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INSTITUTE OF TERRESTRIAL ECOLOGY
(NATURAL ENVIRONMENT RESEARCH COUNCIL)

MHA/NERC CONTRACT
ITE PROJECT 1090

LONDON-FOLKESTONE-DOVER TRUNK ROAD A20
COURT WOOD TO DOVER SECTION

ECOLOGICAL APPRAISAL

C SARGENT, J CLARK & M D HOOPER

Monks Wood Experimental Station
Abbots Ripton
Huntingdon
Cambs PE17 2LS

January 1987

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Continued

CONTENTS continued

1. SUMMARY

1.1 This report discusses the likely impact on the biological environment of the proposed extension of the A20 from Court Wood (Capel le Ferne 61/212377) to urban Aycliffe (Dover 61/399 307).

1.2 It follows a previous report on the proposed route of the A20 between Castle Hill and Capel le Ferne (Sargent, Pattingale & Hooper 1986).

1.3 Five areas of possible conservation importance are considered.

1.4 Likely reactions of the environmental organisations are discussed, and recommendations for amelioration of impacts by establishment of new habitats are made.

2 INTRODUCTION

2.1 The Institute of Terrestrial Ecology (ITE) under contract since 1985 with Mott, Hay & Anderson (MHA), have surveyed the line of the proposed extension of the A20 (Folkestone to Dover).

2.2 An earlier report (Sargent, Pattingale & Hooper, June 1986) describes the environment of that section of the proposed route between Castle Hill and Court Wood, included in the Channel Tunnel Bill; it considers ecological effects that would likely result from construction of this road; recommends ways of ameliorating deleterious impacts and creating or replacing lost habitat; reports responses of concerned organisations; and gives a biblography.

2.3 This report deals with the remaining section of the proposed A20 Court Wood to Dover, published under draft orders in January 1987 shown on drawings MHA 293, 543, 544, 545 and 546. The road crosses the line of the existing A20 east of Capel-le-Ferne at Court Wood, passes through arable land before crossing Lydden Spout rifle range area above Abbots Cliff. The route follows the Old Folkestone Road valley down towards Aycliffe and Dover, following the course of the valley bottom as closely as road alignment standards permit, and skirting Round Down (National Trust).

2.4 A preliminary visit to the land was made in June 1986 and a detailed survey completed during August, 1986.

2.5 Discussions have been held with representatives of the Nature Conservancy Council (NCC), Countryside Commission (CC), Kent Trust for Nature Conservation (KTNC) and National Trust (NT), and are reported in the text as appropriate.

2.6 A bibliography is given.

3 CONSERVATION INTEREST IN THE PROPOSED ROUTE

3.1 The entire length of the road as far as Aycliffe falls within an Area of Outstanding Natural Beauty (AONB; Figure 1) and the road touches the Folkestone Warren Site of Special Scientific Interest (SSSI) at three places (Overlay 1:2). The KTNC have an interest in Farthingloe Down, although the area is not defined as a reserve.

3.2 Five areas which may be ecologically or politically sensitive have been identified and are described below.

1 Lydden Rifle Range lying partly within the Folkestone Warren SSSI.

2 Farthingloe Down, and of some interest to the KTNC.

3 Round Down (owned by the National Trust and falling entirely within the SSSI.)

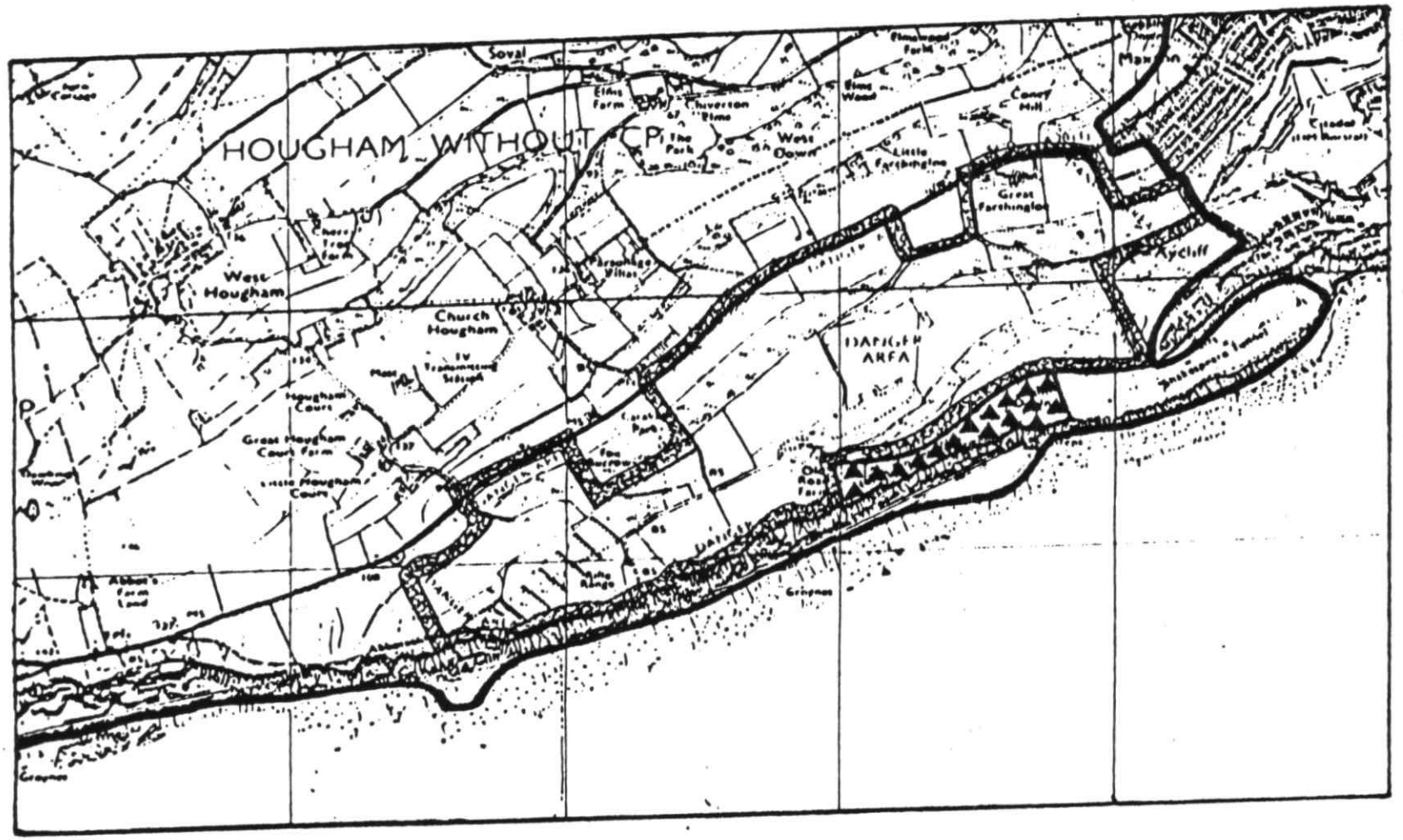
4 The area of grassland near Aycliffe, part of which falls within the SSSI.

5 The verges of the existing old Folkestone to Dover Road.

3.3 Elsewhere the route is across grade 3-4 agricultural land which is presently arable or under ley, or passes through urban areas of Aycliffe and Dover.

