



SIGNAGE DEVELOPMENT FOR RAIL TRAILS

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A guide to good practice for the design of signage for rail trails

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1.0

PREFACE

The purpose of this document is threefold.

- To assist Committees of Management in developing an awareness of the issues involved in signage for Rail Trails.
- To provide Committees of Management with a strategy to use in the development of a life cycle signage programme for their particular Rail Trail.
- To supplement current Australian Standards and to provide experienced and technically competent persons with a guide to good practice for the design of signage for Rail Trails.

The document is not intended to be a step-by-step manual for inexperienced designers and is not intended to be a working manual.

It is envisaged that the end result will be signage that complies with relevant Australian standards, that is fit for the purpose, readily identifies a trail as a Rail Trail and enhances the safety and enjoyment of its users.

As many factors influence the choice of signage in any given situation discretion and judgment should be exercised.

The guidelines are intended for use on Railtrails throughout Australia.

2.0 INTRODUCTION

Signs play an invaluable public relations role in trail design by identifying the trail, giving directions, clarifying rules of safe usage and providing both basic and unique information relating to the trail.

In doing so signs provide the means of giving the trail users the full benefit of the experience of traversing the trail, by allowing them to geographically orientate themselves, by protecting their safety, by enhancing their enjoyment of the environment, by providing them with an understanding of the local history and by influencing their perceptions of the landscape.

Effective signage can also play a role in minimising the environmental impact of trail users.

A unique feature of rail trails is their historical and physical connection to railways. As railways played such an important role in the development of Australia it is considered worthwhile installing specific signage on rail trails, which emphasises this link.

In addition many people in the community have an interest in various aspects of railways and would appreciate signage along the trail giving them railway related information

3.0 SCOPE

This document covers;

- A strategy for the development of a life cycle signage programme for Rail Trails.
- The design philosophy and design principles for signage on Railtrails throughout Australia including signage on roads crossing Rail Trails and on Rail Trail access paths.

The various signage categories are described and examples given, together with a process for producing a detailed life cycle signage programme for any particular Rail Trail.

Because both local and regional conditions vary so widely throughout Australia it is considered preferable that detailed information relating to graphics layout and text size requirements, together with material and manufacturing specifications is not included. Instead this information is referenced through Australian standards and Codes of Practice, thus giving the designer freedom to accommodate differing conditions whilst at the same time incorporating the philosophy of the guidelines.

4.0 DEFINITIONS

4.1 Rail Trail

The definition of a rail trail as adopted by Railtrails Australia is as follows:

Rail trails are defined as any trail that is traversable by walkers, cyclists or horse-riders and which at least for the majority of its length is located within the existing or original 'Right of Way' of an abandoned, disused or active rail way.

4.2 Life Cycle Signage Programme

A management and planning tool that sets out a detailed programme for the ongoing management of all aspects of signage over the life of the signage. This programme would cover the technical, financial and scheduling aspects of design, fabrication, installation, maintenance, auditing and emergency situations relating to the signage.

4.3 Walkers

As these guidelines provide for the signage to be designed in accordance with Australian standards, they are transportation corridors as defined in AS 1742: 'Manual of Uniform Traffic Control Devices'. The term used for 'walkers' in AS 1742 is 'pedestrian', which is defined as including people in motorised and non-motorised wheelchairs, people using wheeled and recreational devices such as rollerblades, rollerskates and skateboards and people using wheeled toys such as a child's pedal car, scooter or tricycle.

The definition of the term 'walker' in these guidelines is the same as the definition of the term 'pedestrian' in AS 1742.

4.4 Rail trail access path

A path, which is not a roadway and is used to gain access to a Rail trail.

4.5 Town Trail

There are instances where the ownership of the original railway Right of Way through a town has been transferred and the land is no longer available for use as a rail trail. In such cases the rail trail is linked through the town by a 'Town Trail' that usually traverses roads and parkland. The local authority may choose to retain signage compatibility with that of the rail trail, or, depending on particular circumstance, may choose alternative design criteria. Where alternative design criteria is used the trail should be treated as a 'Town Trail' linking two sections of the rail trail.

4.6 Managing Authority

The authority or authorities responsible for planning, locating, designing, constructing and maintaining the trail, for example a local council or a State Parks authority. A Managing Authority often operates through a separate Committee of Management.

4.7 Committee of Management

A committee appointed by a Managing Authority, to be responsible on their behalf, for specific aspects of the rail trail, which could include design, construction, maintenance and operation.

A typical committee would consist of representatives from

the various stakeholders and would be chaired by a representative of the Managing Authority.

4.8 Land Management Authority

Any authority, which has responsibility for land affected by the rail trail, such as road authorities, local councils and parks authorities⁹

4.9 Signage Categories

For the purposes of these guidelines, the applicable categories are as defined below. Refer to Section 9.0 for a more detailed description and usage of these categories.

4.9.1 Regulatory Sign

Identifies legal responsibilities of trail users.

For example, **No Trailbikes**

4.9.2 Warning Sign

Advises trail users of known hazards, necessary for trail safety. eg, **Road Ahead**

4.9.3 Behavioural Sign

Indications of trail courtesy, aimed at avoiding conflict between users and encouraging co-operative behaviour.

eg, **Move off the trail when stopped**

4.9.4 Information Sign

Provides information to individual trail users that:-

- assists in their orientation and navigation to destinations.

eg, **Queenscliff Station 15 km**

- enhances their effective use of the trail.

eg **Gravel surface next 10 kms**

4.9.5 Interpretative Sign

Provides descriptive information to identify and inform the trail user. Typical examples include historic sites, locations of historic events, areas of ecological environmental or geological significance, significant flora and fauna and significant vistas.

eg., **Walhalla Goldfields Rail Trail Site of Derailment – 1915**

4.9.6 Promotional Sign

Provides information advertising businesses or organisations who may have contributed to, or stand to gain financially from the Rail trail.

eg, **Clare Cottage Bed and Breakfast**

4.9.7 Temporary sign

Provides information of a temporary nature

eg. **Bridge Closed for Repairs**

5.0 PROJECTION OF A RAIL TRAIL IMAGE

In addition to serving other important functions, signs should assist in defining the trail's image. The signage should foster a feeling of specialness about each individual trail through the way signs are presented while at the same time maintaining a consistent rail trail image.

