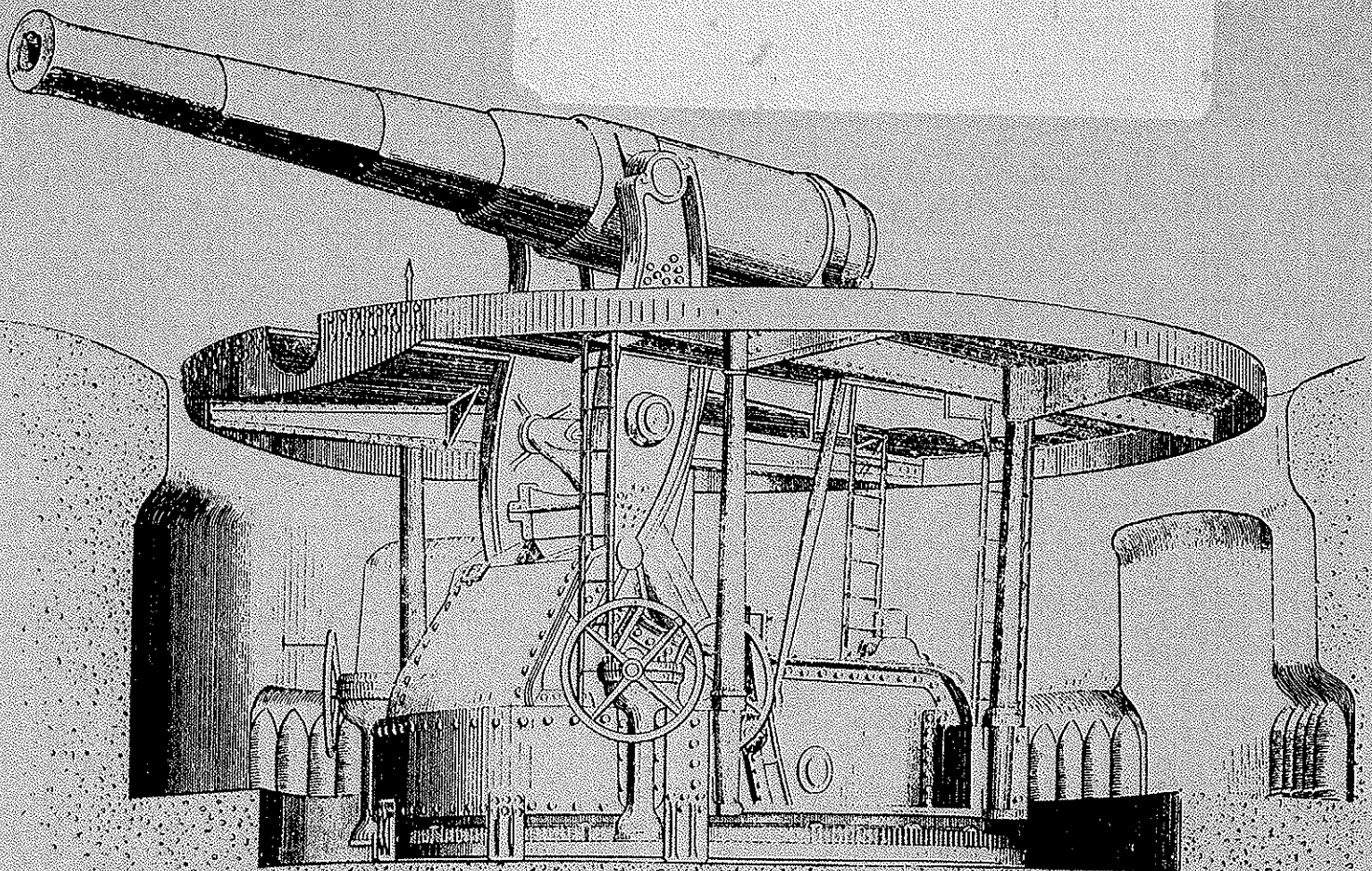


# *Beacon Hill Ancient Monument*

**Draft action and management plan**



**Tendring District Council**



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# Preface

*There are a number of Ancient Monuments within the Tendring District, the majority of which are located on or near the coast. Most of the Structures were constructed for reasons of defence or related to the provision of coastal navigational aids e.g lighthouses. Two notable exceptions to this rule are St Osyth's Priory and Mistley Towers.*

*Beacon Hill represents a somewhat unusual example of a Scheduled Ancient Monument as the site is not readily recognisable as a structure of national significance. However, on closer examination the fortifications which have been established especially since Victorian times are unique in character. Part of the site is owned by the District Council whilst the remainder is under the control of a private individual. English Heritage which is the government body responsible for the preservation of the country's Ancient Monuments has expressed its concern over the deterioration and general neglect of the site.*

*The District Council fully recognises the importance of this site in terms of its history and wishes to explore how best to proceed with a scheme aimed at restoring the fortifications and developing this local resource for tourism and for local residents. There is clearly a need to balance the needs of the local community for a recreational facility against the need to preserve and if possible enhance an important Ancient Monument.*

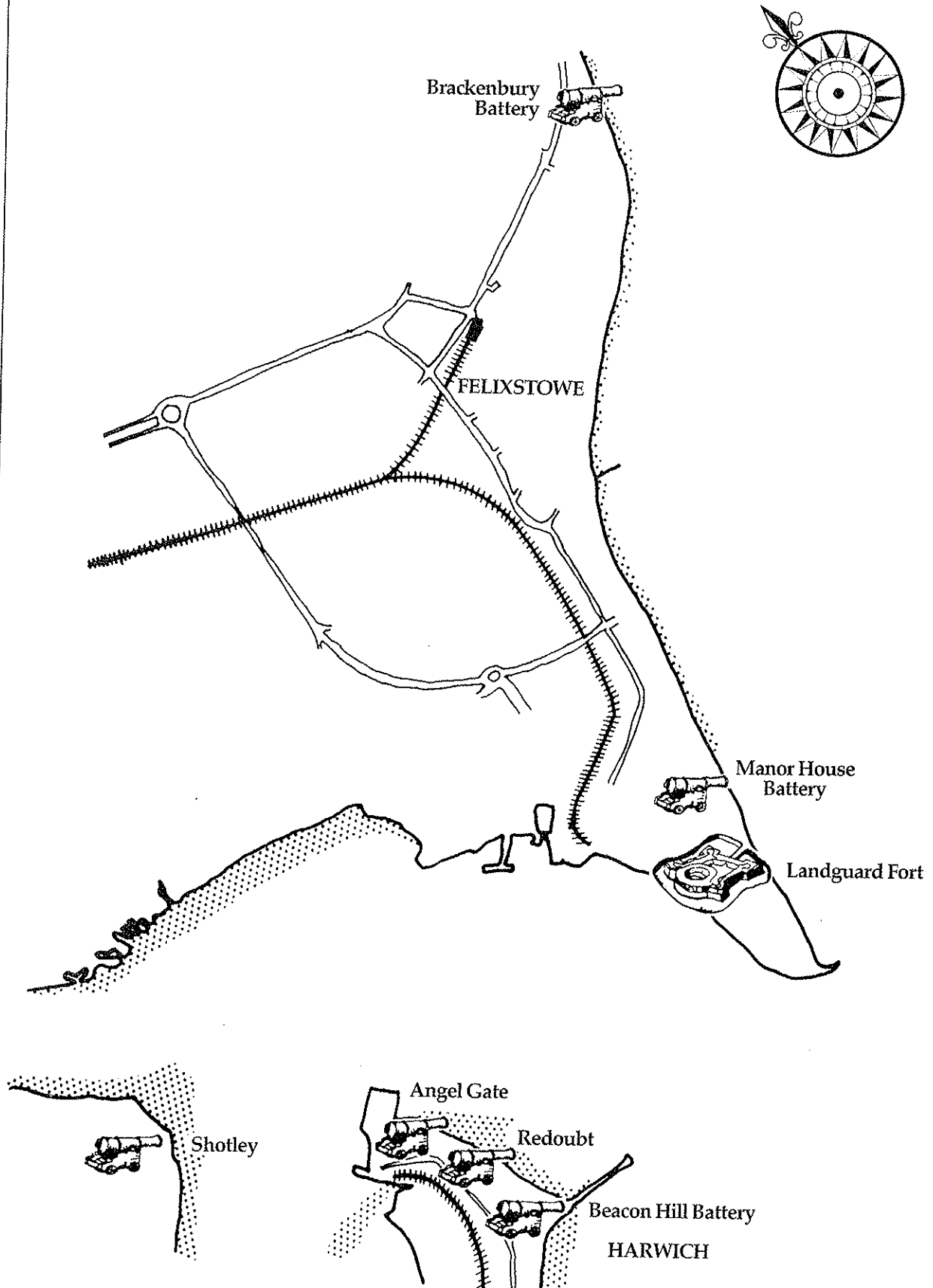
*This report looks in detail at the Fort and suggests possible courses of action forming the basis of a management plan for the future.*

# 1

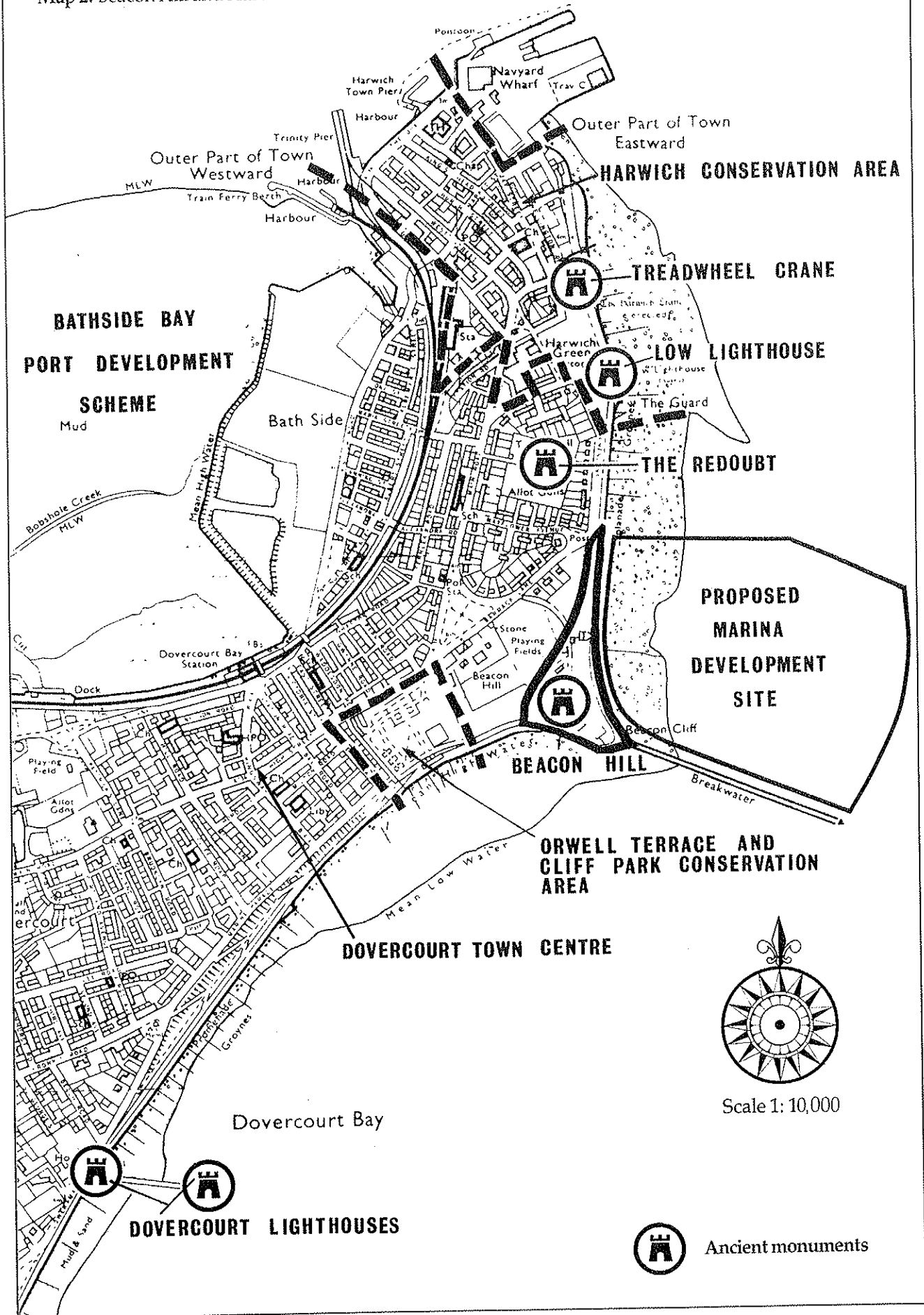
## Introduction

- 1.1 The significance of the Haven Estuary of the Rivers Stour and Orwell as a military and commercial port has been well documented by historians. Over the centuries the low, estuarine landscape between Felixstowe and Harwich has provided a sheltered anchorage surrounded by a gently rising shore with a generally flat hinterland. As well as providing a natural harbour the Haven presented a great opportunity to an invading army to land, secure a beach-head and progress rapidly inland through Essex to London, the heart of the Nation.
- 1.2 The importance of the Haven was recognised by the Romans who by 300 AD had built a castle at Walton, north of Felixstowe. The Danes regularly used the harbour and were defeated by King Alfreds Navy at Bloody Point, Shotley in 885. Undeterred, they landed a force in the Haven in 991 before the sacking of Ipswich. In 1016, Canute used the Haven on his way to take the English throne. Attacks on the Haven continued for almost the next 1000 years. Between 1320 and 1470 Harwich was attacked seven times, chiefly by the French and Dutch and the port was used as an assembly point for English Fleets, notably before Sluys in 1340 under Edward III. Threats to the East Coast continued as the turbulent politics of Europe ebbed and flowed through the Napoleonic War up until the Second World War.
- 1.3 The significance of the Haven as a strategically important port and its vulnerability to attack resulted in the construction of a complex infrastructure of defence works, from the Brackenbury Battery north of Felixstowe to Beacon Hill on the seaward side of the Harwich Penninsula (see Map 1). The full history of these fortifications is complex and is well documented elsewhere. However, it is important to acknowledge here, that large elements of these fortifications survive as an important testament to the Haven's rich maritime history.
- 1.4 One important surviving remnant of the Haven fortifications is located at Beacon Hill, Harwich (see Map 2). This promontary provides a good vantage point over the coast and inland and has therefore been recognised as an important defensive site for many centuries, indeed archaeological finds suggest that the site was occupied as early as the Bronze Age.
- 1.5 Beacon Hill is only a component of the defensive structures which were established in Harwich over the years. The Redoubt which is located approx 100 metres North West of the Beacon Hill site is a circular fort built in Napoleonic times as a counter to possible French invasion has been considerably restored by the efforts of The Harwich Society. Other defensive sites existed at Harwich but in the main they have been lost over the years to re-development.

