

## **Sand Dunes**

## a practical handbook

Compiled by Alan Brooks Revised by Elizabeth Agate

Illustrated by Anne Roper

DISCLAIMER: The information given in this publication on behalf of BTCV is believed to be correct, but accuracy is not guaranteed and the information does not obviate the need to make further enquiries as appropriate. This publication is not a comprehensive statement on all safety procedures and the reader must take all reasonable steps to ensure the health and safety of all users and to take all necessary steps to implement a health and safety policy. This publication is issued without responsibility on the part of BTCV for accidents or damage as a result of its use.

ISBN 0 946752 32 X

© BTCV 1979 - 2005

This publication may not be reproduced in any form without the prior permission of the publishers.

First Published July 1979 Revised November 1986 Appendix D revised April 1996; 1999 Revised Appendices November 2001 This impression with revised Appendices April 2005

Typeset by Katerprint Typesetting Services Ltd., Oxford Printed by Wrightsons Ltd., Northamptonshire, on recycled paper

Published by BTCV, Conservation Centre, Balby Road, Doncaster DN4 0RH Registered Charity 261009



## Contents

	Introduction		5
1	A Look at Sand Dunes	Formation and Distribution of Sand Dunes	7
-	An alternative particulation of	Accretion and Erosion	8
		Ecology	11
2	Management Planning	Threats and Opportunities	17
		Management Problems and Principles	20
		Principles of Dune Stabilisation	23
3	Coastlands and the Law	Ownership	27
		Rights of Usage	27
		Protected Species	28
		Wreck	28
4	Safety, Equipment and Organisation	Safety Precautions	29
		Clothing	30
		Tools and Equipment	31
		Tool and Equipment Maintenance	32
		Organising Group Work	33
5	Dune Profiling and Stabilisation	Wave Barriers	34
		Contouring	37
		Fencing	39
		Fencing Materials and Techniques	42
6	Access Management	Factors to Consider	51
		Car Parks	51
		Typical Access Problems	53
		Paths	54
		Boardwalks	57
		Fences and other Barriers	63
		Signposting	67
7	Vegetation Establishment	Transplanting Grasses	69
		Turfing Eroded Machairs	76
		Planting Shrubs	76
		Sowing	78
		Fertilising	79
		Thatching, Mulching and Binding	80
8	Vegetation Management	Factors to Consider	86
		Woodland Management	86
		Scrub Control	86
		Dune Grasslands Sea Buckthorn Control	87
		Sea Buckthorn Control	89
9	Dune Wildlife	Amphibians and Reptiles	94
		Invertebrates	96
		Birds	96
	ppendix A: Conservation and the Volunteer	r Worker	98
	ppendix B: Site Studies and Surveys		99
	ppendix C: The Coastal Code		100
	ppendix D: Contacts		101
	ibliography		104
	llossary		108
11	ndex		109

