

DENGE SECURITY MAIN

Archaeological Reconnaissance and Fieldwalking Survey

prepared by

NETWORK ARCHAEOLOGY LTD

for

DALCOUR MACLAREN

on behalf of

FOLKESTONE AND DOVER WATER SERVICES

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NON-TECHNICAL SUMMARY

This archaeological field survey report relates to a proposed water pipeline to be built between Saltwood (NGR 615830 137169) and New Romney (NGR 608359 126616) in Kent. The proposed pipeline is approximately 15 km long and follows the Royal Military Canal and the Romney, Hythe and Dymchurch Railway for much of its length. The archaeological survey represents the second stage in what is expected to be a detailed investigative programme of archaeological research, investigation and mitigation.

Field reconnaissance survey along the entire course of the proposed pipeline identified: four nationally important sites, including three pillboxes and The Royal Military Canal (a Scheduled Ancient Monument); no regionally important sites; and sixty-six sites of local importance (eight of which were corroborated desk-based sites). The locally important sites included pillboxes, lamp posts, marker stones, a bridge, a wall, other structures, holloway roads, quarries, finds scatters, flood banks, ditches/drains, former field boundaries, limestone spreads/rubble and ponds.

Forty-three desk-based sites, lying on the course of the proposed pipeline were not corroborated by the field survey.

Sixty-six boundaries were also recorded by the surveys. Five of these are parish boundaries and sixteen may include Important Hedgerows, under the Hedgerow Regulations.

No structured fieldwalking took place, but single sherds of Iron Age and medieval pottery were spotted opportunistically.

There will be an indirect affect upon The Royal Military Canal. Additionally, the pipeline will have an adverse direct impact on fifty-one, and an uncertain impact on a further thirty-one of the locally important sites.

Scheduled Monument Consent is required for a proposed auger bore crossing of The Royal Military Canal.

Further archaeological investigation is required along a short section of the pipeline which lies adjacent to a multi-period site near Saltwood, pending the results of trench evaluation. None of the remaining sites currently known to lie along the course of the proposed pipeline requires avoidance or further investigation in advance of construction.

Recommendations are made for an archaeological watching brief during construction. The level of recording of known sites, the intensity of the watching brief, and the contingency measures for dealing with unexpected archaeological remains should be agreed with Kent County Council Environmental Management Unit.

1 INTRODUCTION

1.1 Archaeological surveys

1.1.1 Scope of archaeological work

This report presents the results of archaeological field reconnaissance undertaken along a proposed water main.

1.1.2 Aims of the surveys

The purpose of the archaeological surveys was to consider the cultural heritage implications of the proposed pipeline, to assist in the identification of an archaeologically least damaging route, and to provide a basis for further stages of investigation.

The general objectives were to:

- identify and define the extent of known archaeological remains lying within the working width of the proposed pipeline;
- provide a preliminary assessment of their significance;
- assess the overall impact of the proposed pipeline on the remains;
- assess the need for further evaluation and mitigation prior to and during construction; and
- make recommendations for further evaluation and mitigation, where necessary.

Survey specific objectives can be found within the Written Schemes of Investigation (Network Archaeology 2004b).

1.1.3 Archaeological procurement

The archaeological surveys were commissioned by *Dalcour Maclaren Ltd* on behalf of *Folkestone and Dover Water Services Ltd*. The archaeological contractor was *Network Archaeology Ltd*, a professional archaeological organisation which provides consultancy advice and undertakes field services.

1.1.4 Resourcing

The reconnaissance survey was undertaken by a team of two individuals on 25th – 26th October 2004. Report writing was undertaken by two individuals over a two week period and use was made of MapInfo GIS and AutoCAD to manage and present the data.

1.1.5 Reliability and potential limitations of surveys

Field survey data collection and interpretation is limited for a number of reasons:

- differential levels of ‘archaeological visibility’ along the route
- lack of clarity surrounding the extent of sites

1.2 Proposed pipeline

1.2.1 Pipeline specifications

The proposed 400mm diameter main is to be installed for a length of 15.05 km between Saltwood near Hythe and St Marys Bay on Romney Marsh. The proposed main will also include two spur pipelines each 0.45 and 0.48 km long, lying to the north west of the village of Saltwood. Approximately two kilometres of the pipeline is to be inserted along the high street through the town of Hythe.

1.2.2 Reasons for building the pipeline

The water main is required in order to ensure security of supply to the Folkestone area, and also to act as back up to the existing Dover Spine Main.

1.2.3 Pipeline construction

Construction is planned for 2005. The pipeline is to be built within a 20m working width, which will be decreased at hedgerows and increased at road crossings and at other areas of constraint.

All of the pipeline will be constructed in open cut (approx. 600mm wide), including the roads, apart from the Royal Military Canal and a number of the large drains which will be crossed by auger boring.

Construction will use the spread technique. Construction activities will be in a phased sequence as follows: surveying the route, demarking/fencing the route, preparing the working width, topsoil stripping, stringing out the pipes, trenching, placing the pipeline in the trench and reinstatement of the working width.

1.3 Legislation, regulations and guidance

The pipeline and any temporary works areas benefit from Permitted Development Rights under the *Town & Country Planning Act (1990)*, and therefore do not require planning consent from The Local Planning Authority or any other permission. The works may, however, be subject to *The Hedgerow Regulations (1997)*.

1.4 Archaeological background

Desk-based study of published archaeological information in the public domain, lying within 500m of the proposed pipeline route, revealed 506 sites of archaeological importance. These included:

Mesolithic flint microliths; Neolithic flint implements; Bronze Age ring ditches, a founder's hoard and a barbed and tanged flint arrowhead; Iron Age settlement at Saltwood, Iron Age ditch and pottery in Hythe; Roman Road(s), possible fortress, possible beacon, settlement, cemetery and other burials; Saxon settlement and early Anglo-Saxon pagan cemetery at Saltwood, late Saxon town of *Hyde* and Limen embankment in Burmarsh; medieval settlements of Saltwood and Hythe, manor house of Brockhull, leper hospital in Saltwood, Premonstratensian monastery of Blackwose Newington, moated site and stray finds; post-medieval military structures, including The Royal Military Canal and associated gun emplacements, batteries, Martello Towers, a fort wrecked vessels, limekilns, quarries and a

shepherd's hut; First World War army camp, Second World War service trenches, Acoustical Research Station, Second World War defensive sites, including pillboxes and an anti-tank ditch, Sandgate Branch Railway and The Romney, Hythe and Dymchurch Railway (Network Archaeology, 2004a).

1.5 Physical environment of the survey area

1.5.1 Location and geomorphology

The proposed route runs along the Kent coast west of Folkestone (figure 1), for approximately 19.5 km from Saltwood (NGR 615830 137169) to New Romney (NGR 608359 126616). The route crosses three distinct zones: dry land to the north of Hythe (c.60m – 90m AOD), Hythe streets (c.10m – 60m AOD), and marshland (c.10m AOD).

1.5.2 Solid geology

Within the Study Corridor, there are three solid formations, including: the Hastings Beds Group (of the Wealden Series), a series of alternating sandy/silty and clay rich layers; *Lower Greensand*; and *Weald Clay*, clay and silty-clay units interspersed with harder thin sandstone horizons.

1.5.3 Superficial geology

There are four main drift deposits: colluvium, dune sand & marine shingle, marine alluvium and raised beach & marine deposits ('storm gravel beach deposits').

1.5.4 Soils

The proposed route crosses five soil types: *Denchworth* (712b), *Malling* (571c), *Newchurch 2* (814c), *Wallasea 2* (813g) and *Sandwich* (361) (SSEW 1983).

1.5.5 Land use

The land immediately surrounding the proposed pipeline primarily includes agricultural fields, apart from that section which passes through Hythe..

1.6 Staged approach to archaeological investigation and route selection

1.6.1 Work to date

A staged, multi-disciplined approach to route selection has been adopted (see appendix A). One previous phase of assessment has taken place:

Archaeological Desk Based Assessment (Network Archaeology 2004a): published archaeological information in the public domain, lying within 500m of the proposed pipeline route.

1.6.2 The current works

These archaeological field surveys form the second stage in what is expected to be a detailed investigative programme of archaeological research, investigation and mitigation during the design and construction of the road improvements.

1.7 Terms of reference

This field survey report will be issued to *Dalcour Maclaren Ltd* and *Folkestone and Dover Water Services Ltd*. This report will also be subject to external review by Kent County Council's archaeological service and English Heritage.

1.8 Report structure

This field survey report is divided into five chapters forming three main sections:

Chapters 1-2: serve to introduce the organisations involved, the proposed pipeline, the context, method and standards of field survey, and the layout of this report.

Chapter 3: presents the results of the surveys

Chapters 4-5 deal with the impacts of the proposed pipeline on the archaeological sites within the survey area and discuss approaches which should be adopted for dealing with them.

2 PROCEDURES

2.1 Standards

This assessment has been conducted according to the Institute of Field Archaeologists *Code of Conduct* (2000).

2.2 Establishment of the proposed pipeline centreline

The survey team established the centreline of the proposed pipeline using hand-held GPS equipment and placed temporary markers on its course to orientate themselves across the fields.

2.3 Field numbering

Fields along the route were assigned consecutive numbers during the archaeological surveys. These allocations were unique to each field. The numbers were prefixed with a capital N to differentiate them from any other numbering scheme (figures 2-7).

2.4 Field reconnaissance survey

2.4.1 Plots

This consisted of a visual inspection of each plot, in order to record extant earthworks, significant soil or vegetative anomalies, the nature of land boundaries, present (and former) land use, visible geology, and general topographical variations. Observations were recorded on pro-forma record sheets. A summary of the results per plot can be found in Appendix B.

Further details of the survey methodology can be found within the WSI (Network Archaeology 2004b).

2.4.2 Boundaries

Details of each boundary crossed by the route were recorded on a dedicated Boundary Record form. This included recording what form the boundary took (i.e. wall, hedge, fence, ditch, bank, or a combination of these elements). A summary of the boundary observations appears in Appendix C.

Further details of the survey methodology can be found within the WSI (Network Archaeology 2004b).

2.5 Fieldwalking survey

Details of the proposed survey methodology can be found within the WSI (Network Archaeology 2004b). In the event, no fields were suitable for fieldwalking.

2.6 Data management and presentation

2.6.1 Definition of a ‘site’

The term ‘site’ is used throughout this report to refer to ancient monuments, buildings of architectural and historical importance, parks, gardens, designed landscapes, battlefields,

public spaces, historic landscapes, historic townscapes, boundary features, findspots of artefacts and any other heritage asset. Unless otherwise stated the term ‘site’ refers to the location where a site was situated and not to extant remains (e.g. a windmill means the location of a former windmill, and a pond means the location of a former pond). The only exception is structures, which can be taken to be extant unless otherwise stated.

2.6.2 Reference conventions

The information gathered from the field surveys is uniquely referenced throughout this report and on all the figures (see table 2.1). Sites found during the course of the field surveys, which were not previously identified in the desk based assessment are referred to as FSU sites, and are identified by a numeric suffix. Known desk based sites, which have been corroborated by the field surveys, are referenced by their existing alphanumeric codes.

Table 2.1: Summary of site reference codes

Reference code	Terms of reference	Example site reference
DBA	Desk based assessment	DBA:AB
FSU	Field Survey site	FSU:08
LS	Listed Structure	LS TA03NE 10/58
MON	English Heritage MONARCH database and Events database	MON 1309749
SAM	Scheduled Ancient Monument	SAM 26502
SMR	Essex County Council Sites and Monuments Record	SMR EX 3638

2.6.3 Archaeological constraint gazetteer

Field survey sites are summarised within a gazetteer in appendix D. The gazetteer is structured in alphanumerical order. The gazetteer provides the source, cross-references, description, period and location of each site. The location is given as a 12 figure national grid reference to the centre of the point, area or linear. The gazetteer also gives a category of importance (see section 2.6.8), an assessment of impact (section 2.6.9) and an assessment of the significance of impact (section 2.6.10).

2.6.4 Field survey site figures

The archaeological sites listed in the gazetteer are presented on two A3 constraint figures (2-7). Each site is represented by a star, shaded area or dashed line, depending on the type of data held. The symbols and corresponding labels are coloured according to the importance of the corresponding site.

2.6.5 Artefact distribution figures

The finds retrieved by fieldwalking are presented on two A3 figures (4-5). Each find is represented by a symbol indicating the category of material. Each symbol is coloured according to the date of the find.

2.6.6 Accuracy of displayed data

Site data may have been originally captured at a different scale to that which it is now displayed. This should be borne in mind when interpreting the exact location of constraint points and polygonal boundaries. The table below (2.2) presents estimated accuracy levels based upon visual comparison with plots.