Because of their standard formats, regulatory, and warning signs cannot be used for image projection, however the behavioural, informative, interpretative and promotional categories to varying degrees, do provide the opportunity for creativity as described below.

5.1 Use of a rail trail Logo

The use of a rail trail logo, which is standard throughout Australia, provides an excellent base for image projection.

The recommended format for such a logo is in two parts.

The first part, as shown below in Figure 1, provides a standard shape, either circular or elliptical, and text to portray a primary logo that will indicate that a particular trail is a rail trail.

The second part is the use of the area inside the circle or ellipse for a secondary logo. This space provides the opportunity to creatively develop a logo specific to that particular trail as shown in Figure 2.

The logo could be produced in various sizes to suit particular situations.

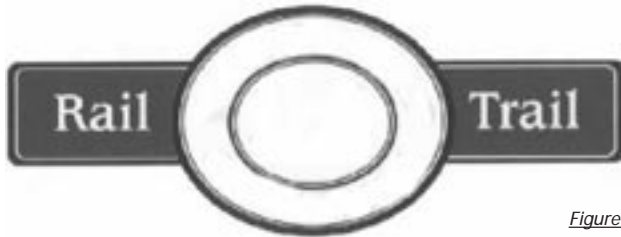


Figure 1



Figure 2

Examples of the use of the logo in both informational and interpretive signs are shown below in Figures 3 and 4.



Figure 3: Mirboo North rail trail

5.2 Use of Regulatory, Behavioural, Warning, and Temporary signage for projection of rail trail image

As signage in these categories will mostly be chosen from Australian Standards, which will be recognisable across Australia, they should not be installed as non-standard. Hence it is not appropriate to use them for image projection such as inclusion of the logo.



Figure 4: Bellarine rail trail

5.3 Use of Information, Interpretative and Promotional signage for projecting of Rail trail image

These signage categories provide effective means of projecting the rail trail image.

As a minimum the logo should be included on each sign.

Then where appropriate through both text and graphics, the image can be projected in many other ways.

Historically significant points can be highlighted by calling attention to railway events or station sites, sites of important political events or the location of historic architecture and bridges along the trail. If appropriate, interpretative information on industrial relics such as bridges, tunnels, signalling devices and switching stations can be provided. This particularly applies where remnants have been preserved.

Since railway construction represents one of the most dramatic periods of Australian immigration and labour history, the people who built the historic structures can be highlighted. A multi-use trail lends itself to educational displays documenting the struggles and history of the railway's creators. Figure 5 is representative of logo use in interpretative signage.

6.0 SIGNAGE PROVIDING ACCESS TO A RAIL TRAIL

The provision of adequate signage to enable rail trail users to readily locate a trail from either of its end points or intermediate points is particularly important. If the trail cannot be easily located potential users may give up in frustration.

6.1 Signage on roads

State tourism authorities in conjunction with road authorities provide for the erection of “Tourist Attraction” signs. In Victoria they are white on a brown background and there are certain eligibility requirements established by VicRoads. The signs indicate features and attractions of significant recreation and cultural interest.

It should be possible to have such signs on roads where they cross rail trails. Also signage should be supplied along roads that provide access to the rail trail in order to assist people who are travelling to the rail trail by vehicular transport or from the nearest railway station or bus stop.

For each particular rail trail it is recommended that the relevant tourist authority be approached with regard to such signage. In the event that it is not feasible to use tourist signage then signage in accordance local road authorities requirements should be installed.

Rail trails are relatively new to Australia, and from the safety aspect, motorists are not accustomed to cyclists, horse riders and walkers suddenly emerging from the bush and crossing the road. There should be a warning sign on the road, advising motorists of a rail trail crossing ahead. Such signs would also assist in informing both potential and actual users of the trail’s location. Preferably these signs should be standard throughout Australia.

Figures 6 and 7 show examples of signs installed on public roads at rail trail crossing points.

6.2 Signage on access paths

In some cases the distance along an access path between a roadway and the rail trail may be such that intermediate directional signage is required.

Such signage should be generally in accordance with signage along rail trails and consideration should be given in each case to the need for distance markers showing the distance to the rail trail. Figure 8 shows an example of this type of sign.



Figure 8: Example of signage on a roadway or access path indicating the distance to the rail trail along an access path



Figure 6: Example of a standard trail sign showing distances



Figure 7: Diagram of a standard rail trail warning sign

7.0 DEVELOPMENT OF A SIGNAGE STRATEGY

The development strategy can take the form of a project brief which would normally be prepared by the Managing Authority or Committee of Management.

It is assumed that this authority would be established at the beginning of the rail trail project, and would be in place when consideration would need to be given to signage.

Following is a sample project brief structure.

A Technical

1 Authority responsible for the signage

Name the authority responsible for the signage such as:

- Managing authority
- Committee of management
- Subcommittee of the managing authority or committee of management.

2 Trail users

List the category of user for whom each section of the trail would be designed, such as;

- Walkers,
- Cyclists,
- Horse riders,
- People in motorised and non-motorised wheel chairs,
- People using wheeled recreational devices such as roller-blades, roller-skates and skateboards,
- People using wheeled toys such as pedal car, scooter or tricycle.
- People pushing prams and strollers

3 Stakeholders

List the stakeholders who would have an interest in the project.

