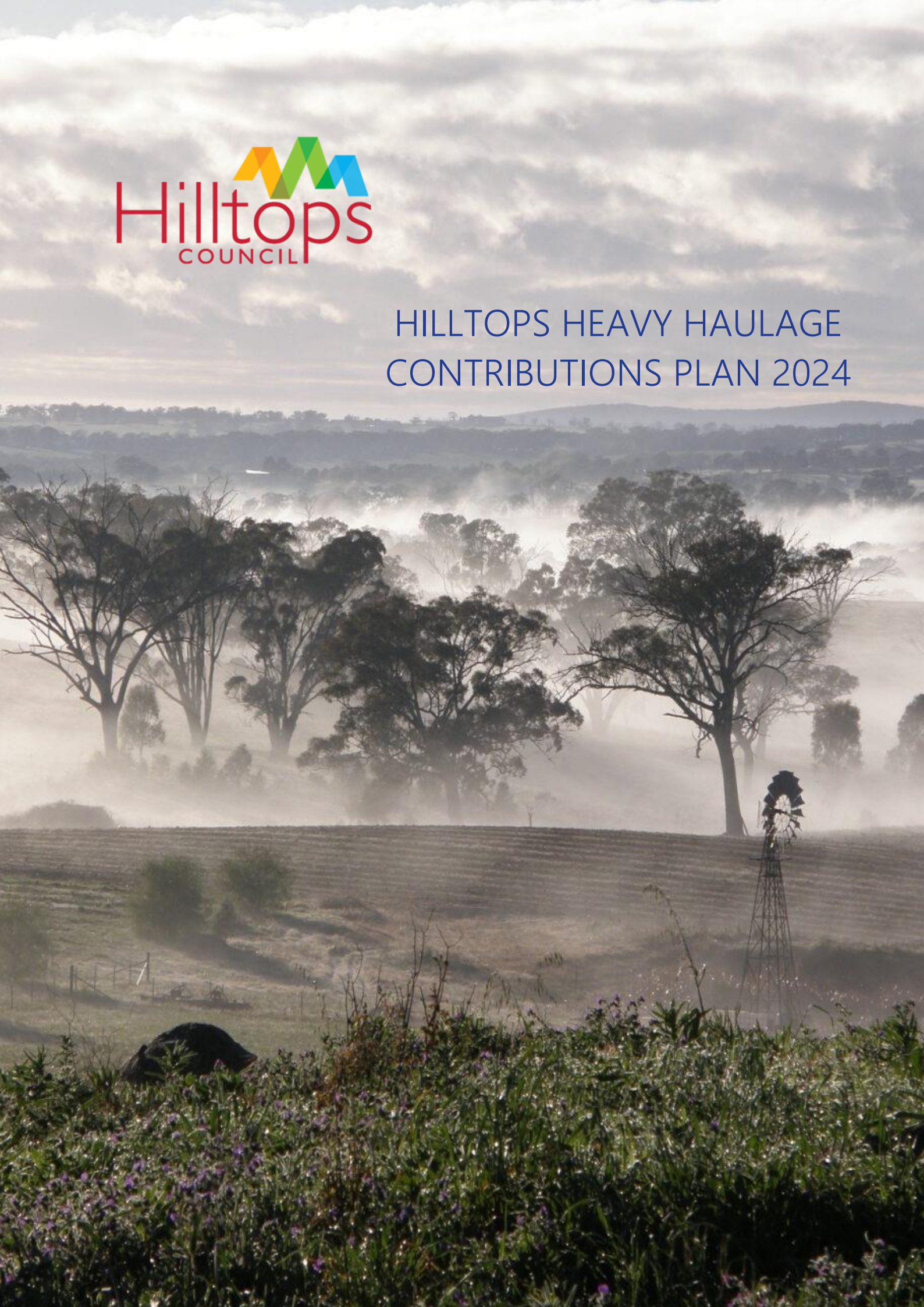

HILLTOPS HEAVY HAULAGE CONTRIBUTIONS PLAN 2024

Hilltops Heavy Haulage Contributions Plan 2024

Prepared for

Hilltops COUNCIL

By

gln. planning consulting strategy

Document Control

Document ID: Hilltops Haulage Contributions Plan

Rev No.	Date	Revision Details	Author	Approver
5	15/05/2024	Final	GLN	BW
6	22/05/2024	Endorsed and Approved by Council (24/146)	GLN	Hilltops Council

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Acknowledgements
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Executive summary

In this summary:

- Infrastructure demand
- Development this plan applies to
- Calculating the contribution
- Imposing the contribution
- Paying the contribution
- Key steps in the process.

Hilltops Council (**Council**) receives applications for developments that involve the haulage of material using heavy vehicles. The developments are located anywhere within the local government area (**LGA**).

The concentration of heavy vehicle movements generated by the developments are known to accelerate the deterioration of road pavements that are designed to meet the demands of mainly local vehicles not heavy industrial vehicles.

Section 7.11 of the Environmental Planning and Assessment Act 1979 allows Council to impose a contribution towards the maintenance of roads from developments that generate significant heavy vehicle movements to meet the additional cost burden of affected roads in the LGA.

This plan provides:

- the relationship or 'nexus' between the expected development in the area and the road infrastructure that is required to meet the demands of that development,
- the formulas to be used for determining the reasonable contributions required form expected development for the required infrastructure,
- the contribution rates applying to development affected by this plan,
- maps showing the location of the roads likely to need maintenance because they are used for haulage purposes, and
- the administrative and accounting arrangements applying to the contributions that are required by this plan.

Infrastructure demand

The Hilltops LGA is in the Southern Tablelands of NSW and covers an area of 7,140 square kilometres. It is mainly rural, with many townships which include residential, commercial and industrial areas. The LGA includes pockets of mining and other extractive industries. Most of these industries use local roads to transport material to other locations.

All developments that significantly increase the movement of laden heavy vehicles along local Council roads will be required to make contributions towards the additional maintenance burden resulting from the accelerated deterioration of the roads.

The contributions of cash will provide Council with funding to provide additional maintenance.

Development this plan applies to

Heavy haulage development includes extractive industry, forestry, landscape and garden supplies, industry, mining, rural industry, timber and building supplies and any other development that involves the movement of laden heavy vehicles. In Council's opinion this use is likely to result in the reduction of the life of the local road network.

Calculating the contribution

The contribution rates are shown in Table 1. The monetary contribution will be calculated on a quarterly basis. The total monetary contribution is the sum of the total local roads travelled by each heavy vehicle. Worked examples are shown in **Appendix B**.

The contribution rates will be indexed for inflation at the time of consent and again at the time of payment in accordance with quarterly movements in the Producer Price Index (3101 Roads and bridge construction NSW), as published by the Australian Bureau of Statistics.

Table 1: Section 7.11 contribution rates at May 2024

Road type	Contribution per ESA per km travelled by laden heavy vehicles
R1	$0.27
R2	$0.40

Imposing the contribution

If a contribution is required for a development under this plan, the consent authority will impose a condition in the consent requiring the contribution. The condition will specify the contribution amount payable, how the contribution amount will be indexed for inflation, when the contribution needs to be paid, and how to pay the contribution.

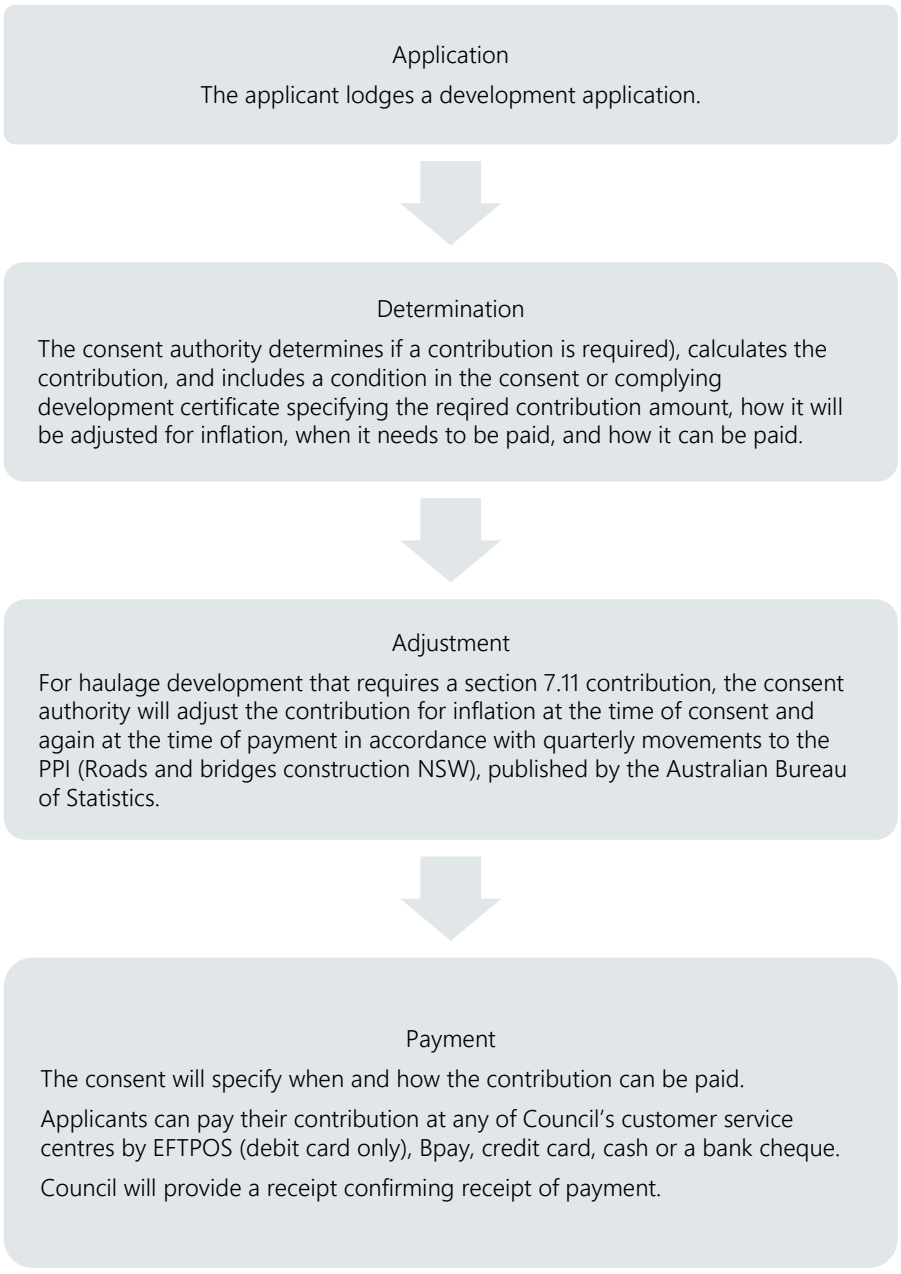
Paying the contribution

The condition in the development consent will specify when and how to pay the contribution. The timing for when contributions need to be paid is specified in **section 2.3**.

Key steps in the process

Key steps in the overall process are depicted in **Figure 1**. Further details are provided in relevant subsections of this plan.

Figure 1: Key steps in the process



1 Background

In this section:

- 1.1: Purpose of this plan
- 1.2: Where this plan applies
- 1.3 Development this plan applies to
- 1.4 Exempted development
- 1.5 Local infrastructure provided under this plan.

1.1 Purpose of this plan

This plan is called Hilltops Heavy Haulage Contributions Plan 2024.

