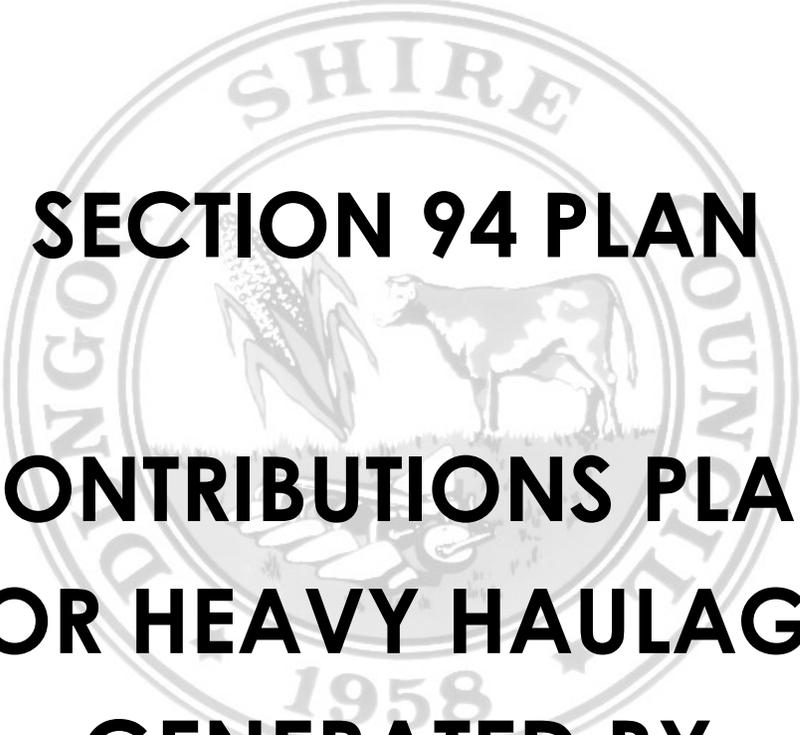


DUNGOG SHIRE COUNCIL

The seal of the Dungog Shire Council is a circular emblem. It features a central illustration of a cow standing in a field, with a sheaf of wheat to its left. The word "SHIRE" is arched across the top of the seal. The words "DUNGOG" and "COUNCIL" are written vertically on the left and right sides, respectively. The year "1958" is inscribed at the bottom of the seal.

**SECTION 94 PLAN
CONTRIBUTIONS PLAN
FOR HEAVY HAULAGE
GENERATED BY
EXTRACTIVE INDUSTRIES**

2017

Effective from 15 July 2017

PART 1 - BACKGROUND INFORMATION

The Shire of Dungog is part of the Hunter Region and the Lower Hunter Sub-Region and is bound by Great Lakes Shire to the East, Singleton Shire to the West, Upper Hunter Shire to the North-west, Gloucester Shire to the North and by Port Stephens Shire and the City of Maitland to the South.

Dungog Shire covers an area of 2251 sq. kilometres. The Council is situated in the Barrington Tops region and has an estimated resident population of 9,100. The Shire consists predominantly of very rugged to hilly country which becomes less rugged from north to south. The major population centres within the Shire include:

- Dungog
- Clarence Town
- Paterson
- Gresford / East Gresford
- Vacy
- Martins Creek

Critical external transport links include MR101 to Maitland (South) and Gloucester (North), MR301 to Port Stephens (South), MR128 to Singleton (West) and Limeburners Creek Road to the Bucketts Way (East).

Critical internal transport links include RR7778 (Paterson to Vacy to East Gresford) and RR7764 (East Gresford to Dungog).

Dungog Shire Council is now the only Council in New South Wales that does not have a State Road as part of it's road network.

Dungog's economy was founded on agricultural enterprise and this continues to be a strong source of income today. Whilst traditional agricultural industries still play a major role in providing jobs and income, the area is growing and changing and new enterprises are emerging. There is increasing development in the area for Rural Residential property, tourism activities and resource extraction.

As part of Council's Sustainable Asset Management objectives, Council needs to ensure that those industries that both benefit from the regions resources and place extra strain on Council's Asset network contribute their share in the costs associated with upgrading and maintaining those assets both for the benefit of themselves and the whole community.

It is therefore vital that ratepayers are not burdened by infrastructure costs generated by new development. This Plan aims to provide a basis for the levying and collection of development contributions for the ongoing maintenance and upgrade of existing roads and the provision of new roads and associated works where this may be applicable. Contributions will be sought where a nexus can be established between ongoing heavy vehicle movements resulting from development, and the need for new roads and/or additional maintenance, due to resulting deterioration on the road network. The Plan will enable appropriate and accountable financial management of income derived from developer contributions in accordance with the provisions of Section 94 of the Environmental Planning and Assessment Act 1979, and Part 4 of the Environmental Planning and Assessment Regulation 2000.

Projected Development

As part of the projected population growth for Dungog Shire, there is expected to be an associated growth in non-residential development, some of which will be in the form of Heavy Haulage Development. This increase in development will create the demand for new and augmented road works including:

- New and upgraded road, culvert and bridge works; and
- Traffic Management Facilities

Infrastructure Funding and Asset Maintenance

Dungog Shire Council's operations cover a wide range of activities with Infrastructure Management, maintaining our roads and bridges being the major focus of Council's activities.

Council derives its income from a number of sources including rates, fees and charges, government grants, loans, return on investments and contributions from developers. Although a large proportion of funds are currently allocated to road works, substantially more is required to maintain our roads and bridges to an acceptable standard.

All councils have felt the escalating costs of providing services over recent years as well as an expectation to provide a broader range of services. At the same time income levels to fund services have not kept pace. Not only have Councils rates been pegged to CPI, but State and Federal Governments have shifted costs to local government and decreased the funding disbursements that are crucial to the ongoing viability of local government.

This continued decline in other sources of funding is almost certainly going to continue into the foreseeable future. The recent federal budget decision to freeze the indexation of Financial Assistance Grants will cost Australian councils an estimated \$925 million by 2017-18. Like many smaller rural and remote councils the impact will hit Dungog Shire hardest.