Identify the status of each stakeholder:

- Those already having representation on any committee connected with the rail trail project.
- Those not currently having any such representation.

Identify the method of liaison between stakeholders: eg

- As a representative on a committee related to the project,
- Not as a representative but to be offered the opportunity to comment on committee proposals.

4 Appointment of designer

Specify the following:

- Required qualifications and experience,
- Position description,
- Appointment process.

5 Risk / hazard management

Identify the risk / hazard management strategy to be

adopted to cover the following:

- Design,
- Construction,
- Operation,
- Maintenance,
- Emergency.

6 Legal Responsibility

Identify the processes, systems and safeguards in place to ensure the managing authority has proper protection against litigation in relation to the signage.

7 Design Standards

Normally the designer would determine the applicable standards. However there may be situations where the committee of management may require specific standards to be followed. If this is the case these standards should be specified.

8 Town Trails

Identify the following:

- Any town trails that will be connected with the project,
- Whether any such trails will be the responsibility of the managing authority and if not
- The name of the responsible authority and the method of liaising with that authority.

9 Fabrication, Installation, Auditing and Maintenance

Identify the resource method to be used for each of these processes using for example; contract, in house, or volunteer.

10 Treatment of existing signage

Identify the process for treating any existing non-conforming signage.

B FINANCIAL

Provide an overall budget for the project to cover design, fabrication, installation, maintenance and auditing.

C SCHEDULE

Provide a schedule for design, fabrication, installation, maintenance and auditing.

8.0 DESIGN PRINCIPLES

8.1 Establishing design criteria

In establishing design criteria, the following factors should be considered. The points covered below provide assistance to designers and stakeholders in ensuring that, in the preparation of a signage policy and design brief, all design issues are considered and applied in the context of that specific rail trail.

8.1.1 *Designed in Accordance with Relevant Standards*

Rail trails are transportation corridors and therefore signage should be designed in accordance with AS 1742 - Manual of uniform traffic control devices. However this standard does not specifically refer to rail trails therefore in each case, all other relevant national, regional and local standards, codes and regulations, need to be identified and applied as appropriate. Examples of such documentation are given in Clause 7.3.

8.1.2 *Signage to be 'Fit for Purpose'*

In developing these guidelines it is recognised that it is impractical to produce a document, which is totally prescriptive in application to all rail trails throughout Australia.

Because rail trails throughout Australia come under different jurisdictions and different managing authorities, it is inevitable that differing conditions will exist both locally and regionally. The reasons for this include the absence of a specific Australian standard, along with differing legal requirements and interpretations, cultural differences, differing local and regional histories, differing geographical and environmental settings, and the natural inclination to apply already existing, proven local standards and procedures. Also different conditions of use may apply, such as where the trail surface is bitumen sealed and hence not available to horse riders.

The managing authority responsible for the signage design for each trail should therefore use these guidelines taking into account local and regional conditions.

8.1.3 *Designer Competency*

This document is intended to be used to assist competent designers. It is not intended to be a step-by-step manual for inexperienced designers and is not intended to be a working manual. It is envisaged that the appropriate design expertise could either be provided or supervised by the local authorities who are responsible for signage generally in the area, such as the local council or state government authority, such as the regional road authority.

8.1.4 *Managing Authority*

It is assumed that for each rail trail there will be a managing authority appointed whose responsibilities will include ensuring that a competent designer is appointed to design the trails signage. The managing authority would also normally establish a Committee of Management

8.1.5 *Legal responsibility*

The managing authority should be fully aware of their legal responsibilities in relation to signage and in particular be aware of the possibility of being sued over any incident where it could be claimed that the signage was inadequate

in any way. The managing authority should therefore ensure that they have appropriate processes, systems and safeguards in place, which will provide proper protection against such an eventuality.

8.1.6 *Identification of trail users*

The particular users for which the trail will be suitable should be identified in the design criteria. In many cases, the decision will be based on budgetary considerations.

Depending on the location of the trail (eg, urban or rural) or depending on the type of trail surface (eg, earth, gravel or bitumen) or depending on the gradient of the trail (eg, steep slopes or steps) the trail may not be suitable for use by each user category as identified in the definition of a rail trail, that is, walkers, cyclists, or horse-riders.

For example, whereas a gravel surfaced trail in a rural area may be suitable for horse-riders and cyclists it may not be suitable for all categories of walkers, such as motorised and non-motorised wheelchairs, wheeled recreational devices or children's toys. Also, if the gravel surfaced trail was in an urban area it may not be appropriate for it to be used by horse riders.

A bitumen surfaced trail would not be suitable for horse-riders, however, it would normally be suitable for all categories of walkers, as defined in this document.

Also, the suitability of a particular trail for use by each category may vary along its length.

Examples of such situations are:

A town trail may be bitumen, whereas the trail on either side may be earth or gravel.

Where section(s) of the original right of way have reverted to private ownership and the owner has not made continuous access available, the route of the connecting section could have a different surface, steep gradient, or steps.

Where original civil engineering works such as bridges, cuttings or embankments have not been re-instated to a compatible standard and it is necessary to deviate the trail, the deviation could have a different surface, steep gradient or steps.

8.1.7 *Identification of Stakeholders*

Before adopting a detailed design philosophy for any particular rail trail, it is first necessary to identify the stakeholders for that trail.

The stakeholders may be government agencies such as the state parks authority, a regional tourist authority, a local council, non government interest groups engaging in bicycle riding, horse riding or walking, historical societies, or a local volunteer group established to forward the interests of the rail trail. Occupants of establishments for disabled or aged people that are located near the trail may also be stakeholders. Sponsors and local business are also important stakeholders.