The plan's main purpose is to authorise the consent authority, when granting consent to an application to carry out development to which this plan applies, to require a contribution under section 7.11 of the Environmental Planning and Assessment Act 1979 (**EP&A Act**) to be made towards the provision of maintenance of roads required because of road haulage development in the Hilltops local government area. Other purposes are:

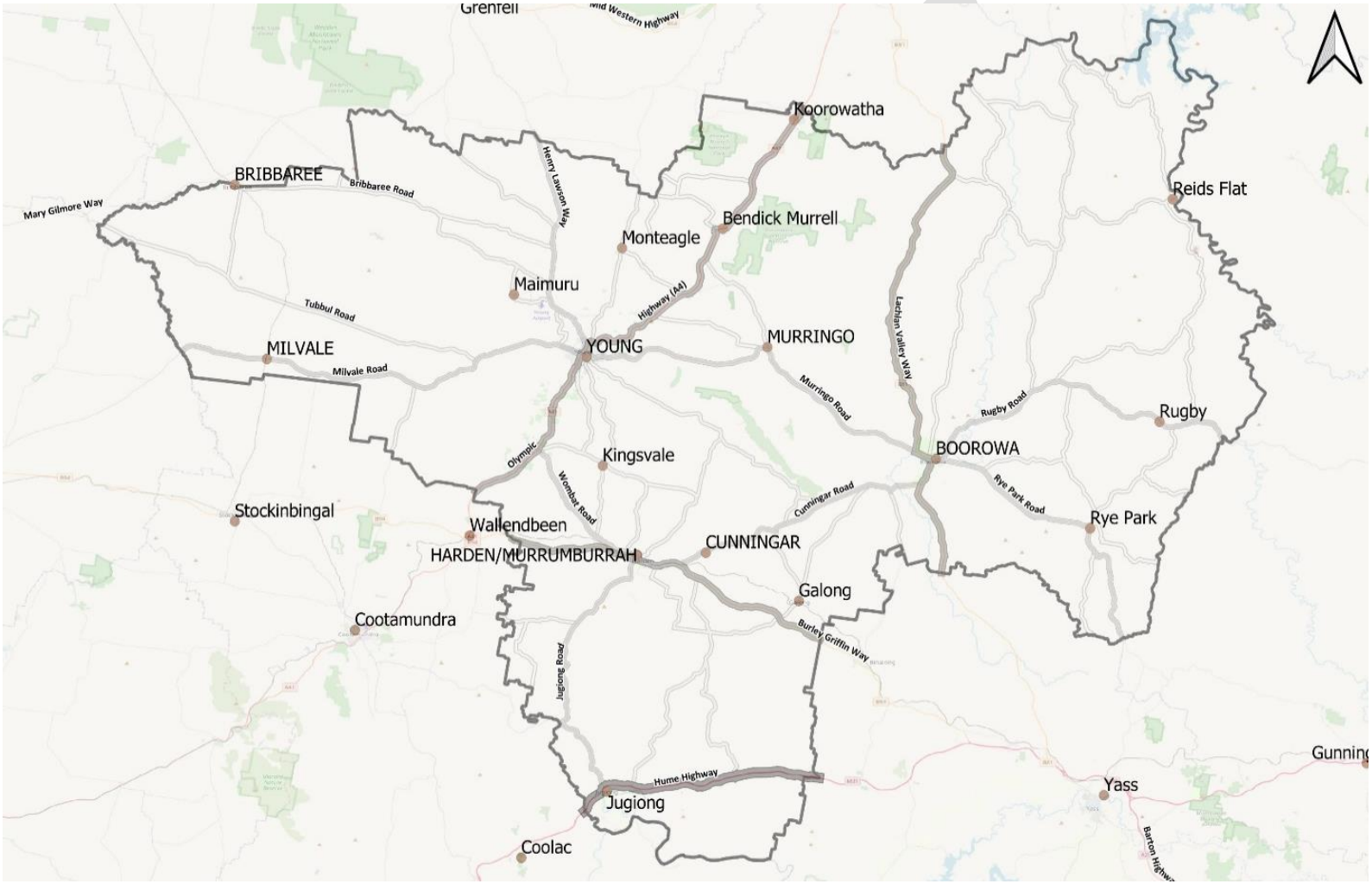
- to provide a framework for the efficient and equitable determination, collection, and management of road maintenance contributions in the Hilltops LGA
- to establish the relationship between the expected development and proposed local infrastructure to demonstrate that the section 7.11 contributions required under this plan are reasonable
- to ensure, within the constraints imposed by the NSW government, that the broader Hilltops community is not unreasonably burdened by the increased maintenance needs of local roads that is required because of development.

This plan has been prepared in accordance with the EP&A Act and Environmental Planning and Assessment Regulation 2021, having regard to the most recent practice notes issued by the NSW Department of Planning and Environment.

1.2 Where this plan applies

This plan applies to all land in the Hilltops local government area, as shown in **Figure 2.**

Figure 2: Land to which this plan applies



Source: Hilltops Council

1.3 Development this plan applies to

Heavy haulage development includes extractive industry, forestry, landscape and garden supplies, industry, mining, rural industry, timber and building supplies and any other development that involves the movement of laden heavy vehicles. In Council's opinion, this extraordinary use is likely to result in a reduction in the life of the road network.

1.4 Exempted development

Council may consider exempting types of development, or components of a development from a requirement to make contributions under this plan. For an exemption to be approved, any development application will need to make a comprehensive submission arguing the case for exemption.

1.5 Local infrastructure provided under this plan

Heavy haulage developments that contribute to the deterioration of local roads can be located anywhere within the LGA. Council will therefore expend contributions collected under this plan according to:

- the location of the contributing developments,
- the impact of heavy haulage movements from those developments on specific sections of the LGA road networks, and
- the requirement to provide the road works within a reasonable time.

Council will plan the expenditure of funds collected under this plan on an annual basis. The planned expenditure program will be published in the Management Plan, reviewed and adopted by the Council.

Roadworks may be required to be undertaken in addition to contributions required under this plan

The Hilltops LGA road network is constructed and maintained by Council to ensure an acceptable standard of service. It is possible that these roads may or may not be able to accommodate additional heavy vehicle loading generated by haulage developments at their existing standard. New roads, or upgrades to sections of the existing road network may be required to accommodate the additional heavy vehicle loading. Unformed, natural roads may also need to be sealed to accommodate heavy traffic.

Where development requires capital works to the road network to be undertaken, the requirement will be by way of a condition of development consent under section 4.17 of the EP&A Act. Such development will also be subject to a condition requiring payment of road maintenance contributions under this plan both for the section(s) of new or upgraded road, and for the other sections of the road network to be used for haulage purposes.

Contributions will not be used to fund direct works to comply with development consent conditions that are required to bring roads up to the minimum suitable standard as assessed by Council to commence operations, such as:

i. road widening

ii. pavement upgrades (a pavement is to have a minimum remaining life of 10 years)

iii. geometric improvements

iv. drainage works

v. intersection improvements.

2 How to use this plan

In this section:

2.1 Calculating the contribution

Contributions in this plan are levied on the basis of:

- the location of the development site,
- the anticipated cost of upgrading and maintaining sealed regional (R1) and rural (R2) roads,
- the periodic laden heavy vehicle movements generated by the development, and
- the length of sealed roads used by the laden heavy vehicles generated by the development.

Table 1 contains the contribution rates by road type.

The monetary contribution is calculated on a quarterly basis by either:

- using the results of a traffic classifier placed on the development's vehicular exit points, or
- collecting weighbridge receipts showing the extent of material hauled from the development.

The formulas for calculating a contribution under this plan is included in **Appendix A**.

Worked examples for calculating section 7.11 contributions for haulage development are shown in **Appendix B**.

The contribution rates used in the examples reflect the rates at the time the plan commenced. Rates are adjusted for inflation in accordance with the provisions of clause 2.3 of this plan. Applicants should inquire at the Council for information on the latest contribution rates.

2.2 Imposing the contribution

This plan authorises the Council, when determining a development application relating to heavy haulage development, to impose a condition of consent requiring the payment of a monetary contribution to Council towards the maintenance of roads used for haulage. The contributions received from developers will be used to meet the cost of maintaining roads to a satisfactory standard.

2.3 Paying the contribution

Timing of payments

Monetary contributions will be paid within 28 days of the developer's receipt of quarterly notice from the Council stating the contribution amount that applies according to the previous quarter's heavy haulage vehicle activity.

Deferred or periodic payments

Council does not generally accept deferred payment of contributions required under this plan.

Indexation at the time of payment

A section 7.11 monetary contribution amount required by a condition of development consent imposed in accordance with this plan will be indexed between the date of the grant of the consent and the date on which the contribution is paid in accordance with quarterly movements in the Producer Price Index (Roads and bridges construction NSW) as published by the Australian Bureau of Statistics.

Payment method

Contact Council's Planning Team on 1300 445 586 or email, mail@hilltops.nsw.gov.au for an invoice which will also provide details of the various methods of payment available, prior to payment.

For Council to be able to issue an invoice, the information on the previous quarter heavy vehicle movements will need to be submitted.

2.4 Obligations of certifiers

Complying development

Some types of development may be classified as 'complying development' under an environmental planning instrument, for example, Council's local environmental plan (LEP) or a state environmental planning policy (SEPP).

Complying development is a combined planning and construction approval for development proposals that have a predictable and/or minor impact. They can be determined through a fast-track assessment by a council or a certifier, without a development application. Applicants can choose to apply to either the council or a certifier.

This plan applies to complying development. If a proposed development is classified as complying development and applicants apply for a complying development certificate through a certifier, the certifier is responsible for determining the complying development application in accordance with this plan and with clause 156 of the Environmental Planning and Assessment Regulation 2021.

This includes:

- Determining the contribution type, that is, whether a section 7.11 contribution or section 7.12 levy is required for a development, per section 2.1 of this plan
- Calculating either the section 7.11 contribution or section 7.12 levy, per section 2.2
- Imposing the contribution, per section 2.3
- If a complying development certificate is to be issued, impose a condition requiring a monetary contribution if required under this plan.

However, there are special requirements for complying development in relation to excluded development and determining the development cost for the purpose of determining if a section 7.12 levy is required and then calculating the levy. These special requirements are outlined below.

Construction certificates

It is the responsibility of an certifier issuing a construction certificate for building work or subdivision work to ensure that each condition requiring the payment of a monetary contribution before work is carried out has been complied with in accordance with the CDC or development consent.

The accredited certifier must ensure that the applicant provides a receipt (or receipts) or verification of payment from Council confirming that contributions have been fully paid and copies of such receipts/verification must be included with copies of the certified plans provided to the Council in accordance with clause 142(2) of the EP&A Regulation and with clause 20 of the Environmental Assessment (Development Certification and Fire Safety) Regulation 2021. Failure to follow this procedure may render such a certificate invalid and expose the certifier to legal action.

The only exceptions to the requirement are where a work in kind, material public benefit and/or dedication of land has been agreed to by the Council. In such cases the Council will issue a letter confirming that an alternative payment method has been agreed with the applicant.

2.5 Alternatives to monetary contributions

A person may make an offer to the Council to carry out works or provide another kind of material public benefit or dedicate land, in lieu of making a contribution in accordance with a condition imposed under this plan.

Any offer shall be made in writing to the Council.

If the offer is made prior to the issue of a development consent then the offer must be made by way of a planning agreement, and the Council will consider the request as part of its assessment of the development application.

Council will generally only consider offers of land or material public benefits where those offers relate to improvements to the LGA's road network. This is because the monetary contributions under this plan that may be forgone because of an approved offer relate to the provision of roads and traffic management facilities. It is therefore reasonable that Council should only consider alternatives to the payment of the monetary contributions that result in similar facilities being provided directly by the developer.

