

SHERINGHAM TO LOWESTOFT (1996)

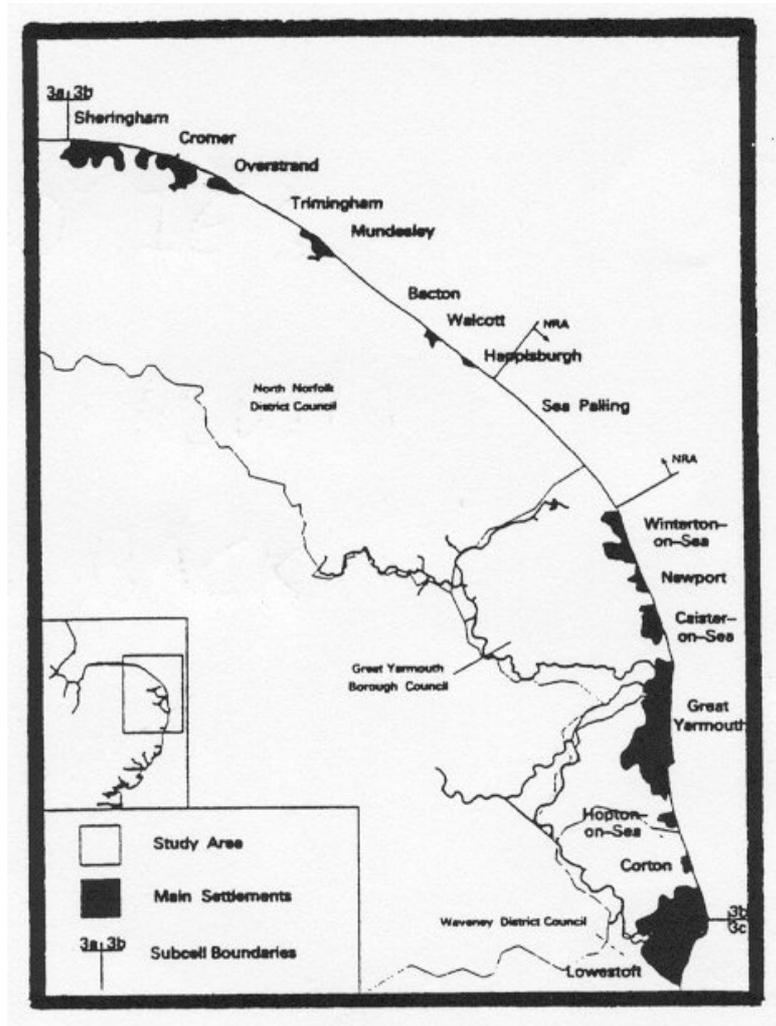
SHORELINE MANAGEMENT PLAN

SUBCELL 3B

PHASE 2

THE SHORELINE MANAGEMENT PLAN

EXECUTIVE SUMMARY



North Norfolk District Council

Waveney District Council

Great Yarmouth Borough Council

National Rivers Authority

HALCROW

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INTRODUCTION

A previous study of the coastlines of England and Wales, for the Ministry of Agriculture, Fisheries and Food (MAFF)¹, established that coastal sediment movements occur within distinct boundaries, or cells, which are rarely coincident with administrative boundaries. Piecemeal coast protection schemes may not always be compatible with coastline needs elsewhere within the same sediment cell. Recognising this fact, the above operating authorities in Norfolk and Suffolk decided to produce a Shoreline Management Plan wherein all the conflicting needs and constraints are identified and considered.

The shoreline between Sheringham and Lowestoft is managed for coastal protection by the administrative authorities of North Norfolk District Council, Great Yarmouth Borough Council and Waveney District Council, and by the Environment Agency – formerly known as the National Rivers Authority (NRA) – for flood defence. These operating authorities jointly appointed Sir William Halcrow and Partners Limited to produce a Shoreline Management Plan for this coastline, which forms sub-cell 3b, in accordance with the guidelines produced for coastal defence authorities by MAFF, published in 1995.

THE SHORELINE MANAGEMENT PLAN

A Shoreline Management Plan by definition is “a document which sets out a strategy for coastal defence for a specified length of coast taking account of natural coastal processes and human and other environmental influences and needs” (MAFF Guidance Note 1995). The aim is to provide the basis for sustainable coastal defence policies within the sediment sub-cell and set objectives for the future management of the shoreline. In the context of sub-cell 3b, the Shoreline Management Plan will represent the most detailed document to date of coastal information relating to the shoreline between Sheringham and Lowestoft.

However, it is also important that this first issue of the Shoreline Management Plan is recognised for what it is, which is the foundation for shoreline management planning. It is not the definitive solution. It is based upon the information that is available now and will need to evolve as future studies, such as those identified by this study, are undertaken to fill the gaps in existing knowledge. An important aspect of this first issue of the Shoreline Management Plan is the identification of areas of uncertainty, to enable the prioritisation of future studies and monitoring. In this respect, the aims of a Shoreline Management Plan as defined in the MAFF Guidance should be reiterated, that is “...to provide the basis for sustainable coastal defence policies....”.

The Shoreline Management Plan contains the coastal defence strategy that will be adopted at the present time. However, it is a ‘live’ working document and must be capable of change to enable new information to be incorporated. Such change may arise through new planning requirements, a change in environmental factors, or from improved understanding of the natural processes influencing the evolution of the coast.

¹ Succeeded by the Department of Environment, Food and Rural Affairs (Defra).

OBJECTIVES

The MAFF definition of the aim of a Shoreline Management Plan is “to provide the basis for sustainable coastal defence policies within a sediment cell and to set objectives for the future management of the shoreline”. The main objectives of completed Shoreline Management Plans, as defined in the MAFF guidance, are to:

- assess a range of strategic coastal defence options and agree a preferred approach;
- outline future requirements for monitoring, management of data and research related to the shoreline;
- inform the statutory planning process and related coastal zone planning;
- identify opportunities for maintaining and enhancing the natural coastal environment, taking account of any specific targets set by legislation or by locally set targets;
- set out arrangements for continued consultation with interested parties.

Notwithstanding these requirements, the following objectives and principles were identified as needing to be addressed during the development of the Shoreline Management Plan for Sheringham and Lowestoft:

- assessment of how the shoreline, with the boundaries of the sub-cell, is behaving and how it may behave in the future, predicting the evolution of the coastline and the assets likely to be placed at risk;
- management of the sub-cell to be facilitated through the concept of Management Units, these being sub-divisions of the coastal frontage which exhibit coherent characteristics;
- the establishment of broad policies reflecting the natural coastal processes, human and environmental influences and needs;
- embodiment of environmental and conservation issues;
- incorporation of the various socio-economic needs and aspirations of the human environment;
- attempt to reconcile conflicting needs so that the Shoreline Management Plan consists of a set of shared objectives;
- develop a heightened public awareness of the overall behaviour of the coast and the influences they and others have on it;
- facilitate liaison between operating authorities in this and neighbouring cells;

- facilitate production of works programmes;
- produce a document which, in both its physical form and in the ideas it presents, is capable of amendment and improvement as changing circumstances and awareness dictate.

STRATEGIC COASTAL DEFENCE OPTIONS

One of the main objectives of the SMP is to assess a range of strategic coastal defence options and determine a preferred approach for each Management Unit. Each option needs to be considered in relation to its impacts, both positive and negative, upon the various factors which are influenced by, or influential upon, the condition of the coastline.

