Project, a Funding Recipient must acknowledge the financial support they have received from the Australian Government.

Please ensure that the Department is advised well in advance of any public and/or media events, so all parties can work cooperatively to arrange and agree on dates and where possible the attendance by Members of Parliament or their representatives.

Please refer the Public Recognition requirements on Page 7, Section 1.9 for more information http://investment.infrastructure.gov.au/publications/administration/pdf/NoA_November_2014.pdf

10. Contact Information

If you do not agree with any requirements, or you need assistance in relation to this Offer of Funding or the Programme in general, please contact the Department of Infrastructure and Regional Development's Heavy Vehicle Safety and Productivity information line on

Telephone 02 6274 8030 or

Email hvspp@infrastructure.gov.au

11. Required Actions

If you agree with the conditions, complete all required information, sign and return the scanned document to hvspp@infrastructure.gov.au. This document must be signed by either the Council's General Manager or a person authorised to commit the funding to this project.

I agree with the administrative and funding conditions outlined in this package as required by the Australian Government and confirm that:

1. Construction has not commenced;
2. Construction will commence By June 2017 and be completed by 30 June 2019.
3. Matching funding of at least 50% has been confirmed and the evidence is attached.
4. Matching funds DO NOT include funds from any other Australian Government programme such as Roads to Recovery, Black Spot or National Stronger Regions Fund

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Signed

Name

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Position

Chief Executive Officer

Proponent

Mansfield Shire Council

Date

27/9/16

12.Next Steps

Upon receipt and acceptance of the Offer of Funding, we will send you an email confirming that all arrangements are in place outlined in the Project Agreement. The Project Agreement will contain the templates for all your reporting purposes and inform you that construction of the project can commence. Do not undertake any construction on the site of your project or accept any tenders for construction prior to receiving the Project Agreement.

We wish you well with your project and look forward to receiving your updates.



Australian Government
Department of Infrastructure and Regional Development

http://www5.austlii.edu.au/au/legis/cth/consol_act/nlta2014258/s24.html

Attachment A

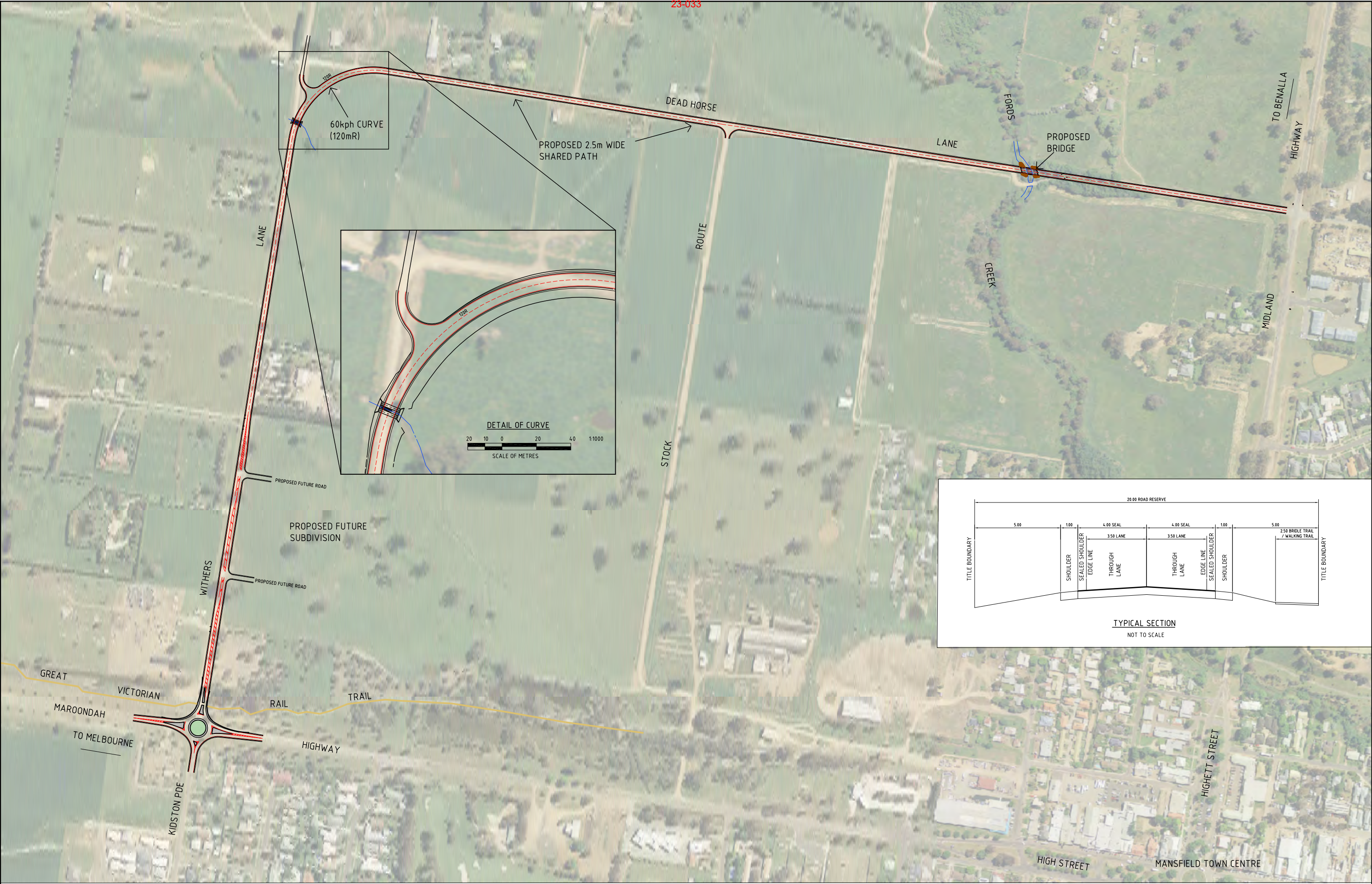
NATIONAL LAND TRANSPORT ACT 2014 - SECT 24

State or State authority must call for public tenders for certain work

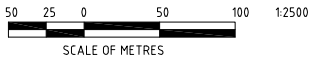
(1) If the funding recipient is a State or an authority of a State, the funding recipient must call for public tenders for all work on the funded project, other than:


- a) work that is maintenance of a road or railway; or
- b) work that is to be carried out by a public utility; or
- c) work that the Minister has, by a written exemption relating to the project, exempted from this condition because, in the Minister's opinion:
 - i. the work is urgently required because of an emergency; or
 - ii. the work is of such a minor nature that the invitation of tenders for the work would involve undue additional cost; or
 - iii. the work is of a kind for which it is not practicable to prepare adequate tender specifications; or
 - iv. the work is of a kind for which competitive tenders are unlikely to be received; or
 - v. the work will contribute to employment in a region; or
 - vi. the cost of the work is less than an amount determined by the Minister by legislative instrument under subsection (4) for the purposes of this subparagraph.

Scope of works for which the exemption is sought	Value of these works	Intended entity to undertake these works	Category under which the exemption is being sought	Supporting reasons for the exemption
[Project Name]	\$ [Total project cost]	For example - XXXX Shire Council day labour	Choose one of the categories above For example ii) the work is of such a minor nature that the invitation of tenders for the work would involve undue additional cost	For example – Council is experienced in this type of works and is best suited to undertaking this work in a cost effective manner.




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VER	DATE	DETAILS





ENGINEERING & WORKS
DEPARTMENT
MANSFIELD SHIRE COUNCIL
MANSFIELD, VIC 3722 LOCKED BAG
1000

35 of 161

CAD FILE: DESIGN01DWG	DATE: 29/06/2015	
	DESIGNED: G.DOWNES	
	DRAWN: G.DOWNES	
LEVEL DATUM: AHD	CHECKED: P.VALENTE	SCALE: 1:2500@A1

PROPOSED HEAVY VEHICLE BYPASS ROUTE (SECTION 1)
WITHERS LANE / DEAD HORSE LANE, MANSFIELD
MANSFIELD SHIRE COUNCIL
OVERALL PLAN (OPTION 1)

ORIGINAL SHEET SIZE:	A1
VERSION:	00
REF No:	E2819
SHEET No:	1 OF 1

Item	Description of Works (Works Schedule A)	Quantity	Unit	Rate (\$)	Amount (\$)
1	GENERAL				
1.1	Site establishment and management including permits, insurances and liaison with relevant authorities and parties. Traffic Management in accordance with VicRoads specifications. Environmental Management in accordance with VicRoads specifications. Location and depthing of existing services prior to undertaking any works. Survey and set-out of works.	1	Item	\$10,000.00	\$10,000.00
2	EARTHWORKS				
	Earthworks for road pavement construction to sub-grade as required including proof rolling for 'soft spots' and disposal of surplus excavated materials (tenderers shall make their own arrangements to dispose of spoil material).				
2.1	Cut (<i>solid</i>)	5800	m ³	\$5.00	\$29,000.00
2.2	Fill (<i>compacted</i>)	6500	m ³	\$5.00	\$32,500.00
3	ROADWORKS				
	Construction of a sealed road pavement and asphalted pavement including preperation work, supply of all materials, place and consolidation in accordance with relevant specifications and drawings. (Includes preparation of existing crushed rock subgrade/lower subbase to 97% standard compaction)				
3.1	Size 10/14 two coat seal	21200	m ²	\$12.00	\$254,400.00
3.2	150mm compacted depth 'Class 2' FCR base (<i>solid</i>) to 98% minimum modified compaction	26050	m ²	\$15.00	\$390,750.00
3.3	150mm compacted depth 'Class 3' FCR subbase (<i>solid</i>) to 97% minimum modified compaction	26050	m ²	\$12.00	\$312,600.00
3.4	150mm compacted depth 'Class 4' FCR lower subbase (<i>solid</i>) to 97% minimum modified compaction	26050	m ²	\$12.00	\$312,600.00
4	LINE MARKING AND SIGNAGE				
	Supply and installation of the following line marking and signs on a standard pole as shown on drawings and where directed by the superintendent in accordance with relevant specifications.				
4.1	Give Way Sign - Size A (R1-2A) (Withers Lane side road and Stock Route)	2	No.	\$150.00	\$300.00
4.1	Give Way Sign - Size B (R1-2B) (Highway locations)	2	No.	\$250.00	\$500.00
4.1	Overdimensional (OD) route signage (Highway locations)	2	No.	\$150.00	\$300.00
4.1	Directional signage (Highway locations)	2	No.	\$1,000.00	\$2,000.00
4.2	Centreline linemarking (full length)	2500	L.m.	\$1.00	\$2,500.00
4.3	Fogline linemarking (both sides of roads)	5000	L.m.	\$1.00	\$5,000.00
4.4	Chevron and island separator linemarking in Withers Lane near future subdivision (including arrows etc).	1	Item	\$5,000.00	\$5,000.00
4.5	Supply and install Guide Posts along both sides of road at 75 metre average spacing.	80	No.	\$40.00	\$3,200.00
5	SERVICES				
5.1	Alteration to proposed works to avoid existing services and alteration to existing services in the event that works cannot be moved as required with a written approval from the Principal’s Superintendent in accordance with all relevant service authorities specifications including design and associated approvals and inspections, excavating, supply of materials, fittings, placing and compacting of approved backfill material. Disposal of surplus excavated materials (tenderers must make their own arrangements to dispose of spoil material). Includes provision for relocation and installation of lighting, including supply, delivery and installation in accordance with relevant specifications and drawings.	1	Item	\$15,000.00	\$15,000.00
SUBTOTAL WORKS SCHEDULE A (excluding GST)				\$1,375,650.00	

ESTIMATE COSTING SUMMARY	
SUBTOTAL PROVISIONAL WORKS SCHEDULE A (excluding GST)	\$1,375,650.00
GST (10.0%)	\$137,565.00
PROJECT TOTAL (including GST)	\$1,513,215.00

23-033

National Land Transport Act 2014
Investment Project
Project Approval No. VPT34854
Approval Under Part 3 Sections 9 and 17

I, ROLAND PITTAR, General Manager North West Roads as a delegate of the Minister under subsection 93(1) of the *National Land Transport Act 2014* (the Act):

- a) being satisfied that the project referred to below (the Project) is eligible for approval in accordance with section 10 of the Act and considering that it is appropriate to approve the Project in accordance with section 11 of the Act, approve the Project under section 9 of the Act and;
- b) approve, under section 17 of the Act, the provision of Commonwealth funding for the Project to the eligible funding recipient identified below.

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8/11/2016

ROLAND PITTAR

Project No.	064328-16VIC-HV5
Project Name	Mansfield Shire Council - Construction of a Heavy Vehicle Bypass for Mansfield Township
Sub-Programme	Heavy Vehicle Safety and Productivity Package
Project Description	Construction of a heavy vehicle bypass for Mansfield Township.
Maximum Funding Amount that the Commonwealth may Contribute	\$700,000
Eligible Funding Recipient	Department of Economic Development, Jobs, Transport and Resources



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General Manager
South East Roads Branch
Infrastructure Investment Division
Department of Infrastructure and Regional Development

328 *AM*
REQUEST FOR MILESTONE PAYMENT – 064271-16VIC-HV5 – MANSFIELD SHIRE COUNCIL – CONSTRUCTION OF A HEAVY VEHICLE BYPASS FOR MANSFIELD

s47F -

In accordance with the agreed project milestone schedule, I certify that the following payment milestone has been achieved:

- **Payment Milestone PDLM1:** Planning, Development and Design completed. Construction commenced on 24 April 2017.

On that basis, I request payment of \$500,000.

Yours sincerely

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Engineering Manager

Date: 16 May 2017

Department of Infrastructure and Regional Development Use ONLY

To Business Manager, Infrastructure Investment

On the basis of information provided by VicRoads and our validation of that information, I am satisfied that the milestone has been achieved and payment can now be made.

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General Manager
South East Roads
Infrastructure Investment
Department of Infrastructure and Regional Development

15/6/17



Australian Government
Department of Infrastructure
and Regional Development

II DIVISION

Date:

Dead Horse Lane Vegetation clearing and preparation of new road alignment



Dead Horse Lane Vegetation clearing and preparation of new road alignment





Importation of road-fill material to site



Importation of road-fill material to site



**Australian Government****Department of Infrastructure, Transport,
Regional Development and Communications**

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A/g Director
National Targeted Road Infrastructure Programs
Infrastructure Investment Division

**Subject: 064328-16VIC-HV5 - Mansfield Shire Council - Construction of a Heavy
Vehicle Bypass for Mansfield Township**

- ☐ Cost Saving ☐ Cost Increase ☐ Name/Scope variation ☐ Cancellation/Withdrawal
☒ Schedule Variation

Reasons

Mansfield Shire Council (MSC) has requested the Mansfield Heavy Vehicle Bypass for Mansfield Township project, which was scheduled for completion of construction June 2022, has now been forecasted to be completed October 2022. Consultant staffing challenges due to COVID and significant staff turnover causing extensive delays during design that could not have been foreseen. Addressing the issue took some time but the consultant bought on more resources to ensure the project is completed with minimal delay.

The weather has contributed to this delay as the wet and colder months make pavement works unsuitable. This project is stage 1 of the bypass.

Further information can be found at **Attachment A**.

Assessment

The requested schedule change would result in the project being delivered outside of the guidelines for Round 5 of the Heavy Vehicle and Safety Productivity Programme (HVSP), but otherwise has no impacts on scope or costs associated with the program.

MSC's request is reasonable as COVID-19 restrictions and staff challenges heavily affect councils and small businesses with smaller resource pools, and the flow on consequences could have not been foreseen at the time Mansfield Council made their application. As the request meets the criteria of the HVSP Variation Guide, the recommended course of action is to agree to schedule change.

Administration

As variations to project schedule are not listed under s93 of the NLT Act or within Schedule 1 of the Minister's National Land Transport Delegation Instrument dated 6 January 2020, you have the authority to approve changes to the project schedule.

We will write to the proponent to advise them of your decision.

Recommendation

That you agree to the request by signing this minute.

We will write to the proponent to advise them of your decision.

<div data-bbox="167 286 687 510" data-label="Text"> <p>s47F - personal privacy</p> </div> <div data-bbox="196 510 604 622" data-label="Text"> <p>Assistant Director Bridges Renewal Program 07/07/2022</p> </div>	<div data-bbox="826 264 1262 479" data-label="Text"> <p>Signed / Not signed / Discuss s47F - personal privacy</p> </div> <div data-bbox="858 472 1369 629" data-label="Text"> <p>A/g Director National Targeted Road Infrastructure Programs 7 July 2022</p> </div>
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Attachments:

Attachment A: Request from Proponent.



Bridges Renewal Program

Heavy Vehicle Safety and Productivity Program

Project Variation Request

April 2021

Introduction

This project variation request is used whenever one of the three key features of your project is changing: scope, cost or schedule.

All changes to any of these features must be approved in advance, with the following two exceptions:

- Cost savings may be advised at the completion of the project. Your final payment (and other payments if required) will be amended to reflect the savings.
- Early completion of a project can be advised at the completion of the project. The Australian Government reserves the right for payments for early completed projects to be paid according to the original timetable.

All sections of the form are mandatory.

Returning the form

Please check that you have completed all sections of the form, including signature (electronic is acceptable). Once complete this document should be returned by email to:

- bridgesrenewal@infrastructure.gov.au or
- HVSPP@infrastructure.gov.au

Proponents should also provide an email copy to their state/territory transport/infrastructure agency contact.

Questions

Should you have any questions or concerns regarding this form, please contact the National Targeted Road Infrastructure Program helpdesk on either of the email addresses above, or by calling (02) 6274 8040.

Next steps

Once this form is received the Department will check that it meets our requirements. The Minister or their delegate will then be asked to make a decision. You will be advised by email of that decision. If we need more information about your request we will contact you. This process can take several weeks, depending on the complexity of the request.

In the event that your request is denied funding may be withdrawn from the project, including funding already paid. The Australian Government may instead require you to complete the project to the cost, schedule and scope as agreed.

About the project

Proponent	Mansfield Shire Council
Project Name	HV5 (Heavy Vehicle Alternate Route - Stage 1)
Project Number	064328-16VIC-HV5 (Heavy Vehicle Alternate Route - Stage 1)

About you

Name	s47F - personal privacy
Role	Capital Projects Officer
Phone number	s47F - personal privacy
Email address	s47F - personal privacy

What is changing?

Complete all that apply

☐ Cost Change:

If your project is complete and you are not requesting additional funding you do not need to complete.

Funding Source	Current Approved Funding (\$)	Requested change (\$) (negative for savings)	Revised Funding (\$)
Australian Government			
Proponent			
Other			
TOTAL			

☐ Scope Change:

Current approved scope (from your approval instrument)
Proposed scope

☒ Schedule Change:

If your project will commence and be completed within the existing timeframe for that round approval is not required.

Event	Current Approved Date (from your offer of funding)	Requested date
Commencement of Construction	30/5/2022	Construction in progress
Other milestone (where applicable)		
Physical completion		31 Oct 2022
Provision of PCR	30/06/2022	30 Nov 2022

Current round timeframes

Bridges Renewal Program			Heavy Vehicle Safety and Productivity Program		
Round	Commencement	Completion	Round	Commencement	Completion
BRP3	Jul 2018	Dec 2019	HVSP5	Jun 2017	Jun 2019
BRP4	Jun 2020	Dec 2022	HVSP6	Jul 2019	Jun 2021
BRP5	Dec 2021	Dec 2022	HVSP7	Dec 2021	Dec 2022

Rationale

Please explain the reasons for the change to the project. At a minimum include:

- What was the issue or issue which led to the need for change?
- When you identified that the project would not be able to delivered as agreed?
- At what point of the build was the issue identified (design, tender, construction, etc.)?
- Whether the issue could have been foreseen?
- What actions have been taken to address the issue and minimise or mitigate impacts?

Rationale
<p>Consultant staffing challenges due to COVID have resulted in extensive delays during design. During the evaluation for design consultants, Council prioritised contractors who could meet the timeframes when awarding the project and awarded on this basis. Unfortunately, finalising the design took longer than planned by the consultant as they faced significant staff turnover causing delays which could not have been foreseen. Despite this, we were still aiming on completing construction in the first half of 2022.</p> <p>Unfortunately, during construction there were several softspots and weeks of wet weather. This issue became more noticeable as construction continued past the end of autumn and consistent rain prevented work from progressing as planned. The pavement for the largest section had been completed but consistent rain every week has prevented the sealing of the road since early May. Weather conditions are continually being monitored for suitable sealing conditions, but this may be delayed until September/October.</p> <p>The left-hand turning lane at the intersection of Maroondah Highway and Withers Lane also faced significant delays due to VicRoads approval taking longer than expected due to organisational changes that have impacted timeframes. Despite frequent communication, approval from VicRoads was only given in May when weather had already become unsuitable for pavement works. As a result, the contractor proposed to move the works to September/October to avoid winter construction issues that would lengthen the time for construction as well as traffic safety concerns associated with deep excavations and changing traffic conditions during peak snow season traffic. After due consideration, Council accepted this proposal as the best option considering the circumstances.</p> <p>Council is committed to delivering this project and has a good working relationship with the awarded contractor who is also committed to completing the works as soon as weather allows.</p>

Declaration

By signing below you confirm that all information provided in this report is true and correct.

Signature	s47F - personal privacy	Date	09 / 06 / 2022
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Further information

What do you consider in making your decision?

In making a decision we consider a range of factors. The primary factor is whether the project remains value for money.

Other factors include:

- Whether the project has commenced construction (requests for projects which have not commenced projects are more likely to be asked to resubmit in a future round).
- The extent to which a problem could have been foreseen.
- The likelihood that the project will now meet its cost, scope and schedule.
- The experience of the proponent in delivering projects.

Who makes the decision?

Who makes the decision depends on the complexity of the decision. Most decisions are made by the Assistant Secretary with responsibility for the program. Very complex or marginal decisions may be made by the Minister responsible for the program.

What if I have already changed cost/scope/timeframe?

We strongly encourage all proponents to contact us before one of these parameters change. In some cases, such as natural disasters, this may not be possible. Requests for change can be granted retrospectively, but the circumstances which prevented application prior to the change will need to be extensively outlined.

What if my request is denied?

If your request is denied, you will need to continue to deliver to the cost, scope and schedule as contained in your offer or funding or most recent funding instrument. If you cannot do so, you will need to withdraw the project from the program.

How long does it take to make a decision?

The process of coming to a decision can take several months, depending on the complexity of the request, and other priorities. We may also request further information to clarify or expand on the information you have provided.

HEAVY VEHICLE SAFETY AND PRODUCTIVITY PROGRAM ROUND SIX

PROPOSAL FORM

ELIGIBILITY CHECKLIST	Choose Yes or No from Dropdown
We declare that -	
We are a state, territory or local government;	Yes
The road or highway is a publicly accessible road;	Yes
The road or highway is outside the National Land Transport Network;	Yes
The Australian Government contribution sought is equal to or less than 50 per cent of the total project cost;	Yes
The project is requesting \$5 million or less in Australian Government funding;	Yes
The costs are for capital expenditure (i.e. not for repairs or ongoing maintenance);	Yes
Construction has not commenced, including acceptance of tenders and offsite prefabrication work, and will not commence before documentation is completed;	Yes
Construction is scheduled to commence by 1 July 2019; and	Yes
Construction is scheduled to be complete by 30 June 2021.	Yes

If you have answered 'No' to any of the above questions, you are not eligible for Round Six of the Heavy Vehicle Safety and Productivity Program.

This form should be attached into IMS once your Nomination Spreadsheet has been uploaded.

Large attachments can be emailed separately to the Department via the email address below.

The Department can be contacted on HVSPP@infrastructure.gov.au or 02 6274 8040 if you would like to discuss.

HVSP Round Six Project Summary	
PROPOSAL SUMMARY	
State	VIC
PROPONENT DETAILS	
Proponent Organisation <i>(Name of Department or Council)</i>	Mansfield Shire Council
Contact Name:	Paul Valente
Job Title:	Senior Civil Engineer
Telephone:	0419 530 679
Email:	paul.valente@mansfield.vic.gov.au
Postal address:	Private Bag 1000. Mansfield. VIC. 3724
For Local Councils Only	
Mayor's Title	Mr
First name	Paul
Surname	Volkering

MEETING THE PROGRAM OBJECTIVES		
Productivity	Response	Brief Comments (Less than 20 words)
Will the project increase access for higher mass & productivity vehicles?	Yes	The bypass would improve access and transport time, particularly for B-Doubles and semi-trailers to key freight areas within Mansfield and through to Mt Buller.
Will the project facilitate integration with key freight networks?	Yes	The Bypass will link Maroondah Hwy, B300 - a national key secondary road freight route, and Midland Hwy, and Mt Buller Rd C320 via Mansfield's present and future industrial areas.
Will the project facilitate improvements to 'last mile' logistics?	Yes	Heavy vehicles will have direct access to existing industrial development and the route will also allow further industrial development with direct access to occur.
What is the estimated financial benefit <u>per year?</u> - In \$	\$226,000	
What is the BCR? (Where available)	1.01	
Will In-vehicle Telematic data be used (Where available)	Not required	Dedicated detailed analysis of various routes has been undertaken with the preferred route being the most advantageous combination of productivity and safety
Safety	Response	Brief Comments (Less than 20 words)
Will the project improve safety of heavy vehicle operations?	Yes	Heavy vehicles would avoid travelling through main shopping strips, residential areas, by the hospital and by schools (including school crossings).
Has AustRoads standards and/or crash data been used to measure safety improvements?	Yes	Road widths are not currently sufficient to safely facilitate two way heavy vehicular traffic. Intersections also require upgrade to meet standards.
Will In-vehicle Telematic data be used (Where available)	Not required	Dedicated detailed analysis of various routes has been undertaken with the preferred route being the most advantageous combination of productivity and safety
Other Benefits	Response	Brief Comments (Less than 20 words)
What are the major freight tasks or commodities on the route? - Max 3	Stock, Freight, Earthmoving	Rock and mineral extraction is a growing industry requiring suitable road network support. General freight and livestock movement transport in and out of Mansfield and Mt Buller will significantly benefit from improved access
Is the project aligned with industry priorities and/or strategies?	Yes	The industry has been fully consulted and the project has been incorporated into the Mansfield Township Structure Plan, endorsed by Council formally in 2015
Is the project aligned with state/territory priorities and/or strategies?	Yes	VicRoads commissioned the study "Mansfield Heavy Vehicle – Alternative Routes Planning Study" published in 2010. It recommend freight movements be moved to outside of the Mansfield Central Business District and residential areas.
Have you initiated changes with the Heavy Vehicle Regulator to reflect improvements made by the project?	Yes	The Heavy Vehicle Bypass has been flagged with the regulator as it will become the dedicated heavy vehicle route through Mansfield once it is gazetted.

(general, stone & mineral extraction)

FUNDING PROFILE						
Funding Source	2017-18 \$000,	2018-19 \$000,	2019-20 \$000,	2020-21 \$000,	Total	Comments
Australian Government		557406	695402		1252808	
State / Territory Government					0	
Council		557406	695402		1252808	
Other					0	
Total	0	1114812	1390804	0	2505616	

Proponent to answer Criterion 1 - 3 (scroll down for Criterion 3). Criterion 4 will be provided by your state/territory road agency.	
Criterion 1	Structural Improvements Contributing to Productivity and safety
<p>The specific objectives of the Program are to:</p> <ul style="list-style-type: none"> - increase the productivity and safety of heavy vehicle operations, including through the provision of driver fatigue management rest areas and the enhancement of heavy vehicle networks. <p>Using as much detail as possible, outline how the project will increase productivity or improve the safety environment for heavy vehicle operations?</p> <p>Structural improvements can be demonstrated by (but not limited to):</p> <ul style="list-style-type: none"> - Increasing load limits; - Increasing the number of lanes or capacity; - Extending the operational life of bridge. <p>Claims against this criteria should be specific and measurable.</p>	<p>The Heavy Vehicle Bypass route will provide a direct link between two VicRoads arterial roads without the need to pass through the busy town centre of Mansfield. The Bypass will link Maroonadah Hwy, B300 - a national key secondary road freight route, and Midland Hwy, and Mt Buller Rd C320 via Mansfield's present and future industrial areas. Note that currently, the B320 secondary route terminates in the centre of Mansfield, not in the key freight areas.</p> <p>The current main route through the Mansfield CBD includes a section that is restricted and excludes B-Doubles and B-Triples without permit. The bypass will enable access for high productivity vehicles to the industrial areas and freight distribution points for vehicles travelling from Melbourne or from the Hume Hwy.</p> <p>Regular permit requests are received by Council via the National Heavy Vehicle Regulator's access management system to move heavy freight through Mansfield. The bypass route will reduce the need for a number of these permits, as the route will have fewer heavy vehicle restrictions.</p> <p>The current heavy vehicle routes through Mansfield Township are hindered by significant side friction from on-street parking, pedestrians and drop-off/ pick-up during school hours. One section through the main shopping area has restricted heavy vehicle access. The standard of construction and route will integrate with existing Heavy Vehicle routes and align with the regulator's access management operations.</p> <p>The conditions of the existing roads currently do not satisfy the requirements for increased heavy vehicle traffic. Dead Horse Lane between Midland HWY and Mansfield Whitfield Road and Mt Battery Road between Mansfield Whitfield Road and Greenvale Lane are currently of insufficient width for two way heavy vehicle traffic (7m constructed), they do not have sealed shoulders and the pavement composition requires strengthening to resist failure from the higher mass loads (approximately 250mm pavement).</p> <p>The proposed design addresses these issues and includes intersection treatments at Mansfield Whitfield Rd/Mt Battery Rd and Dead Horse Lane to accommodate B Double turning movements, wider pavement (10m overall, 450mm depth), sealed shoulders (1m seal), associate drainage structures and roadside furniture.</p> <p>The proposed bypass will provide a safer route for heavy commercial vehicles outside Mansfield's busy CBD by limiting the interaction of heavy vehicle with pedestrians, concentrations of light vehicles, shopping and school zones. The route is mainly through land zoned for farming and undeveloped future industrial land. The Council structure plan provides direction for managing access to the bypass, and avoiding the said traffic conflicts.</p>
Criterion 2	Quantified Benefits
<p>The economic and social benefits to the community of the project including evidence to support these claims.</p> <p><u>Benefits could include</u> (but not limited to):</p> <ul style="list-style-type: none"> - Increased safety; - Increasing traffic capacity; - Improved community access, including for emergency services; - proved heavy vehicle access; - Shorter trips. <p><u>Evidence could include</u> (but not limited to):</p> <ul style="list-style-type: none"> - General and heavy vehicle counts; - Costs incurred by alternative routes; - BCR's (where available); - Extent to which detours are avoided; - Letters of support that provides statements as to how the community, organisation or individual will benefit. 	<p>The proposed bypass will provide a faster and safer route for heavy commercial vehicles primarily through avoidance of Mansfield's busy CBD. It is estimated that approximately 300 commercial vehicles per day, including 30 heavy vehicles comprising articulated trucks, truck and dog combinations and B-doubles will utilise the bypass. The bypass is designed to provide priority to through traffic, which will reduce the overall journey time (i.e. avoidance of several congested intersections on existing routes).</p> <p>Improved travel times for these vehicles will result, with traffic congestion and potential accidents at critical intersections within the Mansfield CBD being significantly mitigated. Calculations show an estimated travel time saving over the full length of the proposed bypass of 74 seconds.</p> <p>The heavy vehicle safety issue is primarily that of interaction between heavy vehicles and pedestrians, shopping traffic, school zones and town centre events. The bypass will resolve this conflict and hence improve safety. Traffic congestion and potential accidents at critical intersections and pedestrian crossings within the Mansfield CBD will also be mitigated. The bypass will provide a viable option to avoid the town centre for all through-traffic during high traffic periods, notably the busy ski season and long weekends, and many festivals, events (such as High Country Targa) and markets that are held within.</p> <p>The design for the proposed route adopted Safe System Principles for road design, construction and operation. Significant elements include:</p> <ul style="list-style-type: none"> - Limiting the number of access/entry points along the bypass length; - Road geometry of adequate width including provision of sealed shoulders; - Provision of pavement marking for centreline and edge fog line to mitigate accidents such as running off the road and head-on crashes. - Adoption of a speed limit that is safe and practical and suits the environment for the proposed route. <p>The 2013 Annual average daily traffic (AADT) is 1483 with 2.64% (39 number) Heavy Vehicles including 3 B-Doubles. This is measured on the main current Heavy Vehicle Route through town (from which the majority of heavy vehicles are expected to be diverted to the bypass). The proposed bypass is expected to attract 600 vehicles per day initially, with an annual growth of 2%. The estimated percentage of Commercial Vehicles on the bypass is 33%. Evaluation Period 30 Years, Annual Traffic Growth 2%, Discount Rate 10%</p> <p>First year projected traffic volumes - Average Daily Traffic of 600 vpd, 195 vpd commercial, estimated Travel Time saving 60 seconds per vehicle</p> <p>Net Present Value Benefits (30 years), Travel Time Saving - Non-commercial vehicles \$0.82M; Commercial \$1.64M; Other savings (Accidents, Maintenance, Noise) \$0.07M;</p> <p>Total Savings \$2.53M Project Cost \$ 2.51M BCR 1.01</p> <p>In addition, the intangible benefits to the community and residents include eliminating the movements of trucks outside retirement villages, the hospital and schools. This will be perceived by the community as a significant safety and amenity improvements to the township.</p>
Criterion 3	Construction Readiness and Risk
<p>The ability of the proponents and partners of undertaking the project and the risks to the project from proceeding. This may include;</p> <ul style="list-style-type: none"> - Past experience in delivering similar projects within the required timeframes; - Confirmation of other funding sources; - Community consultation undertaken by the proponent to the community; and - Risks have been adequately considered and addressed. <p>Evidence could include (but not limited to):</p> <ul style="list-style-type: none"> - Planning or design work that has been undertaken, including if final designs have been completed; - The progress of approvals and when all approvals are expected to be completed; - Engineering assessments recently undertaken that provide a report on the current status of the bridge; and - Project costings and how these costings were obtained. 	<p>Council has previously upgraded the Greenvale Lane timber bridge and the Dead Horse Lane low level crossings with B-Double standard bridges as well as upgrading the unsealed sections of Greenvale Lane to sealed road. Withers Lane road sealing is currently under construction with the project being on track, due to be completed in February 2019. The Dead Horse Lane and Withers Lane bridge and culvert upgrade projects were recently constructed on time and on budget.</p> <p>Council has committed budget allocations to complete the missing segments of the bypass over the next 3 to 5 years. Part of this commitment included the 50% contribution towards the bridge and culvert replacements on Dead Horse Lane as well as the construction and upgrading of the Withers Lane pavement currently underway. The Dead Horse Lane and Mt Battery Road projects under this application are included as budget items in Council's 5 year capital works programme.</p> <p>Extensive consultation has been undertaken with industry and business operators via the "Mansfield Heavy Vehicle – Alternative Routes Planning Study", and through the Mansfield Township Structure Plan consultation process. Specific businesses and transport operators consulted include Mansfield Construction (quarry operation), Shaw's Transport (livestock transport), NF & CR Pigdon (earthmoving and quarry contractors), Mansfield Premix (plant operators), Alpine Civil (earth moving contractors), Mt Buller Freight, FoxAg (fertilizer distributor), Mansfield-Mt Buller Bus Line, VicForests (Hardwood extraction), and Victoria Farmers Federation (Primary Producers). The current route evolved from this consultation and was refined via feedback given.</p> <p>VicRoads commissioned a study into heavy vehicle routes in 2010. The resultant study - "Mansfield Heavy Vehicle – Alternative Routes Planning Study" published in November 2010, highlighted the need to develop a suitable route to accommodate freight movements outside of the Mansfield Central Business District (CBD) and residential areas. A number of alternative routes were investigated and assessed. The remaining elements of the recommended route are the subject of this funding application.</p> <p>The development of the heavy vehicle bypass will make the key freight and transport routes easier to traverse for heavy vehicle operators, reducing fatigue, and reducing crash risk for fatigued operators negotiating the final few kilometres of travel. It will also improve travel for heavy vehicle operators departing the area and enabling drivers to commence journeys with less frustration and risk. The route design includes a buffer zone to reduce the visual and noise impact on adjacent land users, which was identified as an issue with existing heavy vehicle movements.</p> <p>This route has been incorporated into the Mansfield Township Structure Plan, which was endorsed by Council at its Ordinary Meeting of Council held on the 19th of May 2015.</p>
Criterion 4	State and Territory Priority
	No response required - This proposal will be forwarded to the State or Territory road agency the proposal is located within. The relevant agency will forward that ranking to the Department of Infrastructure and Regional Development.

