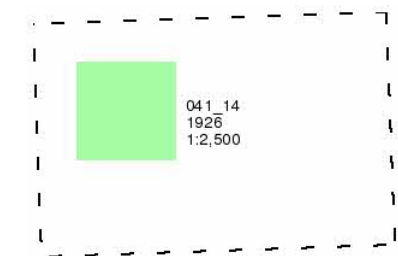
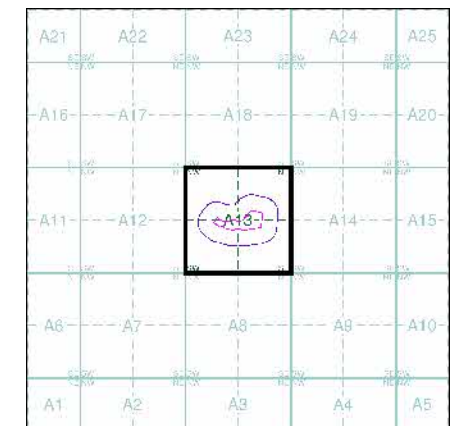


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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

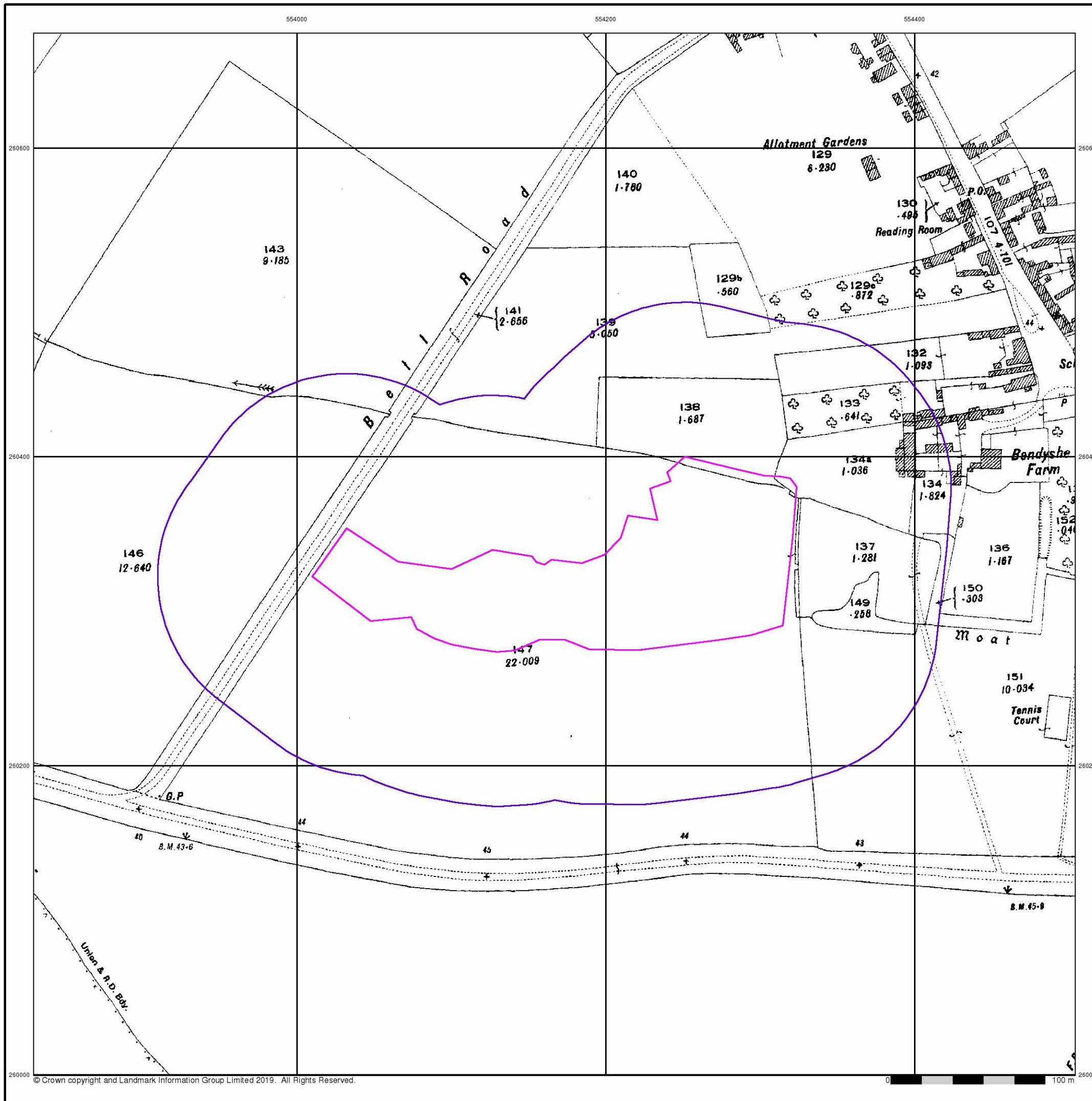


Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159_GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 100

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



Ordnance Survey Plan

Published 1972

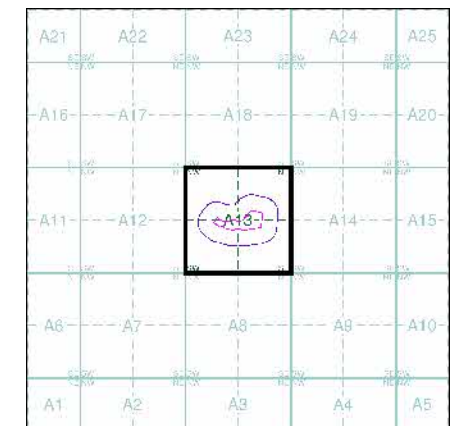
Source map scale - 1:2,500

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)