Each strategic coastal defence option has initially been reviewed on the basis of its compatibility with natural processes, the implications for the human environment, natural environmental acceptability, technical sustainability, economic viability and its wider impacts within each Management Area.

There are four generic strategic coastal defence options which are identified by MAFF and have been considered for each management unit. To ensure consistency with other SMPs being produced within the Anglian Region, a series of definitions have been agreed upon by the Anglian Coastal Authorities Group (ACAG) in agreement with the MAFF Regional Engineers. These are as follows:

- (i) Do-nothing – “carry out no coastal defence activity except for safety measures”,
- (ii) Hold the existing line – “By intervention, hold the existing defence where it is”,
- (iii) Advance the existing line – “By intervention to move the existing defence seaward”;
- (iv) Retreat the existing line – “By intervention to move the existing defence landward”, also referred to as Managed Retreat.

THE MANAGEMENT STUDY

Section 2 of this document contains the developed strategy for the management of the sub-cell 3b shoreline. This assessment and development of the management strategy for each of the Management Areas and Management Units has been carried out in a number of stages. The strategies which are selected for each of these Units combine to form the Shoreline Management Plan for this sub-cell.

The framework adopted for developing the strategy was such that the selection of a strategic defence option for the smaller scale Management Unit took into account the wider physical hydrodynamics operating on a regional scale, along with overall objectives which are pertinent to the Area. This avoids the piecemeal approach to problem solving in the coastal zone which is one of the aims of shoreline management planning.

Management Area Statements

A series of Management Area Statements for this sub-cell have been produced. These provide a summary of the coastal processes, the key strategic issues and objectives for the Area, and the defence strategy resulting from the assessment of the individual Management Units to meet both the objectives and natural process needs.

Maps

Summary maps accompanying the Management Area Statements identify the location of each individual Management Unit and the preferred strategy.

DEVELOPMENT OF THE SHORELINE MANAGEMENT PLAN

Phase 1 of the Shoreline Management Plan development was the collation of existing information and the undertaking of studies to produce an assessment of the present situation, identifying the various needs and conflicts of interests. Having completed this phase it was important that the findings were summarised for individuals and organisations to comment upon prior to the development of management policies for the shoreline. The results of the first phase, completed in May 1995, are contained in two volumes.

Volume 1 is an interpretative summary of the main issues for this shoreline and the objectives for sustaining and enhancing the present levels of interest. This volume also contains details of the division of sub-cell 3b into Management Areas and Management Units. Volume 2 contains all of the individual studies and reports undertaken for this SMP. These appraise in greater detail the present condition of the shoreline and the coastal zone together with the various issues. This provides detailed appendices to the Shoreline Management Plan, containing the background data and references used in its development.

In phase 2 the final Shoreline Management Plan Strategy Document has been developed from the phase 1 studies, formalising the division of the shoreline into appropriate Management Units and establishing strategies for each. This was also issued for consultation and finalised in May 1996.

MANAGEMENT FRAMEWORK

A framework of Management Areas and Management Units has been established to enable sustainable shoreline management and coastal defence strategies to be established for the future.

Management Areas

A Management Area represents a section of coastline that possesses coherent characteristics in terms of natural coastal processes which are sufficiently independent of adjacent stretches of shoreline. Parameters such as wind, waves and tidal currents have been analysed along with geological and littoral features to establish those areas which are essentially process based divisions.

The key to achieving effective management of the shoreline is the knowledge of the processes and their interaction along the coast. All management decisions should be linked to the processes and the implications for defence assessed in relation to these. The defence options determined for each Management Unit must therefore be appraised against the overall processes within any Management Area.

Management Units

The purpose of further subdivision of the process units into smaller components is to identify and develop the different defence options which will enable the main objectives to be met, whilst being in accordance with the overall natural process requirements for the Management Area. Management Units provide a practical way for the operating authorities to implement the coastal defence strategy since it is not possible to consider the whole coastline at once.

Definition of a Management Unit from the MAFF Guidelines is “a length of shoreline with coherent characteristics in terms of coastal processes and land use”. As coastal processes and land use vary along the coast, there are a number of Management Units within the area covered by the Shoreline Management Plan. Consistent land use or type along a stretch of shoreline within a Management Area has been the basis for the division into Management Units within this sub-cell.

THE FUTURE

There is still much to be done to implement the strategies put forward and to maintain the Shoreline Management Plan. Constant review and updating on the Plan and the information contained therein is essential for effective and sustainable shoreline management in the future.

Monitoring

Monitoring of the coastline and the natural processes influencing it is fundamental to future understanding and hence planning the management of the shoreline. Traditionally monitoring has been carried out on an ad-hoc basis in many areas without a structured monitoring strategy in place. However, in the past decade the need for monitoring programmes has been recognised and these are gradually being implemented where funding allows. The issue of funding monitoring is an important one. The relatively small costs of undertaking monitoring can be offset in the long term, allowing better informed decisions on coastal defence to be made and enable more cost effective design of appropriate defence works.

Further Studies

An important aspect of the SMP development is the identification of gaps in knowledge and the research studies or data acquisition that should be carried out to enable better informed decision making in the future. Those areas that need to be considered at the present time are detailed below. It should be noted that these are requirements for the whole sub-cell and need to be supplemented by the undertaking of location specific studies to appraise schemes.

It will also be necessary to recognise the need to conduct appropriate studies when developing the outline concepts during the implementation phases, ensuring that the local processes are fully understood as well as the broader ones. The monitoring to be undertaken will be of great significance in enabling this.

Implementation

The next phase of the shoreline management procedure is the implementation of the strategies presented in the Shoreline Management Plan. Outline guidance on how the preferred generic coastal defence options should be implemented are presented in each of the Management Unit statements. Subsequent phases should take this guidance further, developing outline concepts for the nature of works to be undertaken, producing broad cost estimates for them and establishing a programme of both capital and maintenance works.

Whilst these phases will be conducted separately by each Authority, it will be important to liaise on the implementation programme. It is recommended that the Authorities meet on a regular basis after completion of the SMP to maintain the flow of information between them. This will help to avoid operations which may be to the detriment of others in the shorter term, optimise the use of resources, and increase awareness of others' operations. This could lead to overall benefits and result in lower cost defences in the future.

UPDATING THE SHORELINE MANAGEMENT PLAN

As stated previously, this Shoreline Management Plan contains the coastal defence strategy that will be implemented at the present time. However, as a 'live' document new information must be incorporated and the need to amend the current strategy reviewed accordingly in the future.

Whilst there may be a continuous flow of new information, it would be inappropriate to have a continuous review and change to the strategy. The approach therefore must be one by which the new information can be incorporated and the implications of this upon the present strategy assessed, but with any change to the strategy subject to periodic review. Notwithstanding this, the format of this SMP is such that if circumstances dictate, a review to enable a strategic change in defence policy could be implemented at any time.

Ultimately the responsibility for updating and reviewing the Shoreline Management Plan liaise with the Authorities involved and close cooperation is necessary, with new information being shared.

Finally, there has been public consultation throughout the development of this SMP to develop awareness and elicit interaction. This consultation should be continued and the SMP used as a vehicle to inform and facilitate public involvement in coastal defence issues in the future.