Figure 1

CURRENT LAND DESIGNATIONS

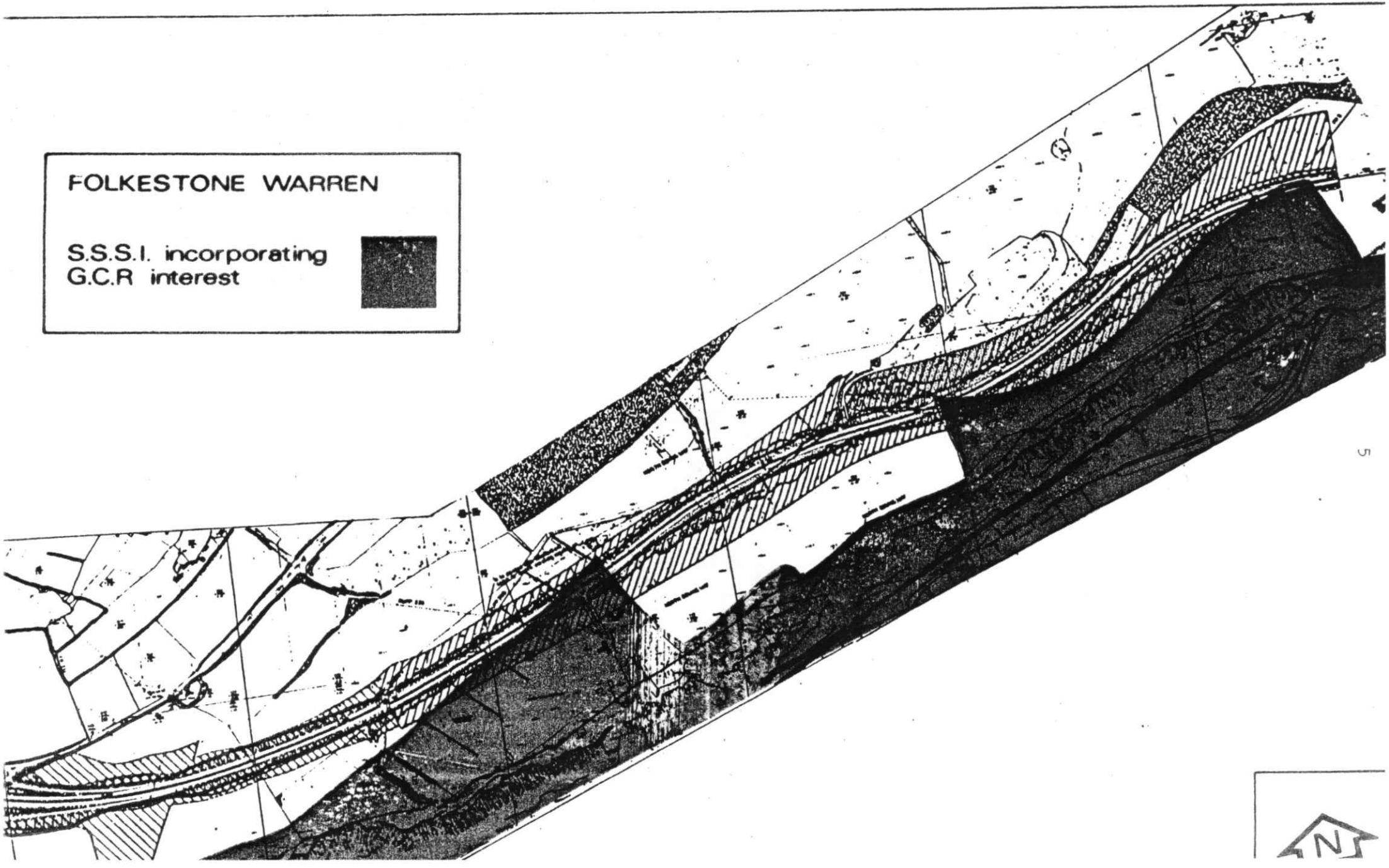


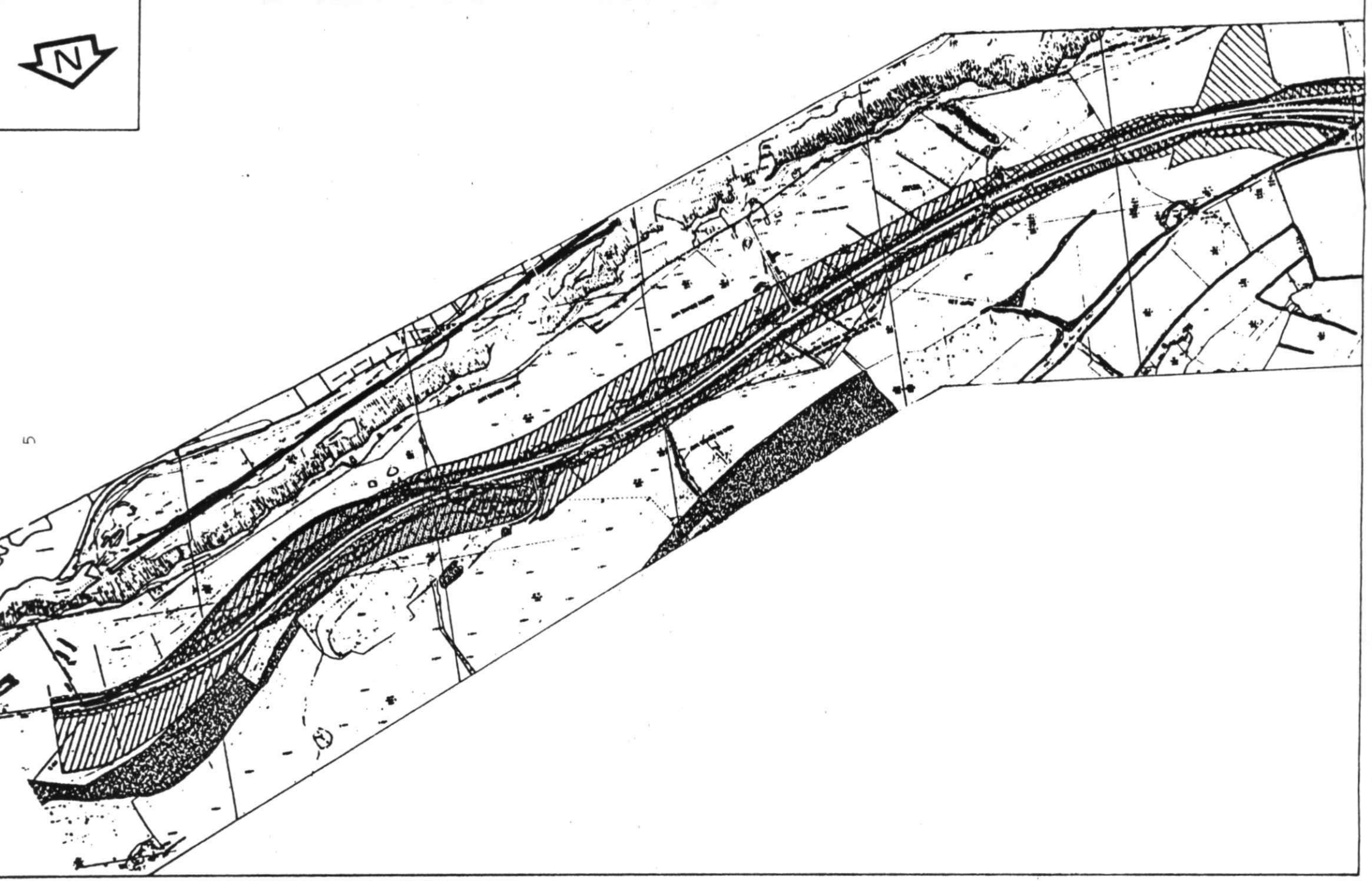
Ministry of Defence Land

Area of Outstanding Natural Beauty

National Trust Land

scale 1:25000


FOLKESTONE WARREN
S.S.S.I. incorporating
G.C.R interest
N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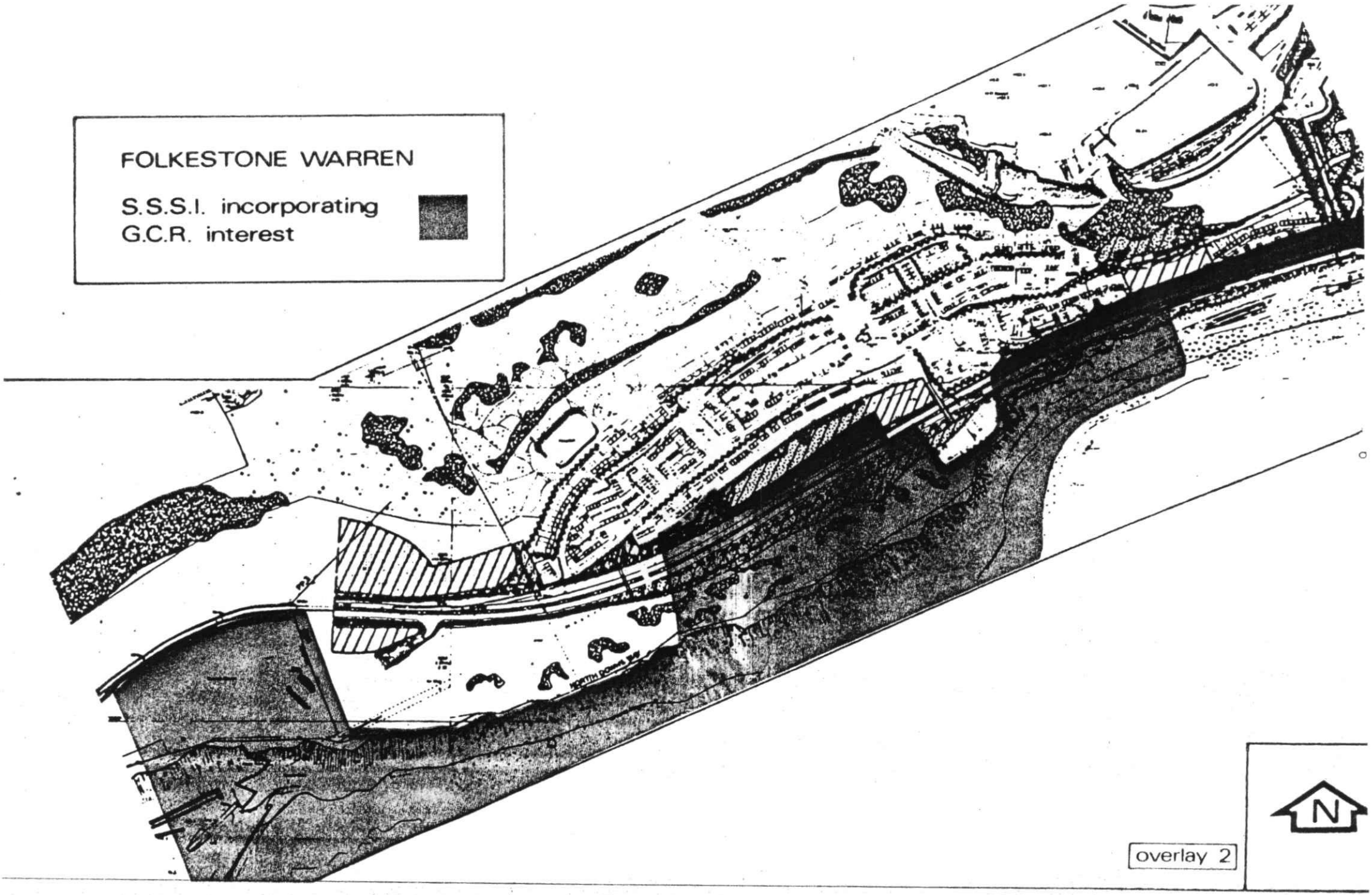
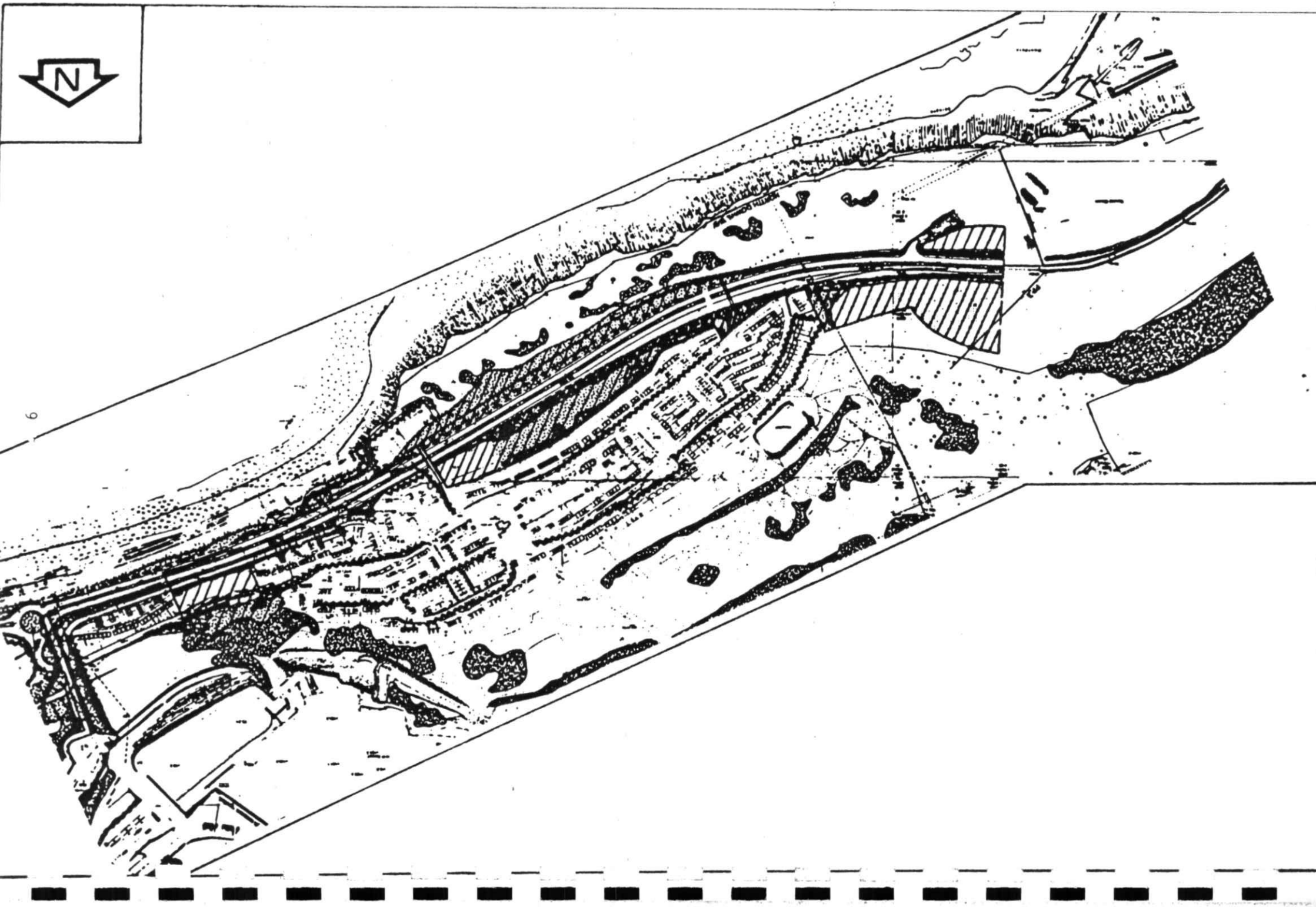