TL5360 1972 12,500	TL5460 1972 12,500
TL5359 1972 12,500	TL5459 1972 12,500

Historical Map - Segment A13

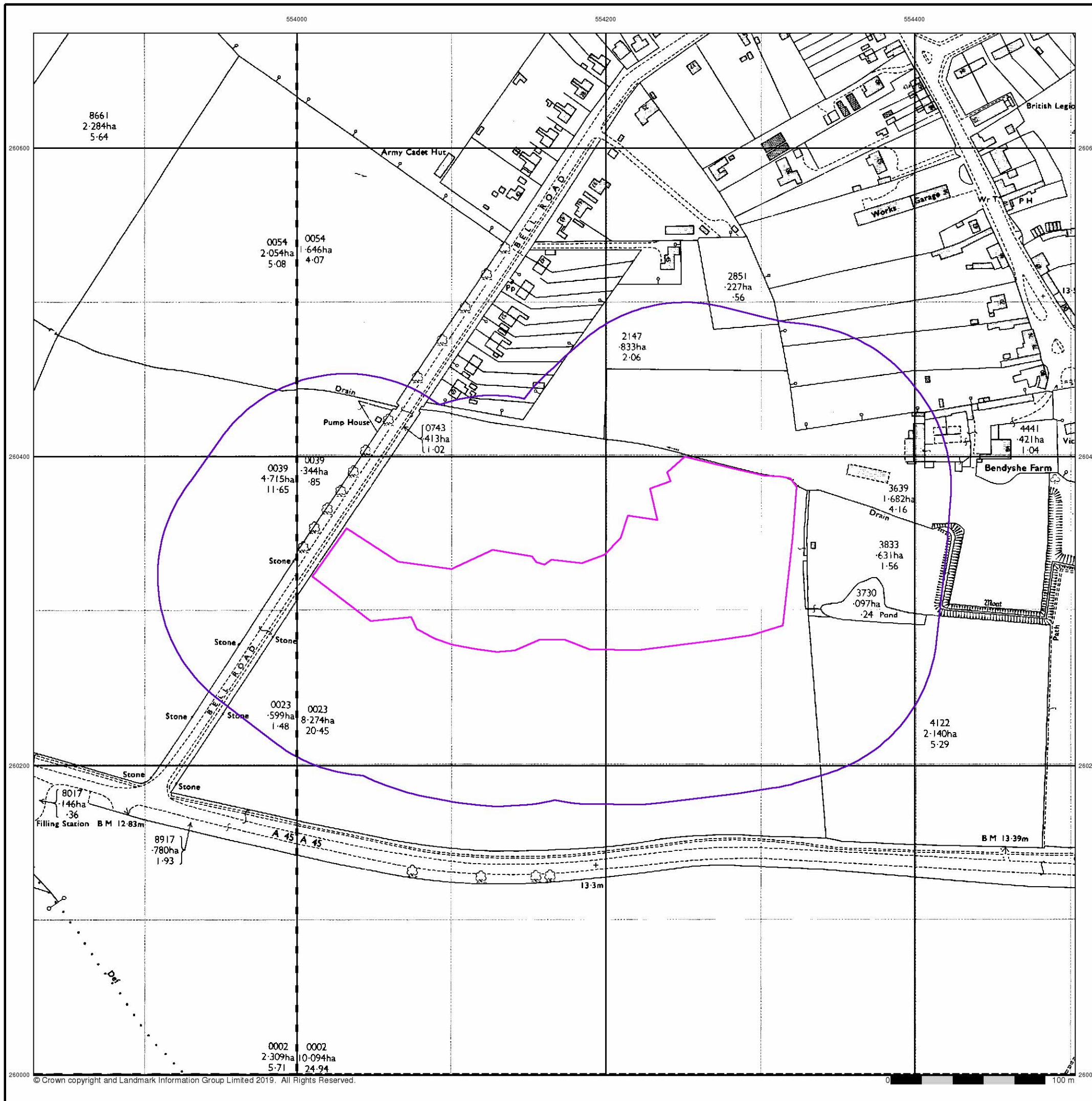


Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159_GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 100

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



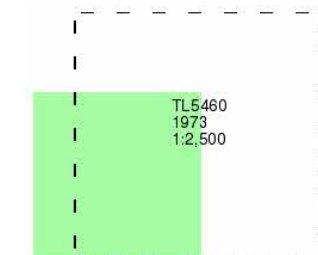
Supply of Unpublished Survey Information

