

PHASE 1 PRELIMINARY RISK ASSESSMENT

Of

THE OLD PUMP HOUSE DYMCHURCH

For

MR STEVE ADLINGTON

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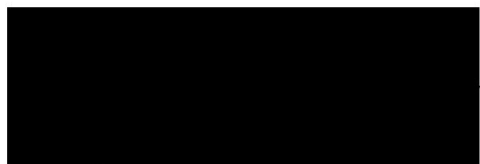
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APPROVAL & DISTRIBUTION SHEET

PROJECT DETAILS	
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FOREWORD

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1. INTRODUCTION AND BACKGROUND

CET Infrastructure (CET) was instructed by Mr Steve Adlington to undertake a Phase 1 Preliminary Risk Assessment (PRA) of a study site located at The Old Pump House, Dymchurch. It is understood that the existing structure is to be repurposed to comprise a private residence with garden.

Assessment of the risks that may be associated with potentially contaminated land are generally undertaken on a phased or tiered basis, in accordance with current UK policy and technical guidance given in Contaminated Land Publication CLR11 “Model Procedures for the Management of Land Contamination” (2004) and British Standard BS10175 “Investigation of Potentially Contaminated Sites – Code of Practice” (A1:2013) as well as other relevant documents. The relevant phases of risk assessment are as follows:

- Development of a Conceptual Model that identifies potential source-pathway-receptor linkages (pollutant linkages) based initially on consideration of desk-based and site reconnaissance information on the characteristics of the site and its environmental setting;
- Risk estimation and evaluation using generic assessment criteria. This allows refinement of the Conceptual Model based on information on the condition of the land (site investigation data) and involves comparison between observed concentrations of contaminants in environmental media against relevant and applicable generic assessment (or screening) criteria; and
- Risk estimation and evaluation using site specific assessment criteria. This involves further refinement of the Conceptual Model based on more detailed, site specific information on the condition of the land, and the use of relevant and applicable exposure models and site-specific assumptions to estimate risks.

Preliminary Risk Assessment is a qualitative judgement about the potential human health and environmental risks that may be associated with a site and represents the first of the three phases outlined above.

This PRA report is based upon a defined programme of work and terms and conditions agreed with the Client. In preparing this report, all reasonable skill and care has been taken, accounting for project objectives, agreed scope of work and prevailing site conditions. CET Infrastructure accepts no liability to any parties whatsoever, following the issue of this report, for any matters arising outside the agreed scope of the work. It should be noted that this report is issued in confidence to the Client and that CET Infrastructure has no responsibility to any third parties to whom this report may be circulated, in part or in full, and any such parties cannot rely on the contents of the report. Unless specifically assigned or transferred within the terms of the agreement, CET Infrastructure asserts and retains all Copyright, and other Intellectual Property Rights, in and over the report and its contents.

2. OBJECTIVES

The objectives of this study were to:

- Establish the historical and current uses of the subject site and adjacent land, including any areas located within a 250 m radius of the subject site that have been used for landfill disposal purposes;
- Determine the environmental setting of the land as characterised by:
 - i. Geology;
 - ii. Hydrogeology;
 - iii. Hydrology;
 - iv. Licensed waste management activities;
 - v. Pollution controls and authorisations;
 - vi. Historical pollution incidents;
 - vii. Radon hazards; and
 - viii. Ecosystem designations.
- Comment on the potential for contamination of the soil and water environment in contact with the subject site, arising from the use of the site or surrounding land, or as the result of other factors; and
- Identify the potential human health and environmental risks that may be associated with the subject site, considering past, current and planned future uses of the land and its environmental setting.

3. SOURCES OF INFORMATION

In preparing this report, CET Infrastructure has relied upon the sources of information set out below:

Report Ref:	Document Reference	Prepared by
1	<i>Envirocheck Report (Ref: 158032393_1_1) comprising:</i> • <i>The Envirocheck Main Legend Maps</i> • <i>Ordnance Survey Historical Maps</i> • <i>The Envirocheck Report</i> • <i>The Envirocheck Flood Map</i> • <i>The Envirocheck Groundwater Vulnerability Map</i> • <i>The Envirocheck Sensitive Land Uses Map</i>	Landmark Information Group
2	Geology of Britain Viewer	British Geological Survey
3	EA Groundwater Vulnerability and Aquifer designation data available via the EA website	Environment Agency
4	Site reconnaissance carried out on 5 th March 2018	Marianne Brett, CET

4. SITE DESCRIPTION AND SETTING

SITE LOCATION

The study site comprises a roughly triangular shaped plot of land with associated driveway situated to the south west of Marshlands which is a residential road. The plot occupies an area of approximately 0.28 Ha and is centred on National Grid reference TR095288 (Figure 1).

WALKOVER SURVEY

A CET Environmental Scientist conducted the site walkover survey on the 5th March 2018

The study site was accessed via a gate from the residential area “Marshlands” to the north east of the site, connected to a surfaced drive between pastoral agricultural land and heritage railway track. A brick building, constructed as a pumping station is present on the site, but unoccupied at the time of the visit. Adjacent to the building was a mobile home occupied by the owner at the time of site visit.

Due to differing risk levels, the site shall be zoned for the purposes of this assessment, with Zone 1 referring the main body of the site; a triangular piece of land bounded by wooden fencing, drainage channels on two sides and rail track on the third side (Plate 1). Zone 2 refers to the land from the gate of Zone 1, including the drive, the 1 m zone either side of the drive, and access gate to Marshlands, bounded by the rail track, and the drainage channel to the north. A residential area is immediately north of the access gate leading out of site Zone 2.