Table 2.2: Summary of accuracy levels for displayed data

Source	Source type	Source scale	Positional accuracy in relation to current OS mapping	Accuracy in relation to position on the ground
DBA	OS map	1:10,000 1:10,560	1mm	± 10m
DBA	OS map	1:2,500	1mm	± 2.5m
DBA	AP vertical	1:5,000 - 1:10,000	1-5mm	± 5 - 50m
DBA	AP oblique	1:1,000 - 1:2,500	1-5mm	± 5 - 50m
DBA	Tithe/enclosure map	1:5,000 - 1:10,000	1-5mm	± 5 - 50m
FSU	reconnaissance survey	-	-	±5m
LS	digital points	-	-	± 10m
MON	digital points	-	-	± 10m – 1000m
SAM	annotated OS map	1:10,000	1mm	±10m
SAM	annotated OS map	1:2,500	1mm	±2.5m
SMR	Annotated maps, digital points and text data	(1:10,000)	±1-200mm	? ± 10m – 2000m

2.6.7 Impact assessment process

Archaeological impact assessment is the process by which the impacts of a proposed development upon the archaeological resource are identified. Each site has been assessed in its wider heritage landscape, taking account of identity, place, and past and present perceptions of value.

A three-stage process was adopted:

Stage 1: assessment of importance (see 2.6.8)

Stage 2: assessment of the impact of the proposed development (see 2.6.9)

Stage 3: assessment of significance of impact (see 2.6.10)

2.6.8 Importance

The sites listed in the gazetteer, in appendix D, have been rated according to their perceived importance into categories A to D and U (as shown in table 2.3). Where possible, each site has been assessed on the following characteristics:

- complexity (i.e. diversity of elements and relationships)
- condition (i.e. current stability and management)
- period
- physical form
- rarity
- setting
- survival (i.e. level of completeness)

The grade awarded to each site considered the scale at which the site may be judged significant (i.e. in terms of local, regional and national policies, commitments and objectives); representational value, diversity and potential; and existing local, regional and national designations (e.g. Scheduled Ancient Monuments). Some sites within the survey area benefit from statutory protection and other protection.

The process of importance categorisation has been adopted as a tool in determining appropriate mitigation. The categories should not be taken as a statement of fact regarding the importance or value of a particular site. The use of examples of types of site is simply a guideline. The inclusion of a site in a particular category often involves a degree of subjective judgment and is based upon the current level of information. Categories are not fixed or finite, and there is every possibility that the classification of a site may change as a result of findings made during later stages of investigation.

Table 2.3: Site category definitions

Grade	Description	Examples	Investigation and mitigation
A	Legally protected site	Conservation Area Listed Building (I, II* and II) Scheduled Ancient Monument World Heritage Site	To be avoided
B	Nationally and internationally significant site, currently not legally protected	Grade I and II* Registered Park and Garden Registered Battlefield Major settlements (e.g. villas, deserted medieval villages) Burial grounds Standing historic buildings (non-listed)	To be avoided
C	Regionally significant site	Grade II Registered Park and Garden Some settlements, finds scatters, Roman roads, sites of historic buildings	Avoidance desirable, otherwise investigation recommended
D	Locally significant site	Field systems, ridge and furrow, trackways, wells	Avoidance /investigation not envisaged
U	Ungraded	Non-archaeological site held by data source	Natural mound

2.6.9 Impact of the proposed development

The potential impact of the proposed scheme upon a site has been assessed at three levels:

- nature of impact (see table 2.4)
- type of impact (see table 2.5): a nominal 44m working width has been allowed.
- magnitude of impact (see table 2.6)

Table 2.4: Nature of impact definitions

Positive	Beneficial contribution to the protection or enhancement of the archaeological and historical heritage
Negative	Detrimental to the protection of the archaeological and historical heritage
Neutral	Where positive and negative impacts are considered to balance out
None	No or negligible impact due to distance from proposed scheme, and/or construction technique which negates the impact

Table 2.5: Impact type definitions

Direct	Physical damage, including compaction and/or partial or total removal. Severance, in particular linear sites
Indirect	Visual intrusion affecting the aesthetic setting of a site, Disturbances caused by vibration, dewatering, or changes in hydrology <i>etc.</i>
Uncertain	Where the physical extent or survival of a site is uncertain, or where the visual impact of the proposed scheme on the setting of sites or the landscape has not been determined

Table 2.6: Magnitude of impact definitions

Severe	Entire or almost entire destruction of the site
Major	A high ratio of damage or destruction to the site
Minor	A low ratio of damage to the site
Indeterminate	Where the data level does not allow any secure calculation (e.g. because the quality and extent of the site is unknown, or because construction techniques have not yet been decided)

Factors affecting the assessed magnitude of impact include:

- the proportion of the site affected
- the integrity of the site; impacts may be reduced if there is pre-existing damage or disturbance of a site
- the nature, potential and heritage value of a site

2.6.10 Significance of impact

The ‘significance’ of the impact has been assessed as the product of the importance of each site, and the impact of the proposed scheme upon each site. The levels of significance of impact are defined in table 2.7. Significance of impact definitions are provided only for negative impacts, as these were the only type on this particular scheme. The significance of impact rating takes no account of potential mitigation.

Table 2.7: Significance of impact definitions

Stage 1	Stage 2			Stage 3
Importance of site	Nature of impact	Type of impact	Magnitude of impact	Significance of impact
A	negative	direct	severe	high
			major	high
			minor	high
			indeterminate	high
		indirect	severe	high
			major	high
			minor	medium
			indeterminate	high or medium
uncertain	indeterminate	unknown		
B	negative	direct	severe	high
			major	high
			minor	medium
			indeterminate	high or medium
		indirect	severe	high
			major	medium
			minor	medium
			indeterminate	high or medium
		uncertain	indeterminate	unknown

Stage 1	Stage 2			Stage 3
Importance of site	Nature of impact	Type of impact	Magnitude of impact	Significance of impact
C	negative	direct	severe	medium
			major	medium
			minor	low
		indirect	severe	medium
			major	low
			minor	low
			indeterminate	low or medium
uncertain	indeterminate	unknown		
D	negative	direct	severe	medium
			major	low
			minor	low
			indeterminate	low or medium
		indirect	severe	medium
			major	low
			minor	low
			indeterminate	low or medium
		uncertain	indeterminate	unknown

3 RESULTS

3.1 Field reconnaissance survey

3.1.1 Plots

Observations were made in 58 plots. The field survey conditions data is summarised in appendix B. Eight sites (DBA:CS, DBA:DX, DBA:FC, DBA:FQ, DBA:GI, DBA:GP, DBA:JK and SMR KE 9141), identified by the desk based assessment, have been corroborated by the field surveys and 58 new sites have been found.

The new sites include pillboxes, lamp posts, marker stones, a bridge, a wall, other structures, holloway roads, quarries, finds scatters, flood banks, ditches/drains, former field boundaries, limestone spreads/rubble and ponds. All of these sites are considered of local importance. A summary of the sites is provided in appendix D.

Forty-three sites identified by the desk-based assessment were not corroborated by the field surveys (see appendix E).

3.1.2 Boundaries

Data was recorded of 66 plot boundaries, a summary of which is provided in appendix C. The boundaries included 1 bank, 4 terraces, 41 ditches/drains, 24 post/wire fences and 1 wall. Vegetation, in the form of trees, hawthorn hedge and/or scrub was recorded at 16 boundaries. All of the boundaries are considered of local importance.

Five parish boundaries (DBA:BY, DBA:CQ, DBA:CR, DBA:EC, DBA:EO), identified by the desk based assessment, have been corroborated by the field surveys.

Fifty-seven field boundaries are considered historic, in that they correlate with boundaries marked on tithe maps predating 1845. Of these, 16 boundaries have vegetation and may be Important Hedgerows, under the Hedgerow Regulations (see 1.3).

3.2 Fieldwalking survey

None of the arable fields crossed by the proposed pipeline were in a suitable condition for structured fieldwalking. However, two finds were spotted and picked up for identification while walking across plots 54 and 55:

Plot 54: one sherd of Iron Age pottery (NGR 608345 127102)

Plot 55: one sherd of medieval pottery, possibly the base of a saggy-bottomed vessel, originating from the central area of the Weald (NGR 608338 126988)

3.3 Areas with little or no apparent archaeological potential

Approximately 90% of the route appears to have no known archaeological remains. The possible reasons for this may include:

- low levels of 'archaeological visibility' along the route, due to the masking effects of alluvium and colluvium;
- finds poor sites; and
- a genuine absence of archaeological remains at certain points along the pipeline route.

4 ASSESSMENT OF IMPACT

4.1 Impacts of the proposed scheme

4.1.1 Adverse (-) impacts

Construction activities, such as fencing, topsoil stripping, subsoil excavation and/or benching, soil storage, movement of heavy machinery, excavation of drainage, construction and reinstatement could all have direct and/or indirect impacts on known and potential archaeological remains within the working width of the proposed pipeline.

These activities can result in seven main adverse impacts types:

Compaction - the construction of temporary embankments/bunds may have a negative impact on buried archaeology (i.e. it may be crushed or distorted by the unprecedented weight of earth placed over it).

Truncation - ground reduction for cuttings and benching, is likely to have a negative impact on buried archaeology.

Visual - Standing structures and archaeological remains for which landscape setting is essential to their appreciation or understanding may suffer a negative impact if pipeline construction is visually intrusive to their setting.

Hydrological - There may be problems where changes occur in ground water distribution as this can lead to desiccation of organic material within buried archaeological remains.

Vibrations - Movement of works traffic along existing roads could have a damaging effect on nearby standing structures and buried archaeology.

Noise pollution - Construction traffic could be harmful to the setting of standing structures and archaeological remains for which landscape setting is essential to their appreciation or understanding.

Air pollution - Construction traffic could increase local daily engine fume levels resulting in harmful effects to adjacent standing structures.

4.1.2 Beneficial (+) impacts

The proposed pipeline is unlikely to result in short or long term beneficial impacts on the archaeological resource.

4.2 Adverse Impacts

One hundred and twenty-one sites have been identified within the survey area. The quantifications of each grade of each site and impact types are summarised below in table 4.1. The significance of the impacts is summarised in table 4.2.

Table 4.1 Summary of impacts of the scheme by grade

Grade	Description	No. sites in survey area	No. sites in working width	No. sites within nominal 20m wide working width		
				Uncertain impacts	Indirect impacts	Direct impacts
A	Legally protected site	1	0	0	1	0
B	Nationally significant site, currently not legally protected	3	0	0	0	
C	Regionally significant site	0	0	0	0	0
D	Locally significant site	117	82	31	0	51
U	Ungraded	0	0	0	0	0
TOTALS		121	82	31	1	51

Table 4.2 Summary of significance impacts of sites

Significance of impact	count
None	38
Unknown	31
Low	49
Low or Medium	1
Medium	2
High	0
Total	121

The following sections (4.2.1 to 4.2.5) deal in category order with sites that are directly, or indirectly or possibly affected by the proposed pipeline.

4.2.1 Category A Sites

One legally protected site, located within the survey area will be indirectly affected by the construction works of the proposed pipeline (table 4.1).

SAM 396

(plots 10-14, NGR 613270 134060 to 615030 134600)

Royal Military Canal West Hythe Bridge to Scanlon's Bridge: the proposed pipeline joins the canal at Scanlon's Bridge in Hythe; the remains of the canal beneath the bridge are scheduled but the bridge itself is not; this section of canal has no parapet on the north side but retains most of its original back and front drains, though there is a degraded section of back drain at the east end; the route exits at one of the monument's slight doglegs. Cannon were originally mounted at each dogleg and the same sites were reused in the Second World War as gun emplacements.

FSU:037

(plot 14, NGR 613246 134090)

Site of former gun emplacement, identified by the field surveys immediately to the west of the proposed canal crossing

Impact: Negative, indirect, indeterminate; the proposed canal crossing will be achieved by an auger bore meaning that there will be no *direct* impacts upon the monument; there is, however, a potential for the proposed pipe trench to have a permanent *indirect* impact resulting from changes in ground water distribution. Vibrations resulting from the movement of works traffic alongside the monument may have an *indirect* impact. The construction phase in general will also have a slight temporary *indirect* impact upon the setting of the monument.

Significance of impact: medium or high

4.2.2 Category B Sites

Three nationally important sites (not legally protected) were located within the survey area, none of which will be affected by the proposed pipeline (table 4.1).

4.2.3 Category C Sites

No regionally important sites were located within the survey area (table 4.1).

