

The Council of The Municipality of Kiama



Kiama Cycleway Plan



adopted march 2005

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1.0 FORWARD

1.1 Introduction

In 1996 Council adopted a strategic plan for the development of cycleways in the Municipality. This plan was developed through the Walking Tracks and Cycleways Committee and many of the recommendations made in the plan have been implemented. This revised plan updates the recommendations in the light of the achievements to date and current standards and practices.

The area of study offers a variety of landscape both urban and rural, flat and hilly countryside and many scenic values. The plan sets out priorities for the provision of facilities based on current standards whilst recognising the constraints imposed by topography, existing infrastructure and the availability of finance.

Council is therefore interested in providing a safe and convenient bicycle movement system for permanent residents within the area and also encouraging facilities and services for visitors interests and needs.

The intention is to culminate with a plan which provides the basis for the provision of cycleway links within each of the towns and also elsewhere within the Municipality and adjoining Local Government area. In this regard the plan takes into consideration the NSW Coastline Cycleway Study commissioned by the RTA. This study has reported on the provision of a continuous cycleway through the Municipality and the adjoining Local Government areas of Wollongong, Shellharbour and Shoalhaven.

1.2 Aims of the Cycleway Plan

- To establish a network of routes to support safe, convenient and pleasant cycling for residents and visitors, both within the urban and rural areas of the study area and which make use of the proposed NSW Coastline Cycleway.
- To consult with community groups in the preparation of the Cycleway Plan.
- To encourage community education on the benefits of cycling
- To improve safety for bicycle riders and provide a range of facilities to support cycling both as a transport and recreational activity.
- To identify suitable requirements for the introduction of bicycle routes in new residential release areas.
- To produce a bike route map for distribution to the general community, and specifically to schools, to encourage the use of bicycles within the local areas.
- To identify the necessary facilities to be provided at points of connection with various other modes of transport.
- To establish a priority list of bicycle links within the Municipality & with adjoining Municipalities.
- To determine costs for the implementation of stages of the above plan.
- To meet appropriate engineering standards for cycling.

2.0 STRATEGIES

2.1 Engineering Strategy

The plan will establish a system for safe and convenient cycleways to service residential areas as well as links with each of the towns within the study area and regional links within and beyond the study area.

The plan identifies the preferred type of cycleway, bearing in mind practical constraints such as topography and construction costs.

The cycleway routes have been designed to take advantage of existing road reserves in urban areas, rural roads between each of the towns and other routes such as riverside, recreational areas and public reserves.

An important objective is to be the provision of secure bicycle parking facilities at the various points of connection with transport modes and community meeting points such as schools and commercial centres.

2.2 Education Strategy

The main aims of an education program are:

- Education of motorists to recognise and respect the cyclist as a legitimate road user.
- To create a safer on-road cycling environment by encouraging correct behaviour by all cyclists.
- Instruction of cyclists in the legal, safe and responsible riding practices.
- Education of town planners, engineers and politicians to consider the bicycle in the design of new works and redevelopment/reconstruction work.

Studies have shown that many bicycle accidents occur due to the unpredictable nature of cyclists. Younger cyclists have to be educated in the road rules and proper road behaviour. Motorists are also responsible for the safety of cyclists and they have to respect the rights of cyclists as legitimate road users. The education strategy must be included in Kiama's Road Safety Strategic Plan.

The bicycle has been the forgotten mode of transport for many planners and engineers with there being little or no provision for the cyclists in the existing transport infrastructure. Engineers and planners need to be aware of the cyclist so bicycle facilities can be incorporated into future developments.

The educational program can be achieved by providing suitable literature, posters and maps concerning safety issues that are to be directed towards the schools and public meeting places which will increase the visibility and safety of cyclists and through the organisation of cycle events promoted by Council and Kiama Bicycle User Group (BUGS). Suitable information needs to be developed with the assistance of Council's Road Safety Officer to provide localised information to focus on local issues.

2.3 Encouragement Strategy

The encouragement plan is to publicise the attributes and benefits of cycling and to create public and government awareness of the cyclists needs.

A small scale map is to be produced which shows the existing and proposed cycleway routes as well as places of interest and tourist attractions.

Measures need to be introduced to stimulate the use of the bicycle for everyday transport needs. This could be encouraged by having specific events to publicise a new track or cycling in general such as a "Tour De Kiama", a day ride around Kiama with such an event being organised by interested groups with Council assistance in conjunction with NSW Bike Week. Cycling could also be featured in Active Australia Day.

Encouragement of cycling is the responsibility of the whole community with different groups having different interests in cycling. The promotion of cycling shall be done by identifying target groups and focusing promotion towards them

2.4 Walking Tracks and Cycleway Committee

The Walking Tracks and Cycleway Committee is a Community based committee of Council comprising Councillors and a Council Officer and local community representatives concerned with the provision of cycle facilities and pathways in the Municipality. One of the functions of the committee was to develop a cycle plan and the original plan was adopted by Council in 1996.

The committee helped to develop the proposed routes by conducting saddle surveys and proposing other routes and ideas for the Cycleway Plan. A major concern to the committee was to provide accessible bicycle routes that still offered scenic appeal, directness, safety and riding ease.

The Committee has met regularly and provides direct community input to Council continually on cycleway issues and on the review of the plan



Photo 1 - Bombo Beach section of Kiama to Minnamurra Cycleway

3.0 BICYCLE PLANNING

3.1 Introduction

In 1996 surveys were carried out in all of the schools in the Municipality (5 Primary, 1 Secondary) and to the general public through the Cycleways Committee, public places and local shops. The response from the schools was encouraging with over 380 returns, while there was a disappointing response from the general public with only about 20 returns.

The results from surveys carried out in 1996 indicated that many of the cyclists ride a bicycle for exercise or recreation. These cyclists tend to stick to the main roads, are capable of high speeds, and are more responsible and aware of the traffic regulations. A major concerns for this group of cyclists were the lack of a sealed shoulder on rural roads or the deterioration of the road surface with cyclists often forced onto the traffic lanes and lack of a safe crossing over the Minnamurra River

The surveys indicate the different cycling habits for the different groups with school aged children riding a bicycle in their local area and for no real purpose other than for fun. Their main concern was for providing safe routes around the local area that avoid the busy roads and intersections. The other group of cyclists are more concerned with the overall condition of the road system with many of the cyclists regularly going on rides over 10 kilometres.