CONFLICT OF INTEREST	Yes or No:
Does the council/state or any of its personnel have an actual, perceived or potential conflict of interest?	No
If Yes, provide details:	

Acknowledgements - Conditions of Any Approved Funding
1. If the proposal is approved, the proponent will need to supply a financial acquittal of the cost of the project at the completion. Any cost savings are to be shared equally between the proponent and the Australian Government.
2. If the proposal is approved the funding provided is for the project shown in this application. The funding in part or in full can <u>NOT</u> be directed to any other project.
3. The administration of the project is conducted under the National Land Transport Act 2014, The National Partnership Agreement, related Notes of Administration and the Guidelines.

DECLARATION	
I declare all information provided is true and accurate; and I declare that I am	
Name	Neil Ogilvie
Position (i.e. Authorised Person with delegation to submit proposals)	Manager Technical Services
Date	28/03/2018

answer Criterion 1 - 3 (scroll down for Criterion 3).
I be provided by your state/territory road agency.

Structural Improvements Contributing to Productivity and safety

The Heavy Vehicle Bypass route will provide a direct link between two VicRoads arterial roads without the need to pass through the busy town centre of Mansfield. The Bypass will link Maroondah Hwy, B300 - a national key secondary road freight route, and Midland Hwy, and Mt Buller Rd C320 via Mansfield's present and future industrial areas. Note that currently, the B320 secondary route terminates in the centre of Mansfield, not in the key freight areas.

The current main route through the Mansfield CBD includes a section that is restricted and excludes B-Doubles and B-Triples without permit. The bypass will enable access for high productivity vehicles to the industrial areas and freight distribution points for vehicles travelling from Melbourne or from the Hume Hwy.

Regular permit requests are received by Council via the National Heavy Vehicle Regulator's access management system to move heavy freight through Mansfield. The bypass route will reduce the need for a number of these permits, as the route will have fewer heavy vehicle restrictions.

The current heavy vehicle routes through Mansfield Township are hindered by significant side friction from on-street parking, pedestrians and drop-off/ pick-up during school hours. One section through the main shopping area has restricted heavy vehicle access. The standard of construction and route will integrate with existing Heavy Vehicle routes and align with the regulator's access management operations.

The conditions of the existing roads currently do not satisfy the requirements for increased heavy vehicle traffic. Dead Horse Lane between Midland HWY and Mansfield Whitfield Road and Mt Battery Road between Mansfield Whitfield Road and Greenvale Lane are currently of insufficient width for two way heavy vehicle traffic (7m constructed), they do not have sealed shoulders and the pavement composition requires strengthening to resist failure from the higher mass loads (approximately 250mm pavement).

Quantified Benefits

The proposed bypass will provide a faster and safer route for heavy commercial vehicles primarily through avoidance of Mansfield's busy CBD. It is estimated that approximately 300 commercial vehicles per day, including 30 heavy vehicles comprising articulated trucks, truck and dog combinations and B-doubles will utilise the bypass. The bypass is designed to provide priority to through traffic, which will reduce the overall journey time (i.e. avoidance of several congested intersections on existing routes).

Improved travel times for these vehicles will result, with traffic congestion and potential accidents at critical intersections within the Mansfield CBD being significantly mitigated. Calculations show an estimated travel time saving over the full length of the proposed bypass of 74 seconds.

The heavy vehicle safety issue is primarily that of interaction between heavy vehicles and pedestrians, shopping traffic, school zones and town centre events. The bypass will resolve this conflict and hence improve safety. Traffic congestion and potential accidents at critical intersections and pedestrian crossings within the Mansfield CBD will also be mitigated. The bypass will provide a viable option to avoid the town centre for all through-traffic during high traffic periods, notably the busy ski season and long weekends, and many festivals, events (such as High Country Targa) and markets that are held within.

The design for the proposed route adopted Safe System Principles for road design, construction and operation. Significant elements include:

- Limiting the number of access/entry points along the bypass length.
- Road geometry of adequate width including provision of sealed shoulders.
- Provision of pavement marking for centreline and edge fog line to mitigate accidents such as running off the road and head-on crashes.
- Adoption of a speed limit that is safe and practical and suits the environment for the proposed route.

The 2013 Annual average daily traffic (AADT) is 1483 with 2.64% (39 number) Heavy Vehicles including 3 B-Doubles. This is measured on the main current Heavy Vehicle Route through town (from which the majority of heavy vehicles are expected to be diverted to the bypass). The proposed bypass is expected to attract 600

Construction Readiness and Risk

Council has previously upgraded the Greenvale Lane timber bridge and the Dead Horse Lane low level crossings with B-Double standard bridges as well as upgrading the unsealed sections of Greenvale Lane to sealed road. Withers Lane road sealing is currently under construction with the project being on track, due to be completed in February 2019. The Dead Horse Lane and Withers Lane bridge and culvert upgrade projects were recently constructed on time and on budget.

Council has committed budget allocations to complete the missing segments of the bypass over the next 3 to 5 years. Part of this commitment included the 50% contribution towards the bridge and culvert replacements on Dead Horse Lane as well as the construction and upgrading of the Withers Lane pavement currently underway. The Dead Horse Lane and Mt Battery Road projects under this application are included as budget items in Council's 5 year capital works programme.

Extensive consultation has been undertaken with industry and business operators via the "Mansfield Heavy Vehicle – Alternative Routes Planning Study", and through the Mansfield Township Structure Plan consultation process. Specific businesses and transport operators consulted include

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privacy

. The current route evolved from this consultation and was refined via feedback given.

VicRoads commissioned a study into heavy vehicle routes in 2010. The resultant study - "Mansfield Heavy Vehicle – Alternative Routes Planning Study" published in November 2010, highlighted the need to develop a suitable route to accommodate freight movements outside of the Mansfield Central Business District (CBD) and residential areas. A number of alternative routes were investigated and assessed. The remaining elements of the recommended route are the subject of this funding application.

State and Territory Priority

No response required - This proposal will be forwarded to the State or Territory road agency the proposal is located within. The relevant agency will forward that ranking to the Department of Infrastructure and

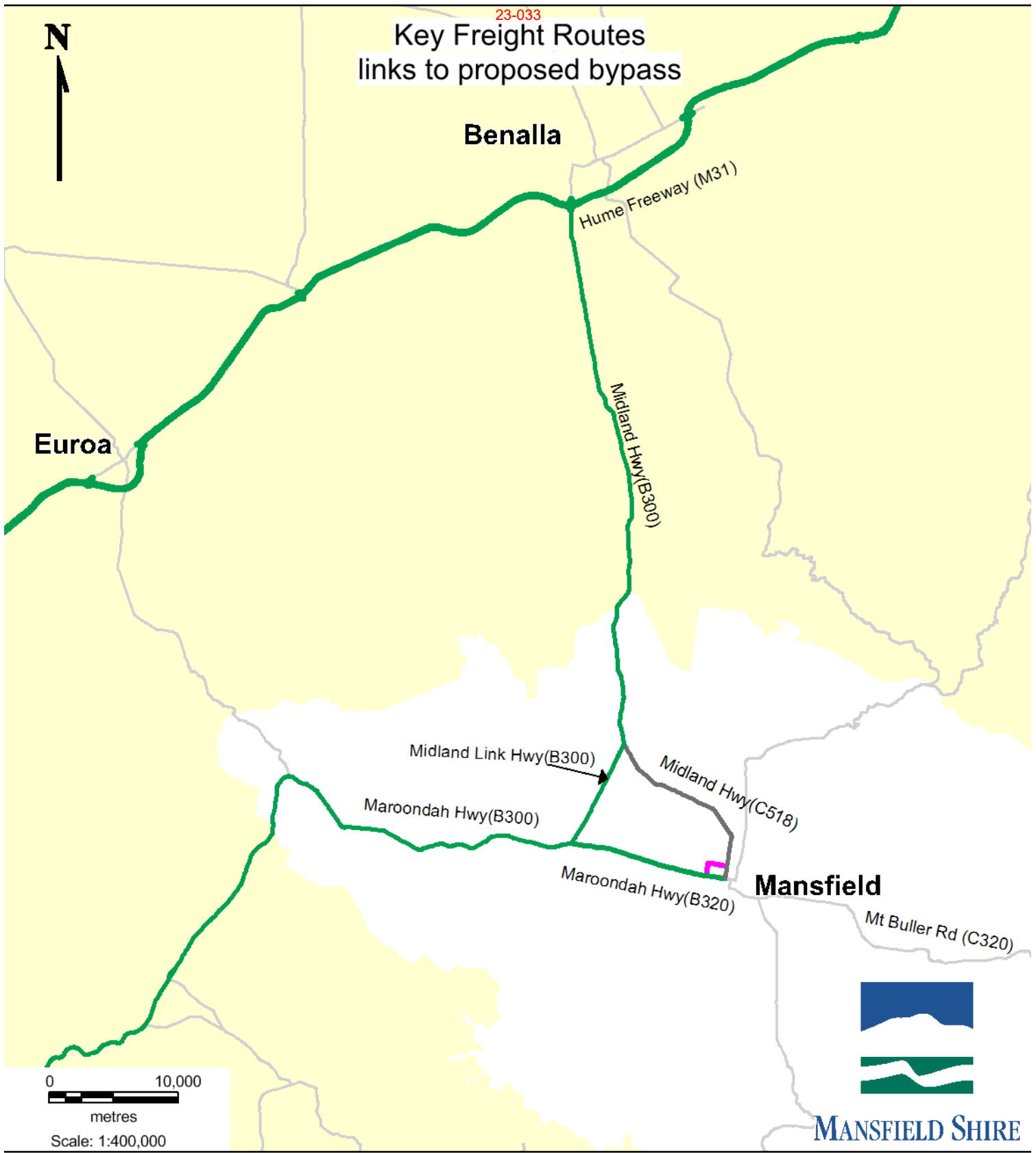
CONFLICT OF INTEREST		Yes or No:
Does the council/state or any of its personnel have an actual, perceived or potential conflict of interest?		No
If Yes, provide details:		

Acknowledgements - Conditions of Any Approved Funding
1. If the proposal is approved, the proponent will need to supply a financial acquittal of the cost of the project at the completion. Any cost savings are to be shared equally between the proponent and the Australian Government.
2. If the proposal is approved the funding provided is for the project shown in this application. The funding in part or in full can <u>NOT</u> be directed to any other project.
3. The administration of the project is conducted under the National Land Transport Act 2014, The National Partnership Agreement, related Notes of Administration and the Guidelines.

DECLARATION	
I declare all information provided is true and accurate; and I declare that I am	
Name	Neil Ogilvie
Position (i.e. Authorised Person with delegation to submit proposals)	Manager Technical Services
Date	28/03/2018

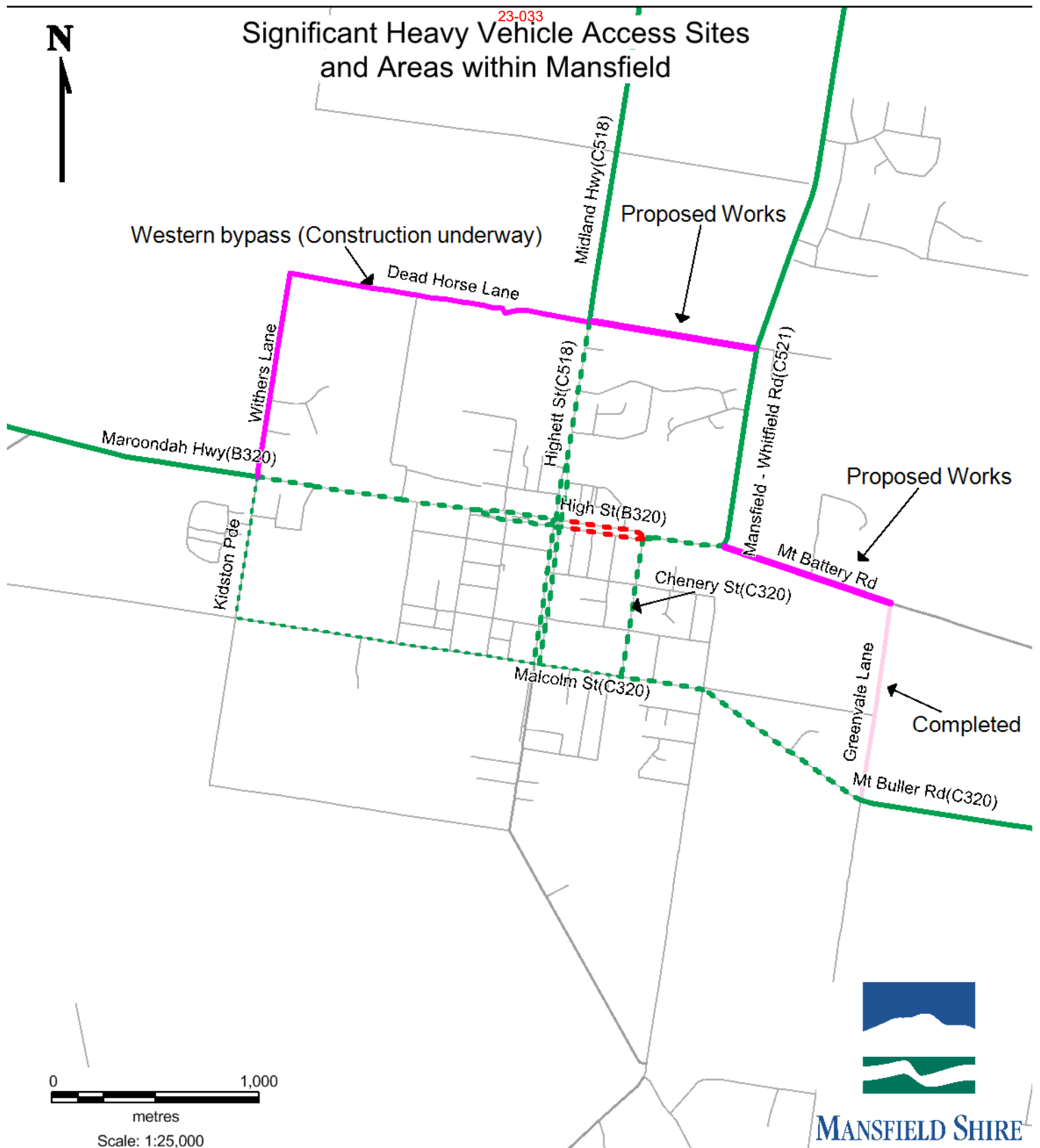
Attachment 1

Map of proposed and existing heavy vehicle routes in Mansfield



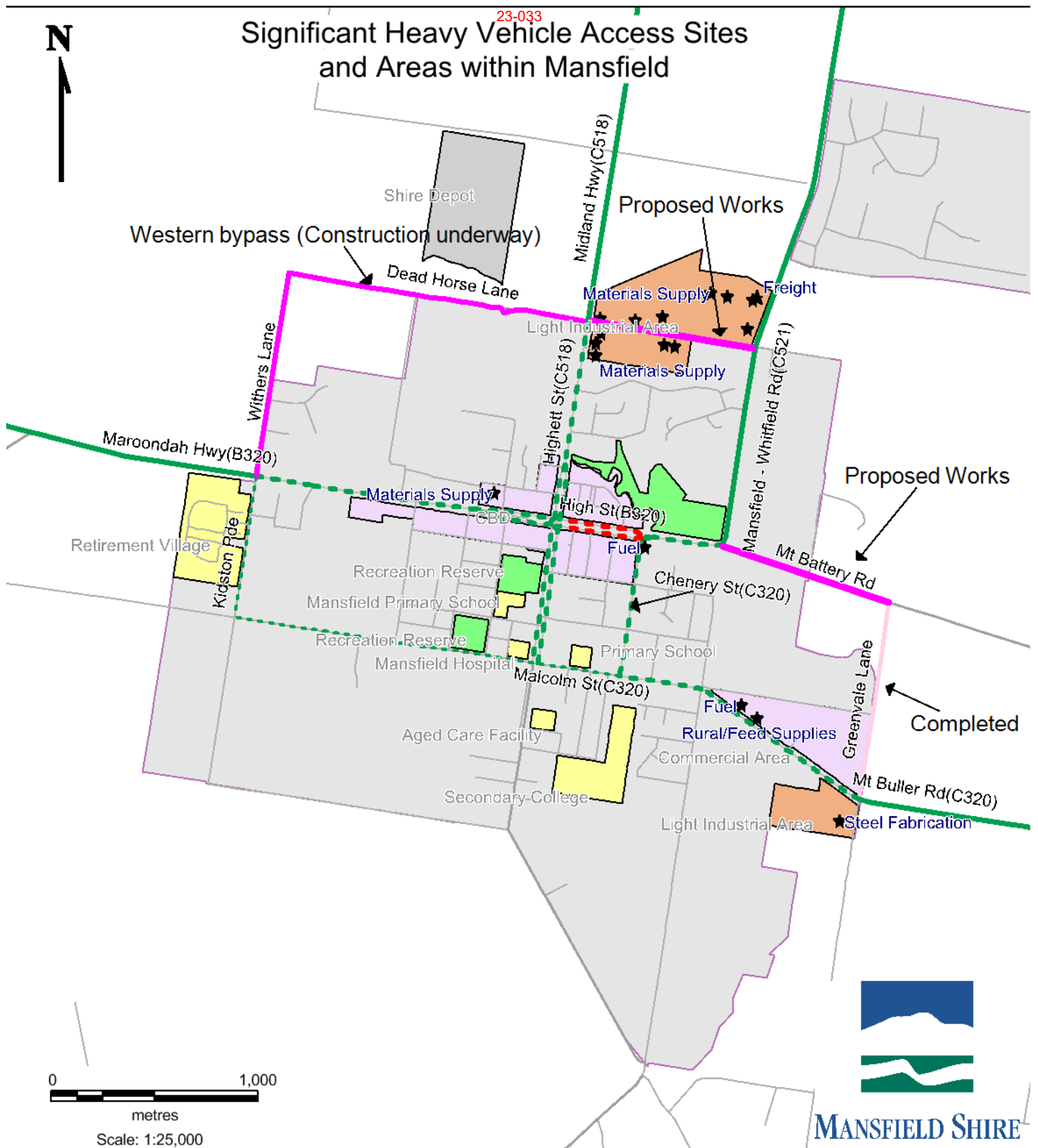
- Key Freight Route
- Secondary Freight Route
- Connection
- Proposed Bypass
- Major Roads
- Areas outside Mansfield LGA

Significant Heavy Vehicle Access Sites and Areas within Mansfield



Attachment 2

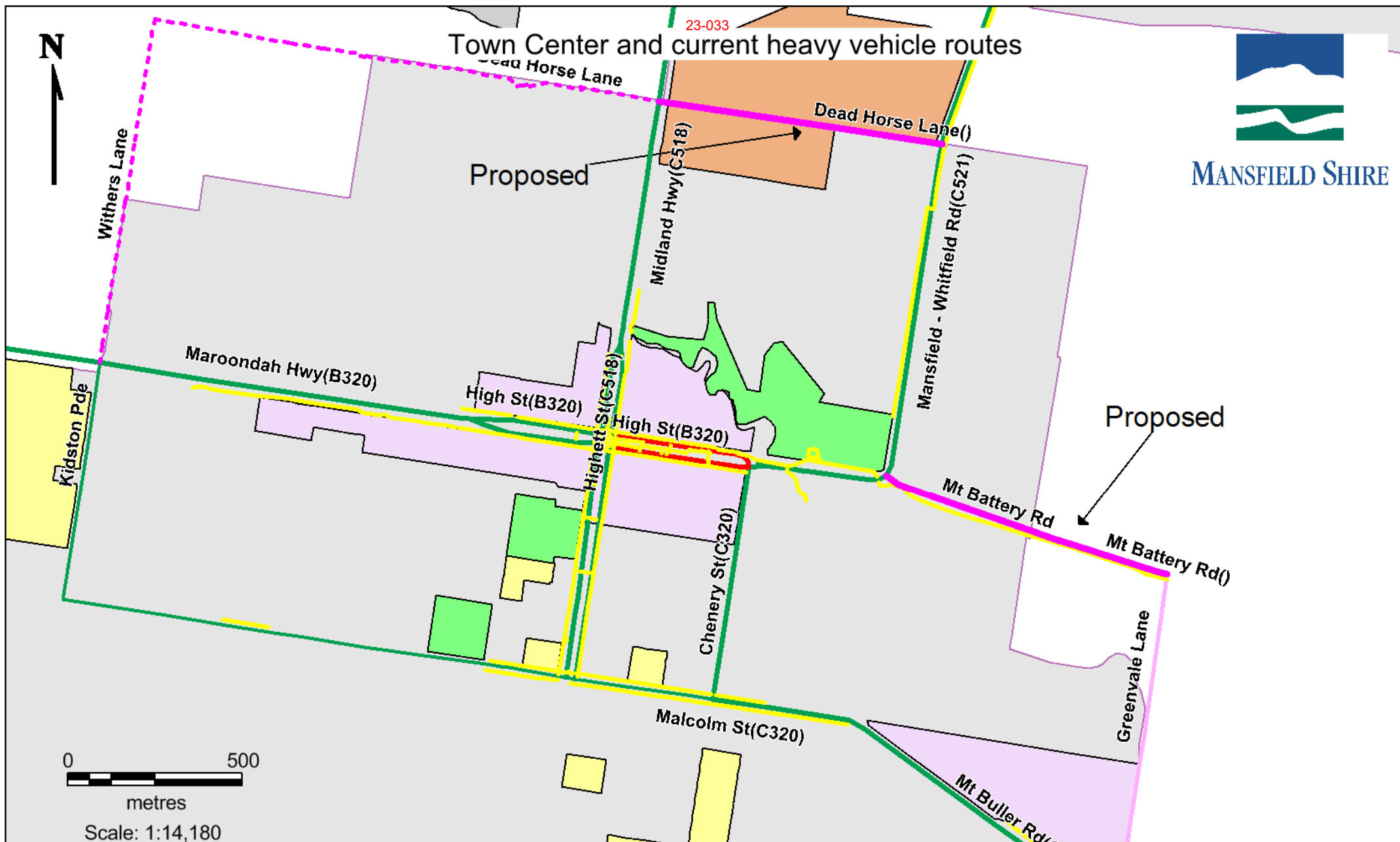
Map of significant locations in Mansfield with respect to heavy vehicle traffic





Town Center and current heavy vehicle routes

23-033



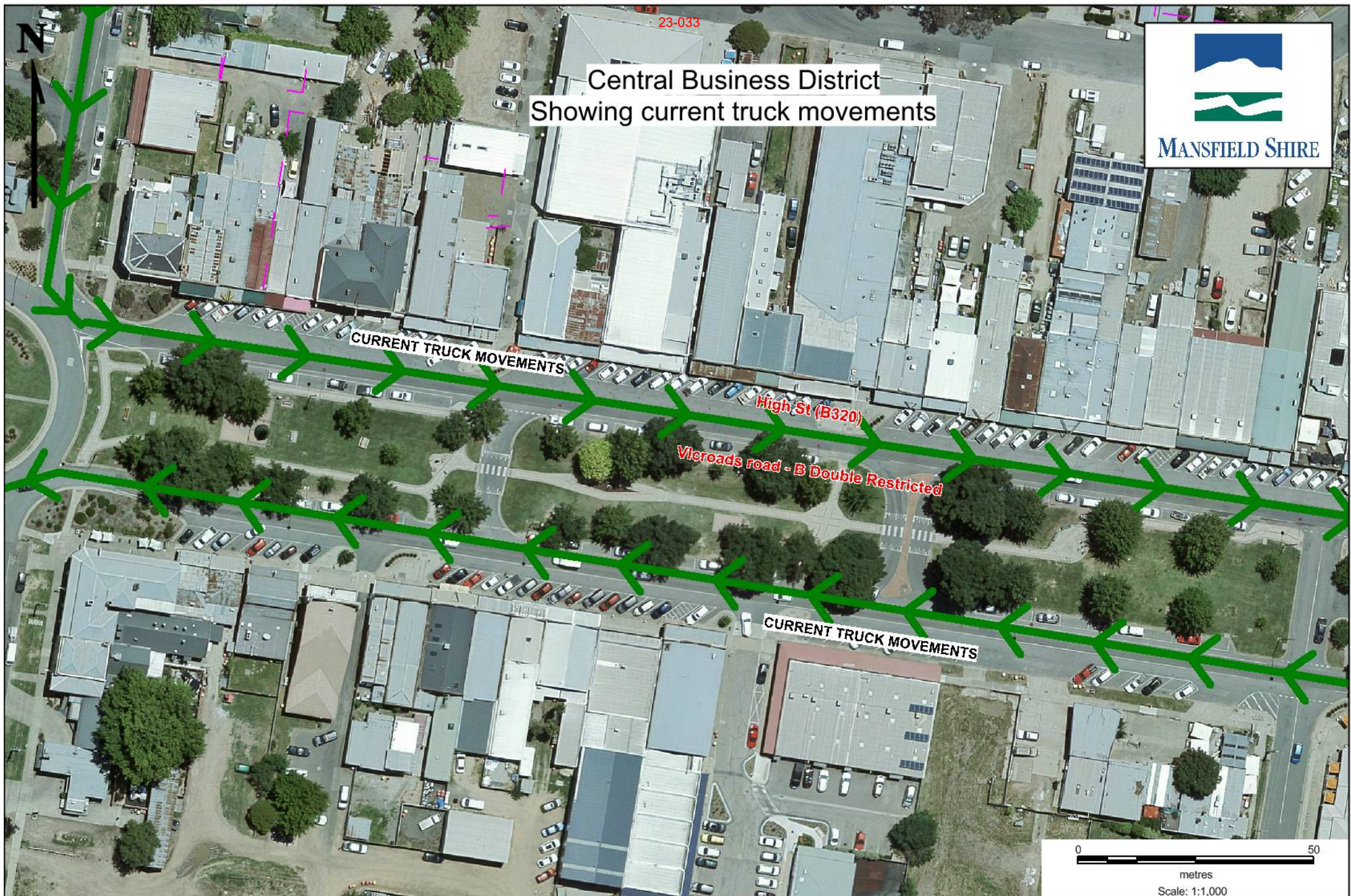
Heavy Vehicle Routes

- Current
 - VicRoads road
 - VicRoads road - B Double Restricted
 - Council road
- Under Construction
- Completed

