MAROOCHY SHIRE COUNCIL PLANNING SCHEME
POLICY NO. DC3
ROADS INFRASTRUCTURE

DC 3.1 INTRODUCTION

(1) This Transitional Roads Infrastructure Policy identifies the process to apportion appropriate road network costs to future development, based on the estimated, average, weekday proportional usage of the Shire's trunk road network by individual developments at the milestone year 2021.

(2) This Policy will apply to all development across the Shire. Maroochy Plan Planning Areas and / or Precinct areas define the geographical boundaries of the charge areas, which have been aggregated into district level charge areas (refer to Table 1).

(3) Contributions will be sought from all assessable development within Maroochy Shire for:
   a. Material Change of Use
   b. Reconfiguration of a Lot

(4) This Policy will also form the basis for initial discussions for contributions under a development Voluntary Infrastructure Agreement.

DC 3.2 TRUNK NETWORK

(5) For the purpose of this Policy, the road network throughout the Shire has been defined as either 'trunk' or 'non-trunk'. Trunk roads are defined on DC 3 Map 1 Trunk Road Infrastructure (refer Appendix 1). Local Roads (non-trunk) have also been shown on Map 1, particularly in the rural areas where they form an important framework connecting smaller communities or provide access to the higher order network. Local Roads (non-trunk) are not however part of the trunk road network and have not been used in the calculation of the roads infrastructure unit rates or infrastructure contributions. By definition, all State-Controlled Roads are 'trunk' infrastructure, however these roads have not been used in the calculation of the roads infrastructure unit rates or infrastructure contributions.

NOTE DC 3.2 SIGNIFICANCE OF 'TRUNK' INFRASTRUCTURE

i) Where a road has been identified as a 'trunk' road, development conditions may not be applied by Council to upgrade that road other than for direct frontage improvements, impacting works where a development has a greater demand on the infrastructure than planned, and access works relating to the development.

ii) Where 'internal' road infrastructure is required to be provided as part of a development, it shall be generally in accordance with the guidelines outlined within relevant planning scheme codes and policies.

iii) For the purpose of clarity it is recorded that the Council is not responsible for the construction or the cost of any part of the internal road network of a development even though they may be later classified as a Collector or a higher-order road (and therefore may become 'trunk').

iv) Infrastructure contributions payable by a Developer pursuant to this Planning Scheme Policy are additional to the 'internal' infrastructure that the Developer is required to provide as part of a development.

(6) This Policy seeks contribution for the estimated proportional use by a development of Council-controlled 'trunk' roads based on:

a. the current replacement cost of the existing infrastructure, including the acquisition of land purchased by Council after 1990 for the purpose of constructing that infrastructure;

b. all associated costs of proposed upgrades to existing 'trunk' infrastructure including acquisition of land, relocation of services;

c. all associated costs of the construction of new 'trunk' infrastructure including acquisition of land, relocation of services, etc.

(7) The Programme of Works comprising the works listed under b. and c. above may also include Council's proportional liability to the upgrade or construction of State-Controlled infrastructure, e.g. the provision of ramps at new Sunshine Motorway interchanges, traffic control and improvements at intersections of Council Roads and State Controlled Roads.

DC 3.3 DESIRED STANDARD OF SERVICE AND DESIGN PARAMETERS FOR ROADS INFRASTRUCTURE

(8) The adoption of a minimum Desired Standard of Service provides a trigger to upgrade elements of the road network. The term Level of Service is more generally used in road design literature and is used interchangeably in the context of this Policy.

(9) The Level of Service for an element of a road system is defined as a qualitative measure describing operational conditions within the traffic stream. It attempts to emulate the perception by motorists and / or passengers of these operational conditions.

(10) A Level of Service definition generally links these conditions in terms of speed and travel time, freedom to manoeuvre, traffic interruptions, comfort and convenience and safety. In general there are six Levels of Service, designated from A to F, with Level A representing the best operating conditions (i.e. free flow) and Level F the worst (i.e. forced or breakdown flow).

(11) Level of Service D is close to the limit of stable flow and is approaching unstable flow. All drivers are severely restricted in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience is poor and small increases in traffic flow will generally cause operational problems.

(12) The desired Standard of Service for the various levels and type of road infrastructure is outlined in Table DC 3.3.1 in Appendix 2.