## Index

Access to shore, law on Access Management, general27Grazing Grey dunes88Sea buckthorn, transplanting Sea lowkthorn, control Sea levelsBinders Birds84High tensile fencing 9663Sea lyme grassBinders Blowouts, fencing of Blowouts, fencing of Blowouts, fencing Boardwalks74Introductions 9622Binders Blowouts, fencing of Blowouts, fencing Boardwalks75Site survey and analysis Site survey and analysis Siles Sea lowed family site88Boardwalks Box fencing Brushwood and wire fencing Brushwood and stake fencing Bulkdozers, for contouring76Soil water 'Soldiers'Car barriers Car parks66Murlough track60Synthetic materials, for fencing 'Straining posts44Car barriers Coast defences Duckboards71Natterjack toads94Tensar' 'Thatching Tides44Coast defences Contouring73Organising group work 'Tools73TidesDuckboards Duckboards59Organising group work 'Tools74TidesDuckboards Fencing, sand trap Fencing, sand trap <br< th=""><th>Y frame strainers</th><th>63</th><th>Grasslands, management</th><th>87</th><th>Scrub control</th><th>86</th></br<>	Y frame strainers	63	Grasslands, management	87	Scrub control	86
Access Management, general51Grey dunes14Sea buckhorn, control Sea levelsAfforestation171617Sea levelsBinders44Hindshore systems7Shooting, law of Shrubs, planting ofBirds9611Introductions22Site survey and analysisBoardwalks57Invertebrates96Sleeper walkwaysBoar fencing3434Sile survey and analysisBoar fencing34Machairs76SoilsBrushwood and wire fencing45Marram grass, sources of supply70Sodiers'Brushwood and stake fencing48Marram grass, planting73SowingBuildozers, for contouring38Mairam grass, planting73SowingBuildozers, for contouring38Natterjack toads94"Tensar."Car barriers66Murlough track60Synthetic materials, for fencingCarparks510Organising group work33TidesContouring30Organising group work33TidesContouring37Fatweb'50Tool maintenanceDuckboards59Polution, control ofVandalism, of fencingPouto fencing46Safety precautions, while working29View platforms70Solatorns70Duckboards59Polution, control ofVandalism, of fencingPoncing, sand trap79Safety precautions, while working9 <t< td=""><td></td><td>27</td><td></td><td></td><td></td><td>77</td></t<>		27				77
Afforestation17Sea levelsBindersHigh tensile fencing63Sea lyme grassBinders96Hindshore systems7Shooting, law of Shrubs, planting ofBinders961Introductions22Slate survey and analysisBoardwalks57Invertebrates96Slate survey and analysisBox strainer63Marnar grass70Slote survey and analysisBox strainer63Marram grass, sources of supply72Soldiers'Brushwood and stake fencing46Marram grass, sources of supply72SowingBulldozers, for contouring73Straining posts44Car barriers66Murlough track60Surfacing, for pathsCar parks51Surdacing, for pathsSurfacing, for pathsCar barriers66Murlough track60Surfacing, for fencingCar barriers60Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingContouring77Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingParaweb'50ToolsYardacing, of fencesPorosity, of fences79Safety precautions, while working79Fencing, sand trap79Safety precautions, while working70Pencing, sand trap79Safety precautions, while working71Fencing, sand trap79S					Sea buckthorn, control	89
BindersHigh tensile fencing63Sea lyme grassBinders96Hindshore systems7Shooting, law of Shrubs, planting of Shrubs, planting of Slite survey and analysisBoardwalks57Introductions22Site survey and analysisBoardwalks57Invertebrates96Site survey and analysisBoardwalks57Invertebrates96Site survey and analysisBoardwalks57Invertebrates96SoilsBox strainer63Marram grass, sources of survey and analysisSoilsBrushwood and wire fencing46Marram grass, sources of survey70Brushwood and stake fencing48Marram grass, planting73Bulkozers, for contouring38Mining, of foreshore Mulching19Straining posts44Car barriers66Murlough track60Synthetic materials, for fencing74Car bartiers66Murlough track61Synthetic materials, for fencing74Car bartiers66Murlough track62Surfacing, for paths54Car bartiers66Organising group work31Tides70Cliching30Organising group work31Tides70Coast defences27Ownership, of shore27Timber slat fencingCoast defences59Polution, control of Porosity, of fences70Vandalism, of fencingDuckboards59Polution, control of Porosity, of fences70<				0.0		8