Map 1: The Haven Defences



Map 2: Beacon Hill and Harwich





# 2

## *Beacon Hill, Harwich and the proposed marina*

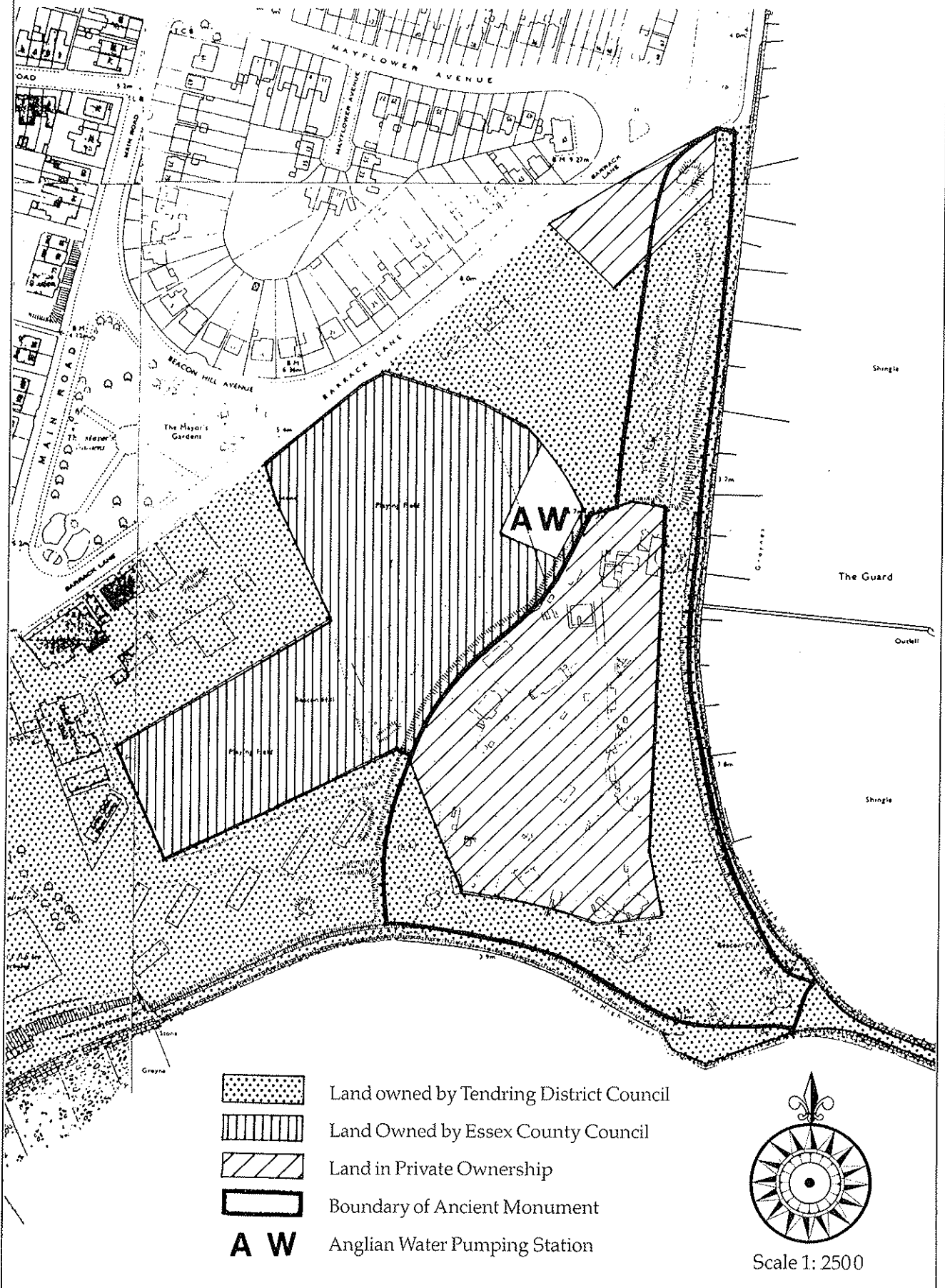
- 2.1 As Map 2 shows that Beacon Hill occupies a prominent position within Harwich. The fortifications are closely related to the Old Town and to the later Victorian settlement of Dovercourt. Old Harwich has been designated a Conservation Area for almost twenty years and a *Town Scheme* has been established since 1975 whereby grants are made available for the repair of the town's many historic buildings. The steady enhancement of the Conservation Area is now an established fact and to publicise the progress so far achieved the Council published a promotional booklet in 1988.
- 2.2 To promote the town's important maritime history the Council has introduced the *Harwich Maritime Heritage Trail* which consists of information panels, fingerposts and accompanying publications. It is hoped to extend the Maritime Heritage theme further during 1989/90 if resources are available.
- 2.3 It is within this context that Beacon Hill should be seen i.e. as an important local feature which will when restored provide visitors with a major new attraction alongside the Old Town, the Redoubt and the Heritage Trail. Indeed it would be sensible to include the Beacon Hill fortifications within an extended Trail.
- 2.4 Below Beacon Hill on the foreshore is the site of the *Sportport Marina* development which has recently received outline planning consent. The illustrative plans submitted with the planning application showed 335 new dwellings, over 1000 moorings, shops, workshops, a supermarket, petrol station, hotel, offices and a yacht club. The developer of the site is currently investigating various technical issues before submitted detailed plans for the proposal.
- 2.5 The marina development plan includes reference to the Beacon Hill site as being a 'future museum site'. Such a use allowing public access to the fortification with some associated interpretation facilities and possibly refreshment facilities would provide a very useful and attractive amenity for the town and to the residents of the new marina. The developers of the marina should be encouraged to look further into this proposal in conjunction with the proposals included in this report.
- 2.6 The Ancient Monument itself plus the open land between the fortifications and Cliff Park are allocated as public open space on the Harwich Town Map and there is considerable scope to develop this whole area as an attractive cliff top park.
- 2.7 Cliff Park and Orwell Terrace are a designated Conservation Area and proposals have been put forward to extend the Conservation Area into Dovercourt Town Centre. However, this proposal has not been implemented at this time.

# 3

## *Ownership of the site and surrounding land*

- 3.1 Although formally allocated as public open space on the Harwich Town Map the largest portion of the ancient monument is not within the Council's ownership. Approximately 3.8 acres of the site is controlled by the District Council whilst 3.7 acres is owned by a private individual. Map 3 shows the boundaries of the various ownerships.
- 3.2 As can be seen from the map the Council owns the open land immediately to the south west of the ancient monument. However, much of the land adjoining the ancient monument is owned by Essex County Council for a future school site. The County Education Officer has been consulted on this proposal and he states that it is still the Council's intention to build a new school on this land when funds are available.
- 3.3 Beyond the proposed school site approximately 2.2 acres of land is owned by the District Council. Where there are a number of community buildings.
- 3.4 Clearly the key to restoring the site as a museum complex is the attitude of the private landowner as he controls such a vital part of the fort complex. So far he has not made his intentions clear although some discussions have been held on the general planning principles including the relationship of the site to the proposed marina *sportport* development.
- 3.5 If the marina development goes ahead then there may well be an opportunity for a scheme to be prepared with the developers, the private landowner and the Council on a phased programme of restoration based on the proposals included in this document.

