

Protocol for Managing the Dunes at Elie and Earlsferry



At a time when climate change is resulting in rising sea levels and increased storminess allowing storm surges to reach further inland, the dunes act as an effective coastal protection system by absorbing the impact of coastal storms. The dune grasses with their long root system also help trap the sand and hold it in place. To maintain the integrity of the dunes for coastal defence purposes the following protocols are proposed:

Beach Huts



At present there is no formal arrangement for siting beach huts. The huts are located on open coastline in a dune system which is extremely fragile and vulnerable to erosion. Whilst the beach huts have no permanent foundations and are removed each winter, placement of these huts on the dunes or in hollows which have been excavated to enable placement of the huts, can lead to lasting damage of the dunes and the risk of a blowout. Also, paths leading from the beach huts do not support dune grasses and could be at risk from tidal rips.

Beach Huts should be placed outwith the dunes on the sands and on suitable foundations such as wooden pallets.

Planting of unsuitable species



Planting of inappropriate species such as Willow Trees, Ivy and Japanese roses undermines the stability of the dunes and their ability to act as a natural method of coastal defence. Marram grass dies off when in the shade of a Willow tree. Ivy which has very shallow roots in comparison with marram grass leaves the dunes vulnerable to erosion.

Householders should consider removing unsuitable species such as Ivy, Willow trees and Japanese roses where there are incursions beyond the main ridge of the dunes and re-planting the bare sand with marram grass.

Gardening of the back dunes with exclusion of the important dune marram grasses

Whilst this may not be a significant issue whilst the dunes are extending their footprint, this ground would offer little defence to threatening floodwater conditions should the current dune building phase be reversed.

Householders should be aware of the risk and consider restoring some dune and marram grass particularly beyond the rock protection. There should be a reduction in mowing and gardening

beyond the main ridge of the dunes. The aim being to increase the depth of naturally vegetated dune thereby increasing the level of natural flood protection afforded by the dunes.

Access paths



There are **22** access paths onto the beach. Whilst the beach grasses have developed in such a way as to be able to withstand direct sunlight, conditions of high salinity and fluctuating water supply, they can't tolerate being trampled underfoot or being driven on. It takes the passage of only one vehicle or a few people over a dune at the same time to kill off a strip of grass. Without this vegetation the dune is exposed to wind erosion resulting in blowouts or breaches in the dunes. These breaches not only create a weak spot in the dune but also create channels for floodwaters to move inland during storm

events leading to inland areas being more vulnerable during coastal storms. Whilst most paths are shallow and do not contribute significantly to the instability of the dunes, those leading at right angles from the beach inland to the back dune could encourage tidal rips during gales and or high spring tides.

Consideration should be given to closing off unnecessary paths which should be filled in with marram grass. Paths at right angles should be re-aligned so they track inland at an angle of 45 degrees to avoid a rip tide scouring out an area of the dunes. Old areas of bare sand should be re-planted with sea-lyme or marram grass sprigs.

Bonfires on the dunes and beach

Open fires on the dunes damage the flora and fauna which take a long time to recover. Once the vegetation is burned away it creates rutting, causing the dunes to collapse.

If your intention is to have a bonfire, it should be placed on the sand. Great care should be taken to extinguish bonfires properly before disposing of them. Also, any discarded cups, bottles or other party accoutrements should be removed from the beach and disposed of appropriately.

The placement of boats on the dunes.



A number of boats have been placed on the dunes. The physical presence of the boats reduces grass growth. Inappropriate placing of boats can lead to dune erosion.

Unused boats should be removed.

Construction work and trade vehicles



Vehicles supporting new builds or construction work are parking on the dunes. There is inappropriate storage of building materials.

Parking of vehicles on the dunes and storage of building materials should be avoided except where there is no reasonable alternative and be confined as close as possible to the houses and away from the sensitive parts of the dunes.



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