From the surveys a map of frequently used routes was established which formed the basis of many of the routes recommended in the 1996 plan and in this revised plan. These are shown in the Appendix.

3.2 Design of the Cycleway

The good design of a cycleway will ensure its continual use by the community and encourage cycling as a viable transport option. There are a number of factors that affect the design of cycleway networks that include topography, scenic appeal, directness and safety. Bicycle facilities are to be designed and constructed in accordance to Austroads Guide to Traffic Engineering Practice, Part 14 Bicycles (1999). However, it must be recognised that existing infrastructure and topography may at times preclude the construction of a cycleway in accordance with all the recommendations of those guidelines

The topography is an important factor for cyclists with the grade determining the route many cyclists ride. The acceptable grade for cycle paths for any distance is 3% with the acceptable distance drastically decreasing as the grade increases to a maximum of 10%. This is a significant problem in the Municipality due to the hilly nature of the area. Where possible the cycleway routes tried to avoid the steep gradients and where necessary the paths will traverse the hills.

Scenic appeal is important in the design of off-road paths with the proposed cycleway routes following the coastline, the rivers or parklands as much as possible.

Directness is an essential factor for a well used cycle way with the distance between attractions being a major factor in deciding whether the bicycle is used for the journey. If the route is indirect then cyclists will explore alternative routes, even if they are not as safe or scenic. The ease of using a cycleway route also applies to the directness with the pathways having to be well defined by either on-road markings or signage at all intersections.

Safety is a crucial element in any bicycle path. Some of the hazards that should be considered when developing any cycleway route are:

- Deterioration of the road shoulder forcing cyclists onto the mainstream traffic lanes.
- High relative speeds between the traffic and the cyclist.
- Parked traffic - opening doors, cars reversing.
- Irregular surfaces, potholes, dropped service pits.
- Drop off between the road and the kerb and guttering when the road is resurfaced.
- Overgrowth of vegetation onto pathways.
- Badly placed concrete resulting in a bumpy ride.
- Debris on the track.
- Pedestrians walking in the centre of the path, not observing for cyclists.
- Cars parked illegally blocking access to the paths.
- Local Area Traffic Management Schemes such as roundabouts and speed humps. These, wherever possible, shall incorporate bicycle movement as recommended in Part 14 of the Austroads Standards wherever possible.

Many of the above hazards can be avoided by the proper design, construction and maintenance of the cycleway.

3.3 On-Road Paths

(i) Exclusive Bike Lanes

Exclusive Bike lanes provide a separate lane for cyclists, preferably in the direction of the flow of the traffic. These are lanes created by pavement marking and signs. Motor traffic is prohibited by regulation from travelling or parking in these lanes. Bike lanes can be contra flow on local or low volume roads or where a physical barrier such as a guardrail or guide posts can be provided to separate the motor vehicles from cyclists. (*See Photo 1*). An exclusive bicycle lane may be appropriate where the road is carrying more than 3000 vehicles per day or a high percentage of heavy vehicles or where bicycle traffic is concentrated eg schools (Part 14 – Bicycles).

(ii) Sign Posted Routes using pavement symbols

These are routes where it is not physically possible or there is a lack of demand to construct a separate path or lane. The route is defined at all intersections with guide signs bike logos and by coloured road pavement to highlight the continuation of a route across an intersection.



Photo 2 - Sign posted route Riverleigh Avenue Gerroa

(iii) Sealed Road Shoulders

Part 14 of Austroads states “*that where a road is unkerbed and provision for cyclists is required, a smooth sealed shoulder is the preferred treatment. Although warrants do not exist specifically for the provision of sealed shoulders for cyclists there are many instances on rural roads where the sealing of shoulders is justified specifically to make roads safer for cycling*”.

Part 14 recommends that an edge line be marked between the shoulder and the traffic lane and pavement symbols may be painted on the shoulder to warn motorists of the likely presence of cyclists and to suggest to cyclists to use the shoulder. Widths required vary from an absolute minimum of 1.2m to a max of 3m depending on traffic conditions.

(iv) Carparking/Bike Lanes

Such a lane is necessary when there is a lot of existing carparking on the proposed routes. The lane is wide enough to accommodate parked cars and cyclists with there being enough room for cyclists to avoid obstacles such as opening doors without having to swerve into the traffic lanes.

These lanes are most appropriate where the street is wide, there is a demand for parking and where road space allows parking throughout the day (Part 14 – Bicycles).



Figure 1 Carparking Bike Lanes - Typical treatment (Austroads 1999)

3.4 Off-Road Paths

The types of off-road paths for cycleways may be as follows:

i) Shared paths

As the name implies this allows use of the pathway by pedestrians, cyclists and other users such as line skaters etc. Nearly all off road paths will be of this type.



Photo 3 - Shared Path in Gainsborough Reserve - Constructed 2001

(ii) Exclusive use paths

These allow for use by cyclists only.

(iii) Separated paths

These are where cyclists and pedestrians are required to use separate designated areas of the path. These are not common as they are generally justified only where there are large numbers of pedestrians and cyclists desiring to use the path (Part 14 – Bicycles).

3.5 Maintenance of the Cycleway Network

Maintenance of the cycleway network is an important element in the development of the cycleway plan. Funding should be made available to provide regular maintenance of both on and off-road pathways. On-road pathways require little maintenance with the vehicular traffic sweeping debris off the roadway. Off-road paths require higher maintenance to prevent the deterioration of the pathway which could lead to the path becoming a danger to cyclists and even become unused.

The maintenance is to include regular sweeping of off-road paths, repainting of bicycle logos surface damage to be immediately repaired and vegetation to be prevented from overgrowing the pathways or becoming an obstacle for cyclists.

3.6 Bicycle Parking Facilities

Bicycle parking facilities are an integral component of any cycleway plan. Part 14 recommends the use of 50mm diameter tubing fabricated into an inverted "U" shape that is capable of securing both of the wheels and the frame. Many have been installed throughout the Municipality as suggested in the 1996 Plan. Racks are recommended at the following locations:

- * Kiama Olympic Pool
- * Kiama Downs Surf Club
- * Jamberoo Pool
- * Gerringong Surf Club
- * North Warri Beach Carpark
- * Boat Harbour Gerringong
- * Crooked River Footbridge
- * Kiama Railway Station
- * Gerringong Railway Station

3.7 Funding Options

The majority of the funding has to be from the Council with assistance from the RTA. Assistance may also come from such sources as Healthy Cities, Illawarra and one-off grants e.g. "Roads to Recovery". Some funding assistance for planning and providing a "supportive environment" may be available from the National Heart Foundation.