Map 3: Land ownership



# 4

## Detailed description of the site and its historical significance

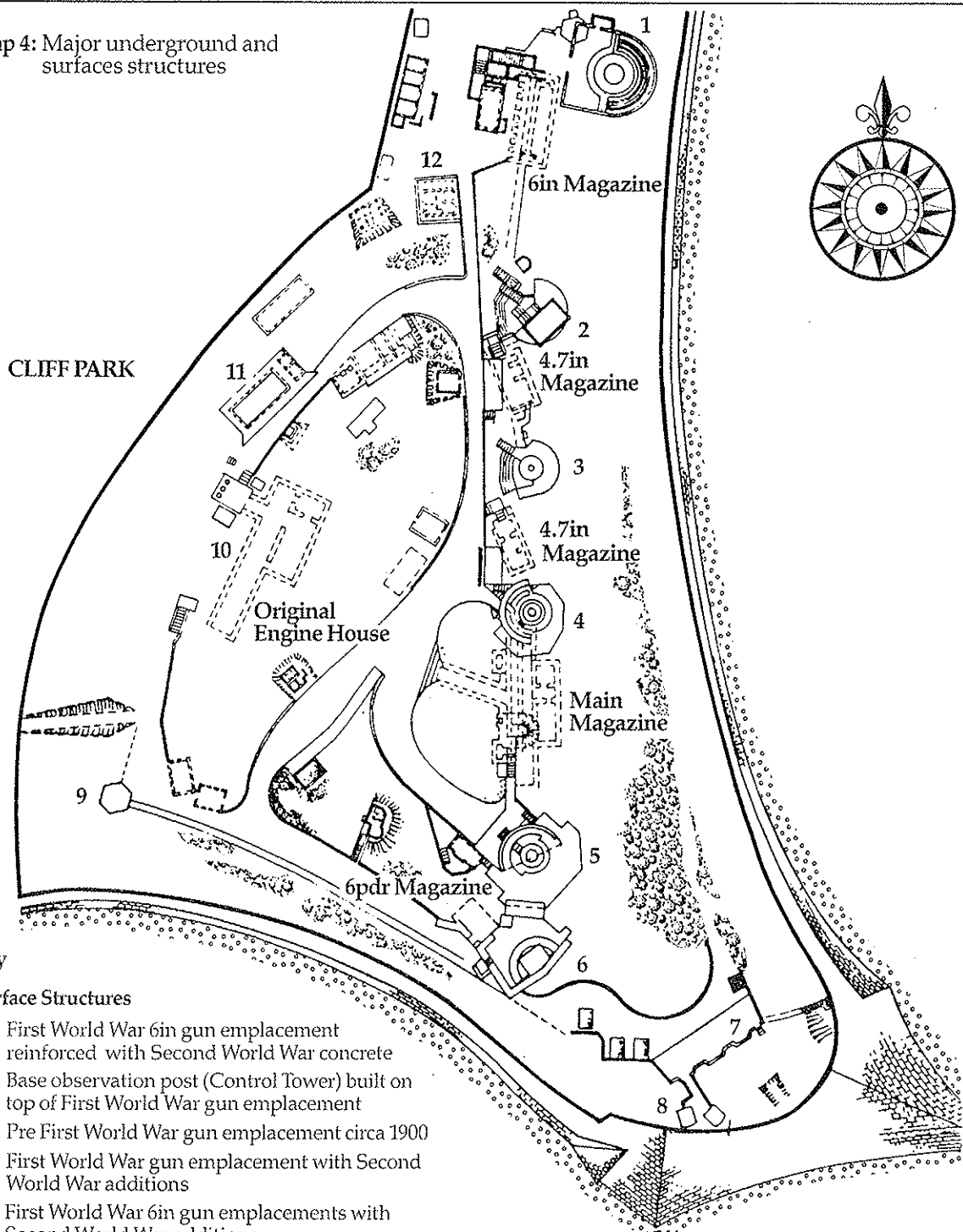
### Origins and Significance

- 4.1 The Beacon Hill Battery constructed in 1889/90, expressed a radical new tactical doctrine in coastal defence: this substituted the idea of 'invisibility' from an earlier ethos of visible, almost monumental defences. An example of the latter may be seen in the high granite facade of Landguard Fort at Felixstowe, finished just a decade before. The rationale for this change in approach was an improvement in the accuracy, power and range of naval armaments which made defences constructed in the manner of Landguard Fort more vulnerable to bombardment and destruction. On the other hand, a battery which was absorbed into a landscape, either real or apparent, was less vulnerable because a fort which was difficult to see was also difficult to hit.
- 4.2 However the battery as it exists today represents a line of visible concrete structures, reflecting a requirement in the Second World War for an elevated fire control position and for the enclosing of the gun positions in casements to protect against air attack. The loss of invisibility which resulted was the price to be paid for responding to new tactical circumstances. Map 4 shows the principal structures in some detail.
- 4.3 The original battery was possibly the first to employ the new doctrine of invisibility in a coastal defence setting. On the seaward side, its one 10-in. and one 6in. breech-loading guns were mounted on disappearing carriages in pits: the barrels sprang up above the pits for a few seconds to fire and then recoiled back down out of sight for reloading (see illustrations). Two 4.7-in. and two 3-pr. quick-firing guns were also mounted behind ultra low-profile apron-parapets hardly visible at any distance.
- 4.4 On the landward side of the fort, the battery was provided with defences in the form of the revolutionary *Twydall Profile*, invented just a few years before and incorporated into a coastal defence for the first time at Beacon Hill. This was a gently sloping glacis down to the bottom of a ditch containing a concealed unclimbable fence. A large concrete lined dug-out close by was used as a bombardment shelter and the rear defence troops would have rushed out of this at the appropriate moment to line the parapet and fire with their magazine rifles on any enemy infantry assault launched by a landing force.
- 4.5 In the centre of the battery was a low artificial hill which provided an apparently natural back-drop to the guns and concealed from view the engine rooms, magazines and other accommodation enclosed within it. It also screened the rear of the guns and the backs of the gunners from fire from the landward side.
- 4.6 As constructed, the battery was undeniably a revolutionary way forward and, indeed, was the prototype for other batteries built both in Britain and abroad in the 1890s. At Beacon Hill, traces of the original emplacements may be seen beneath or next to later modifications. Some of the original magazines also exist as well as much of the rear defences and the concrete lined dugout and other positions.

## First Modifications

- 4.7 The process by which the seaward front of the battery lost its original appearance began after little more than a decade. By the First World War the original 6-in. and 10-in. gun pits had been infilled and the guns replaced by barbette mounted 6-in. guns. In addition a third emplacement was constructed on the northern side of the fort. Searchlight emplacements and position finding cells were also added.

Map 4: Major underground and surfaces structures



### Key

#### Surface Structures

- 1 First World War 6in gun emplacement reinforced with Second World War concrete
- 2 Base observation post (Control Tower) built on top of First World War gun emplacement
- 3 Pre First World War gun emplacement circa 1900
- 4 First World War gun emplacement with Second World War additions
- 5 First World War 6in gun emplacements with Second World War additions
- 6 Second World War twin 6 PDR guns with own BOP
- 7 Battery of about 1860
- 8 Searchlights
- 9 Second World War pillbox

#### Underground Structures

- 10 First World War underground workshops
- 11 First World War generator room
- 12 First World War guard room

## Second Modifications

- 4.8 All three 6-in. guns were roofed over against air attack in 1940 and, by 1942 a large casemate known as Cornwallis Battery, armed with a twin 6 pounder quickfiring gun with its tall overhead fire director tower, had been added on the right flank. The monolithic fire control tower was added in the centre of the battery front.
- 4.9 In 1940 a radar tower was built on the left flank of the battery. This still exists, although its structure has suffered cracking in one corner from subsidence.
- 4.10 The rebuilding and modifications of the Second World War did most to give the battery the appearance which it has today.
- 4.11 Thus from start to finish the Beacon Hill Battery was originated and developed in response to the interaction between technical advances in weapons, and political tensions, with the periodic threats of raids or invasion.
- 4.12 Like many other batteries, the Beacon Hill Battery went into "reduced" status after 1945, although it was still considered an active defence. The battery was abandoned after 1956 when it was claimed by the War Office that improvements in military jet aircraft and the advent of guided missiles had rendered coastal defences obsolete.

## Summary: The Historical Importance of the Beacon Hill Battery

- 4.13 Because of its origins, the battery has a greater than just local historical importance as a milestone in the development of fortifications. Its Twydall Profile and the shelter are probably the earliest surviving in the country.
- 4.14 The Second World War structures at Beacon Hill have an important regional historical importance. In the whole of the southern coastline of the county of Kent for example, no complete battery form this period has survived intact except add-ons on Dover's Western Heights due to demolition both by private owners and, sadly, by public authorities in the 1970's and early 1980's. The danger of such destruction in other areas is always a risk and the Beacon Hill Battery assumes an ever greater importance as a result.
- 4.15 Its radar tower with some of the internal aerial array still surviving, has an importance on its own account, being one of the earliest radar emplacements in the country.
- 4.16 The site is rare in that all the aspects of a battery: gun emplacements, radar, fire control, magazines, engine rooms and searchlight emplacements are concentrated within a relatively compact area. The site presents a unique opportunity to display all the aspects of a twentieth century coastal battery in one place. The District Council is fortunate to have this site within its boundaries and this places a custodial responsibility on its owners to preserve its visual integrity and to facilitate its presentation to the public.

# 5

## *Beacon Hill as a wildlife habitat*

- 5.1 Following early visits it was clear to the officers of Tendring District Council that the Beacon Hill site contained a wealth of flora and fauna. It was decided therefore to invite the Essex Naturalists' Trust to carry out a detailed wildlife habitat survey in order to assess the ecological implications of the development of the site. The full report by the Essex Naturalists' Trust is included in Appendix 2.

### **Summary of the Report**

- 5.2 Despite the problems involved with carrying out a wildlife habitat survey early in the year, before the springtime activity of the flora and fauna commences, the Essex Naturalists' Trust was able to assess the implications of the development of the site for the species present and suggest some habitat management regimes. The site can be broadly divided into two areas.

### **Area 1: Between the Gun Positions and Foreshore**

- 5.3 This area is dominated by short grass and shrubs on the shallow slopes and a mix of low scrub, particularly Brambles, Elder and tall herbs on the steeper areas.

### **Area 2: Behind and Between the Gun Emplacements**

- 5.4 Towards the centre of the site the vegetation has developed into a mosaic of mixed open grass/scrub communities combined with denser scrub/tree communities. This area represents a dense cover of older, thicker scrub species with sparse ground flora due to low levels of light penetration.
- 5.5 Large numbers of garden birds occupy the site and old nests in the taller scrub indicate a large spring nesting population. Landguard Fort is an important site for landing of migratory birds, and Beacon Hill is an important land fall during spring through to the autumn.

### **Recommendations by the Essex Naturalist's Trust**

- 5.6 The steeper banks of rank grass and other vegetation should be left around the perimeter. Areas of remaining vegetation of this type should be as large as possible to provide good food and cover for the bird population. A suitable management regime would be to divide the frontal area into two cutting half every other year in order to keep down larger scrub species and allow the rest of the plant community to maintain a presence.
- 5.7 To the rear of the gun lines, the central area will require more intensive maintenance. The prime value of this area is for the nesting and roosting of birds and should be managed with this in mind. A rotational coppice regime should be introduced in order to allow extra light to filter through to the ground to allow plant growth and improved cover for birds. This area should be divided into between 8 and 14 sub-areas, one of which should be cut back per annum in a rotation sequence.

- 5.8 Areas designated for wildlife conservation should be given limited access only and a nature trail could be introduced.
- 5.9 The larger underground rooms could be best used as exhibition areas but this does leave a number of smaller magazines which can be put to little use where the presentation of the ancient monument is concerned. They could possibly be sealed in such a way as to provide bat roosts.
- 5.10 Second World War installations at Landguard Fort in Felixstowe have been fenced in and preserved as wildlife habitats. The local bird ringing groups now use the observation posts as hides and set up catch nets nearby to trap birds for ringing purposes. It is not proposed that Beacon Hill is put to similar use but activity at Felixstowe clearly shows the importance of the Haven for its bird populations.
- 5.11 The tall trees to the rear of the Beacon Hill site which were part of the defensive arrangement of the fort and designed to blend the fort into surrounding countryside should be preserved. In addition certain bushes and shrubs in the centre of the fort were planted by the garrison when the fort was operational.
- 5.12 The grassed area in front of the Cornwallis Battery which was cleared in 1988 for the Armada Beacon celebrations would present no difficulties to maintain.



# 6

## *Plan of Action*

- 6.1 It is clear even at this early stage that any project for restoration of the Beacon Hill Fort will be a long term one. It must be flexibly matched to the availability of finance and other resources and should proceed on a rolling programme basis with definite objectives for each stage. The current division of ownership on the site will need to be addressed at the outset.
- 6.2 Over the last 20-30 years the whole of Beacon Hill Battery has become a de facto public area and amenity. Certainly the potential of the site for direct income generation should be an important feature of the project. It would be for the future land owners to decide whether it would be appropriate to attempt to seal off the whole of the site and make access possible only on payment of an entrance fee. Possibly there should be fees for visits to special interest areas of the battery. However, the staffing costs implication of this would have to be considered. Indirect income generation could result from increased visitor numbers to the town itself with additional spending there as a consequential spin-off of this additional tourist attraction.
- 6.3 It is recognised that there are nature conservation interests as well as historical factors to consider and that these will need to be reconciled in the overall management plan.

### **The Object of Presenting the Battery to the Visitor**

- 6.4 The battery should be presented to the visitor as having five main functional elements:
- The guns, gun emplacements, their fire control systems and ancillary searchlights.
  - The magazines which supplied the guns with their ammunition.
  - The human factor-the garrison-how soldiers lived and worked on the site.
  - The power supply and services infrastructure.
  - Special technical interest features such as the radar tower and minefield control tower.
- 6.5 It is important to present these elements in such a way as to explain the main purpose of the battery as a defensive feature in its own rights. A secondary but nonetheless important part of the presentation is to explain the relationship between the battery and other locally situated defences and its place within the wider strategy of the national system of coastal defences.
- 6.6 People tend best to respond to images rather than words and this should be the guiding principle throughout. The visitor should come to the Beacon Hill Battery to experience a fort rather than merely to be told about one. Above all, the visitor should be able to enjoy that experience. Inevitably, this approach means the development of a strategy whose ultimate aim is the reinstatement of the battery to its original appearance. But, it may not be possible

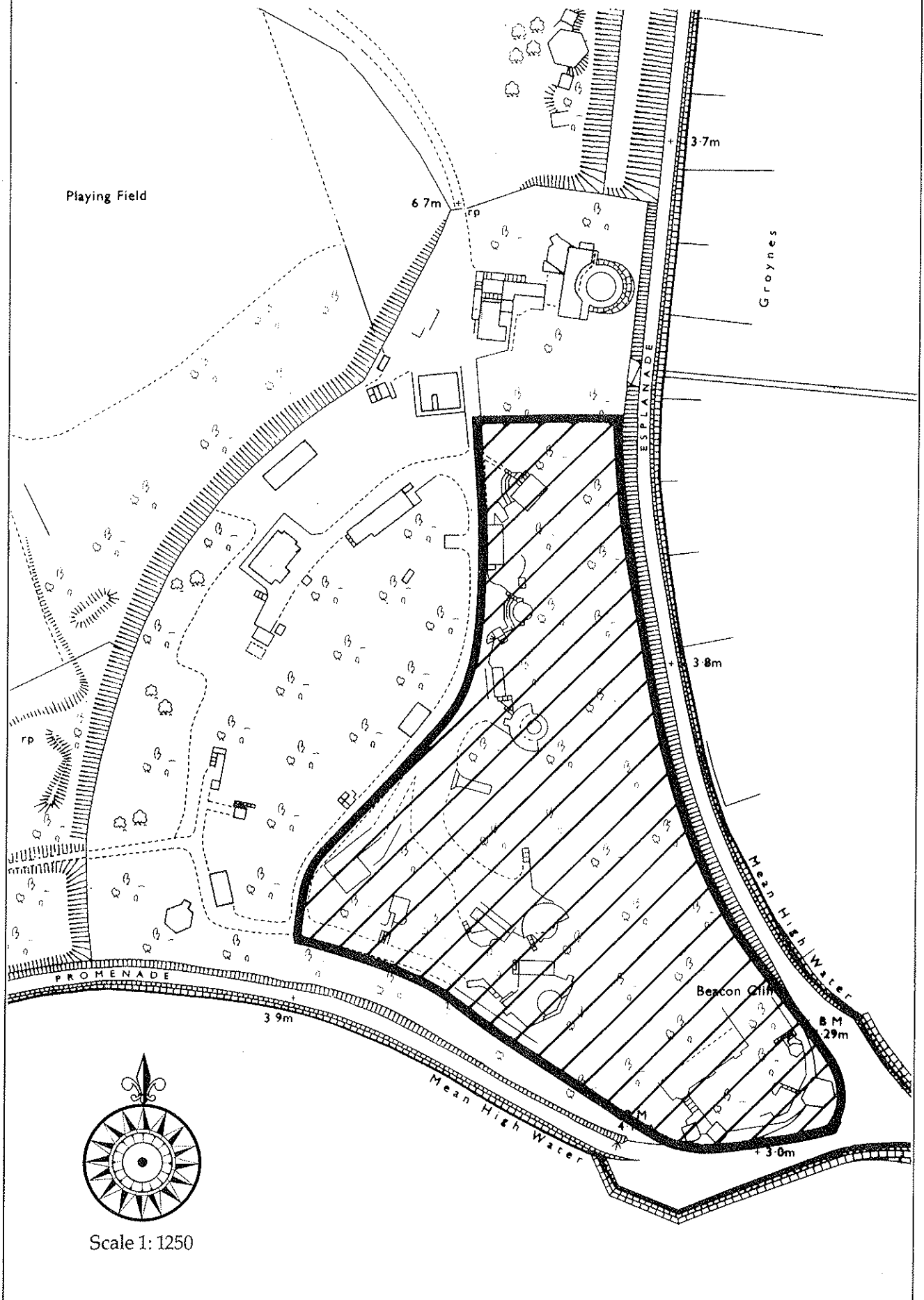
to achieve this aim given financial constraints, or it may not even be desirable to renovate the site to such an extent given wildlife considerations. This means at least partial rearmament with either original or replica weapons, the reinstatement of magazines, and the renovation of some of the shelters and other accommodation. Realistically reinstatement has to be approached on a selective basis and where it is not possible strong, clear pictorial images should be used as interpretation material.