The Council will consider the following matters in deciding whether to accept an offer of material public benefit:

- the overall benefit of the proposal, and
- the financial implications for cash flow and the continued implementation of Council's road maintenance program (including whether the council would need to make up for any shortfall in contributions by its acceptance of the offer).

If Council approves the offer, then it will require the applicant to enter into a written agreement for the provision of the works in a suitable time period. If the offer is made by way of a draft planning agreement under the EP&A Act, the council will require the agreement to be entered into and performed via a condition in the development consent.

The value of any land or material public benefit offered by the applicant may, at Council's discretion, be used to offset monetary contributions applicable to the development under this plan. The value of any land or material public benefit will be determined by a process agreed to between the Council and the applicant.

Should an offer of works in-kind or land dedication be accepted, Council will negotiate with the applicant, as relevant, the following:

- an acceptable standard for workmanship and materials,
- frequency of progress works inspections,
- the program for completion of the works,
- an appropriate maintenance and / or defects liability period,
- the value of any offset of monetary contributions otherwise payable, including any surplus offset value.

Other contributions to be taken into account

Council will take into consideration any land, money or other material public benefit that the applicant has elsewhere dedicated or provided free of cost within the area, other than:

- a benefit provided as a condition of the grant of development consent under the EP&A Act, or
- a benefit excluded from consideration by a planning agreement.

For Council to consider the previous benefits made by the applicant, details must be submitted at the time of the development application. A reduction in the contribution requirement may be considered where the applicant can demonstrate:

- the land, money or other benefit previously provided continues to provide ongoing benefit to the community,
- the benefit was not required to be provided under a condition of development consent or under a planning agreement with Council,
- a benefit offsets some of the need for local infrastructure identified in this plan,
- the financial implications for cash flow and the continued implementation of the Council's works schedule, including whether there may be a shortfall in contributions funds.

2.6 Planning Agreements

Nothing in this plan prevents the Council and a developer from entering into a planning agreement that either/both:

- Requires the developer to make monetary contributions, undertake works or provide material public benefits for road infrastructure identified by the Council, and
- Excludes the operation of section 7.11 of the EP&A Act to the development.

Such an agreement may address, for example, a situation where a developer makes an offer to the council that is not outlined in this plan..

3 Other administrative matters

In this section:

3.1 Relationship to other contributions plans

The Harden Contributions Plan for Heavy Haulage Developments (2011) is repealed by this plan.

This plan does not affect existing development consents applying to land in the Hilltops LGA containing conditions requiring contributions under the above plan.

3.2 Commencement and transitional arrangements

This plan will apply to all development applications submitted prior to the adoption of this plan but not yet determined.

All applications to modify a consent under section 4.55 of the EP&A Act will be determined against the same contribution plan that was applied to the original consent.

3.3 Adjustment of contribution rates in this plan

The monetary contribution rates at the plan adoption date are adjusted to reflect the increases in costs from inflation. The rates will be adjusted to reflect quarterly changes in the Producer Price Index (3101 Roads and bridge construction NSW) issued by the Australian Bureau of Statistics.

At the time of adoption of this plan the base PPI is 144.7 (March 2024).

The formula for adjustment is:

$$Adjusted\ Haulage\ Rate = \$Rate\ (at\ time\ of\ DA\ approval)\ x\ \frac{PPI\ Current\ period}{PPI\ Base\ period}$$

Adjustment of contribution rates in a condition of development consent

The monetary contribution rate imposed on development at the time of consent are adjusted at the time of payment to reflect the indexed cost of the provision of maintenance infrastructure included in this plan.

The monetary contribution rate will be indexed between the date of the grant of the consent and the date on which the contribution is paid in accordance with this section.

3.4 Use of contributions funds

This plan addresses the provision, upgrading and maintenance of the LGA's road network that is required because of development that incorporates heavy vehicle usage of that network.

These developments can be located anywhere within the LGA. Similarly, Council is responsible for the provision and maintenance of most roads in the LGA.

Council will therefore expend contributions collected, and deliver roads infrastructure, under this plan in a manner that fairly takes account of:

- the location of the contributing developments,
- the likely impact of heavy haulage movements from those developments on specific sections of the road network; and
- the requirement to provide the public amenities and services within a reasonable time.

Council will therefore plan the expenditure of funds collected under this plan on an annual basis in response to these factors.

This plan also authorises monetary contributions paid in accordance with development consent conditions authorised by this plan to be pooled and applied progressively for those purposes.

3.5 Accountability and access to information

In accordance with the EP&A Act and EP&A Regulation a contributions register will be maintained by Council and may be inspected by the public upon reasonable request.

The register will be maintained at regular intervals and will include the following:

- particulars sufficient to identify each development consent for which contributions have been sought,
- the nature and extent of the contribution required by the relevant condition of consent,
- the name of the contributions plan under which the condition of consent was imposed.

Accounting records will be maintained for contributions in this plan and published annually in Council's financial accounts. They will contain details concerning contributions received and expended, including interest. The records are held at Council's administration office and may be inspected upon reasonable request.

3.6 Review of this plan

Council will review this plan every five years or as required following its commencement date, being May 2024, to ensure it addresses community needs, Council priorities and relevant legislation.

Council may also elect to review the plan before then if needed because of changes to planning instruments, legislation or development conditions.

3.7 Life of this plan

This plan is expected to be in place from 2024 to 2034. Council will operate this plan until this plan is replaced by an updated heavy haulage contributions plan.

3.8 Development determined by other consent authorities

There are many developments that generate significant extra demands on local infrastructure, but rather than being determined by Council they are determined by another consent authority, for example, The Minister for Planning and Public Spaces. Specific development examples include development with a capital investment value exceeding $30 million, and state significant development (SSD).

Section 7.13 of the EP&A Act allows that, where the consent authority is not a council, the consent authority can impose a condition on the development consent for a section 7.11 contribution that is not authorised (or of a kind allowed) by, or not determined in accordance with the relevant contributions plan. However, under section 7.13(2), the consent authority must, before imposing such a condition, have regard to any contributions plan that applies to the site.

There is no other published guidance provided to other consent authorities about the matters they should consider when deciding the local infrastructure contribution to impose on development. To fill that void, this plan requires that other consent authorities, before imposing a section 7.11 or contribution amount on a development that is less than the amount calculated in accordance with this plan, must consider the following:

- Will the reduction in contributions prejudice or place at risk Council's ability to implement this plan's works schedule in a timely manner?
- Whether sufficient justification for a reduction in contribution has been provided by the applicant.
- Where the justification for the reduction of the contribution amount calculated under this plan is to be reduced / offset by the value of works, land or other material public benefits proposed to be provided as part of the application (that is, the 'offset contributions'), all of the following criteria should be satisfied:
    - The offset contributions are not essential to the carrying out of the development and would not be required to be carried out at the developer's cost anyway as a condition of consent imposed under section 4.17(1)(a) or (h) of the EP&A Act,
    - The offset contributions provide a public benefit that is clearly superior to the alternative of Council receiving the cash contributions in full, to enable it to provide the infrastructure included in this plan's works schedule, and
    - The infrastructure needs served by the offset contributions mean that the Council will not need to meet those needs by using local infrastructure contributions or other funding sources.

APPENDIX A: DEMAND FOR INFRASTRUCTURE

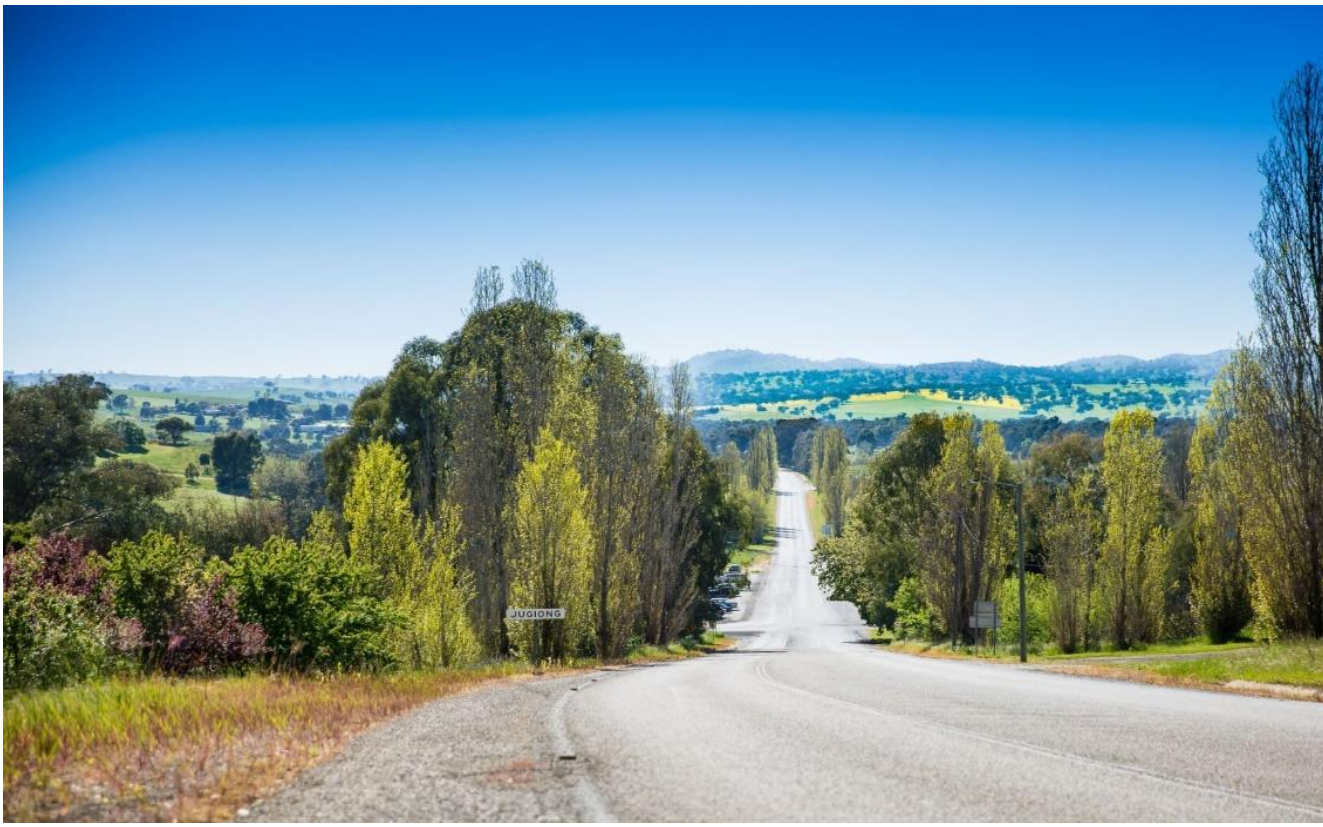
Appendix A: Relationship between expected development and demand for infrastructure

A.1: Basis for imposing contribution requirements on heavy vehicle haulage developments

From time to time, Hilltops Council receives applications for developments that involve the haulage of supplies using heavy vehicles. These developments can be located anywhere within the LGA.

Concentrated heavy vehicle movements generated by these developments are known to accelerate deterioration of road pavements that are designed to meet the demands of rural rather than industrial traffic.

Councils are permitted to impose fees or charges to meet the extra costs associated with accelerated deterioration of roads caused by heavy vehicle movements under section 7.11 of the EP&A Act. Council will therefore require contributions from developments that generate significant heavy vehicle movements to meet the additional cost burden of providing and maintaining the affected roads in the LGA.



A.2: Public amenities and services that will be required

The existing Hilltops Council local road network has been generally designed to accommodate the needs generated by rural users. Council maintains three types of rural road. The road types are shown in Table 2.