Footpaths

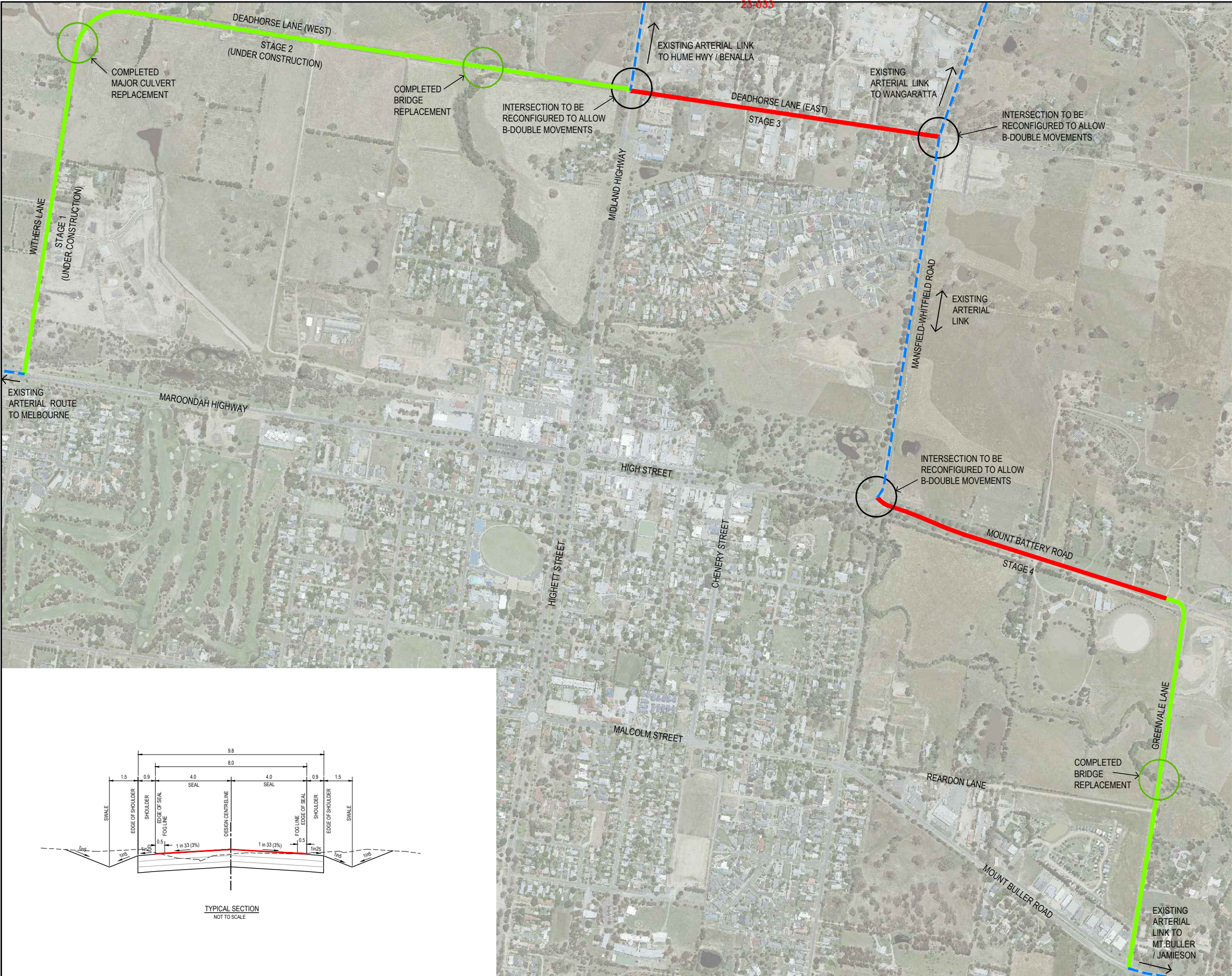
Areas within Mansfield

- CBD/Commercial
- Light Industrial
- School/Hospital/Aged Care
- Residential
- Recreation reserve

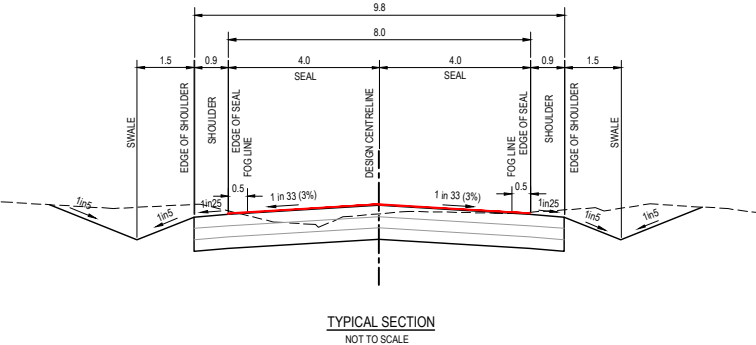


Attachment 3

Bypass design plans – Overview



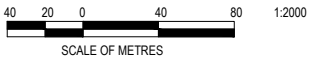
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- RECONSTRUCT AND WIDEN PAVEMENT TO 10 METRES
- HIGH STRENGTH SEAL
- REALIGN DRAINAGE
- RECONFIGURE INTERSECTIONS TO ALLOW FOR B-DOUBLE MOVEMENTS

LEGEND

- STAGE 2 HEAVY VEHICLE BYPASS WORKS (UNDER CONSTRUCTION)
- STAGE 3 HEAVY VEHICLE BYPASS WORKS (PROPOSED)
- - - EXISTING ARTERIAL ROUTES



01	27.03.18	ORIGINAL ISSUE
VER	DATE	DETAILS



ENGINEERING & WORKS
DEPARTMENT
MANSFIELD SHIRE COUNCIL
MANSFIELD, Vic 3722 LOCKED BAG
1000

MANSFIELD SHIRE
66 of 161

CAD FILE:
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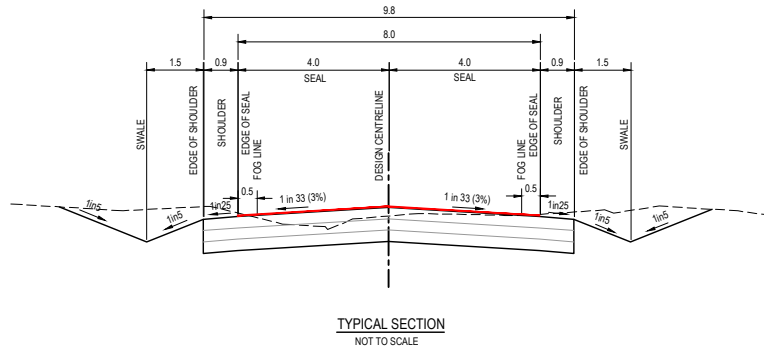
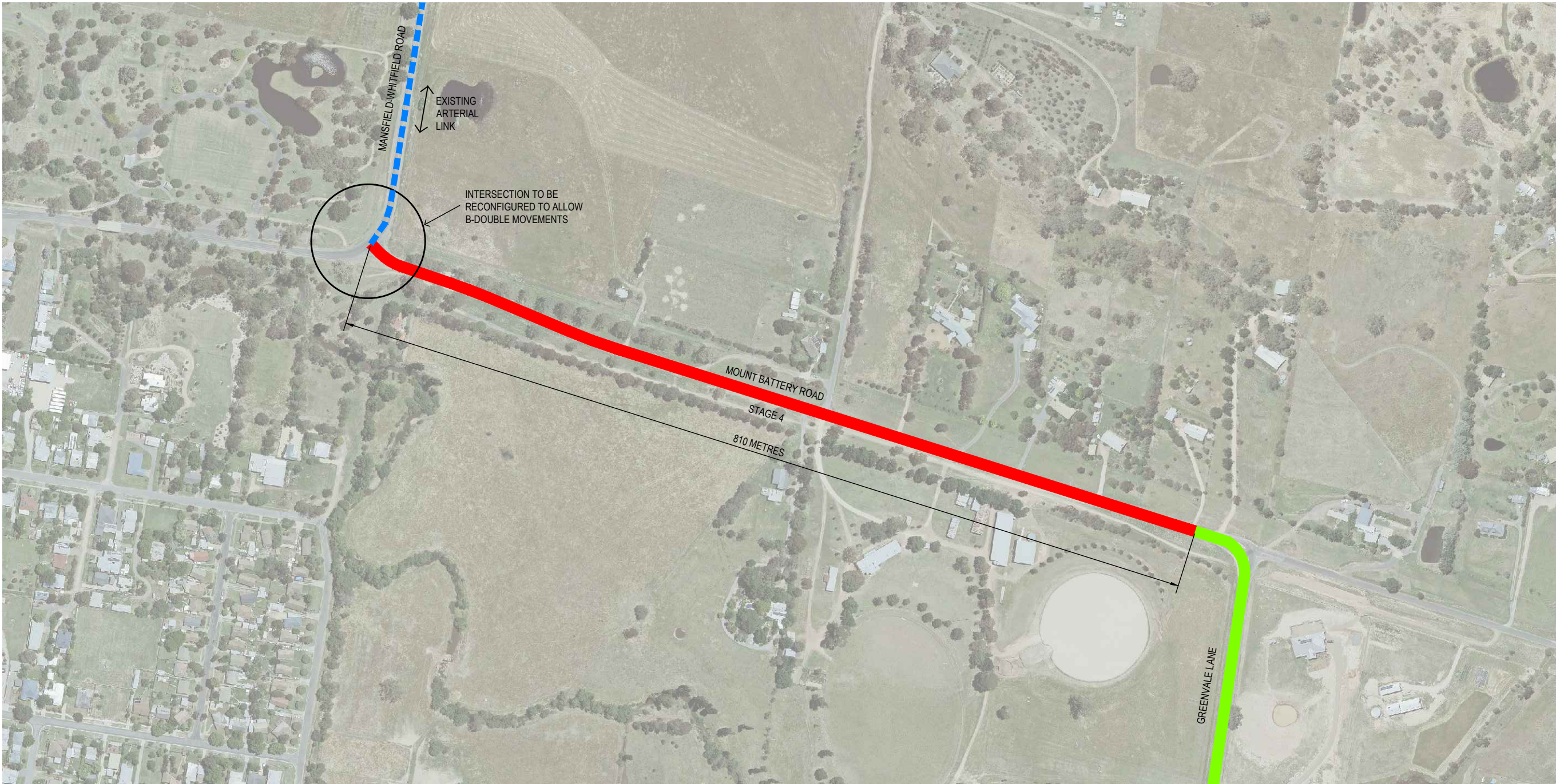
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G.DOWNS

CHECKED:
P.VALENTE

SCALE:
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HEAVY VEHICLE BYPASS ROUTES
CURRENT AND PROPOSED ROUTES
MANSFIELD SHIRE COUNCIL
DETAIL PLAN 1

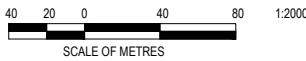
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VERSION:	01
SHEET No:	2 OF 3



- RECONSTRUCT AND WIDEN PAVEMENT TO 10 METRES
- HIGH STRENGTH SEAL
- REALIGN DRAINAGE
- RECONFIGURE INTERSECTIONS TO ALLOW FOR B-DOUBLE MOVEMENTS

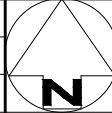
LEGEND

- COMPLETED HEAVY VEHICLE BYPASS WORKS
- STAGE 4 HEAVY VEHICLE BYPASS WORKS (PROPOSED)
- EXISTING ARTERIAL ROUTES



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VER	DATE	DETAILS


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MANSFIELD SHIRE COUNCIL
MANSFIELD, VIC 3722 LOCKED BAG
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MANSFIELD SHIRE
67 of 161

CAD FILE:
HV ROUTES OVERALL.DWG
DATE:
27/03/2018
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G.DOWNS
CHECKED:
P.VALENTE
SCALE:
1:2000


HEAVY VEHICLE BYPASS ROUTES
CURRENT AND PROPOSED ROUTES
MANSFIELD SHIRE COUNCIL
DETAIL PLAN 2

ORIGINAL SHEET SIZE:	A1
VERSION:	01
SHEET No:	3 OF 3

Attachment 4

Traffic Time modelling for bypass routes

	Travel Time (s)	Practical Speed	Number	Length (m)	Journey Time (s)
Bypass - Maroondah to Midland via Withers Lane - Dead Horse Lane					
Corner	5		2		10
Stop/give way points	15		1		15
Roundabout	25		0		
Road lengths		50		0	0
Road lengths		80		2500	113
Net Travel Time					138
Net Distance				2500	

Current - Maroondah to Midland Via CBD Roundabout					
Corner	5				
Stop/give way points	15		0		0
Roundabout	25		1		25
Road lengths		40		1500	135
Road lengths		70		1000	51
Net Travel Time					211
Net Distance				2500	

*Travel time improvement***74***Distance Change***0**

Full Bypass - Withers Lane - Deadhorse Lane - Whitfield Road - Mr Battery Rd - Greenvale Lane					
Corners	5		6		30
Stop/give way points	15		1		15
Roundabout	25		0		
Road lengths		50		850	61
Road lengths		80		5150	232
Net Travel Time					338
Net Distance				6000	

Current Route - Maroondah Hwy - High St - Chenery St - Malcolm St - Mt Buller Rd					
Corner	5		1		
Stop/give way points	15		1		15
Roundabouts	25		2		50
Road lengths		40		2420	218
Road lengths		70		1480	76
Net Travel Time					359
Net Distance				3900	

*Travel Time Improvement***21***Distance Change***2100**

	Travel Time (s)	Practical Speed	Number	Length (m)	Journey Time (s)
Western Bypass - Midland Hwy - Deadhorse Lane - Whitfield Road - Mr Battery Rd - Greenvale Lane					
Corners	5		5		25
Stop/give way points	25		1		25
Roundabout	0		0		
Road lengths		50		850	61
Road lengths		80		2800	126
Net Travel Time					237
Net Distance				3650	

Current Route - Midland Hwy - Highett St - Malcolm St - Mt Buller Rd					
Corner	5		0		
Stop/give way points	25		0		0
Roundabouts	0		1		0
Road lengths		40		2420	218
Road lengths		70		1080	56
Net Travel Time					273
Net Distance				3500	

Travel Time Improvement
Distance Change

36

150

Attachment 5

Mansfield Heavy Vehicle Bypass Study



Mansfield Heavy Vehicle Alternative Routes Planning Study Final Report November 2010

Client:

VicRoads

This report has been prepared from the offices of CPG Traffic & Transport at:

46 Wadhurst Drive, Boronia 3155, T 8805 3400

Acknowledgements and Recognition

- Traffic data from classification counts conducted by VicRoads in September 2009 on the four arterial road entries to Mansfield Township;
- Results of VicRoads analysis of the above count data to determine origin and destination patterns for commercial vehicles;
- Transcripts of discussions by VicRoads staff with major transport operators in the Mansfield area;
- Crash data from the VicRoads database covering the most recent 5 year period (2005 – 2009);
- Map of currently approved B-Double routes around and through Mansfield;
- Results of supplementary traffic counts conducted by Mansfield Shire;
- Aerial photography provided by Mansfield Shire for site-specific treatment sketches.

Issue Date	Revision No	Author	Checked	Approved
29/06/2010	Preliminary Draft Report #1	s47F - personal privacy		
22/07/2010	Draft Report #2			
27/08/2010	Draft Report #3			
23/09/2010	Draft Report #4			
02/11/2010	Final Report			

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APPENDIX C	CRASH DATA
APPENDIX D	TRAFFIC COUNT DATA

1. INTRODUCTION

1.1 Executive Summary

The study has identified routes that can be developed over time to provide ultimate external bypass alternatives for heavy vehicle travel around Mansfield's residential and commercial areas. These routes represent the existing declared arterial road network, but connected remotely by Dead Horse Lane West and Withers Lane to the northwest and Mount Battery Road and Greenvale Lane to the northeast. The report has nominated improvement works required for these routes to become fully operational and provides order-of-cost estimates for such works.

However, this investigation has concluded that, due to the current low levels of demand and high infrastructure costs, these remote bypass options are unlikely to be developed in the short to medium term. It is suggested that planning for these routes be confined to the acquisition of land at critical corners and the ultimate provision for widening of the Greenvale Lane reservation. The exception to this approach is the Kidston Parade/Malcolm Street route that is the southern bypass link common to short and long term strategies. It is recommended that upgrading projects along this route proceed with the highest priority in the suggested works program.

The report supports current discussions by Mansfield Shire with VicRoads to formalise a more rational network of heavy vehicle routes through the fringes of the town using Kidston Parade and Malcolm Street for the east-west bypass of the CBD whilst using High Street and Highett Street to execute the west-north traverse. However, the report suggests that Chenery Street is not suitable for use by B-Doubles and Higher Mass Limited vehicles. It recommends an extension of the Midland Highway route along Highett Street South as the most suitable interim link between the northern town entries and the southern east-west bypass route for heavy vehicles.

The report itemises a series of prioritised improvement projects on the arterial and local road systems for consideration by Council and VicRoads as treatments to cater for the safe and efficient passage of heavy vehicles (including B-Doubles and Higher Mass Limited trucks) through Mansfield to avoid the central business and retail area.

These comprise the following progressive route improvement works by the respective authorities:

Council Works:

1. Intersection works at Malcolm Street and Kidston Parade to ensure long vehicles can safely perform turns at this location;
2. Seal widening of Kidston Parade and widening and regulation of Malcolm Street;
3. Upgrading of the school crossings in Highett Street;
4. Seal widening and drainage improvements along Dead Horse Lane East;
5. Construction of a shared path along Malcolm Street and footpaths along Kidston Parade;
6. Intersection works in Malcolm Street at Highett Street.

VicRoads Works:

1. Provision of turn lanes in Maroondah Highway at Kidston Parade intersection;
2. Seal widening (shoulder sealing) along Maroondah Highway and Midland Highway;
3. Intersection improvements in Midland Highway at Dead Horse Lane;
4. Intersection improvements at Dead Horse Lane and Mansfield-Whitfield Road.



Figure 1.1: Locality Plan of Mansfield
(Plan courtesy of Mansfield Shire Council)

1.2 Background

Mansfield Shire Council and VicRoads have identified roads that could be designated as preferred routes for heavy vehicles to use to avoid travel through the central business district (CBD) of Mansfield Township. CPG has been engaged to investigate the routes in greater detail, to identify planning issues and prepare conceptual designs.

Specifically, the consultancy task involves the following aspects:

- Review existing conditions along the potential routes including traffic data;
- Review results of VicRoads traffic data analysis and consultation with key transport operators;
- Review and develop proposals for heavy vehicle alternative routes, bearing in mind industry needs, community impacts of development of proposed routes, and likely funding constraints;
- Determine the capacity of existing infrastructure along proposed routes and identify any changes, improvements, upgrades necessary, including mitigation measures;
- Propose any short-term measures considered appropriate to address heavy vehicle issues in Mansfield;
- Prepare conceptual designs and cost estimates for key infrastructure upgrades required to implement the alternative routes, including recommended mitigation measures.

A locality plan of Mansfield is provided in Figure 1.1 for reference to road and street names used throughout this report.

1.3 Technical References

The technical references used in the preparation of this assessment are:

- The Austroads *Road Design Guide – Part 3, Geometric Design*;
- The Austroads *Road Design Guide – Part 4A, Unsignalised and Signalised Intersections*;
- *North East Infrastructure Design Manual* for Urban Road/Street Characteristics;
- Mansfield Shire Planning Scheme.

2. EXISTING CONDITIONS

2.1 Context

Mansfield continues to grow and develop as a tourist centre, with more than 60% of its income derived from tourism. There are distinct peaks in tourist activity that mirror the seasonal conditions:

- a) Winter - snow sports at Mount Buller and Mount Stirling;
- b) Summer - water activities on Lake Eildon and bush walking and touring in the high country.

These seasonal peaks generate high visitor traffic volumes and, in particular, tourist buses comprise a significant proportion of the winter ski resort traffic. Logging generates significant heavy truck traffic activity, mainly in summer and depending upon logging programs.

The Mansfield Township CBD is centred on the intersection of two major highways, C518 Midland Highway (Highett Street) from the north and B320 Maroondah Highway (High Street) from the west with its extensions to the east, namely the C320 Mount Buller Road and beyond the C521 Mansfield-Whitfield Road (see arterial route locality plan in Figure 2.1).

Whilst these are the most direct routes through the township, heavy vehicles using these “through routes” are considered to be incompatible with local activity in the shopping centre and tourist traffic through the town. As a result heavy vehicles mix with local traffic on confined traffic lanes with angle parking, pedestrians and vehicles towing boats, caravans, horse floats, etc. This is seen to present ongoing safety and amenity issues for this busy and often congested commercial/tourism precinct.

Although heavy vehicles can use the approved B-Double route for east-west movements to the south of the CBD, it is currently not attractive, being narrow, rough and requiring vehicles to negotiate sharp turns. There are no such approved routes for heavy vehicles to cross town from the north and the north east. As a result, the majority of heavy vehicles travel through the busiest part of town en-route to cross-town destinations.

It is expected that traffic safety and amenity will be improved once alternative routes are provided which result in express type heavy vehicle facilities for bypassing the CBD wherever possible.

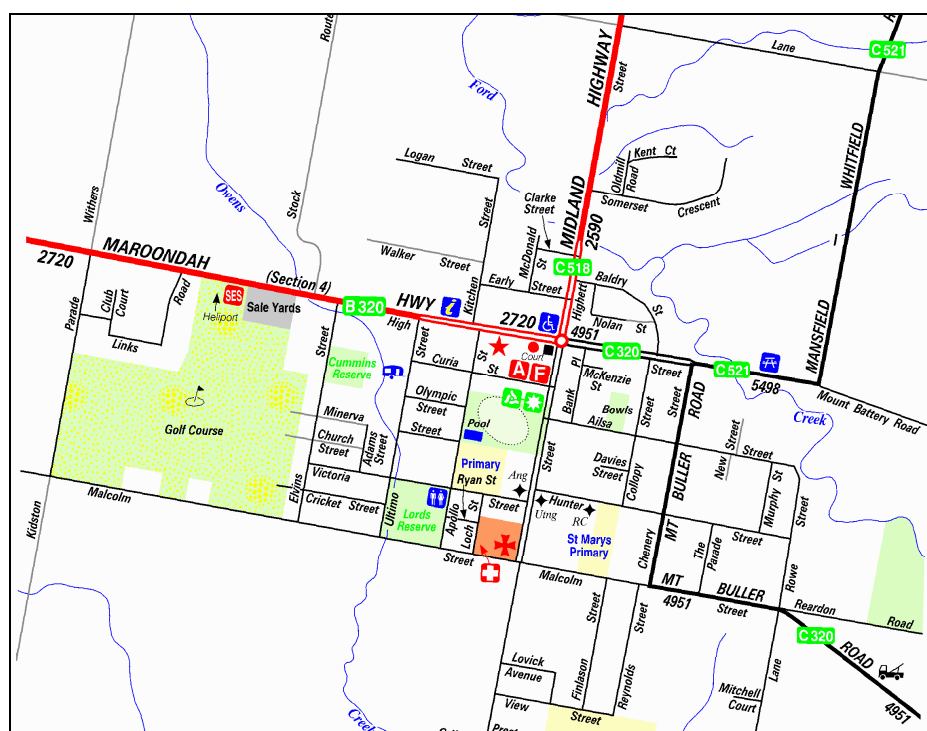


Figure 2.1: Arterial Route Locality Plan

(Plan provided courtesy of RACV/VicRoads Country Directory, Map 679)

2.2 Arterial Road Network

Maroondah Highway

The Maroondah Highway is part of the State's Arterial Road network (route B320) managed by VicRoads. It provides access to Mansfield and the high country from Melbourne. Known as High Street through Mansfield Township it is a two-lane two-way carriageway for the majority of the length, converting to a two lane dual carriageway with a wide median from Ultimo Street to Hightt Street.

Midland Highway

Midland Highway is also part of the State's Arterial Road network (route C518) managed by VicRoads. It provides access to Mansfield from Benalla and central Victoria. It is a two-lane two-way single carriageway that converts to a two lane dual carriageway with a wide median as it crosses Ford Creek and takes the local name of Hightt Street. The Midland Highway declaration terminates at High Street whilst the wide divided carriageway of Hightt Street continues as a local road south of High Street to Malcolm Street, where it converts to a two-lane two-way single carriageway.

Mount Buller Road

Mount Buller Road is also part of the State Arterial Road network (route C320). It connects Mansfield with the popular tourist destinations of Mount Buller and Lake Eildon at Goughs Bay, Howqua and Jamieson. As the High Street extension of Maroondah Highway, it continues the wide divided carriageway through the primary retail centre of Mansfield. At the eastern end of the shopping centre Mount Buller Road turns south into Chenery Street – a two-lane two-way single carriageway in a confined 20m road reservation – then follows Malcolm Street out the eastern end of town.

Mansfield-Whitfield Road

Mansfield-Whitfield Road is the fourth of the State Arterial Roads (route C521) radiating from Mansfield. It connects with Mount Buller Road at the High Street/Chenery Street intersection east of the shopping centre and provides the direct route from Mansfield to Wangaratta via Tolmie and Whitfield. It is a two-lane two-way single carriageway for its entire length.

All other roads under consideration in this study are local roads controlled by Mansfield Shire Council.

2.3 Traffic

VicRoads undertook traffic counts at the four "arterial entrances" to Mansfield in September 2009. A summary of results is shown in Figure 2.2. Count locations are illustrated in Figure A1 in Appendix A.

Road	Location	Total Volumes		CVs	
		7 day Ave	5 day Ave	5 day Ave	%
Maroondah Highway	W of Kidston Parade	3109vpd	2979vpd	370vpd	12.4%
Mount Buller Road	E of Greenvale Lane	3435vpd	3297vpd	310vpd	9.4%
Midland Highway	N of Dead Horse Lane	1235vpd	1294vpd	163vpd	12.6%
Mansfield-Whitfield Rd	N of Dead Horse Lane	1141vpd	1174vpd	102vpd	8.6%

Figure 2.2: Recent VicRoads Arterial Road Traffic Count Results

Traffic count data made available by Mansfield Shire Council and relevant to the road network included in this study are summarised in Figure 2.3.

Road	Location	Count Date	Volume	Peak Hour Volumes	
			7 day Ave	AM	PM
Chenery Street	S of Hunter Street	Sept 2006	3940vpd	363vph	421vph
Dead Horse Lane	W of Whitfield Road	Aug 2008	574vpd	620vph	81vph
Greenvale Lane	N of Mt Buller Road	Feb 2008	248vpd	20vph	28vph
Highett Street southbound	S of Hunter Street	Oct 2006	1858vpd	158vph	265vph
Highett Street northbound	S of Victoria Street	Oct 2006	2240vpd	238vph	279vph
Highett Street	N of Lovick Avenue	Oct 2006	1890vpd	266vph	268vph
Kidston Parade	S of Maroondah Hwy	Oct 2008	623vpd	53vph	63vph
Malcolm Street	W of Finlayson Street	Aug 2006	2706vpd	319vph	307vph
Malcolm Street	At Elvins Street	Aug 2006	988vpd	96vph	120vph
Maroondah Highway	300m from Kidston Parade	Oct 2008	3814vpd	244vph	291vph
Mount Buller Road	E of Crosby Lane	Oct 2008	4060vpd	445vph	380vph

Figure 2.3: Mansfield Shire Traffic Count Summary

2.4 Speed Environment

Eighty kilometre per hour signed speed limits are in place along:

- Maroondah Highway from west of Kidston Parade to Ultimo Street;
- Mount Buller Road from west of Greenvale Lane to the eastern town boundary;
- Kidston Parade from Maroondah Highway to Malcolm Street;
- Malcolm Street from Kidston Parade to Elvins Street;
- Midland Highway from north of Dead Horse Lane to Cambridge Drive;
- Whitfield Road from town boundary to north of Dead Horse Lane;
- Withers Lane north from Maroondah Highway (end of zone not signed).

All other roads within the township are either signed at or are subject to the default 50 km/h urban speed limit.

2.5 Existing Heavy Vehicle Routes

It is desirable for heavy vehicle bypass routes and gazetted B-Double routes to coincide. The existing gazetted B-Double and Higher Mass Limited vehicle routes for Mansfield are shown in Figure A1 in Appendix A.

These currently approved routes include Kidston Parade and Malcolm Street (although not approved for higher mass limits), Dead Horse Lane, the western section of High Street (west of the saleyards at Elvins Street), Whitfield Road to Chenery Street and Highett Street south from High Street to Malcolm Street.

However, Chenery Street, High Street east of Elvins Street and Highett Street/Midland Highway north from High Street to Dead Horse Lane are presently excluded from this network. This creates a hiatus that prevents legal travel by B-Doubles and discourages travel by other heavy vehicles between the north approaches and the east or west entries to the town.

Mansfield Shire Council is currently working with VicRoads to achieve agreement on a more rational network of approved B-Double and Higher Mass Limited roads for Mansfield Township that provides

for all remote origin/destination movements across the town. Outcomes of these discussions are still pending but are expected to result in the network described in Figure A2 in Appendix A. This network is intended to include:

- Dead Horse Lane as an east-west link between Midland Highway and Whitfield Road;
- Full length of the Malcolm St / Kidston Pde link to Maroondah Hwy for east-west movements;
- High St west of Highett St and Highett St north of High St for north to/from west movements;
- Chenery St and Whitfield Rd for north to/from east movements.

2.6 Crash History

Over the past five years the VicRoads database has recorded the following six casualty crashes along the network being considered for heavy vehicle use (see details listed in Appendix C):

- Two cross traffic crashes (DCA 110), one at Maroondah Highway/Kidston Parade intersection and one at Highett Street/Malcolm Street intersection;
- One off-path crash (DCA 171) along Malcolm Street between Ultimo Street and Apollo Street;
- One pedestrian crash (DCA 108) in Highett Street at Early Street;
- One right rear crash (DCA 132) in High Street between Collopy Street and Bank Place;
- One leaving parking crash (DCA 142) in High Street west of Highett Street.

No pattern of crashes is evident and it can be concluded that the heavy vehicle routes currently operate relatively safely with no identified deficiencies that require addressing urgently through works.

2.7 Industry Liaison

VicRoads undertook phone interviews with 10 industry representatives to ascertain the quantum of heavy vehicle traffic generated by these industries, the routes used to travel through or around the township, comments about these routes and any alternatives, and general comments on truck traffic through Mansfield. These discussions are summarised below.