Where a rail trail becomes a separate town trail through a town the authority responsible for the town trail would be a stakeholder.

These stakeholders will have recommendations and/or

8.0 DESIGN PRINCIPLES

requirements that relate to their own particular area of interest.

For example, a state parks authority or local council may require some compatibility with signage on other trails within their jurisdiction and may have already adopted standards or guidelines defining those requirements. Other interest and volunteer groups may have valuable local information that could be relevant to interpretive signage.

8.1.8 *Liaison between stakeholders*

It will be necessary for the managing authority to enter into negotiation with, and liaison between, the stakeholders.

This is usually best achieved by establishing a Committee of Management. This will enable stakeholder interests to receive due consideration through formal discussion and identify at an early stage of the project any areas of conflict, including any in relation to these guidelines.

This should facilitate early resolution of such areas thus producing a final design that optimises user and community satisfaction.

In particular, it is essential in the interests of consistency of approach and application that where the rail trail passes through more than one municipality, appropriate liaison takes place between the local government councils.

8.1.9 *Town trails*

Town trails may not be under the same management as the rail trail. In such cases, close liaison is necessary to ensure that appropriate signage is installed to provide a seamless transition between the two trails and, where feasible, that the town trail maintains association with the rail trail possibly through the use of the rail trail logo. Examples of town trails are through the towns of Myrtleford and Porepunkah on the Murray to the Mountains rail trail in Victoria.

8.1.10 *Treatment of existing signage*

An existing rail trail may already have signage installed which is not compliant with these guidelines. In such situations and where feasible, its rationalisation should be included in the design brief.

8.2 Design brief

The whole package should then be specified in a design brief, which is consistent with this document and which contains sufficient detail to allow the designer to proceed with the design, fabrication and installation of the signage.

8.3 Design Standards

As rail trails are public transportation corridors, signage should be designed using recognised standards.

There is no standard dedicated exclusively to rail trails, therefore it is necessary to use standards that specify requirements of similar facilities. It is considered that the requirements of bicycle paths and parkland have the closest resemblance to rail trails.

As requirements relating to horses are generally not covered in any of the standards, the designer will need to incorporate such requirements in the application of each

standard.

The documentation considered most applicable is identified below.

8.3.1 *AS 1742 Manual of uniform traffic control devices*

AS 1742.1 General introduction and index of signs

This standard covers the signs used for controlling vehicular and pedestrian traffic on the road. It defines the sign classifications, specifies the numbering system used and sets out the basic design of signs in terms of colour and shape codings. It provides an illustrated index of all signs and sign types which have a standard sign number, and includes sign sizes and references to other standards in this series which cover usage of each sign.

AS 1742.9 - Bicycle facilities, in particular covers requirements for bicycle lanes on roads, at signalised and unsignalised intersections and off-road bicycle paths. It specifies requirements for signs, pavement markings and other devices to be applied for the exclusive use of bicycles or joint use with walkers. The standard includes recommendations for guide signs and other navigational information.

The objective of the standard is to provide road and local authorities with a uniform set of devices to control and promote the safe use of bicycle facilities on roads and on paths separate from roads.

8.3.2 *AS 1743 Road signs – Specifications*

This standard specifies graphics, layout and size requirements together with an abridged material and manufacturing specification for the manufacture of the standard road signs included in AS 1742. The standard gives users and providers of signs comprehensive information on the content, material and manufacture of standard road signs. It includes information on; numbering systems; graphic design; signboard size; colours; signboard construction.

8.3.3 *Austrroads Guide to Traffic Engineering Practice, Part 14 – Bicycles*

This document is intended as a guide for road authorities, engineers, planners and designers involved in the planning design and construction of cycling facilities. Signage is covered under Section 9 of Part 4 of the document Traffic Control Devices.

8.3.4 *AS 2342 Development of testing and implementation of information and safety symbols and symbolic signs.*

This standard applies where it is considered necessary to develop a new symbol or symbolic sign.

The aim of the standard is firstly to encourage communicators to determine objectively, by following a defined procedure, whether a symbol or symbolic sign is the best solution to a problem and if so to provide standardised symbol design criteria and a standardised method of testing the comprehension of the symbol by the target population.

8.0 DESIGN PRINCIPLES

8.3.5 Publications by road authorities

State road authorities may produce documentation that provides information on the design of bicycle facilities for engineers and planners.

For example when a particular need is identified VicRoads provide the information through a Cycle Note. For example, Cycle Note No. 10 issued July 2000 covers shared path behavioural signs.

8.3.6 Publications by parks authorities.

As rail trails may traverse parkland or be adjacent to parkland, signage used by local or regional parks authorities may be appropriate.

Many land management agencies have signage guidelines for signage in reserves which may be adjacent to rail trails. These may include signs such as **Steep Descent** and **No trail bikes**

8.3.7 Publications by tourism authorities

State tourism and road authorities produce documentation that provides information on the design of signage identifying tourism destinations adjacent to or in the vicinity of the trail. Such destinations could include; art galleries, craft outlets, antique galleries, museums and historic properties, industry based attractions, wineries, and seasonal attractions.

For example, Tourism Victoria and Vicroads produce a document titled, *Guidelines for Tourist and Services Signing on Roads in Victoria*.

8.4 Design issues

Factors for consideration in the design process include the following.

- Imparting the desired information using the minimum number of signs, ie, avoiding “sign clutter”.
- Keeping signs accurate, simple, clear, concise and easy to read.
- Maintenance of consistency.
- Effective use of symbols.
- Avoidance of large signs.
- Where feasible, each sign displaying messages from one sign category only.
- Grouping of interpretative signs together, especially at trailheads, rest areas, and trail facility locations. Bulletin boards or kiosks work well for this.
- Legal implications.
- The way in which trail users will interpret each sign and its place in effective navigation of the rail trail.
- Other means of conveying the message, such as information sheets.
- Maintaining adequate distance between signs to allow users time to read and responds to the differing messages.
- Possible vandalism.