Published 1973

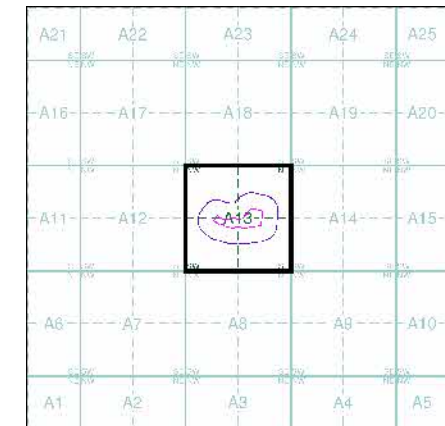
Source map scale - 1:2,500

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

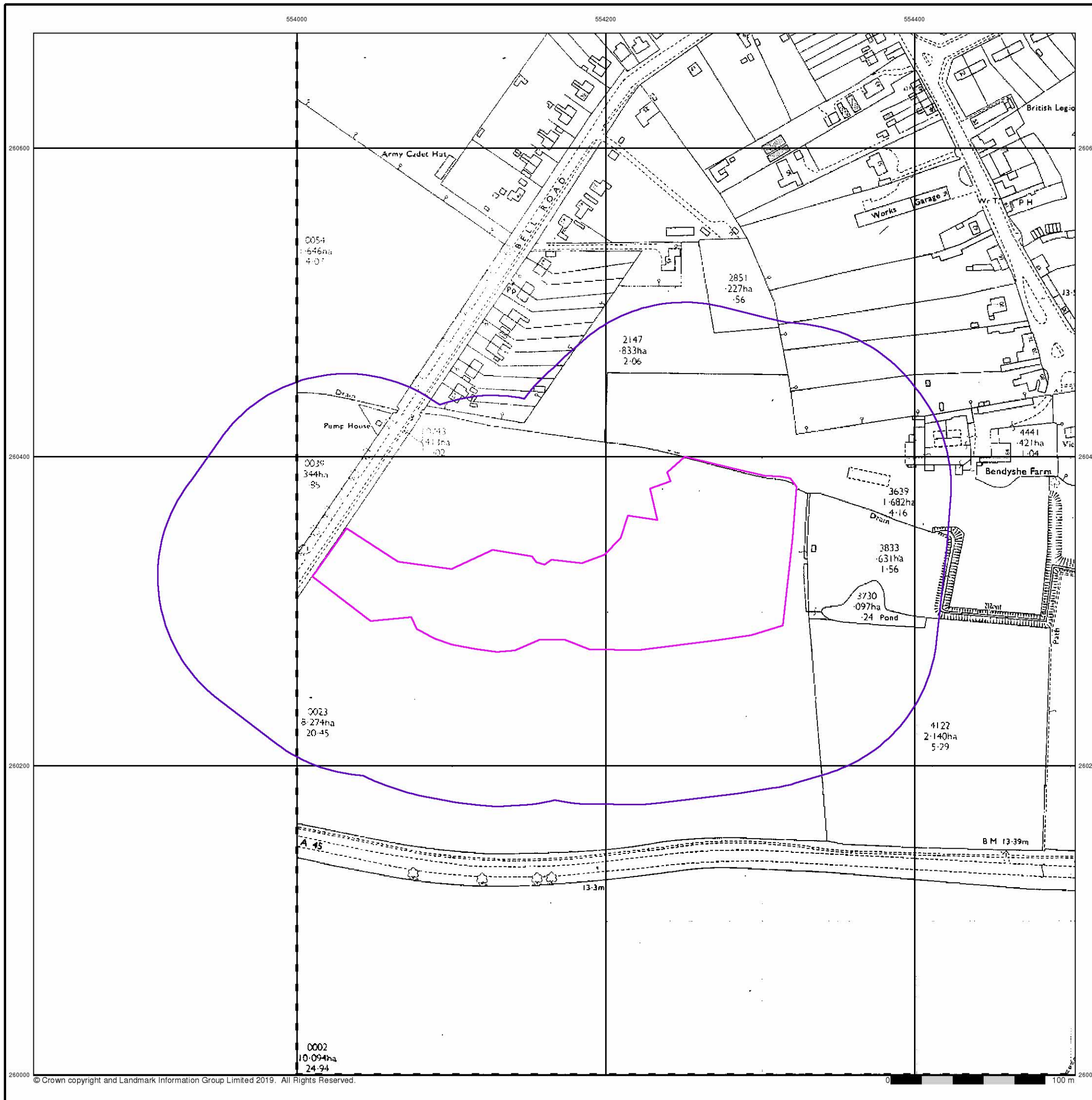


Order Details

Order Number: 220424530_1_1
Customer Ref: 4159_G1
National Grid Reference: 554180, 260330
Slice: A
Site Area (Ha): 2.14
Search Buffer (m): 100

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



Additional SIMs

Published 1978

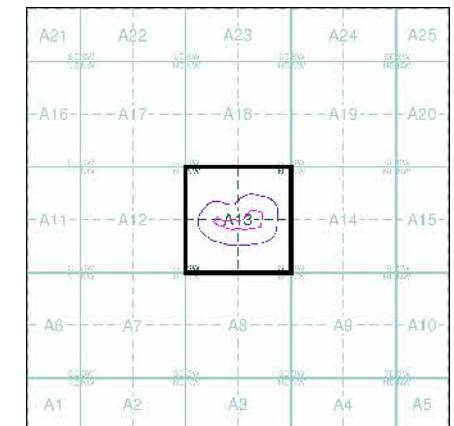
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