Table 2 Hilltops LGA Road Types

Road type category	Traffic volume (AADT)	Road surface
R1 – Regional	> 500	Sealed
R2- Local	100-500	Sealed
R3 - Local	< 100	Gravel/natural material

Source: Hilltops Council
AADT = Annual average daily traffic

Type R1 roads are sealed regional, Type R2 are sealed local roads and Type R3 are the reminder of local unsealed roads. The existing road network is contained in **Appendix C**.

Hilltops Council may accommodate development in the future that will result in accelerated deterioration of the LGA road network. It is generally accepted that the road surface deterioration is caused by heavy vehicles. Consequently, higher numbers of heavy vehicles on roads means Council will need to find additional funds to meet the extra demands placed on the road network. The funds will be needed to maintain the road network to an acceptable level.

Future development of the area for the purposes of heavy haulage development can only be sustained by investment in the provision, extension and augmentation of the road infrastructure. Council considers it appropriate that any new heavy haulage development make a reasonable contribution toward the infrastructure.

A.3: The impact of expected development on road infrastructure

Heavy vehicle use increases road maintenance expenditure

Council has a responsibility to maintain the LGA's road infrastructure to an acceptable standard. The standard is to ensure the roads:

- are kept to an appropriate level of safety for the road user, and
- remain trafficable for the duration of their design life.

The Austroads publication *Pavement Design: A Guide to the Structural Design of Road Pavements* (1992) outlines that the performance of road pavements is 'influenced significantly by the heavy end of the traffic spectrum'. It means that the influence of cars or light commercial traffic pavement loadings are largely negligible. The main effect of lighter vehicles on roads is the capacity. The performance and subsequent failure of pavements is determined by heavy vehicle axle passes, the axle loading and the configuration of the axles.

Consequently, additional heavy vehicle loadings on public roads due to haulage development will accelerate the deterioration of the road's pavement. It means that the roads authority (Council) will need to provide additional maintenance spending to maintain the road pavement at its appropriate level of service.

This contributions plan is premised on the principle that it is reasonable to expect that additional heavy vehicle users of the road infrastructure should contribute their share of the additional upkeep, which would otherwise not be required.

There are various methodologies used to derive a reasonable monetary contribution. A common method derives a contribution based on the amount of material hauled per kilometre of haul route. That method works well for uses where heavy vehicles have adequate access to weighbridges. Due to the limited weighbridges available within the LGA, this plan uses a method based on heavy vehicle movements.

Design life of a standard road

In pavement design, the damage caused by different axle groups is dependent on the axle spacing, the number of tyres/wheels per axle. The load on the group and the suspension of the vehicle (Austroads, 1997). Generally, for design purposes axle groups are broken into four types:

- single axle with single wheels,
- single axle with dual wheels,
- tandem axels with dual wheels, and
- tri-axles with dual wheels.

For simplicity, the damage to the pavement associated with any specific axle load has been expressed as a standard axle. The standard axle is a single axle with dual wheels that carries a load of 8.2 tonnes.

For the purposes of road pavement design, all vehicle class configurations are converted to equivalent standard axles (ESA). The design life of a road pavement can also be expressed in ESA.

Appendix E of the Austroads Pavement Design Guide provides a methodology for the adoption of ESAs for axle group types in accordance with NSW conditions and road functional classes[1].

For the purposes of this plan, Hilltops Council will assume a functional Class 3 local road that is defined as:

'A road whose main function is to form an avenue of communication for movements:

- Between important centres and the Class 1 and Class 2 roads and/or key towns; or
- Between important centres; or
- Of an arterial nature within a town in a rural area.'

[1] The relevant sections of Austroads may be requested from Council for review.

Council uses the Austroads vehicle classification system to identify heavy vehicle traffic numbers from traffic counters[2][3]. From this classification system, ESAs for each vehicle class can be calculated using Table E4 in Appendix E of Austroads Design Guide. The resulting total vehicle ESA for each class is provided in Table 3.

Table 3 Total Vehicle ESA per Vehicle Class

Vehicle Class	Vehicle Type (Austroads)	ESA per vehicle
1	Car	0
2	Light vehicle with towing/commercial van	0
3	Two axle truck	1.2
4	Three axle truck	1.6
5	Four axle truck	2.2
6	Three axle articulated truck	1.8
7	Four axle articulated truck	2.2
8	Five axle articulated truck	2.8
9	Six axle articulated truck	2.8 (average)
10	Seven+ axle articulated truck (B double)	3.4
11	Double road train (various axle configurations)	4 (average)
12	Triple road train (various axle configurations)	4 (average)

The above vehicles are assumed to be loaded. If higher order vehicle classes are used by the developer, those vehicles will be assumed to be Class 10.

Table 3 shows that a loaded Class 10 vehicle has almost three times the impact of a Class 3 vehicle on the road pavement.

As mentioned previously, the conversions in Table 4 are for the purposes of road design. Austroads Pavement Design Guide provides methodologies for both rigid and flexible pavements. Hilltops LGA sealed roads are primarily flexible pavements with a sub-base, base and wearing surface of asphalt or bitumen. The wearing surface is generally due for replacement every 14 years to maintain the level of service for current traffic use.

Austroads contains a design conversion figure that allows pavement design life to be expressed in accordance with design traffic. A standard 20-year pavement can be expressed as ESAs. This means

[2] A copy of the vehicle classification system information used in this plan is available from Council.

[3] Appendix D contains a Truck Impact Chart produced by the Australian Trucking Association (2016).

that the life of a pavement can be expressed as the total number of equivalent axles that pass over it prior to replacement.

The standard 20-year life for the two road types in Hilltops LGA expressed as ESA are:

- R1 roads approximately 2,000,000 ESA
- R2 roads approximately 1,000,000 ESA

It is considered that all laden heavy vehicles on Hilltops roads contribute to the deterioration of the road pavement. It is also understood from the above design methodology that a road pavement has a finite life in terms of ESA. Growth of heavy vehicle use on the local roads is limited to growth in the transportation of goods and haulage. Consequently, it is considered reasonable to expect heavy haulage development to make a contribution per additional loaded vehicle on the local roads.

Costs of maintaining rural sealed roads for the duration of design life

Council maintains a rural sealed road network and regional roads within the LGA. Council may apply for an receive Commonwealth Government and State Government funding for the upkeep of the roads network.

Council has reviewed the most recent funds expended to maintain the road network. For the R1 type roads, the average annual expenditure is approximately $10,000 per kilometre of road (including government grants)[4]. The average annual amount to maintain R2 roads is approximately $6,000 per kilometre.

In addition to general maintenance, it is assumed that the roads will need to be resealed once during their design life. Reconstruction of the road is required at the end of the design life and the work involves the total excavation and relaying of sub-grade layers. Reseals are necessary every 14 years to keep the level of service at an acceptable standard. Reconstruction is usually required after 20 years.

Council's costs over time show that the average cost to reseal R1 roads is approximately $40,000 per kilometre and the cost of R2 roads is $35,000 per kilometre. The difference is due to the variance in pavement construction and road widths.

The approximate cost to reconstruct the roads at the end of their design life is approximately $300,000 per kilometre for R1 and $250,000 per kilometre for R2 roads.

Form the above information the total cost of a road can be approximated for a 20-year design life.

Road	Maintenance over 18 years per km	Reseal at 14th year per km	Reconstruction at 20th year per km	Total lifecycle cost per km
R1	$10,000 x 18	$40,000	$300,000	$520,000
R2	$6,000 x 18	$35,000	$250,000	$393,000

[4] The amount includes Government grants which would otherwise be necessary for Council to find in its annual budget. Grants from Government are usually not subject to qualification or consultation with Council.

A.4: Calculation of a reasonable contribution

From the information contained above it is proposed that the monetary contribution from development should be made on a periodic basis and should be per ESA for the total distance of R1 and R2 roads anticipated to be travelled by the development's laden heavy vehicles.

It has been shown that the life of a road can be expressed in total ESA loads that can pass over the pavement until the pavement deteriorates to the point of needing reconstruction. As mentioned previously the life of a typical road in Hilltops LGA is approximately 20 years and equivalent to either 1 million or 2 million ESA, depending on the road type.

Contribution formula

$$\$CPeriod = \frac{\$R1Life \times ESA \times R1Length}{R1Life} + \frac{R2Life \times ESA \times R2Length}{R2Life}$$

Where:

- ***$CPeriod*** *is the monetary contribution payable by the development for the preceding period in dollars*
- ***$R1Life*** *is the standard cost of an R1 type road per kilometre over the design life in dollars*
- ***$R2Life*** *is the standard cost of an R2 type road per kilometre over the design life in dollars*
- ***ESA*** *is the number of ESAs generated by the development in the preceding period, as recorded by the traffic classifier at the development exit point*
- ***R1Life*** *is the assumed design life of an R1 road equivalent to 2 million ESA*
- ***R2Life*** *is the assumed design life of an R2 road equivalent to 1 million ESA*
- ***R1Length*** *is the total length of road type R1 that will be travelled by the development's laden vehicles estimated at the time of development application in kilometres*
- ***R2Length*** *is the total length of road type R2 that will be travelled by the development's laden vehicles estimated at the time of development application in kilometres.*

Contribution rate per kilometre

The contribution rate – that is the contribution per ESA per kilometre of road used can be expressed as follows:

$$\$Rate = \frac{\$RLife}{RLife}$$

Where:

- ***$Rate*** *is the monetary contribution rate for each road type (R1 or R2) per ESA per kilometre of road type in dollars*
- ***$RLife*** *is the standard cost of each road type (R1 or R2) per kilometre in dollars*
- ***RLife*** *is the assumed design life of each road type (R1 or R2).*

Using the above formula and values:

$R1 Rate = $0.26 per ESA per kilometre

$R2 Rate = $0.39 per ESA per kilometre

Two methods of calculating a contribution by counting laden vehicle movements

- Use of a traffic classifier installed at the applicant's cost, at a suitable location to classify and count the number of loaded vehicles that enter and exit the development site over a set period.
- Submission by the developer of weighbridge receipts that show the tonnage of material hauled from the development over a set period. Council will convert the tonnage amount into the number of laden vehicles using a typical 30 tonne truck and dog haulage vehicle.

Worked examples on the application of the above are found in **Appendix B**.

Measures to ensure contributions are reasonable

To ensure contributions are reasonable, the following will be undertaken:

- The heavy haulage travel route(s) from the site will be identified at the time of development application and nominated as the total distance in kilometres that laden heavy vehicles will travel along R1 and R2 routes within Hilltops LGA.
- The following will be required as conditions of consent for heavy haulage developments using the traffic classifier option:
  - The traffic classifier will be used to determine the number of ESAs that leave the development and are subject to contributions.
  - Responsibility for keeping the traffic classifier in good working order throughout the life of the development will rest with the operator of the heavy haulage development.
  - Council officers are to be provided access to the traffic classifier data on a regular (i.e. at least quarterly) basis.
  - In the event of the traffic data being corrupted, then the Council at its discretion may determine the levy for the preceding period.

- Where weighbridge receipts are used:

  - Council officers are to be provided with the tonnage receipts on a regular (i.e. at least quarterly) basis.

  - In the event of unavailable weighbridge receipts (due to breakdown), the Council at its discretion may determine the levy using an estimate from the previous quarter where tonnage data was provided.

- There may be circumstances where the likely length or lengths of roads to be used by laden heavy vehicles related to a heavy haulage development is difficult to quantify. In such cases Council will determine the length or lengths of road to be levied based on the information submitted with the development application. It is the duty of the applicant to provide sufficient and accurate information on likely laden heavy vehicle use at the application stage.