- 6.7 In order to present accurate and authoritative images, adequate and detailed research will be required for each stage of the development process. The amount of work and skill involved should not be underestimated. However, this is fully within the capability of a number of specialists and members of the Fortress Study Group, a well-established international academic body.
- 6.8 It should be emphasised that the overall project objectives will take a period of years to achieve. Unless large sums of money were allocated at the outset, a phased programme of gradual reinstatement would be a realistic way ahead and initial costs could then be kept relatively low.
- 6.9 At Landguard Fort for example, two 6-in. gun positions outside the main body of the fort have been made safe and secure, simply by removing dangerous metalwork, replacing railings and installing short runs of metal steps to provide ease of access to the general public.

### **The First Stage of Development**

- 6.10 It is recommended that a strategy be adopted for first concentrating effort upon a limited and manageable area of the battery and then gradually expanding out to include most or all of the remainder of the site. The area suggested for first action to include the more essential features of the seaward front, has been marked on Map 5.
- 6.11 The initial action would be as follows:
- Clearance of debris and rubbish from the surfaces and interior of all structures and the introduction of a regime of continuing cleaning maintenance introduced.
  - Basic and most essential repair of structures to allow safe public access.
  - Placement of vandal-resistant and weather-proofed interpretation panels, combining pictorial images with a succinct, clear text to identify and explain the major features within the subject area.
  - Blocking and infilling of dangerous shafts generally across the whole of the fort area, a necessity on safety grounds given that many more visitors would be attracted to the site.
  - Start of a programme of vegetation clearance from the battery area. This is necessary not only to 'tidy up' the site but also to give the visitor a clearer idea of the form of the battery. Such clearance should respect the advice given in the Essex Naturalist's Trust report.
- 6.12 This would be the minimum work required to start off the process of restoration and presentation of the battery and establish it for the first time as an attraction worth visiting. Perhaps it would be

Map 5: Suggested first phase of restoration



unrealistic to consider denying the whole of the battery to those who have not paid a gate fee. Income generation could more sensibly be by means of charges levied from visiting specific high interest areas within the battery and merchandising-eg souvenirs and general sales and refreshments.

## **Restoration of the Main Magazine**

- 6.13 The Main Magazine (see Map 4) consists of two long parallel corridors with rooms behind, the largest of which measures 27ft by 13ft. These underground structures relate closely with gun emplacements above, as they were designed for storing shell cases and charges and lifting them to the surface by means of hoists. The reinstatement of the main magazines will present to the visitor the importance ammunition storage and supply arrangements for the fort. The magazines can be made secure and it is envisaged that the visitors would pay a gate charge for entering and viewing this specially presented area thus contributing to the income generation of the site.
- 6.14 The process of restoration of the underground magazines should proceed as follows:
- Interior wall surfaces cleaned, restored and repainted.
  - Ammunition lifts cleaned and reactivated.
  - Barrier systems reinstated.
  - Shell and cartridge stores recreated including storage tables and reproduction ammunition on display.
  - Introduction of lighting (reproduction magazine lanterns placed in original lamp recesses which should be reglazed).
  - Interpretation panels clearly showing how the magazines relate to the gun emplacements above.
  - The large chamber should become a general display area containing an exhibition to promote an interest and understanding of the origins, development and significance of the battery, especially by the use of the most evocative and descriptive images, through the medium of modern display techniques.
- 6.15 Guided tours of the battery could certainly be organised. However, the way ahead for the vast majority of visitors would be to provide them with a self-guiding tour leaflet.
- 6.16 The management and staffing arrangements for the site will have to be carefully considered.

## **Subsequent Phases of Development**

- 6.17 Subsequent phases would, over a period of years, consolidate and extend the achievements of the first phase, both in the area first focused upon and in the remainder of the battery to fulfill the overall strategic objectives.
- 6.18 During or immediately after the first phase of development already described, there should be an initiative to seek, find and procure guns and equipment appropriate to the reinstatement of the battery: some items may yet be discovered in the U.K. but other items may have to be sought abroad. After establishing what exactly is available and the possibilities or problems of obtaining it,

the practicality and cost of replicating those items which cannot be obtained in original form should then be considered. This information should be embodied in a more detailed development plan, with specific emplacements and other buildings or parts of the battery designated for complete or partial reinstatement identified.

- 6.19 High priority must be given to rearming one or two of the emplacements because without guns the presentation of the rationale of any fortification is otherwise weakened. The Battery Observation Tower would naturally form an excellent visitors' observation point. It has fine views to seaward and from here the principle of range-finding and fire-control could be effectively interpreted. The Fortress Study Group feel that it may be possible to reinstate one of the Defence Electric Light Cells: it is known that some searchlights of an acceptably compatible design still remain in the U.K.
- 6.20 It would be sufficient to contain the presentation of the ammunition storage and supply arrangements with the reinstatement of the main magazine, already envisaged as a feature of phase 1 of the development plan for the battery.
- 6.21 The War Shelters for the gun detachments lend themselves to evocative interpretation. It is suggested that one of these – preferably next to the emplacement to be rearmed – should be reinstated. The purpose of this would be to introduce a human theme by providing an image of the duty detachment awaiting a call to action. The presentation would comprise several uniformed figures, sitting on benches, playing cards on a table and with a stove light.
- 6.22 It is also possible that one of the engine houses could be reinstated as part of the presentation of the power supply and services infrastructure. There is a growth of interest in stationery engines and a group of enthusiasts might well be persuaded to help as happened at Coalhouse Fort at East Tilbury. This would add considerably to the interest of the battery as a visitor attraction.
- 6.23 Following phase 1, other parts of the battery should, if possible, be cleared and made accessible to visitors including the underground engine house and shelter. All minor features within the battery – the majority of which will not be given full reinstatement treatment – should be identified for visitors and selected ones given weather-proof interpretation panels to describe them in more detail. The previously bulldozed section of rear defence rampart should be restored to its previous appearance and profile.
- 6.24 The subsidence at the corner of the radar tower should be examined as soon as possible by a structural engineer. If the tower may be saved, then in the longer term it should be given a special focus for visitors, given its historical and scientific importance and interest. The radar tower is on land owned by the District Council and therefore this part of the project could be progressed almost independently from the larger elements of the restoration works.

# 7

## Management & marketing strategy

- 7.1 Statistics published by the English Tourist Board in the *English Heritage Monitor 1988* show that there is a growing interest and awareness of historic buildings and ancient monuments in England. Indeed, the visiting of historic properties was the third most popular outdoor leisure activity after walking and visiting the coast.

In 1987 there were 67 million visits to historic buildings in England and between 1986 and 1987 buildings owned by English Heritage showed a 17% increase in visitors mainly as a result of improved marketing.

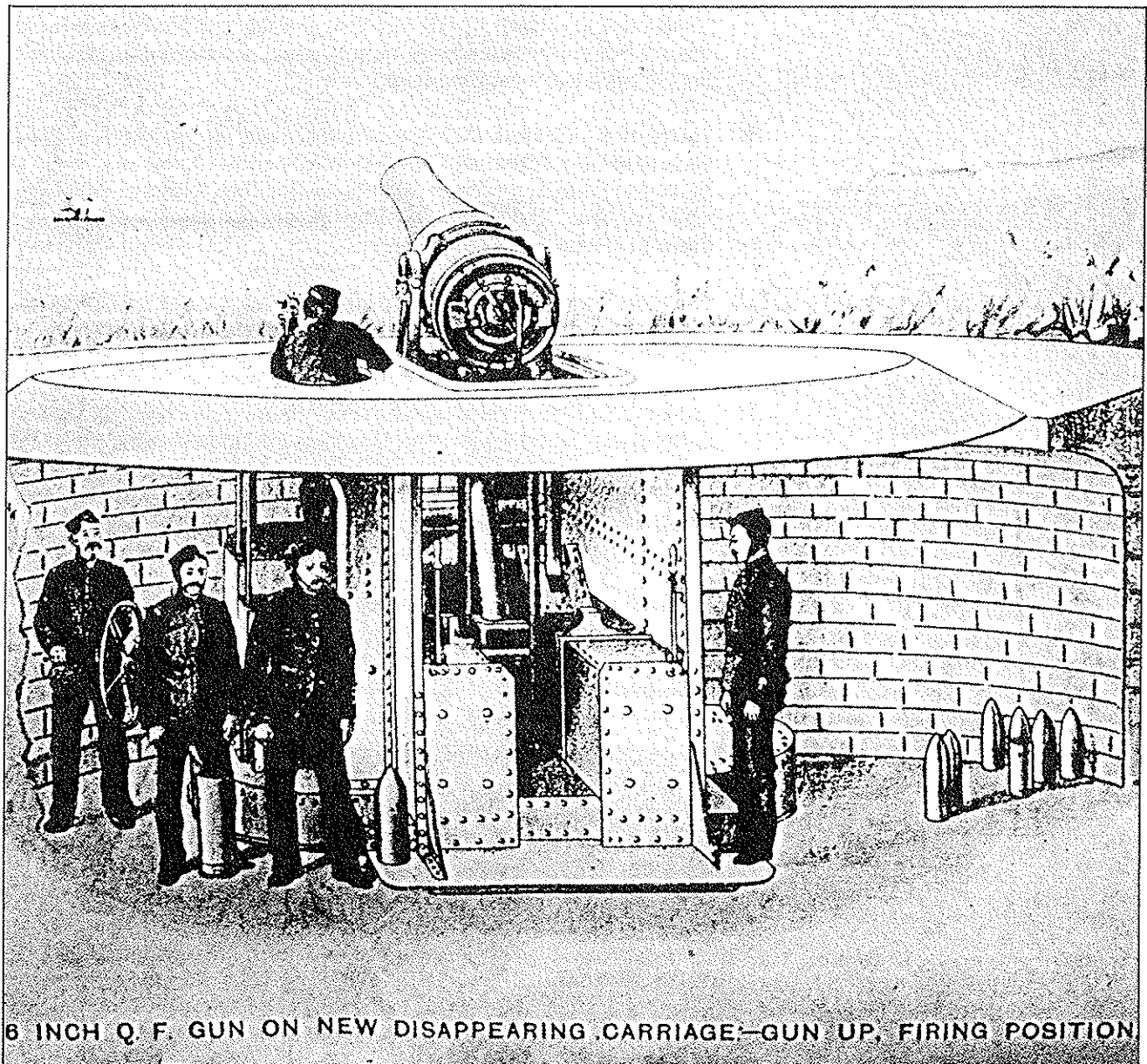
- 7.2 Essex is well located close to London and East Anglia to benefit from substantial tourist expenditure and the County has a rich heritage of historic buildings, Ancient Monuments, Conservation Areas and attractive, accessible coastline. Harwich is also a major passenger port dealing with over 2 million people each year and therefore there is a large potential domestic and foreign visitor market to be tapped.
- 7.3 Beacon Hill and the associated defences in Harwich and at Felixstowe are recognised as the fifth most important concentration of coastal fortifications in England. In addition the uniqueness of the Beacon Hill battery (explained in detail earlier in the report) means that there is a great potential to develop a co-ordinated marketing strategy for the Fort in association with the other historic features in Harwich, Felixstowe and Shotley.
- 7.4 When preparing a marketing strategy for the site it is worthwhile drawing on lessons learnt from other historic properties which have managed to increase visitor levels. An English Tourist Board survey of properties which had increased their visitor levels by at least 20% in 1987 illustrates the following as the major contributing influence:
- Special events and exhibitions (18%)
  - More foreign visitors (10%)
  - Introduction of extra attractions (10%)
  - Longer opening hours (9%)
  - Better signposting (6%)
  - Increase in school/educational parties (6%)
  - Increase in other groups (5%)
- 7.5 Other factors which are important in increasing visitor numbers include; excavation/renovation work, good marketing, newspaper and television publicity widespread distribution of leaflets, joint ticketing arrangements, visual presentations and inclusion on bus/coach tours.

