COASTAL DUNE MANAGEMENT METHODS / TECHNIQUES

HARD ENGINEERING

- Concrete walls, revetments, CBees, rock armour, cobble filled gabions, groynes and/or offshore breakwaters
- To prevent erosion of the dunes by wave action and limits blowout by wind action
- To protect the toe of the dunes and prevent undercutting
- To protect areas to the rear of the dunes; farming, industry, urban, recreation
- But may increase wave scour and prevent wind blown sand from reaching the dunes

ACCESS MANAGEMENT

- Special car parking zones to the rear
- Controlled access to the dune belt
- Fenced pathways / boardwalks to keep walkers off the fragile areas, especially the pioneer plants and embryo dunes
- Signposts
- Channelling of visitors
- Viewing platforms
- Barbed wire fences to keep animals off fragile areas
- Banning of some activities sun as camping, BMX etc.

PUBLIC AWARENESS

- May be prohibitive or educational
- Information boards to inform public and visitors about flora / fauna, species and habitats
- Signs to prohibit access or to direct access to certain routes
- Guided tours, talks, leaflets. NNR, LINCOLNSHIRE WILDLIFE TRUST

MORPHOLOGY MODIFICATION

1. FENCING
    - To slow down the wind, reduce wind energy and aid sedimentation
    - To keep walkers off the dunes to prevent misuse and trampling
    - To help rebuild blow-outs
    - Fences can be angled at 45 degrees to the wind and can be inexpensive eg brushwood
    - Porous fencing is best as it prevents scour
2. SEDIMENT MODIFICATION
    - Beach nourishment to build up beach levels
    - Beach nourishment provides sand for the wind to infill blow-outs
    - But dredged sand can have high salinity which affects vegetation
3. PLANTING VEGETATION
    - Particularly xerophytes such as Marram
    - This reduces the wind speed, causes sedimentation and holds the sand
    - Planting of conifers
4. OTHERS
    - Clear felling (deforestation)
    - Habitat creation (digging out dune slacks to produce wetlands)
    - Reactivation of blow-outs which begins the succession again