NOTE DC 3.3 DESIRED STANDARD OF SERVICE AND DESIGN PARAMETERS FOR ROADS INFRASTRUCTURE

1) Traffic demand varies by time of day, and seasonally throughout the year. What is a seasonal peak period in Buderim is different to the seasonal peak period in Mooloolaba. Hinterland traffic may peak on weekends throughout the year, but in Nambour the peak may be associated more closely with school start and finish times. In developing areas, demand growth will be very large over the next twenty years, whereas in some established residential areas, maximum development (and trip generation) has already been achieved.

2) Traffic modelling linking existing and future landuse to trip generation can provide estimates of traffic flows in incremental steps into the future. The Sunshine Coast Travel Forecasting Model (SCTFM) is a computer-based model for the whole of the Sunshine Coast developed by Maroochy Shire and the Department of Main Roads in collaboration with Noosa Shire and Caloundra City. The Model is used to predict Annual Average Weekday Daily Traffic (AAWDT) and AM and PM (2-hr) peak demands. Based on the calibration year 2000, predictions have been made for the milestone years 2006, 2011, 2016 and 2021.

3) Within urban areas, capacity at major intersections holds the key to maintaining reasonable standards of service. Travel demands have been cordoned from the SCTFM peak periods and seasonally factored to give design hour volumes at milestone years of 2016 and 2021. These demand volumes have then been used in a traffic simulation programme that reports those parameters that can be linked to Level of Service, e.g. average delay, vehicles per hour; or those elements of design, e.g. signal phasing, queue lengths for auxiliary lane design, etc.

4) It is acknowledged that in some cases, due to localised circumstances, the desired standard of service may not be met. In these situations, roads infrastructure aims to meet the standards to the greatest degree practicable.

DC 3.4 ESTIMATED COST OF ROADS INFRASTRUCTURE

(13) The current estimated costs for roads infrastructure is outlined in Table DC 3.4.1—

Table DC 3.4.1: Roads Infrastructure Costs to 2021

Type of Works	Existing network	Securement	Embellishment
Trunk Roads Infrastructure	**$229,587,000**	**81,318,000**	**$191,691,000**

DC 3.5 PROPORTION OF ROADS INFRASTRUCTURE ESTABLISHMENT COSTS TO BE FUNDED BY INFRASTRUCTURE CONTRIBUTIONS

(14) The proportion of Roads infrastructure costs attributable to infrastructure contributions is outlined in Table DC 3.5.1.

Table DC 3.5.1 Proportion of roads infrastructure costs subject to infrastructure contributions ($)

LEVEL OF WORKS	Costs not subject to Infrastructure Contributions	Costs subject to Infrastructure contributions
Trunk Roads Infrastructure	**$335,603,000**	**$166,993,000**

DC 3.6 INFRASTRUCTURE CONTRIBUTIONS AND CALCULATIONS

(15) Those areas of the Shire and the type of development applications subject to roads infrastructure contributions together with the method of calculating the contribution is outlined in Schedule DC 3.

DC 3.7 PROGRAM OF ROAD NETWORK IMPROVEMENTS

(16) Works included in the current Programme have been previously endorsed by Council as part of a Planning Report for the road link or associated area, e.g. Policy DC3 for Maroochydore, Mooloolaba Integrated Landuse and Transport Study (ILTS), Sunshine Motorway Planning Study 2032 (DMR), Coolum Integrated Land Use & Transport Study.

(17) The preliminary design of works is assisted by the use of traffic simulation computer packages. Layouts are prepared in almost all cases without detailed field survey, generally as overlays over aerial photography. Standardised costing rates are used for both new construction and the replacement value.

(18) The works in the Programme will be funded jointly by contributions from development and Council's Capital Works Funding. Further funds may be forthcoming from the State as part of an infrastructure agreement, e.g. the construction of the Maroochy Boulevard / Sunshine Motorway Interchange. The programming of works may be impacted or contingent upon other works not included in the Programme, such as major upgrades of the State-Controlled network, or major landuse redevelopment. From time to time the Programme will be reviewed to reflect changing fiscal circumstances or network priorities.

NOTE DC 3.7 PROGRAM OF ROAD NETWORK IMPROVEMENTS

1) Currently, the Program includes works for Coolum, Maroochydore, Mooloolaba and Sippy Downs (Claymore Road/Dixon Road/Power Road/Upgrade of Sippy Downs Drive)

2) Further works will be included for Nambour/Woombye/Palmwoods (a joint study with DMR) after a report has been submitted and endorsed by Council.