We will continue to lobby for the value of FAGs to be restored to a level equivalent to one percent of tax revenue, the level they were at in 1996. In recent years the value has slipped to 0.7 percent, but by 2017-18 that figure is projected to fall to just 0.53 percent.

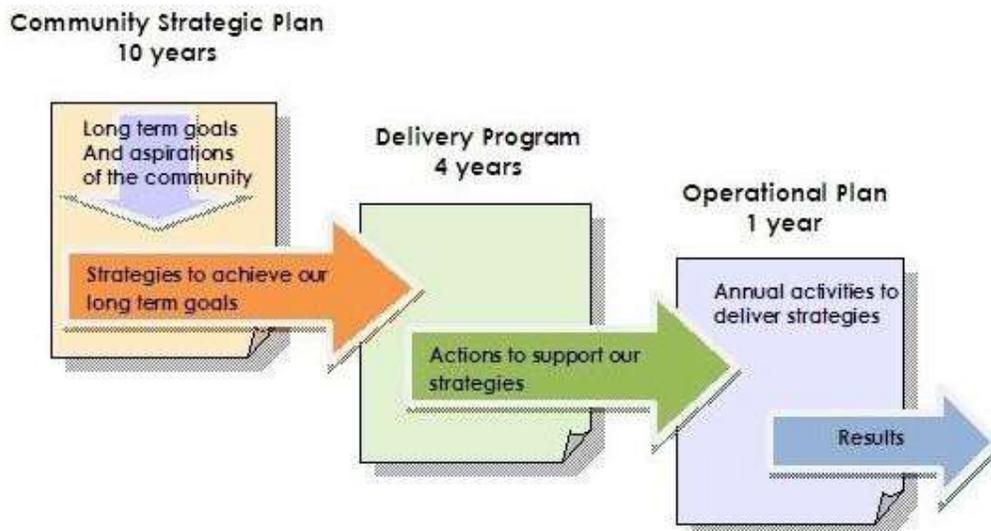
Until now Council has tried to manage these declines in funding by implementing efficiencies. While Council operations and efficiency savings have gone some way to maintaining service levels in the face of decreased income, Council will have to postpone important operational and capital works. This will lead to a further increase in the backlog of work required to maintain services at levels outlined in the Community Strategic Plan.

Integrated Planning Framework

The Delivery Program forms part of a group of plans which will support our community's strategic direction. Council's planning framework is determined by the Integrated Planning and Reporting (IP&R) requirements of the Local Government Act 1993. The IP&R framework includes three levels of planning:

- The first tier includes the Community Strategic Plan. This sets out the community's goals and objectives for the next 10 years. It is a high level plan that focuses on key directions and outcomes rather than specific actions;
- The Strategic Plan is supported by a Resourcing Strategy and Delivery Program. This is the second tier of the planning framework. The Resourcing strategy looks at the finances, assets and human resources that will be required to deliver our long-term goals and includes an Asset Management Strategy. The Delivery Program sets a course of action to progressively achieve these goals in four-year increments associated with each elected Council's term of office;
- The final tier of the planning framework is the Operational Plan. This is an annual plan that provides detailed actions and costing for the works which will be carried out each year.

The following diagram shows how these three documents, the Community Strategic Plan, Delivery Plan and Operational Plan are connected.



The Asset Management Process

One of the purposes of the asset management process is to forecast the timing of asset renewals so as to provide a predetermined level of service to the community.

All assets have a “design life” i.e. the expected life of the asset can be predicted at the time of construction. The life of the asset can be extended by preventative maintenance or reduced by changing use patterns of the asset. For example a road such as Clarence Town Road has a predicted design life at point of construction of 20 years. However, this is based on current traffic conditions. Any dramatic increase in traffic, particularly of heavy vehicles, will predicate a reduction in this “design life” capability.

Assessing the Impacts from Heavy Haulage Development

One of the key questions to be considered in the coming years is the potential long term cumulative impacts of Heavy Haulage Development upon our road transport network, bridges and traffic facilities.

Council understands that it has an obligation to the community to utilise ratepayer's funds economically. To address the financial sustainability of our Assets, and to address our infrastructure and maintenance backlog, further action has to be undertaken.

Damage to bitumen and gravel road pavements due to vehicles from Heavy Haulage Development is a significant impact on the public roads and Council's budget. Further, increases in heavy vehicle movements also necessitate deeper and stronger pavement which incur additional costs when rehabilitating roads. Therefore, where a development has proposed that heavy vehicles use the public roads in the Shire and the existing road infrastructure is inadequate to carry the additional load, a contribution will be sought from the proposed development towards the cost of maintenance, repair and rehabilitation of the road network.

The NSW Land and Environment Court has recognised the significant impact that road haulage vehicles associated with traffic generating developments and in particular extractive industries have on the public road system, beyond the normal usage by the general public, and accordingly has accepted that section 94 of the Environmental Planning & Assessment Act, 1979 is an appropriate mechanism for the levy of contributions for the maintenance, upgrading and rehabilitation of affected public roads.

The ability to levy Heavy Haulage Development for the cost of maintenance, repair and reconstruction of roads as a result of damage caused by trucks involved in the industry is of considerable importance to the Council and Communities in the Shire. The "user pays" approach can significantly reduce the public financial burden of road improvements and the damage caused to the roads.

One of the fundamental responsibilities of any Council in imposing section 94 contributions is to ensure that the contributions levied are reasonable. That is, the works and facilities to be provided must be a direct consequence of the development on which the contributions are levied.

PART 2 - ADMINISTRATION & OPERATION

1 Plan Name

This plan is called Dungog Shire Council Section 94 Plan for Heavy Haulage Generating Development April 2017.

2 Plan Commencement

This plan commences on <insert date of Adoption by Council>.

3 Plan Purpose

The purpose of this Plan is to provide the necessary framework for the efficient and equitable determination and collection of developer contributions towards the maintenance, upgrade and construction of Council's roads transport network (roads, culverts and bridges) utilised by heavy vehicles associated with developments which generate a significant amount of heavy vehicle movements.