Zone 1 is a roughly triangular piece of land with the longest edge bounded by the heritage rail track that runs roughly northeast to southwest (Plate 2). A hedge of *Ieylandii* greater than two metres height and a chain link fence separates the site from the railway. At the northeast corner, Zone 1 meets Zone 2 at a tall metal access gate greater than two metres in height and securely locked. The north – south trending edge of the site is bounded by a wooden fence less than two metres height, in poor repair and with some panels partially fallen. Two to three metres from the fence is a drainage channel more than one metre wide and vegetated. The land to the far side is agricultural land currently in use as sheep pasture. The southerly edge of the site is also bounded by a similar wooden fence in poor repair, with a drainage channel separating the site from the agricultural land beyond, which is currently used for arable farming. At the southeast corner of the site, there is a confluence of three drainage channels, which demarcate the land parcels of three different owners. Anecdotal evidence indicates that the ownership boundary is at the centre of these channels.

Within Zone 1 there is an existing brick building (Plate 3) in the centre of the site which was reported by the owner to have suffered some internal fire damage, although this was not evident from the exterior. An

occupied mobile home was situated adjacent to the west of the building. To the northeast of the building is a strip of hardstanding leading from the building to the gate, and several stockpiles of materials including orange clay or terracotta tiles and bricks, large fragmented concrete blocks, engineering bricks, and recently felled tree limbs. Additionally, there were large rubble bags containing various materials (Plate 4) that were reported to have been brought temporarily on site for storage purposes. Nearby the stockpiles was evidence of a large bonfire (Plate 5) that included glass, clay beads, box files, plastic ducting, scrap wood and timber, and other general refuse.

East of the building is an area of rough ground with concrete slabs, tiles and piping piled with the clay and gravel natural ground excavated from renovating services on the side of the building (Plate 6). Large flint gravel and cobbles are also evident throughout. A row of mature trees stand inside the fence line (Plate 7).

To the south of the building, a number of manhole covers were evident (Plate 8), one identified by the owner as covering the septic tank. Piles of concrete and excavated ground were again observed towards the fence line of the property (Plate 8). A strong sewage odour was noted in this area. The superficial ground was noted to be gravelly cobbly CLAY, with gravel of fine to coarse brown and rinded flint, ceramics and concrete fragments. Two gas tanks were situated to the south west of the building and looked to be in reasonable condition. To the south west boundary with the railway track, a small well cover is labelled "S V".

Throughout the site, where the soil has been disturbed, fresh plant growth is evident with the exception of the remnants of the fire. No olfactory or visual evidence of hydrocarbon spills were noted, and the owner reported encountering no asbestos containing materials within the site.

The drainage channels to the east were visually clean except for some minor plastic waste (Plate 9), the channel was vegetated within the channel and along the margins of the water, with algae also observed. Towards the confluence, both algae and aquatic plant density increased (Plate 10). The drainage channel to the south of the site was observed to host a higher density of algal rafts, up to half way along the length, where there was clear olfactory and visual evidence of sewage discharge into the drainage channel resulting in discoloured water, die back of aquatic vegetation and strong odour (Plate 11). The discharge appears to be sourced from the site, as the water discolouration was greatest at the nearside bank, and was accompanied by, foam, bubbles and disturbance of water. At the nearest fence line, there was a signage indicating the presence of an underground water pipe (Plate 12).

Zone 2 consists of the driveway leading from the gate to Zone 1, adjacent to the railway track, to the access gate leading to "Marshlands" residential road. It includes a one metre margin either side of the hardstanding access road, and a narrow strip of grassed area between the drainage channel to the north and the access road. A large pile of wood and wood-based materials, with other minor refuse, was noted adjacent to the boundary of Zone 2, outside the site (Plate 13) anecdotally described as a bonfire belonging to the neighbouring

landowner. The access road was in good repair, with no evidence of hydrocarbon spills or residues, and there is no boundary fence separating the road from the pastoral land, allowing livestock to roam freely. The adjacent railway was devoid of vegetation and the boundary fence was observed to be in good repair. The drainage channel to the north of the access road had much aquatic vegetation and some algal floats visible. An unlabelled pipe traversed the channel (Plate 14) and plastic refuse was observed.

5. HISTORICAL MAP SURVEY

A review of relevant historical maps for the area surrounding the subject site has been undertaken and is summarised below. The historical maps are included in this report within Appendix B.

1877: Kent (1:10,560); 1899: Kent (1:10,560)

The earliest maps of the area illustrate the entire site and surrounding area as comprised of agricultural land, with the small village of Dunkirk End approximately 400 m to the north east of the site. The coastline is 260m at the nearest point and protected by a network of groins. The site is bounded by a network of artificial drainage ditches, two of which form the southern and eastern boundaries of the site. Another drainage ditch is marked running east to west through the northern part of the site. Six “sheepfolds” are marked within 500m of the site, the nearest at 50m to the east. Less than 250m to the north is a residential property named “West End Villas”. There are two ponds marked close to the site; one at 50m to the east, and one marked at 100m to the west.

1899: Kent (1:10,560)

No significant changes to the site or its surroundings are evident. The sea defences between 250m and 500m east of site have been fortified.

1938-1939: Kent (1:10,560)

A railway line was constructed, which runs along the northeast to southwest boundary of the site. Increasing urban development of Dymchurch between 100m and 250m to the north east and south east of the site is evident, and a recreation ground was marked 250m north of the site.