- Maintenance.
- Cost effectiveness.

Some of the principles to be adopted in considering the above factors are described below.

8.4.1 Risk Management

Committees of management have a legal duty of care towards trail users. An effective way of addressing this is to prepare a formal risk strategy covering all aspects of management of the rail trail that would include, design, construction, operation and maintenance.

Safety should be a basic concern and should be imbedded in the vision, purpose and values of the risk strategy in that the rail trail must be safe for its intended use.

However despite the best intentions, rail trails will always contain hazards, as it is not possible to warn everyone about every possible hazard..

In some situations it may be possible to reduce such risk associated with a particular hazard through improved site design or by regulating activities, however often such engineering or administrative controls are not appropriate particularly where they take time to plan and implement or may not be cost effective.

In such situations signs have a role as the quickest, simplest and most cost effective means to mitigate a hazard.

Signs are also important for regulating safe use, and informing visitors so that the places they visit match their interests, experience and skills.

Signage used as part of a risk management strategy are usually contained in the regulatory, warning and information categories.

Situations where risk management in relation to signage should be used include:

- Where an activity is prohibited for reasons which include safety, such as trail bike riding
- Where hazards may not be obvious, such as gaps in bridge planking where bicycle tyres could be caught
- Where asset standards and levels of service change abruptly, such as where a trail changes from a dedicated path to a roadway with high speed vehicle traffic
- At the start of a rail trail into remote country, where users need to be aware of the level of experience and equipment required
- At locations with a history of accidents, and
- In any situation where visitor expectations about the safety of an activity may not match reality (for example in camping areas where tree limbs may fall without warning).

8.4.2 When to use signs

Signs should only be used when considered absolutely necessary to meet the requirements outlined in the introduction. The avoidance of “sign clutter” should be an important element of the design brief. An excessive

8.0 DESIGN PRINCIPLES

number of signs reduces effectiveness and are an unnecessary capital and maintenance cost.

It is important to create a balance between minimising the number of signs and ensuring that there is adequate site management and information.

Particular attention should be made to ensure that there is sufficient signage to readily identify the trail ahead. Lack of adequate signage identifying trails or providing route directions can be a barrier to participation and an adverse influence on trip satisfaction. Adverse publicity will result if trail users are frequently getting 'lost' due to inadequate navigational signage.

The type, number and location of signs should be appropriate to the particular environment in which they will be placed. In remote areas, excessive use of signs will detract from the visitor's experience of the natural environment. In more developed areas, greater sign usage may be necessary for site management. For example for trails with a high number of users, (maybe those in metropolitan areas), the designer may consider it necessary to install additional behavioural signage such as "Keep Left", "Control Your Dog" or "Stop off the Path" which would not be considered necessary on more remote trails. VicRoads Cycle Notes No.10, titled "Shared Path Behavioural signs" provides an example of such design.

8.4.3 Sign symbols

Australian Standards on signage promote the use of standard symbolic colours and shapes. Symbols can convey a message more quickly and efficiently than text, are more legible at longer viewing distances and more readily understood by people who are poor readers of English. In many instances these colours and shapes and the symbols that go with them are used and recognised internationally. Such symbols used on rail trails should be consistent with Australian Standards as per Clause 7.3.

Symbols should not be too abstract and should not be the exclusive means of communication. As a rule, text and symbols should be used together for the clearest message.

Symbols without text should only be used where there can be no doubt about the meaning

8.4.4 Accuracy

The purpose of a sign and the specific audience to which it is directed should be clear to the designer in order that the text is appropriate and the desired message is accurately communicated.

Any facts to be conveyed should be verified for accuracy and where appropriate sources disclosed.

8.4.5 Legibility

Signs should be readily visible, clearly readable and easy to understand. The required legibility is determined by visibility, user comprehension, sign shape, colour contrast, text character height and proportion. Information on a sign should be concise and lettering styles simple and bold.

Consideration should be given to the necessity to illuminate signs or to apply a reflective surface.

As graffiti can seriously affect legibility, consideration

should be given to the sign being constructed from materials from which graffiti can be easily removed.

For signs carrying larger quantities of text such as those identifying places or items of interest both along and off the trail, for the sake of brevity, the text should be reduced to its essence, using "bite-size" chunks of information. Creating a hierarchy of text (large headlines, medium introductory copy and smaller text for detailed information) will draw the readers into the information allowing them to choose as little or as much detail as their level of interest dictates.

The height of the lettering should be varied according to the distance from which it is intended to be read.

Colour, contrast and shape can be useful for transmitting messages quickly but only if the meaning is easily understood. For example, generally where a sign has warning function a standard colour coding of Black on Yellow should be used.

Contrasting colours with light images on dark backgrounds should be used to make signs easy to read, especially from long distances. Colour should not be used as the sole means of communication as a percentage of the population are colour blind. Instead regularity in sign designs should be used. Similar shapes and sizes as well as colour schemes help users quickly understand and utilise a trail system.

8.4.6 Durability

Commensurate with cost, the expected life of the sign should be determined and materials of commensurate durability chosen. Ongoing maintenance of the chosen material should also be considered including the effective management of graffiti.

8.4.7 Environmental/Aesthetic The materials and colours should be sympathetic with the landscape.

Signs should be placed where they will not detract from natural surroundings and diminish the trail experience. The placement of a sign should not diminish a scenic vista or minimise the dangers of a hazardous area.

The need for a sign and its function should be balanced with the impact it will have on the overall aesthetic appeal of the trail.

8.4.8 Sign Placement

The placement of signs should take into account context, sightlines, safety and visual impact.