- 7.6 Many of the above factors could apply to the Beacon Hill site. Below is a list of recommendations that could be implemented within the scope of a long term tourism marketing strategy for the Haven defences.
- *The renovation of the site should be publicised as vigorously as possible to attract local and regional newspaper coverage and possibly also regional television.*
  - *Once the site is cleared and made safe, a programme of open days and temporary exhibitions could be organised in conjunction with The Redoubt and possibly other local historic attractions. The Redoubt already has an annual fete which could be extended to Beacon Hill. A 'Harwich History Day' could involve local groups and schools and would attract visitors and revenue to the town from further afield. It could also be used to publicise other work being done in the town such as that connected with the Conservation Area and Maritime Heritage Trail.*
  - *Both the Redoubt and the Beacon Hill site should be kept open as long as possible especially during the summer months. The Harwich Society have explained that the Redoubt must be manned in order to keep it open and volunteers are in short supply. The District Council should look to employ part time staff to give tours of The Redoubt and Beacon Hill and to warden the site and other historic buildings within the Harwich Conservation Area.*
  - *The Harwich Conservation Area should be well signposted from the main roads into Harwich, from Dovercourt Town Centre and from Parkeston Quay. At present some signs depicting 'Historic Harwich' are in position. Signs should clearly indicate the location of the Beacon Hill Ancient Monument.*
  - *The Conservation Area and the Beacon Hill site should be publicised in schools, colleges and within other local groups. Guided tours should be offered.*
  - *Leaflets should be printed and distributed to local and regional Tourist Information Centres, Libraries, Museums and other historic buildings and various commercial outlets. They should emphasise the interesting features of Harwich as one entity, including the Conservation Area, Beacon Hill, The Redoubt and other local attractions including views of the port areas and shipping activity.*
  - *An audiovisual presentation should be prepared, giving a history of Harwich and an insight into the restoration work being carried out in the town by the District Council, County Council and voluntary organisations.*
- 7.7 The Beacon Hill site, whilst specifically being the subject of this report and the focus of current attention should not be marketed as one, single attraction. All the historic features should be incorporated into a unified marketing effort. All of the above recommendations provide direct or indirect revenue raising opportunities and all will help to attract increased tourist revenues to Harwich. The possibilities of providing related public amenities and some commercial activities should be studied, as part of the marketing strategy.
- 7.8 It must be realised that the individual historic features of Harwich are not enough in themselves to draw visitors in large numbers.

However a combination of features based on the maritime theme and set in a wider marketing context, which could be 'Tending's Heritage', would provide a significant tourist attraction.

7.9 The opportunity also exists for liaison with those local authorities and voluntary bodies concerned with other defensive works around the Haven, including Landguard Fort at Felixstowe and H.M.S. Ganges at Shotley. A concentrated and co-ordinated effort combining resources from all three major defensive locations within the Haven may prove mutually beneficial to all and attract revenue towards the various ferry services plying between Felixstowe, Shotley and Harwich. Such a marketing strategy should be discussed with the East Anglia Tourist Board.

7.10 The construction of the marina with its substantial numbers of new housing and commercial development will have a major influence on any marketing strategy for Beacon Hill and indeed for Harwich and Dovercourt as a whole. If the development takes place before or during the works proposed to be carried out at the Ancient Monument then the marketing strategy will need to be re-assessed although the overall approach may well be kept.





# 8

## Consultations

- 8.1 The District Council recognises that the initial restoration and eventual development of a museum/heritage complex at Beacon Hill is a very major project requiring substantial finance and manpower. By its very nature such a project would need to take place over a number of years. This report is simply the first stage in recognising the potential of the site as an important local resource which should be developed for the benefit of local residents and visitors alike.
- 8.2 In preparing this document the Council is indebted to the very substantial technical input provided by the Fortress Study Group and in particular to Mr Victor T C Smith and Mr C Trollope. Valuable links have been established between the Council's officers and the Study Group and it is intended to develop them in the future during the more detailed aspects of the restoration project.
- 8.3 Other organisations that have been consulted as part of the input to the study include English Heritage, Essex County Council (Archaeology Section), Essex Naturalists' Trust, the Felixstowe History and Museum Society, The Harwich Society, Portsmouth City Council and Harwich Town Council. However such consultations have only been very superficial and have not touched upon points of detail or indeed firm proposals except for the detailed report commissioned from the Essex Naturalists' Trust.
- 8.4 The Council is also aware that although it is a major landowner in the area it does not control the central part of the ancient monument. This crucial part of the site containing most of the main structures is within the ownership of a private individual whose future intentions are not fully known. It is hoped that this report will form a basis for further discussions with this landowner with a view to agreeing a joint programme of action to restore the site along the lines suggested.
- 8.5 The document is therefore intended to provide an opportunity for a wide range of considered responses from a number of organisations which have interests in ancient monuments and fortifications, local history, tourism and the town itself. The following consultees are particularly important:
- English Heritage*
  - Essex County Council*
  - Mr Bertorelli (the private landowner)*
  - Harwich Town Council*
  - The Harwich Society*
  - Harwich Chamber of Trade and Commerce*
  - East Anglia Tourist Board*
  - The Fortress Study Group*
  - The developers of the Harwich Sportport*
  - Harwich Conservation Panel*
- 8.6 Upon completion of the consultation exercise a further report will be presented to the Council with a view to recommending action by the various authorities concerned.

*Extract from 'Fort' The International Journal of Fortification and Military Architecture. Fortress Study Group Volume Eleven: 1983*

### **The Beacon Hill Battery: the background**

If you stand on Beacon Hill battery and look north across the harbour to the granite casemated face of Landguard Fort and compare it with the battery you are standing on, built only ten years after the latter was finished, you may well wonder whether the Royal Engineers had taken leave of their senses, or what had happened to require such a radical change in design.

A great change had indeed taken place in the military world. Military technology was forcing back the frontiers of science and engineering as fast then as it is today. In 1878 navies and coastal guns expected to fight at 2-3000 yards maximum. The largest guns at Landguard were 12.5-inch rifled muzzle loaders of 38-ton weight well capable of taking on the best battleships of their day. By 1888 battleships, not even the best, could pulverise forts like Landguard with breach-loading guns at ranges the RMLs could not reach.

On land the Turks at Plevna in 1877, armed with modern rifles and firing from dugouts, had amazed the military world by decimating the Russian hoards. In Britain the first magazine rifle, the .303 Lee Metford, was approved in 1888. In 1882, at the bombardment of Alexandria, apparently weak Egyptian forts built in the sand dunes had been able to absorb a large percentage of the British bombardment, due to the ability of the sand to deflect shells away from their target. The difficulty of identifying the precise position of the Egyptian guns was also noted. Firing trials were carried out at Portland in 1885 by HMS Hercules against a 6-inch gun mounted on a disappearing carriage. Despite closing the range and using even her smallest guns HMS Hercules was quite unable to hit the target.

At Harwich something had to be done to protect the fourth most important naval harbour in Britain which was at the same time a prime target for an invasion force. The Stanhope Commission of 1887 proposed two batteries of breech-loading guns. One at Landguard and the other at Beacon Hill to cover the approaches to Harwich. Money was allocated in the imperial defence loan of 1888 and work started at once.

Beacon Hill posed special problems to the engineer designers for, being isolated from the main garrison at Landguard, it required its own land defences.

Being the first of its kind built in Britain the site provided an opportunity to test new designs and ideas and absorb the lessons of modern warfare; in fact, it was to be the prototype for coastal defence batteries to be built at home and overseas during the next ten years.

The main armament was to be one 10-inch breech-loader and one 6-inch breech-loader mounted on hydro-pneumatic disappearing mountings. These mountings allowed the guns to disappear under ground to be loaded, only appearing for twenty seconds to fire. Gun and mounting were enclosed in a mass of concrete with an

apron of sand in front to absorb or deflect enemy shells. The supporting armament were two 4.7-inch QF guns and two 3-pdr. QF guns the first to take on enemy small craft and the second to stop a landing by enemy marines and support the infantry defence on land.

Camouflage for the guns was provided by leaving the sea face of Beacon Hill in a natural state and building the centre to provide a background.

This artificial hill did not just form a back drop to the guns; it protected the gunners' backs from fire from the land front and it housed the engine room and a dugout for the defending infantry force. It helped camouflage these infantry whose duty it was to defend the land front and its crest line is nicely judged to allow the 4.7-inch guns to turn round and just fire over this crest to support the infantry defence.

On the land front, the engineers built what is called a Twydall Profile. That is a glacis sloping gently down to the bottom of a ditch thirty yards in front, containing an eight-foot unclimbable fence. On the outside of the fence the bank of the ditch rose sharply to protect and hide the fence, then the glacis continued to slope away across the sports field to Barrack Road. This Profile was specially designed to provide the defending infantry with the best conditions in which to use their new magazine rifles. They could retreat to the dugout when being shelled and re-emerge to man the fire step as the enemy infantry attacked across open ground. The entrance gate of Beacon Hill, being a vulnerable point, faces the Redoubt, at that time armed with machine guns and 68-pdr. SB on the land side.

Construction work began on 10 January 1889 and the battery was substantially complete by 30 September 1890. On 5 March 1890 the first trials in the United Kingdom were carried out on the 10-inch BL gun fitted to an Armstrong HPDS mounting firing 500 lb. shells propelled by 252 lbs. of prismatic brown gunpowder.

### **The Beacon Hill Battery: a detailed description**

In about 1543 a blockhouse had been built on Beacon Hill, but it had limited life and the hill was refortified at the time of the Armada, being joined to the town walls by an entrenchment. Plans show no further defence works until 1812, although a small fort was planned in 1709. In 1812 a battery was built at the tip for five 12-pdrs. but it was destroyed by sea erosion by 1822. A replacement battery was proposed by Col. Tylden in 1839 and some sort of fortification is shown on the plans of 1866. In 1871 a practice battery replaced this, facing south across Mill Bay and continued to be used until about 1894 when it was replaced by a further practice battery of three 64-pdr. R M L.

On 6 September 1888 authority was given to build on the new battery at Beacon Hill, to be armed with a 10-inch BL and a 6-inch BL on HP carriages. Work started on 10 January 1889 and was substantially complete by 30 September 1890 by which time two 4.7-inch had been added to the armament. Their emplacements being finally completed by 15 May 1892. The 6-inch and 10-inch guns were mounted on Elswick pattern HP mountings. The 10-inch gun arrived on 21 September 1889 and fired its trials on 5 March 1890. Forty-seven rounds were fired, the mountings being found to be satisfactory and accepted into service. The gun barrel was then removed to Landguard for trials and a fresh barrel delivered on 3

October 1891. This mounting appears to have been entirely satisfactory throughout its life. The armament was completed with two 3-pdrs. initially on carriages but with purpose-built mountings from 21 January 1898.

Minor works continued over the next few years, including the provision of gun sheds and a magazine for the 3-prs. in 1895. A practice battery magazine was built between 1894-95, followed by an armourer's shop in 1898. Oil engines started to replace the steam engine in the generator room in 1901-03. In 1900-01 an entirely new emplacement was built to house a 6-inch QF outside the main entrance, the land defences being extended to cover the rear.

Shelters for the gun crews date from 1902-03 and, to the south, in 1904 a new entrance, now destroyed, gave access to a practice battery of four 5-inch BL outside the defences.

The Owen Committee's recommendations swept the battery clear of this proliferation of armament. The 6-inch and 10-inch HP were replaced by two 6-inch MK VII on MK II mountings built into the old emplacements. The 4.7s were kept, but the 3-pdrs. and the 5-inch BLs went. A substantial BCP was built on the roof of the practice battery magazine, all this being completed between 1908 and 1911. Range finding was by position finding, with a group of cells being built to the north and three individual ones at varying distances to the south. Searchlight emplacements were constructed north and south of the main battery, but a sentry beam emplacement of 1899 is the only original left. The other remaining structures all date from the Second World War. In 1916 the BCP was destroyed, so as to improve the arcs of fire towards the land and a temporary timber BCP constructed behind the 4.7s further north.

Good intentions between the wars achieved nothing and the battery entered the Second World War much as it had ended the first, save that the 4.7s were withdrawn in 1927 in anticipation of the installation of twin 6-pdrs. The instruction book for the twin 6-pdr. was issued in 1937 but the emplacement was not started until April 1940, the guns being calibrated on 3 July. This twin 6-pdr. became known as Cornwallis' Battery. Concrete splinter covers were provided for the 6-inch guns at the same time. During that winter a new engine house and the present BOP were constructed. The MGRA remarked on 22 October 1941, that it was 'a blot on the landscape'.