APPENDIX B: WORKED EXAMPLES

Appendix B: Worked examples

B.1: Worked example 1

It is proposed to extract sandstone from a quarry (Quarry 'A') located within Hilltops local government area. The development application states that the quarry will be operational for approximately 25 years. The distance travelled on Hilltops roads as shown from the quarry to the Hume Highway is approximately 20km of R1 road and 12 km of R2 road.

A condition requiring a s7.11 contribution per ESA exiting the site consistent with the rates shown in clause 2.1 is imposed on the development consent.

Method 1. A traffic classifier has been installed at allocation on the quarry exit. The classifier is to be reviewed on a quarterly basis. The most recent quarter results have been extracted and are shown in the Table below.

Vehicle class	6	7	8	9	10
Standard ESA per vehicle	1.1	2.2	2.8	2.8	3.4
Number of vehicles for the period	0	25	35	20	0

The monetary contribution is calculated in the table below.

Road type	Contribution amount
$R1	0.26 x {(2.2 x 25) + (2.8 x 35) + (2.8 x 20)} x 20 = $1,087
$R2	0.39 x {(2.2 x 25) + (2.8 x 35) + (2.8 x 20)} x 12 = $978
Total contribution for period	**$2,065**

Method 2. Weighbridge receipts with a total of 3,500 tonnes of material are provided at the end of the most recent quarter. It is assumed that all the vehicles are 30 tonne truck and dog configuration with the total number of ESA = 2.8.

Number of heavy- laden truck movements out of the quarry = 3,500/30 = 117 trucks

Number of ESA for 117 laden trucks = 328 ESA

The monetary contribution is calculated in the table below.

Road type	Contribution amount
$R1	328 x 0.26 x 20km = $1,706
$R2	328 x 0.39 x 12km = $1,535
Total contribution for period	**$3,241**

B.2: Worked example 2

Quarry 'B' is proposed near McMahons Reef. The developer has advised that the extracted material is to be hauled in two directions. Approximately half of the material is to go north to Burley Griffin Way and the remainder is to go south to the Hume Highway.

A condition requiring a s7.11 contribution per ESA exiting the site consistent with the rates shown in clause 2.1 is imposed on the development consent.

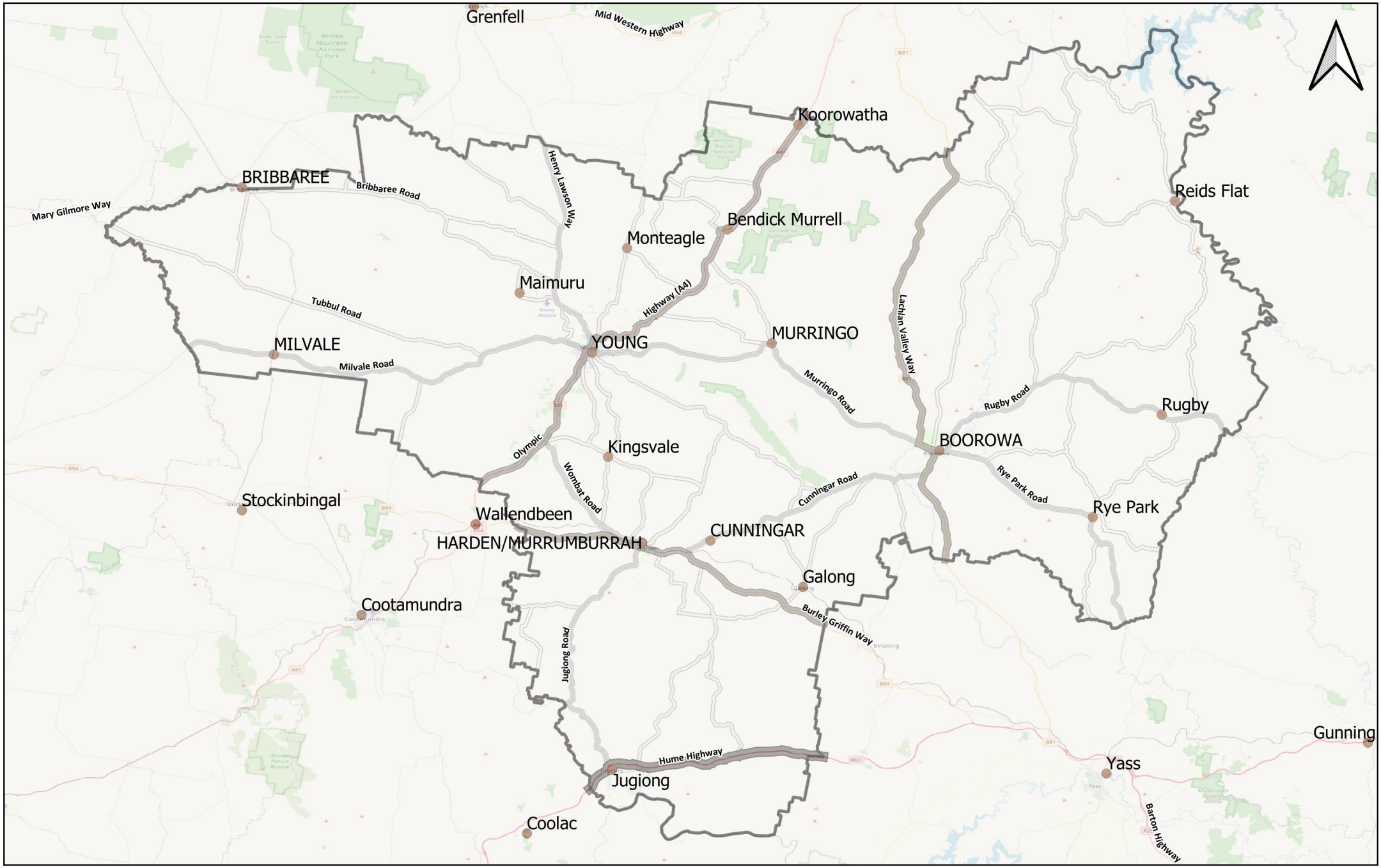
A traffic classifier is located at the quarry exit and shows the same result for the quarter as shown in example 1.

In this example, there are 2 routes, one north and the other south. To calculate the contribution, the north route and south route need to be identified and measured. The truck movements can then be divided between the route unless the developer advises that the vehicles are only moving in one direction. Heading north, R1 = 15km and R2 = 2.3km so the calculation for the north is shown below.

Road type	Contribution amount
$R1	0.26 x {(2.2 x 12.5) + (2.8 x 17.5) + (2.8 x 10)} x 15 = $408
$R2	0.39 x {(2.2 x 12.5) + (2.8 x 17.5) + (2.8 x 10)} x 2.3 = $94
Total contribution for period	**$502**

A similar calculation would be done for the length of the southern haul route.