SCHEDULE DC3: ROAD INFRASTRUCTURE CONTRIBUTIONS SCHEDULE

AREAS WHERE INFRASTRUCTURE CONTRIBUTIONS SHALL APPLY

(1) All areas of the Shire (which have been aggregated into District Charge Areas) are subject to a Roads Infrastructure contribution (refer to Table 1).

Table 1: Charge Areas – Planning Area / Precinct equivalents

CHARGE AREA DISTRICTS		PLANNING AREA / PRECINCT *
1.	South East Maroochy - Urban (SEM)	1. Maroochydore 3. Sippy Downs 4. Mooloolaba 5. Mountain Creek 6. Buderim 7. Alexandra Headland / Cotton Tree 8. Kuluin / Kunda Park
2.	Other Urban	2. Nambour 9. North Shore 10. Mt Coolum 11. Coolum Beach 12. South Peregian 13. Bli Bli
3.	Towns	14. Palmwoods 15. Woombye 16. Yandina 17. Eumundi 19. Blackall Range (precincts 2, 3, 16 & 17)
4.	Rural	18. Kenilworth 19. Blackall Range (all precincts other than 2, 3, 16 & 17) 20. Mountain Creek Valley 21. Eudlo Creek Valley 22. Petrie / Paynters Creek Plains 23. Maroochy River Plains 24. Yandina Creek Valley 25. Northern Coastal Plains 26. Northern Hinterland 27. Central Hinterland 28. Southern Hinterland 29. Obi Obi Creek Valley 30. Mary River Valley

* From Maroochy Plan, Volume 3

APPLICATION OF CONTRIBUTION

(2) Roads infrastructure contributions apply to every development application that involves -

(a) Reconfiguring a lot; or
(b) A material change of use.

DETERMINATION OF ROADS INFRASTRUCTURE CHARGE UNIT RATES

(3) The Roads Infrastructure Unit Rates for the purposes of calculating Roads Infrastructure Contributions is to be determined for each planning area as set out in Table 2.

(4) The Roads Infrastructure Unit rate has been calculated as follows —

For each 'trunk' link a 'usage cost' is determined from the estimated daily traffic volume (on the link) at the year 2021.

i.e. $\frac{\text{Replacement Cost or Capital Cost}}{\text{Total Daily Trip Ends @ year 2021}}$
= 'Usage Cost' (cost per trip end)

The estimated daily traffic volume is distributed to each of the charge areas **and** external areas using the strategic transport model SCTFM. Each charge area daily volume (for the link) is multiplied by the 'usage cost' to determine a 'charge area link cost'.

A 'charge area net cost' is determined by summing the respective 'charge area link cost' for all trunk links under Maroochy Shire control.

The 'charge unit rate' is then determined by dividing the 'charge area net cost' by the total trip generation for a 'charge area'.

DETERMINATION AND CALCULATION OF ROADS INFRASTRUCTURE CONTRIBUTIONS

(5) The Roads infrastructure contribution for any proposed development is to be calculated as follows –

[(A – B) – C] x D x E

Where

A (being proposed demand) is –

i. For reconfiguring a lot the roads demand factor for the Land or lots (excluding any Dedicated Lots) included in the development application determined using the rates outlined in Table 3(a), Table 3(b), Table 4 or Table 5.
ii. For a material change of use the roads demand factor for the use or Land calculated using the rates outlined in Table 3(a), Table 3(b), Table 4 or Table 5.

B (being existing use demand entitlements) is –

i. For vacant land, the roads demand factor allowed for a single dwelling unit or where previous infrastructure contributions have been paid to Council the demand on which the previous contributions were based.[1]
ii. Otherwise, the existing use demand entitlement.[2]

C Is any applicable infrastructure credit for the land (granted as a result of providing advanced funding for the construction of trunk infrastructure or contributing trunk infrastructure) as outlined in the Register of Infrastructure Contributions and Credits.

D Is the applicable Roads Infrastructure unit rate as outlined in Table 2 for the Planning Area in which the land is situated.

E Is the applicable Roads Infrastructure unit charge at the date of payment (refer to Section 3.5 Infrastructure Unit Charges in Planning Scheme Policy DCA - Administration for details of the Roads infrastructure unit charge currently in force).