TL5360 1978 12,500	TL5460 1978 12,500
TL5359 1978 12,500	TL5459 1978 12,500

Historical Map - Segment A13

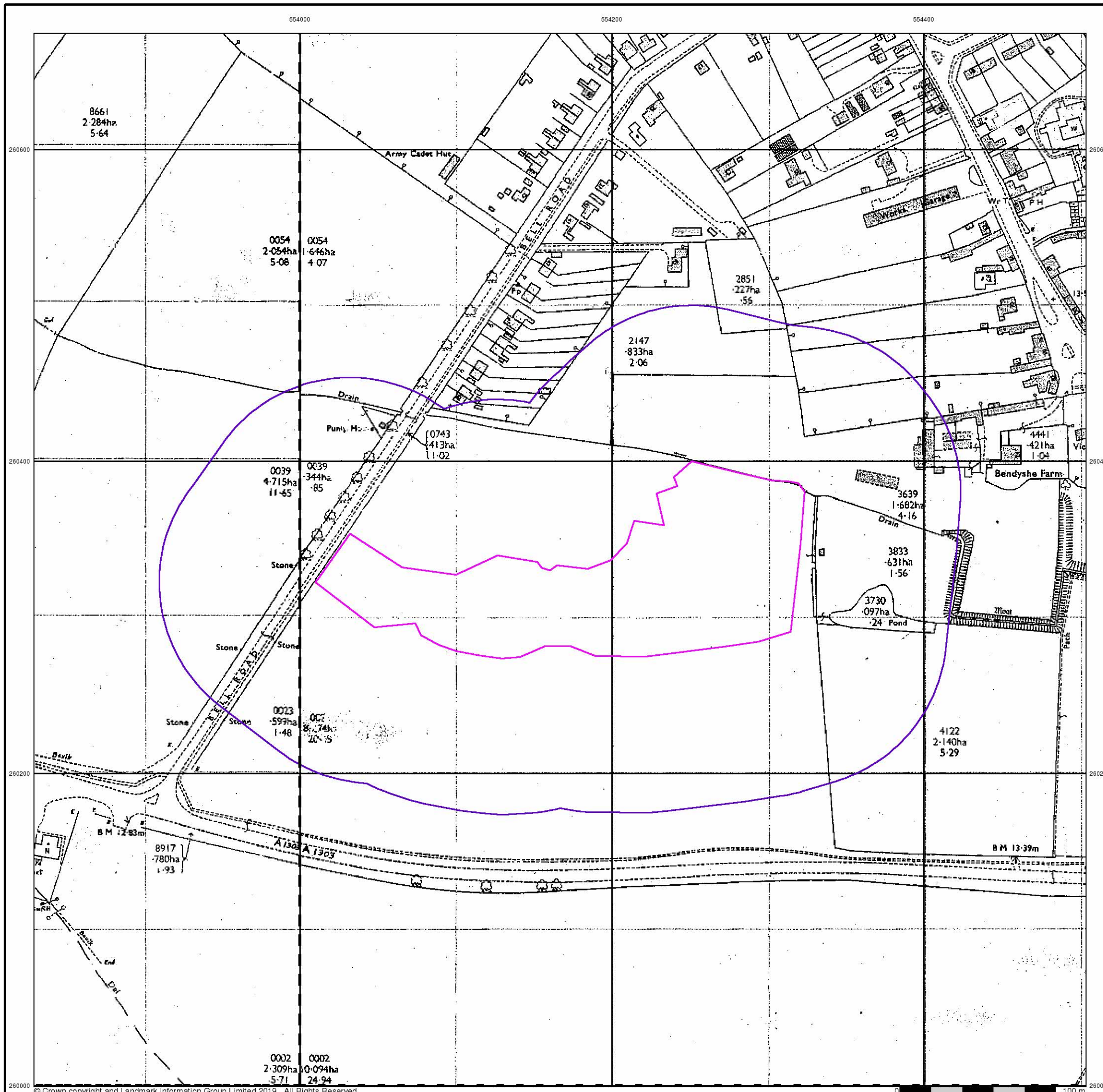


Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159_GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 100

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL




Ordnance Survey Plan

Published 1984 - 1985

Source map scale - 1:2,500

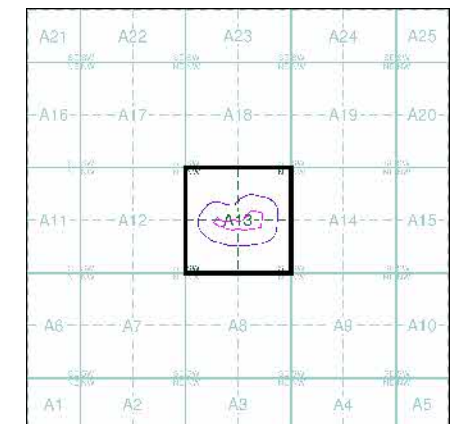
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)