2.7.1 Interviews

Mansfield Constructions (quarry operation to southeast of town)

- Uses semi trailers and truck and dog trailer combinations to carry road materials.
- Produces up to 150,000t/annum crushed rock that equates to 15,000 total vehicle movements across town.
- Current travel routes:
 - Avoids High Street
 - Uses Chenery St to access Whitfield Rd (and Midland Hwy)
 - Uses Malcolm St and Kidston Parade to cross town in east-west direction
- Desirable upgrades:
 - Greenvale La and Mt Battery Rd route (including new bridge over Ford Ck)
 - Intersection of Malcolm St and Highett St (roundabout suggested)
 - Intersection of Dead Horse Lane with Whitfield Rd

Shaw's (livestock transport located to SE of town)

- Uses semi trailers and B-Doubles.
- Current travel routes:

- Uses Malcolm St and Highett St to access Midland Hwy
- Uses Malcolm St and Chenery St to access Whitfield Rd
- Uses Malcolm St, Highett St and High St to cross town east to west
- Desirable upgrades:
 - Intersection of High St/Chenery St/Whitfield Rd (for truck turns)
 - Intersection of Dead Horse Lane with Midland Hwy (remove cross slope)
 - Roughness and unsealed shoulders along Malcolm St
 - Intersection of Malcolm St with Kidston Parade (widen for truck turns)
 - Intersection Kidston Parade and Maroondah Hwy (turn lanes in highway)

NF & CR Pigdon (earthmoving contractors with pit west of town)

- Uses truck and dog trailer combinations and float.
- Produces up to 37,500t/annum from gravel pit that equates to 1,900 return trips across town.
- Current travel routes:
 - Uses High St and Highett St for access to Midland Highway
 - Uses High St to access Whitfield Rd and Chenery St to access Mount Buller Rd
- Desirable upgrades:
 - Intersection of Malcolm St and Highton La (roundabout suggested)
 - Roughness and unsealed shoulders along Malcolm St
 - Intersection of Kidston Parade and Maroondah Hwy (turn lanes in highway)
 - Intersection Mount Buller Rd and Greenvale La (turn lanes in Mount Buller Rd)
 - Withers La and Lakins La upgraded for access between Maroondah Highway and Midland Highway

Mansfield Premix (plant in Dead Horse La)

- Uses truck and dog trailer combinations and agitator trucks.
- Processes up to 16,000t/annum that equates to 1,600 total movements across town.
- Current travel routes:
 - Uses Chenery St and Whitfield Rd to access quarry to southeast of town
 - Uses Highett St and High St to access Maroondah Hwy to west

Alpine Civil (earthmoving contractors in Dead Horse La)

- Uses two-axle trucks, truck and dog trailer combinations and float.
- Average one return trip per day to/from quarry for garden supplies. Earthmoving requirements vary – can reach 10 trips per day
- Current travel routes:
 - Uses Highett St and Monkey Gully Rd to access quarry to SE
 - Uses Whitfield Rd and Chenery St for access to Mount Buller Rd
 - Would use Mt Battery Rd and Greenvale La if upgraded
 - Uses Highett St and High St to access Maroondah Hwy to W
 - Would use Dead Horse Lane & Withers Lane if upgraded
- Route disadvantages:
 - Malcolm St goes past hospital and schools (2 school crossings)
 - Kidston Parade passes retirement village with elderly crossing to golf course

Mt Buller Freight (depot in Dead Horse La)

- Uses two semi trailers and two B-Doubles
- One return trip per day for each vehicle – 90% to/from W (Melbourne).
- Current travel routes:
 - Uses Highett St and High St to access Maroondah Hwy to W
 - Would use Dead Horse Lane and Withers Lane if ford and bend were upgraded
- Desirable upgrades:
 - Intersection of High St and Chenery St (unsuitable for B-Doubles)

FoxAg (fertilizer distributor from Merton)

- Uses spreader trucks (bulk deliveries by contract)
- Current travel routes:
 - Uses Malcolm St and Kidston Parade to cross town in east-west direction
 - Uses High St and Highett St for access to midland Highway and Dead Horse La to access Mansfield-Whitfield Road

Mansfield-Mt Buller Bus Lines (charter trips Melbourne-Mount Buller)

- Familiar with cross town bus traffic, particularly during snow season.
- Total of 2,000 buses through gates at Mount Buller (data ex Alpine Resort Management)
 - 1/3rd 29 seater (or smaller) buses, 2/3rd 45-48 seater buses
 - Peak gate numbers = 89 buses on midseason Saturday
- Current travel routes:
 - 70% of Melbourne-Mount Buller traffic uses Malcolm St and Kidston Parade
 - 30% along High St (access ski hire outlets) and Chenery St
- Desirable upgrades:
 - Intersection of Malcolm St and Highett St (roundabout suggested)

VicForests (manages hardwood extraction from Mount Buller/Mt Stirling area)

- Contractors use semi trailer and B-Double timber jinkers
- Cartage depends on maturity of trees and weather conditions
 - 2007-08 season carted 30,000 - 45,000t = 1,000 – 1,500 total movements
- Current travel routes:
 - Use Malcolm St and Kidston Parade for east-west movements
 - Use Malcolm St and Highett St for movements east-north
 - Use Chenery St and Whitfield Rd from the east to access a storage dump in Dead Horse Lane
- Desirable upgrades:
 - Intersection of Malcolm St and Kidston Parade

Victorian Farmers Federation (on behalf of primary producers in area)

- Current travel routes:
 - Use Malcolm St and Highett St to access Midland Hwy
 - Use Malcolm St and Kidston Parade to cross town in east-west direction
- Desirable upgrades:

- Greenvale La and Mt Battery Rd route (including new bridge over Ford Ck)
- Intersection of Malcolm St and Chenery St
- Roughness and unsealed shoulders along Malcolm St

2.7.2 Summary of Feedback

The following common themes arose out of the interviews:

- Current travel routes:
 - Highett St and High St used between Midland Hwy and Maroondah Hwy
 - Malcolm St and Kidston Parade used to cross town in east-west direction
 - Chenery St used for access between Mount Buller Road and Whitfield Road whilst Malcolm St and Highett St are used between Mount Buller Road and Midland Hwy

These routes are reflected in the proposed B-Double network being negotiated by Council with VicRoads

- Improvement projects identified by multiple respondents:
 - Rectify roughness and unsealed shoulders along Malcolm St
 - Intersection of Malcolm St and Kidston Parade (widening for truck turns)
 - Intersection of Malcolm St and Highett St (roundabout suggested)
 - Improve intersection High St, Whitfield Rd and Chenery St (unsuitable for B-Doubles)
 - Intersection Kidston Parade and Maroondah Hwy (add turn lanes in highway)
 - Intersection Mount Buller Rd and Crosbys La/Greenvale La (add turn lanes)
- Other identified improvement projects include:
 - Intersection of Dead Horse Lane with Midland Hwy (remove cross slope)
 - Intersection of Dead Horse Lane with Whitfield Rd (no specific issues noted)
 - Intersection Malcolm St and Highton La (roundabout)
 - Intersection of Malcolm St and Chenery St (no specific issues identified)
- Desirable new routes:
 - Greenvale La and Mt Battery Rd route (including new bridge over Ford Ck)
 - Dead Horse Lane and Withers Lane route (including new bridge over Ford Ck)

3. TRAFFIC CONSIDERATIONS

3.1 Heavy Vehicle Distribution

3.1.1 B-Doubles

VicRoads undertook 5 day classification counts at the various arterial road entries to Mansfield in September 2009. An extract of the data yielded the total B-Double movement volumes summarised in Figure 3.1.1.

Location	Direction	Mon 7/09/2009	Tues 8/09/2009	Wed 9/09/2009	Thur 10/09/2009	Fri 11/09/2009
Maroondah Hwy	EB (in)	5	4	5	6	6
	WB (out)	4	5	4	4	5
Mt Buller Rd	WB (in)	2	2	3	4	1
	EB (out)	2	2	3	3	0
Midland Hwy	SB (in)	3	4	2	5	2
	NB (out)	2	3	4	8	3
Whitfield Rd	SB (in)	0	1	0	0	0
	NB (out)	0	1	0	0	0
Σ in		10	11	10	15	9
Σ out		8	11	11	15	8
Total		18	22	21	30	17

Figure 3.1.1: B-Double Movements

VicRoads performed an analysis of this data to estimate the routes of B-Double vehicle through-movements across the town on the three mid-week days. Despite gaining correlation with only a small number of axle configurations, the prevailing patterns, in order of frequency of use, appear to be:

1. Maroondah Highway to/from Mount Buller Road (7 matching movements)
2. Maroondah Highway to/from Midland Highway (5 matching movements)
3. Midland Hwy to/from Mount Buller Road (3 matching movements)
4. All movements to/from Whitfield Road (negligible demand)

3.1.2 Semi trailers

A further extract of the above September count data yielded the semi trailer movements summarised in Figure 3.1.2.

Location	Direction	Mon 7/09/2009	Tues 8/09/2009	Wed 9/09/2009	Thur 10/09/2009	Fri 11/09/2009	Sat 12/09/2009	Sun 13/09/2009
Maroondah Hwy	EB (in)	19	19	19	20	28	15	5
	WB (out)	21	23	21	19	30	16	9
Mt Buller Rd	WB (in)	14	11	7	9	15	7	6
	EB (out)	13	12	8	12	16	6	6
Midland Hwy	SB (in)	7	14	14	13	13	3	2
	NB (out)	10	12	9	18	11	4	3
Whitfield Rd	SB (in)	2	2	2	8	3	3	1
	NB (out)	1	1	6	5	2	2	0
Σ in		42	46	42	50	59	28	14
Σ out		45	48	44	54	59	28	18
Total		87	94	86	104	118	56	32

Figure 3.1.2: Semi Trailer Movements

A similar analysis was undertaken to establish semi trailer movements through Mansfield on the three mid-week days. Although total vehicle numbers were higher, axle patterns and vehicle timing correlations again produced a low number of matching movements. Similar patterns to the B-Double movements were evident with the movements in order of frequency being:

1. Maroondah Highway to/from Midland Highway (22 matching movements)
2. Maroondah Highway to/from Mount Buller Road (17 matching movements)
3. Midland Highway to/from Mount Buller Road (9 matching movements)
4. All movements to/from Whitfield Road (fewer than 3 movements for each combination)

It should be remembered that this analysis is based on a cordon of count stations surrounding the town (as shown in Figure A1 in Appendix A) and does not take into account cross-town trips generated internally, for example by the businesses located along Dead Horse Lane or by the saleyards in High Street.

3.2 Design Principles

The aim of the study is to identify roads that could be designated as preferred alternative routes for heavy vehicles to use to avoid travelling through the central business area of Mansfield, which is primarily centred on that section of High Street between Highett Street and Chenery Street but also extends to a lesser degree west along High Street to Ultimo Street and north along Highett Street from High Street to Ford Creek. Recent retail development has also extended along Chenery Street.

The identified routes are intended to be progressively upgraded to cater for convenient travel by all standard design vehicles, particularly buses, semi trailers and B-Doubles. As such the basic design principles should include the minimum criteria outlined in the Austroads *Guide to Road Design – Part 3: Geometric Design* as follows and illustrated in Figure 3.2 below:

- Carriageway width of 7.0m (2 x 3.5m traffic lanes) desirably flanked by 1.5m sealed shoulders
- Turn radii of 15m to accommodate the Austroads template for 25m B-Double turn movements
- Intersection treatments (e.g. roundabouts) that allow for the passage of 25m B-Doubles
- Pavement and structure strengths that cater for tri-axle groups with gross mass of 22.5t
- Desirable minimum speed limit of 60 km/h in urban areas
- Clear zones of 3.0m from traffic lanes in urban areas (in 60 km/h or lower speed limits)

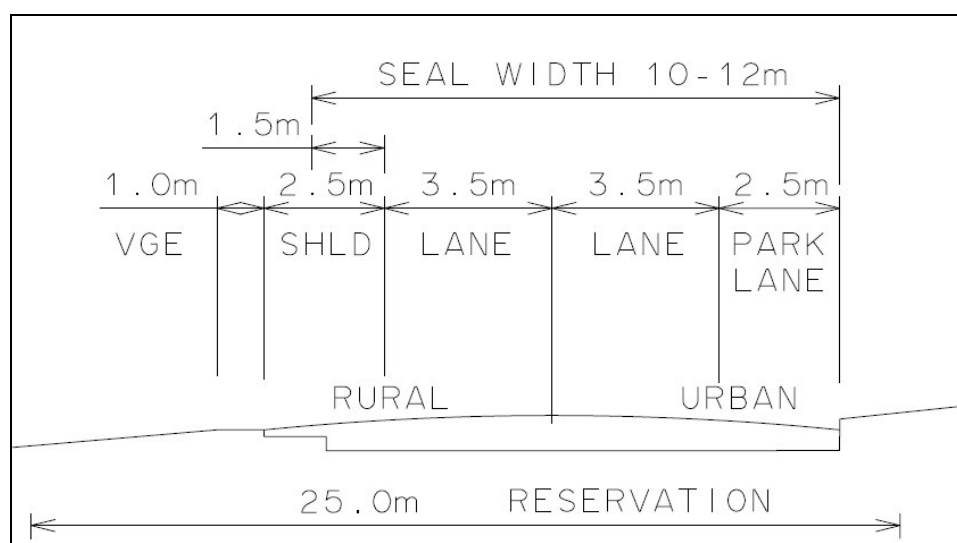


Figure 3.2: Typical Design Cross Sections for HV Route

These design parameters are consistent with the road characteristics nominated in Mansfield Shire's Infrastructure Design Manual Version 2.5 (Issued 2 November 2009) for:

- Urban Industrial Streets (refer Table 2 of the Manual) that specifies a 12.5m seal between barrier kerbs, including parking lanes on both sides, in a 25m reservation, or
- Rural Living Collector Roads (refer Table 6 of the Manual) that specifies a minimum seal width of 6.2m (or 7.0m for Group B Councils as defined in the Manual) within a 25m reservation and maximum traffic volumes of 6,000vpd.

4. ULTIMATE ROUTE OPTIONS

The project brief described a series of preferred alternative heavy vehicle route options that had been identified by Mansfield Shire and VicRoads. The three external routes are described in Sections 4.1 to 4.3 and illustrated in Figure 4.1 below. Broad constraints and upgrade requirements are discussed under each option.

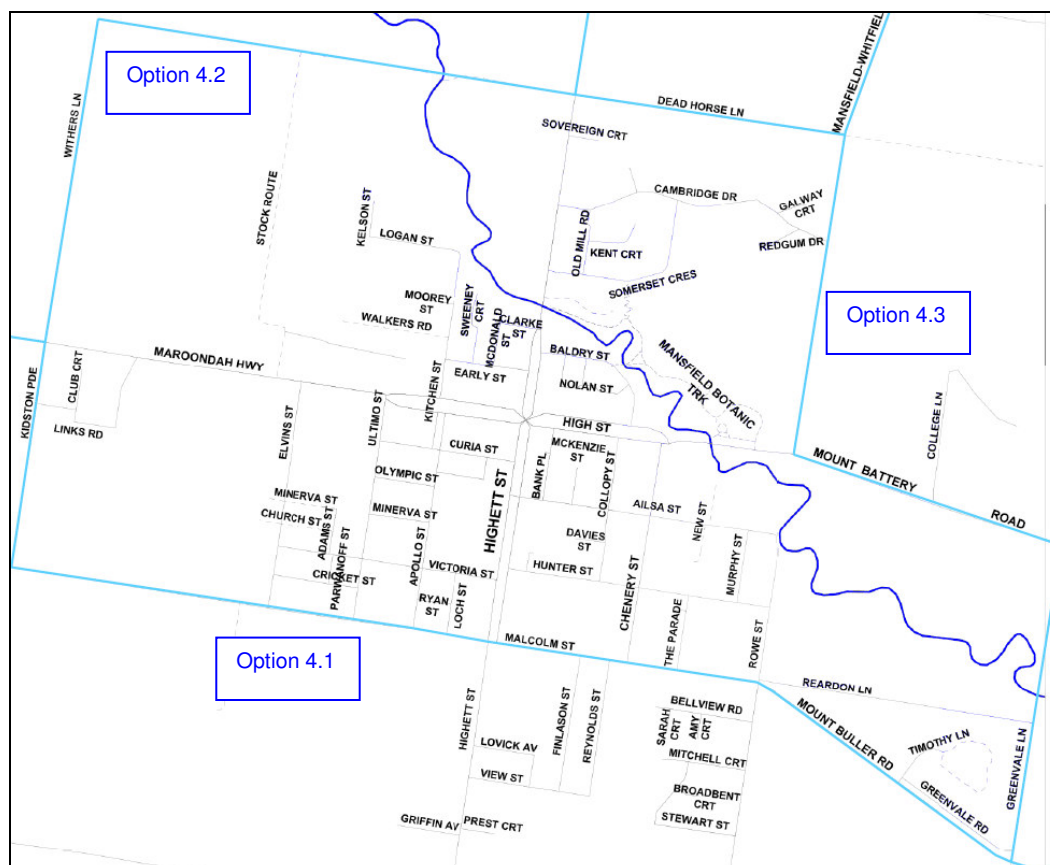


Figure 4.1: Ultimate Heavy Vehicle Route Options

4.1 Malcolm Street and Kidston Parade

Malcolm Street and Kidston Parade, between Maroondah Highway and Mount Buller Road, form the current frequently used east-west route that bypasses the CBD, particularly for winter traffic generated by the Mount Buller/Mount Stirling snow fields and for log and gravel cartage traffic.

It is currently a designated B-Double route (is the most frequently used bypass route in the VicRoads analysis – refer Section 3.1) and forms part of the proposed heavy vehicle cross-town link network. There are presently no alternatives to this route for an east-west bypass of the shopping centre.

Land-use issues potentially affecting the use of this route are:

- Hospital located at the NW corner of Malcolm Street and Highett Street intersection;
- St Mary's Primary School (with school crossing) located on the route opposite Finlason Street;
- The flagged school crossing in front of St Mary's Primary School also serves the pedestrians walking to Mansfield Secondary College at the south end of Finlason Street;
- Retirement village being developed along the west side of Kidston Parade;
- Alzburg Resort located on NE corner of Malcolm Street and Highett Street intersection.

Although currently functional for most vehicle movements, sections of the route do not comply with desirable design criteria for width and vehicle turns. Industry feedback has also highlighted the following deficiencies that would need to be addressed along the route:

- Installation of separate turn lanes (Type CHR and AUL treatments) in Maroondah Highway at Kidston Parade;
- Widening of the Kidston Parade/Malcolm Street intersection to facilitate turns. This work would require relocation of a HV power pole and may require acquisition of a splay from the golf club property on the NE corner of the intersection;
- Widening of the narrow seal in Kidston Parade from Maroondah Highway to Malcolm Street;
- Widening of the narrow seal in Malcolm Street from Kidston Parade to Highett Street and pavement regulation to reduce the current roughness for this length;
- Upgrading of the Malcolm Street/Highett Street intersection (several respondents suggested installation of a roundabout). This treatment is also important as a traffic calming measure in close proximity to the hospital (NW corner) and Alzburg Resort (NE corner).

4.2 Dead Horse Lane West and Withers Lane

These two low-standard gravel roads offer an opportunity for a future bypass of Mansfield for west to/from north/northeast trips between Maroondah Highway and Midland Highway or Whitfield Road. Although the section of Dead Horse Lane west of Midland Highway is currently gazetted for use by B-Doubles, the route is not suitable for use by these vehicles, containing a low level ford and several right angle bends that cannot accommodate long vehicles to the west of the highway.

Upgrading works will need to include:

- Construction of a bridge over Ford Creek;
- Widening and strengthening of the 3.9m wide seal along Dead Horse Lane for the 400m from Midland Highway to Ford Creek;
- Construction and sealing of the remaining 2km of the route;
- Improvement of the junction of Dead Horse Lane and Withers Lane to facilitate turns by long vehicles. This will require the acquisition of a splay from the SE corner property. This acquisition could be initiated at an earlier date by Council as part of an ultimate upgrading strategy but will require a decision on design speed to establish the scope of acquisition;
- Provision of turn lanes in the respective highways at both ends of the route – Type CHR in Midland Highway and Type AUL at Maroondah Highway.

Despite this route catering for the most frequent cross-town heavy vehicle movements, total vehicle numbers are very low (fewer than 30vpd) and it would be difficult to justify major investment in the required improvements whilst a satisfactory internal alternative exists along High Street and Highett Street (see Section 5.1). This is considered a very long term option requiring large capital investment and is considered to warrant the provision of an interim alternative option.

4.3 Mount Battery Road and Greenvale Lane

This option provides an ultimate northeast alternative route for north to/from east travel that avoids the densely developed and residential nature of Chenery Street (refer Section 5.2). The 60m reservation width of Mount Battery Road offers ample scope for improvement and the current sparse abutting development is unlikely to attract objections to its use by trucks. Works required to make this connection viable include:

- Intersection improvements at Whitfield Road to facilitate turns by long vehicles;
- Widening and strengthening of Mount Battery Road to Greenvale Lane (850m);

- Improvements to the Mount Battery Road/Greenvale Lane intersection;
- Construction and sealing of the northern part of Greenvale Lane (450m);
- Construction of a new bridge over Ford Creek;
- Seal widening for the southern part of Greenvale Lane (500m);
- Intersection improvements at Mount Buller Road (provision of turn lanes);

As for Option 4.2, the high cost of improvements is expected to result in a very long-term implementation time-frame.

However, Council should consider placing a Planning Acquisition Overlay (PAO) and perhaps a Development Plan Overlay (DPO) on land along Greenvale Lane to achieve building set-backs and allow for ultimate acquisition to widen the Greenvale Lane reservation.

4.4 Summary

In summary it is suggested that the high costs associated with provision of the ultimate northeast and northwest bypass routes makes them very long term planning propositions. Order-of-cost estimates are provided for the improvement tasks along these ultimate alternative routes in the schedule in Appendix B and summarised in Figure 4.4 below.

Route	Element	Costs (\$000)	
		Council	VicRoads
Malcolm Street/Kidston Parade	Maroondah Highway intersection		\$390
	Kidston Parade	\$1,039	
	Malcolm Street W of Chenery St	\$2,576.1	
	Malcolm Street E of Chenery St		\$643.5
	Route Totals	\$3,615.1	\$1,033.5
Dead Horse Lane/Withers Lane	2 x Highway intersections		\$780
	Dead Horse La W & Withers Lane	\$3,019.9	
	Dead Horse La E	\$156	
	Route Totals	\$3,175.9	\$780
Mount Battery Rd/Greenvale La	Whitfield Road		\$962
	Mt Battery Rd	\$585	
	Greenvale Lane	\$2,873	
	Mount Buller Road intersection		\$390
	Route Totals	\$3,458	\$1,352
Totals		\$10,249	\$3,165.5

Figure 4.4: Estimated Costs for Ultimate Heavy Vehicle Route Options

Immediate benefits can be gained from development of the southern route along Malcolm Street and Kidston Parade for all present and future east-west travel and improvement elements are discussed in detail in Section 6.1.

As an alternative to the ultimate outer northeast and northwest routes, to facilitate the passage of heavy vehicles around the Mansfield CBD during the short to medium term, it is recommended that improvements along several interim internal routes be considered. These are discussed in greater detail in Section 5.

5. INTERIM ROUTE OPTIONS

The project brief also discussed several interim options to facilitate heavy vehicle movements around the CBD until such time as the external routes can be developed. These internal routes are described in Sections 5.1 to 5.3 and illustrated in Figure 5.1 below. Broad constraints and upgrade requirements are discussed under each option and are again summarised in the spreadsheet in the schedule in Appendix B.

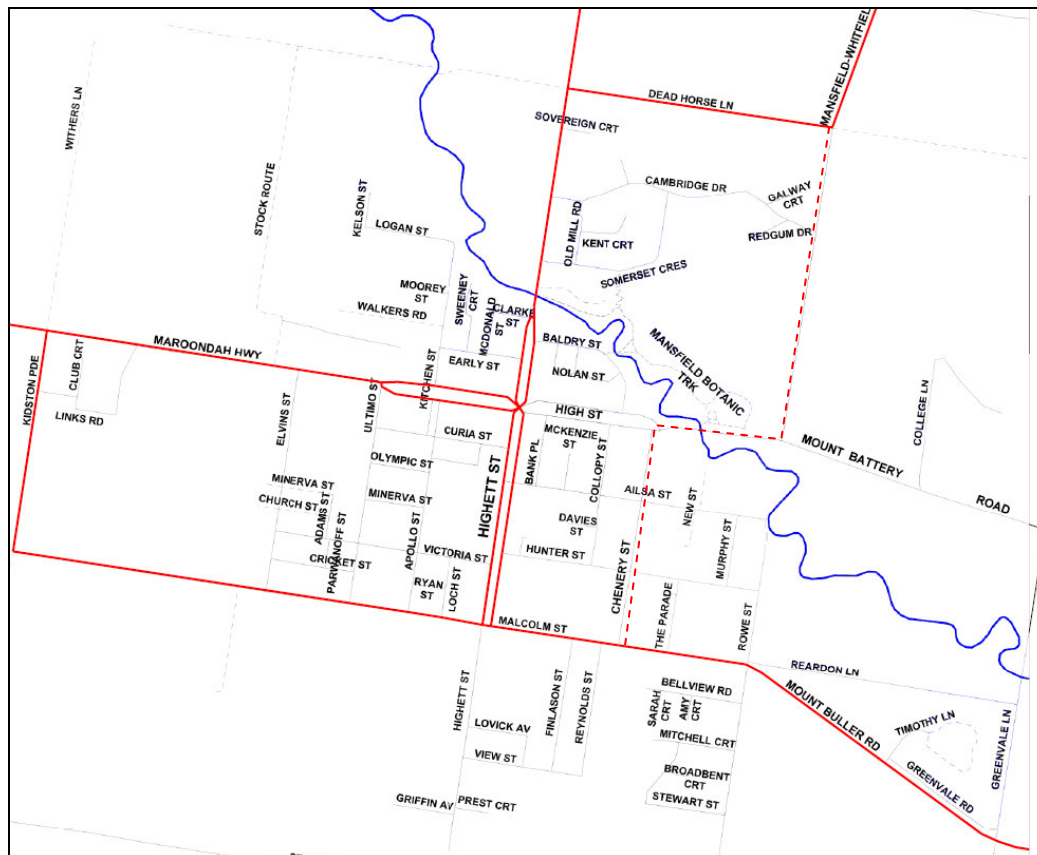


Figure 5.1: Interim Heavy Vehicle Route Options

5.1 High Street West and Highett Street North

The Maroondah Highway (or High Street) western entrance to Mansfield is currently a permitted B-Double route as far as the stock saleyards near Elvins Street. It is intended for the mooted amendment of the gazetted routes to extend legal use by these vehicles east along High Street to Highett Street and north along Highett Street to provide a connection to Midland Highway. The VicRoads analysis in Section 3.1 indicates this to be the most frequent movement by semi trailers.

There are currently no alternative routes for heavy vehicles to travel through Mansfield between the west and north approaches. Ultimately, development of the Withers Lane and Dead Horse Lane West route (see Section 4.2) would offer an alternative route. However, major infrastructure upgrading requirements (including a new bridge on Dead Horse Lane over Ford Creek) are expected to make this alternative a long term proposition and require the use of the High St/Highett St link as an interim route.

The existing roundabout at the intersection of the two highways caters for turns by large vehicles and there are no identified immediate upgrading requirements for the High Street/Highett Street route. However, completion of seal widening or shoulder sealing along untreated sections of the 650m length of Midland Highway north from Ford Creek to Dead Horse Lane and the 1km length of Maroondah Highway from Kidston Parade to Ultimo Street should be implemented at an early stage.

5.2 Dead Horse Lane/Whitfield Road/Chenery Street

This is an existing bypass route of the CBD for traffic between Midland Highway and Mount Buller Road that also services the industries established along Dead Horse Lane. It also forms part of current and all future heavy vehicle routes by providing a direct link between the Midland Highway and Whitfield Road.

Although the Dead Horse Lane section is considered functional for the low level of external cross movements, current users have commented on operational issues associated with the intersections at each end of this link. Desirable improvements that were identified in the industry consultation and that should be considered early in any upgrading program are:

- Intersection improvements at Midland Highway to correct the steep grade (a particular issue for multi-deck stock crates) and install turn lanes;
- Intersection improvements at Whitfield Road to facilitate turns.

The Chenery Street section of this route contains several undesirable features. Chenery Street is located in a narrow (20m wide) road reservation that contains abutting residential development for much of its length and includes a school crossing near Hunter Street. Moreover, its intersection with High Street and Whitfield Road has an unconventional layout that is confusing and does not cater for turns by long vehicles such as B-Doubles. If this route is to be used, high priority should be given to the following:

- Intersection works at Chenery St/High St/Whitfield Rd (likely installation of a roundabout);
- Intersection works at Chenery St/Malcolm St (right turn lane for northbound movements);
- Potential for intersection works at Malcolm St and Highton Lane (noted in industry feedback).

5.3 Highett Street

Although not listed in the VicRoads brief as a route of interest, the use of Highett Street south of High Street as an interim solution for all connections between the Malcolm Street route and Midland Highway and Whitfield Road has emerged in the study as a viable alternative route to the Chenery Street link.

Highett Street has a divided cross section, identical to the section of Midland Highway north of High Street. It is currently an approved B-Double route and can cater for these vehicles without additional improvements. It is understood from industry feedback that it already performs a CBD bypass link function and carries occasional B-Double vehicles in this role.

Although it passes the sensitive hospital and Alzburg Resort establishments, these are currently exposed to the impacts of heavy vehicle travel along the Malcolm Street route and would experience a much lesser level of exposure from this type of traffic in Highett Street.

Flagged school crossings of both carriageways are located just north of Hunter Street but these are safer than their equivalent in Chenery Street by virtue of the single direction of traffic at each.

Intersection improvements have already been flagged as part of Option 4.1 for the intersection of Malcolm Street and Highett Street. Such an intersection treatment would facilitate use of Highett Street. It is consequently considered a superior route to Chenery Street as a connection from the north (Midland Highway) and northeast (Whitfield Road) approaches to the eastern (Mount Buller Road) approach.

Improvements along Highett Street South would comprise:

- Intersection works at Malcolm Street (already included in Option 4.1);
- Kerb outstands at the school crossings near Hunter Street.

5.4 Summary

In summary it is suggested that the immediate focus be on upgrading of the routes which currently have no ready alternatives as summarised in Figure 5.4 and including:

- Malcolm Street and Kidston Parade for all present and future east-west travel (it forms part of the ultimate alternative route network);
- Highett Street South as an interim link for north/northeast travel to/from east;
- Dead Horse Lane as a link from Midland Hwy to Whitfield Road and to serve current industries (it forms part of the ultimate alternative route network).

Other routes that can be progressively upgraded to replace the current inner interim routes are:

- Dead Horse Lane west from Midland Highway and Withers Lane for an outer north to/from west connection;
- Mount Battery Road and Greenvale Lane for an outer north to/from east connection.

Chenery Street is considered to suffer from a number of draw-backs that do not lend themselves to immediate or longer term remediation. These include:

- The narrow road reservation that prevents further cross sectional upgrades and curtails intersection improvements;
- Close abutting residential development and the spread of retail activity along the northern section of this road from the CBD;
- High cost of upgrading works at the intersection with High Street/Whitfield Road.

Route	Element	Costs (\$000)	
		Council	VicRoads
Malcolm St/Kidston Parade	As per ultimate strategy	\$3,615.1	\$1,033.5
High Street & Highett Street	High Street west of Highett Street		\$54.1
	Highett Street north of High Street		\$109.2
	Route Total		\$163.3
Dead Horse/Whitfield/Chenery	Dead Horse Lane	\$156	\$780
	Whitfield Road (+ Mt Battery Rd I/S)		\$572
	Chenery Street		\$975
	Malcolm Street (included above)		
	Route Totals	\$156	\$2,327
Highett Street south option	Dead Horse La (included above)		
	Highett Street North (included above)		
	Highett Street South	\$195	
	Malcolm Street (included above)		
	Route Total	\$195	

Figure 5.4: Estimated Costs for Interim Heavy Vehicle Route Options

As the projects in Figure 5.4 form optional elements and route alternatives, the total cost is dependent on which segments are adopted. A total cost has consequently not been provided.

6. ROUTE TREATMENTS

Specific works as identified in Sections 4 and 5 are discussed in greater detail below. These works involve the upgrading of the current Malcolm Street/Kidston Parade route, the ultimate external north-west route using Dead Horse Lane and Withers Lane, the external north-east route via Mount Battery Road and Greenvale Lane and the interim internal routes to cater for use by heavy vehicles.

6.1 Malcolm Street and Kidston Parade Route

6.1.1 Maroondah Highway at Kidston Parade

This intersection has featured in the feedback from the majority of industry liaison undertaken by VicRoads. It has been the site of one casualty crash in the past five years and is recognised as a worthy improvement candidate by VicRoads and Council. Located on the highway network, this project should logically form part of the VicRoads suite of programs.

Required works comprise widening to install a separate right turn lane (Type CHR treatment) in the west approach and an auxiliary left turn lane (Type AUL) in the east approach in accordance with the parameters for an 80 km/h design environment set out in Austroads *Guide Part 4A*. A typical layout is provided in Figure 6.1.1 that would cater for the expected turn movements at Kidston Parade.

If the Withers Lane/Dead Horse Lane route is developed as an ultimate north-west bypass, then this intersection should be further enhanced at that time with an auxiliary left turn lane on the west approach.



Figure 6.1.1: Proposed works at Maroondah Highway/Kidston Parade intersection.

It is considered that the proposed channelised intersection will satisfy vehicle turn requirements into the foreseeable future and cater for anticipated heavy vehicle growth during the project life. Should it be necessary to upgrade this treatment at some future date, the 60m highway reservation provides adequate scope for the installation of a roundabout or signals treatment should this be necessary.

6.1.2 Kidston Parade

The VicRoads consultation identified the narrow seal width in Malcolm Street as an issue for heavy vehicle travel. At 6.4m wide, this street is only marginally wider than Malcolm Street and requires a similar treatment to cater for current and future large vehicle demands, viz:

- Two 3.5m wide traffic lanes (bounded by 1.5m wide sealed shoulders where possible);
- Constructed footpaths in both road verges, along the frontages of the retirement village to the west and residential development to the east to cater for off-road pedestrian travel.

6.1.3 Malcolm Street at Kidston Parade

This cross intersection has its major traffic movements along the eastern and northern legs, with the south leg providing unsealed residential access to the south-western town fringe and the west leg being a minor rural collector road. Minor improvements have been considered but are difficult to achieve under present constraints imposed by services (power pole) and the reservation width.

An ultimate reorientation of priorities is indicated to align the layout along the majority traffic path, with the other two legs entering at the back of the curve connecting the east and north legs.

Such a layout change would necessitate the acquisition of a splay from the golf club property to the northeast and significant road works. The large high voltage power pole at the northeast corner (at 3.2m offset from present edge of seal) currently inhibits low-cost layout improvements and its relocation is a priority for any works at this site. The layout in Figure 6.1.3a indicates the minimum treatment required to cater for turns by heavy vehicles contained within the respective traffic lanes.