FOLKESTONE WARREN
S.S.S.I. incorporating
G.C.R. interest
overlay 2
N


N

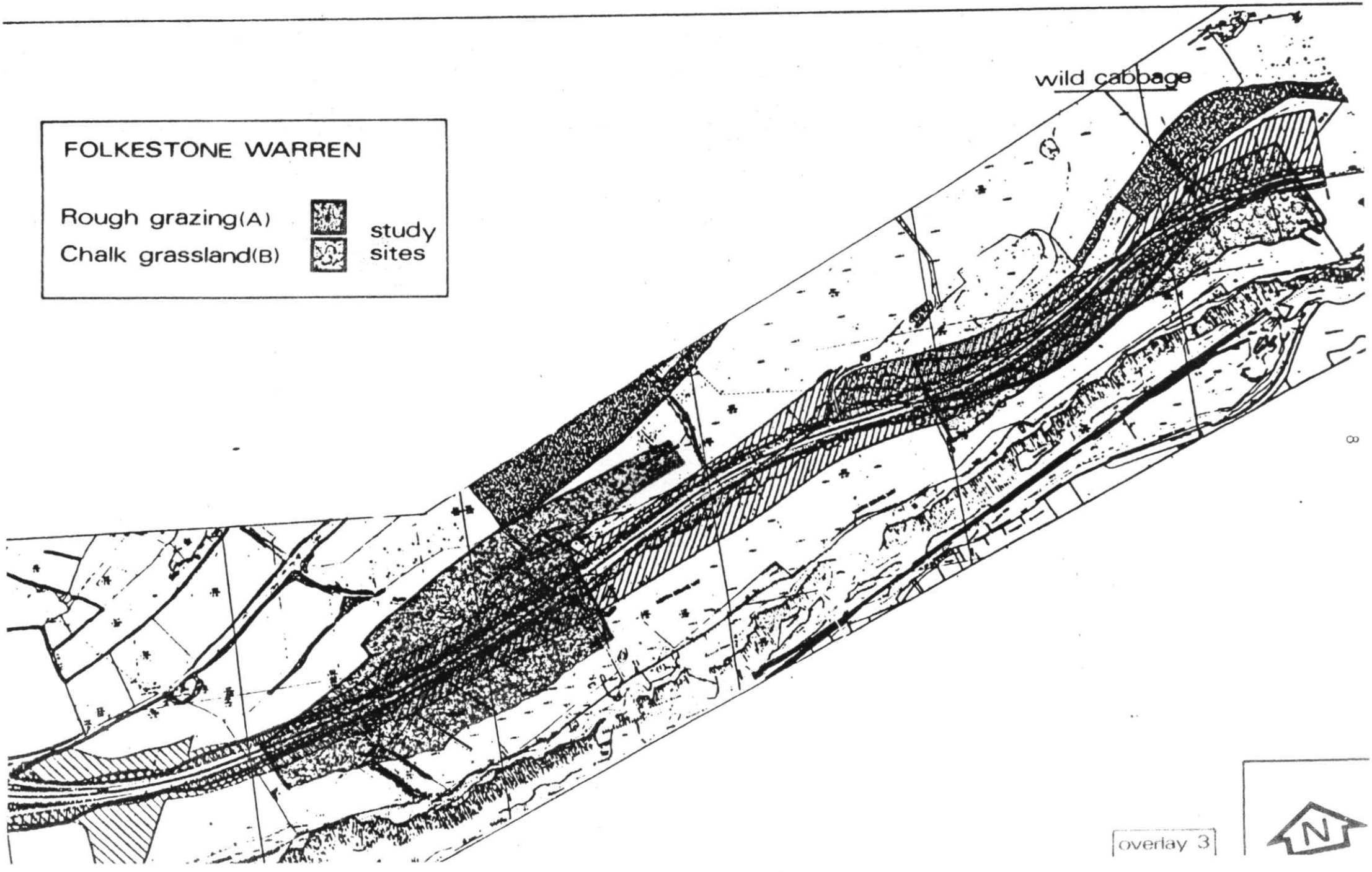
4 LYDDEN RIFLE RANGE

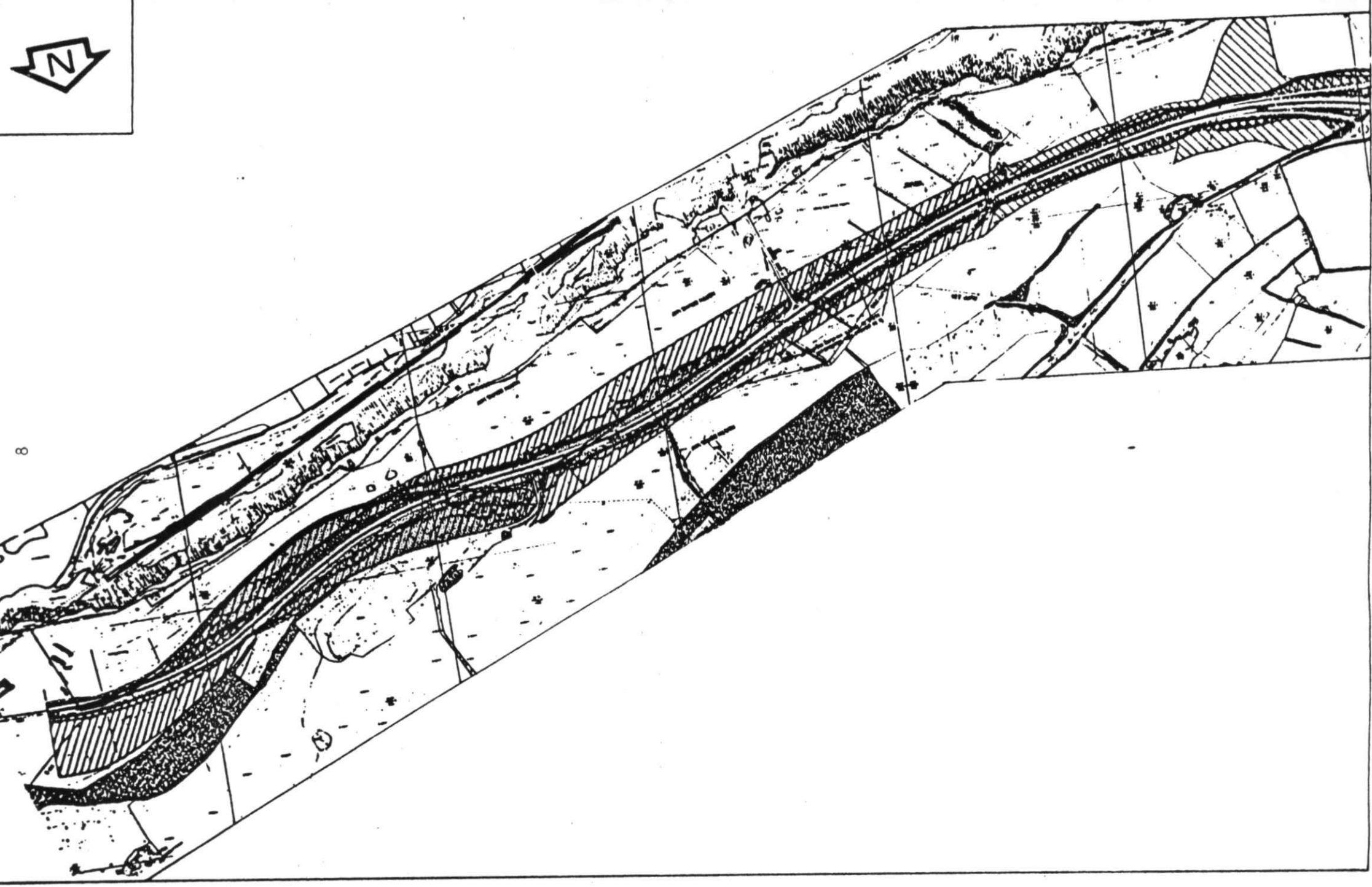
4.1 Lydden Rifle Range is marked as site A on Overlay 3. A species list is given in Table 1. It is an area of rough cattle-grazed grassland dominated by perennial rye grass (Lolium perenne) and red fescue (Festuca rubra). There are few herbs in the sward, and those recorded recently are all common plants. There is, however, a small area of better grassland at some distance from the proposed line of the road, where agrimony (Agrimonia eupatoria), hard-heads (Centaurea nigra), and wild carrot (Daucus carota), grow. There are areas of gorse (Ulex gallii) and blackthorn (Prunus spinosa) scrub, which are presently being bull-dozed out by the MOD or their tenant.