NOTE 1 SCHEDULE DC 3

UNIT CHARGES

(1) For convenience, the infrastructure unit charge for roads infrastructure is contained in the Local Government's Scale of Fees and Charges.

[1] The onus is upon the applicant to provide evidence of any previous infrastructure contributions paid to Council.

[2] Refer to Division 10 – Glossary of Terms in Planning Scheme Policy DCA – Administration for an explanation of the term "existing use demand entitlement".

NOTE 2 SCHEDULE DC 3

EXAMPLES

(1) (a) It is proposed to reconfigure 3 hectares of land at Coolum Beach on the boundaries of Precincts 4 and 9 into :

(A) 1 lot (8000m2) for future unspecified shops;

(B) 1 lot (5000m²) for future house sites (unspecified number of lots) and

(C) 19 residential lots on 1.7 hectares comprising 15 traditional house lots and 4 courtyard lots.

(b) No previous roads contributions were paid nor is the land subject to infrastructure credits.

(c) The roads infrastructure demand for the proposed development using the rates outlined in Table 3(a) is as follows—

A 8000m^2	B 5000 m^2	C 1.7 ha
As the land is within the Local Centre Precinct and there is no actual proposal for the lot, infrastructure contributions are not applicable at the reconfiguration stage as there is no per hectare road network demand factor	As there is no actual proposal for the lot use the land area method to determine the demand factor	As there is a proposal for the land use both the land area and the number of lots method to determine the demand factor and choose whichever method has the greatest demand factor (i.e. cu)
= 0 cu	$\frac{75 \text{ cu/ha} \times 5000\text{m}^2}{10000\text{m}^2}$ = 37.5 cu	75 cu/ha x 1.7 ha = 127.5 cu ✖ OR 15 trad. lots x 7.5 cu = 112.5 cu 4 c'yard lots x 7.5 cu = 30 cu = 142.5 cu ✓

(d) The roads infrastructure demand for the development (A) = 180 cu

(e) As the land is not subject to infrastructure credits nor the subject of previous roads contributions the existing demand is that allowed for a single dwelling unit

(refer to 'B' in the calculation formula).

(f) The demand for a single dwelling unit is 7.5 cu (from Table 3(a)).

B = 7.5 cu

(g) The increase in demand is A – B = 172.5 cu

(h) The infrastructure contribution is -

172.5 x 294 (from Table 2 - Planning Area Coolum Beach)

50,715 x $1.0762 (Infrastructure Unit Charge)

= $54,579.48

(2) (a) It is proposed to extend by 500m^2 an existing 1000m^2 shop at Kuluin / Kunda Park (i.e. GFA increase only – no requirements for additional parking, landscaping, etc).

(b) The shop is on land (3000m^2) within the 'Local Centre' Precinct.

(c) No previous roads contributions were paid nor is the land subject to infrastructure credits.

(d) The roads infrastructure demand for the proposed development using the rates outlined in Table 3(a) is as follows-

Use the GFA method to determine the demand factor (i.e. cu)

$$\frac{1500m^2 \times 22.5 \text{ cu}}{100m^2}$$

= 337.5 cu ✓

(e) The roads demand for the development (A) = 337.5 cu

(f) The existing roads infrastructure demand for the shop is as follows-

$$\frac{1000m^2}{100m^2} \times 22.5 \text{ cu} \qquad B = 225 \text{ cu}$$

(g) The increase in infrastructure demand is A – B which equals 112.5 cu

(h) The infrastructure contribution is-

112.5 x 376 (from Table 2 - Planning Area Kuluin/Kunda Park)

42,300 x $1.0762 (Infrastructure Unit Charge)

= $45,523.26

(3) (a) It is proposed to extend by 200m^2 an existing 440m^2 shop at Maroochydore (i.e. GFA increase only – no requirement for additional parking, landscaping, etc)

(b) The shop is on land (3000m^2) within the 'Town Centre Frame' Precinct

(c) Previous contributions of $49,497.60 were paid for the existing centre

(d) The roads infrastructure demand for the proposed development using the rates outlined in Table 3(a) is as follows -

Use the GFA method to determine the demand factor

$$\frac{640m^2}{100m^2} \times 55 \text{ cu}$$

= 352 cu ✓

(e) The roads infrastructure demand for the development (A) = 352 cu.