SECTION 2 – THE MANAGEMENT STUDY

MANAGEMENT AREA 1: “RUN” – SHERINGHAM TO CROMER

MANAGEMENT AREA 2: “TRI” – CROMER TO MUNDESLEY

MANAGEMENT AREA 3: “BAC” – MUNDESLEY TO WALCOTT

MANAGEMENT AREA 4: “SEA” – WALCOTT TO WINTERTON NESS

MANAGEMENT AREA 5: “WIN” – WINTERTON NESS TO HEMSBY

MANAGEMENT AREA 6: “CAI” – HEMSBY TO GREAT YARMOUTH

MANAGEMENT AREA 7: “GYA” – GREAT YARMOUTH TO GORLESTON

MANAGEMENT AREA 8: “COR” – GORLESTON TO LOWESTOFT

MANAGEMENT AREA STATEMENT

MANAGEMENT AREA 1 “RUN” – SHERINGHAM TO CROMER

Processes

This coast faces northwards with wave exposure which is distinctly high and predominantly onshore-offshore. The large cobbles found on the beaches in this area and the exposed chalk wave-cut platform are unique along this coastline. The general trend here is of erosion.

Key Strategic Issues

The towns of Sheringham and Cromer at either end of the unit are developed up to the present coastline position. These are both important local centres for residents, commerce and tourism and the general strategy for this area is to seek to protect these areas. The area between these two urban centres has lower density development which is generally set back further from the cliff line, with caravan parks located along the cliff tops. The steady erosion of these cliffs provides a source of sediment for beaches within this sub-cell, particularly those in the Management Area. Many areas of the cliffs are designated conservation sites due mainly to their geological exposures and the strategy seeks to maintain these interests.

Management Units

This Management Area has been sub-divided into three Management Units as follows:

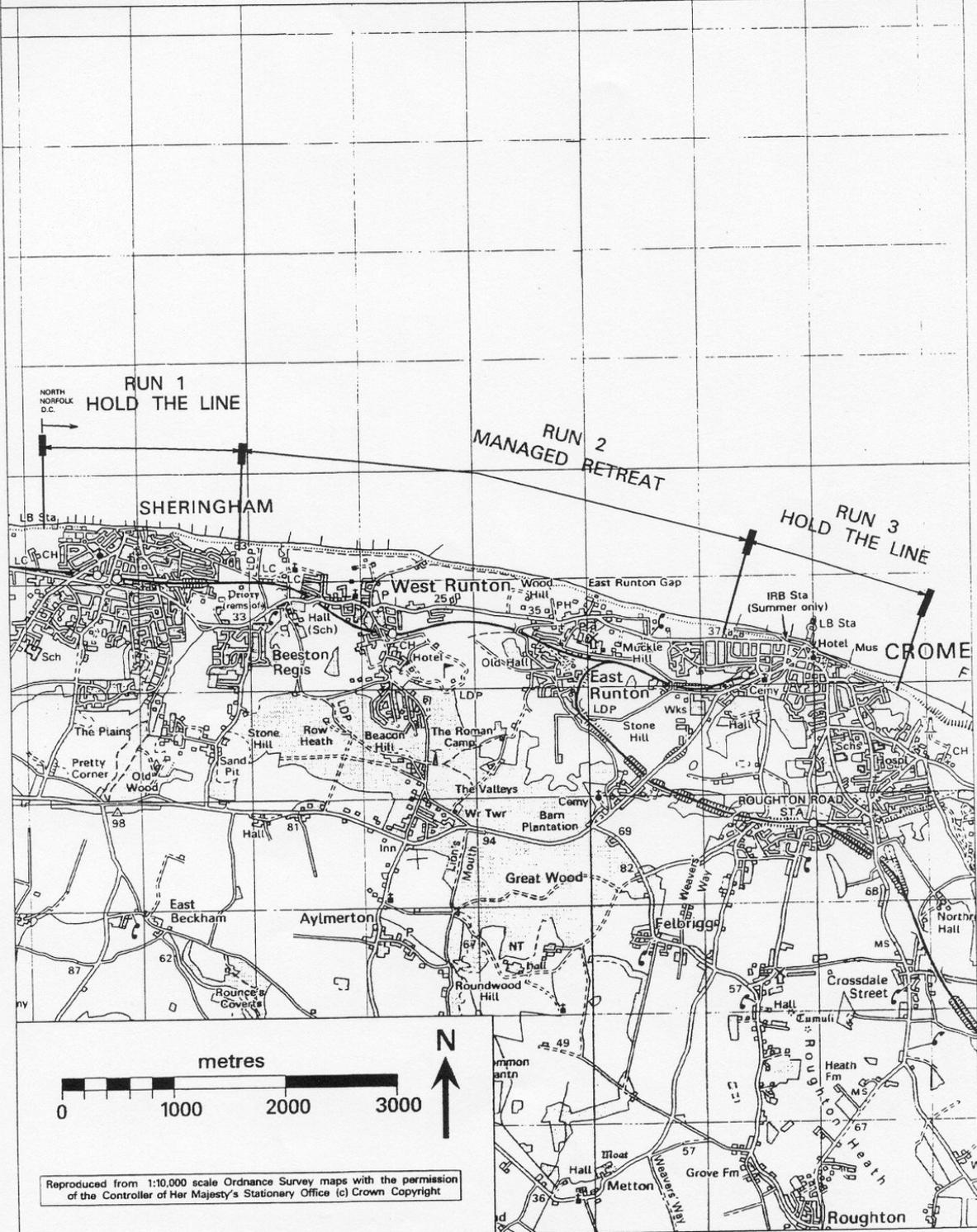
- RUN 1 - Sheringham Lifeboat Station to Beeston Regis Hills
- RUN 2 - Beeston Regis Hill to Cromer, Bernard Road
- RUN 3 - Cromer, Bernard Road to Cromer Coastguard Lookout

Developed Strategy

The resultant defence strategy developed for this Management Area is as follows:

- RUN 1: HOLD THE EXISTING LINE
- RUN 2: MANAGED RETREAT OF THE EXISTING LINE
- RUN 3: HOLD THE EXISTING LINE

SHERINGHAM TO LOWESTOFT SHORELINE MANAGEMENT PLAN SUB-CELL 3B



Management Area 1 Strategy Map
"RUN" Sheringham to Cromer

MANAGEMENT AREA STATEMENT

MANAGEMENT AREA 2 “TRI” – CROMER TO MUNDESLEY

Processes

The high level cliffs which dominate this stretch are important here. These are prone to large rotational slumping. The change in coastal curvature at Cromer results in an increase in longshore currents, although these remain predominantly offshore. Onshore-offshore energy still dominates this coastline, although exposure to more easterly waves is a feature of this stretch of coast and, whilst net longshore energy is low, the potential for sediment movement is variable, i.e. both northwards and southwards, but with a net southerly drift. The foreshore here is steepening and is very narrow, with little or not backshore area in front of the cliffs. Erosion of the cliffs of up to 2 metres/year is experienced over most of this length although this diminishes rapidly towards Mundesley. The nature of this retreat is not linear and tends to occur as discrete failures of many metres at irregular intervals.

Key Strategic Issues

The villages of Overstrand and Mundesley are developed up to the cliff edge, the latter also being popular with tourists. Continued protection of these areas is a priority. The village of Trimingham is set slightly further back but the coastal road also becomes closer to the cliffs here which are high and historically prone to major failures. The strategy seeks to stabilise the coastline here. Notwithstanding the need to defend particular areas, the cliffs are an essential and probably the most substantial source of sediment to the sub-cell beaches and their continued erosion is vital. These cliffs are also some of the most important sites for geological exposures in the country and the high level of environmental interest in these must be recognised. The undeveloped areas are a mixture of agricultural land, caravan parks and a golf course. The strategy for this area is to allow the erosion of these areas to continue unabated maintaining a natural balance with those areas where defence of the existing line is necessary.