4.2.4 Category D Sites

One hundred and seventeen locally important sites are located within the survey area, of which fifty-one will be directly affected by the pipeline. The impact on a further thirty-one sites is uncertain (table 4.1). The sites are discussed below in alphanumeric order:

DBA:BYa

(plots 18 and 19, NGR 612891 133701)

West Hythe and Aldington parish boundary; historic and marked by a ditch (see appendix C – B20)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

DBA:BYb

(plot 21, NGR 612386 132905)

West Hythe and Aldington parish boundary; historic; marked by a ditch and Important Hedge (see appendix C – B23)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

DBA:BYc

(plots 29 and 30, NGR 611914 132362)

West Hythe and Aldington parish boundary; historic; marked by ditch (see appendix C – B33)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

DBA:CQb

(plots 30 and 31, NGR 611772 132217)

West Hythe and Burmarsh parish boundary; historic; marked by ditch (see appendix C – B34)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

DBA:DX

(plot 44, NGR 609500 129405)

Vestigial banks located at precise location of former pond marked on tithe map of 1842 and OS maps of 1877 and 1899

Impact: Negative, direct, severe; the site lies completely within the working width and would be totally destroyed by pipeline construction

Significance of impact: Medium

DBA:FQ

(plot 12, NGR 613749 134135)

Dislodged possible boundary marker stone; lying c. 10m to north of proposed pipeline; The stone lies 15m away from a boundary stone marked at 613764 134138 on the OS maps of 1877 and 1899

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:001

(plots 1 and 2, NGR 615760 136852)

Holloway road (3m wide and 0.5-1.2m deep) with grassy banks

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:002

(plot 1, NGR 615823 137158)

Stone memorial cross to men of WWI Standling camp located on west side of road

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:006

(plots 7 and 9, NGR 616007 136046)

Historic field boundary marked by limestone and mortar wall

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:007

(plot 9, NGR 616012 135818)

Cast iron Edwardian/Victorian lamp posts, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:008

(plot 9, NGR 616010 135744)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:009

(plot 9, NGR 615998 135664)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:010

(plot 9, NGR 616000 135569)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:011

(plot 9, NGR 615982 135529)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:012

(plot 9, NGR 616020 135283)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:013

(plot 9, NGR 616094 135069)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:014

(plot 9, NGR 616024 135060)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:015

(plot 9, NGR 616000 135082)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:016

(plot 9, NGR 615905 135055)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:017

(plot 9, NGR 615834 135078)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:018

(plot 9, NGR 615768 135072)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:019

(plot 9, NGR 615690 135078)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:020

(plot 9, NGR 615316 134802)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:021

(plot 9, NGR 615290 134785)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:022

(plot 9, NGR 615238 134748)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:023

(plot 9, NGR 615208 134722)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:024

(plot 9, NGR 615181 134704)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:025

(plot 9, NGR 615135 134658)

Cast iron Edwardian/Victorian lamp post, with original or replacement heads

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the lamp post will or will not be affected.

Significance of impact: Unknown

FSU:026

(plot 9, NGR 615261 134766)

Brick bridge at end of Orchard Valley Road

Impact: Negative, uncertain; the precise course of the proposed main through Hythe is not known and so it is uncertain whether the bridge will or will not be affected.

Significance of impact: Unknown

FSU:027

(plots 10 and 11, NGR 614577 134416)

Dry ditch, 250m long, oriented NE and numerous other dry ditches/drains running NW-SE; located c. 5m to north of proposed pipeline

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:028

(plot 10, NGR 614594 134370)

Concrete base slab of former structure at SW corner of plot; located c. 5m to north of proposed pipeline

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:029

(plot 10, NGR 614947 134597)

Remnants of former field boundary wall

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:031

(plot 12, NGR 613910 134206)

Numerous dry ditches/drains running N-S

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:032

(plot 12, NGR 614204 134126)

Overgrown remnants of former sheep fold; wooden fence panel frags. and metal fence pins

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:033

(plot 12, NGR 614122 134116)

Limestone rubble of former wall or building, lying within 10m of proposed pipeline

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:034

(plot 12, NGR 614028 134097)

Partly buried possible boundary marker stone

Impact: Negative, direct, severe; the site lies completely within the working width and would be totally destroyed by pipeline construction

Significance of impact: Medium

FSU:035

(plot 13, NGR 613533 134193)

Numerous dry ditches/drains running N-S

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:036

(plot 13, NGR 613657 134086)

Fallen boundary marker stone, within 20m of proposed pipeline

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:038

(plot 15, NGR 613267 133977)

Vestigial ditch, oriented E-W, possibly a former field boundary or drain

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:039

(plot 15, NGR 613260 133977)

Spread of rough non-frogged bricks of 18th / early 19th century date, lying within 10m of proposed pipeline

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:040

(plot 17, NGR 613116 133801)

Two vestigial ditches oriented N-S and E-W, probably representing former field boundaries

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:041

(plot 17, NGR 613060 133741)

Spread of late 19th and early 20th century pottery and tile, covering c. 40m diam to S of pond in SW corner of plot. The finds coincide with part of the an area marked as brick works on the OS map of 1908 (DBA:IW)

Impact: Negative, direct, major; a moderate amount of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:042

(plot 19, NGR 612808 133522)

Man-made flood bank (2m wide and 0.5m high) on NW side of Willop Sewer lying c. 30m to SE of proposed pipeline; associated man-made/natural earthworks covering an area of c. 100m diam

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:048

(plot 33, NGR 611597 132030)

Flood bank and associated dry ditch (200m long) lying on north side of Dymchurch Sewage Disposal Works

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:049

(plot 34, NGR 611319 131693)

Five dry ditches/drains running WNW-ESE

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:050

(plot 39, NGR 610106 129998)

Dry ditch/drain running NW-SE

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:051

(plots 42 and 43, NGR 609592 129564)

Shallow ditch, oriented NNW-SSE

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:059

(plot 2, NGR 615755 136824)

Historic field boundary, marked by terrace (see appendix C – B1)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:063

(plots 4 and 5, NGR 615819 136299)

Historic field boundary, marked by ditch (see appendix C – B5)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:064

(plots 5 and 6, NGR 615749 136284)

Historic field boundary, marked by ditch (see appendix C – B6)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:065

(plot 8, NGR 615868 136484)

Historic field boundary, marked by ditch and Important Hedge (see appendix C – B9)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:066

(plots 9 and 10, NGR 614990 134573)

Historic field boundary with no earthworks or hedge (see appendix C – B11)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:067

(plots 10 and 11, NGR 614547 134435)

Historic field boundary, marked by ditch (see appendix C – B12)

Impact: Negative, uncertain; the site is located close to the edge of the proposed working width and so it is uncertain whether it will or will not be affected.

Significance of impact: Unknown

FSU:068

(plot 12, NGR 613795 134106)

Historic field boundary, partially following course of historic parish boundary, marked by ditch (see appendix C – B14)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:069

(plots 13 and 14, NGR 613466 134092)

Historic field boundary with no earthworks or hedge (see appendix C – B15)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:070

(plots 14 and 15, NGR 613239 134054)

Historic field boundary, marked by ditch and Important Hedge (see appendix C – B16)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:071

(plots 15 and 16, NGR 613217 133859)

Historic field boundary, marked by ditch and Important Hedge (see appendix C – B17)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:072

(plot 17, NGR 613142 133695)

Historic field boundary with no earthworks or hedge (see appendix C – B18)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:073

(plot 18, NGR 613145 133686)

Historic field boundary with no earthworks or hedge (see appendix C – B19)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:074

(plots 22 and 29, NGR 612049 132636)

Historic field boundary, marked by ditch (see appendix C – B32)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:075

(plots 19 and 20, NGR 612686 133401)

Historic field boundary, marked by bank and ditch (see appendix C – B21)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:076

(plot 20, NGR 612414 132909)

Historic field boundary with no earthworks or hedge (see appendix C – B22)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:077

(plots 33 and 34, NGR 611412 131808)

Historic field boundary with no earthworks or hedge (see appendix C – B37)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:080

(plots 32 and 33, NGR 611610 132203)

Historic field boundary, marked by ditch (see appendix C – B36)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:081

(plots 34 and 35, NGR 611269 131482)

Historic field boundary, marked by ditch (see appendix C – B38)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:082

(plots 35 and 36, NGR 610948 131152)

Historic field boundary, partially following course of historic parish boundary, marked by ditch (see appendix C – B39)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:083

(plot 36, NGR 610688 130838)

Historic field boundary, marked by ditch (see appendix C – B40)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:084

(plot 37, NGR 610604 130916)

Historic field boundary, marked by ditch and Important Hedge (see appendix C – B41)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:085

(plots 37 and 38, NGR 610363 130443)

Historic field boundary, partially following course of historic parish boundary, marked by ditch (see appendix C – B42)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:086

(plots 38 and 39, NGR 610222 130256)

Historic field boundary, marked by ditch and Important Hedge (see appendix C – B43)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:087

(plots 39 and 40, NGR 610034 129913)

Historic field boundary, marked by ditch (see appendix C – B44)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:088

(plots 40 and 41, NGR 609932 129854)

Historic field boundary, marked by ditch and Important Hedge (see appendix C – B45)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:089

(no plot, NGR 609730 129660)

Historic field boundary with no earthworks or hedge (see appendix C – B46)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:090

(plot 42, NGR 609664 129734)

Historic field boundary, marked by ditch and Important Hedge (see appendix C – B47)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:091

(plot 42, NGR 609612 129640)

Historic field boundary, marked by ditch and Important Hedge (see appendix C – B48)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:092

(plots 43 and 44, NGR 609427 129519)

Historic field boundary, marked by ditch (see appendix C – B49)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:093

(plots 44 and 45, NGR 609436 129330)

Historic field boundary, marked by ditch (see appendix C – B50)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:094

(plot 45, NGR 609470 129140)

Historic field boundary, marked by ditch (see appendix C – B51)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:095

(plot 46, NGR 609372 129100)

Historic field boundary with no earthworks or hedge (see appendix C – B44)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:096

(plots 46 and 47, NGR 609325 128741)

Historic field boundary, marked by ditch (see appendix C – B53)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

FSU:097

(plots 47 and 48, NGR 609261 128599)

Historic field boundary, marked by ditch (see appendix C – B54)

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

SMR KE9141

(plot 33, NGR 611374 131931)

Earthworks of three dry ditches/drains running WNW-ESE; located within an area purported to be a medieval field system

Impact: Negative, direct, minor; a relatively small proportion of this site will be affected by the proposed working width of the pipeline

Significance of impact: Low

4.2.5 Ungraded sites

No ungraded sites were located within the survey area (table 4.1).

4.3 Sites with no impact

Thirty-nine sites located by the field surveys fall totally outside the proposed working width. These sites are listed in the summary table in appendix D and presented on figures 2-7.

4.4 Uncorroborated desk-based assessment sites

Forty-three sites, recorded during the desk based assessment (Network Archaeology 2004a), and located within fields crossed by the proposed pipeline working width, were not corroborated by the field reconnaissance survey. These sites include four regionally important sites and thirty-nine locally important sites.

5 RECOMMENDATIONS

5.1 Staged approach to mitigation

The most cost-effective means of managing archaeological risk is to implement a staged approach to investigation and mitigation, as laid out in Table 5.1 and explained in greater detail in Appendix A. This report represents the conclusion of Stage 3.

Table 5.1 Staged approach to investigation and mitigation

Archaeological Stages of Investigation	
Stage 1	<i>feasibility study</i> of route corridor option(s) an appraisal of archaeological potential
Stage 2	<i>desk-based assessment</i> of route corridor options a thorough synthesis of available archaeological information
Stage 3	<i>field surveys</i> of preferred route option, including: field reconnaissance survey, field walking survey, geophysical survey, metal detector survey, auger survey, as appropriate
Stage 4	<i>field evaluation</i> of targeted areas along preferred route option, including: machine-excavated trenches, hand-dug test-pits, as appropriate
Stage 5	<i>excavation</i> detailed excavation of those sites which it is not possible to avoid or desirable to preserve
Stage 6	<i>watching brief</i> permanent presence monitoring of all ground disturbing activities
Stage 7	<i>archive and publication</i> synthesis and dissemination of results, leading on from each of the stages outlined above

5.2 Final route selection

The final route should be determined in relation to sites of national and regional significance (i.e. sites of category A, B and C) and to sites where the significance of impact is deemed to be medium or high.

5.3 Avoidance

Modification of the proposed route or the engineering design should be considered, where feasible and desirable, to prevent, reduce or offset significant adverse archaeological effects (e.g. negative impacts upon nationally important remains), during this stage and any future stage.

5.4 Minimisation of impact

Where impacts upon significant archaeological sites are unavoidable consideration should be given to minimisation of impact by reduction of the working width to the minimum practical level, and/or the laying of geotextile matting or bog mats, and/or careful reinstatement procedures (e.g. avoidance of subsoil ‘ripping’ at archaeological sites).

5.5 Trench evaluation

None of the field survey sites currently known to lie along the course of the proposed pipeline, merit investigation by trench evaluation in advance of construction. Trench evaluation has, however, already taken place at one uncorroborated desk-based site:

SMR KE17418

(Plots 1, 2, 9; NGR 615450 136950)

SMR KE17419

(Plots 1, 2, 9; NGR 615750 136950)

Excavations near Saltwood tunnel in 1997-1999, prior to construction of the Channel Tunnel Rail Link, produced settlement evidence spanning the Iron Age, Roman, early/middle Saxon and medieval periods (SMR KE17418) and also a large Bronze Age ring ditch, a small Roman cremation cemetery and an Anglo-Saxon pagan cemetery (SMR KE17419).

The proposed pipeline crosses an area (plot 2) immediately adjacent to the above sites. Recent archaeological trench evaluation of plot 2 identified a single pit containing several vessels dating to the late Bronze Age to early Iron Age (*pers. comm.* Nigel Grant). A report on the work is due shortly (Network Archaeology, forthcoming).

Agreement over the nature of any subsequent investigations at this site should be reached with *Kent County Council Environmental Management Unit* prior to construction (see 5.7 and 5.8).