Where necessary local resources should be drawn upon to establish the relevant information and the best places to locate each sign.

8.4.9 Context

Signs should relate to their message by placing them in visual proximity to the object of interest, but without detracting from the feature or view.

As a rule, a sign should not be placed more than 50 metres from the focus of its interest. This may vary according to the scale of the feature. A rock massif, for example may either have a name sign at its base or be identified/

8.0 DESIGN PRINCIPLES

interpreted at a lookout which affords a better view. A smaller feature should always be identified or interpreted in close proximity to its position.

8.4.10 Sight-lines

Sight lines are also important. Legibility distances are of no use if the sign is obscured. Signs should be placed where obstacles such as vegetation, parked cars or buildings will not block the sign from view.

8.4.11 Safety

The sign itself should not present an obstacle or hazard to trail users. For example post-mounted signs should be at least a half a metre off the edge of the trail circulation route and should be raised around 1.5 metres off the ground.

Non-traffic orientated signs such as information boards or interpretative signs should be at least 1.5 metres off the sides of the trail. These offset distances allows groups of walkers, people using wheelchairs and bicycles to get completely off the path of travel to read the signs thus minimising disruptions on the trail.

Signs should be placed so that they do not distract the viewer during hazardous situations such as placing them too close to corners or blind spots on the trail.

Signs should be placed within the sight distance limits and required stopping distances relating to the information being imparted by the sign. This applies particularly to regulatory and warning signs. Adequate time to read and respond to traffic signs must be calculated into sign layouts

8.4.12 Visual impact

A good sign should be obvious but not dominant and should not intrude on the view. Backdrops of vegetation or physical features can be used to reduce the signs impact, however a backdrop that will camouflage it should be avoided. This is a delicate balance and requires sensitivity and care.

It is important to relate the sign to the scale of the landscape setting in which it is to be located. Very large features near a sign will reduce the signs scale. Alternatively, very large features in the landscape will accommodate larger sign formats.

Vast expanses give the impression of reducing the scale of the sign. These landscape settings can generally accommodate larger horizontal sign formats. Horizontal landscape settings, such as are often encountered in the Victorian Mallee or in many coastal settings with long low features will readily accommodate a long sign.

Confined spaces will accommodate small signs

8.5 Sign schedule

8.5.1 General

Preparation of a sign schedule is an important component of the design brief and an important management and planning tool. It documents the status of signs on the rail trail, is a specification document indicating prescribed sign usage and can be used as a maintenance tool for the ongoing management of the trail signage.

It is essential that a complete schedule or inventory, which should include a route plan, be prepared for each rail trail.

The schedule should:-

- Be prepared within the context of an overall interpretation and information strategy for the rail trail;
- Be prepared in consultation with all stakeholders including relevant government agencies and authorities who, in some cases may have overlapping responsibilities.

Once a sign schedule has been prepared, reviewed and approved it can be used to estimate costs and draw up a works programme.

8.5.2 Typical sign schedule

The layout of a schedule can be varied in a number of ways, but as a minimum it is recommended that the schedule contain the following:

- Base map of the trail showing major features such as roads, rivers, built areas, and public open spaces at an appropriate scale and upon which other relevant detail can be superimposed;
- Trail alignment;
- Existing and proposed sign locations, including those by other agencies;
- Identify the category of each sign.
- Specify the detailed design of each sign including:
 - Necessity for the sign to be read from either direction
 - Wording;
 - Text typeface, letter height, spacing and colour;
 - Specifications and drawings for materials, fabrication, construction and installation.
 - The precise location of each sign in relation to existing features and its offset from the trail

The schedule should form part of an overall interpretative and/or management plan for the rail trail and could be used as a tool for:-

- identifying current status
- recording changes resulting from an audit process
- future maintenance
- Where the budget is insufficient to install all signage upon the initial commissioning of the trail, prioritise the installation of additional signage at a later date.

9.0 SIGNAGE CATEGORIES

For the purposes of these guidelines, signage has been placed into the following seven categories, Regulatory, Behavioural, Warning, Information Interpretative, Promotional and Temporary, all as defined Clause 4.9.

In order to maximise the impact of the message of any particular sign and to reduce the possibility of confusion, it is recommended where feasible, that text and symbols of only one category are displayed on the same sign.

The signs depicted in each category may vary from trail to trail, region to region and state to state across Australia depending upon the particular legal jurisdiction, culture and customs of the particular area.

As many standard signs only relate to cyclists and walkers, modification may be necessary to include horses.

9.1 Regulatory

Purpose To advise users of activities that are mandatory, prohibited or indicate the degree to which an activity or use of a facility is limited or restricted. Non-compliance indicated an offence at law. Regulatory signs may form part of a risk management strategy.

Regulating authority Commonwealth, State and local government authorities.

Style and content Most regulatory signs are rectangular in shape with the long axis vertical, however other shapes may be specified where there is a special need for easy identification Rail trail logos should not be included on these signs

Colour scheme Most have a black or red legend on a white background, however for those having a special need other colours are specified.

Typical examples Regulatory signs to control traffic on bicycle paths are identified in Clauses 3.2(a),(b),(c), (d), (e),(f) and Table 3.1 of AS 1742.9 Other situations where regulatory signs would be appropriate include

- No vehicles;
- No trail bikes;
- No motorbikes;
- No Shooting;
- No firearms;
- No littering;
- No camping;
- Picking plants prohibited;
- No fishing;
- No dogs.
- No fires
- No firewood collection



Figure 9: Bike Path End



Figure 10: No trail bikes

9.0 SIGNAGE CATEGORIES

9.2 Warning

Purpose Warning signs are deemed necessary where it is established that hazards are known to exist, and existing or proposed uses are appropriate, but that risks to life, limb or property may be significant. These risks are generally considered to be within acceptable limits. Warning signs point out existing or potentially hazardous conditions on or near the trail and may caution users to take specific action such as reducing speed or dismounting a bicycle or horse for safety reasons. They are particularly important where the hazard is intermittent or may not be obvious to the inexperienced trail user and the provision of a sign is necessary for safety.