At some stage in 1941 a radar tower was constructed by the Royal Navy and by October the battery commander was conducting trials to see if the guns could co-operate with what was essentially a surveillance set. The construction of the control tower for the twin 6-pdrs, seriously interfered with the arc of fire on the right hand 6-inch gun, so in January 1942, the new gun emplacement built on the front of the old 6-inch QF emplacement was re-constructed to accept a 6-inch MK7 on a MK IV mounting. The intention was to provide Beacon Hill with 6-inch MK XXIV, guns, but first there was a delay, then cancellation in favour of two 5.25-inch on dual purpose mountings. However, peace came and the 5.25s were not installed. The 6-inch MK VIIs were withdrawn in 1947 and Beacon Hill saw out its days with the twin 6-pdrs, until it was closed in 1956. After that date the magazines were in use for some time. The local council then bought the fringes of the site and the central part was sold to an unidentified purchaser in 1981. Beacon Hill with its ancillary radar, PF Stations and SLs is now designated an ancient monument.

# Appendix 2

Report on the Survey of Beacon Hill Defences, Harwich

For: Tendring District Council Essex Naturalist's Trust 3rd March 1989.

## Introduction

This report was compiled at the request of Tendring District Council and considers Wildlife potential and management possibilities for the area known as Beacon Hill, Harwich.

The data upon which this report is based was collected by a team of two surveyors from the Essex Naturalists' Trust's Employment Training Scheme, Essex Wildlife Enterprise, on February 23rd 1989. The data collected takes the form of a set of species records and an assessment of the habitat combination on the site.

It should be noted that while every effort was taken to ensure the accuracy of the data collected, due to the time of year at which the visit was made, and the relatively short time spent on site, the data presented in the results section of this report is not definitive.

## Results

The results of the botanical survey are given in Appendix 1 of this report. They take the form of two species lists, one covering the area of long grass, bramble and ruderal herbs on the foreslope of the area, and the other covering the mixed scrub/grass/tall ruderal vegetation to the rear of the main defences.

There has been no attempt to evaluate the relative dominance or numbers of the respective species due to the fact that many species are not easily visible in February and such an evaluation would present an inaccurate impression of the comparative vegetation cover on the site.

## Observations

The area on the east of the site, lying between the main gun positions and observation towers and the foreshore, consists of a shallow slope dominated by areas of short grass and ruderal herbs running down to a steeper angled slope dominated by a mix of low scrub vegetation, Brambles (*Rubus fruticosus*) and Elder (*Sambucus nigra*), with a high proportion of tall ruderal herbs, in particular willowherbs (*Epilobium* spp) and Nettles (*Urtica dioica*).

The vegetation in this area forms a mosaic of sub-communities, principally invasive rank vegetation with localised dominant stands of such species as *Epilobium*, *Artemisia*, *Urtica* and *Ulex*, particularly along the steeper slope where the ruderal vegetation is almost completely dominant with only a minimal cover of grasses.

The upper part of the slope is more of a grass dominated mosaic. Part of the area, in particular the strip running down towards the breakwater, is a co-dominance of Yorkshire Fog (*Holcus lanatus*), Cock's-foot Grass (*Dactylis glomerata*) and Creeping Bent Grass (*Agrostis stolonifera*). This has a small proportion of low creeping perennial and annual herbs.

The second main habitat is the tall dense scrub and patchy grass/tall ruderal vegetation to the rear of the main gun lines. This area has developed a mosaic of mixed open grass/scrub communities, occupying the upper slopes and the exposed soils on the top of the underground shelters and stores, and denser scrub/tree communities between the main structures. The structure of these communities varies, but in general there is a dense cover of older, thicker scrub species with a sparse ground flora, mainly of tall ruderal species in a species-poor mix due to the low levels of light reaching the ground.

The mix of species includes a number of plants that are non-natives. Tamarisk is an introduced plant normally found in the south of Europe, while the specimens of Privet recorded appear to be of the garden variety. The Sedum noted is also an introduced variety that is a garden escape.

The mixture of communities outlined above is typical on ground which was at one time bare and disturbed. This is why the more mobile ruderal species and those from nearby gardens have been able to colonise the area.

At the time of the visit there was a large number of common garden birds present on the site and there appeared to be a number of old nests in the taller and thicker areas of scrub vegetation. The close proximity of Landguard Point, with its associated record for migratory birds suggests that the site is a potentially important landfall site for birds during the Spring and Autumn passage.

## **Recommendations**

It is recommended that belts of the tall ruderal and rank grass vegetation should be left around the perimeter of the area, in particular on the steep slopes running down to the foreshore. These areas should be as large as possible to provide cover and a food supply for incoming migratory birds. It is suggested that a network of blocks interconnected by perimeter strips of similar vegetation would provide adequate refuge areas for the insect and mammal life as well as the birds which currently use the site. The area will require occasional cutting to keep down the larger, more dominant scrub species and allow the rest of the plant community currently present on the site to maintain a presence. This cutting should be carried out in blocks at different times, not all at once, as this will allow the partial regrowth and re-establishment of the vegetation and resultant habitat in the time between the cuts. Cut half the area every other year in April to allow overwintering insects to emerge and remain on the site.

The area to the rear of the gun lines is considerably larger and will require a subsequently larger amount of maintenance and management work. The prime value of the area is as a nesting/roosting site for birds. However the underground shelters have potential as bat roosts and it is recommended that the Essex Bat group be invited to examine the site. If it is found that the sites are suitable then some of the underground chambers could be sealed up to leave access only large enough for bats. Such sealing would have to be secure enough to prevent the sites being disturbed by human interference. It is recommended that the area be managed primarily for the benefit of the birdlife. This is achieved by selecting blocks of the scrubs for a rotational coppice management. This will allow extra light down to the ground flora, revitalise the plant

growth and improve the cover available to the birds as the plants regrow. The time of cutting and interval of time between each cut will depend on the species concerned but a rotation of between 8-14 years should be adequate with the coppicing being carried out between November and March.

This is easiest achieved by dividing the area into 8-14 blocks and cutting one block each year.

Other areas of the scrub vegetation should be left to run into a more mature state, with the better specimen of trees being allowed to grow into large standards in the future. Where there are areas of more open grass these should be maintained as grassland by cutting back encroaching scrub vegetation and giving the grass a once-yearly cut to stop any scrub seedlings establishing themselves and to maintain and encourage the grassland diversity.

It is recommended that part of the area to the rear of the site will not be developed and will be kept as a wildlife refuge. Where possible those areas that are managed for wildlife should have restricted access to ensure that the increased visitor use of the site does not cause unnecessary disturbance or damage to those sites. In addition, where it is necessary to cut back the vegetation from the footpaths and tracks a fringe of scrub species should be left. If any in-planting is anticipated it is recommended that only native species should be used. It is also suggested that an information board be erected with a plan of the site, showing a visitor nature trail and explaining the wildlife value of the area that is being encouraged by the adopted management.

#### List 1

Site: Foreslope in front of defensive positions.

Date: 23/2/89

Latin name	English (Common) name
<i>Achillea millefolium</i>	Yarrow
<i>Anagalis arvensis</i>	Scarlet Pimpernel
<i>Artemisia vulgaris</i>	Mugwort
<i>Ballota nigra</i>	Black Horehound
<i>Cirsium arvensis</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Dactylis glomerata</i>	Cock's-foot Grass
<i>Elymus repens</i>	Couch Grass
<i>Epilobium spp</i>	Willowherb species
<i>Galium aparine</i>	Cleavers
<i>Geranium spp</i>	Cranesbill species
<i>Glechoma hederacea</i>	Ground Ivy
<i>Hedera helix</i>	Ivy
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Malva spp</i>	Mallow species
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Potentilla repens</i>	Creeping cinquefoil
<i>Rubus fruticosus</i>	Bramble
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex obtusifolius</i>	Broadleaved Dock
<i>Sambucus nigra</i>	Elder
<i>Senecio erucifolius</i>	Oxford Ragwort
<i>Senecio jacobea</i>	Ragwort
<i>Sonchus oleraceus</i>	Sowthistle
<i>Trifolium repens</i>	White Clover
<i>Urtica dioica</i>	Nettles
<i>Veronica chamaedrys</i>	Germander Speedwell
<i>Vicia sativa</i>	Common Vetch

## List 2

Site: Area to the rear of defensive positions.

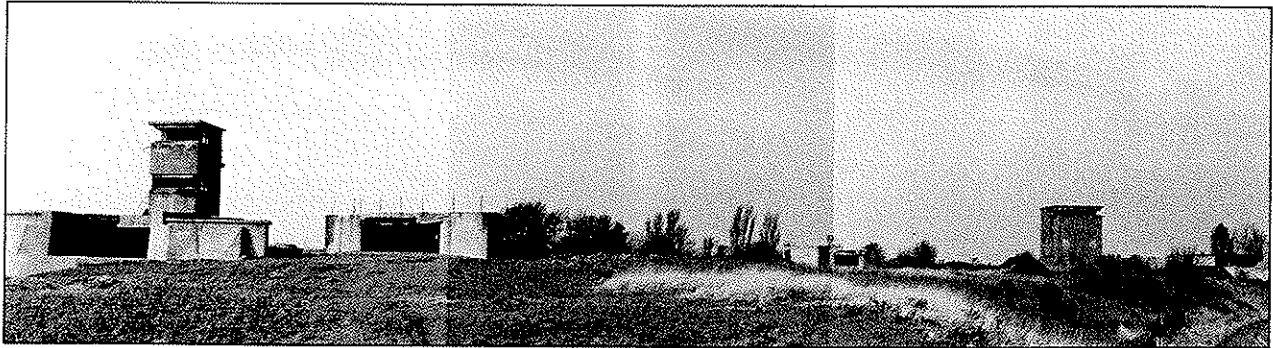
Date: 23/2/89

Latin name	English (Common) name
<i>Acer pseudoplatanus</i>	Sycamore
<i>Agrostis stolonifera</i>	Creeping Bent Grass
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Arrhenatherum arvense</i>	False oat-grass
<i>Bellis perennis</i>	Daisy
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cirsium arvensis</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Crataegus monogyna</i>	Hawthorn
<i>Cytisus scoparius</i>	Broom
<i>Dactylis glomerata</i>	Cock's-foot grass
<i>Epilobium ciliatum</i>	American Willowherb
<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's-foot Cranesbill
<i>Hedera helix</i>	Ivy
<i>Ligustrum vulgare</i>	Privet
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Lonicera perichlymenum</i>	Honeysuckle
<i>Picris echioides</i>	Prickly Ox-tongue
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Populus nigra var italica</i>	Lombardy Poplar
<i>Potentilla repens</i>	Creeping Cinquefoil
<i>Pteridium aquilinum</i>	Bracken
<i>Rubus fruticosus</i>	Bramble
<i>Rumex obtusifolius</i>	Broadleaved Dock
<i>Sambucus nigra</i>	Elder
<i>Sedum spp</i>	Stoncrop species
<i>Senecio vulgaris</i>	Ragwort
<i>Silene dioica</i>	Red Campion
<i>Tamarix gallica</i>	Tamarisk
<i>Ulex europaeus</i>	Gorse
<i>Urtica dioica</i>	Nettles
<i>Viccia cracca</i>	Bush Vetch



# Appendix 3

Photographic survey of Beacon Hill (1989)