Binders84Hindshore systems7Shooting, law of Shrubs, planting of Shrubs, planting of Shrubs, planting of Shrubs, planting of Shrubs, planting of Slite survey and analysis Slabwood fencing SoilsShooting, law of Shrubs, planting of Slite survey and analysis Slabwood fencing SoilsBordwalks57Invertebrates96Box strainer63Machairs76Brushwood and wire fencing Brushwood and stake fencing Bulldozers, for contouring46Marram grass, sources of supply Marram grass, planting Marram grass, planting Mulching72Buddozers, for contouring38Mining, of foreshore Mulching19Straining posts Surfacing, for paths Surfacing, for pathsCar barriers66Murlough track60Synthetic materials, for fencing ThatchingCarbarriers60Marram grass, ing of oreshore Mulching71Tensar, ThatchingClinfate11Organising group work33TidesClothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencing Tool maintenanceCurrent and wave action8Paraweb'50ToolsParaweb'50ToolsYear slate second Wave eorsion Wave eorsionWite dunesFencing, sand trap Fencing, sand trap9Safety precautions, while working Sand sedge9Wind action Wind regimeFencing, law of27Sand sedge71Wind actionFrat kitts	morootation		Wish tangile familie	00		69
Birds96Shrubs, planting ofBlowouts, fencing of41Introductions22Site survey and analysisBoardwalks57Invertebrates96Slabwood fencingBox fencing34Invertebrates96Slabwood fencingBox strainer63Machairs76SoilsBrushwood and wire fencing45Marram grass, sources of supply72SowingBrushwood and stake fencing46Marram grass, planting73SowingBulldozers, for contouring48Marram grass, planting73SowingBulldozers, for contouring48Marram grass, planting73SowingCar barriers66Murlough track60Surfacing, for pathsCar parks51Natterjack toads94'Tensar,'Clinate11Organising group work33TidesContouring37Ovmership, of shore27Timber slat fencingContouring37Ownership, of shore37TidesDuckboards59Pollution, control ofYandalism, of fencingDuckboards59Porosity, of fences39View platformsPrograding dune systems10Wave erosionWaymarkingPencing, sand trap39Safety precautions, while working29White dunesPencing, materials42Saltation9Wind regimeFishing, law of27Sand stabilisation, methods23Wind regimeProt slove dum	a: 1					27
Blowouts, fencing of41Introductions22Site survey and analysisBoardwalks57Invertebrates96Slabwood fencingBox fencing3496Sleeper walkwaysBox strainer63Machairs76SoilsBrushwood and wire fencing46Marram grass, sources of supply72SowingBrushwood and stake fencing46Marram grass, planting73Straining posts44Bulkdozers, for contouring38Mining, of foreshore19'Strawberry netting'44Car barriers66Murough track60Synthetic materials, for fencingSurfacing, for pathsCar barriers66Murough track60Synthetic materials, for fencingCarbarties5171ThatchingThreast os and dunesChestnut paling48Navigation, right of27ThatchingClimate11Threats to sand dunesTidesContouring30Organising group work33TidesContouring37Ownership, of shore27Timber slat fencingDuckboards59Pollution, control ofVandalism, of fencingVandalism, of fencingPorosity, of fences39View platformsWave barriersProcing, sand trap39Safety precautions, while working29White dunesPencing, sand trap79Sand steps61Wave barriersPencing, sand trap79Sand steps61Wave barriers			rindshore systems	1		