4.2 During the 1950s Dr Francis Rose recorded the early spider orchid (Ophrys sphegodes) from this area. He writes that "The area ... is notable for the abundance in some years, of Ophrys sphegodes and Orchis morio (green-winged orchid)" (Rose 1986). No trace of these plants was found during a thorough search in late July (1986 and 1987) (although this is a little late in the season for both plants), and there have been no recent records of either species (Richard Findon, NCC, personal communication). Further, the NCC, in revising the boundaries of the Folkestone Warren SSSI for renotification, has indicated it will omit this area from the SSSI. This revision corresponds with our site A (Overlay 3), and covers the entire area within the rifle range which would be affected by the proposed road.

4.3 The abundance of perennial rye grass, coupled with the general poverty of the flora in this area, indicates that the grassland has been improved in recent years probably by application of nitrogen fertilizers. Although there may be potential for reversing this impoverishment, at present the grassland is of little conservation worth.

4.4 The amenity and landscape value of the area is diminished by derelict buildings and earthworks.


FOLKESTONE WARREN
Rough grazing(A)
Chalk grassland(B)
study sites
wild cabbage
overlay 3
N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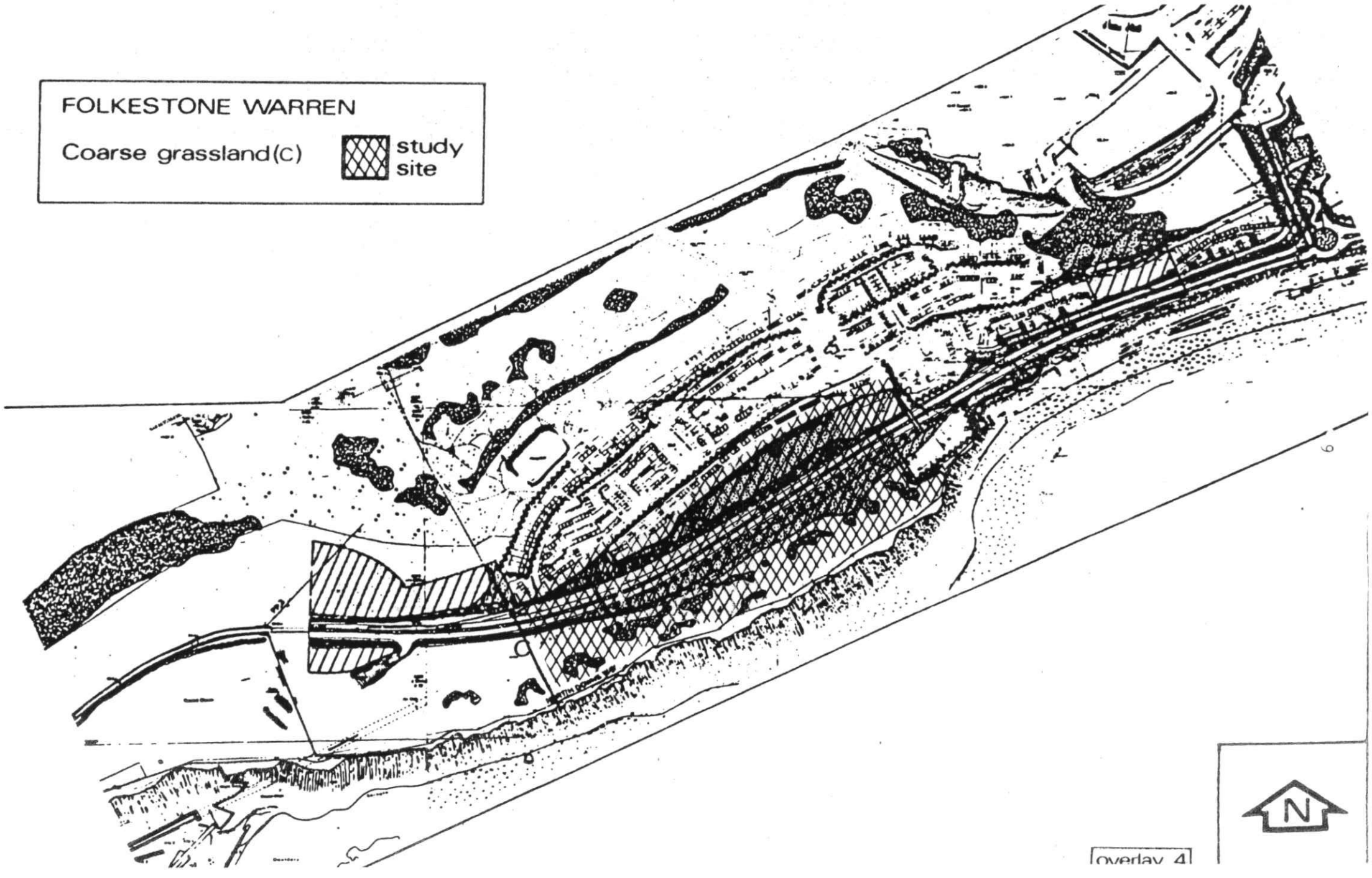
FOLKESTONE WARREN
Coarse grassland(C)
study site
N
overlay 4

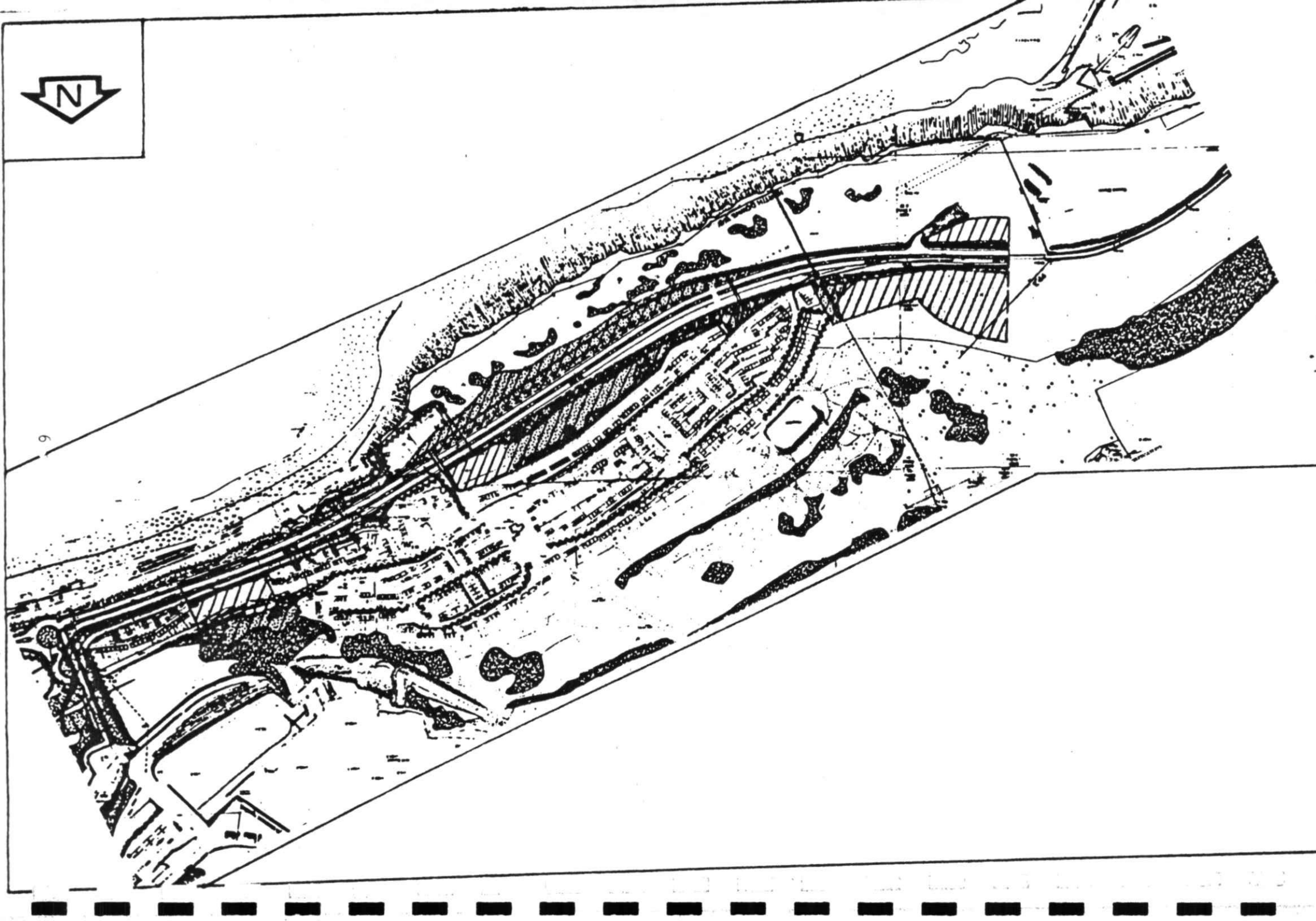
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TABLE 1 PLANT SPECIES RECORDED ON LYDDEN RIFLE RANGE AND PARTHINGLOE DOWN DURING AUGUST 1986