5.6 Watching brief

The final route should be subject to a watching brief during construction. In addition to the working width of the proposed pipeline, investigation should also cover the sites proposed for associated engineering works, such as site compounds and pipe dumps.

The current proposed pipeline route falls into four distinct zones, each of which presents unique issues in terms of archaeological potential, investigation and mitigation, which should be taken into account when determining an appropriate level of monitoring and recording during the watching brief:

- Dry land to the north of Hythe (see 5.5)
- Streetworks through Hythe
- Royal Military Canal - a Scheduled Ancient Monument, requiring Consent (see 5.6.1)
- Romney Marsh (see 5.6.3)

The Romney Marsh area presents unique issues in terms of the identification of archaeological, palaeo-environmental and organic remains. There is often a deep accumulation of clays and silts (alluvium) in marshland areas. Due to the moderately high potential for the existence of archaeological remains in areas of deep alluvium, and the potential cost of assessing organic and palaeo-environmental remains, adequate resources should be put in place for dealing with unexpected archaeological remains in this area during the watching brief.

5.6.1 Known sites

All sites found by the field surveys for which advance work is not felt necessary, should be targeted for recording during the watching brief. One site is flagged up for specific discussion:

SAM 396

(plots 10-14, NGR 613270 134060 to 615030 134600)
Royal Military Canal West Hythe Bridge to Scanlon's Bridge

FSU:037

(plot 14, NGR 613246 134090)
Site of former gun emplacement

Recommendations

English Heritage has been consulted and Scheduled Ancient Monument Consent from the Secretary of the State to auger bore beneath this monument is currently being sought. No works should take place on, or in the vicinity of the monument until Consent has been granted. Prior to any works taking place alongside the monument, the extent of the scheduled area should be agreed with English Heritage and marked out on the ground and this will form an exclusion zone to all construction activities.

Agreement over the intensity of the watching brief and the level of recording of known sites should be reached with *Kent County Council Environmental Management Unit* (see 5.7 and 5.8).

5.6.2 Historic boundaries

Existing historic boundaries

Construction should aim to minimise the disturbance of historic boundaries, particularly parish boundaries and boundaries marked by an Important Hedge (see 5.4). Cross sections of those boundaries which are unavoidable could be recorded during the course of a watching brief. Archaeologically significant layers, such as old land surfaces, sealed beneath banks may require sampling. Earthworks, such as banks and ditches, should be sensitively reinstated.

Former field boundaries

Former field boundaries identified as being potentially historic could also be targeted for detailed recording during the course of a watching brief.

5.6.3 Geo-archaeological, palaeo-environmental and organic remains

Geotechnical survey data should be reviewed to establish that it confirms the anticipated solid and drift geology and to flag up any areas of alluvium and/or peat.

Geo-archaeological and palaeo-environmental specialist advice should be sought in the formulation of a *Written Scheme of Investigation* for the watching brief. This should address the need for both pre-emptive and reactive works. Adequate resources should be put in place for dealing with geo-archaeological, palaeo-environmental and organic remains found during construction. Particular consideration should be given to Romney Marsh.

5.7 Written Schemes of Investigation

An archaeological Written Scheme of Investigation (WSI) should be produced for each stage of any future archaeological work (see 5.1).

5.8 Liaison with statutory consultees

Liaison should be maintained with *Kent County Council Environmental Management Unit* in order to agree future archaeological investigation, approve and monitor the implementation of any archaeological WSIs, review reports, monitor fieldwork in progress, and also to visit the construction site.

6 ACKNOWLEDGMENTS

Network Archaeology Ltd would like to thank the following for their contribution to the project:

Organisation	Name	Position
Dalcour Maclaren	Jonathan Tenant	Director and Project co-ordinator
Kent County Council (Environmental Management Unit)	Wendy Rogers	Senior Archaeological Officer
Network Archaeology Ltd	David Bonner	Director
	Martin Lightfoot	Project Manager
	Rosey Burton	Project Officer
	Frank Martin	Project Officer
	Adam Holman	IT/GIS Officer
	Wendy Booth	Finds Officer
	Dordon Shaw	Project Assistant
	Caroline Kemp	Project Assistant

7 BIBLIOGRAPHY

7.1 Primary sources

Table 7.1 Summary table of maps

British Geological Survey	1979	Ten Mile Map: South Sheet, 3 rd ed.	Scale 1:625,000
Soil Survey of England and Wales (SSEW)	1983	Soils of England and Wales; Sheet 5, South West England	Scale 1:250,000

7.2 Secondary Sources

Table 7.2 Summary table of documentary references

DEFRA	1997	The Hedgerow Regulations	http://www.hmso.gov.uk/si/si_1997/7116001.htm
Institute of Field Archaeologists	2000	<i>Code of Conduct</i>	
Network Archaeology	2004a	Alkham Valley Main: Archaeological desk-based assessment	
Network Archaeology	2004b	Alkham Valley Main: Written scheme of investigation for archaeological reconnaissance and fieldwalking survey	
ODPM	1999	<i>Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999</i>	

8 STATEMENT OF INDEMNITY

Every effort has been taken in the preparation and submission of this report in order to provide as complete an assessment as possible within the terms of the brief, and all statements and opinions are offered in good faith. Network Archaeology Ltd cannot accept responsibility for errors of fact or opinion resulting from data supplied by any third party, or for any loss or other consequences arising from decisions or actions made upon the basis of facts or opinions expressed in this report and any supplementary papers, howsoever such facts and opinions may have been derived, or as a result of unknown and undiscovered sites of artefacts.

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APPENDIX A

EXPLANATION OF PHASED APPROACH TO ARCHAEOLOGICAL INVESTIGATION AND MITIGATION

Stage 1: Feasibility Assessment

An appraisal of archaeological potential

Stage 2: Desk-based Assessment

A thorough desk based synthesis of available information

Aerial photographic study:

Identification and mapping of palaeochannels from aerial photographs should be undertaken as part of the desk-based assessment.

Stage 3: Field Surveys

Field reconnaissance survey

This is a visual inspection of the proposed pipeline route, in order to:

- locate and characterise archaeology represented by above ground remains (e.g. earthworks and structures); and
- record the nature and condition of existing field boundaries crossed by the route, to establish their potential antiquity.
- A walkover of the entire pipeline route should normally take place.

Fieldwalking survey

The distribution of finds found by fieldwalking can indicate areas of archaeological activity, which are not represented by above ground remains.

A programme of structured fieldwalking should normally take place across all available arable land to recover archaeological artefacts. A minimum of five transects at 10m separation based upon the centreline of the proposed pipeline should normally be walked.

Geophysical survey

Geophysical survey methods are non-intrusive and can detect and precisely locate buried archaeological features.

Magnetometry is the most cost-effective technique for large scale surveys. *Recorded* magnetometer survey, supplemented by background magnetic susceptibility survey is normally recommended. The surveys should sample the entire length and a proportion of the width of the working width of the proposed pipeline route, except in wetland areas, such as marshland, tidal areas and floodplains.

Only a *recorded* magnetometer survey can provide direct and objective evidence of the presence and character of individual archaeological features.

Unrecorded magnetometer scanning is not recommended because it requires spontaneous, subjective interpretation as the unrecorded scanning survey progresses. This method does not therefore provide a secure basis for eliminating areas that produce negative results from further consideration.

Electro-magnetic survey

This technique can produce a three-dimensional geomorphological sub-surface map of wetland areas. Survey should take place along a minimum of five transects, and measurements should be calibrated by absolute readings collected by borehole and/or hand auger survey.

Auger survey

Geotechnical borehole survey supplemented by hand auger survey could:

- generate stratigraphic profiles and establish the depth of alluvium;
- look for 'islands' of solid geology which are elevated in comparison with their contemporary landscape;
- look for former river channels;
- look for evidence of buried land surfaces;
- calibrate an EM survey; and
- assess the viability of using targeted magnetometer survey on the floodplain.

Ideally, an environmental archaeologist would consult with the geotechnical team in order to develop a strategy which would enable the opportunistic and immediate examination of the geotechnical team's soil cores, in conjunction with a *hand auger survey* tailored to meet archaeological objectives listed above. The location and frequency of the hand augers should be determined by the results of the EM survey, but generally should be taken at regular intervals, no greater than 50m separation, along the centreline of the proposed route.

Radiocarbon dating and palaeo-environmental assessment

Soil samples recovered may require radiocarbon dating and assessment of potential for preservation of palaeo-environmental important remains.

Stage 4: Evaluation

Field evaluation should normally take place at the sites of positive findings made during earlier stages of archaeological assessment and field survey, which it may not be possible or desirable to avoid. Evaluation might involve machine-excavated trenches, hand-dug test-pits and/or hand auguring. The objectives are to confirm the presence or absence of archaeological remains, to determine their character, extent, date and state of preservation, and to produce a report on the findings. The choice of technique(s) will depend upon site-specific factors.

Stage 5: Excavation

It may not be possible or desirable to avoid significant archaeological sites identified by previous survey work and/or evaluation. Ideally, *excavation* of such sites should take place in advance of construction. Excavation would involve machine-stripping of limited, open areas, followed by archaeological investigation. The objectives would be to obtain a full record of the archaeological remains prior to construction, and to produce a report on the findings.

Stage 6: Watching Brief

A permanent-presence watching brief will be required during all ground disturbing activities of the construction phase of the project, to record unexpected discoveries, and known sites which did not merit investigation in advance of construction. The main phases of monitoring for the pipeline will be topsoil stripping, trench excavation and the opportunistic observation of the pre-construction drainage. The objectives are to obtain a thorough record of any archaeological remains found during construction, and to produce a report on the findings. Contingencies should allow for salvage excavation of significant, unexpected archaeological sites found during construction.

Stage 7: Archive, Report and Publication

A post-excavation programme for dealing with all records of investigated archaeological remains and recovered artefacts usually follows each of the stages outlined above. This includes the collation and cataloguing of all site records, the processing, conservation and cataloguing of artefacts, the production of an archive report, and, where appropriate, the drafting of articles for publication.

APPENDIX B

SUMMARY TABLE OF PLOT DATA

Plot No	Landuse	Conditions	Visibility	Weather	H & S
1	Urb. & Ind.	hardstanding		sun/cloud	
2	Arable	crop	poor	sun/cloud	
3	Pasture	long	poor	sun/cloud	
4	Pasture	long	poor	sun/cloud	
5	Pasture	long	poor	sun/cloud	
6	Pasture	short	poor	sun/cloud	
7	Pasture	short	poor	sun/cloud	
8	Wood	orchard	poor	sun/cloud	
9	Urb. & Ind.	hardstanding		sun/cloud	cars
10	Pasture	long	poor	sun	water, ammunition & explosives
11	Pasture	long	poor	sun	water, ammunition, explosives & buried pipe
12	Pasture	long	poor	sun	water, ammunition & explosives
13	Pasture	long	poor	sun	buried pipe, BT overhead cables
14	Infrastructure	canal		sun	water
15	Arable	shoots	moderate	sun	water
16	Arable	shoots	good	sun	water
17	Arable	shoots	good	sun	water
18	Pasture	long	poor	sun/cloud	
19	Pasture	long	poor	sun/cloud	water
20	Arable	shoots	good	sun/cloud	water, railway
21	Pasture	long	poor	sun/cloud	water, railway
22	Arable	shoots	good	sun	water, railway
23	Arable	shoots	good		water, railway
24	Arable	shoots	moderate	sun	
25	Pasture	long	poor	sun	water, railway
26	Pasture	short	poor	sun/cloud	water, railway
27	Arable	shoots	poor	sun	water, railway
28	Arable	shoots	poor	sun	water, railway
29	Arable	shoots		sun	water, railway
30	Arable	shoots	good	sun	water
31	Pasture	long	poor	sun	water
32	arable	crop		sun	water
33	Pasture	short	good	sun	water
34	Pasture	long	poor	sun	water
35	Arable	shoots	good	sun	water
36	Arable	shoots	good	sun	water
37	Arable	shoots	good	sun/cloud	water
38	Arable	shoots	good	sun/cloud	water
39	Arable	shoots	good	sun/cloud	
40	Arable	ploughed	100%	sun/cloud	water
41	Arable	shoots	good	sun/cloud	water
42	Arable	shoots	good	cloud	water
43	Arable	shoots	good	cloud	water
44	Arable	shoots		cloud	water
45	Arable	shoots	good	cloud	
46	Arable	harrowed	100%	sun/cloud	water, railway
47	Arable	shoots	good	sun/cloud	water. railway
48	Arable	shoots	good	sun/cloud	water, railway
49	Arable	shoots/stubble	moderate	sun/cloud	water., railway
50	Arable	shoots/stubble	moderate	sun/cloud	water

Plot No	Landuse	Conditions	Visibility	Weather	H & S
51	Arable	shoots/stubble	moderate	sun/cloud	railway
52	Pasture	long	poor	sun/cloud	
53	Arable	shoots	good	sun/cloud	water
54	Arable	shoots	good	sun/cloud	water
55	Arable	shoots	good	sun/cloud	water, railway
56	Pasture	short	poor	sun/cloud	water
57	Pasture	long	poor	sun/cloud	overhead electricity cables
58	Pasture	long/short	poor	sun/cloud	

