Guidelines

Track construction in coastal areas G-13.1

Coastal tracks and trails provide access to foreshore areas, linkages from one coastal site to another, and in some instances recreational opportunities for various user groups such as walkers, mountain bike riders and horse riders. The design of coastal tracks needs to consider the purpose of the track and it's user groups as well as the unique coastal processes and the natural and cultural values of the area. Seek advice from your NRM Officer in local council.

Careful planning and quality construction by skilled and trained track workers are the keys to success and can greatly reduce the cost and amount of maintenance. Planning for ongoing maintenance is essential. Consider capacity and resources to maintain existing tracks prior to constructing new tracks.

Use these guidelines in conjunction with the information provided in Chapter 13 when planning works and engaging consultants and contractors to ensure the proposed works use the most effective methods and minimise the risk of causing damage to coastal values.

Environmental and cultural considerations

Track construction has the potential to impact on vegetation communities, wildlife habitat, Aboriginal and maritime heritage values and threatened species.

It is important to identify all natural values that may be affected. Seek advice from specialists. Vegetation and fauna assessments may be required.

It is important to identify all cultural values that may be affected. Contact Aboriginal Heritage Tasmania, an assessment and permit may be required. If a new relic is discovered stop work and contact Aboriginal Heritage Tasmania.

Avoid creating new tracks in areas not infected with *Phytophthora cinnamomi* if the vegetation type is highly susceptible to Phytophthora root rot disease or if there are threatened plants or communities present. Wash down stations will be required on existing tracks that move from infected areas to non infected areas. Consider rerouting such tracks if possible.

Planning

Tracks cannot be constructed on public land without the authority of the land manager. Identify the land manager and undertake any necessary assessments and approvals. Land managers must agree to ongoing maintenance.

Consult with the local community and any local community groups over the community's recreational track needs and other community and coastal values. Local community groups may be willing to be involved in track construction and maintenance.

Consider multi-use tracks and tracks and structures that provide disabled access where appropriate, particularly at coastal access points such as viewing points and beaches.

Ensure tracks and associated infrastructure are designed, classified, built, audited and maintained according to the Australian Standards for *Walking Track Classification and Signage (AS 2156.1-2001)* and associated infrastructure conforms with the Australian Standards for *Infrastructure Design on Walking Tracks (AS 2156.2-2001).*

Classify tracks according to recognised track classification schemes, using the six classes detailed in *AS 2156 Walking Tracks Part 1 Classification and Signage.*

Multi-use tracks and their associated signage that are built for use by mountain bike riders should be designed, classified, built, audited and maintained according to the International Mountain Bicycling Association (IMBA) track design and construction standard.

Consider potential sea level rise and ensure new tracks are constructed above Intergovernmental Panel on Climate Change (IPCC) predicted levels for their life span and away from the threat of storm waves and coastal inundation.

Track design

Careful planning and choosing the appropriate site is important for tracks and trails near the shoreline and will minimise future maintenance demands.

Accessways and tracks through sand dunes should be sited in natural gullies. Avoid creating tracks on dune crests. Unstable areas such as unvegetated dunes, cliff tops, wetland edges and potential landslip zones are also unsuitable.

Avoid works on or near beaches and foredunes, unless they are required to provide access to the shoreline.

Choose already disturbed sites where people want to go (e.g. where people usually cross dunes), wherever possible. This will lead to greater public acceptance and use of these tracks. Aim to reduce the number of access points through dune systems.

Follow the contours of the land where appropriate and work around exisiting vegetation. This will often be more cost effective and have less impact on the landscape.

Design tracks so that they are visually pleasing and suit the natural environment, and are easy for visitors to find (e.g. use posts to mark where paths enter beaches).

Guidelines

G-13.1 Track construction in coastal areas

On the job

Do not construct infrastructure unless absolutely necessary. Minimise the construction of bridges and retaining walls. This will make the track cheaper to construct and cheaper and easier to maintain.

Use well trained and appropriately skilled staff or contractors for designing, classifying, building, auditing and maintaining tracks to ensure a quality product that will be appreciated by the community. High quality construction will minimise ongoing costs.

Ensure all works staff and contractors are briefed on minimising environmental impacts and provide adequate supervision to ensure best practice environmental standards are being implemented.

Avoid disturbance to wildlife. Schedule works to avoid significant wildlife events such as shorebird and penguin breeding season where appropriate.

Liaise regularly with the community and plan your track construction project to minimise impact on the use of the area by the community i.e. install signage to let people know when the work is expected to be completed by; split the project into sections; undertake the work outside of the tourist season.

Clean soil and plant material off machines, tools and boots before and after works to avoid introducing weeds and diseases on machinery, tools and personal equipment such as boots.

Prevent the spread of weeds and diseases by ensuring all imported gravel, soil and mulch are weed and disease free.

Minimise soil disturbance by using hand tools rather than machinery wherever possible. Do not discard excavated material onto dune or coastal vegetation.

Be aware of acid sulfate soils which can pollute waterways and corrode infrastructure and concrete. Watch out for indicators such as yellow deposits or a rotten egg smell when soil is disturbed. If discovered stop work and seek specialist advice.

All rock used for track construction work to be the same as the parent rock in the area wherever possible.

Align paths to the beach away from the direction(s) of the onshore prevailing winds to minimise loss of sand from the beach.

Align tracks on the uphill side of large trees to minimise damage to tree root systems. Do not trim large tree roots to make way for the track.

Retain large hollow bearing trees or trees that may develop hollows in the future.

In well-protected dunes with little foot traffic do not install a protective surface but maintain a natural sandy path.

In busier or windy sites, install a protective surface. Choose local materials such as stone, gravel or bush timber to create a more natural appearance, wherever possible.

Fine grade gravel is generally most suitable on Class 1 and 2 tracks whereas compacted coarser grade gravels with a high clay content are suitable for Class 3 and 4 tracks.

Build gravel paths about 100 mm high to allow rainwater to run off, and define the edges with free-draining crushed rock and boulders.

Retain the edges of tracks if necessary with dry-stone walls using local materials wherever possible.

Minimise water crossings whenever possible. Seek engineering advice. Hardened track structures, such as culverts and bridges, may be required for creek and drainage crossings. In some instances the use of rock may be all that is required to harden the track over boggy or soft terrain.

Control the movement of water on the track through good design with due consideration to the local topography, soil type and rainfall patterns. These measures can include regular grade reversals, grade-dips, or nicks.

Divert water by laying gravel with an out-slope of between 3% and 5% or by crowning the gravel on the track to encourage water to sheet across the track not flow along the track.

Rehabilitation

Rehabilitate any disturbance to surrounding vegetation as soon as possible.

Assess the need for revegetation. If there is no natural vegetation nearby to supply seed, plant the area with appropriate local native species or use direct seeding once track has been constructed.

Mulch or jute matting can be used to prevent weeds whilst native plants re-establish.

Maintenance

Incorporate regular inspections and maintenance of structures into existing maintenance programs.

Carry out regular safety inspections in accordance with Australian Standards specifications.

Inspect for hazards after extreme storms and coastal inundation events such as king tides.

More Information

AS 2156 Part 1 Walking tracks. Classification and Signage

AS 2156 Part 2 Walking tracks. Infrastructure Design

Tasmanian coastal works manual.Chapter 13, Page & Thorp 2010

Trail planning guidelines: Guidelines to assist with the planning, design, construction and maintenance of sustainable recreational trails in Tasmania. Sport and Recreation Tasmania, in prep

Walking track management manual. Parks and Wildlife Service 2003