Boardwalks57Invertebrates22Slabwood fencing Sleeper walkwaysBox strainer63Machairs76Soil waterBox strainer63Marram grass70Soldiers'Brushwood and stake fencing46Marram grass, sources of supply72Soldiers'Brushwood and stake fencing46Marram grass, planting73Straining posts44Mulching82Surfacing, for pathsSurfacing, for paths54Car barriers66Murlough track60Synthetic materials, for fencing57Carrying capacity18Natterjack toads94'Tensar.'Cliniate11Thatching Threats to sand dunesTheats to sand dunesCothing30Organising group work33TidesContouring37Ownership, of shore27Timber slat fencing Tool maintenanceDuckboards59Paths, general54Porosity, of fences39View platformsDuckboards13Wave barriers'Vandalism, of fencingFencing, sand trap39Safety precautions, while working29White dunesFencing, materials42Saltation9Wind regimeFranking79Sand scelpe71Sand scelpe'Wind, of fencingFrankation79Sand scelpe71Wind cond'Wind regimeProting39Safety precautions, while working29White dunesFrankation71S						76
Box' fencing34Invertorizes96Sleeper walkways SoilsBox strainer63Machairs76SoilsBrushwood and wire fencing45Marram grass, sources of supply72SowingBrushwood and stake fencing46Marram grass, planting73Straining posts44Buldozers, for contouring48Marram grass, planting73Straining posts44Buldozers, for contouring48Marram grass, planting73Straining posts44Car barriers66Murlough track60Synthetic materials, for fencing44Car parks51Matterjack toads94'Tensar,'Carparks51Natterjack toads94'Tensar,'Climate11Natterjack toads94'Theast to sand dunesClinting60Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingContouring79Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Pollution, control ofVandalism, of fencingPrograding dune systems10Wave erosionWaymarkingFencing, materials42Saltation9Fencing, materials42Sand steps61Wine for fencing7Sand steps69Winte dunes7Sand steps61 <tr <td="">Wine for fencingFishi</tr>				22		21
Box strainer63 BrushwoodMachairs76 SoilsSoils Soil waterBrushwood and wire fencing Brushwood and stake fencing Bulldozers, for contouring45 Marram grass, sources of supply Marram grass, splanting72 SowingSowing Straining posts44 Marram grass, sources of supply To soliters'Bulldozers, for contouring48 Marram grass, planting73 Straining posts44 Strawberry netting' Surfacing, for pathsCar barriers66 Murlough track60Synthetic materials, for fencing '' Surfacing, for pathsCar parks511Surfacing, for pathsCarpying capacity18 Navigation, right of27 Thatching Threats to sand dunesClimate11 Contouring0 Organising group work33 TidesContouring30 Organising group work33 TidesTidesCurrent and wave action6 Paraweb' Potosity, of fences70 Surfacing dune systemsYeandalism, of fencing View platformsEcological succession, of dunes 'Enkamat'13 Prograding dune systems10 Wave erosion WaymarkingWave erosion WaymarkingFencing, sand trap Fencing, materials79 Sand stabilisation, methods29 Sand stabilisation, methods90 Sand stabilisation, methods90 Sand stabilisation, methods90 Sand stabilisation, methods			Invertebrates	96		49
Dot StrainingOSMachairs76Soil waterBrushwood and wire fencing46Marram grass, sources of supply72SowingBrushwood and stake fencing48Marram grass, planting73Straining posts44Bulldozers, for contouring38Mining, of foreshore19'Strawberry netting'44Bulldozers, for contouring38Mulching82Surfacing, for paths44Car barriers66Murlough track60Synthetic materials, for fencing 'Car parks51Carrying capacity18Natterjack toads94'Tensar,'Chestnut paling48Navigation, right of27ThatchingThatchingClothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingCurrent and wave action8'Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Porosity, of fences39View platformsPrograding dune systems10Trograding dune systems10Fencing, materials42Salt sege71Wind actionFencing, materials42Salt sege71Wind actionFirst aid kits31Sand sedge71Wine, for fencingFirst aid kits31Sand sedge71Wine, for fencingFirst and kits31Sand sedge71Wine, for fencing		-				57