Warning signs will form part of a risk management strategy.

Regulating authority Managing authority. Warning signs are advisory only and not enforceable by law.

Style and Content In general, warning signs are square shaped with one corner vertical. They are identified alpha-numerically. AS 1742.1 specifies the prefix and series number and denotes the nine classifications into which warning signs are categorised (eg. W1, W2, W3, etc) depending on the intended function. Those categories which generally relate to rail trails are; W5 'Road Obstacle Series', W6 Pedestrian, Bicycle and School Series' W7 'Railway Level Crossing Series' and W8 'Auxiliary Series'. The W8 series signs are rectangular in shape and are used in conjunction with other signs in the warning series to supplement and clarify the message conveyed in the accompanying diamond shaped warning sign.

Rail trail logos should not be used in conjunction with these signs.

Warning signs may include the following information

- Appropriate text and/symbol
- Statement of danger
- Statement of consequences
- Statement of precautionary actions

Colour scheme Usually a black legend or symbol or both with a black border on a yellow reflectorised background.

Typical examples Warning signs to control traffic on bicycle paths are identified in Clauses 3.2(g),(h),(i), (j) and Table 3.1 of AS 1742.9

Other situations where warning signs would be appropriate include;

- Farm crossing;
- Railway crossing;
- Changes in grade;
- Sharp curve;
- Narrow bridge;
- Hazardous gaps in bridge planking;
- Changes in bridge conditions;
- Changes in surface conditions;
- Riders dismount;
- Wearing of approved helmets;
- Upcoming traffic control devices;
- Livestock;
- Native animals.
- Move quietly near horses and other stock
- Emergency situations such as 'land slip ahead', 'bridge closed', 'detour'.



Figure 11: Give Way To Stock



Figure 12: Rail trail crossing ahead

9.0 SIGNAGE CATEGORIES

9.3 Behavioural

Purpose Behavioural signs can be considered as regulatory signs without the force of law behind them. Behavioural signs relate more to trail courtesy, with the aim of avoiding conflict between users and encouraging co-operative behaviour.

Regulating authority Managing Authority.

Style and content In contrast to regulatory and warning signs, the necessity to use designs drawn from those standards that are used by land management authorities for similar facilities may be relaxed. Signs should display the trail logo and may carry a single or several messages.

Colour scheme May vary, preferably black on a white background.

Location of typical examples Vic Roads cycle notes No. 10

Typical examples Keep left;
Warn when approaching;
Move off trail when stopped;
Control your dog;
Carry home your rubbish;
Leave gates as found



Figure 13: Outer Circle Rail Trail Behavioural sign

9.4 Information

Purpose Information signs provide trailside information that serves to enhance the practical effectiveness of trail usage.

This information can be split into two further sub-categories, being:-

Geographic information that assists in navigation to identifiable destinations

Advisory information that enhances effective trail usage for trail users

Information signs may form part of a risk management strategy

Regulating authority Managing Authority.

Style and content In contrast to regulatory and warning signs, the necessity to use designs drawn from those standards that are used by land management authorities for similar facilities may be relaxed.

The opportunity exists to be more creative and apply designs that provide strong links between the rail trail and

it's past railway heritage. Signs should display the trail logo and may carry a single or several messages.

Colour scheme Various.

Typical Placement Typical placement of information signs are: -

- At the start and finish and selected entry points.
- At junctions between the rail trail and intersecting roads, trails and rail trail access paths.
- Along rail trail to reassure users that they are still on the trail possibly by giving the distance to the trail end or locations along the rail trail.
- On intersecting roads to guide users to the trail and to warn motorists
- Along the trail directing users to services such as toilets, water, shops, car parking
- Along the trail directing users to adjacent places of interest and at the places of interest.

Typical examples Signs showing navigational information.

- Name, length and destination of the trail.
- Map of the trail
- Direction and distance to destinations such as towns, trailside facilities, accommodation, commercial enterprises, services, other trails, access roads, historical sites, geographical features

Signs showing advisory information relating to effective trail usage, which may include:

- The name of the managing authority of the trail and contact information.
- Description of the trail and information such as whether it follows or partly follows an abandoned railway.
- Track surface conditions.
- Type of trail e.g. loop, linear, return.
- Effect of various weather conditions such as carrying sufficient drinking water in hot conditions, or sufficient warm clothing in cold conditions.
- Opening and closing hours of the trail
- Estimated completion time and whether the time is one-way or return
- Registration and reporting requirements
- Advise on any special equipment requirements
- Personal safety precautions



- Skill level required
- The suitability of the trail for use by different user groups such as walking, cycling horse riding, inline skating, or following by car.

Figure 14: Murray to Mountains navigational sign



Figure 15: Great Southern Rail Trail information signage

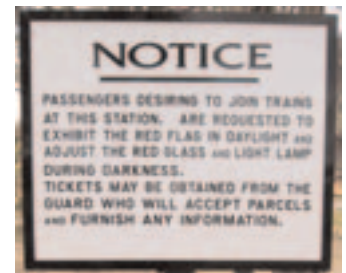


Figure 16 & 16a: Reproduction station sign on the former Wangaratta to Whitfield right of way(right) and at Bonegilla on the High Country Rail Trail

9.5 Interpretative

Purpose Interpretative signs communicate knowledge or feeling about what is being seen or sensed. The signing should succinctly explain and/or interpret the information about a site or significant vista. Such sites or vistas would include historic sites, locations of historic events, areas of ecological environmental or geological significance and significant flora and fauna.