Management Units

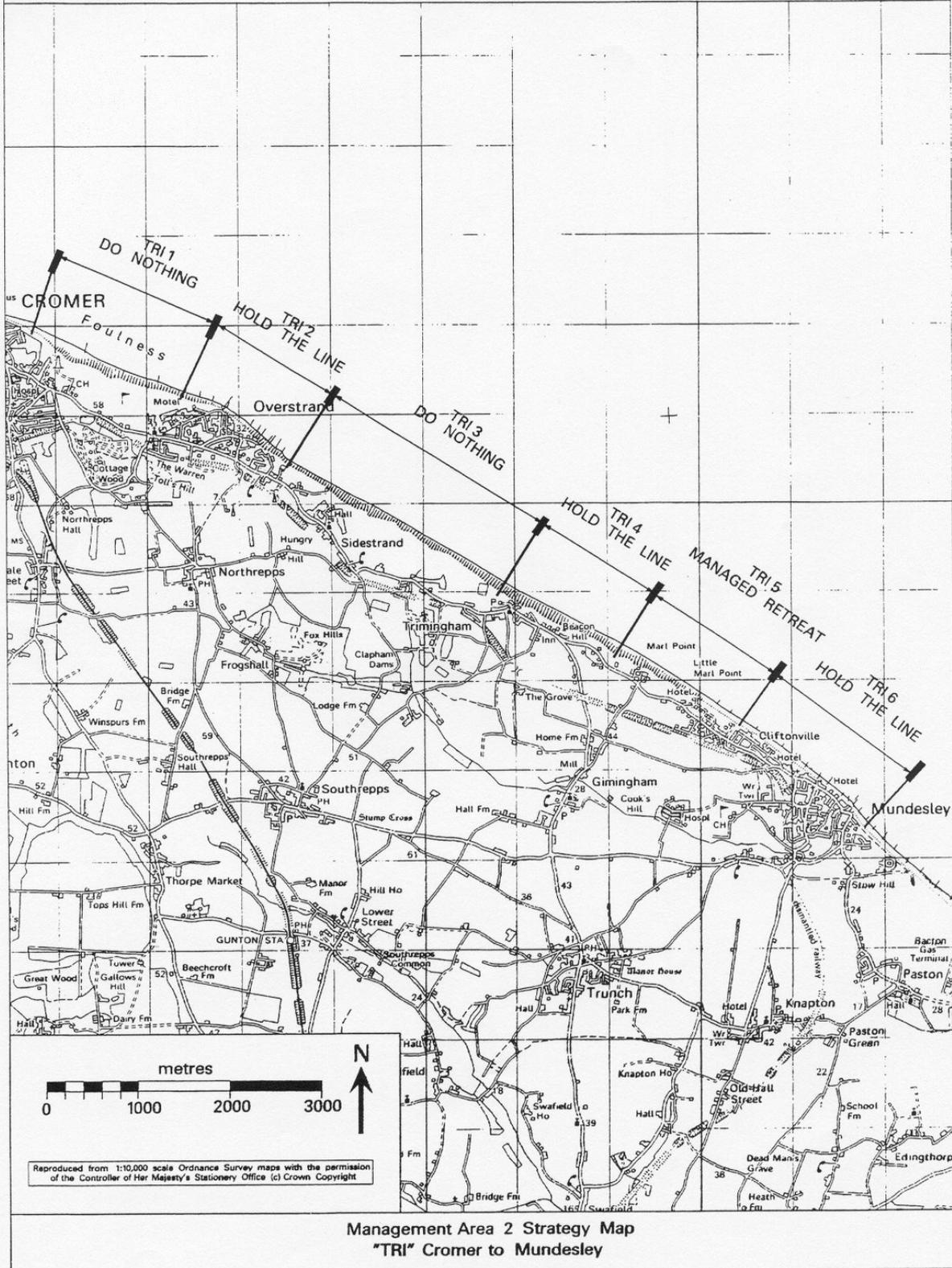
This Management Area has been sub-divided into six Management Units as follows:

TRI 1 -	Cromer Coastguard Lookout to Overstrand, Beach Close
TRI 2 -	Overstrand, Beach Close to Overstrand, South
TRI 3 -	Overstrand, South to Trimingham, North
TRI 4 -	Trimingham, North to Trimingham, Beacon Hill
TRI 5 -	Trimingham, Beacon Hill to Mundesley, Seaview Road
TRI 6 -	Mundesley, Seaview Road to Mundesley, East Cliff

Developed Strategy

The resultant defence strategy developed for this Management Area is as follows:

- TRI 1: DO NOTHING
- TRI 2: HOLD THE EXISTING LINE
- TRI 3: DO NOTHING
- TRI 4: HOLD THE EXISTING LINE
- TRI 5: MANAGED RETREAT OF THE EXISTING LINE
- TRI 6: HOLD THE EXISTING LINE



MANAGEMENT AREA STATEMENT

MANAGEMENT AREA 3 “BAC” – MUNDESLEY TO WALCOTT

Processes

The coastline here sets back slightly from that to the north and south. Onshore-offshore wave energy is dominant but longshore energy increases on this coast producing a net southerly drift of sediments. The nature of the coast line in this area is different from that further north with lower level cliffs, which are also sandier, but the coast is still in retreat.

Key Strategic Issues

Over the northern section of this Area the sites which are developed are not seriously threatened and the strategy should allow the natural processes to continue and maintain a supply of sediment to the beaches. Central to this Area is Bacton natural gas terminal which is of national importance. The strategy must ensure its preservation. To the south, the mainly residential developments of Bacton and Walcott are built up to the coastline. This area is also popular with tourists. Parts of this area are low lying and prone to localised flooding. Protection to these areas is a priority. The cliffs to the south of Mundesley are a designated SSSI and the maintaining of this status is another key consideration in the strategy development.