APPENDIX C

SUMMARY TABLE OF BOUNDARY DATA

Boundary	Ref.	Plots	Bank 1	Ditch 1	Terrace	Fence Wall	Hedge	Historic boundary	Important hedge
B1	FSU:059	1/2			+ 0.5 m	p/w		yes	
B2	FSU:060	2/3						yes	
B3	FSU:061	3/4			- 1.5 m		yes	yes	yes
B4	FSU:062	3/4			- 1.5 m	p/w	yes	yes	yes
B5	FSU:063	4/5						yes	
B6	FSU:064	5/6		3m x 3m				yes	
B7	-	4/7				p/w	yes	yes	yes
B8	-	4/7				p/w	yes	yes	yes
B9	FSU:065	2/8			- 5 m	p/w	yes	yes	yes
B10	FSU:006	7/9				Wall		yes	
B11	FSU:066	9/10				p/w		yes	
B12	FSU:067	10/11		1m x 0.3m				yes	
B13	-	11/12		2m x 0.5m					
B14	FSU:068	12/13				p/w		yes	
B15	FSU:069	13/14				p/w		yes	
B16	FSU:070	14/15				p/w	yes	yes	yes
B17	FSU:071	15/17		3m x 1.5m			yes	yes	yes
B18	FSU:072	17/18				p/w		yes	
B19	FSU:073	17/18				p/w		yes	
B20	DBA:BYa	18/19		4m x 2.5m		p/w		yes	
B21	FSU:075	19/20	3m x 0.5m	6m x 2m				yes	
B22	FSU:076	20/21				p/w		yes	
B23	DBA:BYb	20/21		3m x 1.5m			yes	yes	yes
B24	-	21/22		20m x 5m					
B25	-								
B26	-								
B27	FSU:078	23/24		5m x 2.5m				yes	
B28	FSU:079	24/25		5m x 2.5m				yes	
B29	DBA:CQa	25/26		8m x 3m				yes	
B30	FSU:047	26/27		5m x 30m					
B31	DBA:CR	27/28		5m x 3m				yes	
B32	FSU:074	22/29		3m x 2m				yes	
B33	DBA:BYc	29/30		5m x 1.2m				yes	
B34	DBA:CQb	30/31		10m x 5m				yes	
B35	-	31/32				p/w			
B36	FSU:080	32/33		7m x 2m				yes	
B37	FSU:077	33/34				p/w		yes	
B38	FSU:081	34/35		6m x 3m				yes	
B39	FSU:082	35/36		6m x 3m				yes	
B40	FSU:083	36/37		4m x 2m		p/w		yes	
B41	FSU:084	36/37		4m x 2m			yes	yes	yes
B42	FSU:085	37/38		10m x 5m				yes	

B43	FSU:086	38/39		3m x 1.5m		p/w	yes	yes	yes
B44	FSU:087	39/40		5m x 2m				yes	
B45	FSU:088	40/41		5m x 2.5m			yes	yes	yes
B46	FSU:089	41/42						yes	
B47	FSU:090	41/42		10m x 4m			yes	yes	yes
B48	FSU:091	42/43		6m x 1.5m			yes	yes	yes
B49	FSU:092	43/44		5m x 1.5m				yes	
B50	FSU:093	44/45		3.5m x 1.2m				yes	
B51	FSU:094	45/46		4m x 2m		p/w		yes	
B52	FSU:095	45/46				p/w		yes	
B53	FSU:096	46/47		4m x 2.5m		p/w		yes	
B54	FSU:097	47/48		4m x 2m				yes	
B55	DBA:EC	48/49		20m x 5m				yes	
B56	FSU:098	49/50		3m x 2m				yes	
B57	FSU:099	50/51		3m x 2m				yes	
B58	FSU:100	51/52		1m x 0.2m			yes	yes	yes
B59	FSU:101	51/52		4m x 2m		p/w	yes	yes	yes
B60	FSU:102	52/53		7m x 2m			yes	yes	yes
B61	FSU:103	53/54		3.5m x 1.5m				yes	
B62	-	54/55		20m x 4m					
B63	FSU:104	55/56		6m x 2m				yes	
B64	DBA:EO	56/57				p/w		yes	
B65	FSU:105	57/58				p/w		yes	
B66	FSU:106	57/58				p/w		yes	

APPENDIX D

SUMMARY TABLE OF FIELD SURVEY SITES

Reference	Plot	Source	Description	Period	Importance	Impact	Significance of impact	National grid reference
DBA:BYa	18, 19	FRS	Historic parish boundary	Post-medieval	D	-D min	low	612891 133701
DBA:BYb	21	FRS	Historic parish boundary and important hedge	Post-medieval	D	-D min	low	612386 132905
DBA:BYc	29, 30	FRS	Historic parish boundary	Post-medieval	D	-D min	low	611914 132362
DBA:CQa	25, 26	FRS	Historic parish boundary	Post-medieval	D	none	n/a	611679 131883
DBA:CQb	30, 31	FRS	Historic parish boundary	Post-medieval	D	-D min	low	611772 132217
DBA:CR	27, 28	FRS	Historic parish boundary	Post-medieval	D	none	n/a	611115 131092
DBA:CS	34	FRS	Extant pond	Post-medieval	D	none	n/a	611308 131799
DBA:DX	44	FRS	Banks	Post-medieval	D	-D sev	medium	609500 129405
DBA:EC	48, 49	FRS	Historic parish boundary	Post-medieval	D	none	n/a	609036 128404
DBA:EO	56, 57	FRS	Historic parish boundary	Post-medieval	D	none	n/a	608224 126636
DBA:FC	3	FRS	Depression	Post-medieval	D	none	n/a	615949 136472
DBA:FQ	12	FRS	Possible dislodged boundary stone	?Post-medieval	D	-unc	unknown	613749 134135
DBA:GI	29	FRS	Depression	Post-medieval	D	none	n/a	611921 132537
DBA:GP	27	FRS	Pond	Post-medieval	D	none	n/a	611304 131392
DBA:JK	2	FRS	Timber and corrugated iron shed	Modern	D	none	n/a	615886 136615
FSU:001	1, 2	FRS	Holloway and banks	?Post-medieval	D	-D min	low	615760 136852
FSU:002	1	FRS	Stone memorial cross	?Modern	D	-unc	unknown	615823 137158
FSU:003	2	FRS	Spread of limestone slabs	?Post-medieval	D	none	n/a	615900 136600
FSU:004	3, 4	FRS	Holloway and banks	?Post-medieval	D	none	n/a	616010 136337
FSU:005	4	FRS	Field boundary	?Post-medieval	D	none	n/a	615835 136299
FSU:006	7, 9	FRS	Historic field boundary marked by limestone and mortar wall	Post-medieval	D	-D min	low	616007 136046
FSU:007	9	FRS	Cast iron lamp posts, C19	Modern	D	-unc	unknown	616012 135818
FSU:008	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	616010 135744
FSU:009	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615998 135664
FSU:010	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	616000 135569
FSU:011	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615982 135529
FSU:012	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	616020 135283
FSU:013	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	616094 135069
FSU:014	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	616024 135060
FSU:015	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	616000 135082
FSU:016	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615905 135055
FSU:017	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615834 135078
FSU:018	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615768 135072
FSU:019	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615690 135078
FSU:020	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615316 134802
FSU:021	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615290 134785
FSU:022	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615238 134748
FSU:023	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615208 134722
FSU:024	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615181 134704
FSU:025	9	FRS	Cast iron lamp post, C19	Modern	D	-unc	unknown	615135 134658
FSU:026	9	FRS	Brick bridge	?Post-medieval	D	-unc	unknown	615261 134766

Reference	Plot	Source	Description	Period	Importance	Impact	Significance of impact	National grid reference
FSU:027	10, 11	FRS	Ditch	?Post-medieval	D	-unc	unknown	614577 134416
FSU:028	10	FRS	Concrete footing	Modern	D	-unc	unknown	614594 134370
FSU:029	10	FRS	Field boundary wall	?Post-medieval	D	-D min	low	614947 134597
FSU:031	12	FRS	Ditches	?Post-medieval	D	-unc	unknown	613910 134206
FSU:032	12	FRS	Sheep fold	?Modern	D	-D min	low	614204 134126
FSU:033	12	FRS	Wall or building	?Post-medieval	D	-unc	unknown	614122 134116
FSU:034	12	FRS	Possible boundary stone	?Post-medieval	D	-D sev	medium	614028 134097
FSU:035	13	FRS	Ditches	?Post-medieval	D	-unc	unknown	613533 134193
FSU:036	13	FRS	Fallen boundary stone	?Post-medieval	D	-unc	unknown	613657 134086
FSU:037	14	FRS	Gun emplacement (see SAM 396)	Post-medieval	A	-I min	medium	613246 134090
FSU:038	15	FRS	Ditch	?Post-medieval	D	-D min	low	613267 133977
FSU:039	15	FRS	Spread of bricks	Post-medieval	D	-unc	unknown	613260 133977
FSU:040	17	FRS	Two ditches	Post-medieval	D	-D min	low	613116 133801
FSU:041	17	FRS	Pottery spread	Post-medieval	D	-D maj	low	613060 133741
FSU:042	19	FRS	Flood bank	?Post-medieval	D	-D min	low	612808 133522
FSU:043	20	FRS	Flood bank	?Post-medieval	D	none	n/a	612280 133078
FSU:044	21	FRS	Earthwork	?Post-medieval	D	none	n/a	612392 132866
FSU:045	22	FRS	Pebble and cobble spread	Undetermined	D	none	n/a	612125 132758
FSU:046	25	FRS	Drain	?Post-medieval	D	none	n/a	611816 131968
FSU:047	26, 27	FRS	Drain	?Post-medieval	D	none	n/a	611596 131780
FSU:048	33	FRS	Flood bank and ditch	?Post-medieval	D	-unc	unknown	611597 132030
FSU:049	34	FRS	Five ditches	?Post-medieval	D	-D min	low	611319 131693
FSU:050	39	FRS	Ditch	?Post-medieval	D	-D min	low	610106 129998
FSU:051	42, 43	FRS	Ditch	?Post-medieval	D	-D min	low	609592 129564
FSU:052	48	FRS	Pond	?Post-medieval	D	none	n/a	609210 128466
FSU:053	51	FRS	Pillbox	Modern	B	none	n/a	608970 128100
FSU:054	51	FRS	Octagonal pillbox	Modern	B	none	n/a	608880 127972
FSU:055	53	FRS	Octagonal pillbox and boffee	Modern	B	none	n/a	608406 127445
FSU:056	54	FRS	Pottery sherd	Iron Age	D	none	n/a	608345 127102
FSU:057	55	FRS	Pottery sherd	Medieval	D	none	n/a	608338 126988
FSU:058	57	FRS	Pond	?Post-medieval	D	none	n/a	608265 126647
FSU:059	2	FRS	Historic field boundary	Post-medieval	D	-D min	low	615755 136824
FSU:060	2, 3	FRS	Historic field boundary	Post-medieval	D	none	n/a	616137 136622
FSU:061	3	FRS	Historic field boundary and Important Hedge	Post-medieval	D	none	n/a	616013 136342
FSU:062	4	FRS	Historic field boundary and Important Hedge	Post-medieval	D	none	n/a	616020 136318
FSU:063	4, 5	FRS	Historic field boundary	Post-medieval	D	-D min	low	615819 136299
FSU:064	5, 6	FRS	Historic field boundary	Post-medieval	D	-D min	low	615749 136284
FSU:065	8	FRS	Historic field boundary and Important Hedge	Post-medieval	D	-D min	low	615868 136484
FSU:066	9, 10	FRS	Historic field boundary	Post-medieval	D	-D min	low	614990 134573
FSU:067	10, 11	FRS	Historic field boundary	Post-medieval	D	-unc	unknown	614547 134435
FSU:068	12	FRS	Historic field boundary, partially following course of historic parish boundary	Post-medieval	D	-D min	low	613795 134106