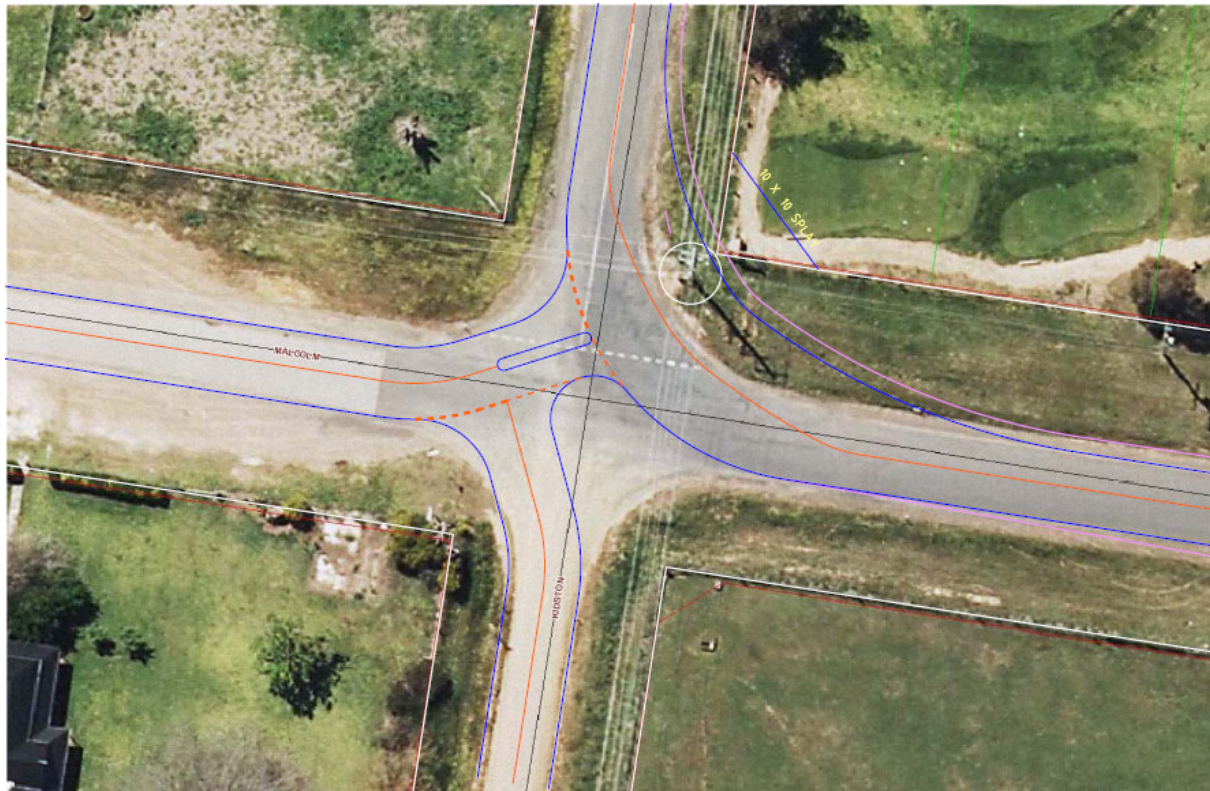


Figure 6.1.3a: Proposed works at Malcolm Street/Kidston Parade intersection.

It is further suggested that a PAO be applied for the ultimate acquisition of a larger splay from the golf club property to permit 60km/h vehicle speeds to be maintained through this bend, making it a more attractive travel option for a variety of heavy vehicles. The road centre line options have been plotted on the photo in Figure 6.1.3b. The worst case scenario of 180m radius with 3% superelevation that requires a 120m x 120m splay, has been used in the estimating spreadsheet in Appendix B.



Figure 6.1.3b: Curve Options for Malcolm Street/Kidston Parade intersection.

6.1.4 Malcolm Street

Many of the respondents to the VicRoads consultation mentioned the narrow (6.2m seal) and rough surface along the section of Malcolm Street from Kidston Parade to Highett Street. Widening and regulation of this 1.4km length of road is a high priority as it is the only viable east-west heavy vehicle alternative route around the CBD. Works should aim to provide:

- Two 3.5m wide traffic lanes (bounded by 1.5m wide sealed shoulders where possible);
- An off-road shared path along the northern reserve boundary, east from Elvins Street at the minimum, for safe pedestrian and cyclist access to the schools;
- Depending on growth in heavy vehicle traffic, it may also become necessary in the medium term to upgrade the school crossing at St Mary's Primary School to provide active control (permanent Zebra crossing or pedestrian operated signals).

6.1.5 Malcolm Street at Highett Street

This complex cross intersection occurs at the change in cross section in Highett Street from a divided road with a wide central median (north leg) to a two-lane two-way cross section (south leg). Although it has undergone recent layout improvements, several respondents to the VicRoads interviews still commented on the poor operational characteristics of this site. It has been the subject of a cross traffic crash in the last five years.

A roundabout treatment (as illustrated in Figure 6.1.5) is considered to offer the best means of addressing the difficult mix of layout elements. Such a treatment is expected to involve a deviation of the northern legs (with resultant loss of some central parking) and represent a project with significant development costs. A roundabout would have the additional benefit of introducing a slow point along the long straight alignment of Malcolm Street at a sensitive location abutting the hospital and Alzburg Resort.

An alternative treatment that could be considered in detailed design is the extension of the duplication through the intersection and introduction of the merge south of Malcolm Street.



Figure 6.1.5: Proposed works at Malcolm Street/Highett Street intersection

6.1.6 Malcolm Street at Chenery Street

This intersection also received mention during the VicRoads consultation. If the Highett Street interim route is adopted and in-principle agreement is given to the ultimate Mount Battery Road/Greenvale Lane external bypass route, this intersection could be provided with a splitter island and kerb outstands in the north leg to downgrade it as a heavy vehicle route.

6.1.7 Mount Buller Road/Malcolm Street at Highton Lane

This intersection received mention by several respondents to the VicRoads consultation. It has marginal sight distance characteristics from the south (Highton Lane) leg and exhibits an undesirable five leg layout but has no crash history to warrant high priority consideration of upgrading works.

6.2 Withers Lane/Dead Horse Lane Route

6.2.1 Midland Highway at Dead Horse Lane

This intersection is envisaged to undergo staged upgrading, initially to satisfy the interim route proposals outlined in Section 5.1, and ultimately to cater for right turn movements into Dead Horse Lane west as part of the Dead Horse Lane/Withers Lane route proposals.

There are only short sections of sealed shoulder along the highway approaches to this intersection. They do not comply with the Austroads criteria for a Type BAR treatment and do not permit heavy vehicle turns to be confined within the relevant traffic lanes (i.e. they require these vehicles to swing wide into the opposing traffic lanes). There is also a grade issue in the east approach that is of concern to livestock transporters.

As this intersection on an arterial road forms an integral part of both the existing and proposed heavy vehicle alternative routes, initial upgrading of this site is recommended to incorporate the following elements to facilitate turns by heavy vehicles as part of the program to establish the interim route network as illustrated in Figure 6.2.1:

- Introduce a passing lane that satisfies the Type BAR dimensions for an 80km/h design speed;
- Widen the intersection to permit turns without crossing the centre line;
- Ameliorate the cross-slope issue by reducing the down-grade in the east approach.

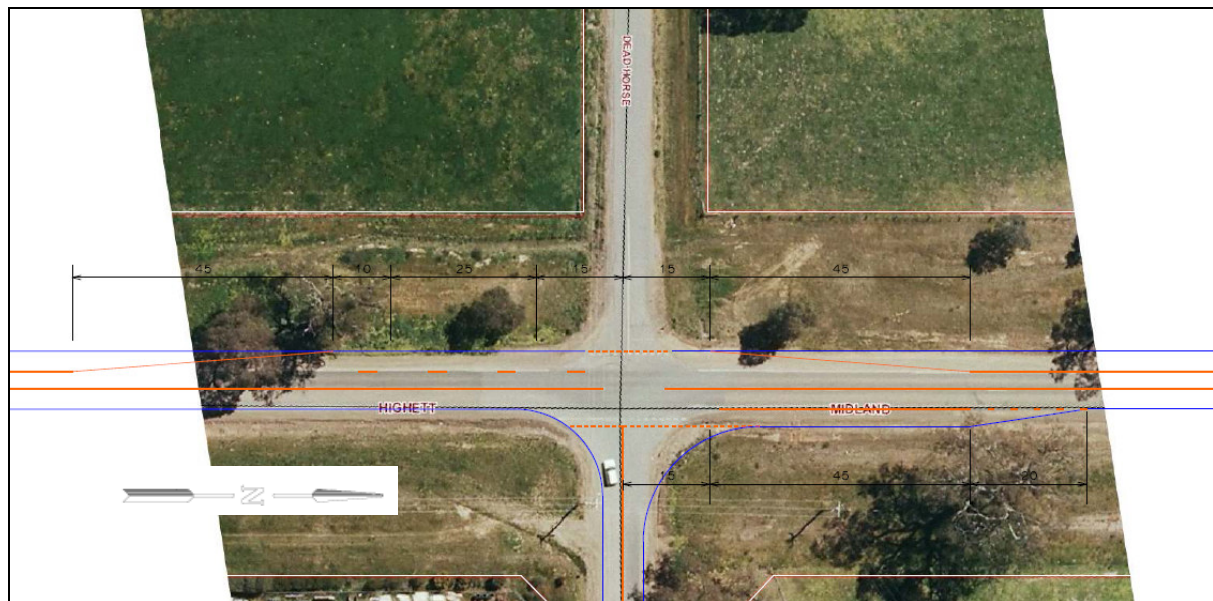


Figure 6.2.1: Proposed interim works at Midland Highway/Dead Horse Lane intersection.

As noted above, the northbound Type BAR interim treatment should be augmented with a southbound Type CHR treatment in the Midland Highway northern leg at the time that the ultimate Dead Horse Lane/Withers Lane route is opened to heavy vehicle traffic.

6.2.2 Dead Horse Lane West

This section of road consists of a 400m length of narrow (3.9m wide) seal between Midland Highway and the low level crossing of Ford Creek, with the remaining 1km to Withers lane comprising a 4m wide gravel formation (apart from the 100m of seal along the frontage of No 115). The pavement along the entire length of this road requires strengthening and sealing to provide 2 x 3.5m traffic lanes and a new bridge over Ford Creek for it to be suitable as a heavy vehicle alternative route.

Any medium term proposal to replace the current low-level crossing of Ford Creek with a bridge should include alignment and structure design parameters that cater for future use of the route by heavy vehicles including B-Doubles.

6.2.3 Withers Lane at Dead Horse Lane

As part of an ultimate Dead Horse Lane/Withers Lane route, this T junction would need to cater for major east to/from south movements by heavy vehicles. Such a priority change would necessitate the acquisition of a splay from the property on the southeast and significant road works. In addition, a reorientation of priorities would indicate that the current northern leg should form an altered T junction at the back of the curve connecting the east and south legs. The layout in Figure 6.2.3a indicates the minimum treatment required to cater for turns by heavy vehicles contained within the respective traffic lanes necessitating the acquisition of a 10m x 10m splay from the property to the southeast.



Figure 6.2.3a: Minimum Splay at Withers Lane/Dead Horse Lane intersection

This minimum treatment effectively represents a stop condition and is not considered conducive to attracting heavy vehicles onto the route. It is suggested that Council should initiate the acquisition of a splay (or place a PAO over land that may need to be acquired in the future) from the property at the southeast corner of the intersection of these roads to implement future layout improvements. It is suggested that the minimum 10m x 10m splay dimensions should be enlarged to 150m x 150m to maintain 60km/h travel along the route through a 180m radius curve at 3% superelevation. Road centre line alignments for this option are illustrated in Figure 6.2.3b over the page and the worst-case splay is used in the estimating spreadsheet in Appendix B.



Figure 6.2.3b: Curve Options for Withers Lane/Dead Horse Lane intersection

6.2.4 Maroondah Highway at Withers Lane

As noted in Section 6.1.1, future development of the Dead Horse Lane/Withers Lane bypass route will also need to be accompanied by the installation of a Type AUL treatment in Maroondah Highway that caters for eastbound left turn movement into Withers Lane.

6.3 Mount Battery Road/Greenvale Lane Route

6.3.1 Mansfield-Whitfield Road at Dead Horse Lane

No turn lanes are currently provided at this intersection, which forms an integral part of the existing B-Double route, the proposed interim heavy vehicle route and the ultimate heavy vehicle alternative route. Upgrading works, as illustrated in Figure 6.3.1, should aim to:

- Provide a passing lane that satisfies the Type BAR dimensions for an 80km/h design speed;
- Widen the intersection so that B-Doubles can make turns without crossing the centre line.

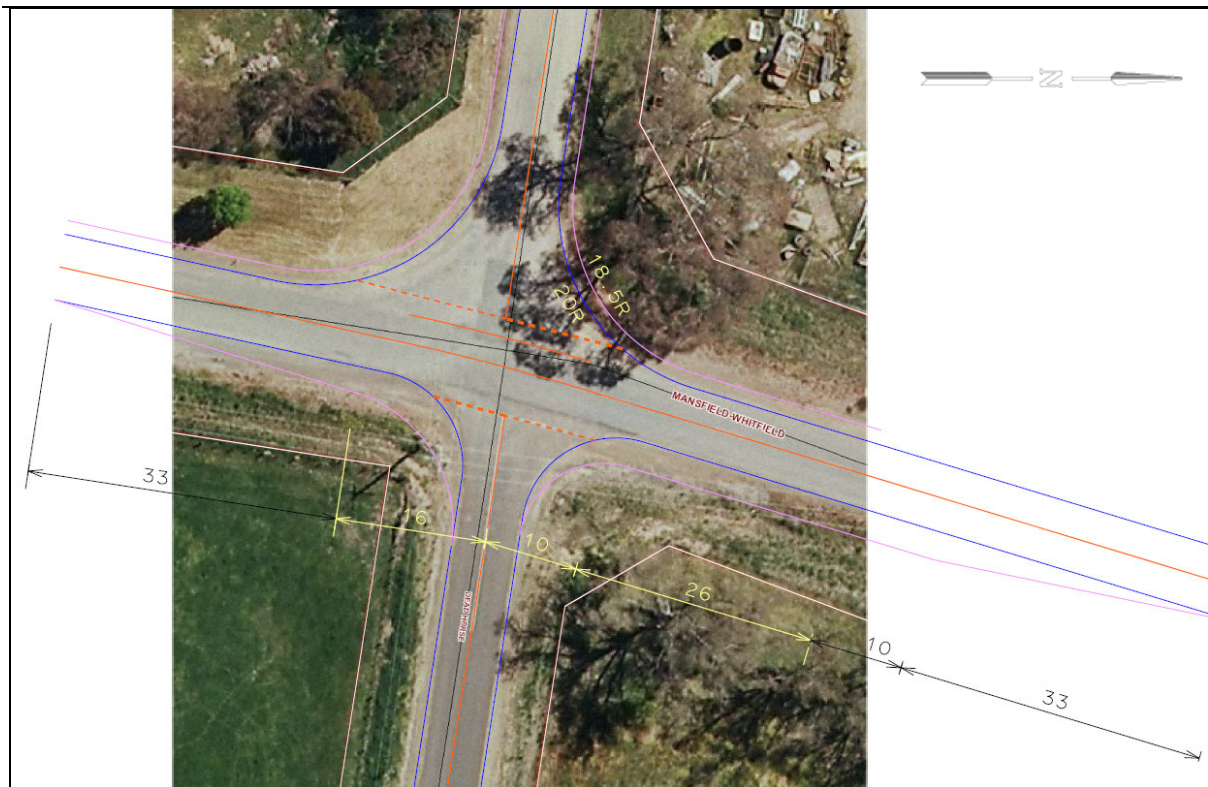


Figure 6.3.1: Proposed works at Mansfield-Whitfield Road/Dead Horse Lane intersection.

6.3.2 Mansfield-Whitfield Road at Mount Battery Road

Development of the Mount Battery Road/Greenvale Lane bypass route will need to include major layout modification at this intersection to cater for north to/from east movements by heavy vehicles. Depending on vehicle numbers, it may be adequate to retain the current T junction layout, appropriately augmented by turn lanes.

Route upgrading works will need to include widening and strengthening of the 750m length of Mount Battery Road from Whitfield Road to Greenvale Lane.

6.3.3 Mount Battery Road at Greenvale Lane

As part of a future Mount Battery Road/Greenvale Lane route, this T junction would need to cater for the major west to/from south flows and may require altering the priority to bring the eastern leg in as a T junction on the back of a curved connection between the west and south legs.

6.3.4 Greenvale Lane

Residential development east from the township may impact on the viability of this route to cater for heavy commercial traffic in a 20m reservation. It is suggested that building setbacks or other planning measures (PAO and DPO) be implemented along the route to allow for future reserve widening if required.

Eventual route upgrading works will include widening, strengthening and sealing of the full 1km length of this road from Mount Battery Road to Mount Buller Road.

It is also suggested that any proposal to replace the current aging timber bridge over Ford Creek (which is presently subject to a 6t load limit) should include alignment and structure design parameters that cater for future use by B-Doubles.

6.3.5 Mount Buller Road at Greenvale Lane

Development of the Mount Battery Road/Greenvale Lane bypass route would need to include a westbound Type BAR passing lane in Mount Buller Road for an 80km/h design speed. Intersection widening would also be required to facilitate the north to east exit movement from Greenvale Lane.

6.4 High Street West and Highett Street North Interim Route

6.4.1 Maroondah and Midland Highways

The two-lane two-way section of Maroondah Highway west of Ultimo Street currently has a seal width of about 6.4m bounded by gravel shoulders whilst the Midland Highway north of Ford Creek has a seal width of 6.0m bounded by sealed shoulders for parts of the length. Both of these sections of road are considered to require seal widening, as a minimum to add sealed shoulders but preferably to provide 2 x 3.5m traffic lanes, consistent with their arterial road status and to satisfactorily carry heavy vehicles.

6.4.2 Dead Horse Lane

A key component of this proposed interim heavy vehicle route and the ultimate heavy vehicle alternative routes is the Dead Horse Lane link between Midland Highway and Mansfield-Whitfield Road. The current seal width of this section of Dead Horse Lane varies between 6.4m and 6.7m. To provide the expected level of service for B-Double and other heavy vehicles along this route, the seal width requires widening to 7.0m (with sealed shoulders if possible) for the 800m of the road. This may also include upgrading a number of commercial entrances and addressing drainage issues along the route.

6.4.3 Intersection Works

Works that are required to facilitate the passage of heavy vehicles at each end of the length of Dead Horse Lane between Midland Highway and Whitfield Road have already been identified in Sections 6.2.1 and 6.3.1.

6.5 Other Upgrades

6.5.1 Highett Street South

Allowing this local road to be used by heavy vehicles as an interim connection between Midland Highway and the Malcolm Street/Kidston Parade route should be accompanied by the installation of kerb outstands at the school crossings north of Hunter Street to improve the conspicuity of the crossings beyond the approaching parking lanes and to act as a road narrowing for traffic calming purposes.

6.5.2 Chenery Street

As noted in Section 5.2, this route has a number of deficiencies that are difficult to address. The recommended strategy involves adoption of the Highett Street South route instead of this route. However, if this route is to be designated as a preferred heavy vehicle route the school crossing north of Hunter Street should be upgraded with kerb outstands to increase its conspicuity and operational safety.

6.5.3 Chenery Street at High Street

As for item 6.5.2, if the Highett Street option is rejected, this intersection would require modification to make it suitable for B-Double turns to/from Mansfield-Whitfield Road. An indicative roundabout layout is illustrated in Figure 6.5.3 over the page for consideration.



Figure 6.5.3: Potential Roundabout Layout for High Street/Chenery Street intersection.

7. DISCUSSION

7.1 Current Heavy Vehicle Demand

It is evident from the industry liaison in Section 2.7 and analysis of the count data in Section 3.1.1 that numbers of through movements by B-Double vehicles are currently very low with total movements on all arterial entries to Mansfield averaging at 22vpd over the 5 week days of the survey (11 inward and 11 outward movements). Maroondah Highway showed the highest level of use with a consistent passage of 10 B-Doubles per day (or a peak of 1 per hour). The most frequent B-Double through movements were west to/from east with 7 matching movements over the mid-week three days. The second highest demand is for the north to/from west movements with 6 matches established in the same three days.

A similar pattern is evident from the semi trailer movements extracted from the count data in Section 3.1.2, albeit at a higher order of magnitude by a factor of 4 to 5. Again the Maroondah Highway approach recorded the highest overall volumes with a 5 day average of 44vpd (or a peak of 5vph). The tracked through-movements showed a reverse order for the top two routes, with the north to/from west presenting the highest demand with 24 movements (including 2 related to Whitfield Road) over the mid-week three days, followed by the west to/from east route with 17 matching movements over the three days.

There was an apparent low demand for north to/from east movements with only 3 B-Doubles and 9 semi trailers recorded travelling this route over the three days of the count (or 4vpd).

7.2 Route Selection

From the discussion of route elements in Section 6 and the above assessment of current need, it is suggested that a viable strategy for catering for heavy vehicle traffic cross-town movements should involve the following:

- Progressive upgrading of the Malcolm Street/Kidston Parade route to facilitate the predominant east-west cross-town movements clear of the CBD. This should include:
 - Intersection works in Maroondah Highway at Kidston Parade
 - Seal widening and footpath construction along Kidston Parade
 - Intersection works (including land acquisition at Kidston Parade/Malcolm Street
 - Seal widening, regulation and shared path construction along Malcolm Street
 - Medium term intersection works at Malcolm Street/Highett Street
- Adoption of the High Street West and Highett Street North route to provide an interim route for the west-north movements, which are of comparable importance to the east-west movements. This would not require any intersection works but should be accompanied by:
 - Seal widening along Midland Highway from Ford Creek to Dead Horse Lane
 - Seal widening along Maroondah Highway from Ultimo Street to Kidston Parade
- Improvement of the current Dead Horse Lane link between Midland Highway and Mansfield-Whitfield Road to better cater for heavy vehicles by:
 - Seal widening and drainage improvements along this length of Dead Horse Lane
 - Intersection improvements at Midland Highway
 - Intersection improvements at Mansfield-Whitfield Road
- Use of Highett Street south from High Street to Malcolm Street as an interim north/northeast-east cross-town link for heavy vehicles. This route is expected to only require:

- Upgrading of the existing school crossings with kerb extensions

7.3 Planning for Long-term Solution

Current traffic volumes make it difficult to justify major investment in the provision of new external alternative routes to cater for north-west and north-east truck movements clear of the town centre. However, planning should occur along the Dead Horse Lane /Withers Lane route by:

- Placing a PAO and ultimately proceeding with the acquisition of a splay from the corner of the Withers Lane/Dead Horse Lane intersection;
- Ensuring that any future upgrading of the Ford Creek crossing caters for B-Double vehicles.

Similarly, future works on Greenvale Lane should ensure that:

- Any replacement structure at Ford Creek caters for B-Double vehicles
- Spreading development does not inhibit future road widening options.

7.4 Short Term Priority Works

All short term works should be implemented in accordance with the strategy outlined in Section 7.2 with a suggested order of priority as follows:

Council Works:

7. Intersection works at Malcolm Street and Kidston Parade to ensure long vehicles can safely perform turns at this location. A decision will need to be made by Council whether to provide for a minimum treatment (requiring a 10m x 10m splay) or to encourage use of the route by catering for 60km/h through-movements (requiring a 120m x 120m splay);
8. Seal widening and regulation of Malcolm Street from Kidston Parade to Highett Street to make the route suitable for the passage of large vehicles;
9. Seal widening of Kidston Parade from Maroondah highway to Malcolm Street;
10. Upgrading of the school crossings in Highett Street for safety;
11. Seal widening and drainage improvements along Dead Horse Lane between Midland Highway and Mansfield-Whitfield Road to improve this link for the passage of large vehicles;
12. Construction of a shared path along Malcolm Street and footpaths along Kidston Parade for use by pedestrians and cyclists;
13. Intersection works (suggested installation of a roundabout) in Malcolm Street at Highett Street to improve safety and introduce traffic calming along the east-west route.

VicRoads Works:

5. Provision of turn lanes in Maroondah Highway at Kidston Parade to improve operational safety at the intersection;
6. Seal widening along Maroondah Highway and Midland Highway to make the north to/from west route suitable for the passage of large vehicles;
7. Intersection improvements and provision of turn lanes in Midland Highway at Dead Horse Lane to improve safety at the intersection;
8. Intersection improvements at Dead Horse Lane and Mansfield-Whitfield Road to improve safety and accessibility for large vehicles at the intersection.

7.5 Road Declarations

In the event that the strategy for using Highett Street as an interim preferred heavy vehicle alternative route is adopted, and intersection works result in a downgrading of Chenery Street as an arterial road, it is suggested that the matter of declared arterial road status of these two roads be reviewed. A change of “ownership” for these roads between Council and VicRoads, with Council relinquishing responsibility for Highett Street and portion of Malcolm Street in exchange for Chenery Street, may be appropriate and should be discussed by the respective road authorities.

APPENDIX A

HEAVY VEHICLE ROUTES

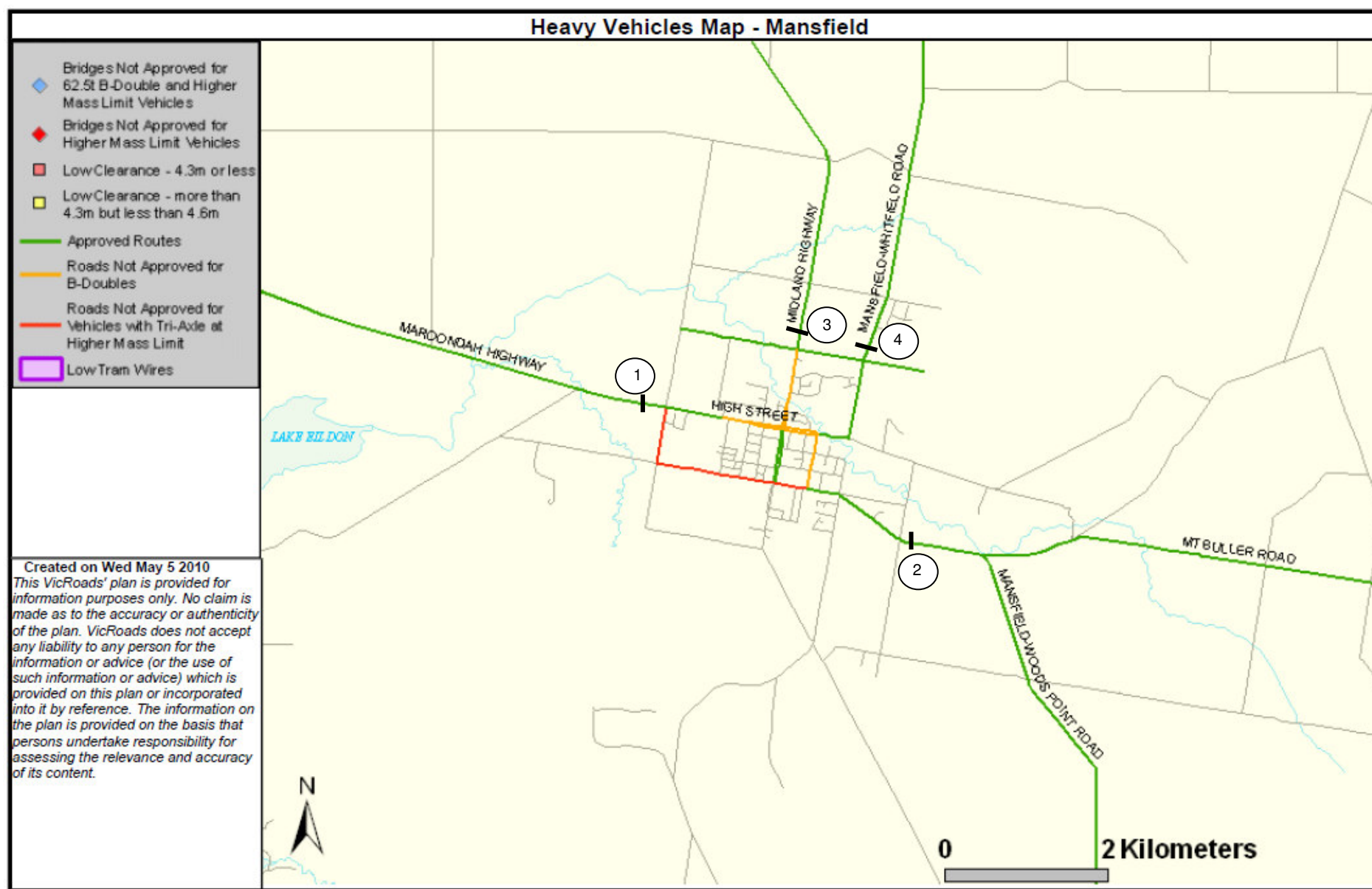


Figure A1: Existing Approved Mansfield B-Double Routes (also showing VicRoads traffic counting stations)

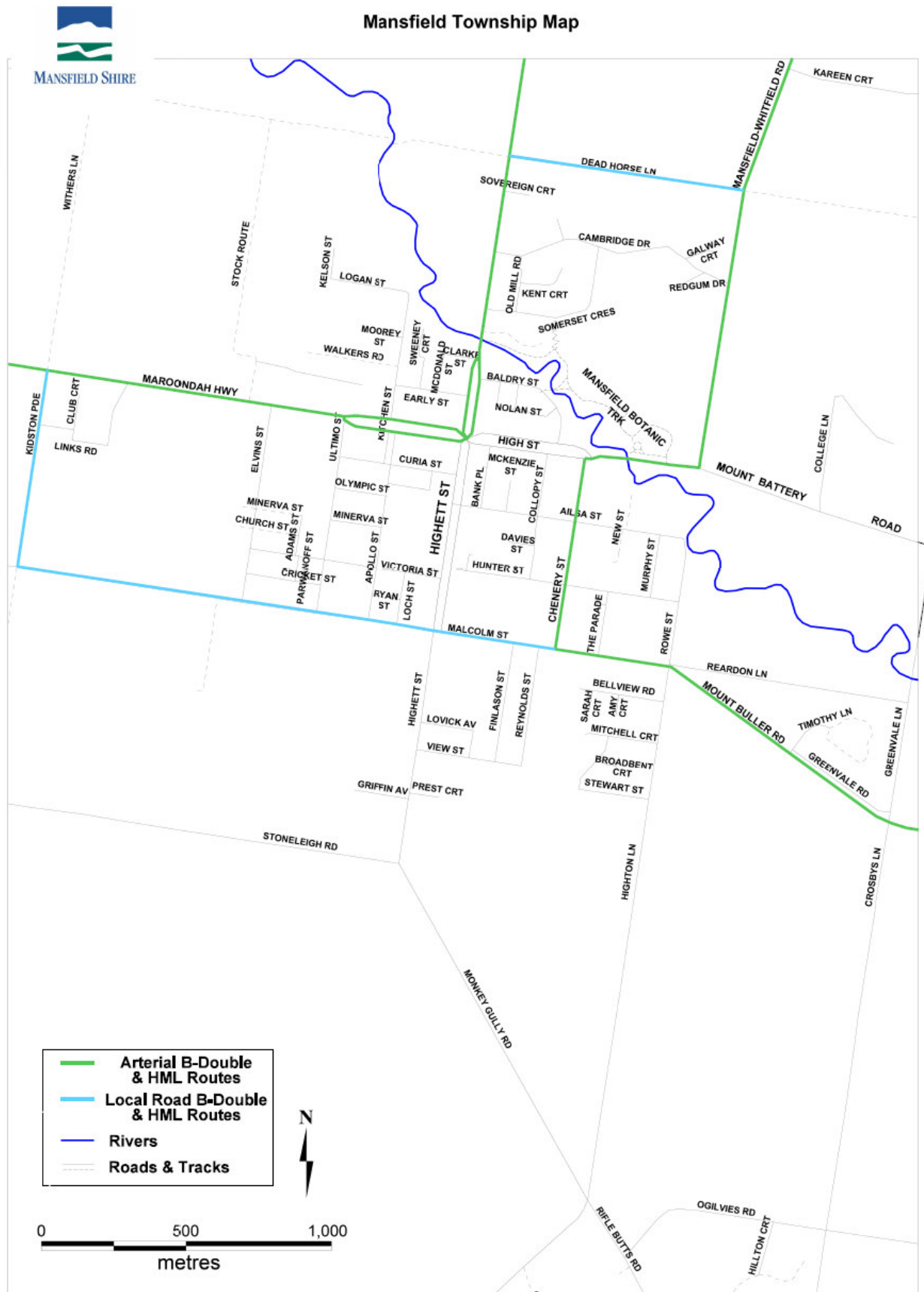


Figure A2: Proposed Mansfield B-Double & Higher Mass Limits Routes
(Plan courtesy of Mansfield Shire Council)