Management Units

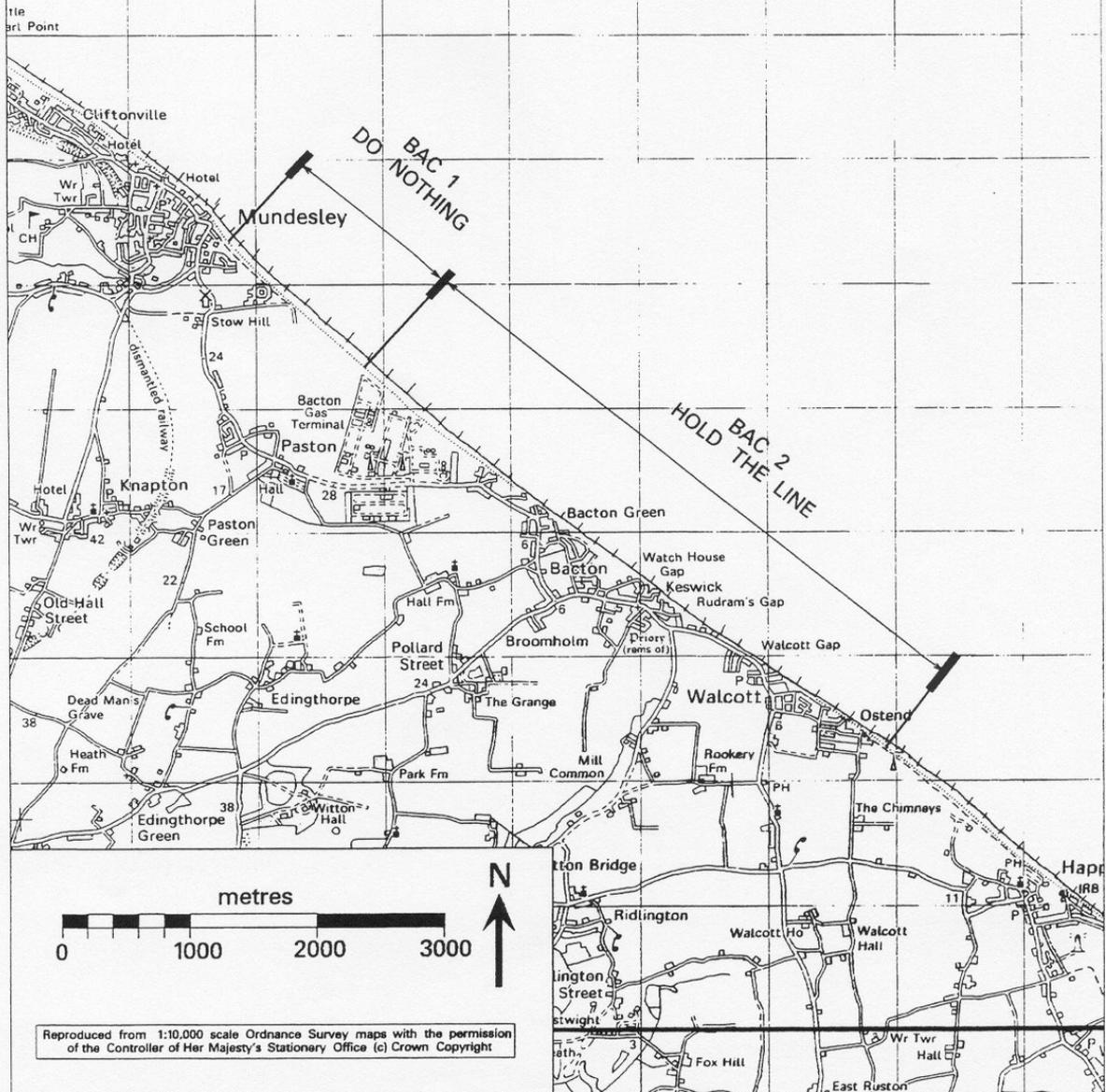
This Management Area has been sub-divided into six Management Units as follows:

- BAC1 - Mundesley, East Cliff to Bacton Gas Terminal
- BAC2 - Bacton Gas Terminal to Walcott, Ostend Cottages

Developed Strategy

The resultant defence strategy developed for this Management Area is as follows:

- BAC1: DO NOTHING
- BAC2: HOLD THE EXISTING LINE



Management Area 3 Strategy Map
"BAC" Mundesley to walcott

MANAGEMENT AREA STATEMENT

MANAGEMENT AREA 4

“SEA” – WALCOTT TO WINTERTON NESS

Processes

Greatest exposure to waves is onshore-offshore but a strong longshore wave energy exists, producing a net southerly drift of material but highly variable directional between storms. Erosion is particularly apparent over the central sections of this area, with the exposure of underlying clays and beach downcutting. Retreat of the natural beach and loss of dunes in front of low lying flood plains is a major feature in the Area.

Key Strategic Issues

This area sees a change in the coastal area from low lying cliffs in the north to low lying flood plain to the south, with the coastline in retreat throughout. The northern end is mainly agricultural land, with the exception of the village of Happisburgh. Continued erosion will result in the loss of some assets and ultimately could pose a threat to the flood plain further south. To the south any further retreat of the coastline would result in widespread flooding of the Broads. The present seawall has prevented any natural rolling back of the natural dune system over much of this stretch. The strategy here must be to continue to prevent the occurrence of flooding in this area.

Management Units

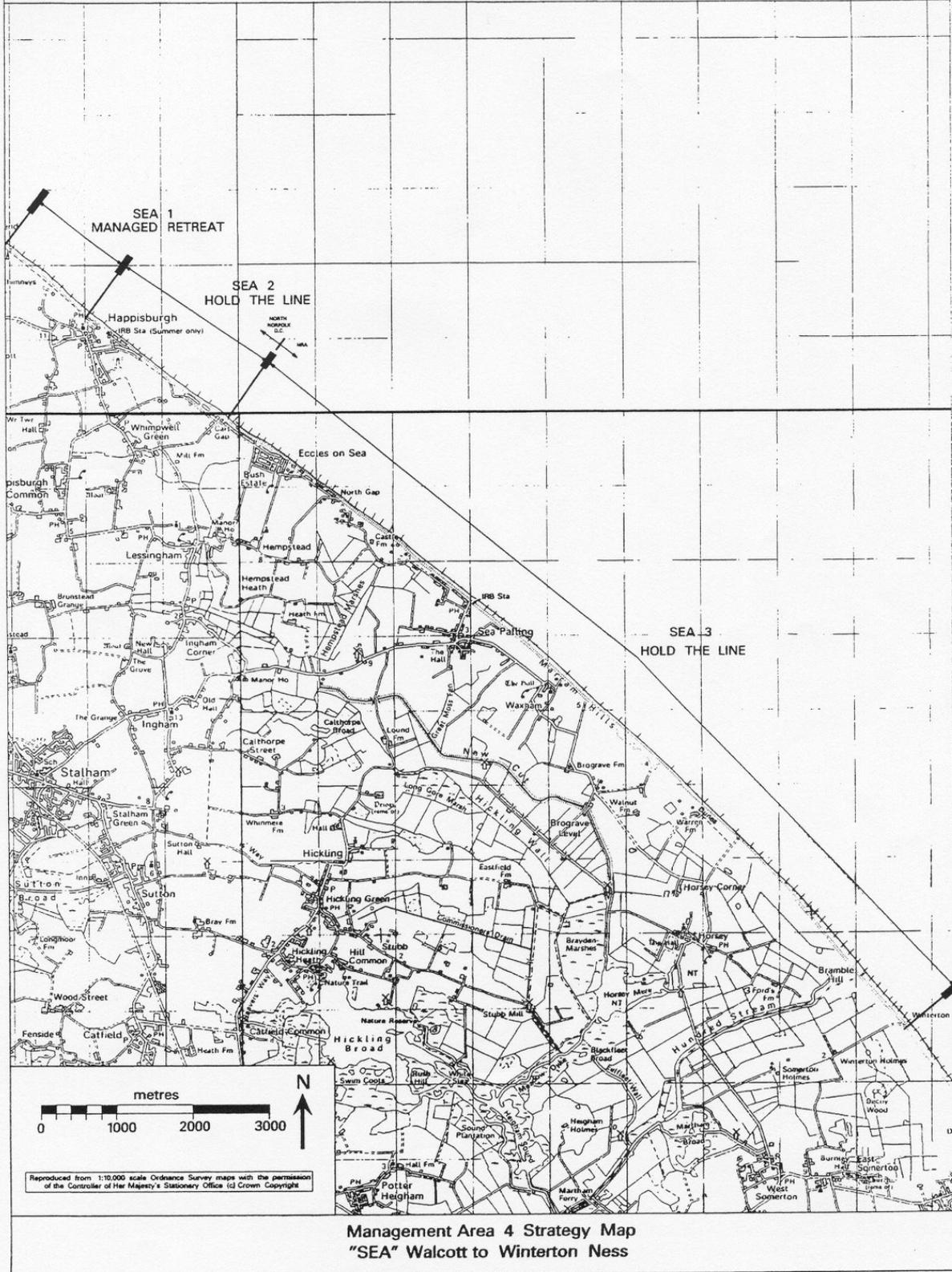
This Management Area has been sub-divided into three Management Units as follows:

- SEA 1 - Walcott, Ostend Cottages to Happisburgh, Caravan Park
- SEA 2 - Happisburgh, Caravan Park to Eccles, Cart Gap
- SEA 3 - Eccles, Cart Gap to Winterton Ness

Developed Strategy

The resultant defence strategy developed for this Management Area is as follows:

- SEA 1: MANAGED RETREAT OF THE EXISTING LINE
- SEA 2: HOLD THE EXISTING LINE
- SEA 3: HOLD THE EXISTING LINE



Management Area 4 Strategy Map
"SEA" Walcott to Winterton Ness

MANAGEMENT AREA STATEMENT

MANAGEMENT AREA 5

“WIN” – WINTERTON NESS TO HEMSBY

Processes

This is an area of natural mobility. The general trend here is one of slight retreat over the northern part and advance to the south as the ness migrates southward and material accumulates. A distinct change in the shoreline orientation occurs in this area with differences in the magnitudes of longshore wave energies and tidal currents between the north and south.