Brushwood45Marram grass5011 WaterBrushwood and vire fencing46Marram grass, sources of supply72SowingBrushwood and stake fencing48Marram grass, planting73Straining posts44Bulldozers, for contouring38Mining, of foreshore19'Strawberry netting'44Bulldozers, for contouring38Mining, of foreshore19'Strawberry netting'44Car barriers66Murlough track60Surfacing, for pathsSurfacing, for pathsCar parks51Carrying capacity18Natterjack toads94'Tensar.'Climate11Clothing30Organising group work33TidesContouring30Organising group work33TidesToolsCurrent and wave action8'Paraweb'50ToolsToolsPutckboards59Pollution, control ofVandalism, of fencingView platformsDuckboards59Porosity, of fences39View platformsPrograding dune systems10'Wave erosionWave erosionFencing, materials42Salation9Wind actionFencing, materials42Salation9Wind eregimeFishing, law of27Sand stegge71Wice for fencingFishing, law of77Sand stabilisation, methods23'Wyretex'		63	Machaire	76		13
Brushwood and wire tencing46Marram grass, sources of supply72SourcesBrushwood and stake fencing48Marram grass, planting73Straining posts44Bulldozers, for contouring38Marram grass, planting73Straining posts44Bulldozers, for contouring38Marram grass, planting73Straining posts44Car barriers66Murlough track60Surfacing, for pathsSurfacing, for pathsCarrying capacity18Natterjack toads94Tensar/Chestnut paling48Navigation, right of27ThatchingClimate11Organising group work33TidesContouring30Organising group work33TidesContouring37Ownership, of shore27Timber slat fencingCurrent and wave action8'Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards13Porsering dune systems10Ecological succession, of dunes13Wave barriers'Enkamat'49Safety precautions, while working29Fencing, sand trap39Safety precautions, while working29First aid kits31Sand sedge71Wind action9Sand sudges71First aid kits31Sand sedge71Wiret fencing49Sand sudges71Wiret fencing75Sand ladders<		45		- C. T.		12
Buildozers, for contouring46Marram grass, planting73Straining posts44Buildozers, for contouring38Mining, of foreshore19'Strawberry netting'54Gar barriers66Murlough track60Surfacing, for pathsSurfacing, for pathsCar parks5151Straining posts44Chestnut paling48Natterjack toads94'Tensaz'Climate11Natterjack toads94'Tensaz'Clothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingCurrent and wave action8'Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Pollution, control ofView platformsPrograding dune systems10'Yave erosionEcological succession, of dunes13'Wave barriers''Enkamat'49Safety precautions, while working29Fencing, sand trap39Safety precautions, while working29First aid kits31Sand sedge71Wind action51Sand sedge71First aid kits31Sand sedge71Woodland management'Yyretex''Wyretex'	Brushwood and wire fencing	46				37
Bulldozers, for contouring38Mining, of foreshore Mulching, of foreshore19Straining posts44Gar barriers66Murlough track60Surfacing, for pathsCar parks5151Surfacing, for pathsCarrying capacity18Natterjack toads94'Tensar,'Chestnut paling48Navigation, right of27ThatchingClimate11ThatchingThatchingClothing30Organising group work33TidesCoast defences27Organising group work33TidesContouring37Ownership, of shore27Timber slat fencing Tool maintenanceDuckboards59Paths, general54Duckboards59Pollution, control of Porosity, of fencesVandalism, of fencing Wave erosionEcological succession, of dunes13Wave barriers'Enkamat'49Safety precautions, while working Saft zition9Fencing, sand trap Fencing, materials79Sand couchgrass69First aid kits31Sand sedge71First aid kits31Sand sedge71Firsthing, law of27Sand sadelers62Firsthy, law of27Sand sadelers62Firsthy, colland management75Sand stabilisation, methods23	Brushwood and stake fencing	48	Marram grass, sources of supply		Sowing	78
Car barriers66Murloy, or breshore19'Strawberry netting' Surfacing, for pathsCar parks51Surfacing, for pathsSurfacing, for pathsCarrying capacity18Natterjack toads94'Tensar'Chestnut paling48Navigation, right of27ThatchingCliniate11Threats to sand dunesThreats to sand dunesClothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingCurrent and wave action8'Paraweb'50ToolsDuckboards59Paths, general54Vandalism, of fencingDuckboards59Porosity, of fences39View platformsEcological succession, of dunes13Wave barriers10Fencing, sand trap39Safety precautions, while working29White dunesFencing, materials42Saltation9Wind actionFirst aid kits31Sand sedge71Wire, for fencingFirst aid kits31Sand sedge71Wire, for fencingFirsthing, law of27Sand stabilisation, methods23'Wyretex'	Julldozers, for contouring		Marrain grass, planting		Straining posts 4	4,63