(f) The existing cu demand is to be equal to the cu on which the previous payment was determined. It was ascertained that the previous payment related to a charge based on the net increase in PM Peak Hour Trips (i.e. 23.1 – 3.9 = 19.2 modified PM Peak Trips). Whilst the charge related to 19.2 trips the actual demand of the existing shopping centre was 23.1 (the then existing detached house and car sales yard reduced the charge by 3.9 trips). Consequently, the existing use demand factor is 23.1 modified PM Peak Trips and for the purpose of this policy, 1 modified PM Peak Trip equals 10 cu. Therefore, the existing use demand factor is 231 cu.

(g) The increase in infrastructure demand is A–B which equals 121 cu.

(h) The infrastructure contribution is-

121 x 376 (from Table 2 - Planning Area Maroochydore)

45,496 x $1.0762 (Infrastructure Unit Charge)

= $48,962.80

(4) (a) It is proposed to change (by demolition) an existing fabrication industry (2000m^2 GFA) to 2500m^2 shops at Kunda Park.

(b) The land is 8000m^2 within the 'Local Centre' Precinct.

(c) No previous roads contributions were paid nor is the land subject to infrastructure credits.

(d) The roads infrastructure demand for the proposed development using the rates outlined in Table 3(a) is as follows-

Use the GFA method to determine the demand factor (i.e. cu)

$$\frac{2500m^2}{100m^2} \times 22.5 \text{ cu}$$

= 562.5 cu ✓

(e) The roads demand for the development (A) = 562.5 cu.

(f) The existing roads infrastructure demand for the fabrication industry is as follows-

$$\frac{2000\ m^2}{100\ m^2} \times 5 \text{ cu}^* \qquad B = 100 \text{ cu}$$

* Because the fabricating industry is an inconsistent use in the Local Centre Precinct, the roads demand factor has been determined using the Precinct that most closely aligns with the existing use –
in this example the Core Industry Precinct which has a GFA demand factor of 5 cu / 100 m^2 GFA (refer Table 3(a)).

(g) The increase in infrastructure demand is A – B which equals 462.5 cu.

(h) The infrastructure contribution is -

462.5 x 376 (from Table 2 - Planning Area Kuluin/Kunda Park)
173,900 x $1.0762 (Infrastructure Unit Charge)

= $187,151.18

(5) (a) It is proposed to change (by demolition) existing shops (2000m^2 GFA) to 120 dwelling units and 1000m^2 shops at Maroochydore.

(b) The land is 8000 m^2 within the 'Multi-storey Residential' Precinct.

(c) No previous roads contributions were paid nor is the land subject to infrastructure credits.

(d) The roads infrastructure demand for the proposed development using the rates outlined in Table 3 (a) is as follows –

Use both the dwelling unit and GFA method to determine the demand factor (i.e. cu)

120 units x 5 cu / du = 600 cu

$\frac{1000\ m^2}{100\ m^2}$ x 60 cu = 600 cu

= 1200 cu ✓

(e) The roads demand for the development (A) = 1200 cu

(f) The existing roads infrastructure demand for the shops is as follows -

$\frac{2000\ m^2}{100 m^2}$ x 60 cu B = 1200 cu

*Because shops are a consistent use in the Multi-Storey Residential precinct, the roads demand factor can be determined using the GFA figure for the Multi-Storey Residential precinct (i.e. 60 cu / 100 m^2 GFA).

(g) The increase in infrastructure demand is A – B which equals 0.

(h) As there is no increase in roads demand, there is no roads infrastructure contribution.

Notes:

Cu	=	Chargeable Unit
Du	=	Dwelling Unit
GFA	=	Gross Floor Area
Ha	=	Hectare

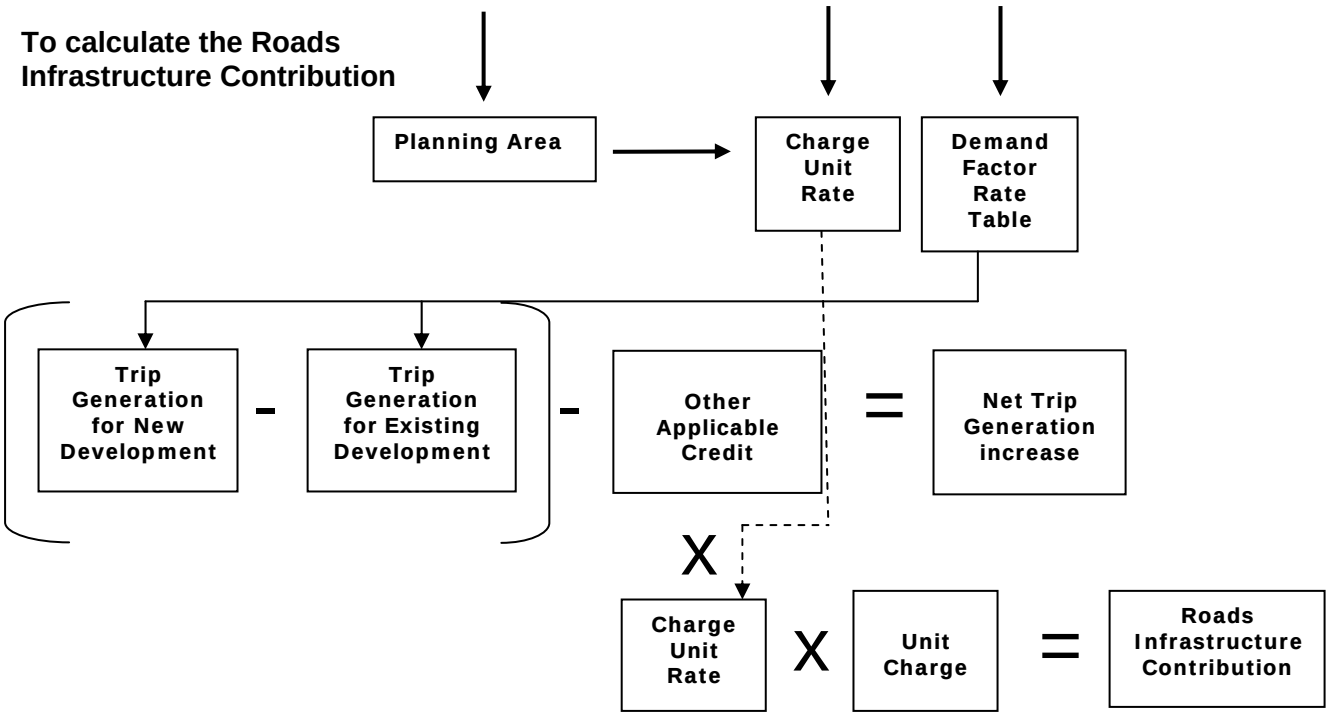
Schedule of Infrastructure Charge Unit Rates

(6) The Roads Infrastructure charge unit rates for the Charge Area Districts or Planning Areas outlined in Volume 3 of this Planning Scheme are shown in Table 2.

Table 2: Charge Unit Rates

CHARGE AREA DISTRICTS		PLANNING AREA	CHARGE UNIT RATE	DEMAND RATES
1.	South East Maroochy – Urban (SEM)	1. Maroochydore 3. Sippy Downs 4. Mooloolaba 5. Mountain Creek 6. Buderim 7. Alexandra Headland / Cotton Tree 8. Kuluin / Kunda Park	376	See Tables 3(a) & 3(b)
2.	Other Urban	2. Nambour 9. North Shore 10. Mt Coolum 11. Coolum Beach 12. South Peregian 13. Bli Bli	294	
3.	Towns	14. Palmwoods 15. Woombye 16. Yandina 17. Eumundi 19. Blackall Range (Precincts 2, 3, 16 & 17)	443	See Table 4
4.	Rural	18. Kenilworth 19. Blackall Range (all precincts other than 2, 3, 16 & 17) 20. Mountain Creek Valley 21. Eudlo Creek Valley 22. Petrie / Payntera Creek Plains 23. Maroochy River Plains 24. Yandina Creek Valley 25. Northern Coastal Plains 26. Northern Hinterland 27. Central Hinterland 28. Southern Hinterland 29. Obi Obi Creek Valley 30. Mary River Valley	639	See Table 5

To calculate the Roads Infrastructure Contribution



Road Network Demand Factor Rates

(7) The road network demand factor rates for the various precinct classes within each Charge Area District outlined in Table 1 of this Infrastructure Contribution Policy are shown in Table 3 (a) or Table 3 (b) or Table 4 or Table 5.

(8) Where the Table has more than one calculation method for determining the road network demand factor rate, the method producing the highest demand factor rate is to be used as the road network demand factor.