The Walking Tracks and Cycleways Committee encourages Council to consider the annual allocation of funds from the Capital Works Program for the implementation of the Cycleway Plan.

4.0 CYCLEWAY ROUTES

4.1 Shellharbour Road to Minnamurra – *See Map 1*

This route is being fully financed and managed by the RTA as it was originally approved as a State Highway Cycleway. Planning for the route provided for construction of a pathway from Shellharbour Road through the Rocklow Creek Swamp Oak Forest and construction of a safe crossing of the Minnamurra River. Council (with funds provide by the RTA) has completed construction of the path from Shellharbour Road to the River. The RTA has undertaken a feasibility study into the River crossing and is yet to announce its decision on the matter. The missing link across the River is preventing the full and safe use of this route. The provision of a safe crossing is considered absolutely essential.



Photo 4 - Rocklow Creek

4.2 4.2 North Kiama – *See Maps 1, 2 and 3*

A number of routes were identified in the 1996 Plan. These included:

- Minnamurra to Bombo via Jones Beach
- Gainsborough to Minnamurra Primary School
- Gainsborough to Swamp Road
- Swamp Road to Jamberoo
- Improvements to the underpass at Bombo Beach

The Minnamurra to Bombo route has been completed involving a combination of on-road and off-road paths.

A number of off-road paths have been constructed in Gainsborough which provide a link from the Princes Highway to Meehan Drive, Gainsborough Neighbourhood Centre, Gainsborough Chase Reserve and the western end of the estate.

Whilst a route along Meehan Drive was proposed in the 1996 plan, it's considered this would be an unnecessary duplication of the above off road routes.

There is a pedestrian pathway along Oxley Avenue, from the highway almost to the Minnamurra Primary School. With the change to the Australian Road rules in 2000, children may ride on footpaths. However, Council's present signage prohibits cyclists using this pathway. Given the fact the route is used by school children it's recommended that this policy be altered and the existing signage be removed.

Investigations have been made into the proposed route from Gainsborough to Swamp Road. It would appear that it would be possible to establish most of this route utilising the Crown Land around the billabong to Swamp Road from the North Kiama By-Pass. As the RTA is providing a cycleway on the By-Pass with access ramps near the billabong this link to swamp Road is very important. It may require acquisition of an easement or right of Way over private property between the western end of the Gainsborough Chase Reserve and the By-Pass. This route would link into the proposed pathway from Gainsborough Chase to Newing Circuit.

A further extension of this route along the Minnamurra River from Swamp Road upstream to Brown's lane is proposed. This would utilise existing Crown Land or Crown roads along the River. In places it may require the acquisition of easements over private property where crown land is not available. However this route would provide one of the most scenic, user friendly, and safe routes in the Municipality with the possibility of direct links to the By-Pass and an off-road route utilising mainly existing public land almost to Jamberoo.

Jamberoo Road is used regularly by sports cyclists in training as part of a circuit between Kiama, Jamberoo and Albion Park. However the narrowness of the carriageway and the condition of the shoulder can cause conflict between cyclists and vehicles. Ideally this could be improved by providing a suitable sealed shoulder separated by an edge line from the traffic lane as described in Section 3.4 In places however, e.g. around Riversdale Avenue, the lack of space on the road reserve would preclude this. The route from Gainsborough to Swamp Road via the Billabong would provide a much safer and flatter route and therefore would address this problem. The provision of that route is therefore very important.

4.3 Kiama – See Maps 3, 4 and 5

In accord with the 1996 plan, the cycleway on Gipps Street was extended with a separate lane marked along Collins Street and a path following the railway line to Hindmarsh Park. In addition, an off-road path was constructed from the High School to Kiama Heights along South Kiama Drive.

All of the scenic route from the CBD south to Kiama Heights will be constructed by June 2002 except the section through the Kiama Showground. This route goes from Black Beach through the Showground, Coronation Park, Surf Beach, Chapman Point, Kendalls Beach, Bonaira Reserve and finally parts of Reid and Marks streets to join up with the cycleway on south Kiama Drive to Kiama Heights. The section of the route through the Showground and around Chittick Oval is important as it will provide a safe off-road route linking to important reserves and to the southern part of Kiama. It is planned to complete this by 2003.



Photo 5 - Pathway linking Surf Beach to Kendalls Beach

The route through the town from the CBD to the school and linking to the Kiama Heights cycleway would involve construction of a pathway through the school property and using Shoalhaven Street and Manning Street. If it is not possible to provide a route through the school an alternative route will have to be investigated.

A route is proposed linking the cycleway at Bombo Beach to Jamberoo Road/Terralong Street via Spring Creek Wetlands Reserve. This will require construction of a pathway under the Princes Highway bridge at Spring Creek and provision of a pathway through the Spring Creek Wetlands Reserve. This needs to be further investigated.

4.4 Kiama to Gerringong – See Map 6

The link from Kiama Heights to Omega and hence Gerringong via the Princes Highway, is identified in the NSW Coastline Cycleway Study commissioned by the RTA.

The only practical solution would appear to be to provide sealed shoulders along the Princes Highway. This in itself may cause some problems with the topography and the amount of space available for cyclists. This route would have to be further investigated and developed by the RTA. The lack of a safe route linking Gerringong to Kiama is a major constraint on cycling in the Municipality.

4.5 Gerringong – See Map 7

The development of cycleways in Gerringong is limited by the topography with the town centre situated on the top of the hill with access only by the main, busy road with many of the other roads being too steep for cycling.

It is suggested to establish a circuit in Gerringong using both on and off-road paths. As part of the Coastal Cycleways Plan the route follows an existing path from Fern Street to Werri Beach. From Werri Beach to Gerringong Town Centre the proposed path will be on-road and defined by either lane markings or signage.

The route from the Gerringong Primary School through to Bridges Road was completed in 2000. This will be extended down Bridges Road to Pacific Avenue and will link to a proposed path within the Reserve fronting Pacific Avenue.