1938-1950: Kent (1:10,560)

These maps indicate increasing urban development to the south of the Clobdsden Sewer, a named drainage channel, more than 500m south of the site. A small structure has been constructed 150 m to the north of the site.

1960: Aerial photograph, Kent County Council

150m to the north of the site, the aerial photo shows a collection of buildings similar in layout to a farm, with a residential building, two small sheds or other small structures and two larger structures, approximately double the length of the residential building, which may be barns or other agricultural buildings. Tracks of farming machinery lead from the nearby fields toward this spot, indicating that this is the farming hub for the surrounding agricultural land. There is evidence that the agricultural land to the west of the site has been turned over to arable use, whereas to the east, a flock of sheep is visible in the photograph. On the main body of the site, a small structure is visible that was not previously marked on the map. The structure is approximately 11m long, with a large circular section connected to a small rectangle. The shadow cast indicates that the structure stands a few metres tall. This building could be an early pumping station, a silo for grain or silage, or similar small agricultural building.

1961: Ordnance Survey Plan (1:10,000)

Further residential development is indicated to the north east of the site, with the closest dwelling adjacent to the north east boundary of the site. No buildings are marked on the site.

1975-1976 Ordnance Survey Plan (1:2,500)

The contemporary on-site pumping station building is now illustrated on the main body of the site with a service track running adjacent to the railway before joining the residential development to the north east. Private garages have been constructed adjacent to the drainage channel on the northern boundary of the site. Residential development to the south of the site has encroached to within 300m. Residential development to the north of the site now separates the recreation ground from the agricultural land.

2003 Ordnance Survey Street View (1:10,000) and Aerial Photograph 12/2003

No substantial changes are recorded within 500m of the site since 1976 except for the construction of a small building 200m south east of the site.

6. ENVIRONMENTAL SETTING

GEOLOGY

Reference to publications of the British Geological Survey indicates that the site is underlain by the Wealden Group, specifically the Tunbridge Wells Sand Formation. Superficial deposits consist of Tidal Flat Deposits: consolidated soft, silty clay with layers of sand, gravel and peat. Boreholes at 183m north and 193m southeast confirm interbedded sand, silts and clays.

The Tunbridge Wells Sand Formation is described as predominantly fine to medium grained sandstone, siltstone and silty sand rhythms with finely-bedded mudstones and thin limestones.

There have been no licenced discharge consents to land within the 1km area of interest.

There are no mineral sites within the 1km area of interest.

There no collapsible or compressible or dissolution ground stability hazards, a moderate hazard for running sand ground stability hazard, and low hazard for shrinking or swelling of clay in the 1km area as stated by the British Geological Survey.

There are no recorded Substantiated Pollution Incident Register to land within the 1km area of interest.

HYDROGEOLOGY

The Tunbridge Wells Sand Formation which underlies the site is designated as a Minor Aquifer Soil Class High 1: Bedrock Secondary Aquifer A. Secondary A aquifers are described as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

The site is not located within an Environment Agency groundwater Source Protection Zone (SPZ). There is currently no groundwater SPZ within the 1km area of interest.

There are no licensed groundwater abstractions within the 1km area of interest.

There have been no licenced discharge consents to groundwater within the 1km area of interest.

HYDROLOGY

The closest surface water features are located on the site boundaries and are designated as “ordnance survey inland rivers”. The entire local area is designated as at risk of extreme flooding and flooding from river or sea and benefits from flood defences.

There are no licensed water discharge consents within 1km of the site.

There are no licensed water abstractions within the 1km area of interest.

There have been three pollution incidents to controlled waters within 500m of the site, all designated as Category 3 - minor incidents. There was one substantiated pollution incident within 1km; occurring on 20th October 2006, 408m northeast, it was designated as having Impact to Water of Category 1 - Major incident, but the pollutant is not recorded. The incident reference is 444762.

WASTE MANAGEMENT ACTIVITIES

There are no historic landfill sites, Licensed Waste Management Facilities (Landfill Boundaries) or Registered Landfill Sites within the 1km area of interest.

CONTEMPORARY TRADE DIRECTORY ENTRIES

Thirteen Contemporary Trade Directory (CTD) entries were registered within 1km of the site. The closest two of which were 57m northeast of the site, classified as wood burning stoves and presently inactive.

FUEL STATION ENTRIES

There are two fuel station entries within 1km of the site; none of which are within 250m. The nearest fuel station is now obsolete and is positioned 867m northeast of the site.

PERMITTED ACTIVITIES

No Integrated Pollution Controls (IPC) or Integrated Pollution Prevention and Control (IPPC) authorisations are recorded within 1km area of interest.

No control of major accident hazard sites (COMAH) or notification of installations handling hazardous substances (NIHHS) are recorded within the 1km area of interest.

RADON HAZARDS

The Envirocheck report indicates that the site is located in an area where less than 1% of properties are affected by hazards associated with radon gas. The Envirocheck report also states that no radon protection measures are necessary in the construction of new dwellings or extensions.

SENSITIVE LAND USES

There are no sensitive land use designations within 1km of the site.

There are no Sites of Special Scientific Interest located within the 1km area of interest.

REGISTERED RADIOACTIVE SUBSTANCES

There are no Registered Radioactive Substances within the 1km area of interest.