Achillea millefolium
Agrimonia eupatoria
Arrhenatherum elatius
Bellis perennis
Brachypodium pinnatum
Centaurea nigra
Cerastium fontanum
Cirsium arvense
Crataegus monogyna
Cynosurus cristatus
Dactylis glomerata
Daucus carota
Festuca rubra
Galium mollugo
Galium verum
Holcus lanatus
Leontodon autumnalis
Lolium perenne
Lotus corniculatus
Phleum bertolinii
Phleum pratense
Plantago lanceolata
Plantago major
Poa pratensis
Potentilla reptans
Prunus spinosa
Ranunculus bulbosus
Ranunculus repens
Rubus fruticosus
Rumex acetosa
Rumex crispus
Trifolium pratense
Trifolium repens
Trisetum flavescens
Ulex gallii
Urtica dioica

5 FARTHLINGLOE DOWN

5.1 Farthingloe Down is the hill to the north of the proposed route. It is an area of rough grassland and is continuous with the Lydden Rifle Range. The route passes through the southern flank of the Down. The grassland is of little conservation importance, and has been very disturbed recently by scrub removal. The species list given for Lydden Rifle Range also applies to Farthingloe Down.

5.2 Information supplied by the Kent Trust for Nature Conservation (KTNC) is reproduced in Appendix 1.

6 ROUND DOWN

6.1 Round Down is shown as site B on Overlay 3. A plant species list is given in Table 2. Round Down is owned by the NT and falls within the Folkestone Warren SSSI. At the time of inspection it was let to a tenant who grazed the species-rich chalk grassland with horses.

6.2 Despite numbers of people who use the grassland for recreation and for exercising their dogs, the area is outstandingly species-rich, supporting good populations of pyramidal (Anacamptis pyramidalis), and green-winged (Orchis morio), orchids, as well as dyers greenweed (Genista tinctoria), Nottingham catchfly (Silene nutans), a rather local form of eyebright (Euphrasia pseudokerneri), wild cabbage (Brassica oleracea), milkwort (Polygala vulgaris), horse-shoe vetch (Hippocrepis comosa), rock-rose (Helianthemum canum) and hay rattle (Rhinanthus minor). The early spider orchid (Ophrys sphegodes) is recorded from here (Francis Rose 1986), and although it was not seen during survey, it seems still to be a very likely habitat. The species list in Table 2 is annotated to show which plants are considered to be of importance, and distribution maps, showing the frequency with which these particular species occur within Britain are given (Figures 2-5). The distribution of the early spider orchid is shown in Figure 6.

6.3 The rare Adonis blue butterfly, feeding on horse-shoe vetch, is known from the area and was recorded there as recently as September 1986.

6.4 The proposed line of the road cuts off a small (300 - 400 square yds) part of Round Down in the north-east corner. This is a sheltered area where the horses stand. Horses droppings have enriched the turf, which consequently supports fewer, more competitive species such as docks (Rumex spp.) and thistles (Cirsium and Carduus spp.), although many of the better grassland components are still present.

6.5 Thus the area of take (0.16 hectares) is not large although moving the boundary will have the effect of altering the area where the horses stand, and a further patch of grassland will become nutrient-rich and species-poor.

6.6 Grazing horses on this turf is not in the best interests of conservation, and it would be prefereable if the NT could persuade their tenants to run sheep. Continued horse-grazing will almost certainly lead to increased populations of ruderal and noxious species such as field thistle (Cirsium arvense) and curled dock (Rumex crispus).

TABLE 2 PLANT SPECIES RECORDED AT ROUND DOWN ON 7 AUGUST 1986

	Achillea millefolium
	Agrimonia eupatoria
	Agrostis tenuis
	Anacamptis pyramidalis
	Anthriscus sylvestris
	Arrhenatherum elatius
	Bellis perennis
	Blackstonia perfoliata
	Brachypodium pinnatum
	Briza media
**	Brassica oleracea
	Campanula rotundifolia
	Carex flacca
	Centaurea nigra
	Chamerion angustifolium
	Cirsium acaule
	Cirsium arvense
	Cirsium vulgare
	Convolvulus arvense
	Conopodium majus
	Crataegus monogyna
	Cynosurus cristatus
	Dactylis glomerata
	Dactylorhiza fuchsii
	Daucus carota
	Echium vulgare
**	Euphrasia pseudokerneri
	Festuca ovina
	Festuca rubra
	Galium mullugo
	Galium verum
	Genista tinctoria
	Gentianella amarella
	Helictotrichon pubescens
	Heracleum sphondylium
	Hieracium pilosella
	Holcus lanatus
	Hypochaeris radicata
	Hippocrepis comosa
	Jasione montana
	Knautia arvensis
	Lathyrus pratense
	Lapsana communis
	Leontodon hispidus
	Linum catharticum
	Lolium perenne
	Lotus corniculatus
	Medicago lupulina
	Ononis repens
**	Orchis morio
	Orchis mascula
	Origanum vulgare

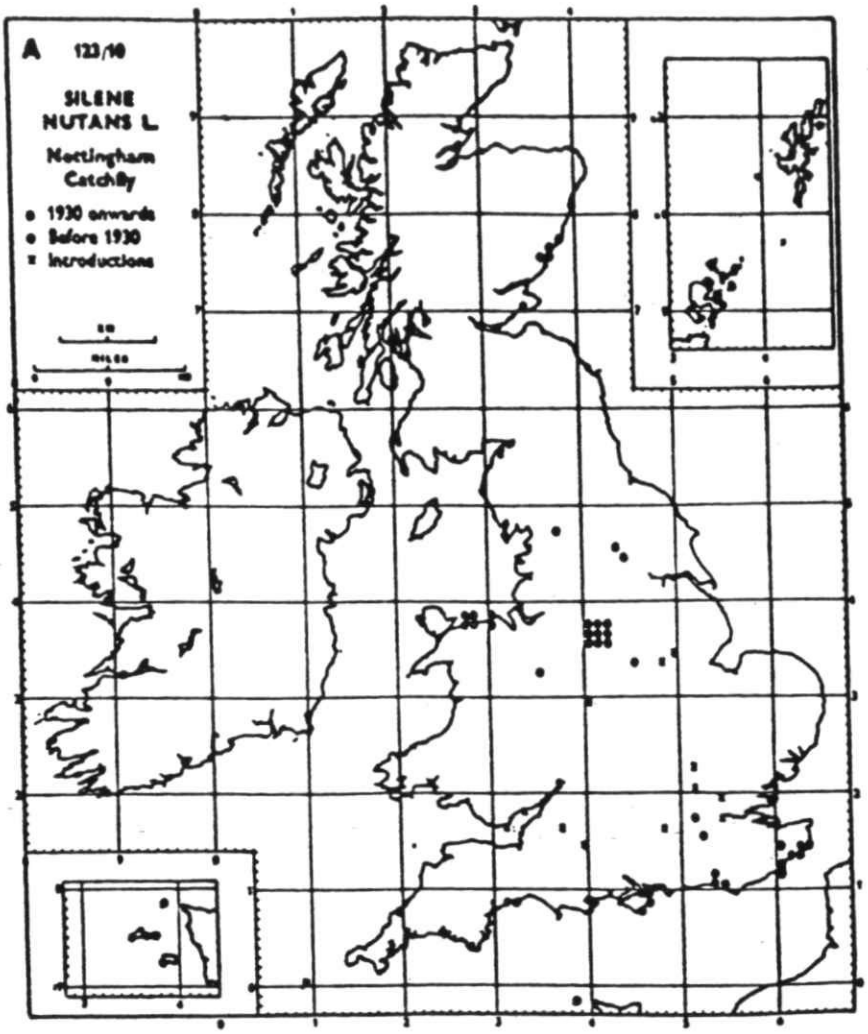
Continued

TABLE 2 continued

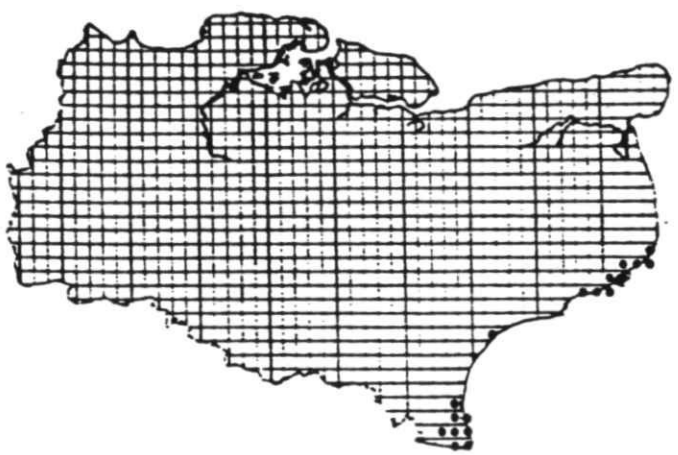
	Plantago lanceolata
	Plantago media
	Pimpinella saxifraga
	Poa pratensis
	Polygala vulgaris
	Potentilla anserina
	Potentilla reptans
	Primula veris
	Prunella vulgaris
	Ranunculus bulbosus
	Ranunculus repens
	Reseda lutea
	Rhinanthus minor
	Rubus fruticosa
	Rumex crispus
	Rumex obtusifolius
	Scabiosa columbaria
	Senecio jacobaea
	Silaum silaus
**	Silene nutans
	Silene vulgaris
	Taraxacum laevigata
	Thymus praecox
	Trifolium pratense
	Trifolium repens
	Trisetum flavescens
	Tussilago farfara
	Urtica dioica
	Vicia cracca
	Vicia hirsuta
	Viola hirta