Reference	Plot	Source	Description	Period	Importance	Impact	Significance of impact	National grid reference
FSU:069	13, 14	FRS	Historic field boundary	Post-medieval	D	-D min	low	613466 134092
FSU:070	14, 15	FRS	Historic field boundary and Important Hedge	Post-medieval	D	-D min	low	613239 134054
FSU:071	15, 16	FRS	Historic field boundary and Important Hedge	Post-medieval	D	-D min	low	613217 133859
FSU:072	17	FRS	Historic field boundary	Post-medieval	D	-D min	low	613142 133695
FSU:073	18	FRS	Historic field boundary	Post-medieval	D	-D min	low	613145 133686
FSU:074	22, 29	FRS	Historic field boundary	Post-medieval	D	-D min	low	612049 132636
FSU:075	19, 20	FRS	Historic field boundary	Post-medieval	D	-D min	low	612686 133401
FSU:076	20	FRS	Historic field boundary	Post-medieval	D	-D min	low	612414 132909
FSU:077	33, 34	FRS	Historic field boundary	Post-medieval	D	-D min	low	611412 131808
FSU:078	23, 24	FRS	Historic field boundary	Post-medieval	D	none	n/a	612153 132341
FSU:079	24, 25	FRS	Historic field boundary	Post-medieval	D	none	n/a	611914 132157
FSU:080	32, 33	FRS	Historic field boundary	Post-medieval	D	-D min	low	611610 132203
FSU:081	34, 35	FRS	Historic field boundary	Post-medieval	D	-D min	low	611269 131482
FSU:082	35, 36	FRS	Historic field boundary, partially following course of historic parish boundary	Post-medieval	D	-D min	low	610948 131152
FSU:083	36	FRS	Historic field boundary	Post-medieval	D	-D min	low	610688 130838
FSU:084	37	FRS	Historic field boundary and Important Hedge	Post-medieval	D	-D min	low	610604 130916
FSU:085	37, 38	FRS	Historic field boundary, partially following course of historic parish boundary	Post-medieval	D	-D min	low	610363 130443
FSU:086	38, 39	FRS	Historic field boundary and Important Hedge	Post-medieval	D	-D min	low	610222 130256
FSU:087	39, 40	FRS	Historic field boundary	Post-medieval	D	-D min	low	610034 129913
FSU:088	40, 41	FRS	Historic field boundary and Important Hedge	Post-medieval	D	-D min	low	609932 129854
FSU:089	none	FRS	Historic field boundary	Post-medieval	D	-D min	low	609730 129660
FSU:090	42	FRS	Historic field boundary and Important Hedge	Post-medieval	D	-D min	low	609664 129734
FSU:091	42	FRS	Historic field boundary and Important Hedge	Post-medieval	D	-D min	low	609612 129640
FSU:092	43, 44	FRS	Historic field boundary	Post-medieval	D	-D min	low	609427 129519
FSU:093	44, 45	FRS	Historic field boundary	Post-medieval	D	-D min	low	609436 129330
FSU:094	45	FRS	Historic field boundary	Post-medieval	D	-D min	low	609470 129140
FSU:095	46	FRS	Historic field boundary	Post-medieval	D	-D min	low	609372 129100
FSU:096	46, 47	FRS	Historic field boundary	Post-medieval	D	-D min	low	609325 128741
FSU:097	47, 48	FRS	Historic field boundary	Post-medieval	D	-D min	low	609261 128599
FSU:098	49, 50	FRS	Historic field boundary	Post-medieval	D	none	n/a	608994 128326
FSU:099	50, 51	FRS	Historic field boundary	Post-medieval	D	none	n/a	608810 128212
FSU:100	51	FRS	Historic field boundary and Important Hedge	Post-medieval	D	none	n/a	608573 127943
FSU:101	52	FRS	Historic field boundary and Important Hedge	Post-medieval	D	none	n/a	608609 127893
FSU:102	52, 53	FRS	Historic field boundary and Important Hedge	Post-medieval	D	none	n/a	608414 127504
FSU:103	53, 54	FRS	Historic field boundary	Post-medieval	D	none	n/a	608291 127298
FSU:104	55, 56	FRS	Historic field boundary	Post-medieval	D	none	n/a	608210 126757
FSU:105	57	FRS	Historic field boundary	Post-medieval	D	none	n/a	608294 126562
FSU:106	58	FRS	Historic field boundary	Post-medieval	D	none	n/a	608427 126720
SAM 396	KCC	FRS	Royal Military Canal West Hythe Bridge to Scanlons Bridge (see FSU:037)	Post-medieval	A	-I indet	medium	614711 134389

Reference	Plot	Source	Description	Period	Importance	Impact	Significance of impact	National grid reference
SMR KE9141	33	FRS	Three ditches	Medieval	D	-D min	low	611374 131931

Site category definitions

Grade	Description	Examples
A	Legally protected site	Scheduled Ancient Monuments, Listed Buildings, Conservation Areas
B	Nationally significant site, currently not legally protected	Major settlements (e.g. villas, deserted medieval villages), burial grounds, standing historic buildings
C	Regionally significant site	Some settlements, finds scatters, Roman roads, sites of historic buildings, locally listed buildings
D	Locally significant site	Field systems, ridge and furrow, trackways, wells
U	ungraded	Non-archaeological site held by data source

APPENDIX E

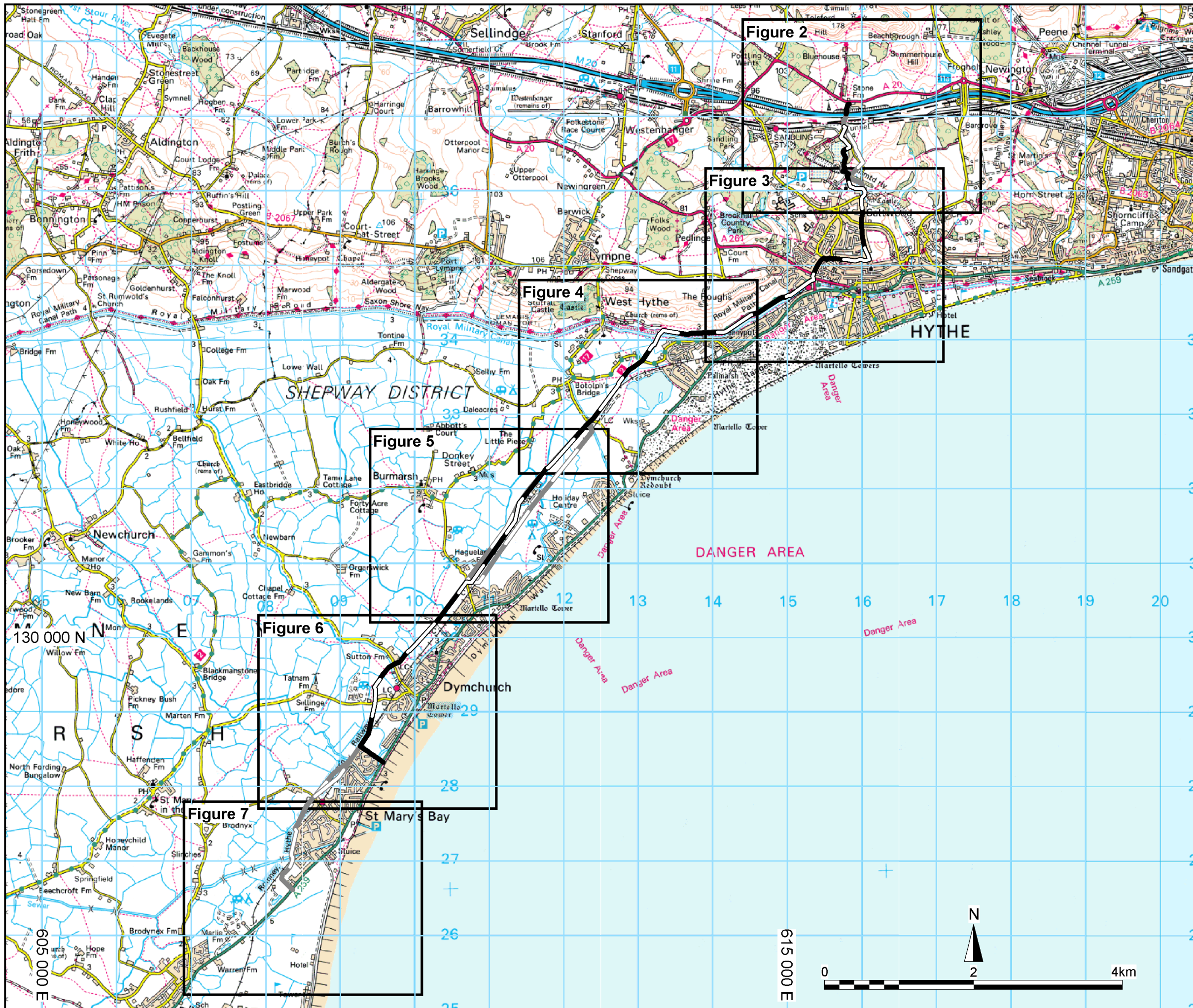
**SUMMARY TABLE OF
UNCORROBORATED DESK BASED SITES**

Reference	Plot	Source	Description	Period	Importance	Impact	Significance of impact	National grid reference
SMR Ke17419	-	DBA	Cemetery	Saxon	C	adv unc	unknown	615750 136950
DBA:AJ	1	DBA	Guide post marked on OS 1877	Post-medieval	D	adv unc	unknown	615815 137174
DBA:BH	11	DBA	Farm building, marked on Tithe map of 1842	Post-medieval	D	none	n/a	614258 134196
DBA:BI	11	DBA	Two buildings and small plot marked on Tithe map 1842	Post-medieval	D	none	n/a	614188 134176
DBA:FT	11	DBA	Boundary stone, marked on OS maps of 1877 and 1899	Post-medieval	D	none	n/a	614206 134151
DBA:IA	11	DBA	Pen marked on OS map 1899	Post-medieval	D	none	n/a	614546 134357
DBA:BK	12	DBA	St Leonards and West Hythe parish boundary marked on Tithe maps 1839 and 1842	Undetermined	D	adv D min	low	613877 133943
DBA:FU	12	DBA	Boundary stone marked on OS map 1877	Post-medieval	D	none	n/a	614065 134111
DBA:IC	12	DBA	Group of buildings and small plots marked on OS map 1899	Post-medieval	D	none	n/a	614116 134182
DBP S0008198	12	DBA	Pillbox	Modern	C	adv unc	unknown	613800 134100
DBA:BS	16	DBA	Pond marked on Tithe map 1839	Post-medieval	D	none	n/a	613098 133945
DBA:BY	18/19 20/21 22 29/30	DBA	West Hythe and Aldington parish boundary marked on Tithe map 1842	Undetermined	D	adv D min	low	612657 132983
DBA:GG	21	DBA	Sheep fold marked on OS maps 1877 and 1899	Post-medieval	D	none	n/a	612444 132902
DBP S0013296	21	DBA	Pillbox	Modern	C	adv unc	unknown	612400 132900
DBA:CN	22	DBA	Pen, marked on Tithe map of 1842 and OS map of 1877	Post-medieval	D	none	n/a	612303 132932
DBA:GH	22	DBA	Pond marked on OS maps 1877 and 1899; located c.50m away from FSU:057 which may be the same site	Post-medieval	D	adv unc	unknown	612176 132743
DBA:CG	23	DBA	Pond marked on Tithe map 1839 and OS Map 1877	Post-medieval	D	none	n/a	612304 132548
DBA:CQ	25/26 30/31	DBA	West Hythe and Burmarsh parish boundary marked on Tithe maps 1839 and 1845	Undetermined	D	adv D min	low	611696 131974
DBA:JO	27	DBA	Pond marked on OS map 1946	Modern	D	none	n/a	611376 131484
DBA:CR	27/28 37	DBA	Burmarsh and Dymchurch parish boundary marked on Tithe maps 1842 and 1845	Undetermined	D	adv D min	low	610959 130912
DBA:GJ	32	DBA	Pond marked on OS maps 1877 and 1899	Post-medieval	D	adv unc	unknown	611699 132169
DBA:CV	35	DBA	Pen marked on Tithe map 1845 and OS map 1877	Post-medieval	D	none	n/a	610959 131187
SMR KE15502	35	DBA	Pottery concentration	Medieval	D	adv unc	unknown	611180 131500
DBA:GR	36	DBA	Pond marked on OS maps 1877 and 1899	Post-medieval	D	adv unc	unknown	610732 130841
DBA:JQ	38	DBA	Post marked on OS map 1946	Modern	D	adv D sev	medium	610332 130273

Reference	Plot	Source	Description	Period	Importance	Impact	Significance of impact	National grid reference
DBA:DL	39	DBA	Farm building marked on Tithe map 1842	Post-medieval	D	none	n/a	610154 129941
DBA:JX	39	DBA	Cropmark	Undetermined	D	adv D min	low	610187 130070
DBA:DM	41	DBA	Pen marked on Tithe map 1842 and OS map 1908	Post-medieval	D	adv unc	unknown	609921 129845
DBA:DN	41	DBA	Pond, marked on Tithe map of 1842 and OS map of 1899	Post-medieval	D	adv unc	unknown	609815 129671
SMR KE15500	43	DBA	Pottery concentration	Post-medieval	D	adv d sev	medium	609640 129580
DBA:EF	46	DBA	Pond marked on Tithe map 1842 and OS maps 1877 and 1899	Post-medieval	D	adv unc	unknown	609398 128881
DBA:JS	47	DBA	Two buildings marked on OS map 1946	Modern	D	adv D sev	medium	609310 128609
DBA:EG	48/49	DBA	Dymchurch and St Mary in the Marsh parish boundary marked on Tithe map 1842 and 1843	Undetermined	D	adv D min	low	609166 128296
DBA:EV	55	DBA	Pond marked on Tithe map 1843 and OS maps 1877 and 1899	Post-medieval	D	adv D sev	medium	608213 126771
DBA:HC	56	DBA	Sheep fold marked on OS map 1877	Post-medieval	D	adv D sev	medium	608263 126712
DBA:JA	57	DBA	Pond marked on OS map 1908	Modern	D	adv unc	unknown	608289 126654
DBA:AP	9	DBA	Saltwood and Hythe parish boundary, marked on Tithe map of 1842	Undetermined	D	adv D min	low	615835 134894
DBA:AW	9	DBA	Farm building marked on Tithe map 1842	Post-medieval	D	adv unc	unknown	615490 135121
DBA:HM	9	DBA	Boundary stone marked on OS map 1899	Post-medieval	D	adv unc	unknown	615497 135107
DBA:HO	9	DBA	Quarry, marked on OS maps of 1877 and 1899	Post-medieval	D	adv D min	low	615960 135107
DBA:HP	9	DBA	Survey post marked on OS maps 1877 and 1899	Post-medieval	D	adv unc	unknown	615905 135070
DBA:JZ	9	DBA	Road	Roman	D	adv D maj	low	616030 136005
MON 1042802	9	DBA	Road	Roman	C	adv d min	low	615336 134836