Key Strategic Issues

The dunes here provide natural protection to the Broads flood plain to the north and Winterton village and the strategy should ensure continued protection of these. The environmental status of this area is exceptionally important and the strategy should ensure the maintaining of the interest here. Winterton Ness is a mobile and potentially sensitive coastal feature which is important for protection of this Area and the natural processes contributing to its evolution should not be disrupted.

Management Units

This Management Area has been sub-divided into three Management Units as follows:

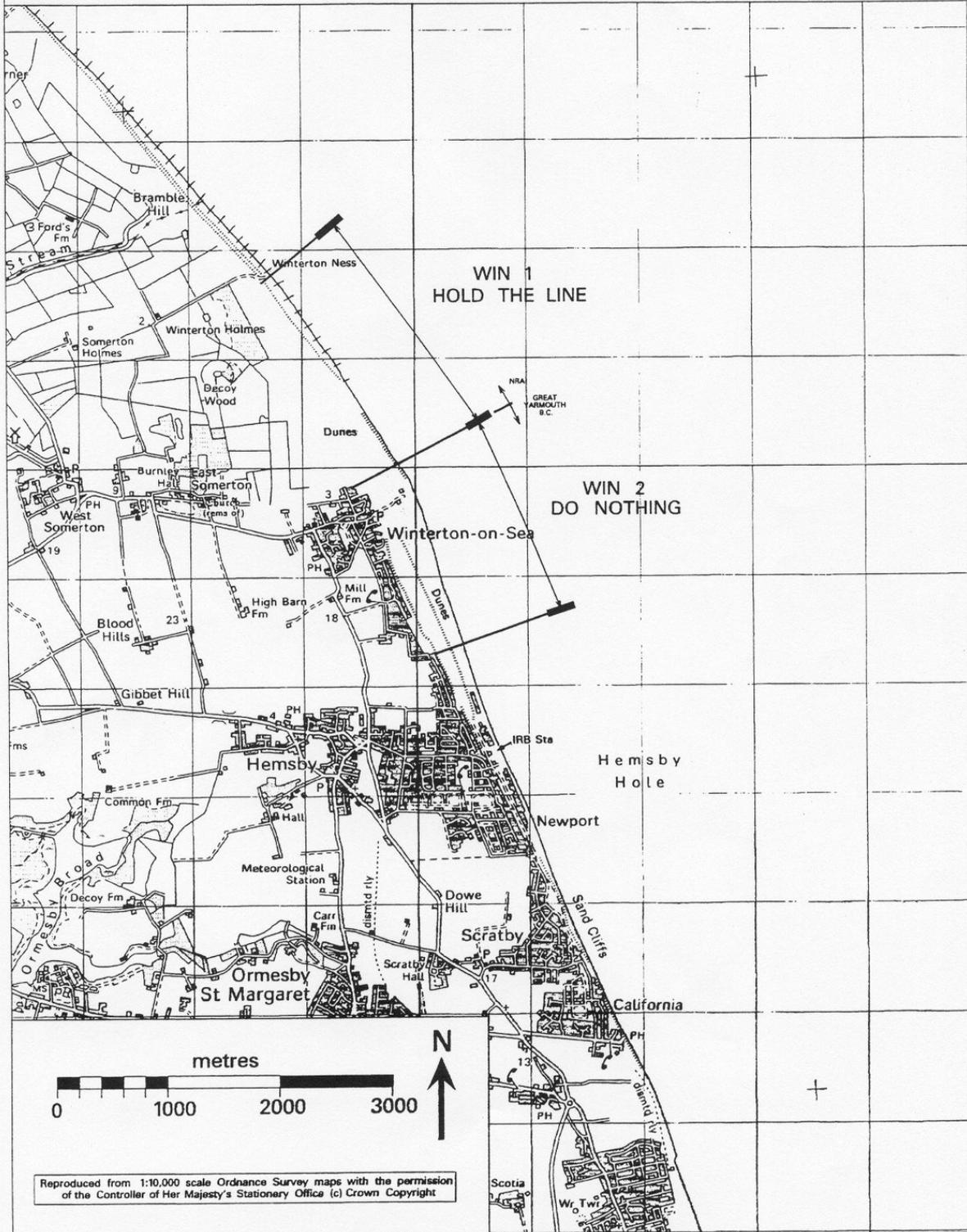
- WIN 1 - Winterton Ness to Winterton, Beach Road
- WIN 2 - Winterton, Beach Road to Hemsby, Long Beach Estate

Developed Strategy

The resultant defence strategy developed for this Management Area is as follows:

- WIN 1: HOLD THE EXISTING LINE
- WIN 2: DO NOTHING

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Management Area 5 Strategy Map
"WIN" Winerton Ness to Hemsby

MANAGEMENT AREA STATEMENT

MANAGEMENT AREA 6 “CAI” – HEMSBY TO GREAT YARMOUTH

Processes

The tidal range through this area becomes very small, however onshore current residuals are strong between Winterton and Caister. Onshore-offshore wave energy is less than that north of Winterton, but more dominant as longshore energies become very small. Both erosion and accretion occurs within this Management Area. To the south of the area there are two ness features at Caister Point and Great Yarmouth North Denes, which appear to be relatively stable. There is some mobility at Caister Point whilst the North Denes are continuing to accrete.

Key Strategic Issues

The coast here is developed almost continuously with a mixture of residential properties, holiday accommodation and recreational facilities. This area is of extreme importance to the local economy because of these developments bringing tourists to the region and any strategy to the detriment of this must be avoided.

The southern part of this Area contains sites of extreme environmental importance and the strategy seeks to preserve their status.