APPENDIX B

IMPROVEMENT WORKS SCHEDULE

Mansfield Heavy Vehicle Bypass Route Options

Route:	Kidston Parade/Malcolm Street									
Road	Section	Length (m)	Pavement Width	Shoulders	Traffic	Speed Zone	Advantages	Sensitivities	Works Required	TEC \$
Kidston Pde	Maroondah Hwy to Malcolm St	680	6.4m seal	gravel	623vpd	80km/h	current bypass route current B-Double route	abutting retirement village abutting residences	widen traffic lanes seal shoulders construct footpaths along both sides provide turn lanes in highway upgrade Malcolm St intersection include: acquire splay off corner shift HV power pole	68,000 27,200 34,000 300,000 300,000 360,000 10,000
Malcolm St	Kidston Pde to Highett St	1,450	6.6m seal	gravel	990vpd	80/50 at Elvins St	current bypass route 30m wide road reserve low density development current B-Double route	abutting hospital abutting rec reserve abutting residences	widen traffic lanes seal shoulders reduce roughness (asphalt overlay) construct shared path along north side upgrade Highett St intersection	145,000 58,000 710,500 18,125 600,000
Malcolm St	Highett St to Chenery St	420	7.0m seal	2 x 3m sealed parking	2,700vpd	50km/h 40km/h TBSZ	current bypass route 30m wide road reserve current B-Double route	abutting Alzburg Resort abutting St Mary's PS Sec College down Finlayson St school crossing	upgrade Chenery St intersection upgrade school crossing	300,000 150,000
Malcolm St	Chenery St to Greenvale La	1,950	6.6m seal	2.0m sealed	4,060vpd	50/80 E of Highton La	declared arterial road 30m wide road reserve current B-Double route	abutting residences	widen traffic lanes upgrade Highton La intersection	195,000 300,000
Kidston Pde/Malcolm St Total Costs (includes 30% contingency)										4,648,573
Route:	High Street/ Highett Street									
Road	Section	Length	Pavement Width	Shoulders	Traffic	Speed Zone	Advantages	Sensitivities	Works Required	TEC \$
High St	Kidston Pde to Ultimo St	1,040	6.4m seal	gravel	3,800vpd	80km/h	highway 60m wide road reserve current B-Double route		seal shoulders	41,600
High St	Ultimo St to Highett St	400	divided road	sealed parking lanes	>5,000vpd est	50km/h	highway divided road proposed B-Double route	abutting shops fringe of commercial centre	Nil	
Highett St	High St to Ford Creek	300	divided road	sealed parking lanes	>5,000vpd est	50km/h	highway divided road proposed B-Double route	abutting shops fringe of commercial centre	Nil	
Midland Hwy	Ford Creek to Dead Horse La	700	6.0m seal	gravel	1,200vpd	80km/h	highway proposed B-Double route 60m wide road reserve	residential estate to east	widen traffic lanes seal shoulders (50% of length)	70,000 14,000
High St/Highett St Total Costs (includes 30% contingency)										163,280
Route:	Withers Lane/Dead Horse Lane									
Road	Section	Length	Pavement Width	Shoulders	Traffic	Speed Zone	Advantages	Sensitivities	Works Required	TEC \$
Withers La	Highway to Dead Horse La	1,000	4.0-5.5m gravel	nil	<200vpd est	80km/h	minimal development		construct & seal 1km new road provide turn lanes in highway upgrade Dead Horse La junction acquire splay off SE corner	200,000 300,000 300,000 33,000
Dead Horse La	Withers La to Ford Creek	1,050	4.0m gravel	nil	<100vpd est	NS (assume 80km/h)	minimal development		construct & seal 1.05km new road construct bridge over Ford Creek	210,000 1,500,000
Dead Horse La	Ford Creek to Midland Hwy	400	3.9m seal	nil	<100vpd est	NS (assume 80km/h)	no development		widen & strengthen 400m seal provide turn lanes at highway	80,000 300,000
Withers La/Dead Horse La Total Costs (includes 30% contingency)										3,799,900

Schedule of improvement works Part 1

Route:	Whitfield Road/Chenery Street									
Road	Section	Length	Pavement Width	Shoulders	Traffic	Speed Zone	Advantages	Sensitivities	Works Required	TEC \$
Whitfield Rd	Dead Horse La to Mt Battery Rd	1,000	6.2m seal	gravel	1,140vpd	80km/h	declared arterial route houses set well back current B-Double route	residential estate to west	widen traffic lanes seal shoulders upgrade Dead Horse La intersection	100,000 40,000 300,000
High St	Mt Battery Rd to Chenery St	400	6.9m seal	gravel	1,140vpd	80/50 at Ford Creek	declared arterial route minimal development current B-Double route	abutting picnic area	upgrade Mt Battery Rd intersection	300,000
Chenery St	High St to Malcolm St	680	7.0m traffic lanes	2 x 3.5m parking lanes	3,940vpd	50km/h	declared arterial route current B-Double route	abutting residences and commercial establishments fringe of commercial centre school crossing narrow 20m road reserve	upgrade High/Chenery intersection upgrade school crossing	600,000 150,000
Malcolm St	Chenery St to Greenvale La	1,950	6.6m seal	2.0m sealed	4,060vpd	50/80 E of Highton La	declared arterial road 30m wide road reserve current B-Double route	abutting residences	widen traffic lanes upgrade Chenery/Malcolm intersection upgrade Highton La intersection	195,000 300,000 300,000
								Whitfield Rd/Chenery St	Total Costs (includes 30% contingency)	2,970,500
Route:	Whitfield Road/Mt Battery Road/Greenvale Lane									
Road	Section	Length	Pavement Width	Shoulders	Traffic	Speed Zone	Advantages	Sensitivities	Works Required	TEC \$
Whitfield Rd	Dead Horse La to Mt Battery Rd	1,000	6.2m seal	gravel	1,140vpd	80km/h	declared arterial route houses set well back current B-Double route	residential estate to west	widen traffic lanes seal shoulders upgrade Dead Horse La intersection upgrade Mt Battery Rd intersection	100,000 40,000 300,000 300,000
Mt Battery Rd	Whitfield Rd to Greenvale La	750	5.6m seal	gravel	<200vpd est	NS (adopt 80km/h)	minimal development wide 60m reservation	some abutting residences	widen & strengthen 0.75km road upgrade Greenvale La intersection	150,000 300,000
Greenvale La	Mt Battery Rd to Ford Creek	680	4.5m gravel	nil	250vpd	NS (adopt 80km/h)	no development	narrow 20m reservation	construct & seal 680m new road construct bridge over Ford Creek provide for ultimate reserve wideing	136,000 1,500,000 204,000
Greenvale La	Ford Creek to Mt Buller Rd	740	5.0-6.2m seal	gravel	250vpd	NS (adopt 80km/h)	minimal development	narrow 20m reservation	widen & strengthen 740m road turn lanes at Mt Buller Rd intersection provide for ultimate reserve wideing	148,000 300,000 222,000
								Mt Battery Rd/Greenvale La	Total Costs (includes 30% contingency)	4,810,000
Route:	Dead Horse Lane/Highett Street									
Road	Section	Length	Pavement Width	Shoulders	Traffic	Speed Zone	Advantages	Sensitivities	Works Required	TEC \$
Dead Horse La	Whitfield Rd to Midland Hwy	1,200	6.7m seal	gravel	574vpd	70km/h	abutting industry to N current B-Double route	some residences to S	widen seal upgrade intersection at Whitfield Rd upgrade intersection at Midland Hwy	120,000 300,000 300,000
Midland Hwy	Dead Horse La to Ford Creek	700	6.0m seal	gravel	1,200vpd	80km/h	highway proposed B-Double route 60m wide road reserve	residential estate to E	widen traffic lanes seal shoulders	70,000 28,000
Highett St	Ford Creek to High St	300	divided road	sealed parking lanes	>5,000vpd est	50km/h	highway divided road proposed B-Double route	abutting shops fringe of commercial centre	Nil	
Highett St	High St to Malcolm St	660	divided road	sealed parking lanes	4,100vpd	50km/h	current B-Double route divided road	abutting Council offices abutting rec reserve school crossing abutting hospital abutting Alzgurg Resort	upgrade Malcolm St intersection upgrade school crossings x 2	600,000 150,000
								Dead Horse La/Highett St	Total Costs (includes 30% contingency)	2,038,400

Schedule of improvement works Part 2

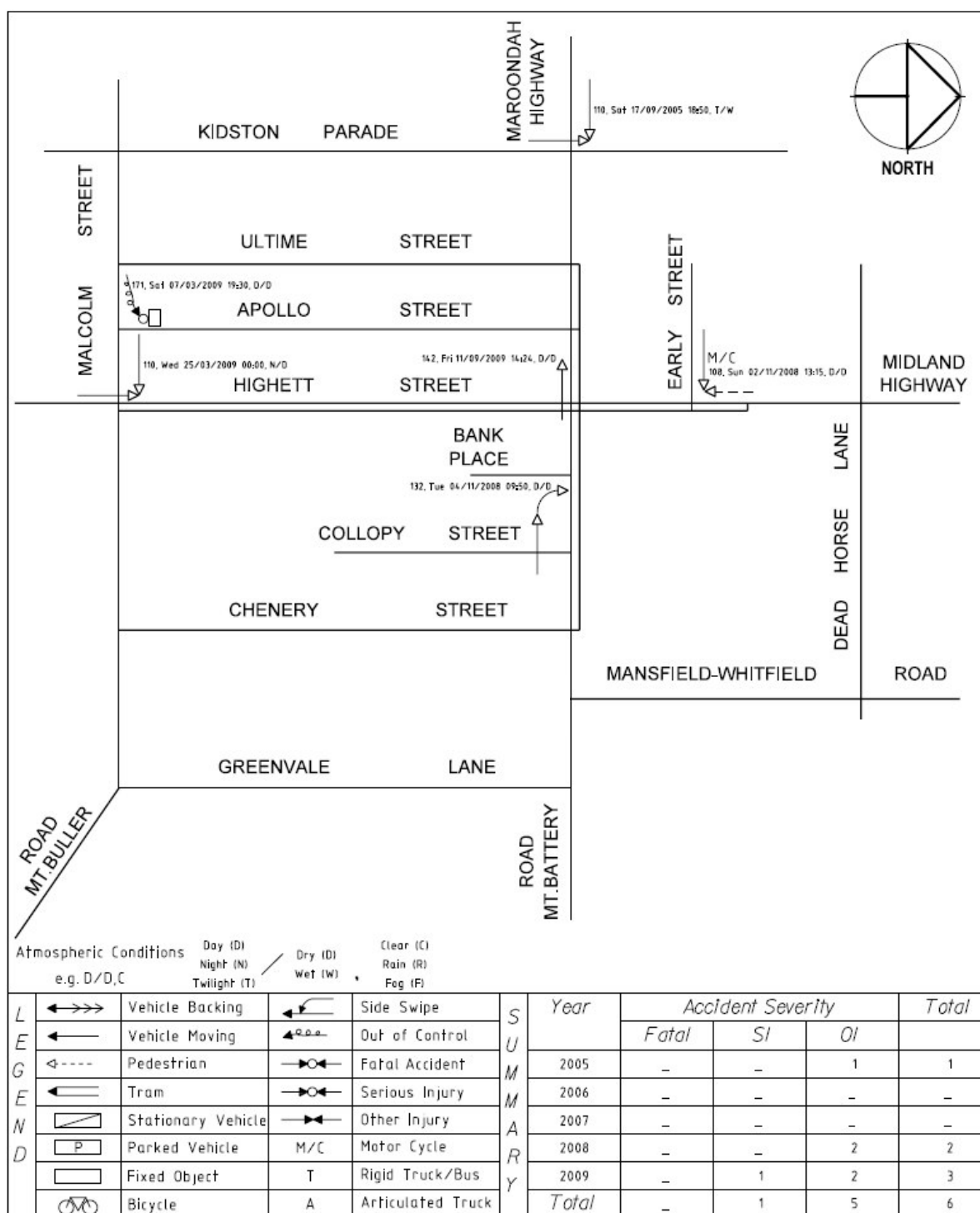
APPENDIX C

CRASH DATA

CPG Australia Pty Ltd



Project: Mansfield Township	Date: 11/06/10
Client: VicRoads - North East Region	Job No: B00265
Subject: Collision Diagram	Sheet No: 1 of 1
	By: [REDACTED]



Collision Diagram Rev B

Road Crash Statistics: Victoria Accident Details

Page 1

Location is LGA(s): MANSFIELD; Query: Casualty accidents; Sites: On Maroondah Hwy (184.382 km) between Kitchen Street and Midland Hwy / Midland Highway Inbound Cwy / Mount Buller Road, On Maroondah Hwy (184.372 km) between Kitchen Street and Midland Hwy / Midland Highway Inbound Cwy / Mount Buller Road, On Malcolm Street (2.765 km) between Elvins Street and Ultimo Street, On Mount Buller Road Inbound Cwy (0.167 km) between Bank Place and Collopy Street, Intersection of Maroondah Hwy and Kidston Parade, Intersection of Midland Highway Inbound Cwy and Early Street, Intersection of Highett Street and Malcolm Street; Date range is 01/01/2005 to 31/12/2999; Sorted by location.

ACCIDENT COUNT: 1

Accident No	42005033666	Light	Dusk/dawn	DCA/Accident	110 Cross traffic(intersections only)	Location	Maroondah Hwy&
Date/Time	17/9/2005 Sat 18:50	Road	Wet	Sub DCA		(Road Names)	Kidston Parade
Severity	Other Injury	Atmosphere	Clear	Sub DCA Code			
Traffic Control	Stop sign	Total Vehcles	Total Veh=2	PERSON INJURY DETAILS			
Map Refs	VCD ED7 679 M4	Killed	0	Vehicle,DIR.(+DCA arrow)	Road User	Age	Sex
Road Number	2720	Serious Injury	0	Car, N(2)	Passenger		Injury Level
KM from Start	182.972 Km , Mansfield	Other Injury	1		Driver	46	Not injured
Speed Zone	80 km/hr	Not Injury	4		Passenger		Not injured
Urbanisation	Other City/Town				Passenger		Not injured
				Car, E(1)	Driver	65	Not injured

ACCIDENT COUNT: 2

Accident No	T20080040473	Light	Day	DCA/Accident	108 Ped struck walking to/from or	Location	Midland Highway Inbound Cwy&
Date/Time	2/11/2008 Sun 13:15	Road	Dry	Sub DCA	boarding/alighting vehicle	(Road Names)	Early Street
Severity	Other Injury	Atmosphere	Clear	Sub DCA Code	Pedestrian emerged from behind car etc		
Traffic Control	Giveway sign	Total Vehcles	Total Veh=2		Alighting		
Map Refs	VCD ED7 679 P4	Killed	0		D01,J02		
Road Number	2590	Serious Injury	0	PERSON INJURY DETAILS			
KM from Start	451.491 Km , Mansfield	Other Injury	1	Vehicle,DIR.(+DCA arrow)	Road User	Age	Sex
Speed Zone	50 km/hr	Not Injury	2	Motor cycle, E(1)	Motor cyclist	57	F
Urbanisation	Other City/Town			Stn. wagon, S(8)	Driver	36	M
					Pedestrian		F
							Injured, needed treatment

ACCIDENT COUNT: 3

Accident No	T20080040692	Light	Day	DCA/Accident	132 Right rear	Location	On Mount Buller Road Inbound C
Date/Time	4/11/2008 Tue 09:50	Road	Dry	Sub DCA	Mid block	(Road Names)	btw Bank Place
Severity	Other Injury	Atmosphere	Clear	Sub DCA Code	N02		& Collopy Street
Traffic Control	Giveway sign	Total Vehcles	Total Veh=2				(86 m E of Bank)
Map Refs	VCD ED7 679 P4	Killed	0	PERSON INJURY DETAILS			
Road Number	4951	Serious Injury	0	Vehicle,DIR.(+DCA arrow)	Road User	Age	Sex
KM from Start	0.167 Km , Mansfield	Other Injury	1	Car, S(2)	Passenger	23	F
Speed Zone	40 km/hr	Not Injury	2		Driver	33	F
Urbanisation	Other City/Town			Car, S(1)	Driver	54	F
							Not injured

Road Crash Statistics: Victoria Accident Detail**Page 2**

Location is LGA(s): MANSFIELD; Query: Casualty accidents; Sites: On Maroondah Hwy (184.382 km) between Kitchen Street and Midland Hwy / Midland Highway Inbound Cwy / Mount Buller Road, On Maroondah Hwy (184.372 km) between Kitchen Street and Midland Hwy / Midland Highway Inbound Cwy / Mount Buller Road, On Malcolm Street (2.765 km) between Elvins Street and Ultimo Street, On Mount Buller Road Inbound Cwy (0.167 km) between Bank Place and Collopy Street, Intersection of Maroondah Hwy and Kidston Parade, Intersection of Midland Highway Inbound Cwy and Early Street, Intersection of Highett Street and Malcolm Street; Date range is 01/01/2005 to 31/12/2999; Sorted by location.

ACCIDENT COUNT: 4

Accident No	T20090010762	Light	Unknown	DCA/Accident	110 Cross traffic(intersections only)	Location	Highett Street&	
Date/Time	25/3/2009 Wed 00:00	Road	Dry	Sub DCA	Not Required	(Road Names)	Malcolm Street	
Severity	Other Injury	Atmosphere	Clear	Sub DCA Code	NRQ			
Traffic Control	Stop sign	Total Vehcles	Total Veh=2	PERSON INJURY DETAILS				
Map Refs	VCD ED7 679 P6	Killed	0	Vehicle,DIR.(+DCA arrow)	Road User	Age	Sex	Injury Level
Road Number	153222	Serious Injury	0	Car, N(2)	Driver	26	F	Injured, needed treatment
KM from Start	0.817 Km , Mansfield	Other Injury	1	Car, E(1)	Driver	55	F	Not injured
Speed Zone	50 km/hr	Not Injury	1					
Urbanisation	Other City/Town							

ROAD CRASH INFORMATION SYSTEM

Page 1

Location Formatted Report

25/05/2010

Route=MALCOLM STREET (1904-3842) Severity=All Casualty Date=01/01/2005 to 31/12/2009 ABS=ABS to receive accident

LGA	Map KM	Location	Severity K/SI/Inj Road User/Age/Sex/Injury	Date Time	Day DCA	Traf. Control Sub DCAs	Light Road	Veh Units/ Dir. Object Hit	Accident No MF/Image
MANSFIELD	67906 3058	On MALCOLM STREET (54mE) btw ULTIMO STREET and APOLLO STREET	Serious injury 0/1/0 Dri/44/F/2	07/03/2009 19:30	Sat 171	No control Q04 V01	Day Dry	E * Station W/Emban	T20090008281 0/0
MANSFIELD	679P4 184381	On MAROONDAH HIGHWAY(R) (64mSW) btw MIDLAND HIGHWAY and APOLLO STREET	Other injury a 0/0/1 Dri/53/F/4 Dri/52/F/3	11/09/2009 14:24	Fri 142	No control R01	Day Dry	E * Station Wagon W Station Wagon	T20090035292 0/0

Number of Accidents: 2

Note : * Indicates vehicle # 1 as per DCA chart

NB: Any complex intersections included in this report may not have had all accidents included.

Attachment 6

Section 11, Mansfield Town Structure Plan

11.0 Transport, Access and Parking

A key feature in Mansfield's future will be how easily people can move around and through the town. A growing and more active place will generate more trips increasing the need to manage transport demand. Planning should ensure that people can easily travel by vehicle, bicycle and by foot to work, shopping, places of recreation and community services and appropriate plans for future parking demands.

From a traffic perspective, there are a number of roads and intersections that are currently underperforming from a safety and functionality perspective and require short, medium and long term solutions. In particular, the intersections of Malcolm Street and Highton Lane and Malcolm Street and Highett Street require short to medium term rectification works to improve safety and function. Planned future residential growth in the land around these intersections will place additional pressure on their function and upgrades will be required to be accommodated to match growth in population.

The intersection of High Street and Chenery Street has recently been upgraded to address poor design issues.

Council supports an interim southern and northern route for a heavy vehicle bypass. The southern route runs along Kidston Lane and Malcolm Street. The northern route along High Street, Benalla Road, Dead Horse Lane, Whitfield Road, Mt Battery Road and Greenvale Lane.

The ultimate route will be Withers Lane/Dead Horse Lane/Mansfield-Whitfield Road/Mount Battery Road and Greenvale Lane to avoid large vehicles utilising High Street and Highett Street. A number of key intersections will need to be upgraded. The Structure Plan recommends that the implementation of the heavy vehicle bypass is promoted as a medium term project. The current route along Malcolm Street will be retained in the interim.

The Structure Plan makes a number of recommendations in regard to road and traffic upgrades that will be required during the next 20 years to cater for anticipated growth. The pedestrian and bicycle network is currently disconnected and the Structure Plan includes a number of strategies to improve connectivity throughout the town.

Parking in Mansfield, while generally meeting current demand, becomes overly utilised during key events and peak holiday periods. Pressure on parking will significantly increase as population grows and additional retail opportunities are developed during the next 20 years. The current provision of car parking will not be able to accommodate the parking requirements associated with the increase in population and retail growth that is anticipated. The ability for sites in the town centre to accommodate large areas of on-site car parking is limited due to the relatively small retail lot sizes.

There are a number of larger strategic sites that are capable of providing sufficient on-site car parking and the Structure Plan recommends that new retail developments provide sufficient on-site car parking to meet staff and customer parking demands where possible.

A Parking Overlay and associated schedule should be investigated in the medium term to assist in collecting financial contributions toward the delivery of public car parking spaces where on-site car parking is not able to be provided. The overlay should cover the retail area and sites that are expected to experience increased retail growth. The overlay and schedule can specify the number of car parking spaces to be provided, and the amount of financial contribution to be made in lieu of car parking.

In the short term, there are opportunities to improve current parking areas. The Erril Street and Nolan Street car parks are poorly defined and constructed and are underutilised. The Structure Plan recommends that in the short term these car parks are upgraded and properly line marked, with way finding and directional signage provided to improve the utilisation of these spaces.

The need for suitable long term parking for staff and visitors associated with Mt Buller during the winter peak period is also identified as a priority for Mansfield. A designated area will relieve pressure on the road network surrounding the retail centre.

In general, a high parking demand was not observed for trailers or caravans within Mansfield. However, with expected population and visitor growth, a medium to long term solution for large vehicle parking should be investigated. This area could potentially be used to provide for long term parking in addition to large vehicles as a way of maximising investment. A short term solution to large vehicle parking is the use of the tourist information centre parking or in the longer term the eastern end of Mullum Mullum wetlands next door.

The introduction of a Parking Overlay will assist in providing the financial contributions towards establishing these areas.

11.0 Transport, Access and Parking

OBJECTIVE 1

To provide an efficient movement network for vehicles, pedestrians and cyclists

Strategy 1.1

Identify key roads that require upgrading to facilitate a high level of accessibility and cater for future traffic volumes.

Strategy 1.2

Investigate improvements to key intersections of Malcolm Street/Highton Lane, Malcolm Street/ Hightett Street in consultation with VicRoads.

Strategy 1.3

Identify future on-road and off-road cycle networks and pedestrian infrastructure requirements within the town centre and connections to key services and recreational areas.

Strategy 1.4

Investigate long term opportunities to develop key heavy vehicular route alternatives to re-route large vehicle trips out of the town centre.

Strategy 1.5

Require new residential subdivisions to fund footpath and shared path upgrades along road frontages to improve connectivity.

Strategy 1.6

Require new residential subdivisions adjacent to Fords Creek to set aside land along the creek for the creation of a liner shared path.

OBJECTIVE 2

To ensure that car parking can accommodate existing conditions and future growth.

Strategy 2.1

Require new retail and commercial developments to provide on-site car parking in accordance with the planning scheme requirements, wherever possible.

Strategy 2.2

In the short to medium term upgrade the Erril Street and Nolan Street car parking areas to improve utilisation through construction, line marking and way finding signage.

Strategy 2.3

In the medium term (5-10 years) investigate the application of the Parking Overlay and schedule to the

town centre to meet future car parking demand generated by new retail, tourism and commercial development.

Strategy 2.4

In the short term (0-5 years) investigate long/large vehicle parking along Maroondah Highway adjacent to the tourist information centre and Mullum Mullum Wetlands.

Strategy 2.5

In the short to medium term (0-10 years) investigate locations for a long term secure car parking area within close proximity of the town centre to accommodate parking demand generated by traders, temporary staff associated with Mt Buller and visitors.

OBJECTIVE 3

To ensure that there is sufficient car parking provided in the town centre to cater for existing and future demands.

Strategy 3.1

Provide sufficient off street parking for new commercial developments to meet the needs of staff and customers, where possible.

Strategy 3.2

Encourage new development to provide car parking at the rear of sites (where possible) and provide pedestrian connectivity to the kerbs.

Strategy 3.3

Access to parking areas is to be via secondary streets, laneways or adjoining parking areas, wherever possible.

Strategy 3.4

Access to parking areas should minimise impacts on activated frontages of new development.

Strategy 3.5

In the short term (0-5 years) upgrade the Erril Street and Nolan Street car parking areas to improve utilisation through construction, line marking and way finding signage.

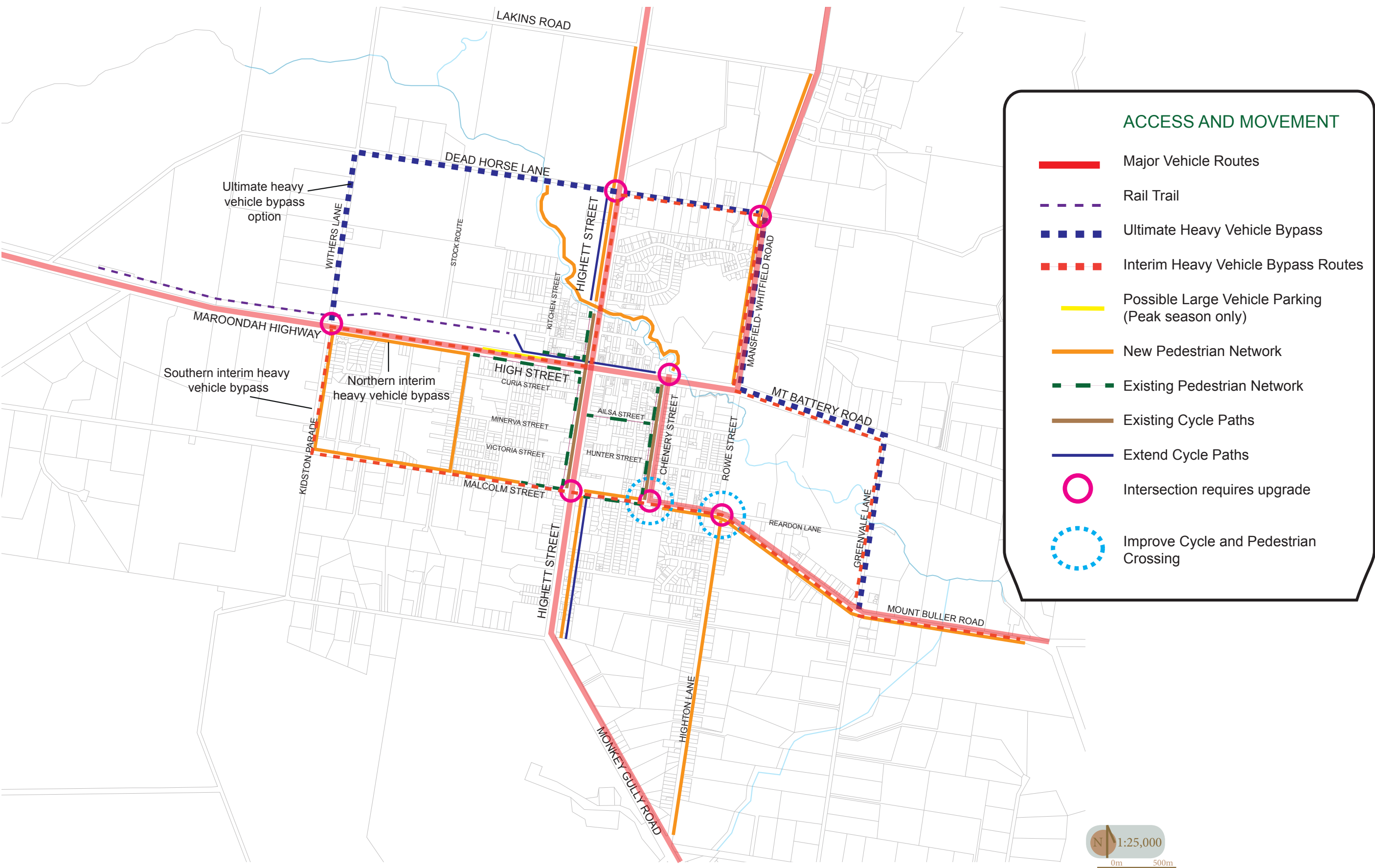
Strategy 3.6

In the short to medium term (0-10 years) investigate sites for the provision of long term parking for staff and visitors.

11.0 Transport, Access and Parking

ACTIONS

1. In the short to medium term (0-10 years) investigate the application of the Parking Overlay and schedule over the town centre area to guide the allocation of parking provision for new retail and commercial development and to assist in collecting financial contributions towards the delivery of public car parking spaces where on-site car parking is not able to be provided.
2. In the short to medium term (0-10 years) investigate sites for the provision of long term parking for staff and visitors.
3. In the short term (0-5 years) prioritise the upgrade of the Erril Street and Nolan Street car parks through proper construction, line marking and way finding measures including signage.
4. Advocate to VicRoads for traffic improvement works to the intersections of High Street and Chenery Street, Malcolm Street and Highett Street and Malcolm Street and Highton Lane.
5. In the short term (0-5 years) provide way finding signage to large vehicle parking at the tourist information centre and in the medium term (5-10 years) additional large vehicle parking to the west of the tourist information centre in the Mullum Mullum wetlands.
6. Provide improved pedestrian paths along Highett Street to Dead Horse Lane, High Street and Maroondah Highway and along Kidston Parade, Malcolm Street and Stoneleigh Road.
7. Investigate opportunities to extend bicycle facilities along Highett Street to Dead Horse Lane and from the Rail Trail to Mt Buller Road.
8. Continue the off-street shared path along Fords Creek to Dead Horse Lane.
9. Provide school and other pedestrian crossings along Malcolm Street in the vicinity of Highett Street, Chenery Street and Highton Lane.
10. Progressively implement the heavy vehicle bypass.



Attachment 7

Traffic Counts – Maroondah Hwy

Daily Traffic Volumes by Austroads Vehicle Class

Report prepared by VicRoads Information Management and Technology
Telephone (03) 9090 4625 for all enquiries.