Car barriers66Murlough track82Surfacing, for paths Synthetic materials, for fencingCar parks5160Surfacing, for paths Synthetic materials, for fencingCarrying capacity18Natterjack toads94Chestnut paling48Navigation, right of27Climate11Thatching Threats to sand dunesClothing30Organising group work33Coast defences27Ownership, of shore27Current and wave action8Paraweb'50Duckboards59Pollution, control of Pollution, control of Prograding dune systemsVandalism, of fencingEcological succession, of dunes13Wave barriers'Enkamat'49Safety precautions, while working Safety precautions, while working Fencing, materials9Safety sources69Wind action Wind action Wind actionFencing, and trap Fencing, materials9Safety precautions, while working Sand couchgrass9Finst aid kits31Sand sedge71Finst aid kits31Sand sedge71Finshing, law of27Sand steplication, methods23Finshing, law of27Sand stabilisation, methods23					'Strawberry netting'	49
Car parks56Multioligh track60Synthetic materials, for fencingCarrying capacity18Natterjack toads94'Tensar,'Chestnut paling48Navigation, right of27ThatchingClimate11Threats to sand dunesThreats to sand dunesClothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingCurrent and wave action8'Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Pollution, control ofVandalism, of fencingDuckboards13Porosity, of fences39View platformsEcological succession, of dunes13Wave erosionWaymarkingFencing, sand trap39Safety precautions, while working29White dunesFencing, materials42Saltation9Wind actionFirst aid kits31Sand sedge71Wine, for fencingFints dik kits31Sand sedge71Wine, for fencingFishing, law of27Sand stabilisation, methods23Woodland management						55
Carrying capacity51Natterjack toads94'Tensar.'Chestnut paling48Navigation, right of27ThatchingClimate11Threats to sand dunesClothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingContouring37Ownership, of shore27Timber slat fencingCurrent and wave action8'Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Pollution, control ofVandalism, of fencingDuck fencing46Porosity, of fences39View platformsEcological succession, of dunes13Wave erosionWaymarkingFencing, sand trap39Safety precautions, while working29White dunesFencing, materials29Sand couchgrass61Wine, for fencingFishing, law of27Sand sedge71Wine, for fencingFishing, law of27Sand stabilisation, methods23'Wyretex'			Murlough track	60		
Chestnut paling48Navigation, right of51Tensar, ThatchingClimate1111ThatchingThatchingClothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingContouring37Ownership, of shore27Timber slat fencingCurrent and wave action8'Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Porosity, of fences39Prograding dune systems10Wave barriersEcological succession, of dunes13Wave erosion Waymarking'Enkamat'49Ramps and steps61Fencing, sand trap39Safety precautions, while working29Fencing, materials42Salation9First aid kits31Sand sedge71Fishing, law of27Sand sedge71Fishing, law of27Sand stabilisation, methods23					eynamer merenner er renning	
Chestnut paling48Navigation, right of27ThatchingClimate1111ThatchingClothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingCurrent and wave action8Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Porosity, of fences39Duckboards13Wave barriers10Ecological succession, of dunes13Wave erosion'Enkamat'49Ramps and steps61Fencing, sand trap39Safety precautions, while working29Fencing, materials42Saltation9First aid kits31Sand sedge71Fishing, law of27Sand stabilisation, methods23Frontshore dune systems7Sand stabilisation, methods23		18	Natterjack toads	94	Tonear'	=0