The proposed circuit could be completed with the cycleway going from Burnett Avenue Estate and following the railway line to the intersection of Fern Street and the Princes Highway at Omega. This could be linked to Werri Beach by sealing the existing gravel Pathway across “Millers Flat” to Miller Street. The proposed route will be subject to further investigation to ensure that a cycleway would not cause adverse effects to the floodplains or other related environmental issues of the area. Because of the traffic conditions and very limited space in Fern Street the proposed cycleway would be a safe, scenic and convenient route to Gerringong town centre that should be developed to encourage cycling as a practical form of transport.

Cycleways are proposed in the new residential estate (Elambra Estate) south of Belinda Street.

4.6 Gerringong to Gerroa – See Map 8

The route linking Gerringong to Gerroa was completed in 2000

4.7 Gerroa – See Map 8

The topography of Gerroa and the severe constraints of Fern Street/Crooked River Road limit the development of convenient cycleway facilities from the Gerroa Boat Fishermens Club through to Crooked River. However, a route has been provided which enables cyclists to get off Fern Street. This utilises the local streets and links to the Gerringong to Gerroa path.

The route further south along Crooked River Road to the Municipal boundary and to Shoalhaven Heads requires detailed investigation. However the present conditions on Crooked River Road are unsuitable for cyclists because of the speed and volume of traffic. Sealing of the shoulder, as described in Section 3.4, should be investigated. The continuation of the route south of the Municipal boundary through to Shoalhaven Heads would be the responsibility of Shoalhaven City Council and will therefore require co-ordination between the two Councils to establish a meaningful link.

4.8 Jamberoo – See Map 2

The route of the cycleway from Gainsborough to Jamberoo was the subject of lengthy consultation and debate during exhibition of the draft Cycleways Plan.

The route is to be developed in two stages. Stage 1 is from the Gainsborough Chase Reserve to Swamp Road. Stage 2 is from Swamp Road to Jamberoo.

Following a report to Council in March 2005, Council passed the following resolution (CR099):

- 1) The interim route of Stage 1 of the proposed cycleway from Gainsborough Chase to Jamberoo follow the route as shown on the plan marked “D” referred to in this report;
- 2) Council pursue ways of establishing the link from Gainsborough Chase Reserve more directly to the Crown reserve at the Billabong via the floodplain;
- 3) The preferred route for Stage 2 of the cycleway from Gainsborough Chase to Jamberoo follow the route along the Minnamurra River (drain) shown as route FF on plan marked “C” referred to in this report, provided this can be done in association with, and complementary to, the works required to rehabilitate that section of the river and as part of an overall Rehabilitation/Management Plan for that part of the river in close consultation with the landowners; and
- 4) The Draft Cycleways Plan be amended to incorporate these recommendations and this amended plan be adopted as the Cycleways Plan.

The route is shown on the Sheet 2 of the maps in the Appendix.



Photo 6 - Section of proposed route adjacent to billabong

4.9 Priorities

The proposed projects are listed below in the preferred order for implementation. The priorities are to be regularly reviewed to allow for any unforeseen developments that may occur. Details of the projects are provided in the previous Sections 4.1 to 4.8:

1. Minnamurra River crossing
2. Rowllins Road, Belinda Street to Omega Reserve
3. Spring Creek underpass at Princes Highway
4. Gainsborough to Jamberoo Stage 1, Gainsborough Chase Reserve to Swamp Road
5. Fern Street to Miller Street via pathway across Millers Flat
6. Crooked River Road, Crooked River to Municipal boundary
7. Pacific Avenue, Werri Street to Geering Street
8. Kiama to Gerringong via Princes Highway
9. Gainsborough to Jamberoo Stage 2, Swamp Road to Jamberoo

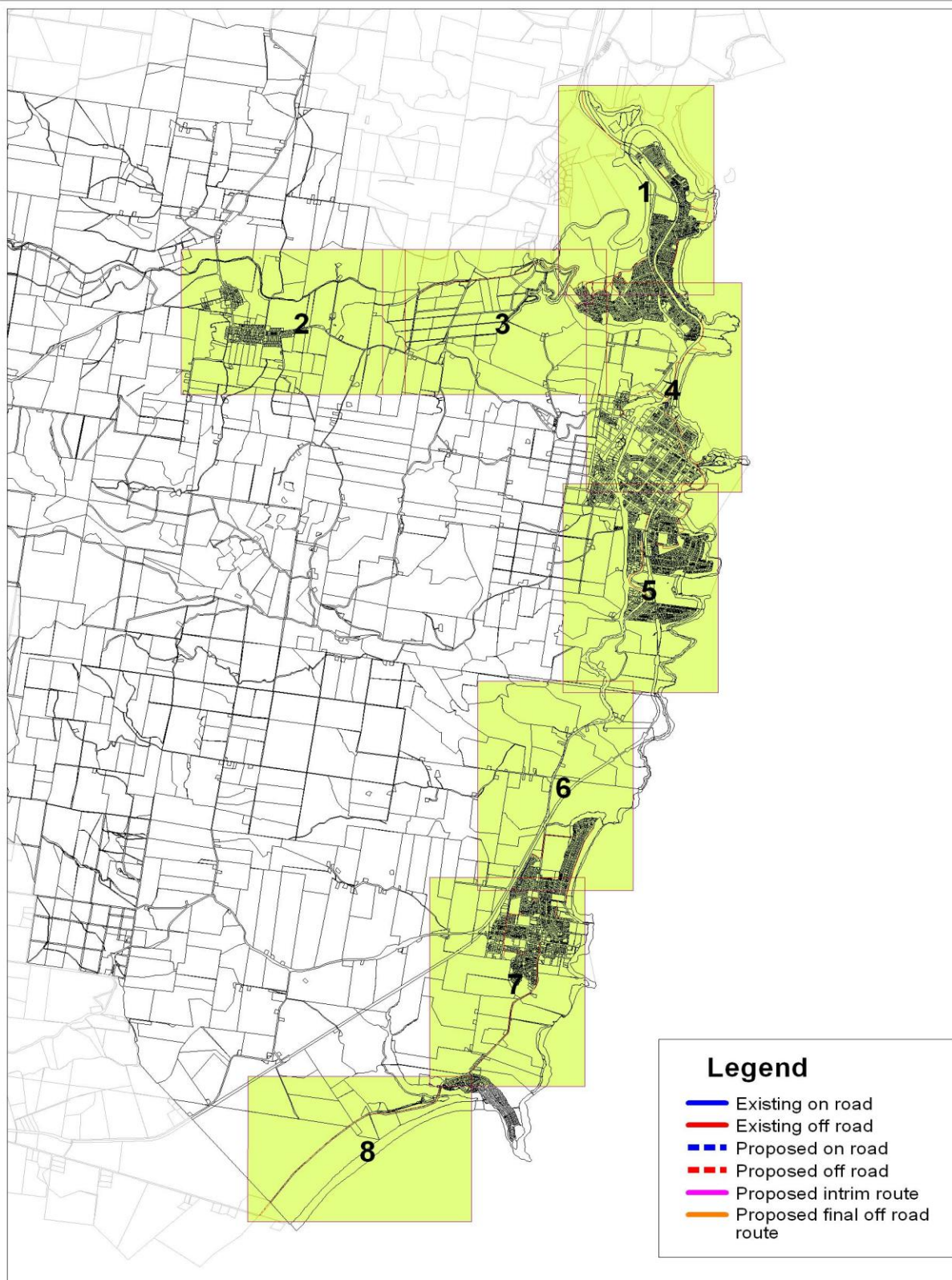
Note: Items 1 and 8 are on the Princes Highway and 100% funding will be sought from the RTA.