** These plants are rare and of particular interest. Distribution maps are given on the following pages.

Figure 2



A



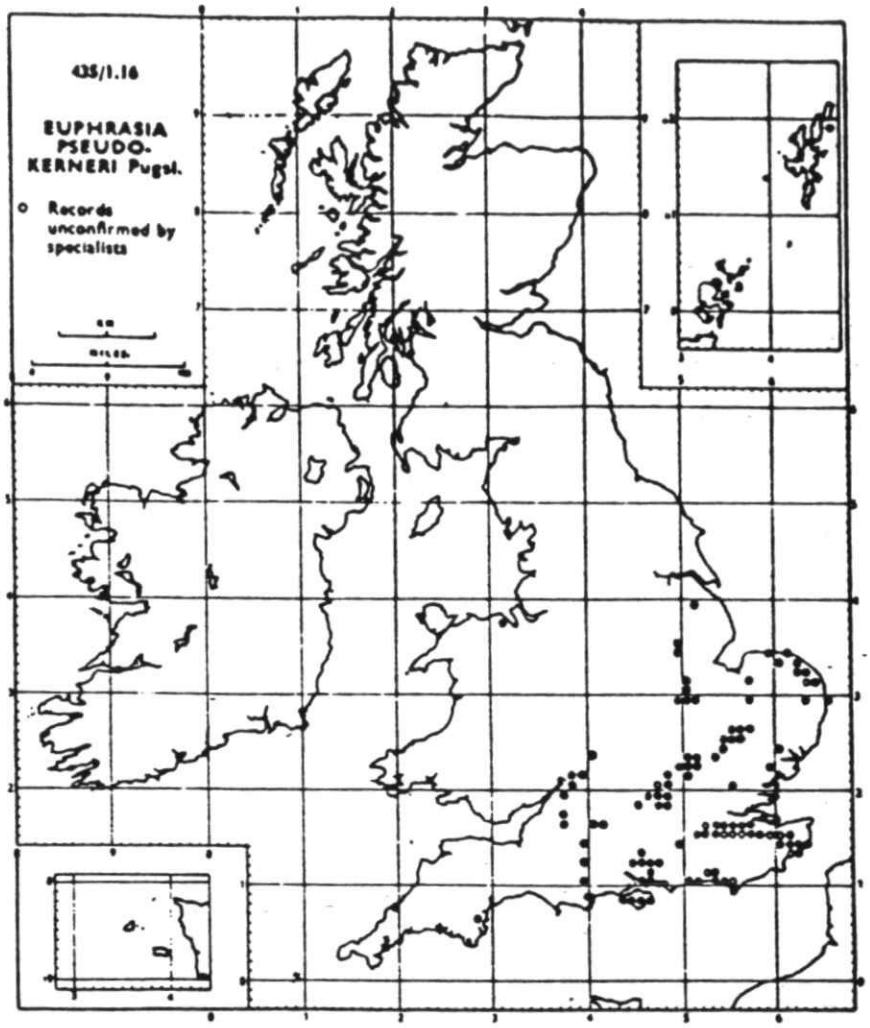
B

NOTTINGHAM CATCHFLY

A The plant has a restricted distribution in Britain. (Perring & Walters 1962).

B It occurs in 18 of 1044 tetrads in Kent (Philp 1982).

Figure 3



A

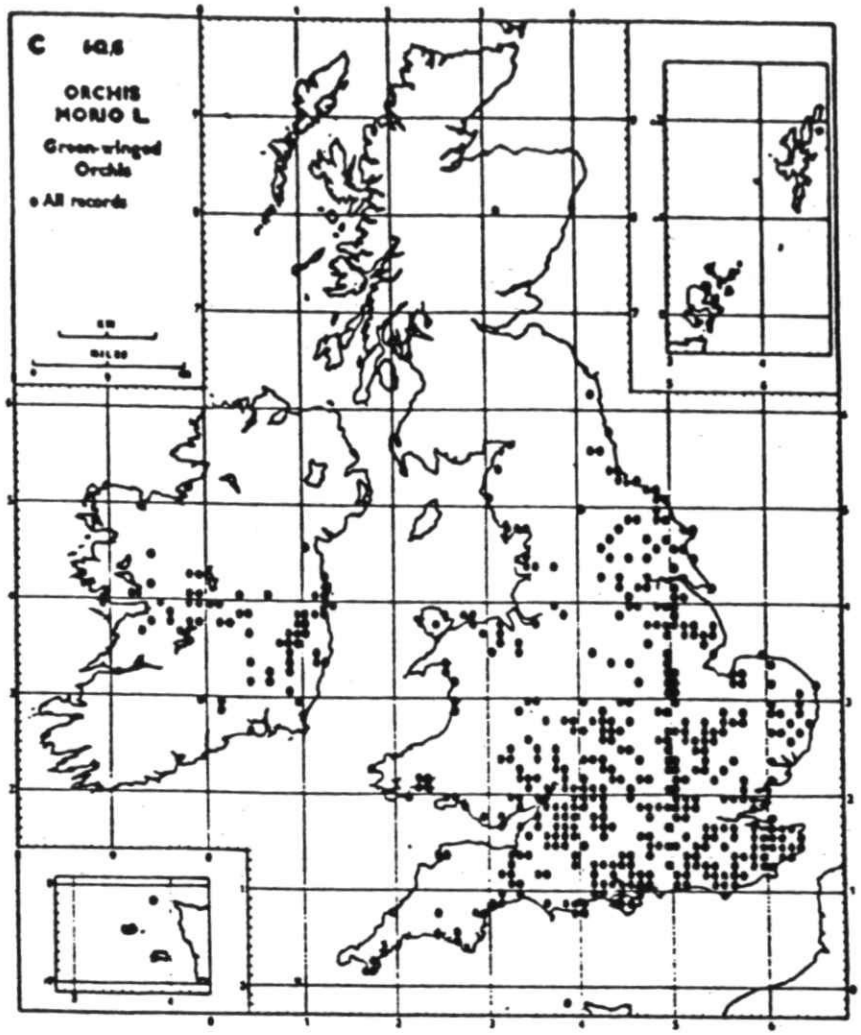
B

EYEBRIGHT

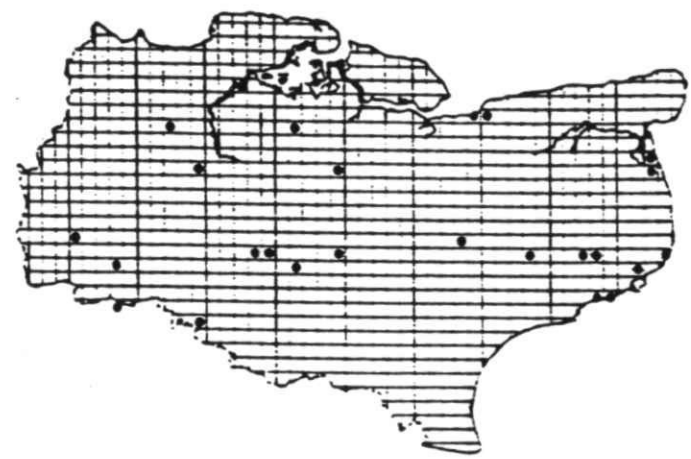
A Distribution in Britain is resricted to calcicolous areas in the south east. Records were confirmed for 88 x 10 km squares. (Perrings & Walters 1962).

B Distribution in Kent. The plant has been found in 42/1044 tetrads (2 km squares). (Philp 1982).