These contributions are intended to be levied upon Heavy Haulage Development which will result in additional road maintenance, upgrade or construction works. Such works would be required to ensure adequate maintenance, safety, efficiency, amenity and environmental standards are achieved on existing roads, and to ensure that upgraded and new road networks are constructed to a standard commensurate with the heavy vehicle usage generated by the development.

For the purpose of this plan, the contributions for "roads" is deemed to include all necessary works of carriageway construction and maintenance, including pavement, associated culverts, bridges, drainage, signs, linemarking, noise attenuation measures, landscaping, safety and traffic management measures. Other purposes of this plan are:

- To identify the road transport network that will be affected as a result of new Heavy Haulage Development;
- To ensure the operation of Heavy Haulage Development does not adversely impact on local roads.
- To apportion the cost of maintenance, upgrade and construction works as identified within Council's road transport network;
- To authorise the Council, or the consent authority to impose, as a condition of development consent, a requirement that the applicant pay to the Council an on-going contribution determined in accordance with this Plan;
- To provide a comprehensive strategy for the assessment, collection, expenditure, accounting and review of development contributions collected from Heavy Haulage Development.
- To minimize any adverse environmental and social impacts in terms of noise and dust to residences, road users, pedestrians and other development in the Shire.

4 Provisions of Section 94 of the Environmental Planning & Assessment Act 1979

Section 94 of the Act provides the basis for levying section 94 contributions. Section 94 (1) of the Act permits Council to require the dedication of land free of cost, the payment of a monetary contribution, or both, if a development for which consent is sought will or is likely to require the provision of or increase the demand for public amenities and public services within the LGA.

5 Land to which this plan applies

This plan applies to all land within the Dungog Shire Council local government area.

This Plan may also be applied to a development located outside the Dungog Shire Council local government area where such a development is reliant upon the use of heavy vehicle haulage routes contained within the Dungog Shire Council local government area and heavy vehicles utilise such haulage routes on an ongoing basis.

6 Development to which this plan applies

This Plan applies to Heavy Haulage Development.

7 Relationship to other plans and reports

This plan relates to the following relevant Council Plans and Policies:

- Dungog Shire Council LEP (2014)
- Dungog Shire Council Community Strategic Plan
- Dungog Shire Council Resourcing Strategy
- Dungog Shire Council Asset Management Plans

This Plan only provides for section 94 contributions for the maintenance and construction of Council's road transport network. The Plan furthermore has links to key strategies within the Dungog Shire Council Community Strategic Plan regarding the provision of services and road infrastructure.

8 Council may require payment of the contribution as a condition of development consent

This plan applies to all applications for development consent required to be made by or under the Act in respect of development on land to which this Plan applies. This Plan applies to all forms of non-residential development that will involve heavy vehicle traffic that will impact upon the condition of, or contribute to the need for maintenance of Council's existing or future road transport network.

Contributions will be levied according to the estimated increase in impact generated by the development. An amount equivalent to the contribution attributable to an existing lawful development on the site of the proposed new development will be allowed for in the calculation of contributions.

9 How will contributions be imposed?

This Plan authorises Council, or the consent authority, to grant consent to development to which this Plan applies, subject to a condition requiring the applicant to pay to the Council a contribution based on the formula for heavy haulage contributions provided in this Plan, provided that the consent authority does not also impose a condition pursuant to s94A of the Act.

10 Responsibility of Accredited Certifiers

Pursuant to clause 146 of the EP&A Regulation, a certifying authority must not issue a Construction Certificate for building or subdivision work under a development consent unless it is satisfied of compliance with any condition requiring the payment of a contribution before work is carried out in accordance with the consent.

This Plan requires a certifying authority (Council or an accredited certifier) to impose a condition requiring the applicant to pay to Council a contribution calculated in accordance with this Plan.

The certifying authority must cause the applicant's receipt for payment of the contributions to be provided to the Council at the same time as the other documents required to be provided under clause 142(2) of the EP&A Regulation.

11 How are the contribution rates indexed?

11.1 Indexation of contribution rates included in this plan

To ensure that the value of contributions are not eroded over time by inflation, Council will without the necessity of preparing a new or amending the contributions plan make changes to the section 94 contribution rates set out in this plan to reflect quarterly movements in the Consumer Price Index (All Groups Index) for Sydney as published by the Australian Bureau of Statistics.

11.2 Indexation of monetary contributions at time of payment

Any monetary contribution required by a condition of development consent imposed in accordance with this plan will be indexed between the date on which consent was granted and the date on which an invoice is issued to the operator of a Heavy Haulage Development in accordance with quarterly movements in the Consumer Price Index (All Groups Index) for Sydney as published by the Australian Bureau of Statistics.

12 Method of payment

Invoicing

Developer contributions shall be paid on a three monthly basis at the applicable indexed rates based upon tonnage hauled for that period, multiplied by the set haulage distance established for the development.

The section 94 contribution is to be calculated from true certified copies of weighbridge docket, log books, diary entries and/or other returns or records that show the true quantities of hauled/extracted and/or processed material transported from an extraction site.

The applicant/operator or consenting assignee is to supply to Council on or before the 10th day of each month for the duration of the development consent for the development's operation, the records of the transported material for the previous month. Upon receipt of this information, Council will on a quarterly basis, as soon as it can conveniently do so, issue to the applicant (or operator) an invoice for the section 94 contribution amount to be paid to Council within 30 days of the date of invoice.

Audit

The condition of consent will contain a condition that Council has the right to inspect the original records relating to the transport of imported material to and export of extracted or processed material from a development.

Original records that may be requested for inspection include:

- The extraction site/zone from which material was extracted and/or processed;
- Date and time of import/export/transport of material to/from a development;
- Monthly quantity and nature of material imported/exported/transported to/from a development;
- Daily number and type (including registration number) of laden trucks and/or trailers;
- Monthly payment date and amount of section 94 contributions made to Council.

All Heavy Haulage Development operators will be expected to keep all necessary information to verify the above matters. Council's inspection of original records will be requested by way of prior written notice.