TL5359 1985 1:2,500	TL5459 1984 1:2,500
---------------------------	---------------------------

Historical Map - Segment A13

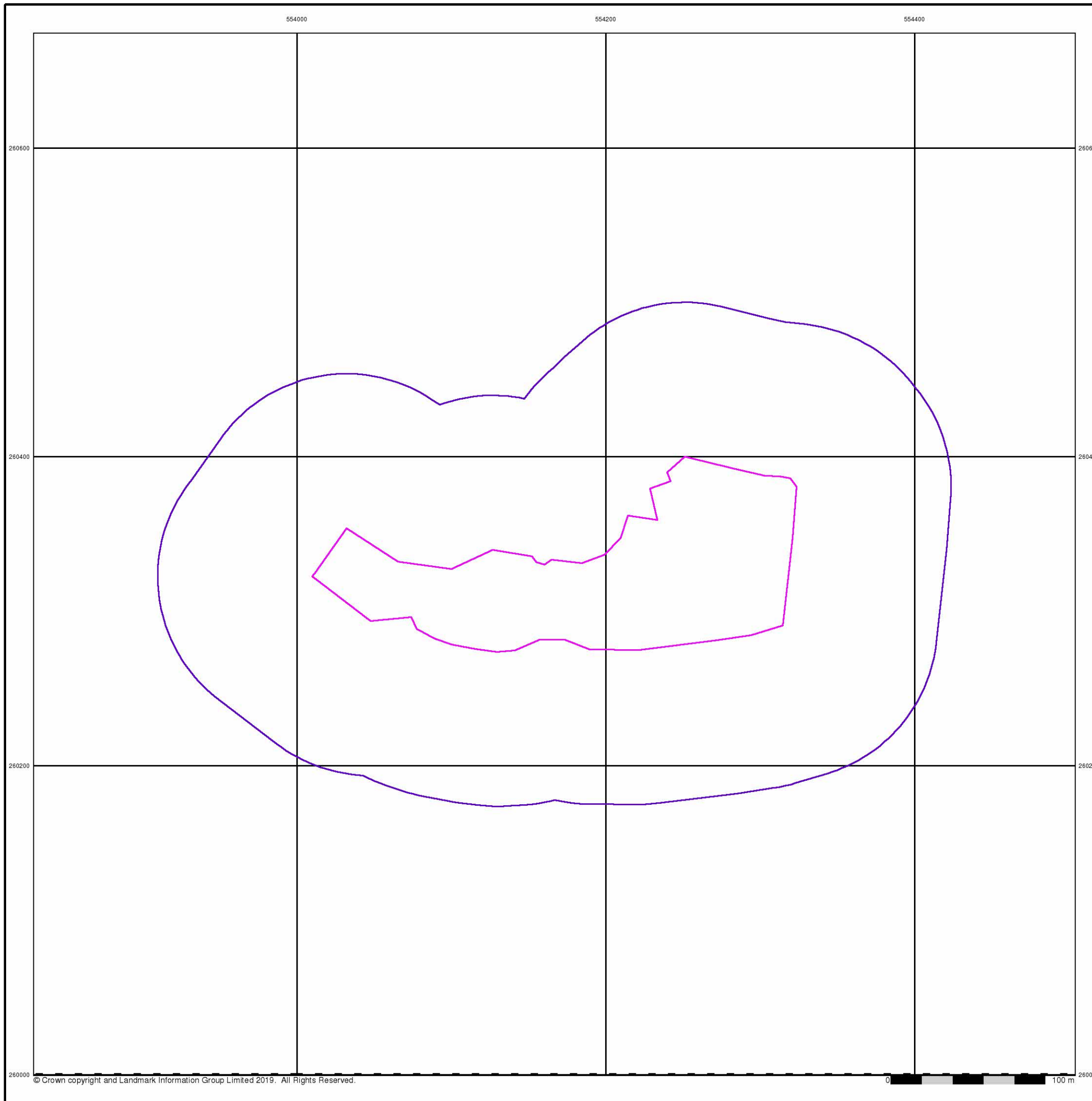


Order Details

Order Number: 220424530_1_1
Customer Ref: 4159,GI
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Slice: A
Site Area (Ha): 2.14
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Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



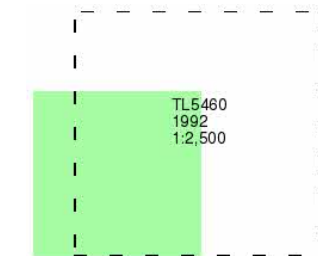
Additional SIMs

Published 1992

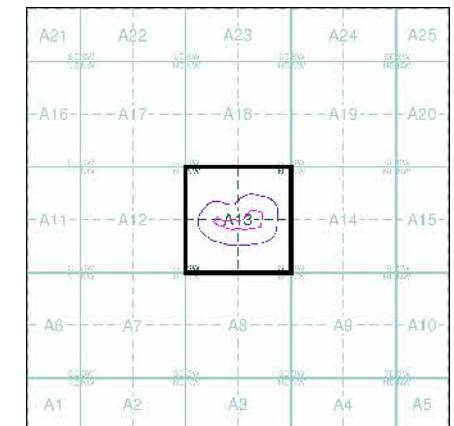
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