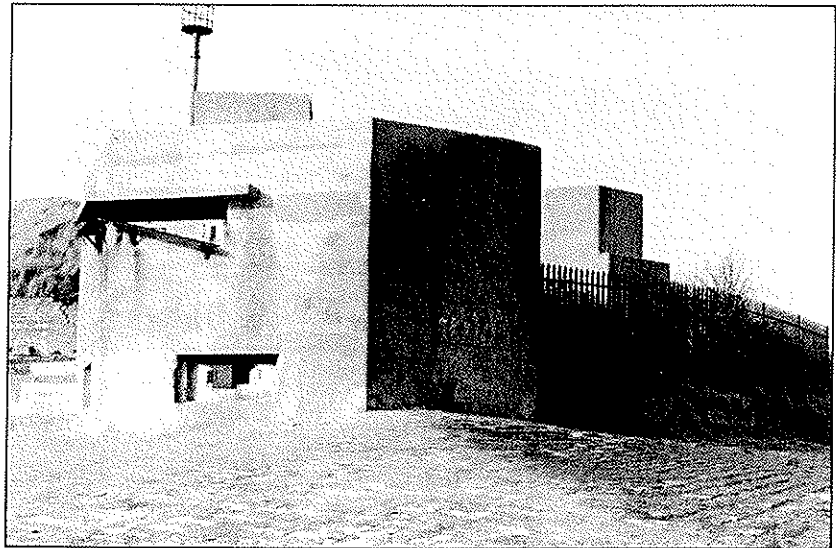


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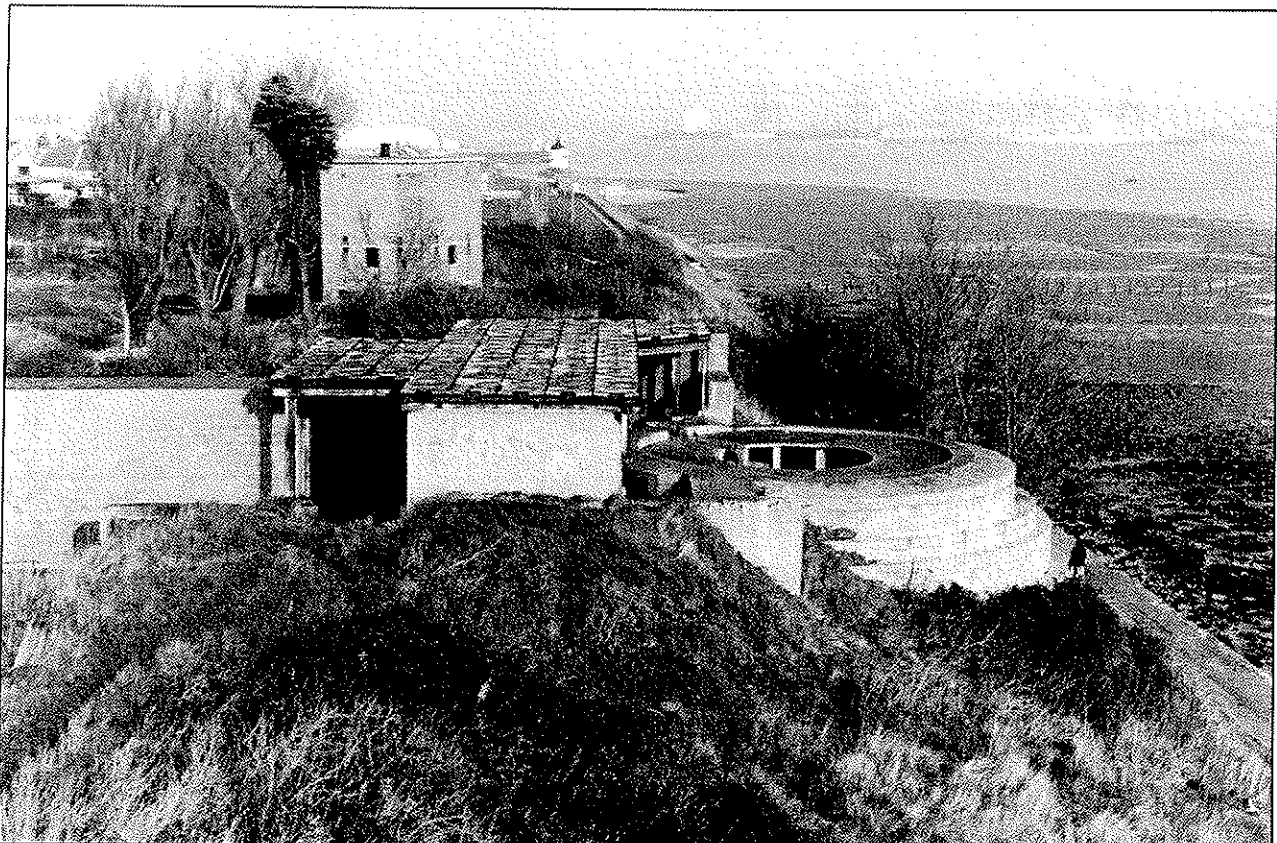
1 General view showing from left to right: Cornwallis Battery, 6in Gun Emplacements and Base Observation Post.

2 Mine Control Tower.

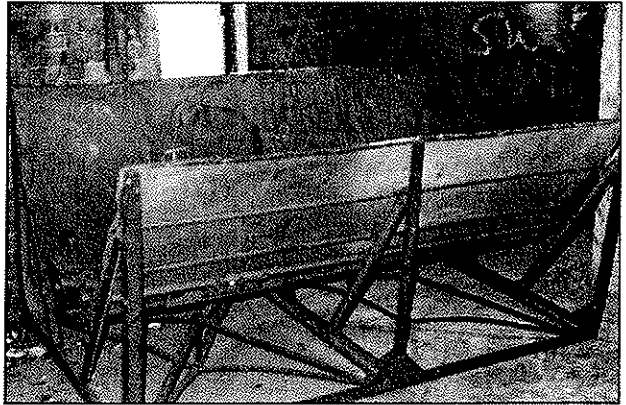
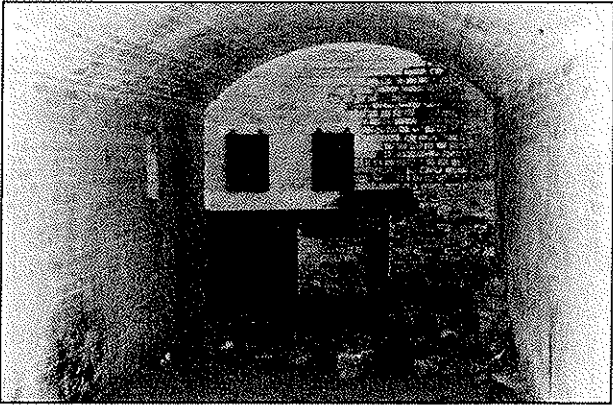
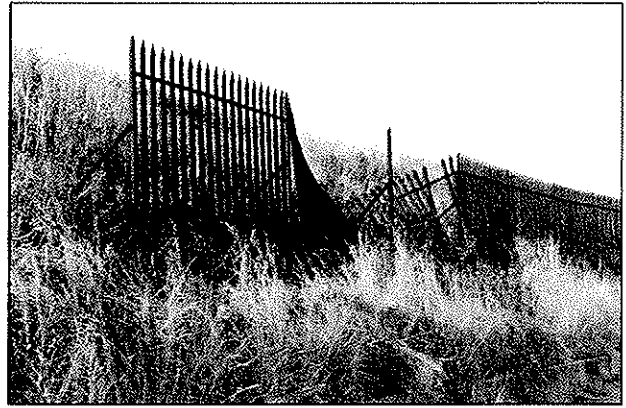
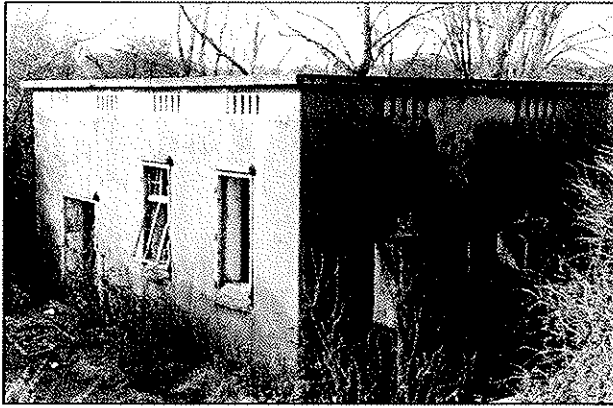
3 6in Mk. VII Gun Emplacement 1941-56 with Radar Tower in middle distance.



2



3



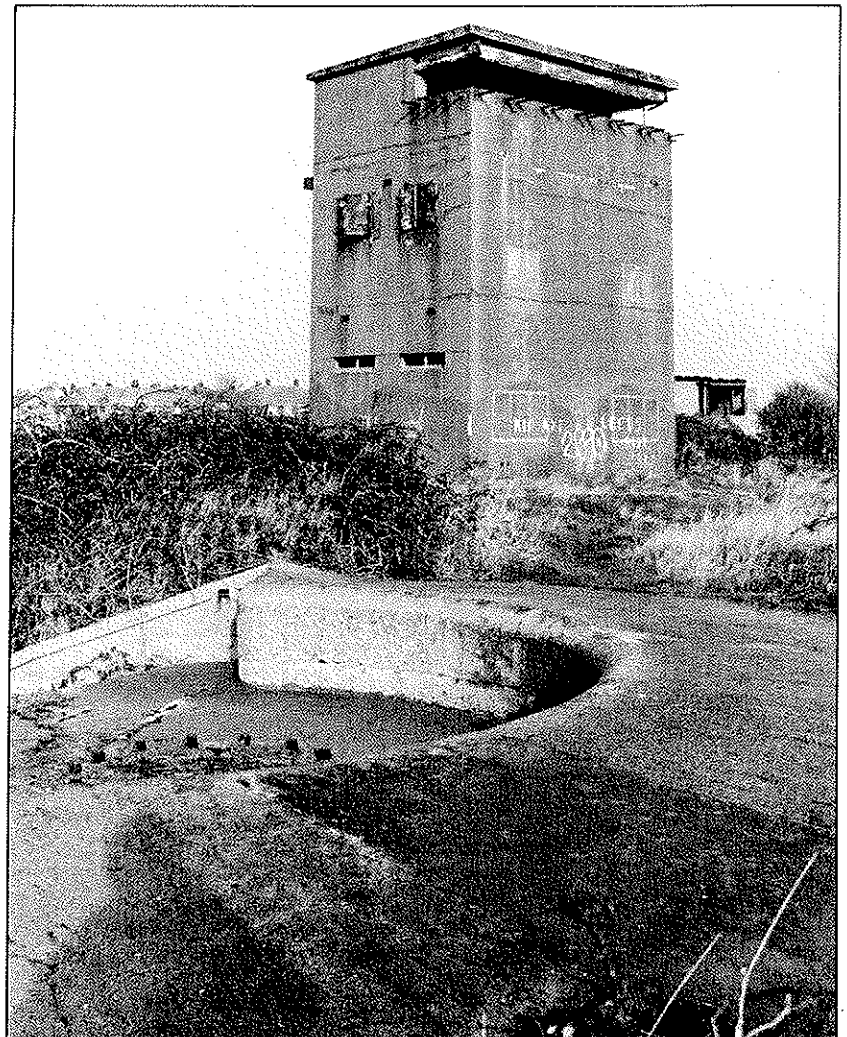
4 Original Engine House.