13 How will the Council apply money collected under this Plan?

Money paid to the Council under a condition authorised by this plan is to be pooled and applied by the Council progressively towards meeting the cost of maintaining, upgrading and augmenting Council's road transport network.

Where a direct nexus between the development and a particular road haulage route can be identified, the funds collected from a particular development as a result of this Plan will be allocated to the road projects identified for that particular haulage route (see Appendix A).

Where a single identified road haulage route cannot be identified, Council's current Asset Management Plan, as amended from time to time, will form the basis for the identification of a works program and funds collected from a particular development as a result of this Plan will be allocated to that program.

14 Are there priorities for the expenditure of money obtained from levies authorised by this plan?

Subject to s93E(2) of the Act and clause 15 of this plan, the priorities for expenditure will be aligned with Council's annual operational plans.

15 Pooling of levies

For the purposes of s93E(2) of the Act, this plan authorises money obtained from levies paid in respect of different developments to be pooled and applied by the Council progressively towards the road transport network shown on the map in Appendix A in accordance with the priorities identified annually in Council's operational plans.

16 Obligation

Any person or company operating a development, to which a condition of consent applies in accordance with this Plan, is legally obligated to operate that development in accordance with that consent.

17 Administration of this Plan

Management is essential if the desired outcomes of this Plan are to be achieved in a timely and affordable manner, and to meet the requirements of the s94 Regulations. Constant supervision and management will be required over a number of years. The recovery of these costs is required by Council and is set at 1.5% of the contribution payable. This rate will be reviewed at the 1st of July each year.

18 What is the Council's policy on the deferred or periodic payment of contributions?

The Council does not allow deferred or periodic payment of levies authorised by this Plan.

19 Are there alternatives to payment of the contributions?

Applicants may propose an alternative contribution rate that more accurately reflects the likely road impacts of the particular development. Any alternate contribution rate must be agreed to by Council prior to the due date for a contribution payment or the commencement of any works as part of that alternate payment method.

Applicants may also propose alternative arrangements to the payment of a periodic contribution to Council for excessive road wear and tear. This could include, for example, the applicant and Council entering into an agreement that required the applicant to maintain the haul roads to an acceptable standard throughout the life of the development.

Justification of any alternative must be addressed in a transport study on the proposed heavy haulage development demonstrating the value for money of the alternative.

20 Exemptions to this Plan

This Contributions Plan applies to all Traffic Generating Development - Extractive Industries as defined in Clauses 5 and 6 of this Plan.

The only exemptions allowed are those the subject of a direction from the Minister for Planning under Section 94E of the EP&A Act and those developments to which it is deemed a condition should be imposed under section 94A of the EP&A Act, rather than a condition under s94 of the EP&A Act. To avoid confusion, the defining factor in making this determination is whether or not the Heavy Haulage Development will have an ongoing impact on the condition of Council's road transport network.

Council (or the Consent Authority) staff will make this determination based on the information supplied with the development application. If insufficient documentation is supplied by the applicant in order for Council (or the Consent Authority) staff to make this determination, a traffic study may be required to be undertaken by an independent, fully qualified Traffic Engineer that will be paid for by the applicant.

21 Savings and transitional arrangements

A development application which has been submitted prior to the adoption of this Plan but not determined shall be determined in accordance with the provisions of the Plan which applied at the date of determination of the application. A contribution for haulage required to be paid by a condition authorised by this Plan must be paid to the Council at the time specified in the condition. If no time is specified, contributions must be to Council in accordance with terms specified in any invoice issued by Council in respect of contributions.

22 Goods and Services Tax (GST)

At the time this Plan was made, the position of the Australian Taxation Office (ATO) was that the payment of development contributions made under the EP&A Act is exempt from the Goods and Services Tax (GST) under Division 81 of A New Tax System (Goods and Services Tax) Act 1999 (Cwth).

23 Accountability and access to information

Council is required to comply with a range of financial accountability and public access to information requirements in relation to section 94 contributions. These are addressed in Divisions 5 and 6 of Part 4 of the EP&A Regulation and include:

- maintenance of, and public access to, a contributions register;
- maintenance of, and public access to, accounting records for contributions receipts and expenditure;
- annual financial reporting of contributions; and
- public access to contributions plans and supporting documents. These records are available for inspection free of charge at Council.

24 Review of Plan without the need for public exhibition

Pursuant to clause 32(3) of the EPA Regulation, Council (or the Consent Authority) may make certain minor adjustments or amendments to the Plan without prior public exhibition and adoption by Council (or the Consent Authority). Minor adjustments could include minor typographical corrections and amendments to rates resulting from changes in the indexes adopted by this Plan.

PART 3 - EXPECTED TYPES OF DEVELOPMENT IN THE COUNCIL'S AREA AND THE DEMAND FOR PUBLIC FACILITIES

Population forecasts indicate that the population of the Dungog Shire Council LGA is likely to continue to grow. As part of this population growth there will be an associated growth in non-residential development, some of which will be in the form of heavy vehicle generating development. This increase in development will create the demand for new and augmented road works, including: -

- New and upgraded road, culvert and bridge works
- Traffic Management Facilities
- Shared pathway (footpath/cycleway) works

To cater for this increased demand Council proposes to carry out those works prioritised in its annual operational plan. Where any of the following facilities are also listed in another Development Contributions plan, the cost listed in this plan is in addition to the costs listed in any other plan.

Justification for levy

The principle of seeking a payment of contributions for road pavement damage is well documented by case law. The landmark case of Collin C Donges & Associates Pty Limited v Baulkham Hills Shire Council established guidelines for levying extractive industries for road maintenance and repair.

In accordance with this judgement, Council will require a contribution for the cost of maintenance, repair and reconstruction of roads. While assumptions have been made about the type of heavy haulage vehicles for the purpose of estimating the damage to the life of roads, clearly the findings have application to some degree to all heavy haulage vehicles because the impacts have been resolved down to axles for which there are maximum load limits. Heavy vehicles are the primary contributor to the consumption of a road pavement's structural capacity. The consumption of a road pavement's structural capacity has a direct correlation to the number of equivalent standard axles [ESA] applied to the road. Therefore the consumption structural capacity can be directly related to the ESA's generated by the vehicle and hence a development.