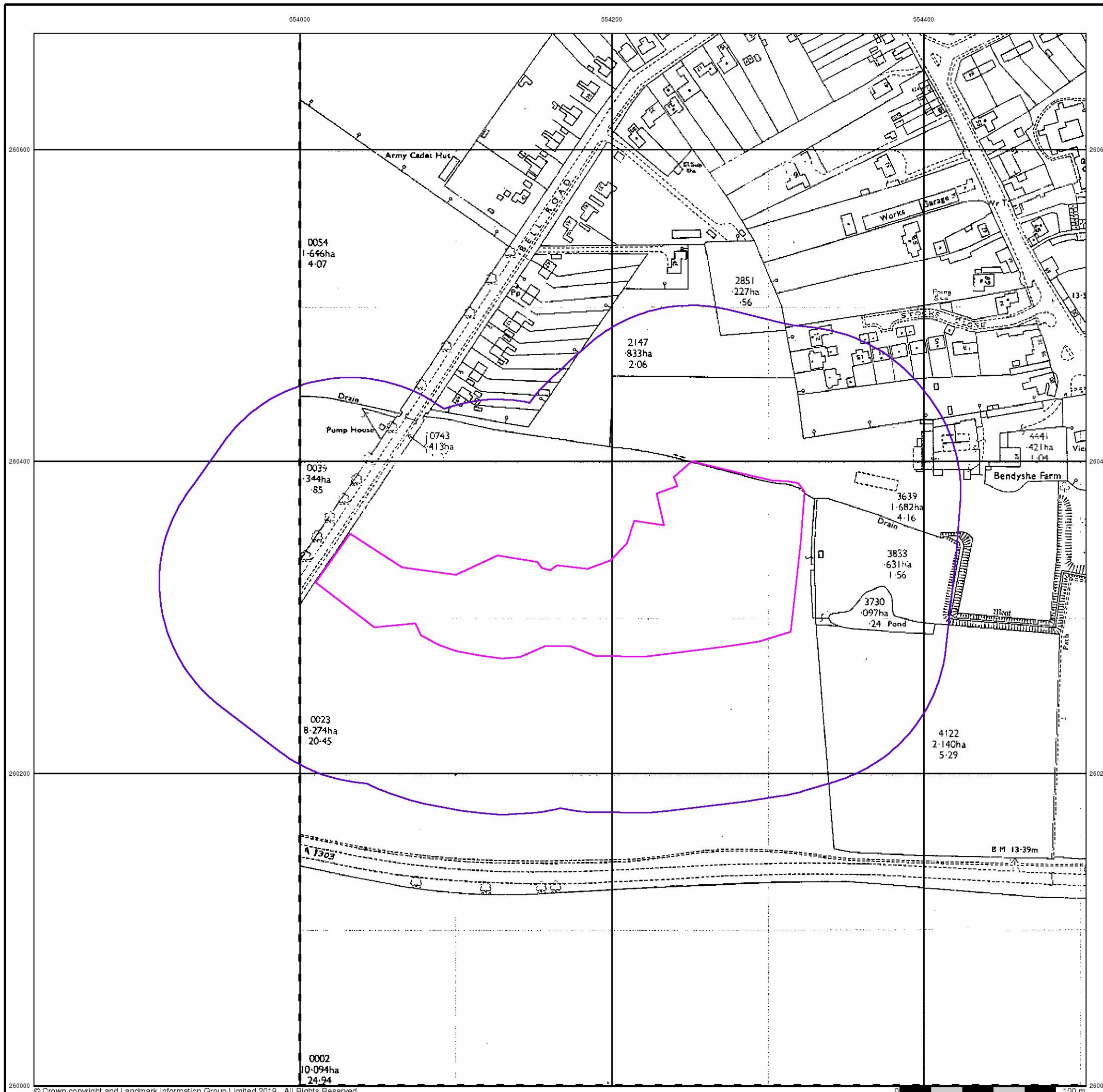


Order Details

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 Customer Ref: 4159,GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 100

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



Large-Scale National Grid Data

Published 1994

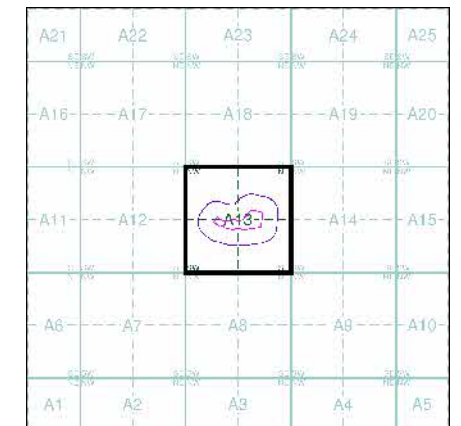
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

