

Guide to Sand Blow Fencing (using end-of-life fish farm cage nets)

Introduction

The purpose of sand blow fencing is to slow the speed of wind blown sand sufficiently so that particles drop to ground level where they can build up to fill blowouts in dunes. They are put to best use where vegetation has disappeared causing wind blown openings or depressions in dune system.

The positioning and spacing of the fences is critical to efficient collection of sand. Fence lines should be erected perpendicular, i.e. at right angles, to the most common direction of wind when sand is usually blown.

Spacing of fences lines should be 4 times their height apart, e.g. if the height of the fence is 90 cm, then the distance between fences should be 3.60 metres. The 4 to 1 ratio is critical because as sand builds up behind the fence and reduces its remaining height, the ratio increases and becomes less efficient.

Fencing should start towards the landward end of the blowout. If started at the mouth of the blowout then sand blow will be starved and not reach the back. Fencing should not be erected where it will get 'wet', i.e. it should be placed above high tide level and not where it will be reached by the sea.

Tools and Materials

Tools, etc. required to erect sand blow fencing includes the following:

- String line and tape measure
- Spade or shovel
- Pinch bar or other tool suitable for making post holes
- Fencing mallet or other suitable hammer for driving posts
- Fencing pliers or heavy duty pliers
- Claw hammer
- Hand saw
- Sharp knife for cutting nets
- Protective clothing such as industrial gloves, steel toe capped boots

Materials required:

- Timber fence posts, preferably 2nd class round, approximately 80 mm dia.
- Processed fish far cage netting cut into manageable sections approximately 7 or 8 metres in length. The sections should be approximately 3 metres in width and not less than 2.70 metres wide. (Processed means the nets will have had lead lines, nylon fittings, etc. removed and will comply with SEPA's waste regulations.)
- Plain fence wire or, preferably, biodegradable fishing twine strong enough to support net
- Fencing staples

Method for Erecting Fencing

After deciding where to start, best at the back of the blowout, dig a shallow trench about 25 cm deep centred on the line of the fence and extending to its full length. At both ends of the fence line, where the dune begins to slope upwards, dig into the slope as the ends of the fence should be embedded into the side of the dune.

Using the stringline to keep the fence straight, make post holes in the centre of the trench around 2 to 2.50 metres apart. Drive the posts in so they are firm and reasonably straight to line for height and level along their tops. Even off the tops of the posts by cutting to level with a saw. At both ends of the fence drive in posts at an angle to act as straining posts when the top wire or twine is tensioned.

Loosely fix the wire or twine across the top of the posts using staples, tension at both ends on the straining posts, and then permanently hammer home the staples.

Drape the netting over the top wire or twine so that half the width of the net is on each side of the fence in a double layer. Make sure there is about a half metre overlap between each section of netting. The loose ends of the nets should be pulled down into the trench and covered over by backfilling the excavated sand so that the sides of the nets are tight.

Tie the nets here and there to the posts and top wire. Make sure no gaps are left particularly at the ends where the fence meets the side of the dune, or at the foot of the fence. Any gaps will cause wind to scour out sand and maybe make the situation worse.

Important

Fencing which does not prove to fulfil its purpose should be removed.

Health and Safety

This guide is not intended to provide advice on health and safety. Proper risk assessments should be made before work begins, tools should be fit for purpose and used by suitably experienced people.