1 Basis for imposing contribution requirements on Extractive Industry heavy haulage developments

Dungog Shire, from time to time, receives applications for Extractive Industry developments that involve the haulage of supplies using heavy vehicles. These developments can be located anywhere within rural areas of the Shire.

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

Consequently, higher numbers of heavy vehicles on roads dictates that Council will need to find additional funds to meet the extra demands placed on the Shire's roads. These funds will be

required to maintain the Shire's roads to an acceptable sealed standard.

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 road infrastructure. Council considers it appropriate that any new heavy haulage development make a reasonable contribution toward this infrastructure.

Council therefore will 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 Shire.

2 Heavy vehicle use occasions greater road maintenance expenditure

As stated above, Council has a responsibility to maintain the Shire's identified maintained road infrastructure to an acceptable standard. The standard is such 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) documents that the performance of road pavements is "influenced significantly by the heavy end of the traffic spectrum". This means that generally, there is no requirement to account for cars or light commercial traffic as far as pavement loadings is concerned. The only effect light vehicles have on the road is in terms of capacity. The performance and subsequent failure of pavements is determinate on heavy vehicle axle passes, the axle loading and the configuration of these axles.

Consequently, any additional heavy vehicle loadings on a public road that may occur due to heavy haulage development will accelerate the deterioration of that road's pavement. The consequence of this additional heavy traffic is that in order for the roads authority (i.e. Council) to maintain the road pavement at its existing level of service, additional maintenance spending will be required due to the extra heavy traffic causing damage sooner.

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.

A review of contribution plans from other NSW councils confirmed that there are various methodologies used to derive a reasonable monetary contribution from heavy haulage development towards road maintenance costs. The most common methods found are for the purposes of extractive industries and derive a contribution that is based on the amount of material hauled per kilometre of haul route.

3 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 4 types namely:

- single axle with single wheels;

- single axle with dual wheels;
- tandem axles both with dual wheels; and
- tri-axles all with dual wheels.

It is well established that damage to road surfaces is caused by heavy vehicles and is to be measured by equivalent standard axles (ESAs). For simplicity, the damage to the pavement associated with any particular axle load has been expressed as an equivalent standard axle (ESA) in the following table:-

Table 3.1 Total Vehicle ESA per Heavy Vehicle Type

Heavy Vehicle Type	GCM (t)	Payload (t)	Load Status			ESA's Round Trip*
			0%	50%	100%	
			Calculated ESA's 4 th Power			
Two Axle Rigid GML	15.0	7.00	0.42	1.18	3.00	3.42
Three Axle Rigid GML	22.5	13.12	0.51	1.27	3.58	4.09
Four Axle Rigid GML	27.5	15.50	0.36	1.30	4.13	4.49
Five Axle Rigid GML	31.0	17.62	0.35	1.19	3.44	3.79
Six Axle Rigid GML	43.0	24.04	1.68	2.59	5.54	7.22
Six Axle Rigid HML	46.0	27.04	1.68	2.59	5.54	7.22
Six Axle Truck & Dog	48.5	33.00	1.64	2.64	7.70	9.34
Seven Axle Truck & Dog	50.5	33.60	1.64	2.45	6.15	7.79
7 Axle Truck & Dog PBS	56.0	38.60	1.65	2.74	8.29	9.94
7 Axle Truck & Dog 20m PBS	57.5	40.10	1.65	2.74	8.29	9.94
19m B-Double GML	56.0	36.35	1.67	2.88	8.29	9.96
19m B-Double CML/HML	57.5	37.85	1.67	2.88	8.29	9.96

* Notes:- 1. The above information is from the Australian Trucking Association (ATA) Truck Impact Chart;
2. ESA's Round Trip is based on 100% Load one-way plus 0% Load one-way

PART 4 - STRATEGY

Traffic Generating Development and the Road Network Nexus

Council is only able to levy Section 94 developer contributions where development will require the provision of, or increase the demand for, public amenities and services. Accordingly, it is necessary to establish the nexus between Traffic Generating Developments and the need for public amenities and services arising from that development. To justify the Section 94 contribution, the development potential of Traffic Generating Development needs to be examined.

Traffic Generating Development typically causes and exacerbates the deterioration of the road surfaces. Council prior to development could have budgeted to maintain the road at a certain level of service. As a result of the development there is a need for continual and considerable expenditure by Council to maintain, repair and, where necessary, undertake reconstruction of the roads. For all road pavements, performance is influenced only by the heavy end of the traffic spectrum. No account need be taken of cars and light commercial vehicles as far as loadings are concerned (Austroads – “Pavement Design – A Guide to the Structural Design of Road Pavements”).

Heavy haulage vehicles cause the greatest impact on unsealed roads because of the lower design life for such roads, which is not sufficiently offset by the lower reconstruction costs. The damage to sealed roads by heavy haulage vehicles reduces slightly as the traffic volumes increase. The cost of damage is about 20% less for a high volume road with the same surface compared to a low traffic volume road.

The basis of the calculation has regard to reconstruction costs and the average annual road maintenance costs and the length of roads likely to be used by vehicles associated with Traffic Generating Development. The increased maintenance costs are calculated on the basis of the average cost per kilometre to bring a Rural Class 3 sealed road up to the required standard for the development. The impact is calculated on the ESA loading on the road per vehicle as a proportion of the total loadings on the road. This is then converted to a total cost per tonne (1000 kilograms) per kilometre. The designated travel route will form the length of road upon which the contribution will be levied.

It is well established that damage to road surfaces is caused by heavy vehicles and is to be measured by equivalent standard axles (ESAs). It is also widely accepted that the damaging effect of a 4 axle vehicle on road pavement is non-linear (e.g. double the load causes 16 times the damage – $2 \times 2 \times 2 \times 2$). For simplicity, the damage to the pavement associated with any particular axle load has been expressed as an equivalent standard axle (ESA). One ESA is equivalent to approximately 8.2 tonnes and, assuming an average car weighs 1,300kg (500kg on one axle and 800kg on the other), one ESA is the equivalent in pavement damage of around 9,500 average cars. Alternatively, a fully laden six axle truck & dog combination has an equivalent ESA of 7.7 - it therefore theoretically creates the same amount of damage as 73,150 cars.