APPENDIX C: HILLTOPS ROAD MAPS

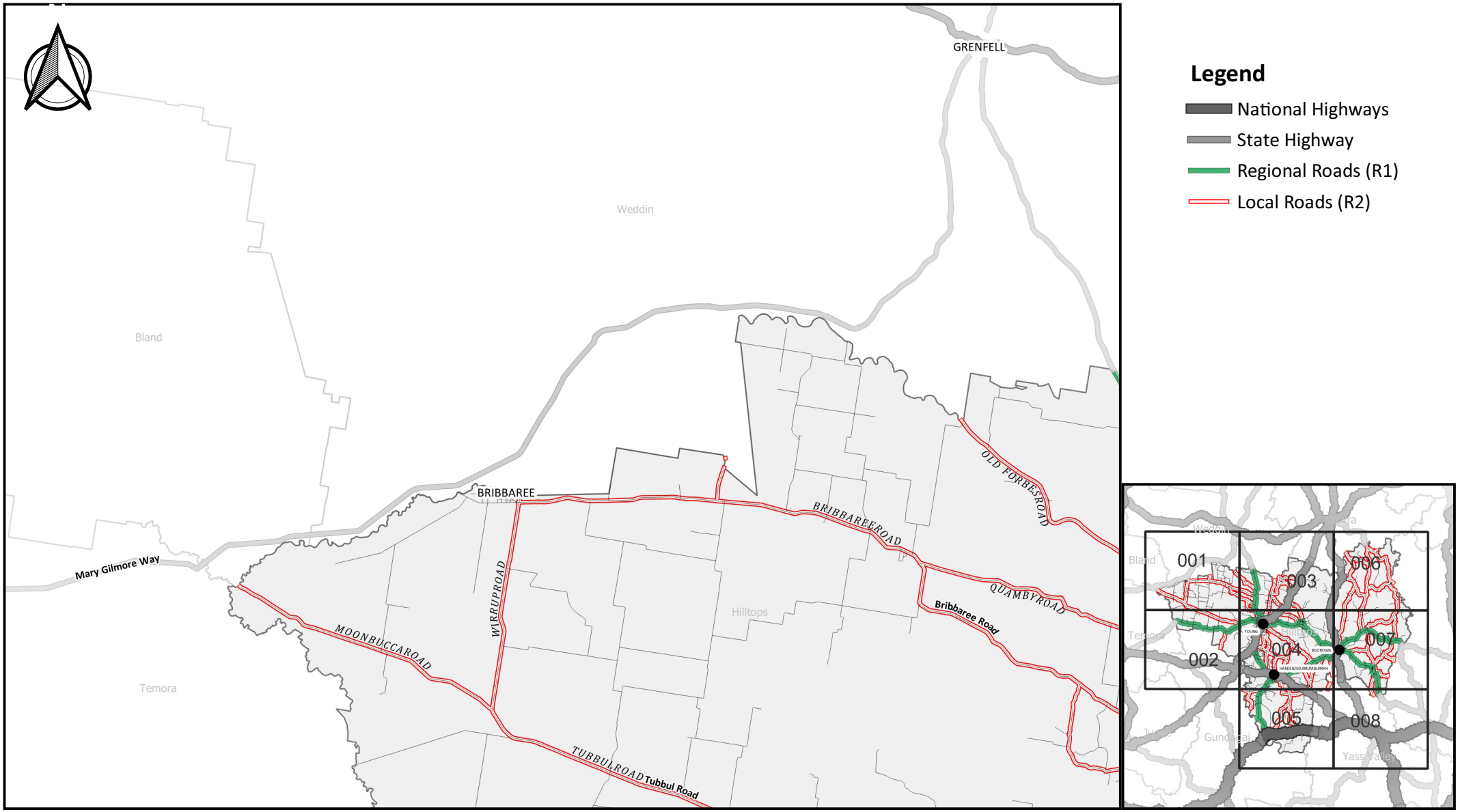


Hilltops COUNCIL

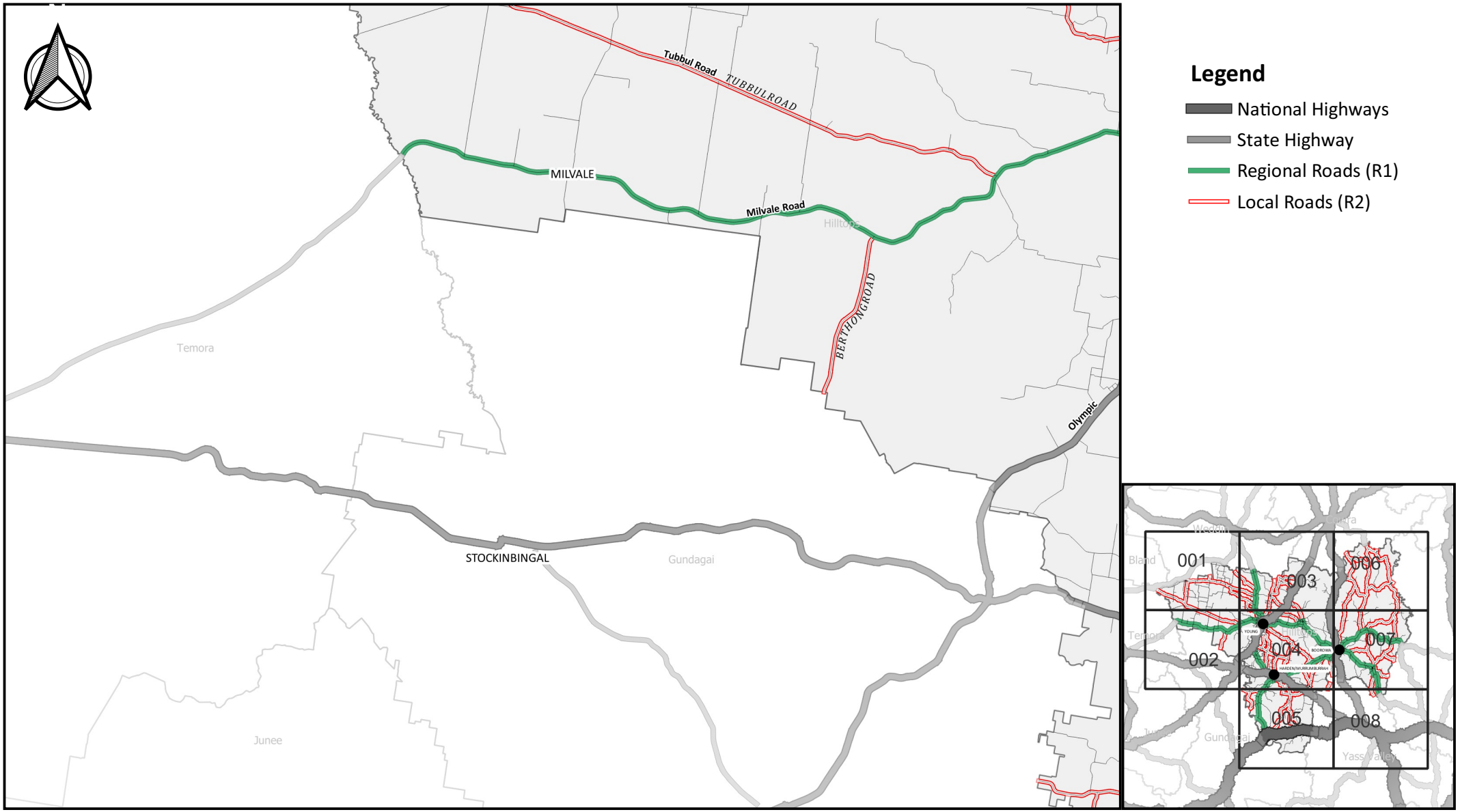
Hilltops Local Government Area

0 20 40 km

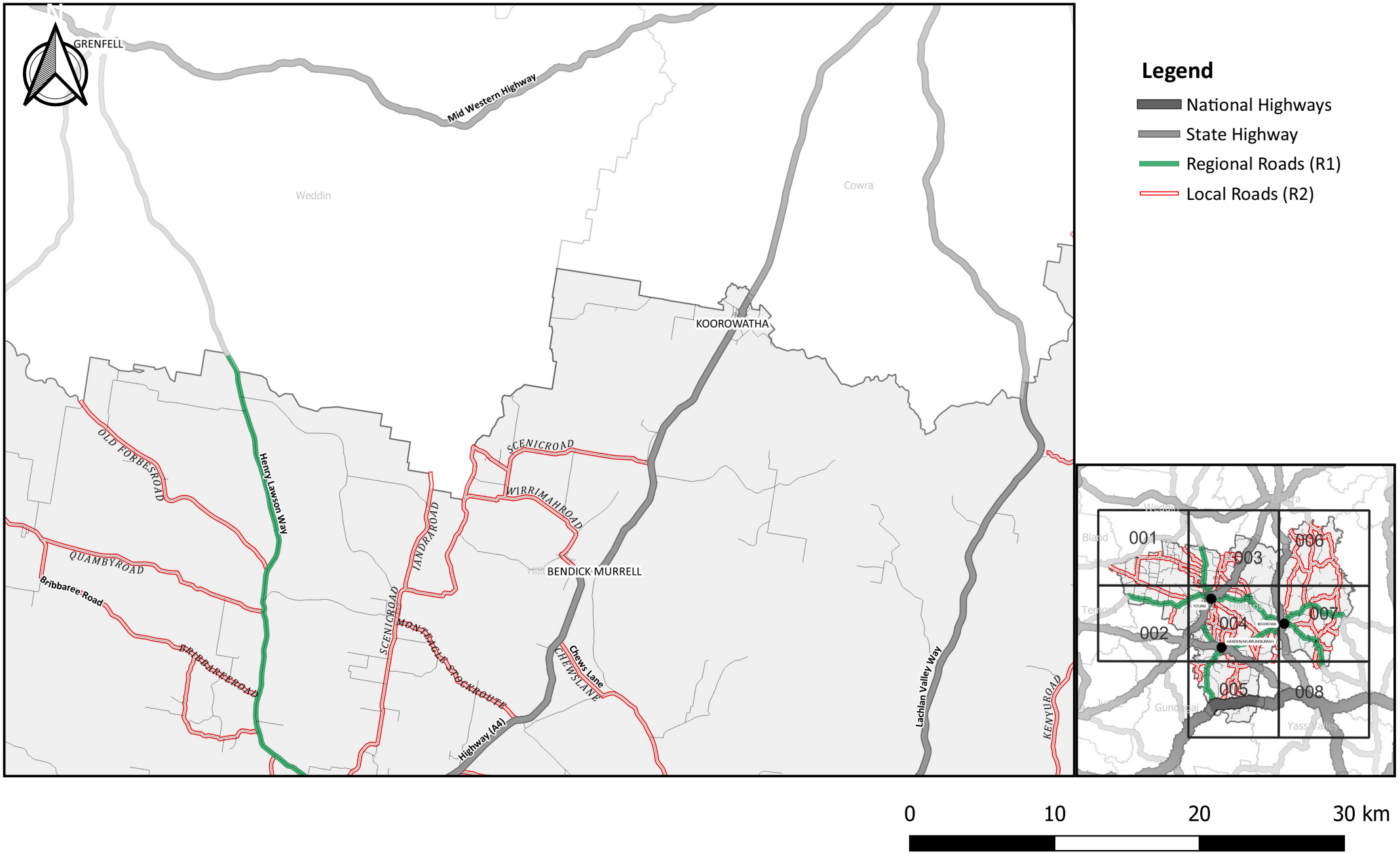
Hilltops Heavy Haulage Contributions Plan - Map 001



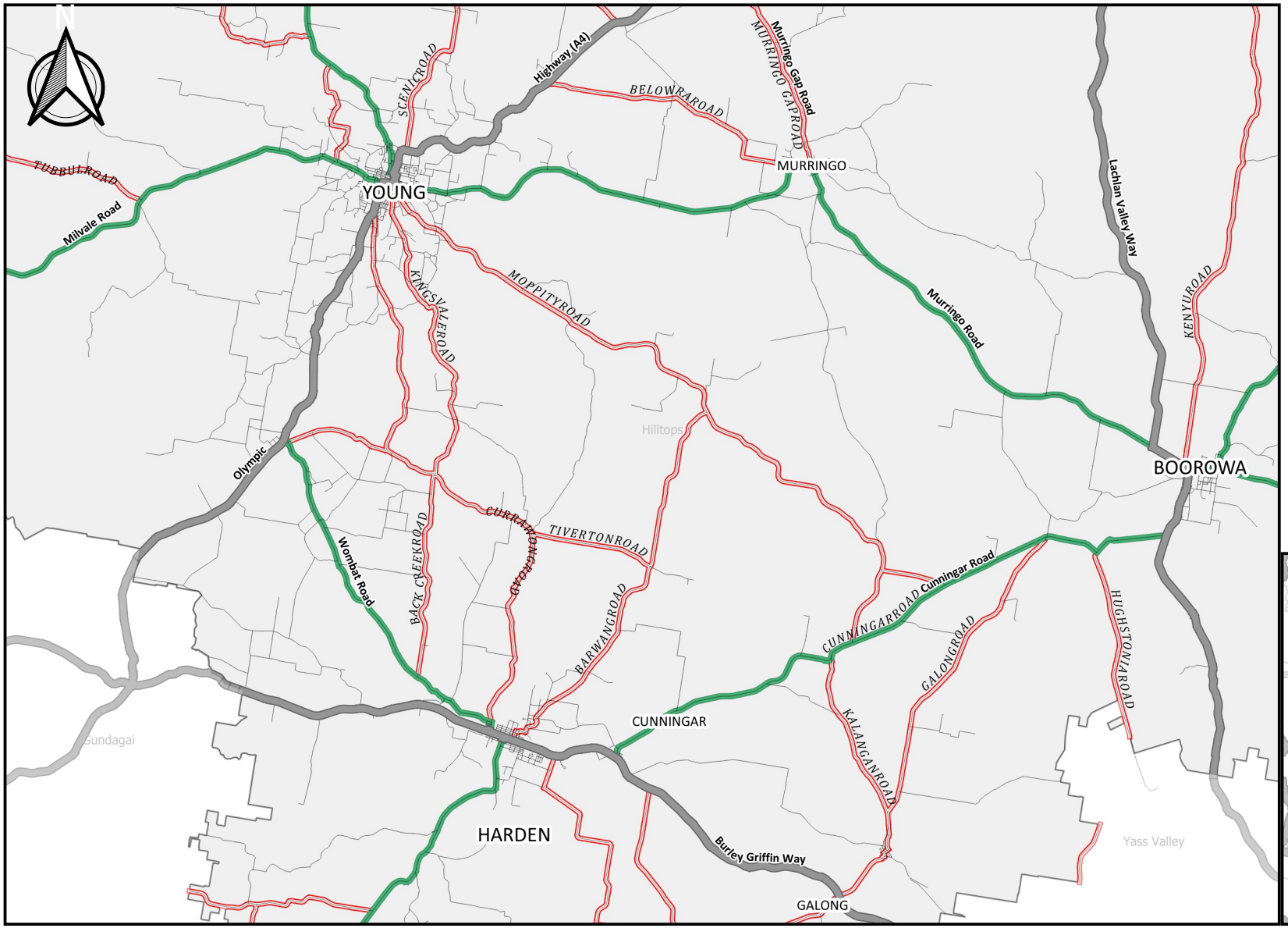
Hilltops Heavy Haulage Contributions Plan - Map 002