Date of Report 02/02/2016
Request No 1

Location
MAROONDAH HIGHWAY btwn HIGH STREET & KIDSTON PARADE
VicRoads Region NORTH EASTERN
Local Government MANSFIELD SHIRE

Road Number
2720
Town
Mansfield

VicRoads Internal Reference Information

Stat	Loc	HFlow	Route	Link	Flow	Sequence	MSD	Local Route
15028	9617	12370	539	2188	1	2	ROV	2

Vehicle Type	Monday 9 Sep 2013	Tuesday 10 Sep 2013	Wednesday 11 Sep 2013	Thursday 12 Sep 2013	Friday 13 Sep 2013	Saturday 14 Sep 2013	Sunday 15 Sep 2013	7 day Averages
Cars	1523	1429	1387	1380	1548	1300	1811	1483
Towing	52	31	34	24	29	60	110	49
LIGHT	1575	1460	1421	1404	1577	1360	1921	1531
Rigid 2 Axle	301	240	248	243	246	184	235	242
Rigid 3 Axle	25	43	49	32	105	29	10	42
Rigid 4 Axle	5	5	2	1	6	1	2	3
RIGID	331	288	299	276	357	214	247	287
Semi 3 Axle	5	12	9	6	7	12	28	11
Semi 4 Axle	16	9	11	8	11	12	14	12
Semi 5 Axle	6	4	9	4	7	2	0	5
Semi 6 Axle	13	15	15	7	7	2	0	8
SEMIS	40	40	44	25	32	28	42	36
B Double	6	2	6	5	3	1	0	3
Trk Trailer	0	0	0	0	0	0	0	0
Road Train	0	0	0	0	0	0	0	0
LONG	6	2	6	5	3	1	0	3
Error Bin	0	3	2	1	1	0	0	0
TOTALS	1952	1793	1772	1711	1970	1603	2210	

DEFINITIONS:

LIGHT Austroads Classes One and Two **RIGID** Austroads Classes Three to Five
SEMIS Austroads Classes Six to Nine **LONG** Austroads Classes Ten to Twelve

Unless stated otherwise, all data included in this report is non-holiday data. The definition of holiday periods for the purposes of traffic data collection includes all public holidays and school holidays in the state of Victoria. Refer to the official Victorian government website (<http://www.vic.gov.au/>) for additional information.

DISCLAIMER:

Although every effort has been made to ensure the quality of the data contained in this report, VicRoads cannot guarantee the accuracy of the data and does not accept responsibility for any consequences arising from its use.

Attachment 8

Benefit Cost Ratio analysis

Variables	value	Unit
Travel Time Saving	60	sec/journey
Evaluation Period	30	years
Annual Traffic Growth	2.00%	per year
Discount Rate	10%	per year
Average Daily Traffic Volume	600	vehicle per day
All Trucks	195	vehicle per day

Category	vehicle per day	Travel Time Savings (h)	Value of Time (\$/h)	Travel Time Savings (\$)
Light Vehicles	405	2,464	\$30	\$73,370
Light to Medium Trucks	165	1,004	\$118	\$118,380
Heavy Trucks & B-doubles	30	183	\$154	\$28,178

Benefit/ Cost Category	Total Year 1	Net Present Value - 30 Years
Travel Time Savings - Light Vehicles	\$73,370	\$821,919
Travel Time Savings - Light to Medium Trucks	\$118,380	\$1,326,140
Travel Time Savings - Heavy Trucks & B-doubles	\$28,178	\$315,662
Accident Reduction Benefits	\$2,000	\$22,405
Saving in road maintenance costs	\$1,500	\$16,804
Reduced Noise/Pollution	\$2,500	\$28,006

Total Discounted Savings		\$2,530,935
Project Costs		\$2,505,616
Net Benefit Cost Ratio		1.01

Vehicle Costs									
Category	Cost	Unit	Breakdown		per running hour cost	weighting	product	weighting	product
Running Costs - car	\$ 13,587.00	per year	1.25	hour day	\$29.78				
Light Rigid lt 12t	\$ 875.00	per day	8	hour day	\$ 109.38	50	\$ 5,468.75		
Light Rigid gt 12t	\$ 1,012.00	per day	8	hour day	\$ 126.50	50	\$ 6,325.00		
Light commercial					Weighted Average	\$ 117.94	85	\$ 9,979.33	
Heavy Rigid	\$ 1,282.00	per day	10	hour day	\$ 128.20	30	\$ 3,846.00		
Running Costs - Truck	\$ 1,605.00	per day	10	hour day	\$ 160.50	60	\$ 9,630.00		
Running Costs - B-Double	\$ 1,964.00	per day	10	hour day	\$ 196.40	10	\$ 1,964.00		
Heavy Vehicles					Weighted Average	\$ 154.40	15	\$ 2,375.38	
All commercial vehicles							Weighted Average	\$ 123.55	

All figures taken from www.freightmetrics.com.au

23-033

PRINT button can be found at the bottom of the calculator.

Truck Operating Cost Calculator

Country of operation

Australia

Units: Kilometres, litres, metric tonnes

Step 1: Fuel

Current Fuel Cost

\$

1.40

per Ltr

[Australian Institute of Petroleum Fuel Charts](#)
[National Diesel Average - Click Here](#)

Less Fuel rebate (fuel credit)

\$

0.12003

per Ltr

Fuel Cost including delivery & rebate

\$

1.27997

per Ltr

[See ATO for Fuel Credit details- click here](#)

Step 2: Vehicle Type

Select Type of Truck & Trailer

Curtain Sider - B-Double

Net Average Daily Delivery

24

Tonne

Step 3: Fuel Consumption

Average Vehicle Fuel Burn Rate

1.60

Km / Ltr (Kilometres per Litre) = 62.5 ltrs per 100km

Step 4: Distance and Working Days

Distance Travelled per Day**750**

Kilometres

(Per working day)

Days per week vehicle works

6

Days per week

Weeks per year vehicle works

46

(account for driver holidays and service time)

Vehicle Description / Number

Route Description

From

Destination

Step 5: Finance (per vehicle)

Capital Cost - Vehicle (Truck)

\$

322,572

Vehicle Stamp duty

\$

9,677

Based on a rate of 3%

Capital Cost - Trailer(s)

\$

157,033

Trailer(s) Stamp duty

\$

4,711

Based on a rate of 3%

Miscellaneous costs

\$

15,000

Less Deposit

\$

0**Principle (Loan - Amount Financed)****\$508,993**

Balloon

%

25%

Residual \$127,248

Interest Rate

%

9.50%

Paid monthly in arrears

Loan Period

5.0

Years

Loan repayments are calculated based on constant payments and a constant interest rate (averaged).

Balloon is the residual lump sum payment payable at the end of the loan (if selected to be used).

Annual Depreciation

\$

Guide to depreciation: www.ato.gov.au

Depreciation rates and limits are set by the Tax Office. Speak with your financial advisor for what rate to use.

Step 6: Fixed Costs (per vehicle)

Costs in Step 6 relate only to the costs for a single vehicle

Insurance (Truck & Trailer)

\$

17,311

per year

Road Tolls Paid

\$

20

per day

Registration (Truck & Trailer)	\$	14,769	per year	23-033	Mobile Cost	\$	120	per month
Accounting / Consultancy	\$	500	per year		Telephone Cost	\$	295	per month
Depot / Rent for vehicle	\$	12,500	per year		Administration Staff	\$	1,890	per month
Depot Rates / Insurance	\$	1,500	per year		Office Supplies	\$	240	per month
Driver Wage (click here to check)	\$	278	per day		Miscellaneous	\$	82	per day
Workcover/ Workers Insurance		4.70%	(of wage on top of wage)					
Superannuation		9.00%	(of wage on top of wage)					

(Note: The Results Calculation assumes 52 weeks of driver employment for the wages costs).

Step 7: Service / Maintenance

Vehicle Service Cost (Type A)	\$	930	per service interval every	18,000	Km
Maintenance Cost (Type B)	\$	2,088	per maintenance interval	20,000	Km

(Maintenance includes costs for Brakes / Differential rebuild / Injectors / Alternator / Engine rebuild / Batteries etc.)

Step 8: Tyre Wear

Steer Tyre Cost	\$	774	per tyre	Drive and Trailer Tyre Cost	\$	700	per tyre
Steer Tyre Quantity		2		Drive and Trailer Quantity		32	
Steer Tyre Life		100,000	Km	Drive and Trailer Tyre Life		160,000	Km

Step 9: Fuel Levy Calculation (only if a base fuel rate is used in contract agreement)

Base Rate Fuel Price (if used)	\$	1.00	per Ltr		
Base Rate Less Rebate per Step 1	\$	0.87997	per Ltr	Fuel Levy	10.57 %

Using Current Fuel Price of \$ 1.4 per Ltr equates to a fuel levy of 10.57% over the base rate fuel price of \$ 1 per Ltr

Summary of Estimated Costs - Click Calculate to Update Figures

Cost Summary	Per Annum	Per Month	Per Work Day	Percentage Cost
Fuel (without fuel rebate included)				32.47%
Fuel	165,596.12	13,799.68	599.99	30.5%
Finance - Principle	76,348.97	6,362.41	276.63	14.1%
Finance - Interest **	31,947.85	2,662.32	115.75	5.9%
Depreciation	0.00	0.00	0.00	0.0%
Fixed Costs	105,272.18	8,772.68	381.42	19.4%
Driver	98,618.83	8,218.24	357.31	18.2%
Tyres	32,184.36	2,682.03	116.61	5.9%
Maintenance	21,610.80	1,800.90	78.30	4.0%
Service	10,695.00	891.25	38.75	2.0%
Total Cost Estimate	\$ 542,274.10	45,189.51	1,964.76	100.0%
Distance Travelled	207,000	Km per year - (estimated average)		
Service Intervals	12	per year (estimated average)		
Maintenance Intervals	10	per year (estimated average)		

** Note: Interest amount varies from year to year. Value is the average of the finance period. (See Rule of 78).

RESULTS - Based on Current Fuel Price in Step 1

Operating Margin **10.0%**

Estimate Charge per Day **\$2,183.07** + GST / Tax (Based on \$1.4 per Ltr, less rebate)

Operating Cost per	Day	\$ 1,964.76	Est. Charge per Day	\$ 2,183.07	Margin per Day	\$ 218.31
Estimated Cost per	Tonne	\$ 81.87	Est. Charge per Tonne	\$ 90.96	Margin per Tonne	\$ 9.10
Estimated Cost per	Km	\$ 2.62	Est. Charge per Km	\$ 2.91	Margin per Km	\$ 0.29

23-033

CAUTION: Margin is highly affected by cashflow. Margin shown may not be achieved for various reasons.

Seek accredited financial advice before using these figures.

Margins shown EBITA - (Earnings before Interest, Tax, Amortization)

All Figures exclude GST / Tax considerations.

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The competitive (cost) value of freight can increase/decrease depending on the demand of freight compared to available vehicles.

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All calculated values are provided for information only and are not a quotation, contract or offer by Freight Metrics Pty Ltd.

The accuracy of all figures and prices is not guaranteed and is provided as a guide only.

23-033

PRINT button can be found at the bottom of the calculator.

Truck Operating Cost Calculator

Country of operation

Australia

Units: Kilometres, litres, metric tonnes

Step 1: Fuel

Current Fuel Cost

\$

1.40

per Ltr

[Australian Institute of Petroleum Fuel Charts](#)
[National Diesel Average - Click Here](#)

Less Fuel rebate (fuel credit)

\$

0.12003

per Ltr

Fuel Cost including delivery & rebate

\$

1.27997

per Ltr

[See ATO for Fuel Credit details- click here](#)

Step 2: Vehicle Type

Select Type of Truck & Trailer

Light Rigid -less than or equal to 12 tonnes GVM

Net Average Daily Delivery

24**Tonne**

Step 3: Fuel Consumption

Average Vehicle Fuel Burn Rate

9.00

Km / Ltr (Kilometres per Litre) = 11.11 ltrs per 100km

Step 4: Distance and Working Days

Distance Travelled per Day**750**

Kilometres

(Per working day)

Days per week vehicle works

5

Days per week

Weeks per year vehicle works

46

(account for driver holidays and service time)

Vehicle Description / Number

Route Description

From

Destination

Step 5: Finance (per vehicle)

Capital Cost - Vehicle (Truck)

\$

45,000

Vehicle Stamp duty

\$

1,350*Based on a rate of 3%*

Capital Cost - Trailer(s)

\$

0

Trailer(s) Stamp duty

\$

0*Based on a rate of 3%*

Miscellaneous costs

\$

5,000

Less Deposit

\$

0**Principle (Loan - Amount Financed)****\$51,350**

Balloon

%

25%

Residual

\$12,838

Interest Rate

%

9.50%

Paid monthly in arrears

Loan Period

5.0

Years

Loan repayments are calculated based on constant payments and a constant interest rate (averaged).***Balloon is the residual lump sum payment payable at the end of the loan (if selected to be used).***

Annual Depreciation

\$

Guide to depreciation: www.ato.gov.au***Depreciation rates and limits are set by the Tax Office. Speak with your financial advisor for what rate to use.***

Step 6: Fixed Costs (per vehicle)

Costs in Step 6 relate only to the costs for a single vehicle

Insurance (Truck & Trailer)

\$

1,750

per year

Road Tolls Paid

\$

20

per day

Registration (Truck & Trailer)	\$	556	per year	Mobile Cost	\$	120	per month
Accounting / Consultancy	\$	500	per year	Telephone Cost	\$	295	per month
Depot / Rent for vehicle	\$	12,500	per year	Administration Staff	\$	1,890	per month
Depot Rates / Insurance	\$	1,500	per year	Office Supplies	\$	240	per month
Driver Wage (click here to check)	\$	278	per day	Miscellaneous	\$	82	per day
Workcover/ Workers Insurance		4.70%	(of wage on top of wage)				
Superannuation		9.00%	(of wage on top of wage)				

(Note: The Results Calculation assumes 52 weeks of driver employment for the wages costs).

Step 7: Service / Maintenance

Vehicle Service Cost (Type A)	\$	350	per service interval every	10,000	Km
Maintenance Cost (Type B)	\$	200	per maintenance interval	20,000	Km

(Maintenance includes costs for Brakes / Differential rebuild / Injectors / Alternator / Engine rebuild / Batteries etc.)

Step 8: Tyre Wear

Steer Tyre Cost	\$	250	per tyre	Drive and Trailer Tyre Cost	\$	250	per tyre
Steer Tyre Quantity		2		Drive and Trailer Quantity		4	
Steer Tyre Life		50,000	Km	Drive and Trailer Tyre Life		50,000	Km

Step 9: Fuel Levy Calculation (only if a base fuel rate is used in contract agreement)

Base Rate Fuel Price (if used)	\$	1.00	per Ltr				
Base Rate Less Rebate per Step 1	\$	0.87997	per Ltr	Fuel Levy		3.96	%

Using Current Fuel Price of \$ 1.4 per Ltr equates to a fuel levy of 3.96% over the base rate fuel price of \$ 1 per Ltr

Summary of Estimated Costs - Click Calculate to Update Figures

Cost Summary	Per Annum	Per Month	Per Work Day	Percentage Cost
Fuel (without fuel rebate included)				13.17%
Fuel	24,532.76	2,044.40	106.66	12.2%
Finance - Principle	7,702.50	641.88	33.49	3.8%
Finance - Interest **	3,223.07	268.59	14.01	1.6%
Depreciation	0.00	0.00	0.00	0.0%
Fixed Costs	70,806.00	5,900.50	307.85	35.2%
Driver	82,182.36	6,848.53	357.31	40.8%
Tyres	5,175.00	431.25	22.50	2.6%
Maintenance	1,725.00	143.75	7.50	0.9%
Service	6,037.50	503.13	26.25	3.0%
Total Cost Estimate	\$ 201,384.19	16,782.02	875.58	100.0%
Distance Travelled	172,500	Km per year - (estimated average)		
Service Intervals	17	per year (estimated average)		
Maintenance Intervals	9	per year (estimated average)		

** Note: Interest amount varies from year to year. Value is the average of the finance period. (See Rule of 78).

RESULTS - Based on Current Fuel Price in Step 1

Operating Margin **10.0%**

Estimate Charge per Day **\$ 972.87** + GST / Tax (Based on \$1.4 per Ltr, less rebate)

Operating Cost per	Day	\$ 875.58	Est. Charge per Day	\$ 972.87	Margin per Day	\$ 97.29
Estimated Cost per	Tonne	\$ 36.48	Est. Charge per Tonne	\$ 40.54	Margin per Tonne	\$ 4.05
Estimated Cost per	Km	\$ 1.17	Est. Charge per Km	\$ 1.30	Margin per Km	\$ 0.13

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CAUTION: Margin is highly affected by cashflow. Margin shown may not be achieved for various reasons.

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Margins shown EBITA - (Earnings before Interest, Tax, Amortization)

All Figures exclude GST / Tax considerations.

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PRINT button can be found at the bottom of the calculator.

Truck Operating Cost Calculator

Country of operation

Australia

Units: Kilometres, litres, metric tonnes

Step 1: Fuel

Current Fuel Cost\$ **1.40** per Ltr[Australian Institute of Petroleum Fuel Charts](#)
[National Diesel Average - Click Here](#)Less Fuel rebate (fuel credit) \$ **0.12003** per LtrFuel Cost including delivery & rebate \$ **1.27997** per Ltr [See ATO for Fuel Credit details- click here](#)

Step 2: Vehicle Type

Select Type of Truck & Trailer

Light Rigid -greater than 12 tonnes GVM

Net Average Daily Delivery

24 Tonne

Step 3: Fuel Consumption

Average Vehicle Fuel Burn Rate

5.00

Km / Ltr (Kilometres per Litre) = 20 ltrs per 100km

Step 4: Distance and Working Days

Distance Travelled per Day**750**

Kilometres (Per working day)

Days per week vehicle works

5

Days per week

Weeks per year vehicle works

46

(account for driver holidays and service time)

Vehicle Description / Number

Route Description

From

Destination

Step 5: Finance (per vehicle)

Capital Cost - Vehicle (Truck)

\$ **75,000**

Vehicle Stamp duty

\$ **2,250**

Based on a rate of 3%

Capital Cost - Trailer(s)

\$ **0**

Trailer(s) Stamp duty

\$ **0**

Based on a rate of 3%

Miscellaneous costs

\$ **5,000**

Less Deposit

\$ **0****Principle (Loan - Amount Financed)****\$82,250**

Balloon

% **25%** Residual **\$20,563**

Interest Rate

% **9.50%** Paid monthly in arrears

Loan Period

5.0 Years

Loan repayments are calculated based on constant payments and a constant interest rate (averaged).

Balloon is the residual lump sum payment payable at the end of the loan (if selected to be used).

Annual Depreciation

\$

Guide to depreciation: www.ato.gov.au

Depreciation rates and limits are set by the Tax Office. Speak with your financial advisor for what rate to use.

Step 6: Fixed Costs (per vehicle)

Costs in Step 6 relate only to the costs for a single vehicle

Insurance (Truck & Trailer)

\$ **2,800** per year

Road Tolls Paid

\$ **20** per day

Registration (Truck & Trailer)	\$	880	per year	Mobile Cost	\$	120	per month
Accounting / Consultancy	\$	500	per year	Telephone Cost	\$	295	per month
Depot / Rent for vehicle	\$	12,500	per year	Administration Staff	\$	1,890	per month
Depot Rates / Insurance	\$	1,500	per year	Office Supplies	\$	240	per month
Driver Wage (click here to check)	\$	278	per day	Miscellaneous	\$	82	per day
Workcover/ Workers Insurance		4.70%	(of wage on top of wage)				
Superannuation		9.00%	(of wage on top of wage)				

(Note: The Results Calculation assumes 52 weeks of driver employment for the wages costs).

Step 7: Service / Maintenance

Vehicle Service Cost (Type A)	\$	500	per service interval every	15,000	Km
Maintenance Cost (Type B)	\$	250	per maintenance interval	20,000	Km

(Maintenance includes costs for Brakes / Differential rebuild / Injectors / Alternator / Engine rebuild / Batteries etc.)

Step 8: Tyre Wear

Steer Tyre Cost	\$	550	per tyre	Drive and Trailer Tyre Cost	\$	500	per tyre
Steer Tyre Quantity		2		Drive and Trailer Quantity		4	
Steer Tyre Life		60,000	Km	Drive and Trailer Tyre Life		60,000	Km

Step 9: Fuel Levy Calculation (only if a base fuel rate is used in contract agreement)

Base Rate Fuel Price (if used)	\$	1.00	per Ltr				
Base Rate Less Rebate per Step 1	\$	0.87997	per Ltr	Fuel Levy		6.30	%

Using Current Fuel Price of \$ 1.4 per Ltr equates to a fuel levy of 6.3% over the base rate fuel price of \$ 1 per Ltr

Summary of Estimated Costs - Click Calculate to Update Figures

Cost Summary	Per Annum	Per Month	Per Work Day	Percentage Cost
Fuel (without fuel rebate included)				20.38%
Fuel	44,158.97	3,679.91	192.00	19.0%
Finance - Principle	12,337.50	1,028.13	53.64	5.3%
Finance - Interest **	5,162.57	430.21	22.45	2.2%
Depreciation	0.00	0.00	0.00	0.0%
Fixed Costs	72,180.00	6,015.00	313.83	31.0%
Driver	82,182.36	6,848.53	357.31	35.3%
Tyres	8,912.50	742.71	38.75	3.8%
Maintenance	2,156.25	179.69	9.38	0.9%
Service	5,750.00	479.17	25.00	2.5%
Total Cost Estimate	\$ 232,840.14	19,403.35	1,012.35	100.0%
Distance Travelled	172,500	Km per year - (estimated average)		
Service Intervals	12	per year (estimated average)		
Maintenance Intervals	9	per year (estimated average)		

**** Note: Interest amount varies from year to year. Value is the average of the finance period. (See Rule of 78).**

RESULTS - Based on Current Fuel Price in Step 1

Operating Margin **10.0%**

Estimate Charge per Day **\$ 1,124.83** + GST / Tax (Based on \$1.4 per Ltr, less rebate)

Operating Cost per	Day	\$ 1,012.35	Est. Charge per Day	\$ 1,124.83	Margin per Day	\$ 112.48
Estimated Cost per	Tonne	\$ 42.18	Est. Charge per Tonne	\$ 46.87	Margin per Tonne	\$ 4.69
Estimated Cost per	Km	\$ 1.35	Est. Charge per Km	\$ 1.50	Margin per Km	\$ 0.15

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Margins shown EBITA - (Earnings before Interest, Tax, Amortization)

All Figures exclude GST / Tax considerations.

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Truck Operating Cost Calculator

Country of operation

Australia

Units: Kilometres, litres, metric tonnes

Step 1: Fuel

Current Fuel Cost

\$

1.40

per Ltr

[Australian Institute of Petroleum Fuel Charts](#)
[National Diesel Average - Click Here](#)

Less Fuel rebate (fuel credit)

\$

0.12003

per Ltr

Fuel Cost including delivery & rebate

\$

1.27997

per Ltr

[See ATO for Fuel Credit details- click here](#)

Step 2: Vehicle Type

Select Type of Truck & Trailer

Medium Comb'n -less than 42.5 tonnes GVM

Net Average Daily Delivery

24**Tonne**

Step 3: Fuel Consumption

Average Vehicle Fuel Burn Rate

1.80

Km / Ltr (Kilometres per Litre) = 55.56 ltrs per 100km

Step 4: Distance and Working Days

Distance Travelled per Day**750**

Kilometres

(Per working day)

Days per week vehicle works

6

Days per week

Weeks per year vehicle works

46

(account for driver holidays and service time)

Vehicle Description / Number

Route Description

From

Destination

Step 5: Finance (per vehicle)

Capital Cost - Vehicle (Truck)

\$

180,000

Vehicle Stamp duty

\$

5,400*Based on a rate of 3%*

Capital Cost - Trailer(s)

\$

65,000

Trailer(s) Stamp duty

\$

1,950*Based on a rate of 3%*

Miscellaneous costs

\$

15,000

Less Deposit

\$

0**Principle (Loan - Amount Financed)****\$267,350**

Balloon

%

25%

Residual

\$66,838

Interest Rate

%

9.50%

Paid monthly in arrears

Loan Period

5.0

Years

Loan repayments are calculated based on constant payments and a constant interest rate (averaged).***Balloon is the residual lump sum payment payable at the end of the loan (if selected to be used).***

Annual Depreciation

\$

Guide to depreciation: www.ato.gov.au***Depreciation rates and limits are set by the Tax Office. Speak with your financial advisor for what rate to use.***

Step 6: Fixed Costs (per vehicle)

Costs in Step 6 relate only to the costs for a single vehicle

Insurance (Truck & Trailer)

\$

9,100

per year

Road Tolls Paid

\$

20

per day

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Registration (Truck & Trailer)	\$	8,645	per year	Mobile Cost	\$	120	per month
Accounting / Consultancy	\$	500	per year	Telephone Cost	\$	295	per month
Depot / Rent for vehicle	\$	12,500	per year	Administration Staff	\$	1,890	per month
Depot Rates / Insurance	\$	1,500	per year	Office Supplies	\$	240	per month
Driver Wage (click here to check)	\$	278	per day	Miscellaneous	\$	82	per day
Workcover/ Workers Insurance		4.70%	(of wage on top of wage)				
Superannuation		9.00%	(of wage on top of wage)				

(Note: The Results Calculation assumes 52 weeks of driver employment for the wages costs).

Step 7: Service / Maintenance

Vehicle Service Cost (Type A)	\$	930	per service interval every	18,000	Km
Maintenance Cost (Type B)	\$	1,670	per maintenance interval	20,000	Km

(Maintenance includes costs for Brakes / Differential rebuild / Injectors / Alternator / Engine rebuild / Batteries etc.)

Step 8: Tyre Wear

Steer Tyre Cost	\$	774	per tyre	Drive and Trailer Tyre Cost	\$	700	per tyre
Steer Tyre Quantity		2		Drive and Trailer Quantity		20	
Steer Tyre Life		100,000	Km	Drive and Trailer Tyre Life		160,000	Km

Step 9: Fuel Levy Calculation (only if a base fuel rate is used in contract agreement)

Base Rate Fuel Price (if used)	\$	1.00	per Ltr				
Base Rate Less Rebate per Step 1	\$	0.87997	per Ltr	Fuel Levy		11.60	%

Using Current Fuel Price of \$ 1.4 per Ltr equates to a fuel levy of 11.6% over the base rate fuel price of \$ 1 per Ltr

Summary of Estimated Costs - Click Calculate to Update Figures

Cost Summary	Per Annum	Per Month	Per Work Day	Percentage Cost
Fuel (without fuel rebate included)				35.25%
Fuel	147,196.55	12,266.38	533.32	33.2%
Finance - Principle	40,102.50	3,341.88	145.30	9.1%
Finance - Interest **	16,780.69	1,398.39	60.80	3.8%
Depreciation	0.00	0.00	0.00	0.0%
Fixed Costs	90,937.00	7,578.08	329.48	20.5%
Driver	98,618.83	8,218.24	357.31	22.3%
Tyres	21,316.86	1,776.41	77.24	4.8%
Maintenance	17,284.50	1,440.38	62.63	3.9%
Service	10,695.00	891.25	38.75	2.4%
Total Cost Estimate	\$ 442,931.93	36,910.99	1,604.83	100.0%
Distance Travelled	207,000	Km per year - (estimated average)		
Service Intervals	12	per year (estimated average)		
Maintenance Intervals	10	per year (estimated average)		

** Note: Interest amount varies from year to year. Value is the average of the finance period. (See Rule of 78).

RESULTS - Based on Current Fuel Price in Step 1

Operating Margin **10.0%**

Estimate Charge per Day **\$ 1,783.14** + GST / Tax (Based on \$1.4 per Ltr, less rebate)

Operating Cost per	Day	\$ 1,604.83	Est. Charge per Day	\$ 1,783.14	Margin per Day	\$ 178.31
Estimated Cost per	Tonne	\$ 66.87	Est. Charge per Tonne	\$ 74.30	Margin per Tonne	\$ 7.43
Estimated Cost per	Km	\$ 2.14	Est. Charge per Km	\$ 2.38	Margin per Km	\$ 0.24

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Margins shown EBITA - (Earnings before Interest, Tax, Amortization)

All Figures exclude GST / Tax considerations.

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PRINT button can be found at the bottom of the calculator.

Truck Operating Cost Calculator

Country of operation

Australia

Units: Kilometres, litres, metric tonnes

Step 1: Fuel

Current Fuel Cost

\$

1.40

per Ltr

[Australian Institute of Petroleum Fuel Charts](#)
[National Diesel Average - Click Here](#)

Less Fuel rebate (fuel credit)

\$

0.12003

per Ltr

Fuel Cost including delivery & rebate

\$

1.27997

per Ltr

[See ATO for Fuel Credit details- click here](#)

Step 2: Vehicle Type

Select Type of Truck & Trailer

Heavy Rigid -greater than 16.5 tonnes GVM

Net Average Daily Delivery

24

Tonne

Step 3: Fuel Consumption

Average Vehicle Fuel Burn Rate

3.00

Km / Ltr (Kilometres per Litre) = 33.33 ltrs per 100km

Step 4: Distance and Working Days

Distance Travelled per Day

750

Kilometres

(Per working day)

Days per week vehicle works

5

Days per week

Weeks per year vehicle works

46

(account for driver holidays and service time)

Vehicle Description / Number

Route Description

From

Destination

Step 5: Finance (per vehicle)

Capital Cost - Vehicle (Truck)

\$

180,000

Vehicle Stamp duty

\$

5,400

Based on a rate of 3%

Capital Cost - Trailer(s)

\$

0

Trailer(s) Stamp duty

\$

0

Based on a rate of 3%

Miscellaneous costs

\$

15,000

Less Deposit

\$

0

Principle (Loan - Amount Financed)

\$200,400

Balloon

%

25%

Residual

\$50,100

Interest Rate

%

9.50%

Paid monthly in arrears

Loan Period

5.0

Years

Loan repayments are calculated based on constant payments and a constant interest rate (averaged).

Balloon is the residual lump sum payment payable at the end of the loan (if selected to be used).

Annual Depreciation

\$

Guide to depreciation: www.ato.gov.au

Depreciation rates and limits are set by the Tax Office. Speak with your financial advisor for what rate to use.

Step 6: Fixed Costs (per vehicle)

Costs in Step 6 relate only to the costs for a single vehicle

Insurance (Truck & Trailer)

\$

6,825

per year

Road Tolls Paid

\$

20

per day

Registration (Truck & Trailer)	\$	1,047	per year	Mobile Cost	\$	120	per month
Accounting / Consultancy	\$	500	per year	Telephone Cost	\$	295	per month
Depot / Rent for vehicle	\$	12,500	per year	Administration Staff	\$	1,890	per month
Depot Rates / Insurance	\$	1,500	per year	Office Supplies	\$	240	per month
Driver Wage (click here to check)	\$	278	per day	Miscellaneous	\$	82	per day
Workcover/ Workers Insurance		4.70%	(of wage on top of wage)				
Superannuation		9.00%	(of wage on top of wage)				

(Note: The Results Calculation assumes 52 weeks of driver employment for the wages costs).

Step 7: Service / Maintenance

Vehicle Service Cost (Type A)	\$	750	per service interval every	18,000	Km
Maintenance Cost (Type B)	\$	500	per maintenance interval	20,000	Km

(Maintenance includes costs for Brakes / Differential rebuild / Injectors / Alternator / Engine rebuild / Batteries etc.)