7. PRELIMINARY RISK ASSESSMENT

APPROACH

The typical technical approach to assessing potential human health and environmental risks associated with the condition of land relies on the consideration of the relationship between contaminants, pathways and receptors, as defined below.

Contaminant	A hazardous substance or agent that has the capacity to cause harm or other damage to a receptor.
Receptor	An entity (e.g. human being, water environment, flora and fauna etc.) that is vulnerable to the adverse effects of the contaminant.
Pathway	The means by or through which a contaminant comes into contact with, or otherwise affects, the receptor.

In the UK, this relationship is termed a “pollutant linkage”. The Conceptual Model (CM) is a representation of the inter-relationship of all potential contaminants, pathways and receptors in a given land use scenario. The CM is therefore a screening tool that should clearly and transparently identify relevant pollutant linkages that may warrant further assessment, as well as providing justification for those that are considered unlikely to exist. It is important to recognise that, for a health or environmental risk to exist, all three elements of the relationship or linkage must be present. Thus:

- No contaminant » There can be no adverse effect on a receptor; and
- Nothing adversely affected by the contaminant » No harm or damage can arise.

It should be noted that even where both a contaminant and a receptor are identified, no harm or damage will occur if there is no pathway by or through which contact between the two can be established. It is also important to recognise that since contaminants, pathways and receptors can all change over time, the assessor must be precise about the time frame to which the risk assessment refers.

Consideration has been given to the potential for the subject site to be determined as “contaminated land” under Part 2A of the Environmental Protection Act 1990. Under Part 2A, Local Authorities have a duty to inspect sites from time to time to identify land that falls within a statutory definition of contaminated land, as assessed in the context of its current use and setting. Part 2A inspections are intended to focus primarily on land that may present unacceptable health and environmental risks, but which cannot be regulated by planning controls or other enforceable mechanisms. It should be noted that it is not possible for land whose condition is assessed as being ‘fit-for-purpose’ under the planning regime to be identified as “contaminated land” under Part 2A.

The primary purpose of this report is to assess the potential for ground contamination derived at the subject site. Reference has also been made to off-site sources of contamination, such that if ground contamination is encountered during a subsequent site investigation a reasonable judgement as to its origin either on or off the site may be undertaken.

POTENTIAL SOURCES OF CONTAMINATION

Based on the original use of the site, as a water pumping station not associated with other industrial processes or activities, this assessment has identified limited sources of potential contamination. There is the potential for localised on-site Made Ground associated with the current buildings and services, which could have resulted in underlying soils being impacted by metals, asbestos, and PAHs. Made Ground can also be a potential source of ground gas. Due to the age of the existing onsite building, it is probable that it would have included asbestos containing materials (ACMs). Anecdotal evidence suggests that the interior of the building has been partially or wholly removed, therefore there is a risk of asbestos contamination to the immediately adjacent land, if the interior was not removed in line with best practice.

There is anecdotal evidence that the site was used as a tip and storage area by the travelling community for a number of years, making contamination from fly tipping a significant likelihood; Shepway Council has been contacted for any record of fly tipping or other refuse issues on this site. The walkover survey identified visual evidence of potential Made Ground within the proposed future private garden area, and the remains of a fire with various refuse as fuel. These are potential sources of metals, PAHs and asbestos.

The septic tank located to the south east of the building has been identified as a current source of on-site contamination. It is located within the proposed garden area of the residential property and provides a source of nitrate pollution and pathogens associated with human waste.

Potential offsite sources of contamination have been identified as the adjacent farmland, and the railway track that runs alongside. Railway tracks are often associated with use of herbicides to inhibit plant growth affecting the line, and historical ejection of boiler ash from steam locomotive currently still in use. The Romney, Hythe & Dymchurch Railway organisation have been contacted and report that they routinely use herbicides in connection with vegetation control, but that boiler ash has not been used alongside the railway for at least 18 years. The adjacent farmland includes both pastoral and arable agriculture. The pastoral agriculture overlaps with Zone 2 but is expected to have limited contamination or pathways due to the Zone 2 usage of a driveway. The arable agricultural land to the south is a potential source of pesticides, fertilisers and hydrocarbons, which may flow overland, or through the unsaturated zone to the drainage channel on the shared boundary. This surface water feature is classed as both a pathway and a receptor, as it allows current and future users to come into contact with any contaminants originating from the adjacent arable, due to proximity with the proposed private garden area of the site.

POTENTIAL RECEPTORS AND EXPOSURE PATHWAYS

The receptors normally considered in land contamination assessments are taken to include, but are not restricted to, those specified in the Statutory Guidance to Part 2A. In general, receptors may be grouped as follows:

- Humans (on-site and off-site);
- Controlled waters (surface and groundwater close to or beneath the site); and
- Buildings and materials of construction on or under the site.

Humans

On site human receptors include construction and maintenance workers and the future site users: residents of the proposed property. Relevant exposure pathways could include:

- Ingestion of liquids, soils and soil-derived dusts;
- Inhalation of dusts, gases and vapours;
- Dermal contact with liquids, soil matter and soil-derived dusts
- Fire or explosion from build-up of gas.

Based on the nature of the proposed residential development, it is judged that there is a high risk of future site users coming into direct contact with any potentially contaminated soils via the direct contact, ingestion and dust inhalation exposure pathways, within the proposed private garden area. There is therefore a high risk to human health associated with the identified sewage leak discharging into the channel which is within the curtilage of the current site, and a moderate to high risk from any areas of Made Ground within the private garden areas. The future development plans propose covering the area north of the building, which includes the site of current rubble stockpiles, and the site of the refuse fire, with hard standing, therefore the risk to future users of the site will be low, but the risk to construction workers is thought to be high.