Climate11Threats to sand dunesClothing30Organising group work33TidesContouring37Ownership, of shore27Timber slat fencingCurrent and wave action8'Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Porosity, of fences39Duckboards13Prograding dune systems10Ecological succession, of dunes13Wave barriers'Enkamat'49Ramps and steps61Fencing, materials42Safety precautions, while working29Fencing, materials42Saltation9First aid kits31Sand sedge71Fishing, law of27Sand sadge71Frontshore dune systems7Sand stabilisation, methods23		48				50
Clothing30Organising group work33TidesCoast defences27Ownership, of shore27Timber slat fencingContouring37Tool maintenanceCurrent and wave action**50ToolsDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Pollution, control ofVandalism, of fencingDuckboards59Porosity, of fences39View platformsEcological succession, of dunes13Wave barriers'Enkamat'49Ramps and steps61Wave erosionFencing, sand trap39Safety precautions, while working29White dunesFencing, materials42Saltation9Wind actionFirst aid kits31Sand sedge71Wioodland managementFishing, law of27Sand stabilisation, methods23Woodland management	Climate	11				81
Coast defences27 ContouringOwnership, of shore27 Timber slat fencing Tool maintenanceCurrent and wave action8 'Paraweb'50 Paths, generalToolsDuckboards59 Pollution, control of Porosity, of fences54 Pollution, control of Porosity, of fencesVandalism, of fencingEcological succession, of dunes 'Enkamat'13 Pamps and steps10Wave barriersFencing, sand trap Fencing, materials39 Safety precautions, while working Saltation29 Wind actionWaid action Wind regimeFirst aid kits31 Sand sedge51 Sand sedgeWine, for fencing Wine, for fencing Wine, for fencing Wine, for fencing13 Wine, for fencing Wine, for fencing Wine, for fencing Wine, for fencing Wine, for fencingFishing, law of Frontshore dune systems27 Sand stabilisation, methods23 Wyretex'Woodland management 'Wyretex'	Clothing	30	Organizing group work	20		17
Contouring37Ownership, of shore27Timber stat fencing Tool maintenanceCurrent and wave action8'Paraweb'50ToolsDuckboards59Pollution, control ofVandalism, of fencingDutch fencing46Porosity, of fences39View platformsEcological succession, of dunes13Wave barriers'Enkamat'49Ramps and steps61Wave erosionFencing, sand trap39Safety precautions, while working29White dunesFencing, materials42Saltation9Wind actionFirst aid kits31Sand couchgrass69Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23''Wyretex'	Coast defences	27				12
Current and wave action8'Paraweb'50Tool maintenanceDuckboards59Paths, general54ToolsDutch fencing46Porosity, of fences39View platformsDutch fencing46Porosity, of fences39View platformsEcological succession, of dunes13Wave barriers'Enkamat'49Ramps and steps61Wave erosionFencing, sand trap39Safety precautions, while working29White dunesFertilising79Sand couchgrass69Wind actionFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand stabilisation, methods23Woodland management	Contouring		Ownersnip, of shore	27		49
Paraweb'50ToolsPuckboards59Pollution, control ofVandalism, of fencingDutch fencing46Porosity, of fences39View platformsEcological succession, of dunes13Wave barriers10Ecological succession, of dunes13Wave erosionWaymarking'Enkamat'49Ramps and steps61Wave erosionFencing, sand trap39Safety precautions, while working29White dunesFertilising79Sand couchgrass69Wind actionFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23Wyretex'					the second se	32
Duckboards59Pollution, control of Porosity, of fences Prograding dune systemsVandalism, of fencing View platformsEcological succession, of dunes13Wave barriers'Enkamat'49Ramps and steps61Wave erosion WaymarkingFencing, sand trap Fencing, materials39Safety precautions, while working Saltation29White dunes Wind actionFertilising79Sand couchgrass69Wind regimeFirst aid kits31Sand sedge71Wire, for fencing Wind anagementFishing, law of27Sand ladders62Woodland management 'Wyretex'		~		50	Tools	31