The installation of such signage should be warranted by the significance of the attraction.

Regulating authority Managing Authority

Style and content The signs would display the trail logo. In contrast to regulatory and warning signs, the necessity to use designs drawn from those standards that are used by land management authorities for similar facilities may be relaxed.

The opportunity exists to be more creative and apply designs that provide strong links between the rail trail and its past railway heritage.

The sign may carry a single or several messages, and could stand alone or be incorporated into a shelter or kiosk.

It should be noted that information provided on interpretative signs might also be appropriate to provide in material promoting the Rail trail

The information may be in the form of text, photos, sketches, illustrations, line drawings or diagrams.

Colour scheme Various

Typical examples with information relating to the following

- History of the original railway.
- Identification of station sites. (Railway station name boards that could be a replica of the original signage).
- Descriptions and / or maps describing or depicting the station yard layouts and history.
- Historical information on industrial relics such as bridges, railway architecture, signaling devices, switching stations and tunnels.
- Historical information at sites of important events including railway events.
- Historical information on the people who built the railway and its associated structures. (Railway construction represents one of the most dramatic periods of Australian immigration and labour history).
- Historical information on the railways creators.
- Geological formations.
- Floras and fauna.
- Vistas



Figure 17: Historical marker at Red Hill station site



Figures 18 & 19: Rail trail historical signage, Outer Circle (above) and Walhalla Goldfields



9.0 SIGNAGE CATEGORIES

9.6 Promotional

Purpose Promotional signs can be used to promote rail trail stakeholders. These may include businesses or organisations which stand to gain financially from rail trail users, or those which may have contributed or do contribute resources to the rail trail.

For those businesses that stand to gain financially, the opportunity exists to enter into a mutually co-operative partnership agreement whereby the managing authority receives a fee in return for allowing the sign. Such a system should operate through a permit being issued by the managing authority.

Such a permit would address issues such as:-

- responsibilities in relation to the cost of installation, maintenance and removal of the sign;
- standards and specifications relating to the construction, installation and maintenance of the sign;
- conditions under which the managing authority may remove the sign;
- conditions relating to the continuing operation of the business.

Alternatively there could be government or non-government organisations that contributed political, consultative or networking resources to the development and or ongoing maintenance of the rail trail and deserve appropriate recognition.

Regulating Authority Managing Authority

Style and content The signs could be either stand-alone or be incorporated into interpretative signage. The signs should display the rail trail logo. The Managing Authority should carefully control advertising signage such that the environmental quality of the trail is not compromised.

Colour scheme Various

Typical examples of businesses which may gain financially from rail trail users:-

- Places of accommodation
- Food /eating establishments
- Wineries
- Tourism enterprises along the rail trail such as museums, theme parks, zoos, historic properties and gardens.
- Local contractors who were or are engaged in the development, construction, operation, and maintenance of the rail trail.

Government or non-government organisations

- State government department responsible for the rail trail
- Local government
- Parks authority
- Environmental groups
- Local historical societies
- Cycling organisations



Figure 20: Bellarine rail trail promotional sign with logo

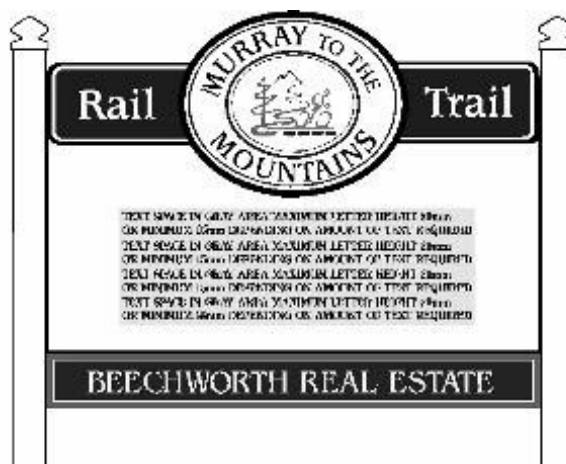


Figure 21: Draft advertising/informational sign on Murray to Mountains rail trail

9.7 Temporary signs

Purpose Temporary signs are used where it is necessary to convey information in relation to short-term conditions. Such conditions could be as a result of an emergency situation.

Regulating Authority Managing Authority

Style and content Defined in various Australian Standards and Codes of Practice issued by authorities such as those responsible for roads and parks.

Rail trail logos should not be used on these signs

Typical examples Detour

- Trail closed
- Bridge closed
- Landslip ahead
- Trail under repair.

10.0 SIGN MAINTENANCE

Effective maintenance of signage is essential to ensure the ongoing quality of trail usage. Signage can lose its effectiveness through normal weathering, accidental damage, vandalism or being obscured by foliage.

The Managing Authority should have a maintenance program in place which should include regular site inspections, management of the repair process and follow up inspections to ensure that the identified work has been properly carried out.

The Managing Authority should ensure that sufficient funds for effective maintenance are included in the annual budget.

11.0 SIGNAGE AUDIT

Over a period of time, conditions along the rail trail may change such that the existing signage is either out of context, inaccurate, superfluous or inadequate. These situations can be of particular concern in relation to risk management signs where the nature of hazards may have changed.

The Managing Authority should manage the audit process by ensuring:-

- That an audit is conducted, at least annually, by a competent person.
- That safety issues are prioritised
- That 'black spots' are identified
- That the recommendations are properly considered and where approved arrange for adequate funding and prioritisation.
- That the changes are carried out in a timely fashion.

11.1 Emergency Situations

The Managing Authority should consider the requirement to carry a stock of temporary signs which could be used in emergency situations

Such signage could include, '**Trail Closed, Bridge Closed, or Detour.**

Railtrails Australia welcomes your feedback on this document.

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