This load equivalency results in high potential levels of damage to roads from heavy vehicles. Therefore, a section 94 contribution is reasonable for new Heavy Haulage Generating Development or Heavy Haulage Generating Development that expands production to cover the increased level of road deterioration. Such a development contribution is appropriate for new

construction, maintenance and rebuilding of any road that is regularly used by the Heavy Haulage Generating Development.

The extent of this reduced road life and increased maintenance depends entirely on the amount of heavy vehicular traffic generated by the development. Therefore, this has a major impact on Council's financial resources which, in effect, without a contribution from the development, would burden the existing community with providing the extra financial resource needed by Council to maintain the existing level of service for the road network as a result of the development.

Methodology

The contributions methodology is applicable to all Council Roads. Based on Council's Roads Management Strategy, Pavement Design ESA's are identified as follows:-

Road Class	Pavement Design ESA	Average Cost for Rehabilitation / Reconstruction per km	Average Cost per ESA per km
Rural Sub-Arterial (RSA)	5 x 10 ⁶	\$950,000 / km	\$0.19
Rural Local (RL)	1 x 10 ⁶	\$750,000 / km	\$0.75

The Average Cost for Rehabilitation/Reconstruction takes into account the need for adequate pavement depth and widening (where required) to accommodate increased traffic loadings.

Contributions are therefore based on the number of movements as a percentage of the Pavement Design Life and Rehabilitation costs.

Tonnage Calculations

The following calculations have been made based on the various vehicle types commonly associated with heavy haulage:-

Heavy Vehicle Type	Payload (t)	ESA's / Round Trip*	Tonnes Per ESA	Cost/t/km Rural Sub-Arterial	Cost/t/km Rural Local
Two Axle Rigid GML	7.00	3.42	2.05	\$0.093	\$0.366
Three Axle Rigid GML	13.12	4.09	3.21	\$0.059	\$0.234
Four Axle Rigid GML	15.50	4.49	3.45	\$0.055	\$0.217
Five Axle Rigid GML	17.62	3.79	4.65	\$0.041	\$0.161
Six Axle Rigid GML	24.04	7.22	3.33	\$0.057	\$0.225
Six Axle Rigid HML	27.04	7.22	3.75	\$0.051	\$0.200
Six Axle Truck & Dog	33.00	9.34	3.53	\$0.054	\$0.212
Seven Axle Truck & Dog	33.60	7.79	4.31	\$0.044	\$0.174
7 Axle Truck & Dog PBS	38.60	9.94	3.88	\$0.049	\$0.193
7 Axle Truck & Dog 20m PBS	40.10	9.94	4.03	\$0.047	\$0.186
19m B-Double GML	36.35	9.96	3.65	\$0.052	\$0.206

19m B-Double CML/HML	37.85	9.96	3.80	\$0.050	\$0.197
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Where detailed information regarding haulage vehicles is not provided, it is assumed for the purpose of the calculations that the standard haulage vehicle is a Six Axle Truck & Dog with a total mass of 48.5 tonnes and payload of 33.0 tonnes. Therefore, for those developments with weighbridges, tonnage contributions can be calculated as per the following table:-

Road Class	Pavement Design ESA	Cost for Rehabilitation / km	Cost / ESA / km	Cost/t/km
Rural Sub-Arterial (RSA)	5 x 10 ⁶	\$950,000 / km	\$0.19	\$0.054
Rural Local (All) (RL)	1 x 10 ⁶	\$750,000 / km	\$0.75	\$0.212

When submitting a development proposal to Council (or the Consent Authority) for consideration and determination, a Development Application will need to contain supporting written documentation which elaborates upon the developments specific attributes. One section of the written documentation will need to contain the following data for Council (or the Consent Authority) to consider:

- mapping which depicts the nominated vehicle public road network to service the development proposal;
- estimate of total vehicle movements (both laden and unladen) generated by the development proposal;
- estimate of the total amount of material imported and exported by the proposal over the life of the development;
- detail on the type, size and volume of vehicles (ie includes contracted Company vehicles) proposed to service the development; and
- the location of the nearest private or public weighbridge to authorise and record the tonnages of material leaving the supplied development site where applicable.

Upon receipt of the above information, Council (or the Consent Authority) will start to determine the contribution amount(s) attributable to the development proposal. The haulage route will be determined by Council (or the Consent Authority) staff when assessing the development application, based on the haulage route/s described in the documentation submitted with the development application. In the following formulae, L is the length of haul route, T is the amount per tonne hauled from the site each month (to be reported to Council by the applicant/operator each month), R is the contribution rate as set out above. These figures are then used to determine the amount payable to Council each month:

Contribution to be paid each month

$$\text{Contribution to be paid each month} = T \times [(L_{\text{RSA}} \times R_{\text{RSA}}) + (L_{\text{RL}} \times R_{\text{RL}})]$$

T = Tonne of extracted/processed material

L = Length of haulage route for each road class (RSA, RL) as set in the conditions of consent

R = Contribution rate for each road class (RSA, RL) per tonne, as set in the conditions of consent and adjusted annually with CPI – Sydney All Groups index published by the ABS.

If insufficient information is submitted with the application for Council (or the Consent Authority) staff to determine haulage route/s (length in kilometres), Council (or the Consent Authority) may require these to be verified by traffic count over a minimum period of 1 month, prior to the commencement of the development prior to setting the maintenance contribution rate. Where the designated travel route involves the use of more than one road then each road will be treated separately in terms of the road maintenance contribution. Therefore, the total contribution payable for the development will be the sum of all the calculated contribution rates for all the individual roads on the designated travel route/s. If required by the Developer, this verification can be performed by an independent and appropriately qualified Traffic Engineer, to be appointed by Council (or the Consent Authority), at the cost of the applicant.