Step 8: Tyre Wear

Steer Tyre Cost	\$	774	per tyre	Drive and Trailer Tyre Cost	\$	700	per tyre
Steer Tyre Quantity		2		Drive and Trailer Quantity		8	
Steer Tyre Life		100,000	Km	Drive and Trailer Tyre Life		160,000	Km

Step 9: Fuel Levy Calculation (only if a base fuel rate is used in contract agreement)

Base Rate Fuel Price (if used)	\$	1.00	per Ltr				
Base Rate Less Rebate per Step 1	\$	0.87997	per Ltr	Fuel Levy		8.47	%

Using Current Fuel Price of \$ 1.4 per Ltr equates to a fuel levy of 8.47% over the base rate fuel price of \$ 1 per Ltr

Summary of Estimated Costs - Click Calculate to Update Figures

Cost Summary	Per Annum	Per Month	Per Work Day	Percentage Cost
Fuel (without fuel rebate included)				26.66%
Fuel	73,598.27	6,133.19	319.99	24.9%
Finance - Principle	30,060.00	2,505.00	130.70	10.2%
Finance - Interest **	12,578.46	1,048.20	54.69	4.3%
Depreciation	0.00	0.00	0.00	0.0%
Fixed Costs	76,372.00	6,364.33	332.05	25.9%
Driver	82,182.36	6,848.53	357.31	27.9%
Tyres	8,707.80	725.65	37.86	3.0%
Maintenance	4,312.50	359.38	18.75	1.5%
Service	7,187.50	598.96	31.25	2.4%
Total Cost Estimate	\$ 294,998.89	24,583.24	1,282.60	100.0%
Distance Travelled	172,500	Km per year - (estimated average)		
Service Intervals	10	per year (estimated average)		
Maintenance Intervals	9	per year (estimated average)		

** Note: Interest amount varies from year to year. Value is the average of the finance period. (See Rule of 78).

RESULTS - Based on Current Fuel Price in Step 1

Operating Margin **10.0%**

Estimate Charge per Day **\$ 1,425.12** + GST / Tax (Based on \$1.4 per Ltr, less rebate)

Operating Cost per	Day	\$ 1,282.60	Est. Charge per Day	\$ 1,425.12	Margin per Day	\$ 142.51
Estimated Cost per	Tonne	\$ 53.44	Est. Charge per Tonne	\$ 59.38	Margin per Tonne	\$ 5.94
Estimated Cost per	Km	\$ 1.71	Est. Charge per Km	\$ 1.90	Margin per Km	\$ 0.19

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Margins shown EBITA - (Earnings before Interest, Tax, Amortization)

All Figures exclude GST / Tax considerations.

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Car Ownership Cost Calculator

Vehicle Cost	45,000		Total Repayments	\$59,579.25
Stamp Duty	1,500	(Dependent on Vehicle Cost - Rate varies between States)		
Deposit	0		Total Interest Paid	\$12,779.25
Loan Amount	\$46,500			
Loan Period	5.00	(Years)	Loan Period (in months)	60.0
Interest Rate (Effective)	10.00%	(Annual)	Flat Annual Interest Rate	3.30%
Residual	40%		Residual (Balloon)	\$18,600.00
			Monthly Repayment (in arrears)	\$752.79
Monthly Account Fee	5.00		Average Weekly Repayment	\$173.72

(Caution Note: Some loan periods may require a final repayment to complete the principle balance.)

Finance Calculator Above (Interest Calculated Monthly - Excludes finance fees and charges)

Fuel Cost	1.50	\$ per Litre		
Fuel Consumption	12.00	Litres per 100 kilometers		
Kilometers per Week	350	Kilometers	Distance Travelled per Year	18,200 Km
Insurance Costs	1,100.00	Registration	620.00	
Service Cost	420.00	Service Interval	15,000	Km
Cost per Tyre	180.00	Tyre Life	55,000	Km

Summary of Estimated Ownership Costs

Fuel	\$3,276.00 per year	\$63.00 per week
Finance	\$9,033.51 per year	\$173.72 per week
Tyres	\$238.25 per year	\$4.58 per week
Servicing	\$420.00 per year	\$8.08 per week
Registration	\$620.00 per year	\$11.92 per week
Total Costs	\$13,587.77 per year	\$261.30 per week

Distance travelled per year	18,200 kilometers
Cost per kilometer	\$0.747 \$ per km
Estimated services per year	1

All Figures exclude GST / Tax & Depreciation considerations.

Estimated Early Vehicle Sale / Finance Exit Costs

Finance Month of Exit	36	Principle Balance Remaining \$	12,846.32
(Est. years of ownership)	3.00	Residual (Balloon) Owing \$	18,600.00
		Early Exit Charges	0.00
		Estimated Total Payable to Exit Finance in month 36	\$ 31,446.32

(Terms and costs of early exit may vary and are dependant on the terms of your finance contract.)
(Always review your affordability, costs, and finance with an accredited financial advisor before using these figures.)

Amortization Table (Interest Calculated Monthly - Excludes finance fees and charges)

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Year	Month	Monthly Repayment	Interest Repayment	Cumulative Interest	Principle	Cumulative Principle	Principle Balance
	1	\$752.79	\$387.50	\$387.50	\$360.29	\$360.29	\$46,139.71
	2	\$752.79	\$384.50	\$770.00	\$363.29	\$723.59	\$45,776.41
	3	\$752.79	\$381.47	\$1,147.45	\$366.32	\$1,089.91	\$45,410.09
	4	\$752.79	\$378.42	\$1,519.81	\$369.38	\$1,459.29	\$45,040.71
	5	\$752.79	\$375.34	\$1,887.04	\$372.45	\$1,831.74	\$44,668.26
0.5	6	\$752.79	\$372.24	\$2,249.10	\$375.56	\$2,207.30	\$44,292.70
	7	\$752.79	\$369.11	\$2,605.94	\$378.69	\$2,585.98	\$43,914.02
	8	\$752.79	\$365.95	\$2,957.53	\$381.84	\$2,967.82	\$43,532.18
	9	\$752.79	\$362.77	\$3,303.81	\$385.02	\$3,352.85	\$43,147.15
	10	\$752.79	\$359.56	\$3,644.74	\$388.23	\$3,741.08	\$42,758.92
	11	\$752.79	\$356.32	\$3,980.28	\$391.47	\$4,132.55	\$42,367.45
1	12	\$752.79	\$353.06	\$4,310.38	\$394.73	\$4,527.28	\$41,972.72
	13	\$752.79	\$349.77	\$4,635.00	\$398.02	\$4,925.30	\$41,574.70
	14	\$752.79	\$346.46	\$4,954.10	\$401.34	\$5,326.64	\$41,173.36
	15	\$752.79	\$343.11	\$5,267.62	\$404.68	\$5,731.32	\$40,768.68
	16	\$752.79	\$339.74	\$5,575.51	\$408.05	\$6,139.37	\$40,360.63
	17	\$752.79	\$336.34	\$5,877.75	\$411.45	\$6,550.83	\$39,949.17
1.5	18	\$752.79	\$332.91	\$6,174.26	\$414.88	\$6,965.71	\$39,534.29
	19	\$752.79	\$329.45	\$6,465.02	\$418.34	\$7,384.05	\$39,115.95
	20	\$752.79	\$325.97	\$6,749.96	\$421.83	\$7,805.88	\$38,694.12
	21	\$752.79	\$322.45	\$7,029.04	\$425.34	\$8,231.22	\$38,268.78
	22	\$752.79	\$318.91	\$7,302.22	\$428.89	\$8,660.10	\$37,839.90
	23	\$752.79	\$315.33	\$7,569.44	\$432.46	\$9,092.56	\$37,407.44
2	24	\$752.79	\$311.73	\$7,830.66	\$436.06	\$9,528.63	\$36,971.37
	25	\$752.79	\$308.09	\$8,085.82	\$439.70	\$9,968.32	\$36,531.68
	26	\$752.79	\$304.43	\$8,334.87	\$443.36	\$10,411.69	\$36,088.31
	27	\$752.79	\$300.74	\$8,577.76	\$447.06	\$10,858.74	\$35,641.26
	28	\$752.79	\$297.01	\$8,814.44	\$450.78	\$11,309.52	\$35,190.48
	29	\$752.79	\$293.25	\$9,044.87	\$454.54	\$11,764.06	\$34,735.94
2.5	30	\$752.79	\$289.47	\$9,268.98	\$458.33	\$12,222.39	\$34,277.61
	31	\$752.79	\$285.65	\$9,486.72	\$462.15	\$12,684.54	\$33,815.46
	32	\$752.79	\$281.80	\$9,698.05	\$466.00	\$13,150.53	\$33,349.47
	33	\$752.79	\$277.91	\$9,902.90	\$469.88	\$13,620.41	\$32,879.59
	34	\$752.79	\$274.00	\$10,101.23	\$473.80	\$14,094.21	\$32,405.79
	35	\$752.79	\$270.05	\$10,292.98	\$477.74	\$14,571.95	\$31,928.05
3	36	\$752.79	\$266.07	\$10,478.09	\$481.73	\$15,053.68	\$31,446.32
	37	\$752.79	\$262.05	\$10,656.51	\$485.74	\$15,539.42	\$30,960.58
	38	\$752.79	\$258.00	\$10,828.18	\$489.79	\$16,029.21	\$30,470.79
	39	\$752.79	\$253.92	\$10,993.06	\$493.87	\$16,523.08	\$29,976.92
	40	\$752.79	\$249.81	\$11,151.07	\$497.98	\$17,021.06	\$29,478.94
	41	\$752.79	\$245.66	\$11,302.17	\$502.13	\$17,523.20	\$28,976.80
3.5	42	\$752.79	\$241.47	\$11,446.29	\$506.32	\$18,029.51	\$28,470.49
	43	\$752.79	\$237.25	\$11,583.38	\$510.54	\$18,540.05	\$27,959.95
	44	\$752.79	\$233.00	\$11,713.38	\$514.79	\$19,054.85	\$27,445.15
	45	\$752.79	\$228.71	\$11,836.23	\$519.08	\$19,573.93	\$26,926.07
	46	\$752.79	\$224.38	\$11,951.87	\$523.41	\$20,097.34	\$26,402.66
	47	\$752.79	\$220.02	\$12,060.24	\$527.77	\$20,625.11	\$25,874.89
4	48	\$752.79	\$215.62	\$12,161.28	\$532.17	\$21,157.28	\$25,342.72
	49	\$752.79	\$211.19	\$12,254.93	\$536.60	\$21,693.88	\$24,806.12
	50	\$752.79	\$206.72	\$12,341.12	\$541.07	\$22,234.95	\$24,265.05
	51	\$752.79	\$202.21	\$12,419.80	\$545.58	\$22,780.54	\$23,719.46
	52	\$752.79	\$197.66	\$12,490.91	\$550.13	\$23,330.67	\$23,169.33
	53	\$752.79	\$193.08	\$12,554.37	\$554.71	\$23,885.38	\$22,614.62
4.5	54	\$752.79	\$188.46	\$12,610.13	\$559.34	\$24,444.72	\$22,055.28
	55	\$752.79	\$183.79	\$12,658.12	\$564.00	\$25,008.72	\$21,491.28
	56	\$752.79	\$179.09	\$12,698.27	\$568.70	\$25,577.42	\$20,922.58
	57	\$752.79	\$174.35	\$12,730.53	\$573.44	\$26,150.86	\$20,349.14
	58	\$752.79	\$169.58	\$12,754.83	\$578.22	\$26,729.07	\$19,770.93
	59	\$752.79	\$164.76	\$12,771.09	\$583.03	\$27,312.11	\$19,187.89
5	60	\$587.89	\$159.90	\$12,779.25	\$587.89	\$27,900.00	\$18,600.00
	61	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

				23-033			
5.5	62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
6	67	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	69	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
6.5	72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	74	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	76	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
7	77	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	83	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	84	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Residual (Balloon) to settle at end of Finance Period \$18600

All Figures exclude GST / Tax & Depreciation considerations.

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The cost of finance can vary depending on fees and charges. Confirm your final repayment with your financier.

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The accuracy of all figures and prices is not guaranteed and is provided as a guide only.

Please contact your qualified financial advisor before using these figures or making any significant financial commitments.

Attachment 9

Strategic Resource Plan

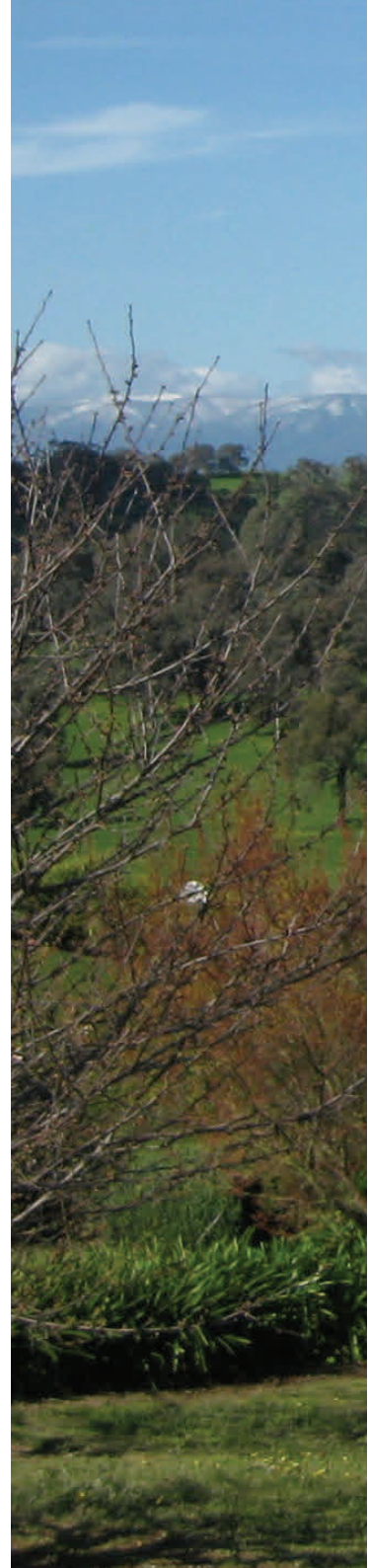
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33 Highett Street Mansfield Victoria 3722
03 5775 8555
council@mansfield.vic.gov.au
www.mansfield.vic.gov.au



Find us on Facebook
www.facebook.com/MansfieldShireCouncil
www.facebook.com/NationalRelayService



Attachment 10

Cost Schedule

SCHEDULE OF QUANTITIES

Dead Horse Lane (East) & Mt Battery Road Heavy Vehicle Bypass

Item	Description of Works	Quantity	Unit	Rate (\$)	Amount (\$)
1	PRELIMINARIES				
1.1	Site establishment including mobilisation of all materials, personnel, plant and machinery, obtaining of insurances, construction preliminaries, temporary fencing and permits as required. Inspections of property and assets	1	Item	\$15,000.00	\$15,000.00
1.2	Environmental management in accordance with VicRoads Specifications	1	Item	\$12,000.00	\$12,000.00
1.3	Traffic management in accordance with VicRoads specifications including, signing, barricades and barriers	1	Item	\$16,000.00	\$16,000.00
1.4	Cultural Heritage management including site induction	1	Item	\$4,000.00	\$4,000.00
1.5	Quality Control including job specific QA plan, testing of materials, ITP's	1	Item	\$12,000.00	\$12,000.00
1.6	Survey & setout of works	1	Item	\$8,000.00	\$8,000.00
1.7	Service Location	20	No.	\$250.00	\$5,000.00
2	CONCRETE & DRAINAGE				
	Excavate, supply, bed, lay, joint and backfill with material as specified to pavement / topsoil level and surface restoration consisting with <i>IDM Standard Drawing SD310</i>				
2.1	Construct B2 kerb & channel on minimum 75mm depth of CL3 FCR base material or approved equivalent to consistent design line and level (includes terminals and transitions)	186	m	\$140.00	\$26,040.00
2.2	Construct reinforced concrete footpath - 1.5m wide x 125mm deep 25mpa concrete with SL72 mesh centrally located on appropriate chairs. Includes dowel bars as specified to tie to existing kerbs & footpaths. Includes 50mm thick Class 3 FCR bedding as specified.	14	m ²	\$120.00	\$1,680.00
2.3	450dia Class 4 RCP - complete supply and installation	180	m	\$235.00	\$42,300.00
2.4	375dia Class 4 RCP - complete supply and installation	90	m	\$210.00	\$18,900.00
2.5	200mm beaching rock	80	m ²	\$25.00	\$2,000.00
3	EARTHWORKS				
	Excavate to line and level to form subgrade and place suitable material as fill where required to form batters and verges including excavation, forming, trimming for road pavement, filling of road including compaction of subgrade to 95% Standard Compaction and proof rolling for 'soft spots' and disposal of surplus excavated materials including any tip fees (tenders should make their own arrangements to dispose of spoil material).				
3.1	Demolition and removal of redundant driveway and footpath	15	No.	\$500.00	\$7,500.00
3.2	Clear & grub - grass and shrubs	8000	m ²	\$1.00	\$8,000.00
3.3	Strip all roadworks areas of topsoil to a depth of 100mm and stockpile for re-use in reinstatement works	7194	m ²	\$2.50	\$17,985.00
3.4	Earthworks to spoil	2245	m ³	\$12.00	\$26,940.00
3.5	Earthworks to stockpile		m ³		
3.6	Roadside table drains	3500	m	\$4.00	\$14,000.00
3.7	Supply and spread topsoil to earthworks batters, areas of redundant pavement and all other disturbed areas and seed with approved species	1440	m ²	\$12.00	\$17,280.00
4	PAVEMENTS				
	Construction of a sealed road pavement including preparation work, supply of all materials, place, consolidation in accordance with relevant specifications and drawings. Includes testing every 750m2 and preparation for seal				
4.1	Subgrade preparation including compaction to 95% Modified Compaction	17200	m ²	\$20.00	\$344,000.00
4.2	150mm compacted depth 40mm Class 4 Fine Crushed Rock, compacted to at least 97% modified compaction	17200	m ³	\$26.00	\$447,200.00
4.3	150mm compacted depth 20mm Class 3 Fine Crushed Rock, compacted to at least 99% modified compaction	17200	m ³	\$30.00	\$516,000.00
4.4	150mm compacted depth 20mm Class 1 Fine Crushed Rock, compacted to at least 100% modified compaction	17200	m ³	\$32.00	\$550,400.00
4.5	Rural driveways	36	Item	\$2,500.00	\$90,000.00
5	PAVEMENT SEAL				
	Final seal to be applied prior to 1 April 2019				
5.1	7mm primer seal to pavement including 150mm overlap to existing pavement	17200	m ²	\$5.50	\$94,600.00
5.2	14mm high strength final seal (5% rubber)	17200	m ²	\$7.00	\$120,400.00

6	LINEMARKING				
	2 coats long life paint applied post final seal. Include interim centreline and statcon marking at corners and intersection				
6.1	Edge line	3440	m	\$4.00	\$13,760.00
6.2	Barrier line	1720	m	\$4.00	\$6,880.00
6.3	Giveway line	84	m	\$15.00	\$1,260.00
6.4	Continuity line	125	m	\$4.00	\$500.00
6.5	Turn arrows	17	m	\$20.00	\$340.00
7	ROADSIDE FURNITURE				
	Includes supply and install				
7.1	Guide posts	90	No.	\$40.00	\$3,600.00
7.2	Standard signs	12	No.	\$150.00	\$1,800.00
7.3	RRPM's	450	No.	\$20.00	\$9,000.00
8	DEMOBILISATION				
8.1	Site disestablishment including removal of all materials, personnel, plant and machinery, site clean up and restoration. Post construction inspections of property and assets	1	Item	\$15,000.00	\$15,000.00
TOTAL WORKS SCHEDULE A (excluding GST)					\$2,469,365.00

SCHEDULE OF QUANTITIES - WORKS SCHEDULE B - PROVISIONAL WORKS

Item	Description of Works	Quantity Estimate	Unit	Rate (\$)	Amount (\$)
11	MISCELLANEOUS				
11.1	Service relocation	1	Item	\$10,000.00	\$10,000.00
11.2	Subgrade correction, remove and replace with 40mm CL4 FCR	450	m3	\$25.00	\$11,250.00
11.3	Dayworks	1	Item	\$15,000.00	\$15,000.00
TOTAL WORKS SCHEDULE B (excluding GST)					\$36,250.00

TENDER COSTING SUMMARY

SUBTOTAL WORKS SCHEDULE A (Excluding GST)	\$2,469,365.00
SUBTOTAL PROVISIONAL WORKS SCHEDULE B (Excluding GST)	\$36,250.00
TOTAL OF ALL SCHEDULES (Excluding GST)	\$2,505,615.00
GST (10%)	\$250,561.50
PROJECT TOTAL (Including GST)	\$2,756,176.50



HEAVY VEHICLE SAFETY AND PRODUCTIVITY PROGRAM ROUND SIX *OFFER OF FUNDING*

Our Ref: NOM-HVC-000138

This form **must** be completed and returned by **13 November 2018**.

Proponent Name	Mansfield Shire Council
Project Name	Mansfield Shire Council – Mount Battery Road and Dead Horse Lane, Mansfield – widen and intersection upgrade
Project Description (What needs to be constructed)	The construction of stages 3 and 4 of the new heavy vehicle bypass by widening the road and upgrading the intersection at Mount Battery Road (Mansfield Whitfield Rd) and Dead Horse Lane near Mansfield, will increase productivity by providing a freight link between two arterial roads and bypassing the Mansfield town centre.
Australian Government Contribution	Up to \$1,252,808
Job numbers? Expected number of full-time positions directly related to the project.	25

This document needs to be read in conjunction with the HVSP Round Six Explanatory Information document.

Required Actions

You should complete all relevant information requests and confirmations in this document, sign and return the scanned document to hvspp@infrastructure.gov.au. Do not send hardcopies. Councils should also provide an email copy to their state/territory road agency contact.

Construction must not begin prior to Council receiving confirmation from the Department that the project may commence (construction means actual on ground works at the project site and/or the fabrication of major components off-site) and tenders cannot be accepted (i.e. contracts cannot be executed).

Confirmations from Proponent

The National Land Transport Act 2014 requires the Department to ensure that all projects continue to meet the eligibility requirements of the Program prior to formal approval of funding.

In order to continue to be eligible for funding the Council needs to confirm all the following are YES responses. If you answer NO to any of these questions, you will NOT be eligible to accept this *Offer of Funding*.

Proponent to respond to each of the following confirmations	Yes / No
The Proponent will wait until it receives formal confirmation (and a copy of the <i>Project Agreement</i>) from the Department before commencing construction. (Note: internal planning, approvals and design work can be undertaken at this stage).	Yes
Matching Funding has been confirmed – see Section 1 in the Explanatory Information for details.	Yes
The Proponent acknowledges that funding is for the nominated project only and substitution of projects cannot occur.	Yes
Only external costs incurred and paid after the date of the Instrument will be included in the final Total Project Cost	Yes
Construction is scheduled to commence by 1 July 2019.	Yes
Construction is scheduled to be completed by 30 June 2021.	Yes

If you have answered No to ANY of the above, you must contact the Department immediately.

Funding

Australian Government Funding (GST Exclusive)	Up to \$1,252,808
Council & Other Funding	\$1,252,808
State/Territory Government Funding	\$0
Total Project Cost (GST exclusive)	\$2,505,616

Construction Dates

	Revised Scheduled Dates <i>Proponent to complete</i>
Scheduled Construction Commencement Date. <i>This needs to be before 1 July 2019.</i>	/ /
Scheduled Construction End Date <i>This needs to be before 30 June 2021.</i>	/ /

Milestones, Payments and Reporting

(See Section 2 of the Explanatory Information for full details)

Milestone Event	Milestone Date	Amount of Australian Government Funding
Commencement of Construction	1 February 2020	\$400,000
2 nd milestone	1 October 2020	\$450,000
Project Completion and submission of the Post Completion Report	1 October 2021	\$402,808
Australian Government Funding		Up to \$1,252,808

Milestones: Reports for milestones completed prior to the milestone date can be submitted to the Department as soon as possible and the Department will bring forward the milestone to enable processing and payment

The Commencement of Construction (if shown) and Post Completion dates are the last date(s) for making claims. If you have not made a satisfactory claim for payment by that date you will need to provide written evidence as to why the Australian Government commitment should remain.

Payments to Councils will be made through the relevant State/Territory road agency.

Reporting: You are required to provide an updated, bi-annual report, by 5 March and 5 November to your State/Territory Road Agency and the Australian Government.

Tender Exemption

Will the Proponent be issuing a public tender for the construction works?	Yes	If No, you need to complete the 'Request for Exemption Form' provided with this <i>Offer of Funding</i> and return with this form. (Refer Attachment B). Selection of a contractor from a Panel that was created from a Public Tender process does not need a Tender Exemption.
---	-----	--

Proponent Contact Officer

Proponent Contact Officer	s47F - personal privacy
Contact Officer Phone Number	s47F - personal privacy

Australian Government Contact

If you need assistance in relation to this *Offer of Funding* or the Program in general, please contact the Department's Heavy Vehicle Safety and Productivity Program information line on:

Telephone 02 6274 8040 or
Email hvspp@infrastructure.gov.au

State/Territory Road Agency Contact For Councils

s47F - personal privacy

Proponent Acceptance

The Proponent accepts and agrees with the administrative and funding requirements outlined in this package as required by the Australian Government.

Signed s47F - personal privacy

Name Alex Green

Position Chief Executive Officer

Mansfield Shire Council

Date 21/11/2018

This document must be signed by a person authorised to commit funding to this project.

Next Steps

Upon receipt and acceptance of the *Offer of Funding*, the Department will complete its formal acceptance procedure that can take several weeks. When it has been formally approved, the Department will send you an email confirming that all arrangements are in place.

Do not undertake any construction on the site of the project or accept any tenders for construction prior to receiving the Australian Government's confirmation of approval.

We wish you well with your project and look forward to receiving your updates.



Australian Government

Department of Infrastructure, Transport, Regional Development and Communications

s47F - personal privacy

s47F - personal privacy

A/g Director
National Targeted Road Infrastructure Programs
Infrastructure Investment Division

Subject: 099008-18VIC-HV6 - Mansfield Shire Council - Mansfield Heavy Vehicle Bypass Upgrade

☐ Cost Saving ☐ Cost Increase ☒ Schedule Variation ☐ Cancellation/Withdrawal

Reasons

Mansfield Shire Council (MSC) has requested the Mansfield Heavy Vehicle Bypass Upgrade project be scheduled for completion of construction later than originally forecasted to December 2022. Consultant staffing challenges due to COVID and significant staff turnover causing extensive delays during design that could not have been foreseen. This issue became more noticeable as design progressed past the start of 2022. Addressing the issue took some time but the consultant bought on more resources to ensure the project was completed with minimal delay. This project is stage 2 of the bypass.

Further information can be found at **Attachment A**.

Assessment

The requested schedule change would result in the project being delivered outside of the guidelines for Round 6 of the Heavy Vehicle and Safety Productivity Programme (HVSP), but otherwise has no impacts on scope or costs associated with the program.

MSC's request is reasonable as COVID-19 restrictions and staff challenges heavily affect councils and small businesses with smaller resource pools, and the flow on consequences could have not been foreseen at the time Mansfield Council made their application. As the request meets the criteria of the HVSP Variation Guide, the recommended course of action is to agree to schedule change.

Administration

In accordance with s93 of the NLT Act and Schedule 1, Item 1.03 of the Minister's National Land Transport Delegation Instrument dated 6 January 2020, you have the authority to vary the Project Approval Instrument, including approving a schedule change to the project outside of the guidelines.

Recommendation

That you agree to the request by signing this minute.

We will write to the proponent to advise them of your decision.

s47F - personal privacy

(Signed / Not signed / Discuss
s47F - personal privacy

Assistant Director
Bridges Renewal Program

05/07/2022

A/g Director
National Targeted Road Infrastructure
Programs

5 July 2022

Attachments:

Attachment A: Request from Proponent.



Bridges Renewal Program

Heavy Vehicle Safety and Productivity Program

Project Variation Request

April 2021

Introduction

This project variation request is used whenever one of the three key features of your project is changing: scope, cost or schedule.

All changes to any of these features must be approved in advance, with the following two exceptions:

- Cost savings may be advised at the completion of the project. Your final payment (and other payments if required) will be amended to reflect the savings.
- Early completion of a project can be advised at the completion of the project. The Australian Government reserves the right for payments for early completed projects to be paid according to the original timetable.

All sections of the form are mandatory.

Returning the form

Please check that you have completed all sections of the form, including signature (electronic is acceptable). Once complete this document should be returned by email to:

- bridgesrenewal@infrastructure.gov.au or
- HVSP@infrastructure.gov.au

Proponents should also provide an email copy to their state/territory transport/infrastructure agency contact.

Questions

Should you have any questions or concerns regarding this form, please contact the National Targeted Road Infrastructure Program helpdesk on either of the email addresses above, or by calling (02) 6274 8040.

Next steps

Once this form is received the Department will check that it meets our requirements. The Minister or their delegate will then be asked to make a decision. You will be advised by email of that decision. If we need more information about your request we will contact you. This process can take several weeks, depending on the complexity of the request.

In the event that your request is denied funding may be withdrawn from the project, including funding already paid. The Australian Government may instead require you to complete the project to the cost, schedule and scope as agreed.

About the project

Proponent	Mansfield Shire Council
Project Name	HV6 (Heavy Vehicle Alternate Route - Stage 2)
Project Number	099008-18VIC-HV6

About you

Name	s47F - personal privacy
Role	Capital Projects Officer
Phone number	s47F - personal privacy
Email address	s47F - personal privacy

What is changing?

Complete all that apply

☐ Cost Change:

If your project is complete and you are not requesting additional funding you do not need to complete.

Funding Source	Current Approved Funding (\$)	Requested change (\$) (negative for savings)	Revised Funding (\$)
Australian Government			
Proponent			
Other			
TOTAL			

☐ Scope Change:

Current approved scope (from your approval instrument)
Proposed scope

☒ Schedule Change:

If your project will commence and be completed within the existing timeframe for that round approval is not required.

Event	Current Approved Date (from your offer of funding)	Requested date
Commencement of Construction	30/5/2022	Aug 2022
Other milestone (where applicable)		
Physical completion		Dec 2022
Provision of PCR	30/06/2022	Dec 2022

Current round timeframes

Bridges Renewal Program			Heavy Vehicle Safety and Productivity Program		
Round	Commencement	Completion	Round	Commencement	Completion
BRP3	Jul 2018	Dec 2019	HVSPP5	Jun 2017	Jun 2019
BRP4	Jun 2020	Dec 2022	HVSPP6	Jul 2019	Jun 2021
BRP5	Dec 2021	Dec 2022	HVSPP7	Dec 2021	Dec 2022

Rationale

Please explain the reasons for the change to the project. At a minimum include:

- What was the issue or issue which led to the need for change?
- When you identified that the project would not be able to delivered as agreed?
- At what point of the build was the issue identified (design, tender, construction, etc.)?
- Whether the issue could have been foreseen?
- What actions have been taken to address the issue and minimise or mitigate impacts?

Rationale

Consultant staffing challenges due to COVID have resulted in extensive delays during design. During the evaluation for design consultants, Council prioritised contractors who could meet the timeframes when awarding the project and awarded on this basis. Unfortunately, finalising the design took longer than planned by the consultant as they faced significant staff turnover causing delays which could not have been foreseen. This issue became more noticeable as design progressed past the start of 2022. Addressing the issue took some time but the consultant bought on more resources to ensure the project was completed with minimal delay. Council stressed our deadlines and priorities to ensure the project could move forward in the most efficient way.

Council is committed to delivering this project and has advertised publicly and received tenders for the project and currently will be awarding the project for construction at the June Council Meeting which is a major delivery milestone.

Declaration

By signing below you confirm that all information provided in this report is true and correct.

Signature	s47F - personal privacy	Date	10 / 05 / 2022
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Further information

What do you consider in making your decision?

In making a decision we consider a range of factors. The primary factor is whether the project remains value for money.

Other factors include:

- Whether the project has commenced construction (requests for projects which have not commenced projects are more likely to be asked to resubmit in a future round).
- The extent to which a problem could have been foreseen.
- The likelihood that the project will now meet its cost, scope and schedule.
- The experience of the proponent in delivering projects.

Who makes the decision?

Who makes the decision depends on the complexity of the decision. Most decisions are made by the Assistant Secretary with responsibility for the program. Very complex or marginal decisions may be made by the Minister responsible for the program.

What if I have already changed cost/scope/timeframe?

We strongly encourage all proponents to contact us before one of these parameters change. In some cases, such as natural disasters, this may not be possible. Requests for change can be granted retrospectively, but the circumstances which prevented application prior to the change will need to be extensively outlined.

What if my request is denied?

If your request is denied, you will need to continue to deliver to the cost, scope and schedule as contained in your offer or funding or most recent funding instrument. If you cannot do so, you will need to withdraw the project from the program.

How long does it take to make a decision?

The process of coming to a decision can take several months, depending on the complexity of the request, and other priorities. We may also request further information to clarify or expand on the information you have provided.