5.0 REFERENCES

- * Guide to Traffic Engineering Practice Part 14: Bicycles Austroads (1999)
- * Planning for the Bicycle Traffic Authority of New South Wales
July 1982
- * New South Wales Coastline Cycleway South Coast Pilot Study
September 1994
- * Kiama Cycleway Study Kiama Municipal Council Engineering Department 1987

APPENDIX

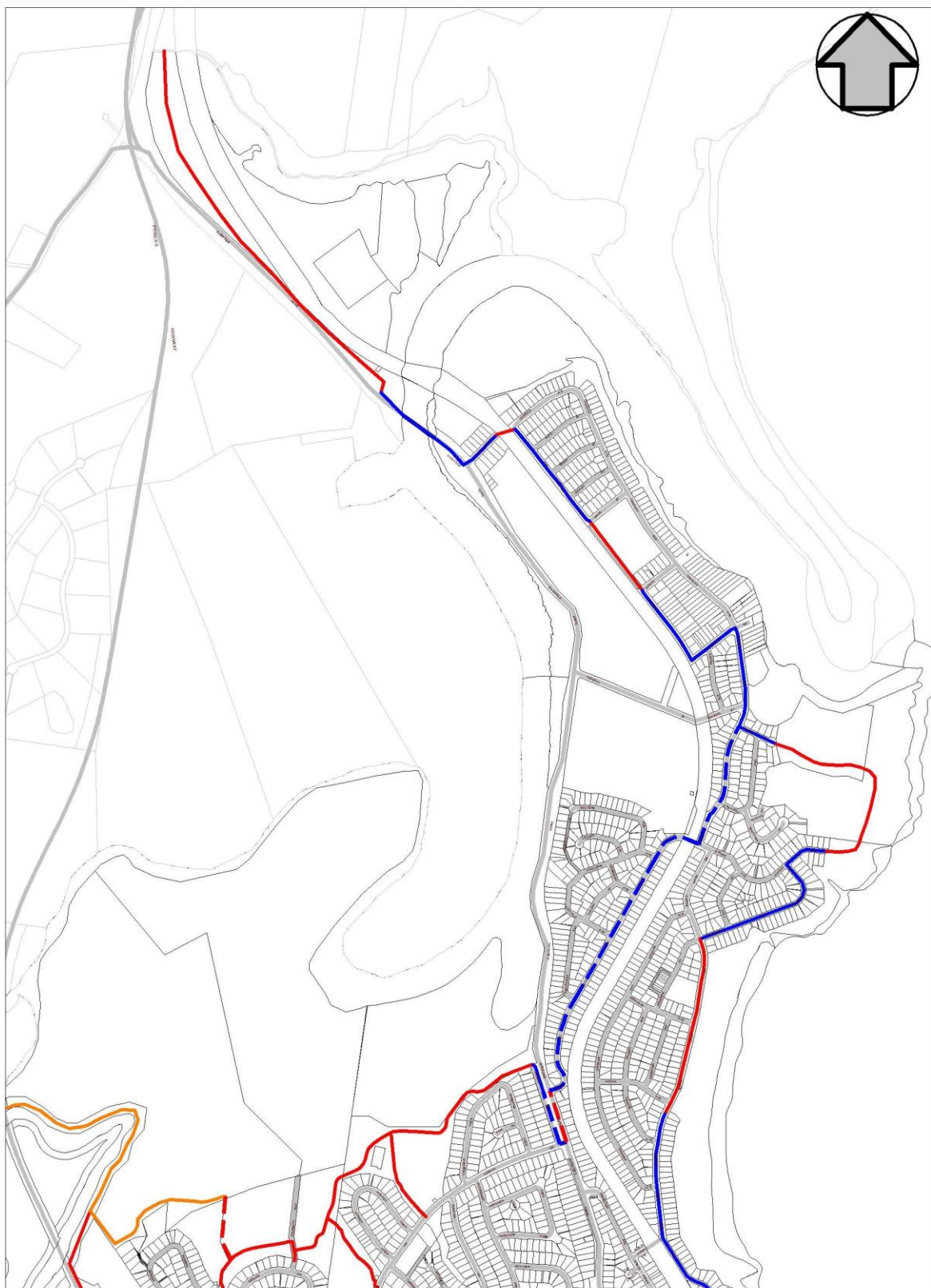
Cycleway Maps



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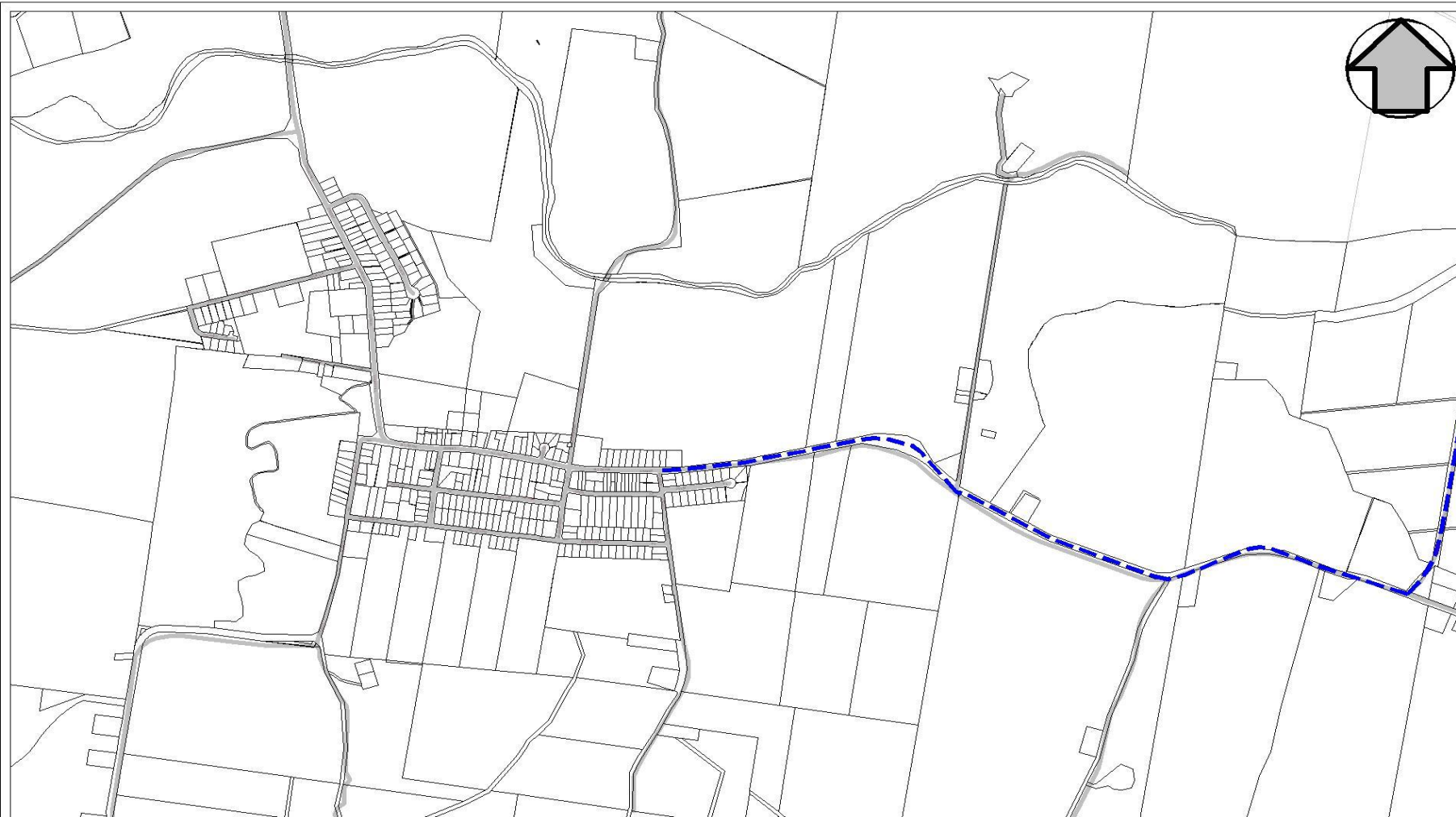