It is considered that there is the potential for Made Ground to be present on-site, associated with the on-site buildings and services, and as such there is a risk that the underlying soils could be impacted by asbestos, heavy metals, and PAHs. The risk to construction workers and future users is high.

Large areas of Made Ground have the potential to be sources of ground gas, which may, over time, build up within buildings causing a fire or explosion hazard. Whilst Made Ground is suspected to be present in low volumes, this cannot be verified without an intrusive investigation, therefore the risk must be regarded as high.

Offsite human receptors include the occupiers of neighbouring sites and visitors, utility maintenance workers and the general public. Relevant exposure pathways could include:

- Ingestion of liquid discharges or soils, and soil-derived airborne dusts migrating from the subject site;
- Inhalation of soil-derived dusts and gases/vapours from the subject site; and
- Dermal contact with liquid discharges, soils, and soil-derived dusts from the subject site.

It is judged that the risks to off-site human receptors could include dust generation during construction works, however these risks are judged to be low given the retention of the existing buildings and therefore minimal disturbance of the potential Made Ground soils, and the greater than 200m distance between the proposed development area in Zone 1, and the nearest residential property. As good practice, appropriate dust suppression measures should be implemented at the site regardless of contamination.

Controlled Waters

The site is underlain by superficial deposits described as “Tidal Flats Deposits” overlying the “Tunbridge Wells Sand Formation”, both of which are designated “Secondary Aquifer – A”.

Groundwater vulnerability is classed as “Minor Aquifer - Soil - Class High 1”.

Based on the nature of the conceptual sources of contamination identified by this assessment, there is judged to be a high risk that soluble and mobile contaminants could migrate significant distances from the study site along drainage channels, although in times of flooding, this would be significantly diluted.

Buildings & Services

The built environment is taken to include permanent and semi-permanent structures, such as houses, offices, commercial and industrial buildings etc. and associated services such as water supply pipes, drains, power and telecommunications cables. Buildings and service runs may also contain enclosed spaces where explosive, flammable or toxic gases and vapours may accumulate, presenting risks to both occupants and the buildings.

If significantly contaminated shallow soils are present beneath the study site aggressive chemical attack on building foundations and buried services is considered plausible.

CONCEPTUAL MODEL TABLES

A comprehensive Conceptual Model (CM) table and schematic diagram is attached in Appendix C provides a tabular representation of the inter-relationship between potential contaminants, pathways and receptors on the site, taking into account the proposed end use and environmental setting of the site. It should be noted that the behaviour of different contaminants in the environment will depend, among other factors, on the chemical properties, and on the prevailing site-specific conditions that may allow (or preclude) the existence of a particular exposure pathway.

8. SUMMARY & RECOMMENDATIONS

SUMMARY

The study site comprises a roughly triangular shaped plot of land with associated driveway situated to the south west of Marshlands, a residential road. The plot occupies an area of approximately 0.28 Ha. The site is centred on National Grid reference TR095288.

At the time of the walkover survey, a light industrial structure was present within the centre of the site, surrounded by undeveloped land and some hard standing. It is understood that the existing structure is to be repurposed into one private residential property with garden.

The site appears to have been occupied by agricultural land until the 1950s, at which point the first pumping station was constructed on site.

The site is underlain by the Tunbridge Wells Sand Formation and is classed as a minor aquifer.

Based on the historic and current on-site land uses identified by this assessment, it is judged that there is generally a high risk to current and future users by a range of organic and inorganic contaminants including metals, PAHs and asbestos associated with sewage and any Made Ground present.

RECOMMENDATIONS

Due to the proposed residential end use and potential for localised Made Ground, it is recommended that a limited ground investigation be carried out to enable soil sampling and the production of a generic risk assessment. The ground investigation should target areas of the site which are proposed for private garden areas and/or have been at risk of contamination from sewage and refuse dumping.

It is recommended a Demolition or Refurbishment Asbestos Survey (previously known as a Type 3 Asbestos Survey) be undertaken prior to development, to reduce the risk of exposure to any asbestos present within the existing on-site building.

FIGURES

FIGURE 1

Lead No.
447172

Sheet 1 of 1

Created By:
MB

Checked:
MM

Approved:
PJW

Date:
March 2018



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O Location of Old Pump House Site

Scale: NTS

FIGURE

APPENDIX A

Viewpoint locations and photographic plates



Plate 1: Viewpoint map for The Old Pump House Site walkover photographs



Plate 2: Railway adjacent to site



Plate 3: Existing Building



Plate 4: Material stockpiles on site



Plate 5: Area used for refuse fire



Plate 6: Rubble piles including concrete and brick



Plate 7: Mature trees along the fence line, plus concrete rubble and stockpiles of various materials



Plate 8: Proposed private garden area with visible services including septic tank. Railway track visible adjacent, propane gas tanks and additional rubble piles.



Plate 9: Drainage channel at eastern boundary of site.



Plate 10: Algal blooms in drainage channel



Plate 11: Visible discharge from site into drainage channel on southern boundary.



Plate 12: Water pumping mains marked near discharge point into drainage channel



Plate 13: Refuse intended for burning on neighbouring land.