APPENDIX F

FIGURES 1 - 7



- Surveyed routes
- Proposed pipeline

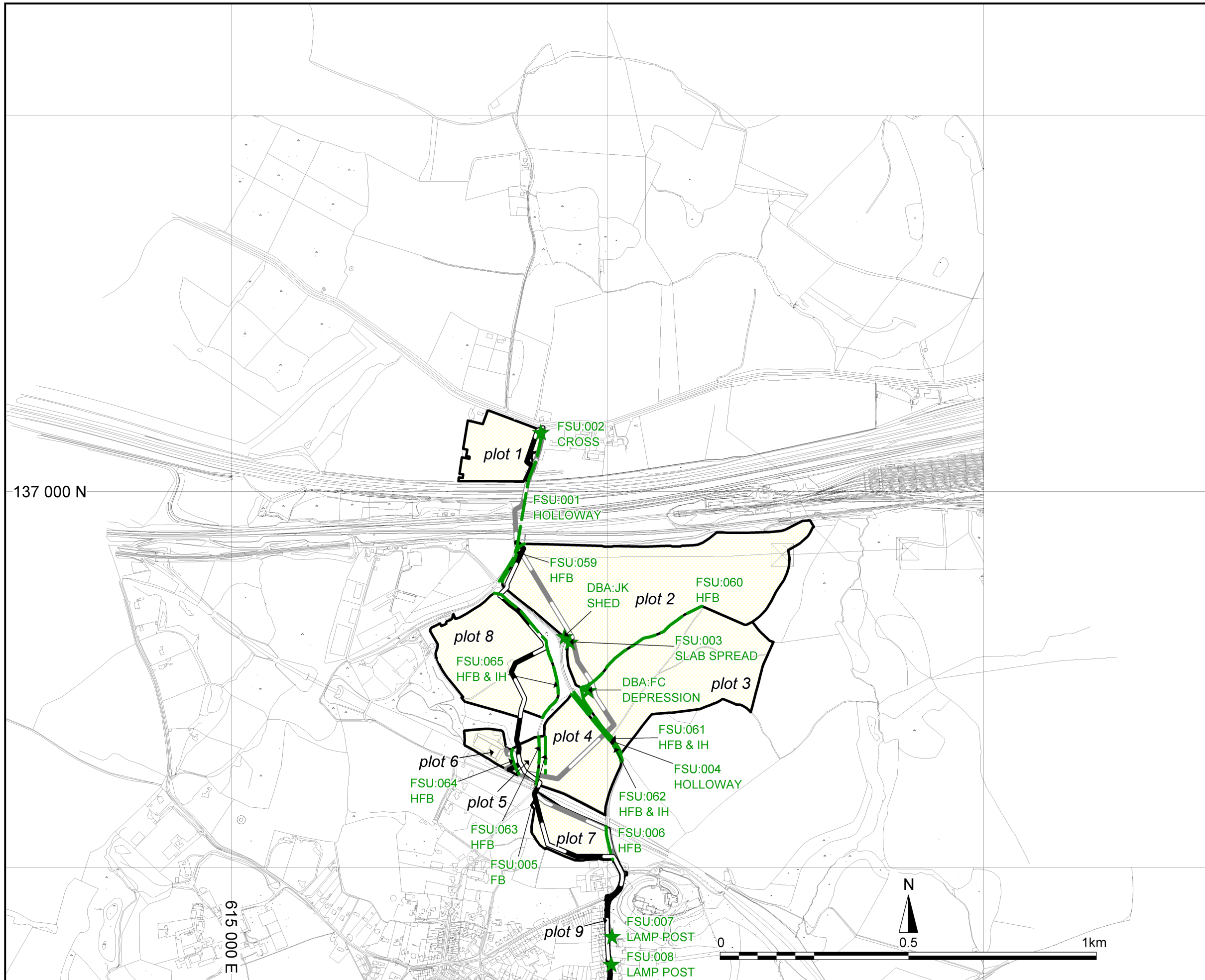
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Ver	Date	Description	Drn	Chk	App
1.00	11/04/05	First draft	AH	ML	DB



Denge Security Main
 Figure 1
 Location of proposed pipeline and figures 2-7
 Scale: 1:50 000



- Surveyed routes
- Proposed pipeline
- Survey plot

- Field survey data**
- A grade
 - B grade
 - C grade
 - D grade

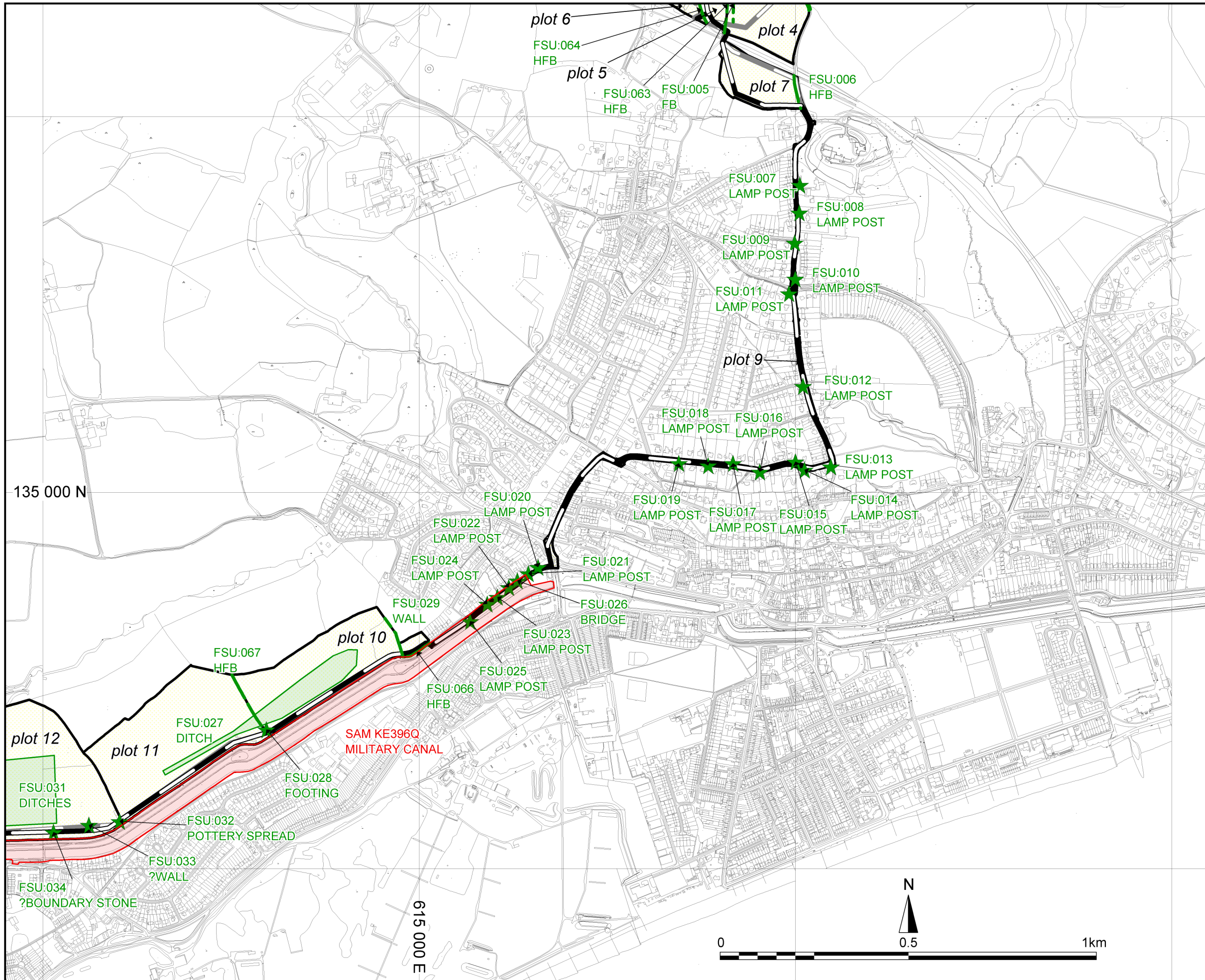
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Denge Security Main
 Figure 2
 Field survey results

Scale: 1:10 000



- Surveyed routes
- Proposed pipeline
- Survey plot

- Field survey data**
- A grade
 - B grade
 - C grade
 - D grade

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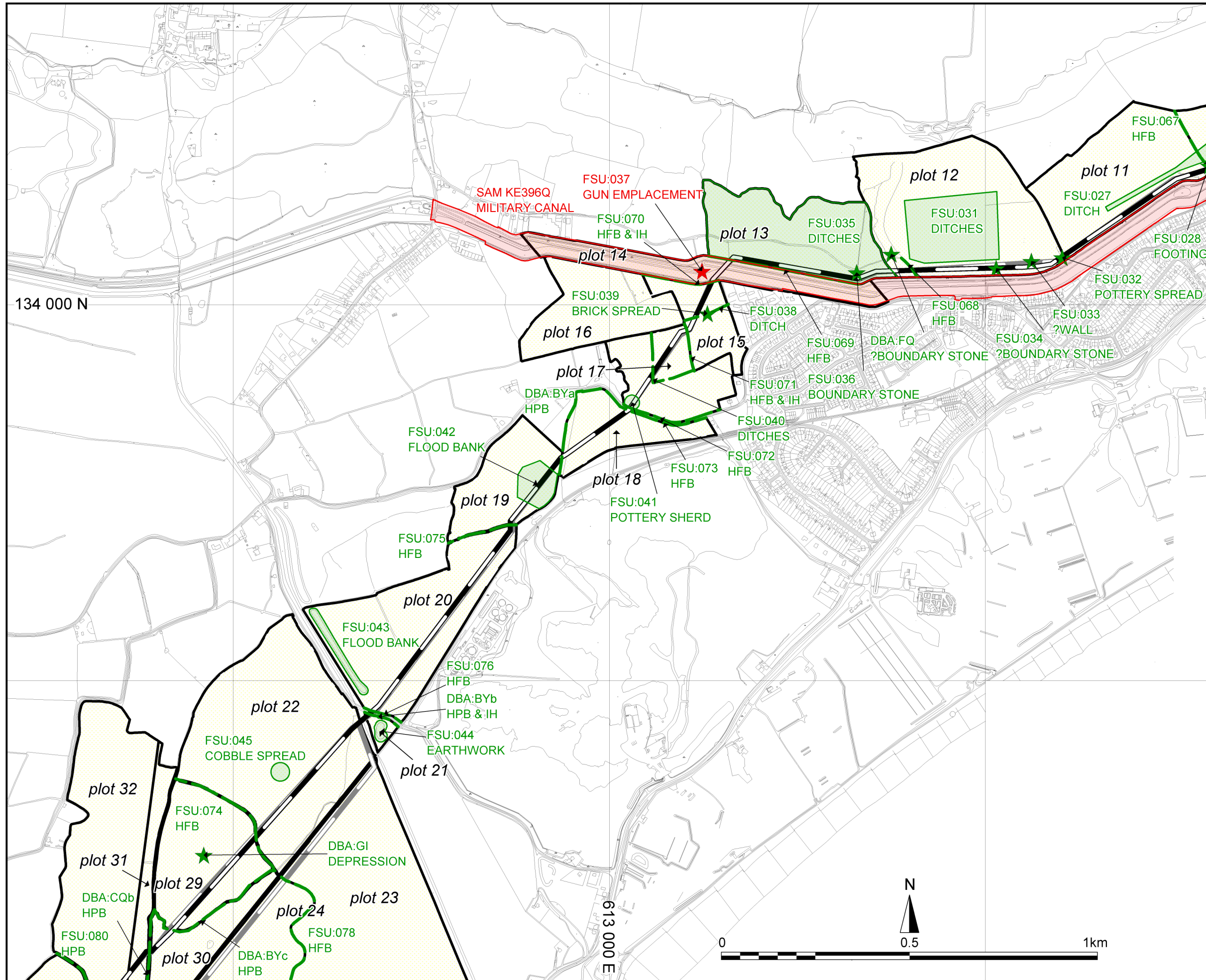
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Denge Security Main