Figure 4



A



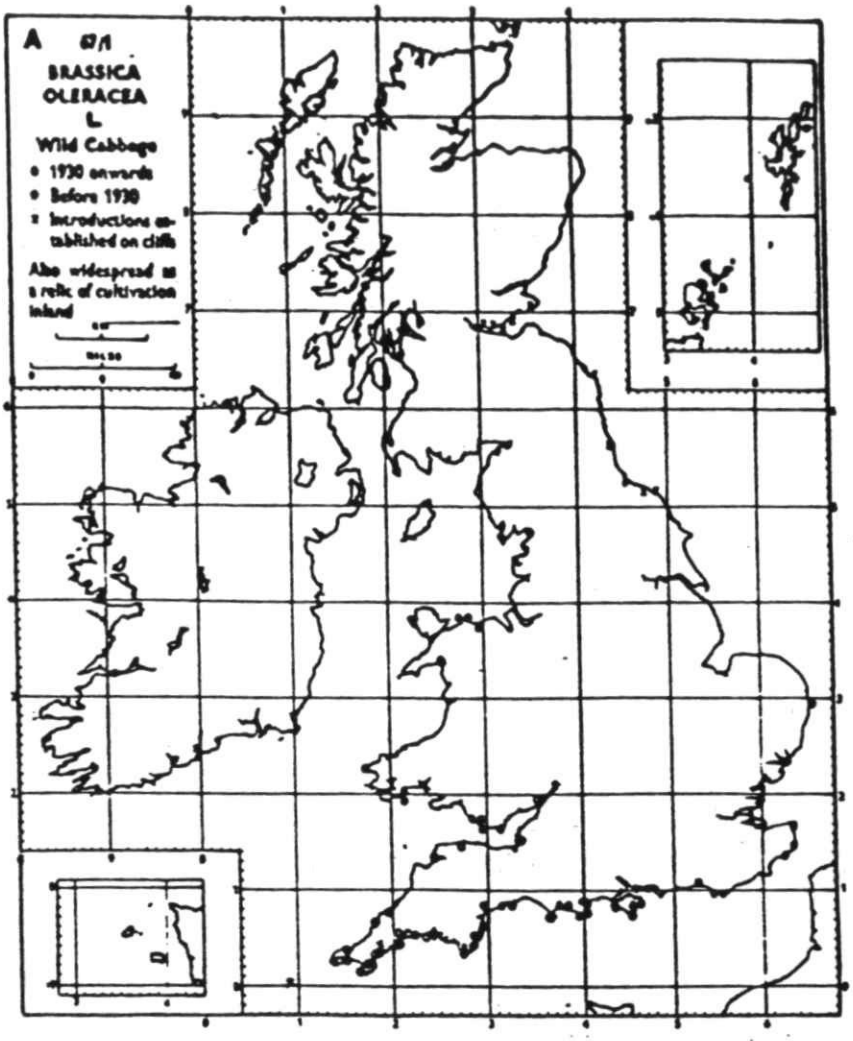
B

GREEN WINGED ORCHID

A This plant is becoming increasingly rare and is not found in many of its previous known localities.

B In Kent it is recorded in 24 of 1044 tetrads (Philp 1982).

Figure 5

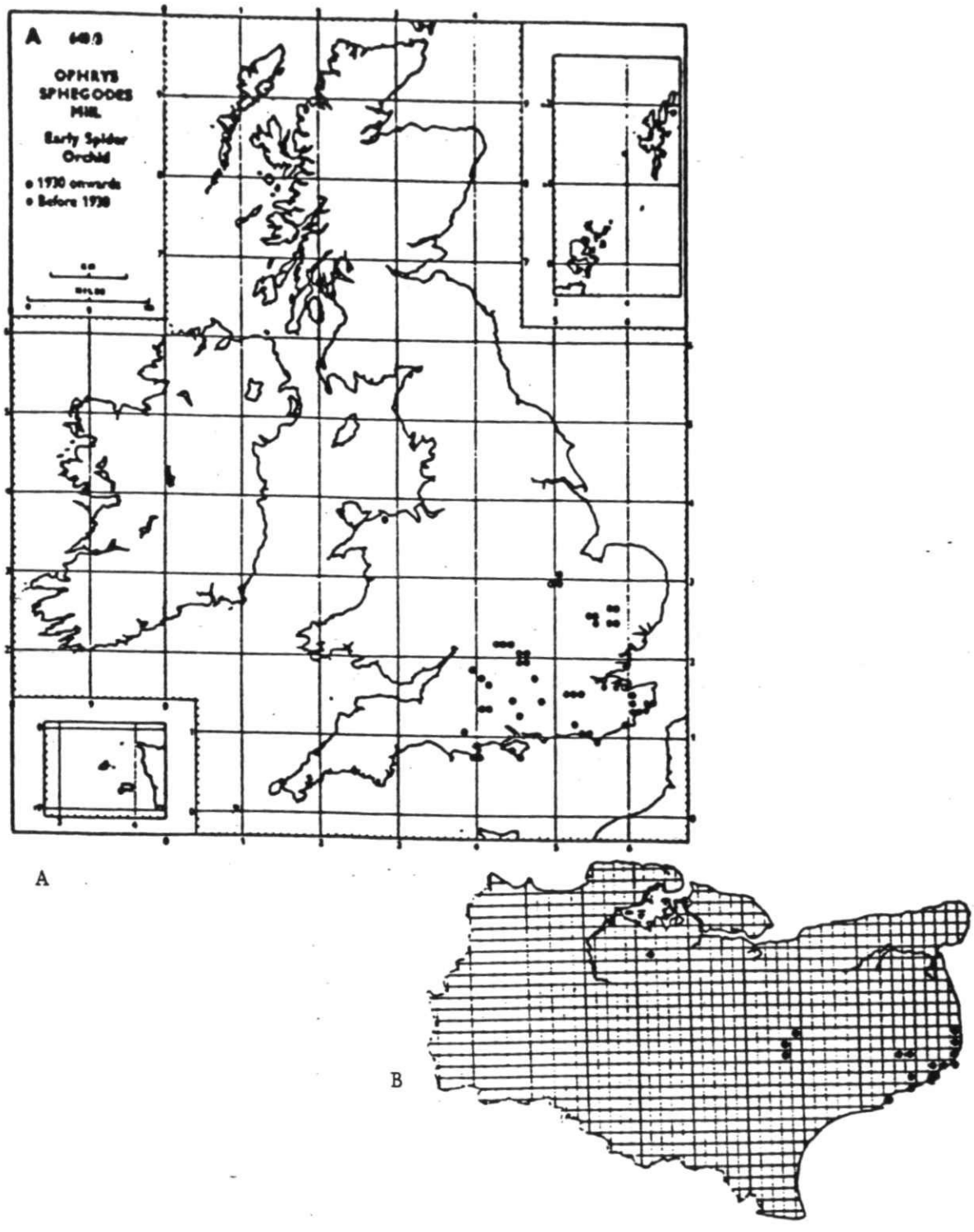


WILD CABBAGE

A The plant is very local on sea cliffs in the south of Britain (Perring & Walters 1962).

B It occurs in 20/1044 tetrads in Kent (Philp 1982).

Figure 6



EARLY SPIDER ORCHID

A This plant has a very local and diminishing distribution in southern Britain (Perring & Walters 1962).

B It has been recorded from 17 of 1044 tetrads in Kent (Philp 1982).

7 AYCLIFFE

7.1 The fourth area of potential conservation interest is marked C on Overlay 4. It is an area of unmanaged rough grassland and scrub, used for recreational purposes. It falls within the AONB, and partly within the Folkestone Warren SSSI.

7.2 The lower slopes of the area, adjacent to the housing at Aycliffe, support false oat (Arrhenatherum elatius) and couch (Elymus repens) grassland, with invasive bramble (Rubus spp.), elder (Sambucus nigra) and privet (Ligustrum vulgare), and much stinging nettle (Urtica dioica). Higher up the slope a species-poor Tor (Brachypodium pinnatum) grassland with privet, occurs. This becomes richer in species and more diverse towards the cliff edge.

7.3 An old record for early spider orchid exists in this area (Rose 1986), and man orchid (Aceras anthropomorphum) has been recorded from the cliff face.

7.4 The route of the road lies well below the area of better grassland, and is unlikely to cause damage to it. The coarse false oat and tor grasslands are not of conservation importance, although they may be of some local habitat value, being ungrazed in an area where most land is arable or pastoral. This grassland could become more interesting with appropriate management.

TABLE 3 PLANT SPECIES RECORDED AT AYCLIFFE DURING AUGUST 1986

Achillea millefolium
Agrimonia eupatoria
Arrhenatherum elatius
Brachypodium pinnatum
Cirsium arvense
Cirsium vulgare
Convolvulus arvense
Crataegus monogyna
Dactylis glomerata
Elymus repens
Festuca rubra
Galium mollugo
Heracleum sphondylium
Holcus lanatus
Ligustrum vulgare
Lolium perenne
Origanum vulgare
Poa pratensis
Prunus spinosa
Rubus caesius
Rubus fruticosus
Rumex acetosa
Sambucus nigra
Scabiosa columbaria
Senecio jacobaea
Tragopogon pratensis
Trifolium repens
Urtica dioica

8 ROAD VERGES - LYDDEN TO AYCLIFFE

8.1 Over most of its length the old Folkestone to Dover road is hedged and has a narrow grass verge supporting common wayside and ruderal plants together with a few maritime species. These include Alexander's (Smyrnium olusatrum), Tamarisk (Tamarix anglicum) and a small population (about 5 plants in 1986) of wild cabbage (Brassica oleracea), which grows in a steep, recently eroded cutting on the north side of the road below Round Down. The location is shown on Overaly 3, and a plant species list is given in Table 4.

8.2 Wild cabbage is a nationally rare species and distribution maps are given (Figure 6). The plant is known from 22 x 2 km squares (tetrads) in Kent, and in Britain is restricted to scattered localities on south coast cliffs. Wild cabbage is, however, very common in nearby grassland above Shakespeare Cliff.

TABLE 4 PLANTS RECORDED ALONG THE VERGES OF THE OLD FOLKESTONE TO DOVER ROAD BETWEEN ABBOTS CLIFF AND AYCLIFFE ON 7 AUGUST 1986

Achillea millefolium
Agrimonia eupatoria
Agrostis tenuis
Anthriscus sylvestris
Arrhenatherum elatius
Bellis perennis
Brachypodium pinnatum
Brachypodium sylvaticum
** Brassica oleracea
Bromus sterilis
Centaurea nigra
Chamerion angustifolium
Cirsium arvense
Cirsium vulgare
Crataegus monogyna
Dactylis glomerata
Daucus carota
Echium vulgare
Festuca rubra
Galium mollugo
Galium verum
Geranium robertianum
Glechoma hederacea
Holcus lanatus
Knautia arvensis
Lapsana communis
Lathyrus latifolius
Lathyrus pratensis
Ligustrum vulgare
Linaria vulgare
Lolium perenne
Lotus corniculatus
Malva moschatellina
Matricria matricarioides
Ononis repens
Origanum vulgare
Papaver rhoeas
Phleum pratense
Picris echioides
Poa pratensis
Potentilla reptans
Prunus spinosa
Rosa canina
Rubus caesius
Rubus fruticosa
Rumex crispus
Rumex obtusifolius

Continued

TABLE 4 continued

Sambucus nigra
Smyrnium olusatrum
Senecio jacobaea
Silene vulgaris
Solanum dulcamara
Sonchus arvense
Stachys sylvatica
Tamarix anglica
Teucrium scorodonia
Trifolium pratense
Trifolium repens
Tussilago farfara
Urtica dioica
Vicia cracca

** This plant is nationally rare. Distribution maps are given following Table 2.

9 CONSULTATIONS WITH ENVIRONMENTAL GROUPS

9.1 The entire rural length of the route lies within an AONB. David Colman on behalf of the Countryside Commission has said that they will certainly raise objections to the proposed route. He pointed out that it was Government policy not to put new roads through AONB's. He expects to be working closely with the NCC on the case (telephone conversation 10.9.86.).