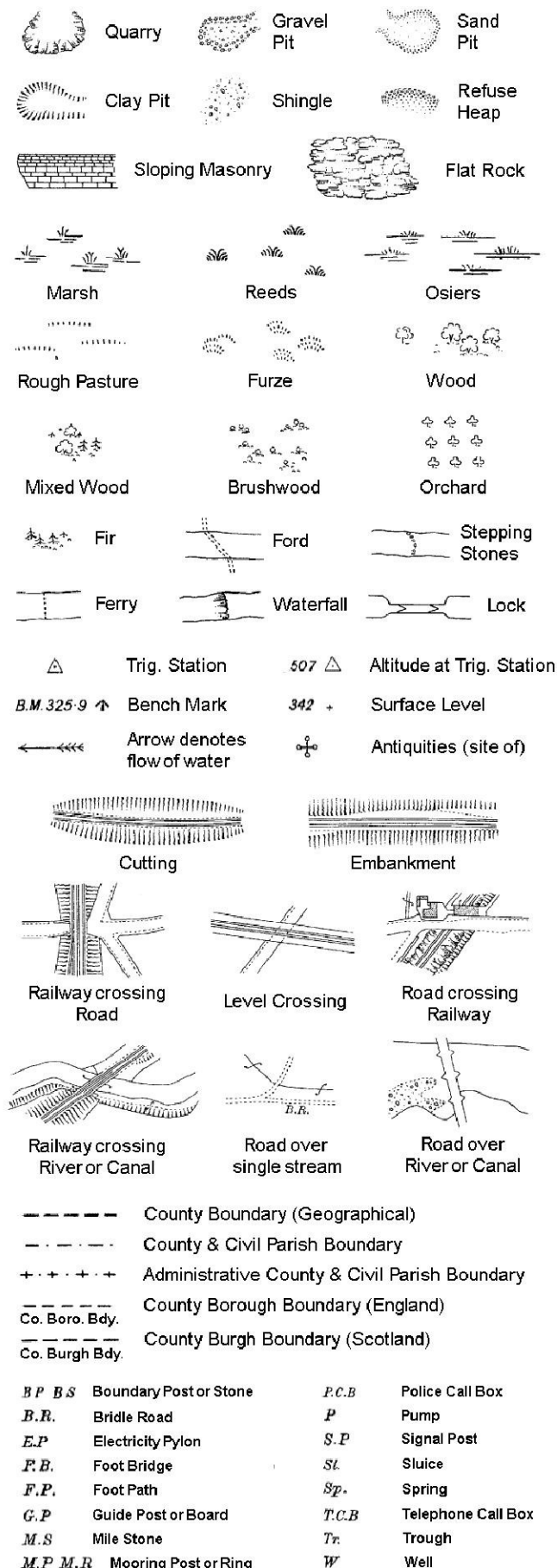
Plate 14: Drainage channel to the north of the site.

APPENDIX B

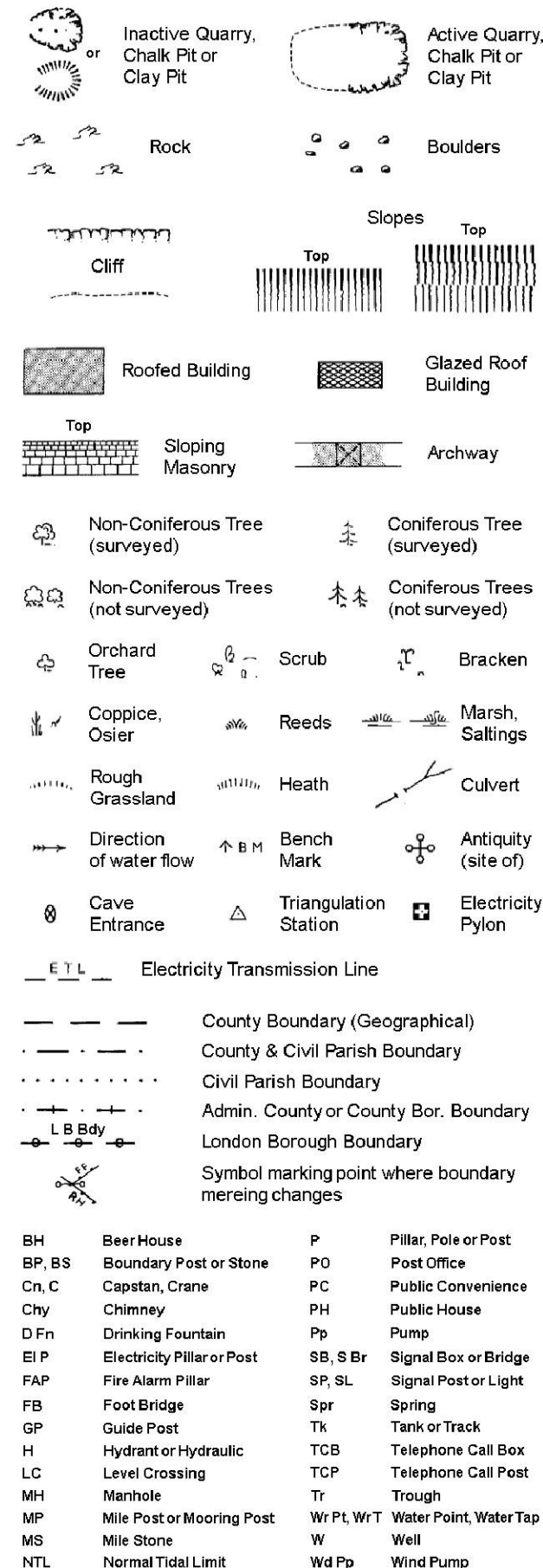
Envirocheck Report including information
from environmental databases and historical maps