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

The Dungog area's local and regional road network has been constructed and is maintained by Council as necessary to ensure an acceptable standard of service. It is possible that some of these roads may not be able to accommodate additional heavy vehicle loading generated by new industrial developments without immediate upgrade. New roads, or upgrades to sections of the existing road network, including ongoing maintenance, may be required to accommodate the additional heavy vehicle loading.

Where a development requires works to the road network to be undertaken, the requirement will be by way of a condition imposed on the development consent under section 80A(1)(f) of the EP&A Act. This will be in addition to the road maintenance contributions imposed under this plan for sections of haul routes not upgraded by the development.

PART 5 – DEFINITIONS, REFERENCES, APPENDICES, SCHEDULES

In this Plan unless the context or subject matter otherwise indicates or requires:

ABS means the Australian Bureau of Statistics.

Act means the Environmental Planning and Assessment Act 1979.

Consent Authority means Dungog Shire Council, the Minister (or their delegates).

Council means Dungog Shire Council.

Development contributions means a development contribution required to be paid by a condition of development consent imposed pursuant to section 94 of the Act.

Extractive industry means:

- the winning of extractive material; or
- an undertaking, not being a mine, which depends for its operation on the winning of extractive material from the land on which it is carried on, and includes any stockpiling, washing, crushing, grinding, milling or separating into sizes of that extractive material on that land.

Extractive material means sand, sandstone, gravel, clay, turf, soil, rock, stone or similar substances that are not minerals under the Minerals Act.

Heavy Haulage Development means the following developments that are defined in the Dungog Local Environmental Plan 2014:-

- Extractive Industry; or
- Mine,

And where the development, if approved, will result in significant additional tonnages or volumes of excavated or extracted material being removed from or delivered to the development site.

Industry means:

- any manufacturing process within the meaning of the Factories, Shops and Industries Act 1962; or
- the breaking up or dismantling of any goods or any article for trade or sale or gain or as ancillary to any business.

Levy means a levy under s94A of the Act authorised by this plan.

LGA means local government area.

Operator means the registered owner or company operating the mine or extractive industry from time to time.

Public facility means a public amenity or public service.

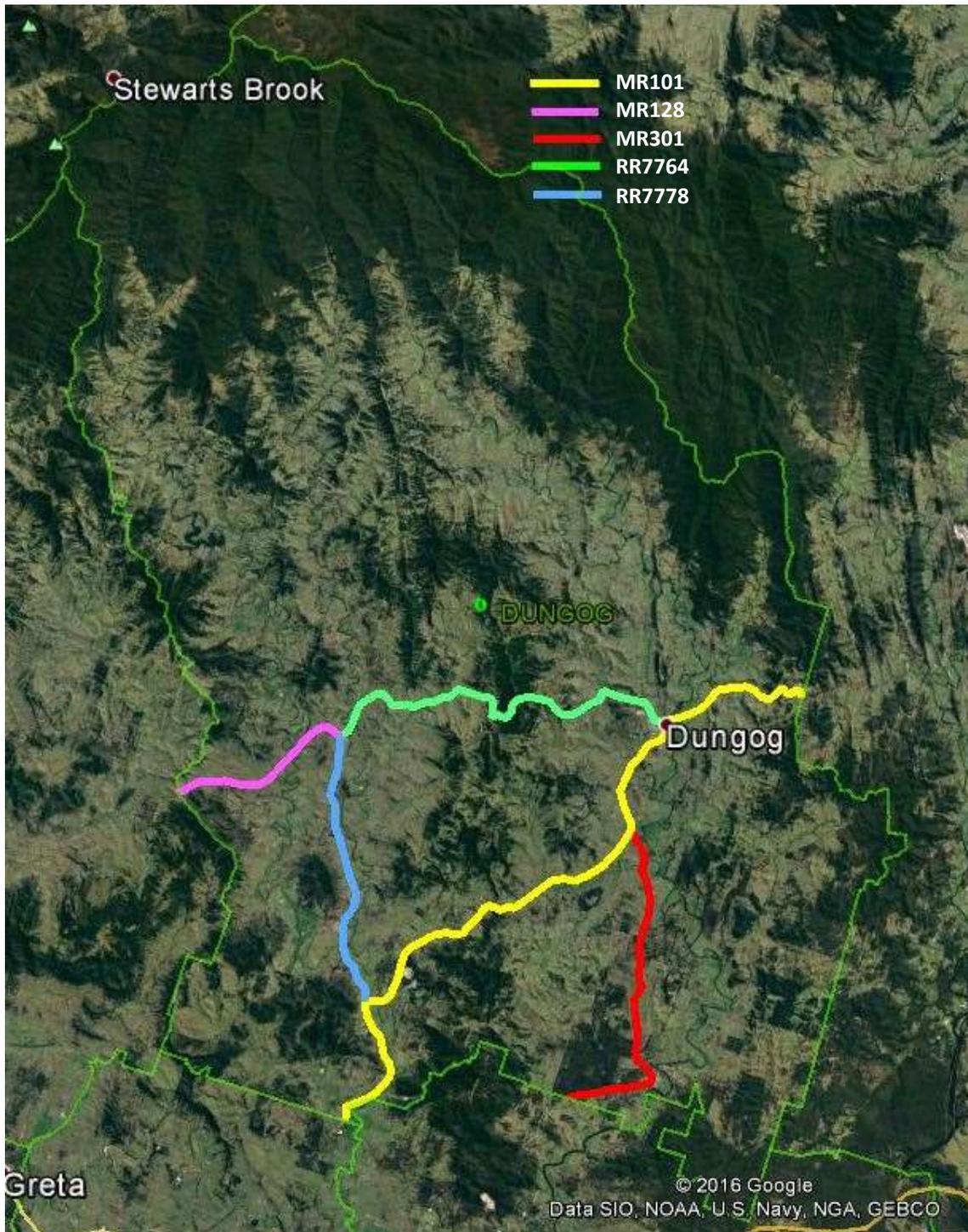
Regulation means the *Environmental Planning and Assessment Regulation 2000*.

s94 plan means a development contributions plan made pursuant to section 94B of the Act.