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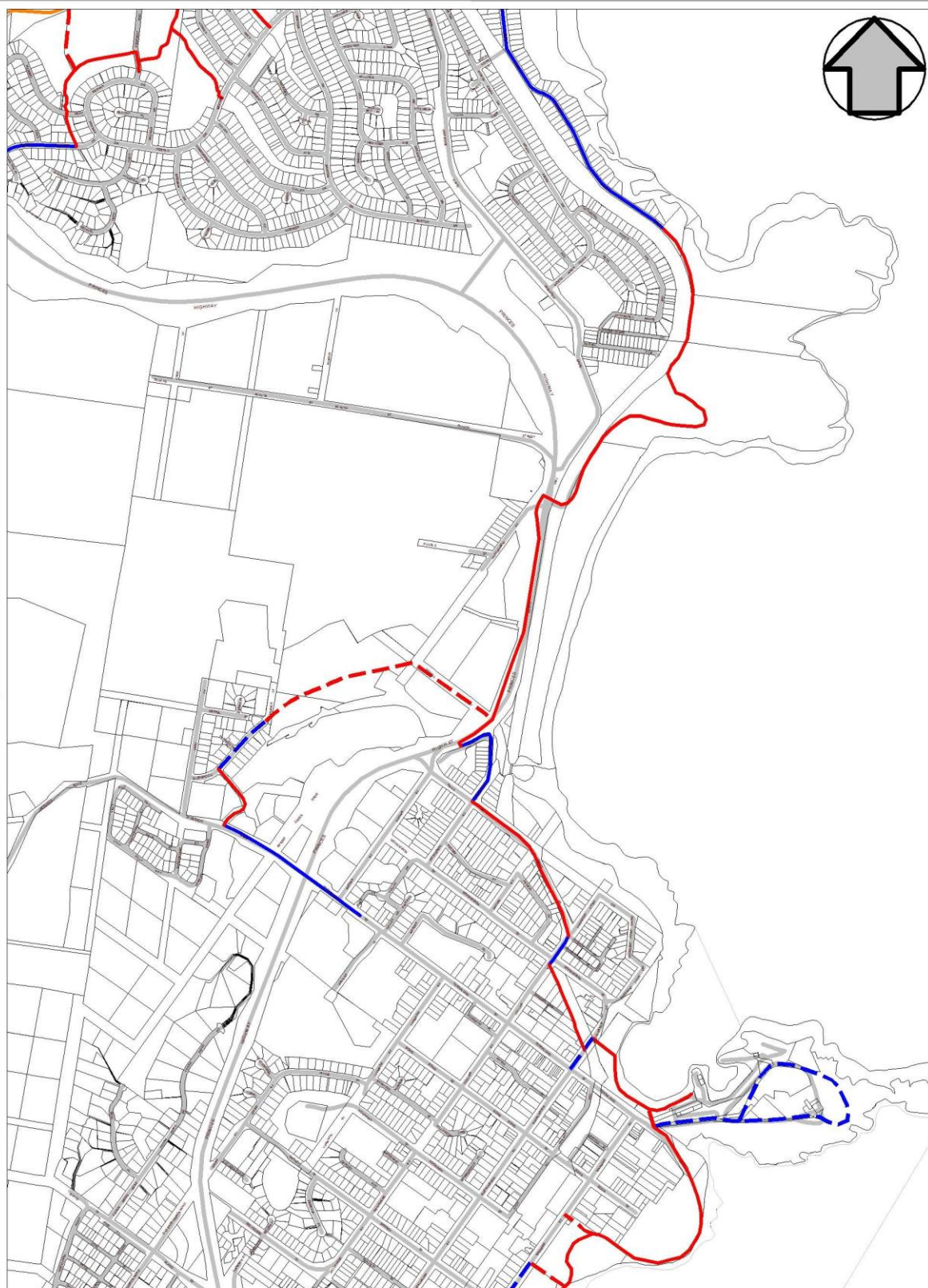
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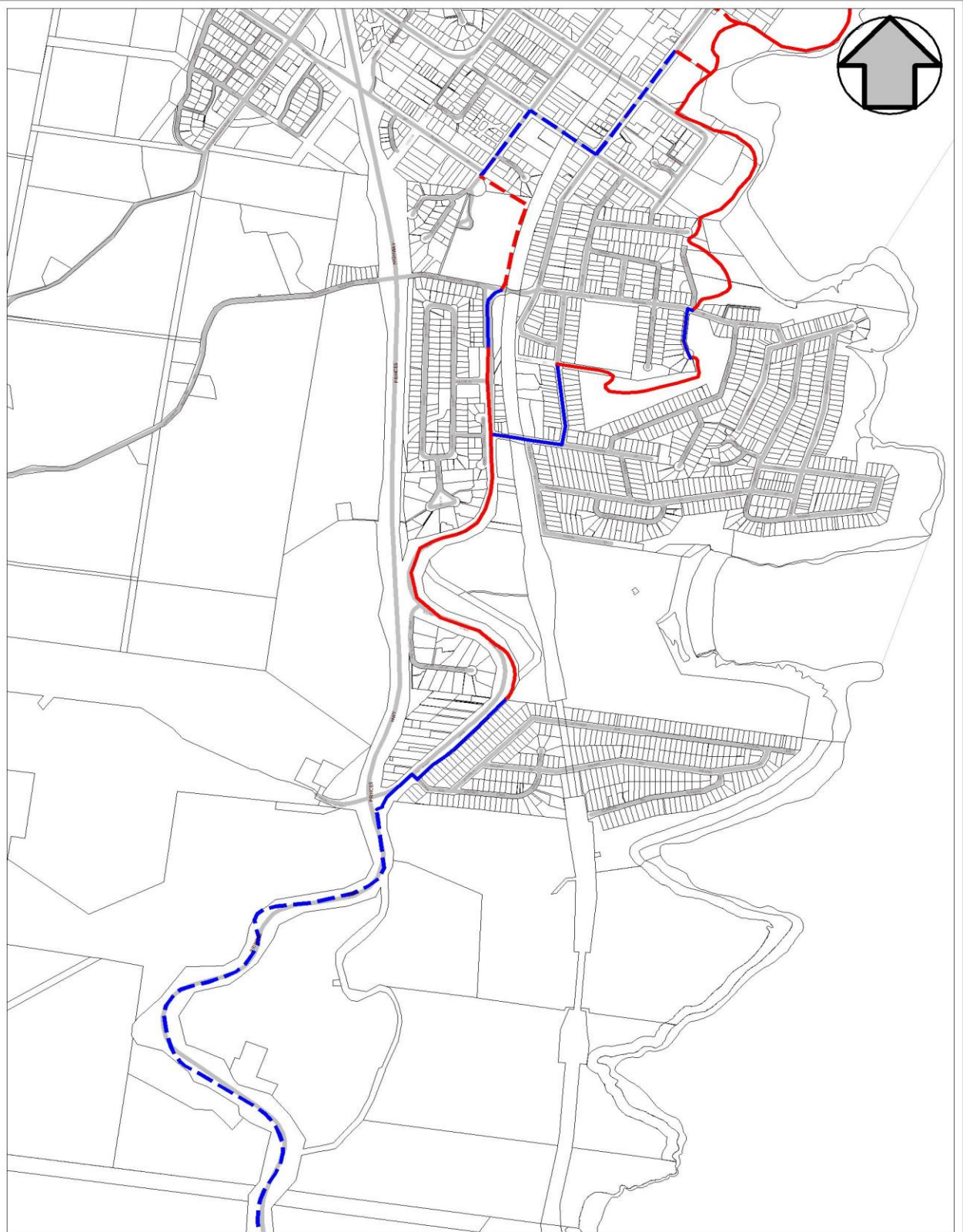
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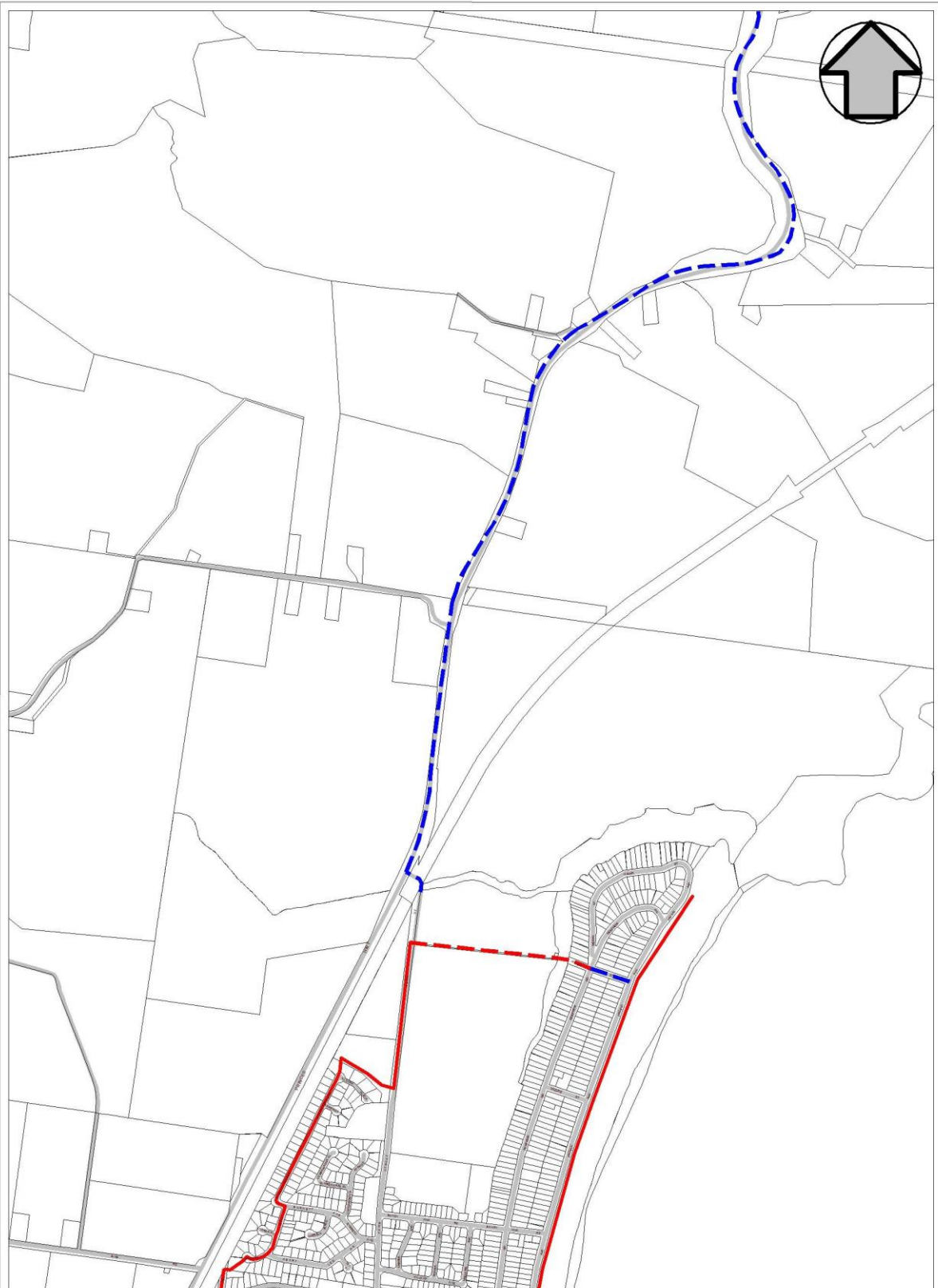