Figure 3
Field survey results

Scale: 1:10 000



- Surveyed routes
- Proposed pipeline
- Survey plot

- Field survey data**
- A grade
 - B grade
 - C grade
 - D grade

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Ver	Date	Description	Drn	Chk	App



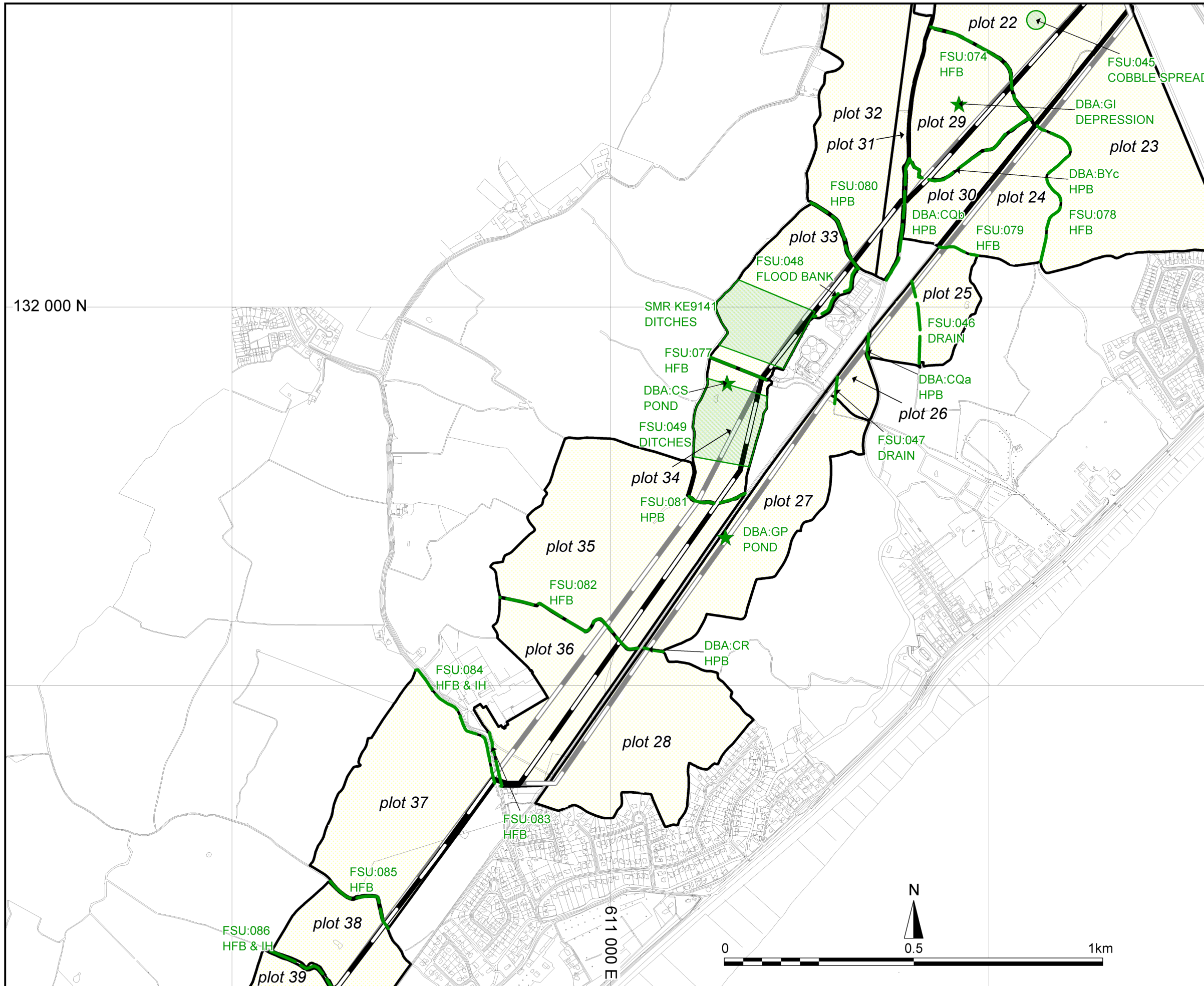
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Denge Security Main

Figure 4
Field survey results

Scale: 1:10 000





- Surveyed routes
- Proposed pipeline
- Survey plot

- Field survey data**
- A grade
 - B grade
 - C grade
 - D grade

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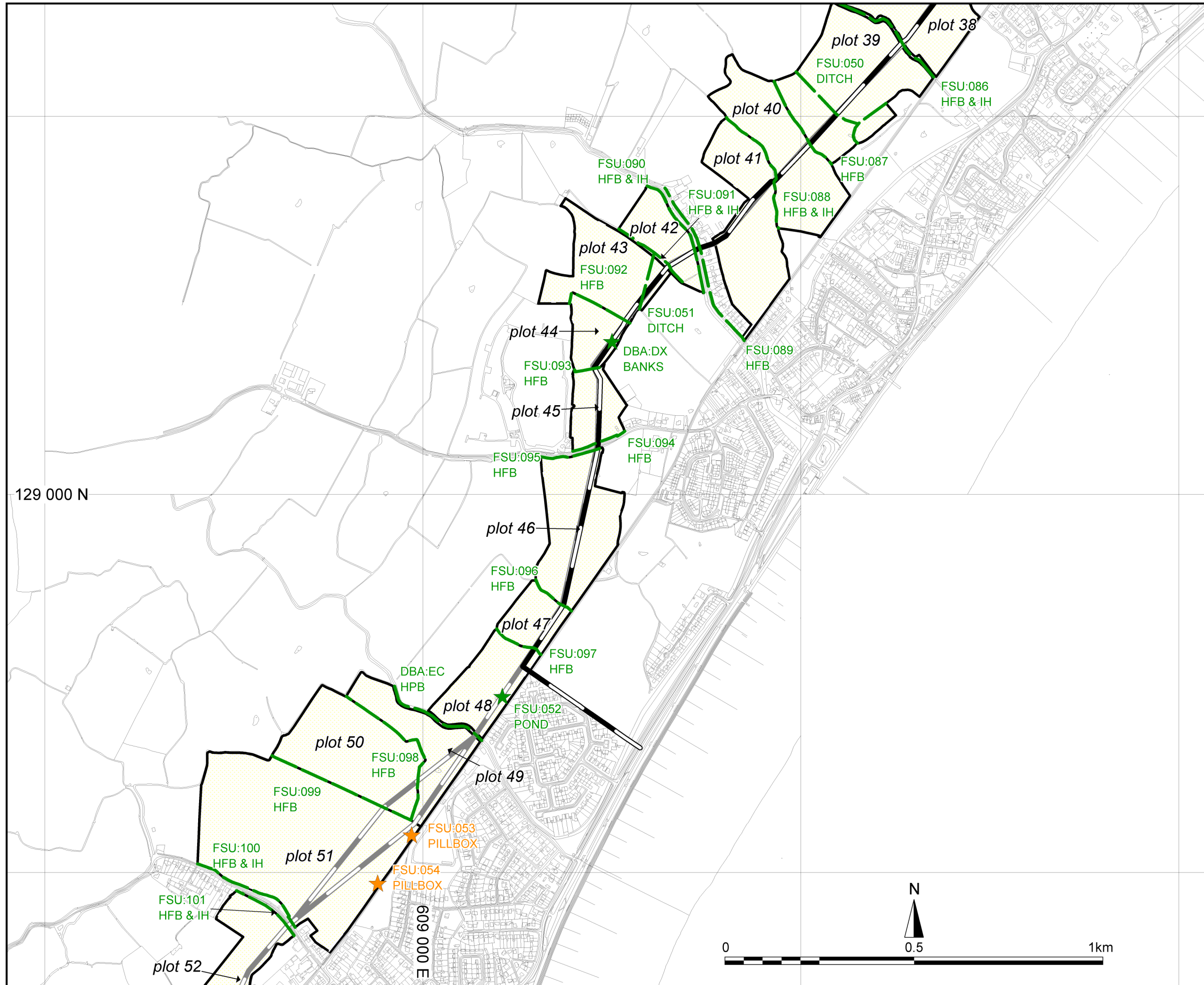
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1.00	31/03/05	First draft	AH	ML	DB



Denge Security Main

Figure 5
Field survey results

Scale: 1:10 000



- Surveyed routes
- Proposed pipeline
- Survey plot

- Field survey data**
- A grade
 - B grade
 - C grade
 - D grade

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Ver	Date	Description	Drn	Chk	App

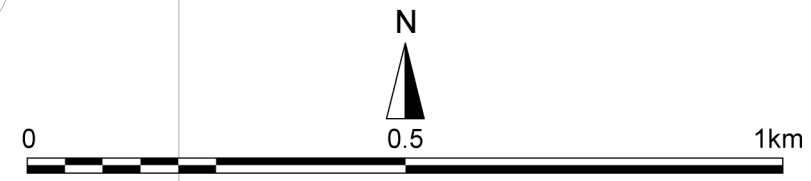


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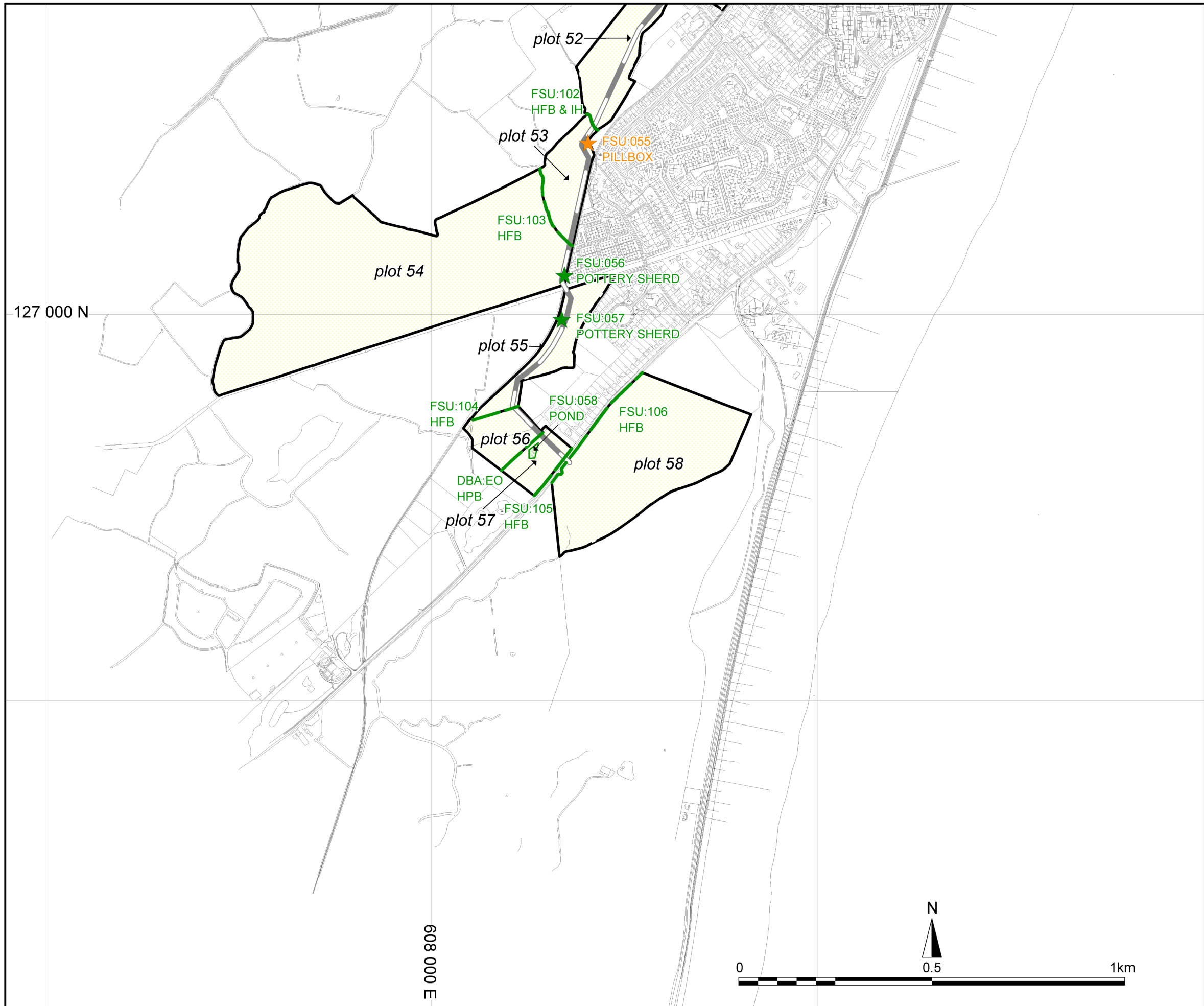
Denge Security Main

Figure 6
Field survey results

Scale: 1:10 000



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- Surveyed routes
- Proposed pipeline
- Survey plot

- Field survey data**
- A grade
 - B grade
 - C grade
 - D grade

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Denge Security Main

Figure 7
Field survey results

Scale: 1:10 000