(9) Where a use is proposed within a precinct and that use or use type does not have a road network demand factor rate for that precinct (eg industrial development within the Village Centre Precinct), the road network demand factor for the use is to be based on the dwelling unit or GFA method for the precinct outlined in the following applicable District Table that most closely aligns with the proposed development.

Table 3(a): Road Network Demand Factor Rates for South East Maroochy - Urban (SEM) and Other Urban Districts (Charge Areas 1 & 2)

PRECINCT	ROAD NETWORK DEMAND FACTOR *	
Business and Industry		9.0cu/100m^2 GFA or 405 cu per ha
Core Industry		5.0cu/100m^2 GFA or 225 cu per ha
Hillslope Residential Sustainable Rural Residential General Rural Land Sustainable Cane Lands Sustainable Horticultural Lands Sustainable Pastoral Lands	Residential	9.5 cu /du
Local Centre	Residential Retail / Commercial / Medical Office	7.5 cu /du 22.5 cu /100m^2 GFA 15 cu /100 m2 GFA
Master Planned Community	To determine demand factor rates, use the precinct or precincts from this table that most closely align with the proposed development.	
Mixed Housing / Multi-storey Residential	Residential Retail / Commercial / Medical Office	5.0 cu /du 60 cu /100m^2 GFA 30 cu /100 m2 GFA
Neighbourhood Residential	Residential Retail / Commercial / Medical Office	7.5 cu /du or 75 cu per ha 60 cu /100m^2 GFA 30 cu /100 m2 GFA
Special Purpose	To determine demand factor rates, use the precinct or precincts from this table that most closely align with the proposed development.	
Town Centre Core	Residential Retail / Commercial / Medical Office	5.0 cu /du 50 cu /100m^2 GFA 20 cu /100 m2 GFA
Town Centre Frame	Residential Retail / Commercial / Medical Office	5.0 cu /du 55 cu /100m^2 GFA 25 cu /100 m2 GFA
Village Centre	Residential Retail / Commercial / Medical Office	5.0 cu /du 60 cu /100m^2 GFA 30 cu /100 m2 GFA
Sustainable Cane Lands Sustainable Horticultural Lands Sustainable Pastoral Lands General Rural Lands	Non Residential Generalised rates not necessarily applicable, and the applicant must submit an estimate of the additional motorised trips per day generated by the proposed development, unless otherwise specified in this table.	

* The roads demand factor is to be based on the highest chargeable unit rate.

Notes for Tables 3(a) and 3(b):

i. Units
cu = Chargeable Unit
du = Dwelling Unit
ha = Hectare
GFA = Gross Floor Area for non-residential purposes

ii. These rates are applied once, at the time of development application and not recalculated unless there is a material change of use **and** there is an increased charge to be levied.

iii. For the purposes of this calculation any shopfront office at ground floor would be deemed to have the Retail Road Network Demand Factor for that precinct.

iv. The specification of a Road Network demand factor in this table does not infer any development right within the particular precinct.

v. Residential development cu are calculated per dwelling. However, should dwelling density detail not be available the cu will be calculated via hectare. If the ha rate is lower than actual density in later assessable applications further charges will be applied.

vi. Demand Factor variations exist for some Specific Precincts –
Refer to Table 3(b) Road Network Demand Factor Rates for Specific Precincts (Unspecified Uses)

Table 3(b): Road Network Demand Factor Rates for Specific Precincts for South East Maroochy – Urban (SEM) and Other Urban Districts

Code	Planning Area	Index	Precinct	Road Network Demand Factor *
1	Maroochydore	1, 2, 3, 4	Town Centre Core	Residential 4.5 cu /du Retail / Commercial / Medical 45 cu /100m^2 GFA Office 18 cu/100m^2 GFA
4	Mooloolaba	1	Town Centre Core	

* The roads demand factor is to be based on the highest chargeable unit rate.

Table 4: Road Network Demand Factor Rates for the Towns District (Charge Area 3)

PRECINCT	ROAD NETWORK DEMAND FACTOR *
Neighbourhood Residential	Residential 8.5 cu /du or 85 cu per hectare Retail / Commercial / Medical 60 cu /100m^2 GFA Office 30 cu /100 m2 GFA
Hillslope Residential Sustainable Rural Residential	Residential 9.5 cu /du
Business and Industry	9.0cu/100m^2 GFA or 405 cu per ha
Core Industry	5.0cu/100m^2 GFA or 225 cu per ha
Mixed Housing	Residential 7.0 cu /du Retail / Commercial / Medical 60 cu /100m^2 GFA Office 30 cu /100 m2 GFA
Special Purpose	To determine demand factor rates, use the precinct or precincts from this table that most closely align with the proposed development.
Village Centre	Residential 7.0 cu /du Retail / Commercial / Medical 60 cu /100m^2 GFA Office 30 cu /100 m2 GFA
Local Centre	Residential 8.5 cu /du Retail / Commercial / Medical 22.5 cu /100m^2 GFA Office 15 cu /100 m2 GFA

* The roads demand factor is to be based on the highest chargeable unit rate.