Management Units

This Management Area has been sub-divided into three Management Units as follows:

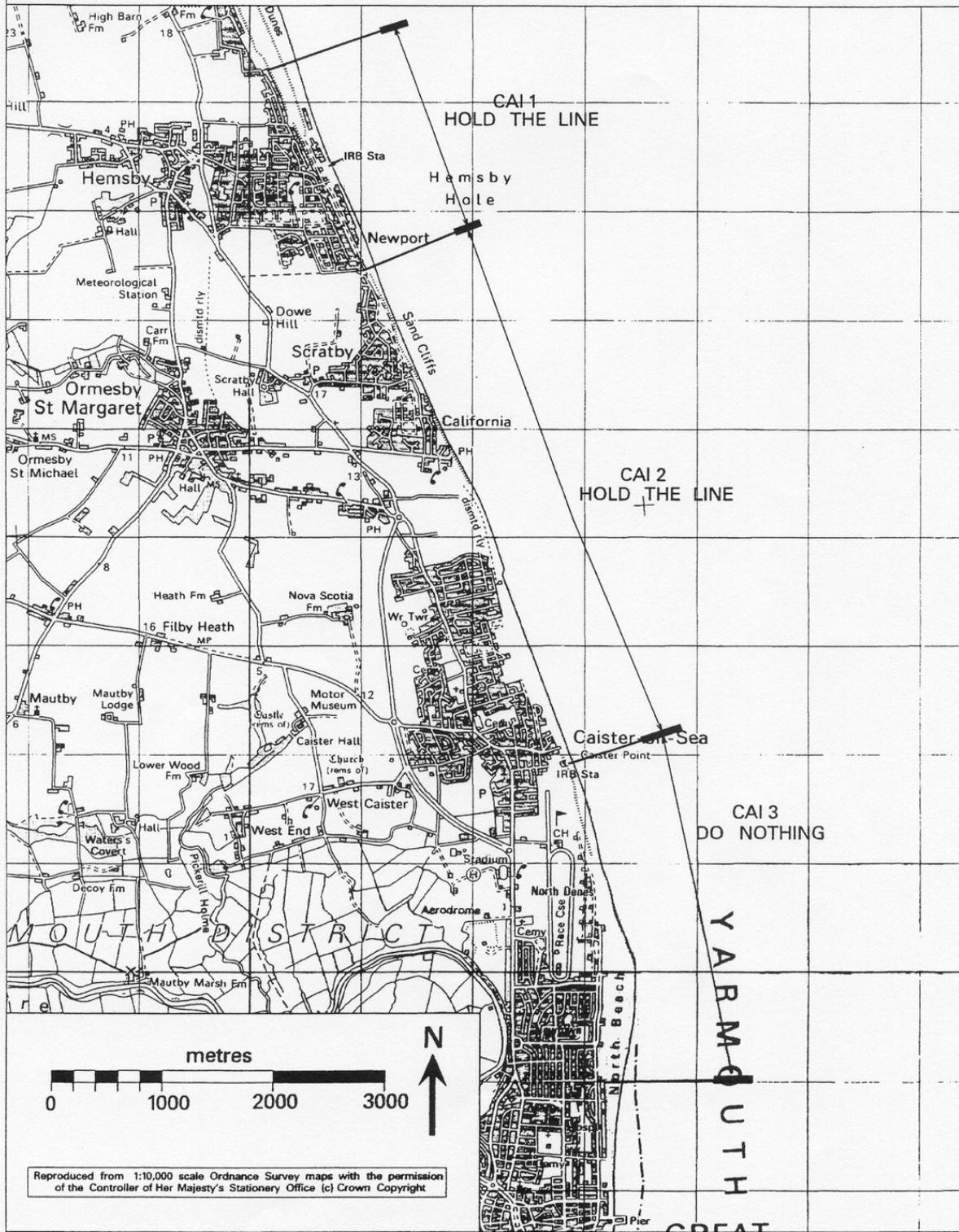
- CAI 1 - Hemsby, Long Beach Estate to Newport Cottages
- CAI 2 - Newport Cottages to Caister Lifeboat Station
- CAI 3 - Caister Lifeboat Station to Great Yarmouth, Salisbury Road

Developed Strategy

The resultant defence strategy developed for this Management Area is as follows:

- CAI 1: HOLD THE EXISTING LINE
- CAI 2: HOLD THE EXISTING LINE
- CAI 3: DO NOTHING

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Management Area 6 Strategy Map
"CAI" Hemsby to Great Yarmouth

MANAGEMENT AREA STATEMENT

MANAGEMENT AREA 7

“GYA” – GREAT YARMOUTH TO GORLESTON

Processes

The coastline fronting the main town of Great Yarmouth is generally accreting. Dominant wave energy is onshore, with a weaker longshore potential for sediment movement which is variable in direction.

Key Strategic Issues

The entire Area is developed predominantly by commercial and industrial interests along the coastal strip. The town is possibly the most popular tourist resort on the East Coast of the UK and the strategy must seek to preserve this situation. The wide open beaches here are continually popular and important to the tourist industry here. The strategy should be to maintain these.

Industrial interests include the Port of Great Yarmouth which is a thriving concern and important to the North Sea Gas industry. The continued provision of these port facilities must be ensured by the strategy.

Management Units

This Management Area has been sub-divided into two Management Units as follows:

- GYA 1 - Great Yarmouth, Salisbury Road to Great Yarmouth Pleasure Beach
- GYA 2 - Great Yarmouth Pleasure Beach to Gorleston, River Yare

Developed Strategy

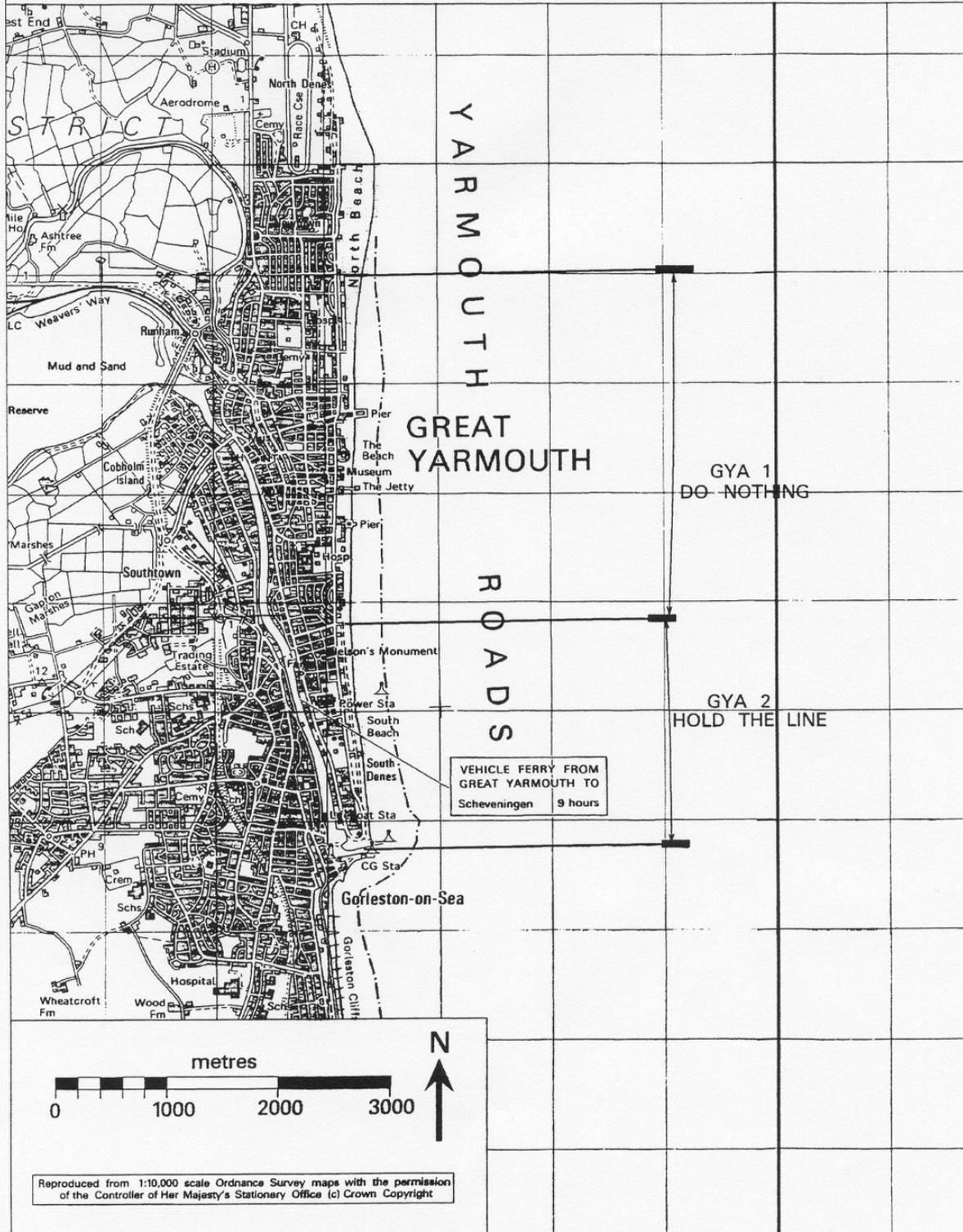
The result defence strategy developed for this Management Area is as follows:

