

Guidelines



Fencing

G-13.4

Fences are often necessary to control access and protect unstable or fragile coastlines and wetlands from damage by people, vehicles and livestock.

Fencing is a specialised task and there a number of qualified and experienced fencing contractors around. It is important to choose good quality materials and experienced contractors or staff to get the best result.

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.

When to use a fence

Fences can be a good way to control access in coastal areas but are expensive to install and maintain. Consider other forms of controlling access such as track markers, bollards and large rocks. Fences can be particularly useful for protecting fragile coastal areas or areas being rehabilitated such as dune blowouts.

Simple fences can be used to protect shorebird nests or to act as a psychological barrier to protect dune vegetation.

Fencing materials are not cheap. There are many different fencing techniques and materials. The type of fence will be determined by the reason for fencing and budget constraints.

Environmental and cultural considerations

Fences requires disturbance of the shoreline and as such have the potential to impact on vegetation communities, wildlife habitat, Aboriginal and maritime heritage values and threatened species and coastal ecosystems.

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.

Ensure correct identification of land tenure and boundaries and seek approval from the land manager. Consult with local Coastcare groups and the general public.

Fence design

Before you start consider...

- What am I trying to keep out?
- How long does the fence need to last?
- How much funding do I have?
- What ongoing maintenance will be required?

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Design must consider a thorough analysis of the site and the coastal processes in the context of the expected life and maintenance regime of the fence.

Climate change and sea level rise predictions based on Intergovernmental Panel on Climate Change (IPCC) predictions must be incorporated into the design. Consider not just elevated water levels but inundation, and increased wave energy and storminess.

Fences are best installed on the landward side of sand dunes. If installing on the seaward side then install the fence behind the incipient dune. On receding beaches it is not wise to install expensive or complicated fences on the seaward side of the dune system. These fences will be subject to erosion and destruction by wave action.

Adapt the design and placement to the site conditions (e.g. align fences away from the direction(s) of prevailing onshore winds).

Height is a great mental barrier to people, fences should be at least 1.2m high.

Attractive timber post and rail fences are expensive but may be appropriate in high use areas.

Fence types

A simple dripline fence or even a string fence provides a psychological barrier rather than a physical barrier and can be used to protect sensitive sites. A dripline fence is just a single wire covered in black polypipe tubing looped between low treated pine posts (75–100 mm) and fastened by stapling.

A simple temporary fence built from garden stakes and baling twine or hazard tape is suitable for delineating temporary exclusion zones such as around nesting shorebirds or areas recently revegetated.

Select the appropriate structure for the conditions. Plain wire fences are relatively cheap and easy to construct and maintain. The wire needs to be strained between the posts (e.g. back to a star picket).



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Fencing suppliers will supply designs and costings for little or no cost. Use a reputable fencing supplier and remember that paying more for quality will bring rewards of a longer life span and less maintenance.

Fences with prefabricated wire (hinge lock) will provide the most effective barrier to people but should be designed to allow for the movement of coastal fauna. Construct hinge lock fencing with large grid spans (300mmx300mm) at the bottom of the fence or elevate the wire off the ground (this will also reduce the rate of corrosion).

Materials and costs to consider

Wooden posts and struts or posts and rails	Labour
Hot dipped galvanised star pickets	Tension metered strainer
Pre fabricated wire (e.g. hinge lock)	Tools such as wire cutters
Galvanised staples	Supervision
Plain wire galvanised soft-wire 3.75mm	Assessments
Plastic caps for star pickets	Maintenance

Site Selection

Consider Aboriginal heritage values and other natural values such as penguin rookeries when siting fences.

Avoid unstable areas such as un-vegetated dunes, dynamic foredune areas, cliff tops, wetland edges and potential landslip zones, unless the structures are built to protect public safety or sensitive sites. Avoid visually prominent locations (e.g. dune tops and beaches), as far as possible.

Wherever possible locate fences on the sea front well back from the highest tides and waves—otherwise they are likely to be washed away by storms. Only fence on the sea front side of the dunes if absolutely necessary. It is important to keep people off the foredunes but fences on receding beaches will require very high levels of maintenance as they become dislodged and damaged by high tides and storm events.

Installation

The installation of fencing requires a reasonable amount of disturbance to vegetation and soil and therefore consultation with specialists and identification of natural and cultural values is essential before works commence. Minimise impacts on coastal values during installation.

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Time works to avoid significant wildlife events such as shorebird and penguin breeding times.

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.

Correct installation is essential. For wire fences do not over strain wires. Strain wires to a measured tension according to the wire specifications. Use a strainer with a tension meter. Drive wooden posts 1m into the sand/soil and star pickets 600mm deep.

Minimise the amount of excavation of the shoreline and the impacts on the coastal vegetation. The use of concrete in sandy soils is not recommended.

Rehabilitate disturbed areas as soon as possible. Plant vegetation adjacent to the fence to improve visual amenity. Over time the vegetation might provide enough of a barrier and allow for the removal of the fence.

If fencing in conjunction with board and chain accessways ensure there is enough space between the ends of the boards and the fence to allow for regular lifting of the boards when covered in sand.

Do not attach geotextiles or woven synthetic mesh to access control fences otherwise sand will accumulate in the accessway.

Public Safety

A fence should never be allowed to become a public hazard. Regular inspections are required to identify any loose or cut wires and sharp hazards.

Maintenance

Maintenance is very important to the life of the fence. A simple post and wire fence should last 10-15 years if installed and maintained correctly.