Table 5: Road Network Demand Factor Rates for the Rural District (Charge Area 4)

PRECINCT	ROAD NETWORK DEMAND FACTOR *	
Business and Industry Core Industry		5.0cu /100m^2 GFA or 225 cu per ha
Neighbourhood Residential Hillslope Residential Sustainable Rural Residential General Rural Lands Sustainable Cane Lands Sustainable Horticultural Lands Sustainable Pastoral Lands Water Resource Catchment Area	Residential	9.5 cu /du
Local Centre	Residential Retail / Commercial / Medical Office	8.5 cu /du 22.5 cu /100m^2 GFA 15 cu /100 m2 GFA
Village Centre	Residential Retail / Commercial / Medical Office	8.5 cu /du 22.5 cu /100m^2 GFA 15 cu /100 m2 GFA
Special Purpose	To determine demand factor rates, use the precinct or precincts from this table that most closely align with the proposed development.	
Sustainable Cane Lands Sustainable Horticultural Lands Sustainable Pastoral Lands Water Resource Catchment Area	Non Residential Generalised rates not necessarily applicable, and the applicant must submit an estimate of the additional motorised trips per day generated by the proposed development, unless otherwise specified in this table.	

* The roads demand factor is to be based on the highest chargeable unit rate.

Notes for Tables 4 & 5:

i. Units

cu = Chargeable Unit
du = Dwelling Unit
ha = Hectare
GFA = Gross Floor Area for non-residential purposes

ii. These rates are applied once, at the time of development application and not recalculated unless there is a material change of use **and** there is an increased charge to be levied.

iii. For the purposes of this calculation any shopfront office at ground floor would be deemed to have the Retail Road Network Demand Factor for that precinct.

iv. Residential development cu are calculated per dwelling. However, should dwelling density detail not be available the cu will be calculated via hectare. If the ha rate is lower than actual density in later assessable applications further charges will be applied.

v. The specification of a Road Network demand factor in this table does not infer any development right within the particular precinct.

APPENDIX 1: DC3 MAP 1 TRUNK ROAD INFRASTRUCTURE

APPENDIX 2: TABLE DC 3.3.1 DESIRED STANDARDS OF SERVICE FOR ROADS INFRASTRUCTURE

TABLE DC3.3.1 Desired Standard of Service for Road Network

Key Performance Indicator Road Network *Speed/Delay*	**Level of Service**	**Performance Measurement Process**	**Performance Target**		**Operational Environment**	**Hourly Maximum Capacity**	
			Average Link Speed	**Average Intersection Delay**		**Single Lane (PCU's)**	**Multi Lane Capacity (PCU's)**
Urban Arterial	≥ LOS D	Link: Average Travel Speed of through vehicles (floating car)	≥ 25 kph	≤ 45 secs	Interrupted	1200	1400
Arterial Main-street	≥ LOS D		≥ 15 kph	≤ 45 secs	Interrupted	900	900
Distributor	≥ LOS D		≥ 25kph	≤ 45 secs	Interrupted	1000	1200
Controlled Distributor	≥ LOS D		≥ 20kph	≤ 45 secs	Interrupted	1000	1200
Sub Arterial Main-street	≥ LOS D	Intersection: Average Delay all vehicles at intersections	≥15kph	≤ 45 secs	Interrupted	900	Not Applicable
Street Network *Volume/Speed*			**Max [m] Volume VPD**	**Max [m] Speed**		**Vehicles per day**	
District Collector	Environmental Capacity	Traffic Volumes & Max Speed	≤ 7,000	60kph	Interrupted	7,000 (two way)	Not applicable
Neighbourhood Collector	Environmental Capacity	Traffic Volumes & Max Speed	≤ 3,000	50kph	Interrupted	3,000 (two way)	Not applicable

PCU = passenger car units