Historical Mapping Legends

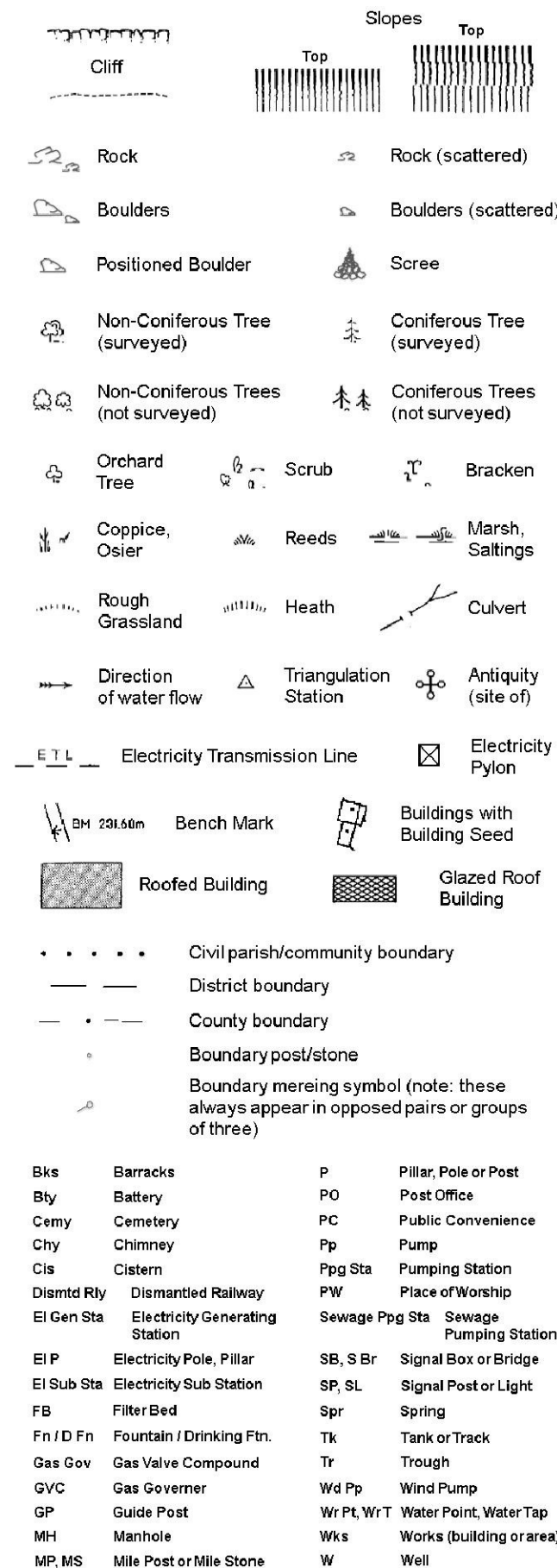
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



Large-Scale National Grid Data 1:2,500 and 1:1,250



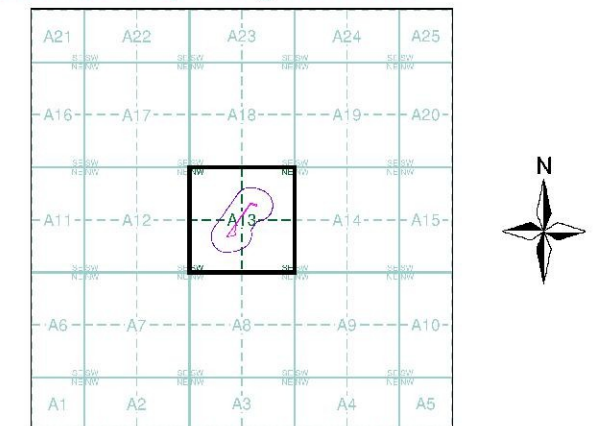
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Kent	1:2,500	1872 - 1881	2
Kent	1:2,500	1898	3
Kent	1:2,500	1907	4
Kent	1:2,500	1937 - 1938	5
Ordnance Survey Plan	1:2,500	1976	6
Additional SIMs	1:2,500	1976 - 1989	7
Large-Scale National Grid Data	1:2,500	1993	8

Historical Map - Segment A13



Order Details

Order Number: 158032393_1_1
Customer Ref: 447172
National Grid Reference: 609550, 128880
Slice: A
Site Area (Ha): 0.28
Search Buffer (m): 100

Site Details

Site at 609540, 128890

Landmark®
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Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

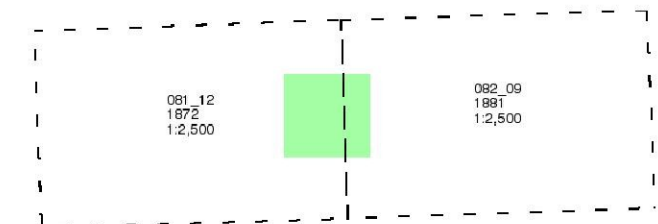
Kent

Published 1872 - 1881

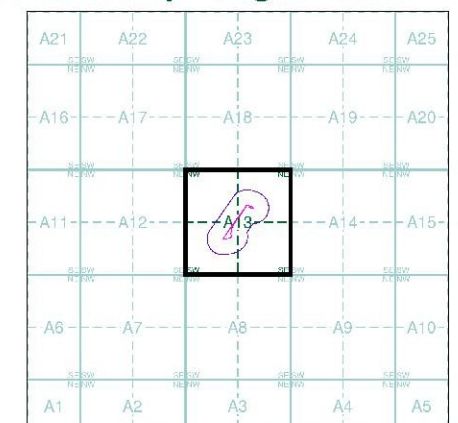
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