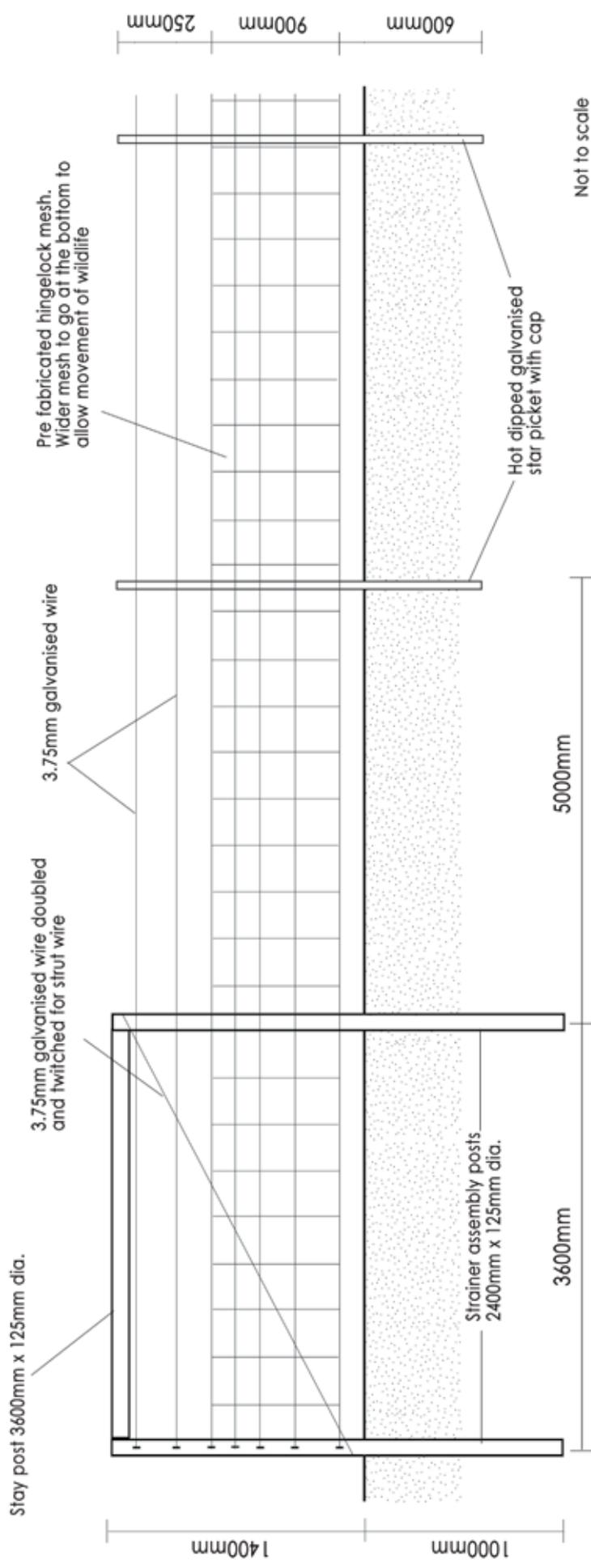
If wires are cut it is an offence that should be reported to the police. Undertake consultation with the public to understand the reason for the vandalism and determine if a resolution can be reached.

Leaning posts can usually be straightened without having to re-install the entire fence.

More Information

Tasmanian coastal works manual Chapter 13, Page & Thorp 2010

Fencing contractors may be able to provide training for works crew staff and community groups in basic fence construction and maintenance.



Type of access control fence - wire mesh fence.
 Other types include post and rail and single wire strands

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Checklist

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Fencing is a specialised task and there a number of qualified and experienced fencing contractors around. It is important to choose good quality materials and experienced contractors or staff to get the best result.

Use this checklist in conjunction with the accompanying guidelines and the information provided in Chapter 13 when undertaking works and engaging consultants and contractors to ensure works adhere to the most effective methods and minimise the risk of causing damage to coastal values.

Planning

- Other access control measures considered
- Land tenure and boundaries clarified
- Permission of land manager granted
- Consultation with NRM officer within local council
- Consultation with local community and community care groups
- Design and siting of fence adapted to local coastal processes and conditions
- Fence type appropriate for task and location
- Vegetation and wildlife values identified. Relevant assessments and approvals undertaken as required
- Impacts on vegetation and wildlife values minimised
- Consultation with Heritage Tasmania and Aboriginal Heritage undertaken and values identified
- Impacts on heritage values minimised. Stop work if Aboriginal relic uncovered
- OH&S risk assessment undertaken
- Materials suitable for installation and maintenance budget
- Use of concrete minimised
- Disturbance to wildlife avoided. Works scheduled to avoid significant wildlife events such as shorebird and penguin breeding seasons where appropriate
- Excavation of the shoreline minimised
- Damage to or removal of coastal vegetation minimised
- Machinery, tools and personal equipment (such as boots) cleaned to minimise spread of weeds and disease
- If a new Aboriginal relic is discovered stop work and contact Aboriginal Heritage Tasmania

Rehabilitation

- Rehabilitation of any disturbance to surrounding vegetation undertaken
- Revegetation undertaken if there is no natural vegetation nearby to supply seed

Maintenance

- Regular inspections scheduled
- Hazard inspections undertaken after extreme storms and coastal inundation events such as king tides

More Information

Coastal dune management, NSW Dept of Land and Water Conservation 2001

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

Installation

- All works staff and contractors briefed on minimising impacts on coastal values and alerted to any permits or restrictions to work activities
- Adequate supervision provided to ensure best practice environmental standards are being implemented and permit requirements are being adhered to

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