Hilltops Heavy Haulage Contributions Plan - Map 003

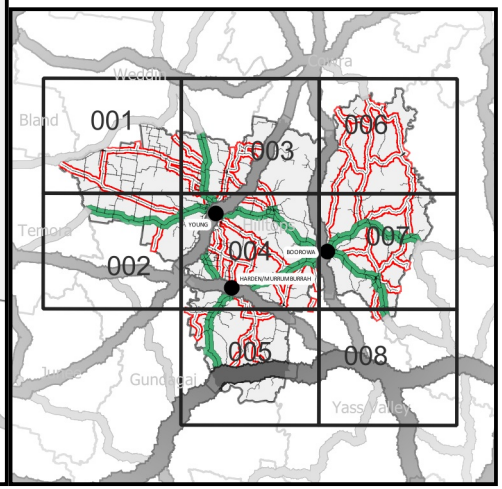


Hilltops Heavy Haulage Contributions Plan - Map 004



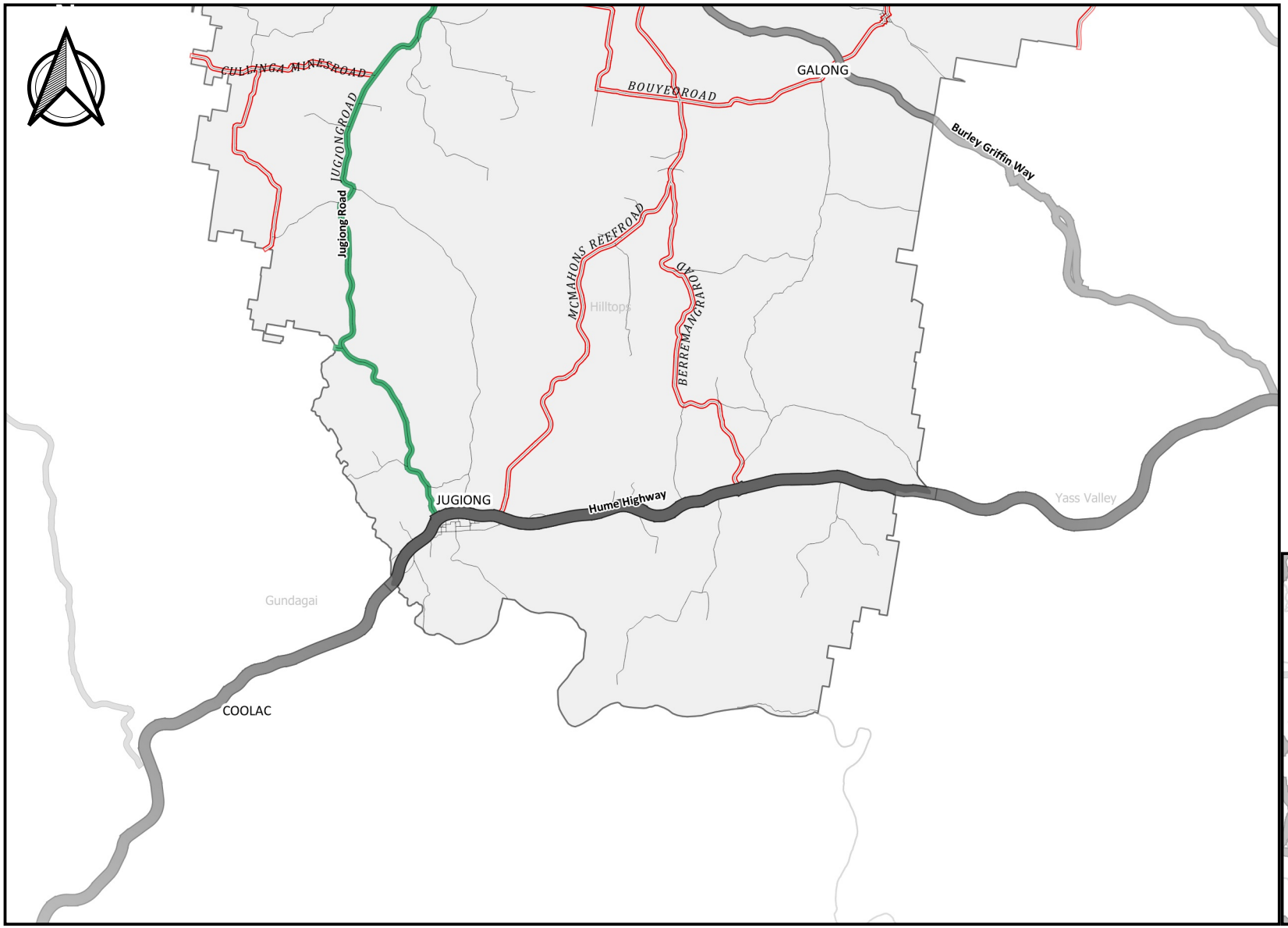
Legend

- National Highways
- State Highway
- Regional Roads (R1)
- Local Roads (R2)



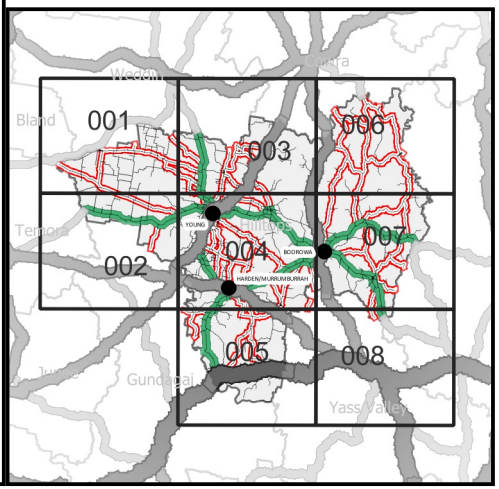
0 10 20 30 km

Hilltops Heavy Haulage Contributions Plan - Map 005



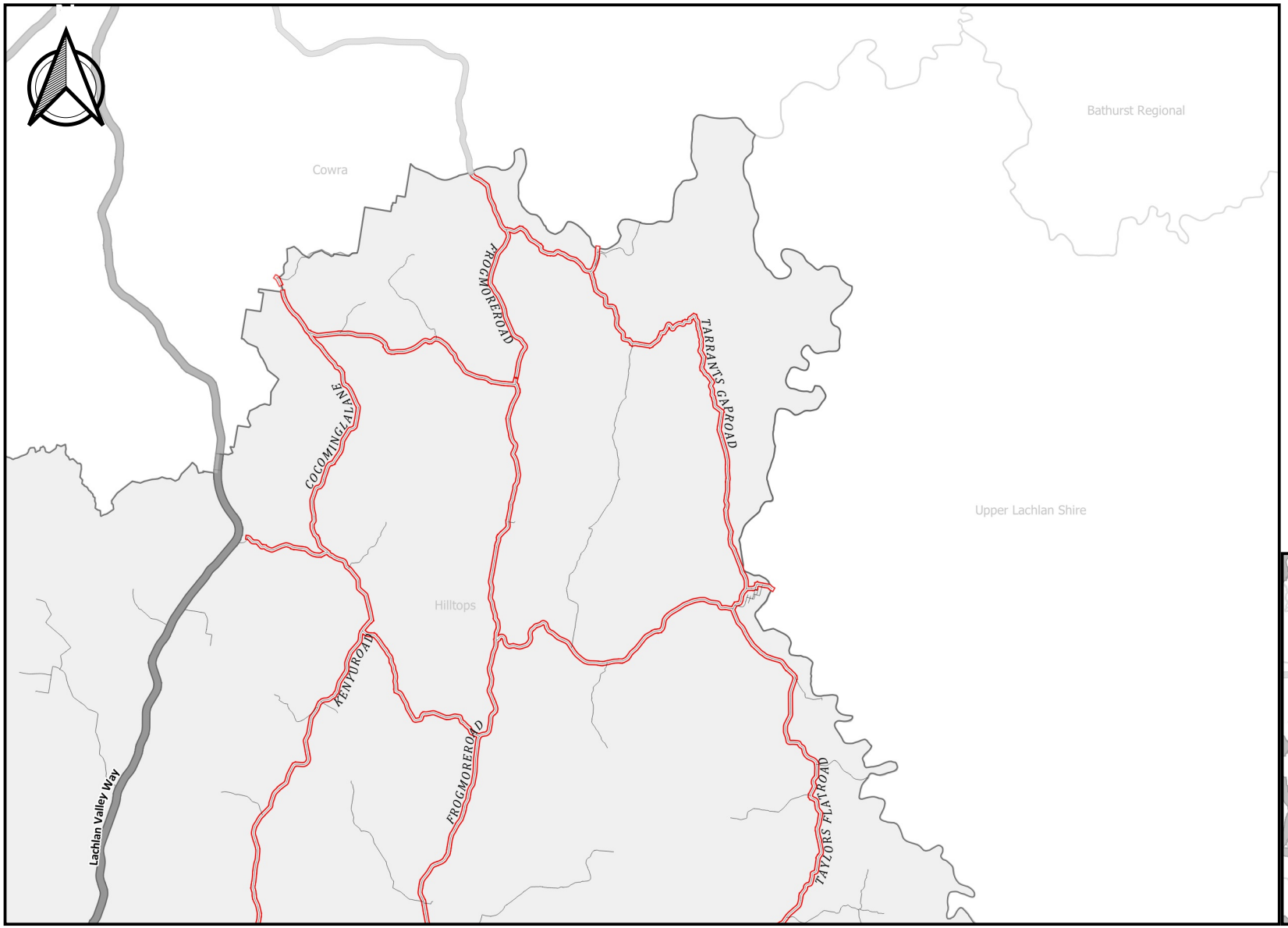
Legend

- National Highways
- State Highway
- Regional Roads (R1)
- Local Roads (R2)