Dutch fencing46Pointition, control ofVandalism, of rencingDutch fencing46Porosity, of fences39View platformsPrograding dune systems1010Wave barriersEcological succession, of dunes13Wave erosion'Enkamat'49Ramps and steps61Wave erosionFencing, sand trap39Safety precautions, while working29White dunesFencing, materials42Saltation9Wind actionFertilising79Sand couchgrass69Wind regimeFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23	Durkhanda	-	Paths, general	54		
Forosity, of fences39View platorinsPrograding dune systems10Ecological succession, of dunes13Wave barriers'Enkamat'49Ramps and steps61Wave erosion WaymarkingFencing, sand trap39Safety precautions, while working Saltation29White dunes Wind actionFencing, materials42Saltation9Wind action Wind actionFertilising79Sand couchgrass69Wind regime Wire, for fencingFishing, law of27Sand sedge71Wire, for fencing Woodland management 'Wyretex'Frontshore dune systems7Sand stabilisation, methods23			Pollution, control of			43
Prograding dune systems10Ecological succession, of dunes13Wave barriers'Enkamat'49Ramps and steps61Wave erosion WaymarkingFencing, sand trap39Safety precautions, while working Saltation29White dunes Wind actionFencing, materials42Saltation9Wind regimeFirst aid kits31Sand sedge71Wire, for fencing Wire, for fencingFishing, law of27Sand ladders62Woodland management 'Wyretex'	Jutch fencing	46	Porosity, of fences	39	View platforms	63
Ecological succession, of dunes13Wave barriers'Enkamat'49Ramps and steps61Wave erosion WaymarkingFencing, sand trap39Safety precautions, while working Saltation29White dunes Wind actionFencing, materials42Saltation9Wind regimeFertilising79Sand couchgrass69Wind regimeFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23'Wyretex'			Prograding dune systems	10		
Fencing, sand trap39Safety precautions, while working29White dunesFencing, materials42Saltation9White dunesFertilising79Sand couchgrass69Wind actionFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23		13			Wave barriers	34
Fencing, sand trap39Safety precautions, while working29WaymarkingFencing, materials42Saltation9Wind actionFertilising79Sand couchgrass69Wind regimeFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23	Enkamat'	49	Ramps and stone	61	Wave erosion	19
Fencing, sand trap39Safety precautions, while working29White dunesFencing, materials42Saltation9Wind actionFertilising79Sand couchgrass69Wind regimeFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23			Namps and steps	01		67
Fencing, materials42Sallety precations, while working 29Wind actionFertilising79Sand couchgrass69Wind regimeFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23	Panalag and then	20		1.1		14
Fertilising79Sand couchgrass69Wind regimeFirst aid kits31Sand sedge71Wire, for fencingFishing, law of27Sand ladders62Woodland managementFrontshore dune systems7Sand stabilisation, methods23				29	the prove state of the prove state (	9
First aid kits 31 Sand sedge 71 Wire, for fencing   Fishing, law of 27 Sand ladders 62 Woodland management   Frontshore dune systems 7 Sand stabilisation, methods 23 'Wyretex'						9
Fishing, law of 27 Sand ladders 71 Woodland management   Frontshore dune systems 7 Sand stabilisation, methods 62 'Wyretex'			Sand couchgrass	69		
Frontshore dune systems 7 Sand stabilisation, methods 23 'Wyretex'			Datio Seale	71		44
Sand Stabilisation, methods 25				62		86
	Frontshore dune systems	7	Sand stabilisation, methods		wyretex	49
Sand supply 7			Sand supply	7		
Gabions 36 Sand trap fences 39 Yellow dunes	Gabions	36			Yellow dunes	14
Golf courses 18 Sand trap fences, positioning of 40	Golf courses		Sand trap fences, positioning of			
Grasses, transplanting 69 Sand lizard 95 Zonal use of dunes			Sand lizard		Zonal use of dunes	18