- GYA 1: DO NOTHING
- GYA 2: HOLD THE EXISTING LINE

North Norfolk District Council
 Great Yarmouth Borough Council
 Waveney District Council
 National Rivers Authority

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 SHORELINE MANAGEMENT PLAN
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Management Area 7 Strategy Map
 "GYA" Great Yarmouth to Gorleston

MANAGEMENT AREA STATEMENT

MANAGEMENT AREA 8

“COR” – GORLESTON TO LOWESTOFT

Processes

This area experiences longshore movement but with a dominant onshore wave energy component, due to the influence of the offshore banks. Longshore wave energies increase towards Lowestoft, possibly due to the change in coastal orientation. Longshore movement is limited, and seasonally variable in this area but a net southerly drift occurs. The general trend here is one of erosion. The area is not a significant supplier of sediment although it is believed to be integral to the feed of material to the offshore banks. The strategy should ensure that any changes to the current situation are not of significance such that this process is compromised.

Key Strategic Issues

At the northern limit the densely populated area of Gorleston is developed close to the cliff edge, as are the holiday parks and caravan sites at Hopton and Corton. These areas are all important to the region and the existing strategy of protecting these should be maintained. At the southern limit the low lying area behind Lowestoft North Denes and Lowestoft Ness would be prone to flooding if the coastline was allowed to retreat. The area contains commercial properties, industrial establishments and provides a recreational/tourist area and the strategy seeks to continue protection to these areas.

Management Units

This Management Area has been sub-divided into seven Management Units as follows:

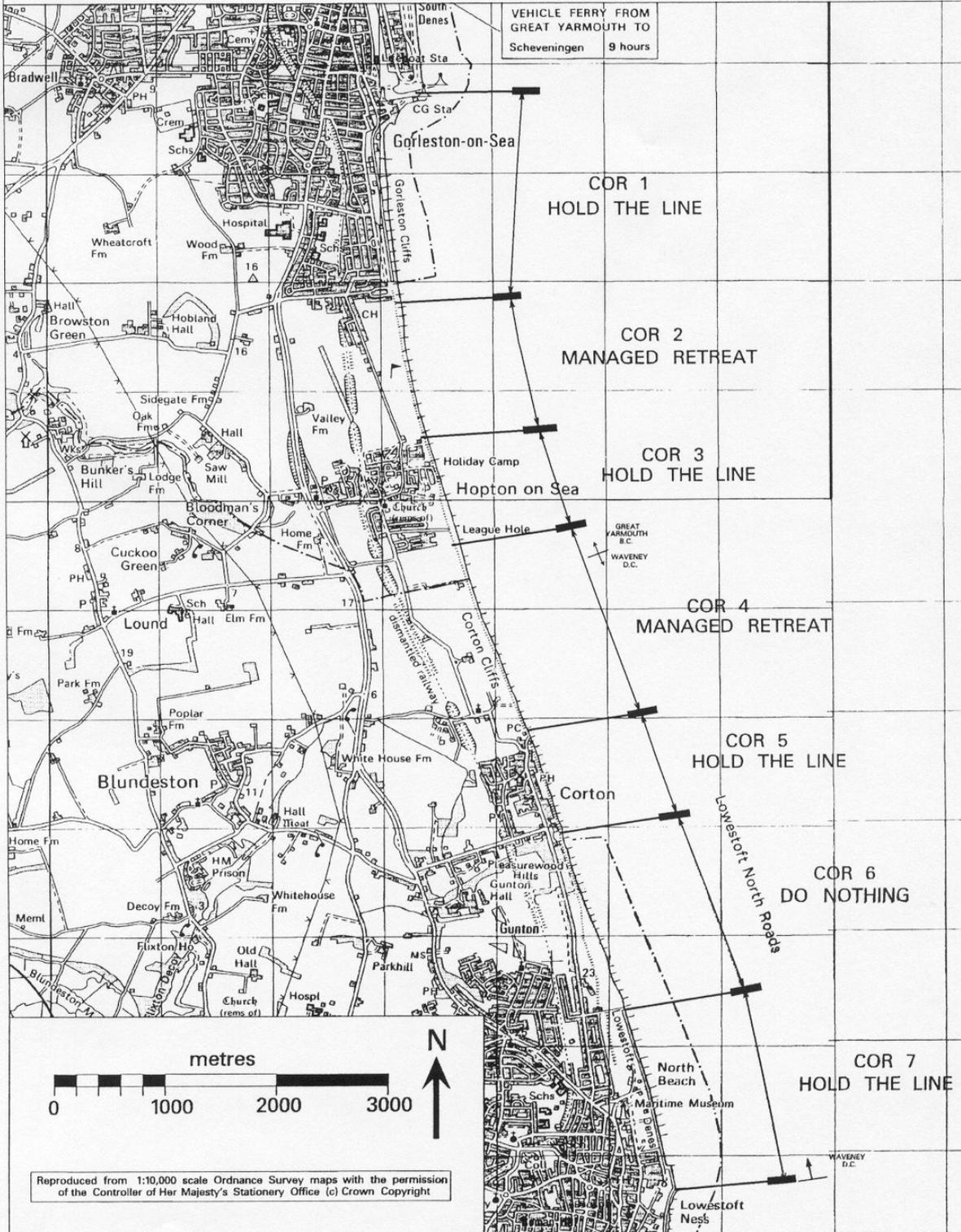
COR 1 -	Gorleston, River Yare to Gorleston, Links Road
COR 2 -	Gorleston, Links Road to Hopton, Cliff Cottages
COR 3 -	Hopton, Cliff Cottages to Hopton Playing Field
COR 4 -	Hopton Playing Field to Corton Caravan Site
COR 5 -	Corton Caravan Site to Corton Woods
COR 6 -	Corton Woods to Lowestoft, North Denes Car Park
COR 7 -	Lowestoft, North Denes Car Park to Lowestoft Ness

Developed Strategy

The resultant defence strategy developed for this Management Area is as follows:

COR 1:	HOLD THE EXISTING LINE
COR 2:	MANAGED RETREAT OF THE EXISTING LINE
COR 3:	HOLD THE EXISTING LINE
COR 4:	MANAGED RETREAT OF THE EXISTING LINE
COR 5:	HOLD THE EXISTING LINE
COR 6:	DO NOTHING
COR 7:	HOLD THE EXISTING LINE

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Management Area 8 Strategy Map
 "COR" Gorleston to Lowestoft