Management guidelines for dune use

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Leaflet No.
V–02.3

Vehicle access to beaches

Introduction

This leaflet is a general introduction to the provision of vehicle access to beaches. Beaches are usually backed by vegetated dunes which can be damaged by uncontrolled vehicle use. A good cover of vegetation maintains dune stability and prevents wind erosion, but it is easily damaged and destroyed by vehicle tyres.

Where vegetation has been damaged by vehicle tyres, wind erosion becomes a problem and can lead to the formation of a blowout. To prevent this, properly established vehicle access tracks are essential where large numbers of off-road vehicles are using the beach and dunes.

General requirements for vehicle access tracks

Vehicle access tracks should be laid over the existing dune surface to avoid the development of blowouts which occur when tracks are laid in excavations made through the dune. Access tracks should be narrow (about 3m wide) and straight, if practicable. In most cases, tracks are aligned at right angles to high water mark. Tracks aligned to the prevailing wind should be avoided.

Vehicle access tracks should be provided at sites convenient to the public. Where large numbers of vehicles are already using a particular crossing point, a properly constructed track can minimise the amount of damage caused to the dune system.

Vehicle use of this unsurfaced access track has caused the formation of a cutting through the frontal dune.

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The surface of access tracks located over sand should be treated so that it is not susceptible to wind erosion. Tracks can be surfaced with either gravel and bitumen or a board and chain roadway. A brief description of each type of vehicle access track follows. A more detailed account of each method will be given in subsequent leaflets.

Gravel/asphalt vehicle access track

An unsealed 150mm layer of well-compacted gravel can be used on flatter sections of the dunal system. Asphalt can be laid on a gravel base. Generally, asphalt and gravel surfaces are unsuitable on slopes of over 30% or for the final drop to the beach. Sealed surfaces should be crowned to minimise water erosion (of the track). The surface of the track should be shaped to shed heavy rain and to prevent accumulation of water.

Board and chain roadways

Board and chain roadways are of similar construction to board and chain walkways discussed in leaflet no. V-02.2, although they are heavier. Board and chain is used on steep sections of the dunes where slopes are greater than 30% and on the final drop down the frontal dune to the beach.

Fencing

Fencing of vegetated areas adjacent to vehicle access tracks may be required to prevent vehicles crossing the dunes other than at properly constructed tracks. Leaflets no.V-02.5 and V-02.6 give details of fencing.

Advisory signs

Suitably worded signs advising the location of vehicle access tracks should be erected in prominent positions. Signs can be made using 14-gauge marine-grade aluminium bolted to a galvanised post 2400mm long (60mm outside diameter) concreted at least 500mm in the ground. Bolts, washers and nuts should be heavily galvanised to prevent corrosion.

Vehicle access track using a board and chain roadway on the crest and seaward slope of the frontal dune. This track needs to be fenced to prevent further damage to dune vegetation on each side of the board and chain roadway.