References

- Development Contributions – Practice Notes Issued July 2005, Department of Planning (formerly Department of Infrastructure Planning and Natural Resources).
- Hills Shire Council, Contributions Plan No.6 – Extractive Industries 2009.
- Deniliquin Development Contributions Plan 2007
- Appeal No.10521 of 1994 Land & Environment Court of NSW, Manaldo -v- Baulkham Hills Shire Council, 1995.
- Appeal No.10064 of 1997 Land & Environment Court of NSW, Neville Francis Diamond -v- Baulkham Hills Shire Council, 1998.
- Appeal No.10501 & 10502 of 1987 Land & Environment Court of NSW, Collin C Donges & Assoc. Pty Ltd -v- Baulkham Hills Shire Council [1989] NSWLEC 39 (4 May 1989).
- Study of Section 94 Contributions made for the Provision of Roads, Traffic facilities and Parking - Stage 1 Report, prepared by Stapleton & Hallam for Western Sydney Regional Organisation of Councils, September 1991.
- ABS 2015, Consumer Price Indexes, Australia, <http://www.abs.gov.au/AUSSTATS>
- BITRE 2013, Yearbook 2013:Australian Infrastructure Statistics, Statistical Report, BITRE, Canberra, ACT.
- BITRE 2012, BITRE Road Construction and Maintenance Price Index, Information Sheet 45 (November 2012), BITRE, Canberra.
- National Transport Commission 2012, Heavy vehicle charges. Report to the Standing Council of Transport and Infrastructure, NTC, February 2012.
- NSW Minerals Council, Submission to IPART – Benchmark Costs for Local Infrastructure Contributions, November 2013.
- RMS Guide to Traffic Generating Developments, revised October 2002, Issue 2.
- Austroads Guide to Road Design
- RMS FREIGHT ROUTE INVESTIGATION LEVELS for Restricted Access Vehicles draft for consultation (January 2012)
- Australian Trucking Association Ltd - Technical Advisory Procedure - Truck Impact Chart - 2.1 edition (September 2016)

APPENDIX A - MAP OF DUNGOG SHIRE SHOWING PREDOMINANT HAUL ROUTES & WORKS PROGRAMME



Road Number	Road Name	Project Location / Description	Length (km)	Programme Estimate
MR101	Maitland Road	140m South of William Street to Albert Street	0.440	\$1,342,400
MR101	Dungog Road	Greenhills to Hilldale Road Intersection	1.830	\$1,903,200
MR101	Dowling Street	Mary Street to Mackay Street	0.720	\$1,260,000
MR101	Dungog Road	Hilldale Road to Sandy Creek Road Intersection	1.680	\$1,747,200
MR101	Dungog Road	North of Grace Avenue to Horns Crossing Road	1.200	\$1,248,000
MR101	Gresford Road	Sextons to Fairhalls	0.950	\$1,111,500
MR101	Dungog Road	Gresford Road to Gostwyck Bridge	1.000	\$1,170,000
MR101	Gresford Road	Dungog Road to Fairhalls	1.650	\$1,930,500
MR101	Dungog Road	1.2km East of Merchants Road to Greenhills	1.700	\$1,768,000
MR101	Dungog Road	500m West of Merchants Rd to 1.2km East	1.700	\$1,768,000
MR101	Clarence Town Road	0.3km to 2.0km North of MR301	1.700	\$1,768,000
MR101	Dungog Road	Wallarobba Rail Crossing to Wallaringa Rd	1.200	\$1,248,000
MR101	Dungog Road	South of Maxwells Creek Bridge	0.350	\$364,000
MR101	Dungog Road	North of Maxwells Creek Bridge to MR301	1.160	\$1,206,400
MR101	Lord / Mary Sts	Rens Street to Dowling Street	0.500	\$2,250,000
MR128	Durham Road	Park Street to Paterson River Road	1.600	\$4,800,000
MR128	Glendonbrook Road	Durham Road to Town Boundary	0.300	\$612,000
MR128	Glendonbrook Road	West of Pound Crossing Bridge	0.900	\$936,000
MR128	Glendonbrook Road	West of Kangaroo Creek Bridge	4.700	\$4,888,000
MR301	Clarence Town Road	North of Erringhi Street	1.900	\$1,976,000

Road Number	Road Name	Project Location / Description	Length (km)	Programme Estimate
MR301	Clarence Town Road	Brookfield to Parers Hill	0.800	\$1,032,000
MR301	Clarence Town Road	Parers Hill to Union Bridge	2.400	\$2,496,000
MR301	Clarence Town Road	Union Bridge to Dungog Road	2.000	\$2,080,000
MR7764	Sugarloaf Road	Chichester Dam Road to Bingleburra Road	2.800	\$2,548,000
MR7764	Bingleburra Road	South of Sugarloaf Road to Mt Richardson	6.900	\$6,279,000
MR7764	Bingleburra Road	Mt Richardson to end of straight	2.500	\$2,975,000
MR7764	Bingleburra Road	End of Straight to Parks Creek Road	1.800	\$1,638,000
MR7764	Bingleburra Road	Parks Creek Road to Bridge	1.800	\$1,638,000
MR7764	Bingleburra Road	Bridge to Turnbulls Road	1.850	\$1,683,500
MR7764	Bingleburra Road	Turnbulls Road to east of Quarry	0.940	\$855,400
MR7764	Bingleburra Road	West of Quarry to Allyn River Road	0.600	\$546,000
MR7764	Allyn River Road	Bingleburra Road to Camyr Allyn Bridge	1.800	\$1,638,000
MR7764	Allyn River Road / Park Street	Camyr Allyn Bridge to Durham Road	0.900	\$2,250,000
MR7778	Gresford Road	East Gresford to Clements Road	1.900	\$1,976,000
MR7778	Gresford Road	Clements Road to Torryburn Bends	1.100	\$1,144,000
MR7778	Gresford Road	Torryburn Bends to Flying Fox Lane	4.300	\$4,472,000
MR7778	Gresford Road	Flying Fox Lane to North of Summerhill Road	1.500	\$1,560,000
MR7778	Gresford Road	Vacy to Dungog Road	3.000	\$3,120,000