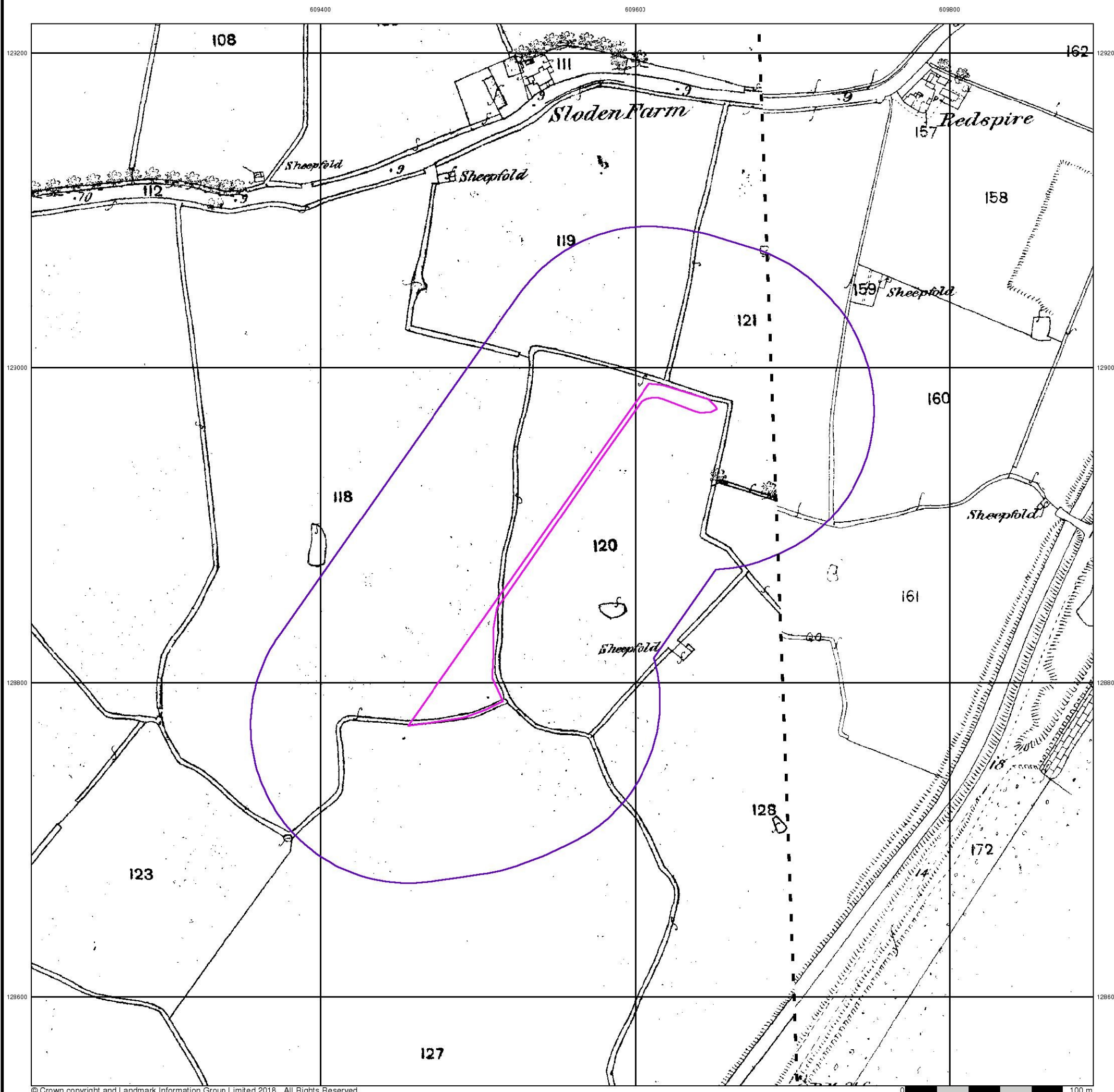


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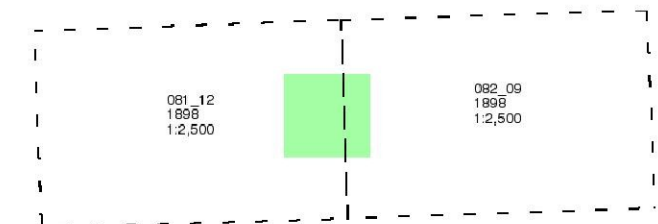
Kent

Published 1898

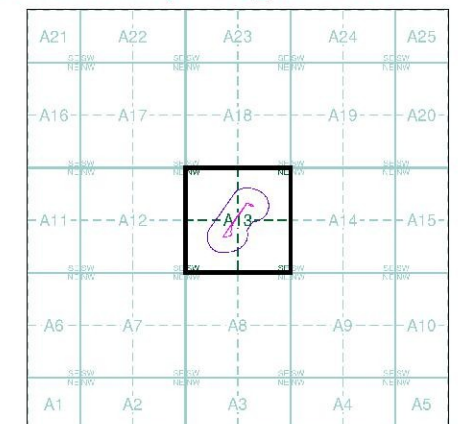
Source map scale - 1:2,500

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