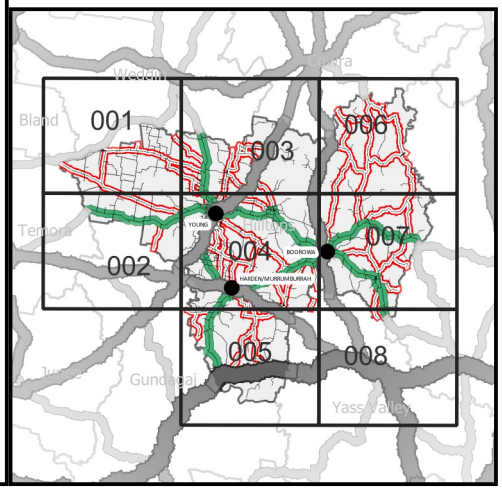
0 10 20 30 km

Hilltops Heavy Haulage Contributions Plan - Map 006



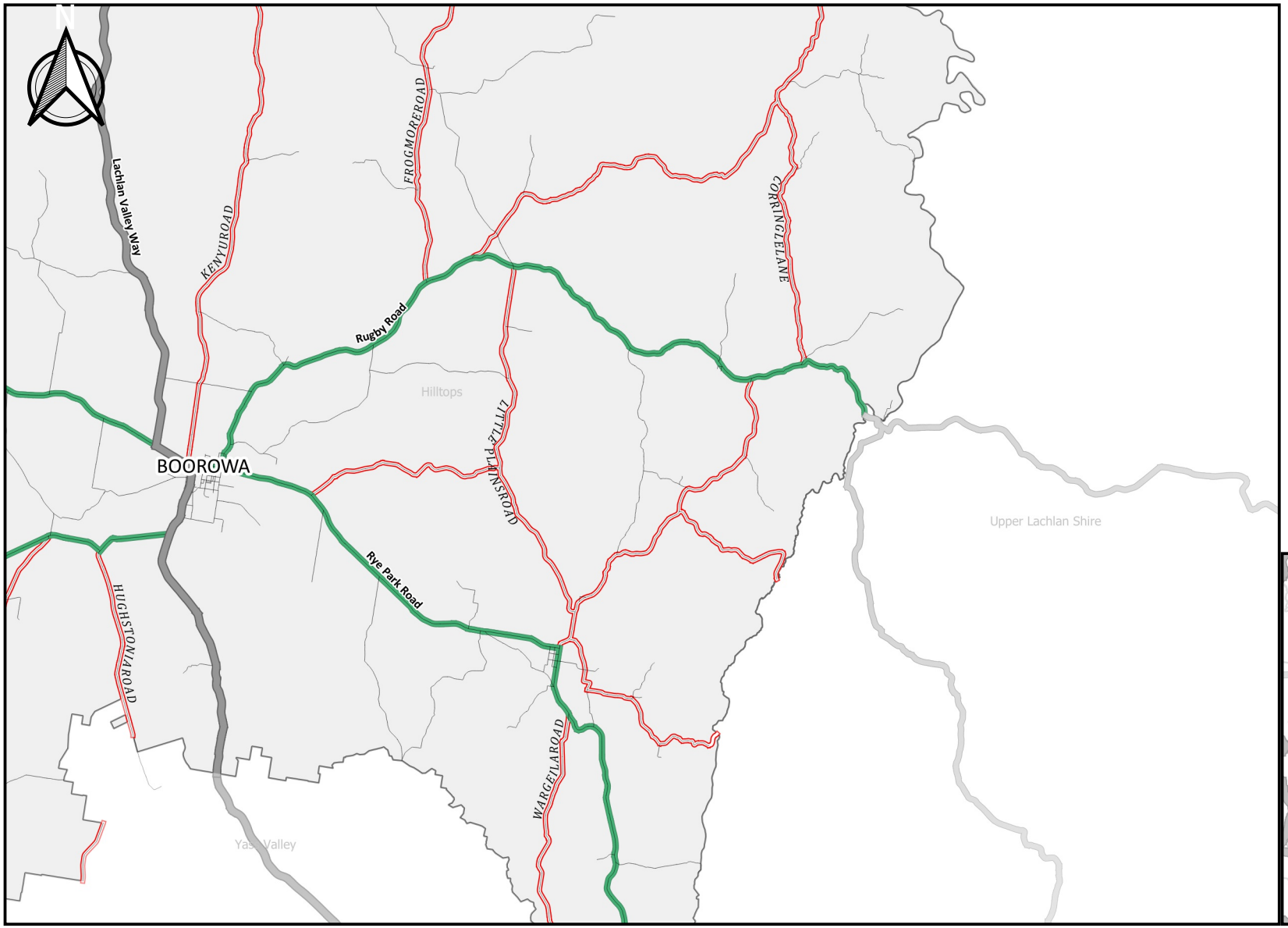
Legend

- National Highways
- State Highway
- Regional Roads (R1)
- Local Roads (R2)



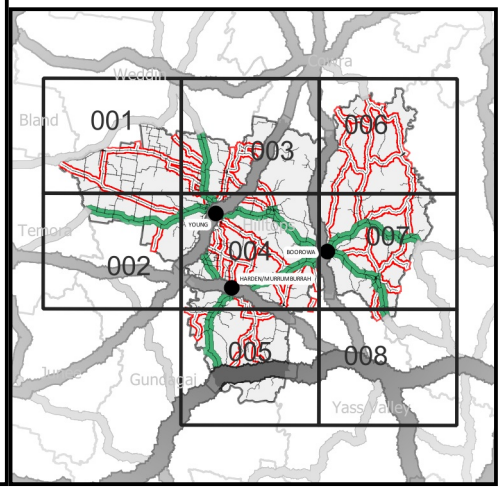
0 10 20 30 km

Hilltops Heavy Haulage Contributions Plan - Map 007



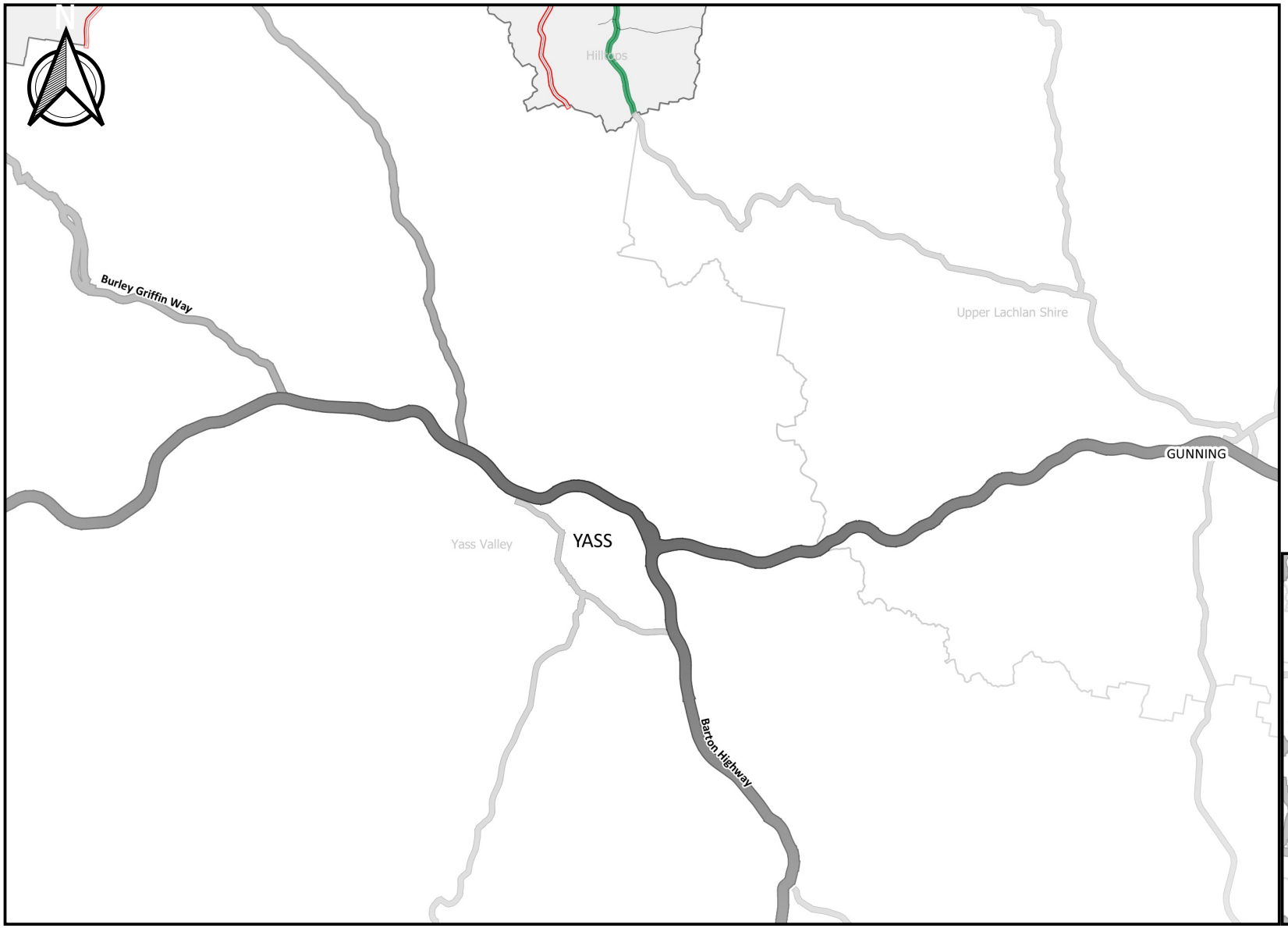
Legend

- National Highways
- State Highway
- Regional Roads (R1)
- Local Roads (R2)



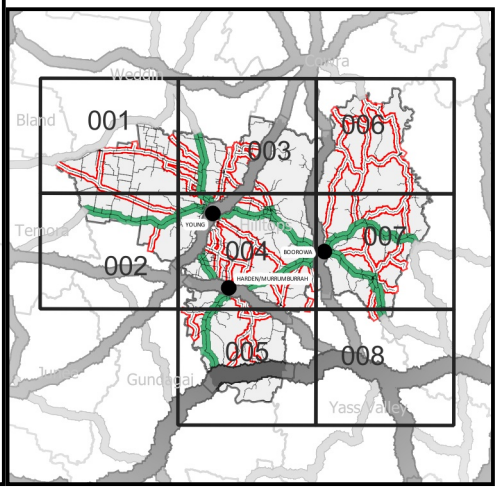
0 10 20 30 km

Hilltops Heavy Haulage Contributions Plan - Map 008



Legend

- National Highways
- State Highway
- Regional Roads (R1)
- Local Roads (R2)



0 10 20 30 km

APPENDIX D: TRUCK IMPACT CHART

The Truck Impact Chart

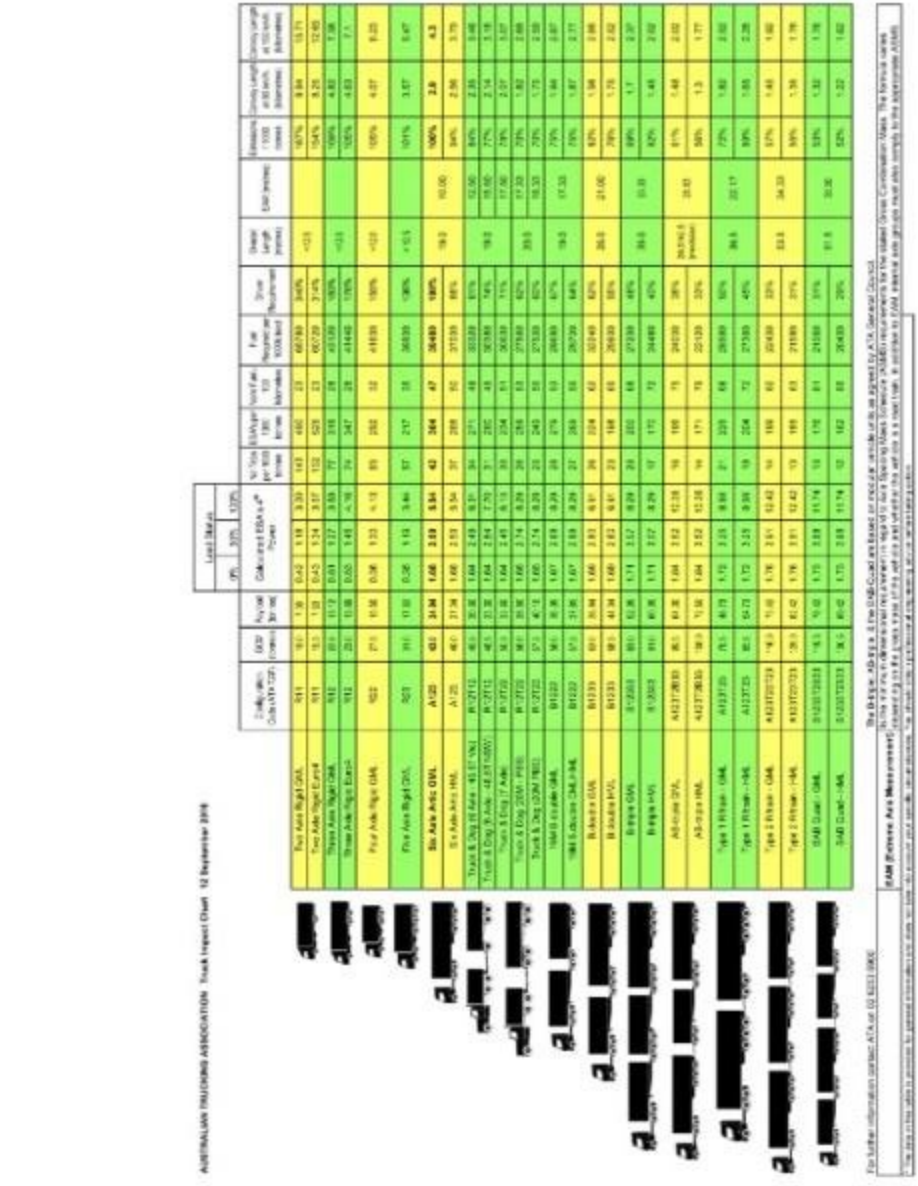


Table 3: Truck impact chart