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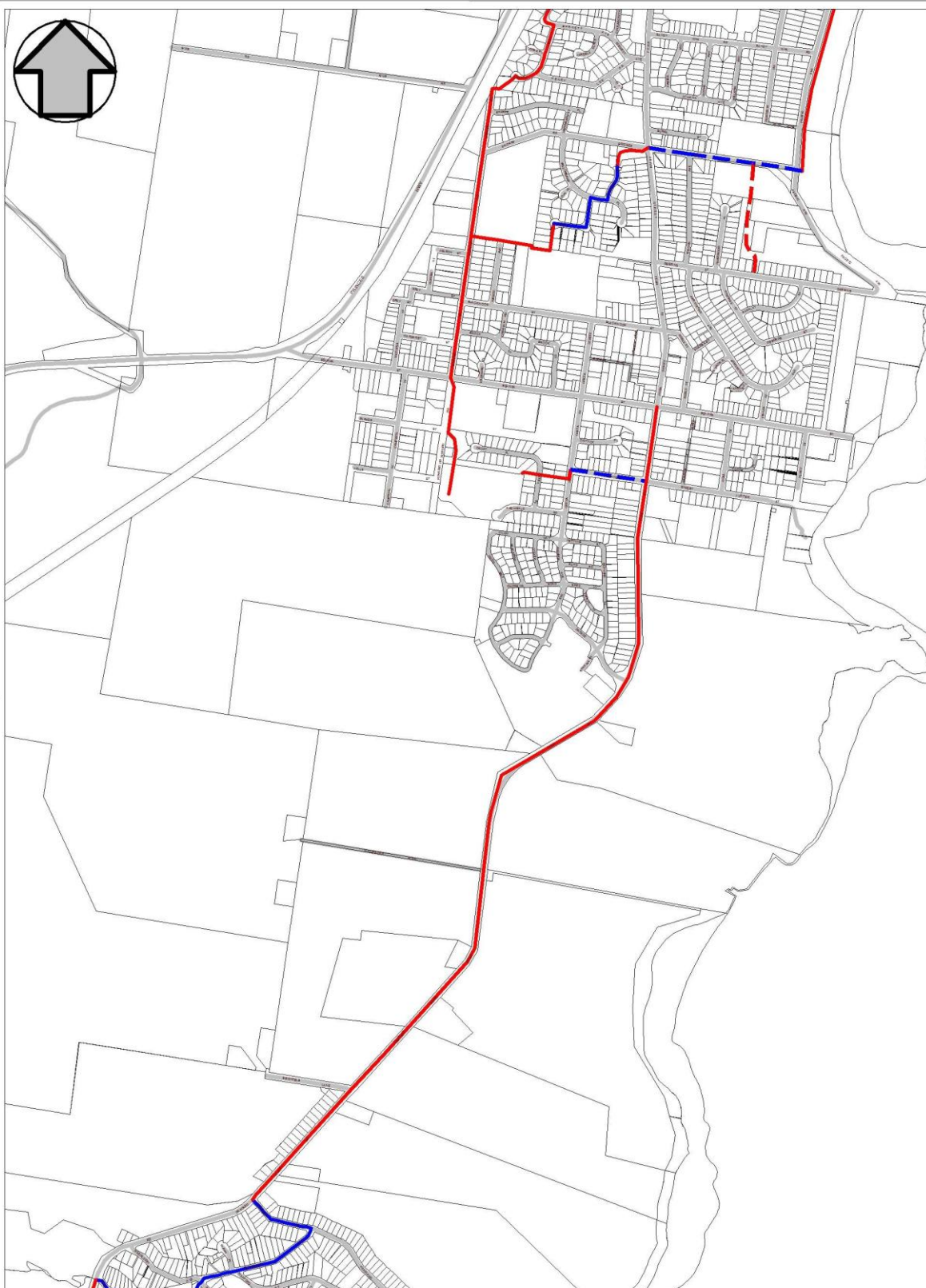
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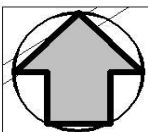


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