9.2 The route crosses National Trust property at Round Down. The NT will raise objections (telephone conversation with Miss Norris, NT land agent, 10.9.86.).

9.3 The route crosses the Folkestone Warren SSSI, as it is currently defined, in three places. Although there is unlikely to be strong objection to any damage to the already degraded pasture at Lydden Rifle Range (which is being considered for denotification; above), evidence will almost certainly be brough concerning the value of Round Down (meeting with Dr T Bines, NCC, 12.6.86.).

9.4 The Kent Trust for Nature Conservation will object to the route. They have had discussion with the MOD over the destructive way in which the land has been maintained and were considering seeking a revised management policy at Lydden Rifle Range and on Farthingloe Down.

9.5 Discussions between the Department and its consultants on the one side and the National Trust, Nature Conservancy Council and Kent Trust for Nature Conservation on the other are expected to continue with this report and the landscape plan as a basis.

10 AMELIORATION

10.1 The recreation of a species rich, chalk grassland habitat along much of the verges of the proposed road is feasible. Research, funded by the NCC and carried out by ITE has led to a booklet "Creating attractive grasslands" (T C E Wells et al 1982) which covers the techniques necessary.

10.2 We understand that the Channel Tunnel Group (CTG) and Trans Manche Link (TML) are proposing such a recreation of species rich grassland for land affected by the Tunnel works between Round Down and Aycliffe and to this end collections of wild flower seed are being made on Round Down.

10.3 We further understand that the NT would be happy for additional seed collections to be made for the A20 and liaison with CTG and TML seems appropriate.

10.4 Such active creation of habitat may well allay some environmental concerns. Improving plant species composition over the route will create additional habitats for invertebrates and small mammals and will increase the conservation value of the area. It will be of particular importance where the land is arable or the grassland is now derelict.

10.5 The preliminary landscape proposals made by John Kelsey Associates (April 1985) include areas of tree and shrub planting and open grassland with intermittent shrub planting. Although the proposals indicate that native, indeed local species characteristic of the chalk, will be used, the main conservation interest of the area is chalk grassland. It would therefore appear preferable if rather less tree and shrub planting were carried out. However, it can be argued that unless proper management is carried out the grassland would naturally degrade to scrub. In the absence of sources of seed of the characteristic trees and shrubs this scrub could be rather dull and it is therefore preferable to provide the characteristic species from the beginning.

10.6 While we recognize the validity of this line of reasoning ITE feel it is preferable to recreate chalk grassland and press for suitable management to sustain it.

10.7 An area of suitable habitat should be created to re-establish the population of wild cabbage.

10.8 Badger runs should be provided where necessary.

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Sites of Nature Conservation Interest

Site reference no: DO 12

Site: Farthingloe Downs etc., Aycliff

Map reference: TR 300400

AONB: Yes

LPA: Dover

SLA: Yes

Parish: Dover

AHNCV: No

Owner: Ministry of Defence/Dover District Council/Private

TPO: No

ASSA: No

KTNC Grade: II

Grade I/II Agricultural Land: No

Category: Grassland, scrub (arable)

Scheduled species: No

Area: 74 ha/180 acres

Public rights of way: Yes

DESCRIPTION:

A spur of downland running in a NE-SW direction behind cliffs between Folkestone Warren and Shakespeare Cliff. The central plateau area is mainly arable land but some scrubby grassland also occurs. The south-facing slopes are the most interesting with many common chalk herbs present, including rest harrow (Ononis repens), and bird's foot trefoil (Lotus corniculatus) but tor grass (Brachypodium pinnatum) and erect brome (Bromus erectus) are dominant. Dyer's greenweed (Genista tinctoria) is widespread, indicating the presence of deep soils over much of the slope. Pale flax (Linum bienne) is also common. Scrub (mainly hawthorn, but gorse and blackthorn also) is present at the westerly end.

The north-facing slopes are generally less interesting with deep soils and coarser vegetation but where thin chalk soils exist on steeper parts, the vegetation includes rock rose (Helianthemum nummularium), thyme (Thymus spp) and kidney vetch (Anthyllis vulneria). Dyer's greenweed and pale flax are again widespread, with betony (Betonica officinalis) on richer soils.

Narrow leaved everlasting pea (Lathyrus sylvestris) is fairly abundant in scrub near old buildings at western end of the site.

Marbled white butterflies, common blue and 5-spot burnet moth were recorded on day of visit. Bird and invertebrate interest have not been investigated in deta but could be important.

This site could be upgraded to I with more positive management

Other sites nearby: (Note:KTNC holds more detailed information)

Folkestone Warren SSSI

Chilverton Elms Valley, near Hougham SNCI

St Radigund's Valley SNCI

Date of Survey: 14 July 1984

Recorder: Joyce Pitt

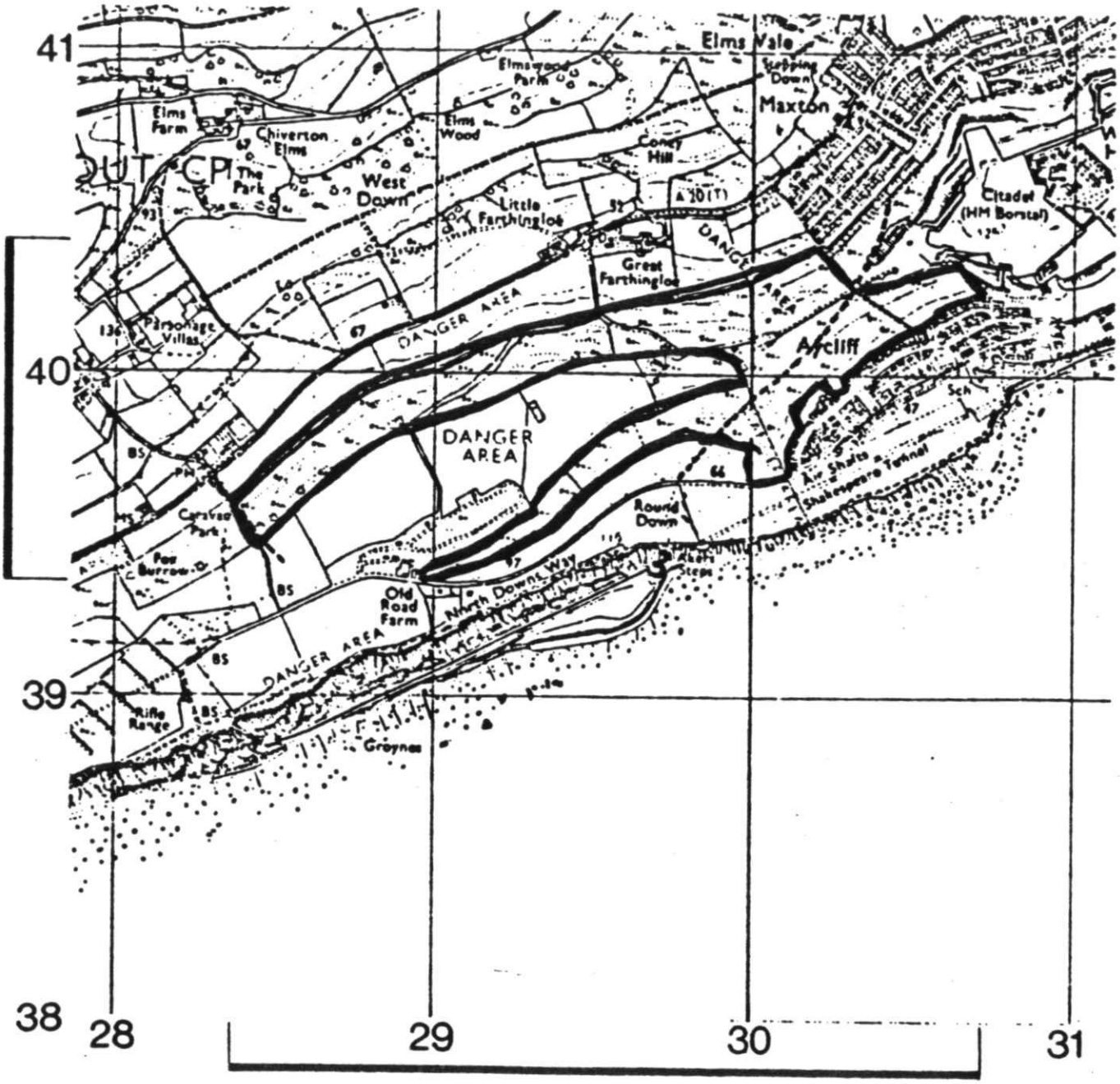
APPENDIX 1

KTNC SITE FILE - FARTHINGLOE DOWN

SITES OF NATURE CONSERVATION INTEREST

Site:
FARTHINGLOE DOWNS, ETC. AYCLIFF

Map reference:
TR300400



1000 Metres 0 Kilometres 1 2

1000 Yards 0 Miles

Kent Trust for Nature Conservation

north