5 Dacoit Fencing – Part of the site's defences against infantry attack.

6 Part of underground 6in Magazine.

7 One of the surviving Radar Reflectors.

8 Base Observation Post 1940-1956 built on top of earlier 4.7in Gun Position.

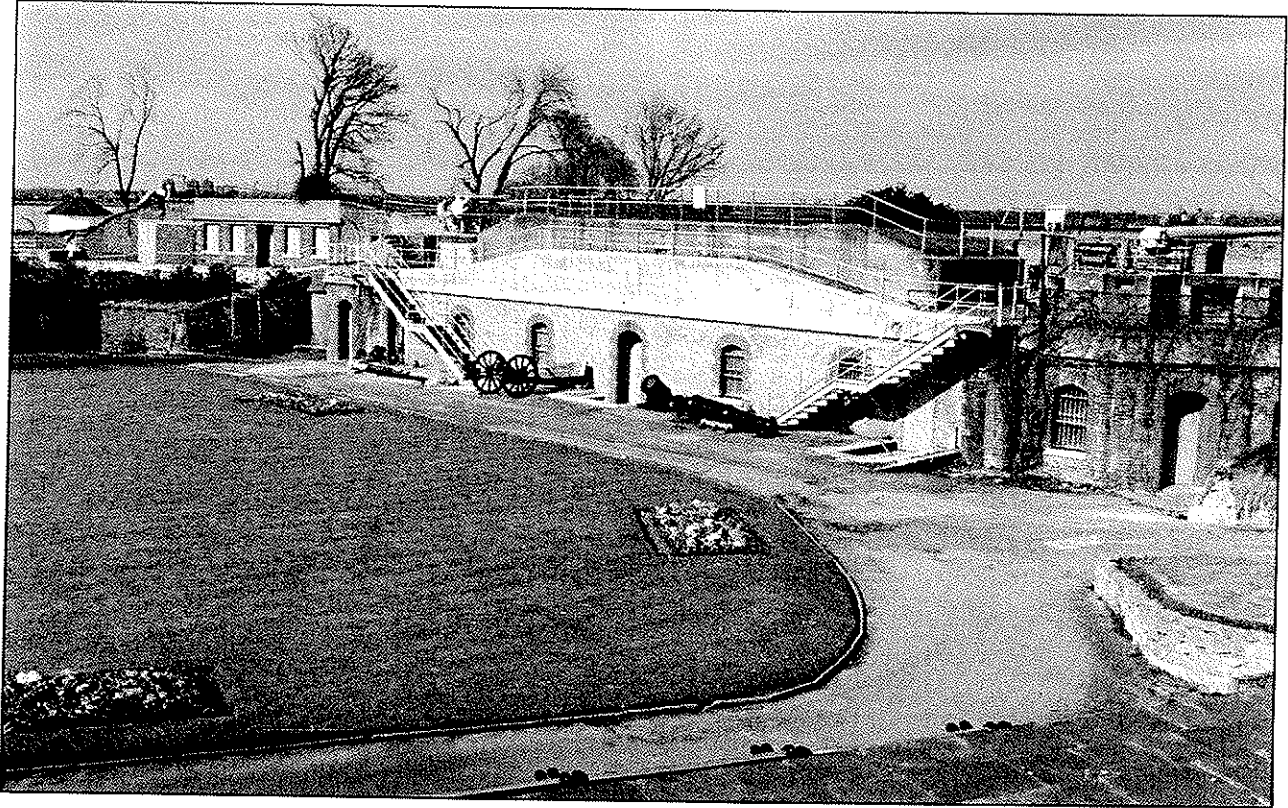


# Appendix 4

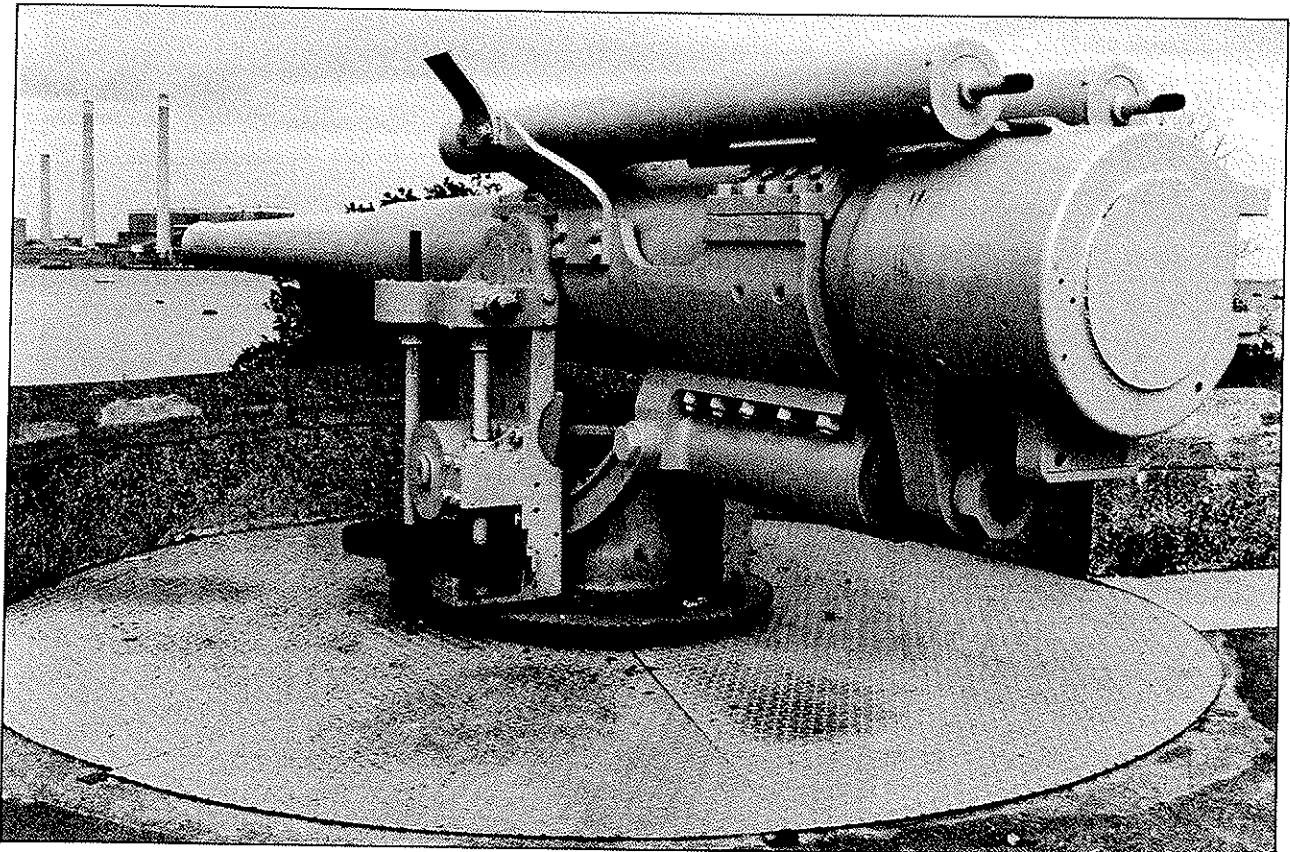
*Some examples of other fort restorations*

1 The 6in Gun Battery at New Tavern Fort (1989).

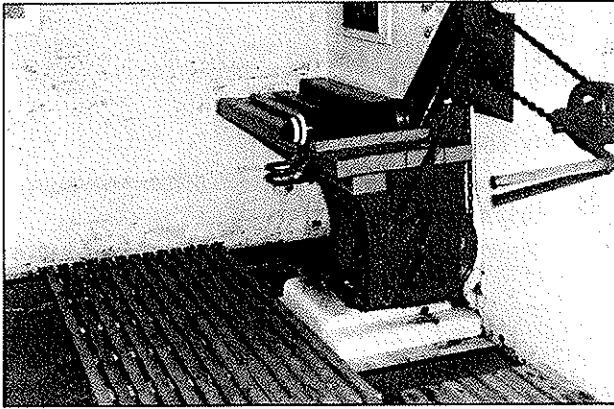
2 6in Breech-Loader at New Tavern Fort, Gravesend (1989) similar to the guns at Beacon Hill in the post – disappearing mounting phase.



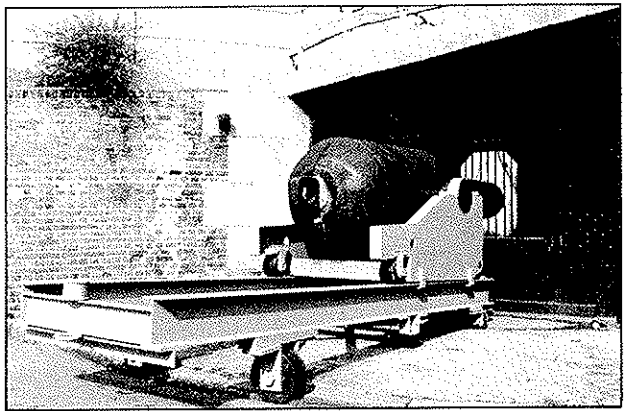
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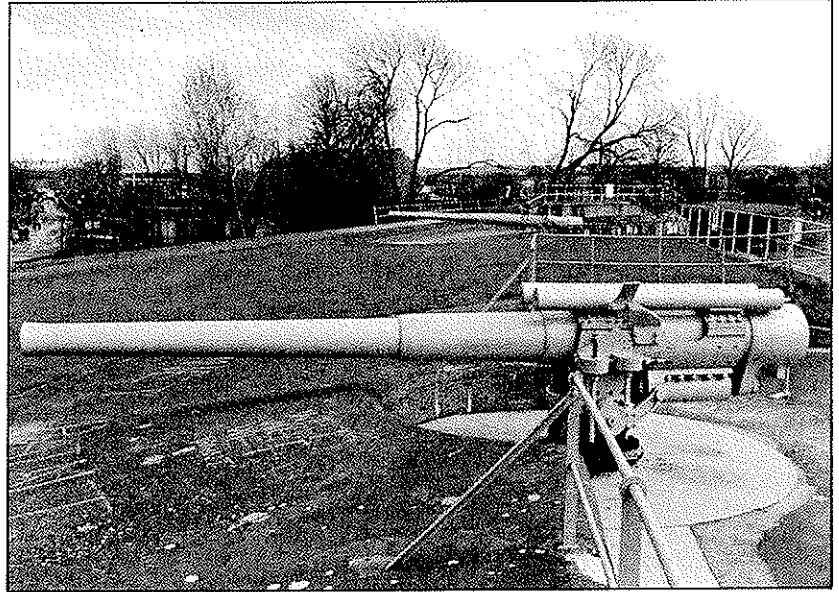


3 Reinstated 6in Magazine,  
Tynemouth Castle (1989).

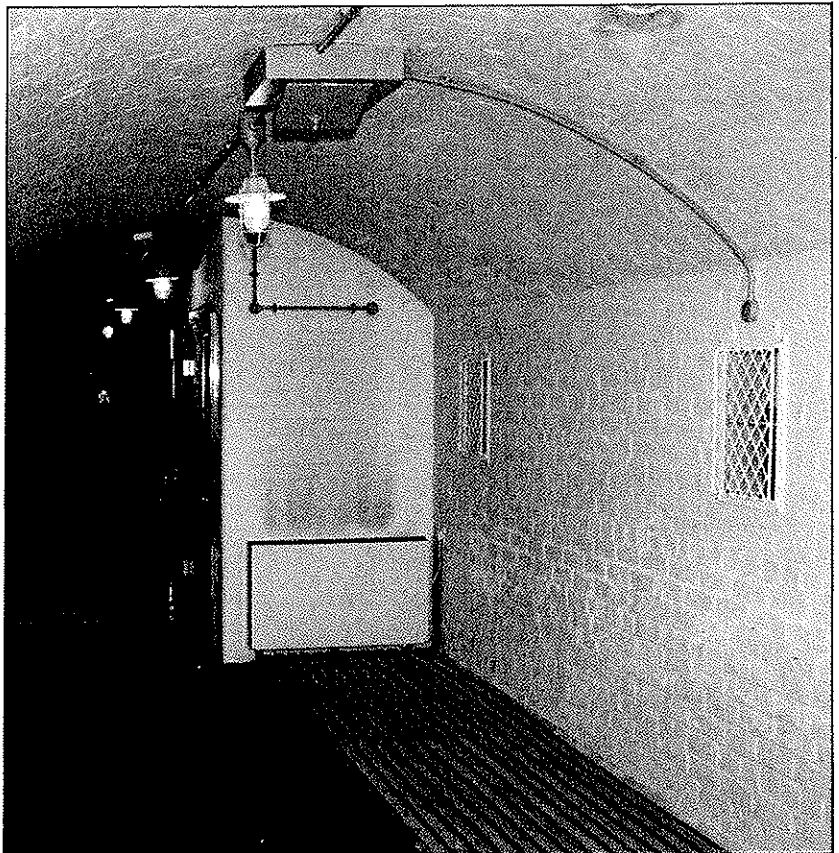


4 Replica Rifled Muzzle-Loader and  
Carriage at New Tavern Fort (1989).

5 6in Breech-Loaders at New Tavern  
Fort, part of the restoration scheme for  
the Fort (1989).

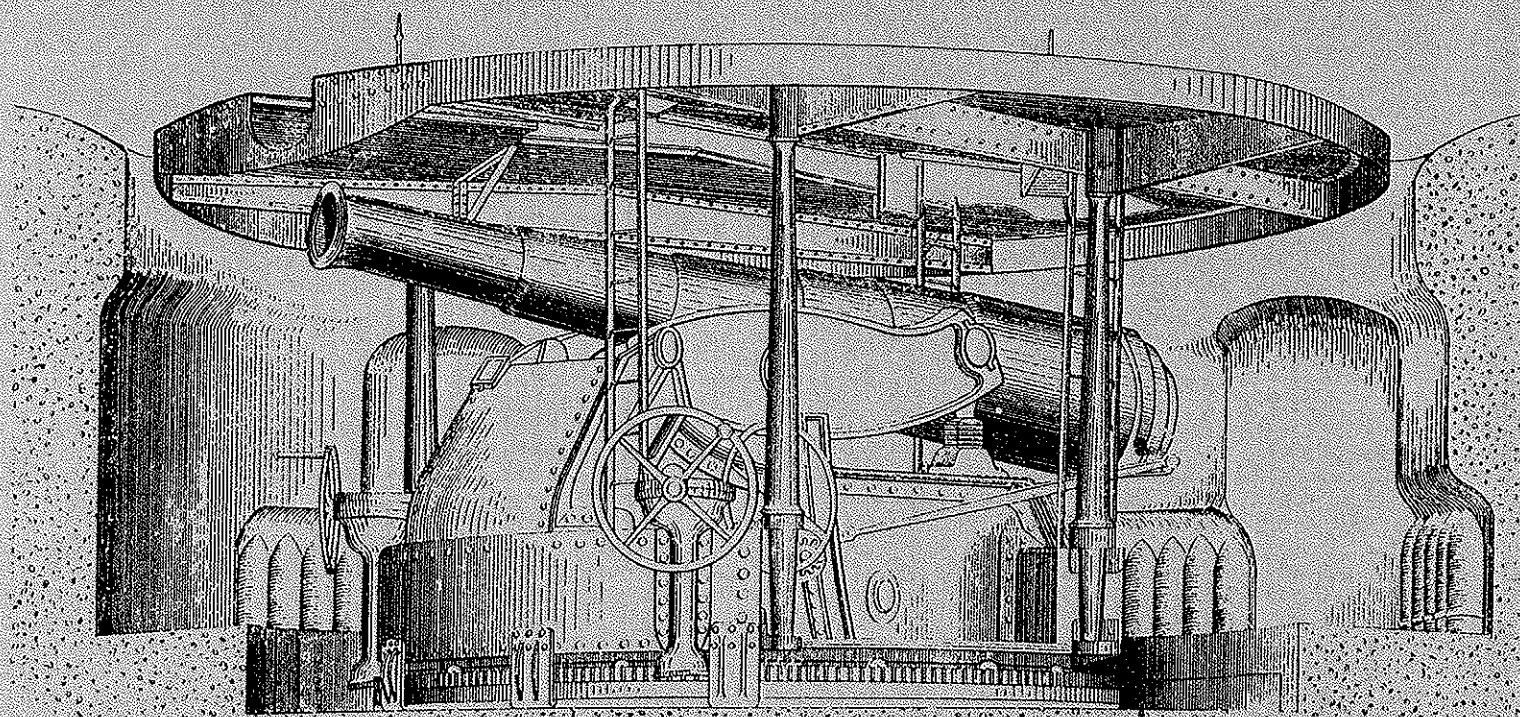


6 Reinstated 6in Magazine,  
Tynemouth Castle (1989).





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