TL5360 1994 1:2,500	TL5460 1994 1:2,500
TL5359 1994 1:2,500	TL5459 1994 1:2,500

Historical Map - Segment A13

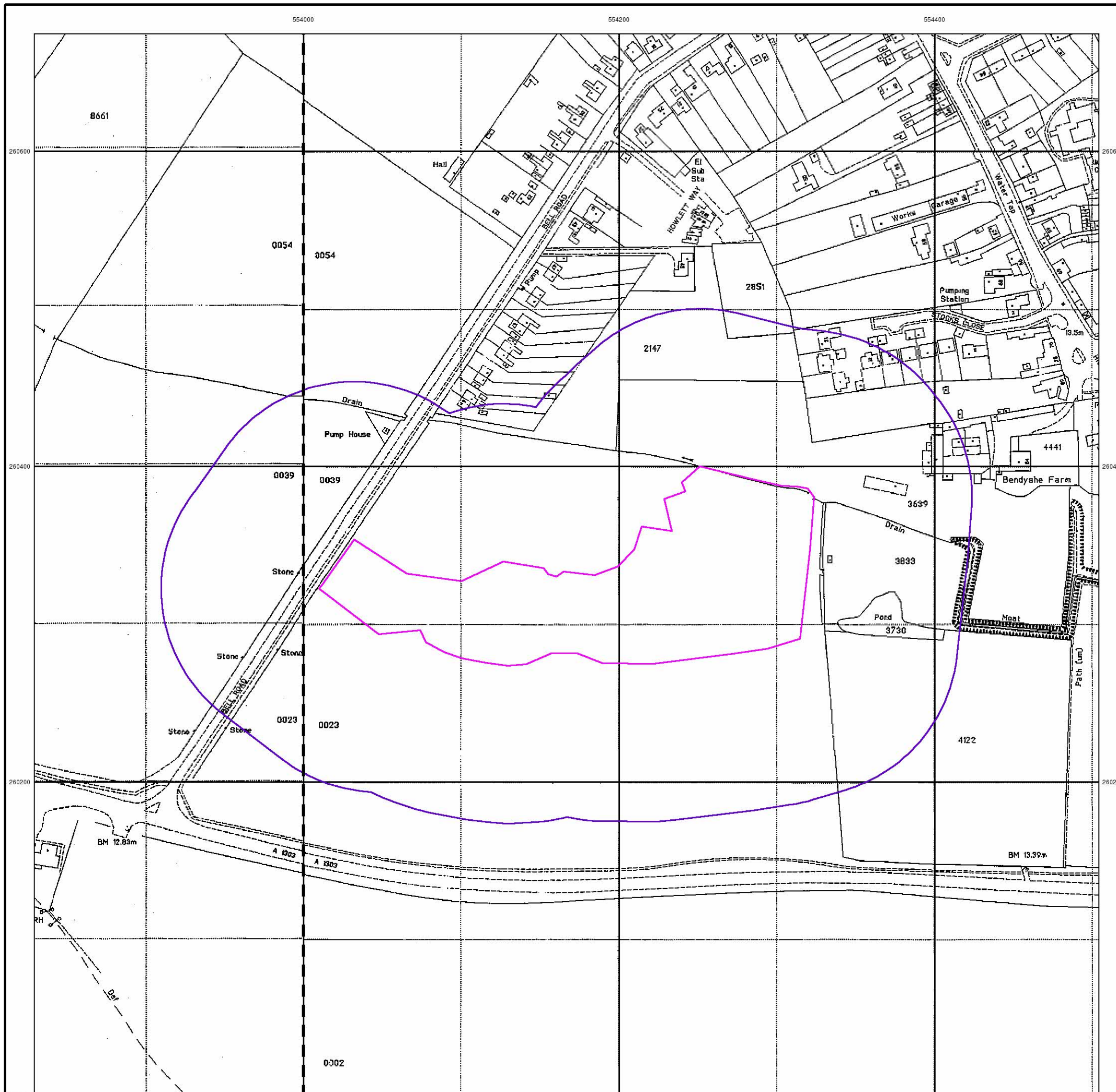


Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 100

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



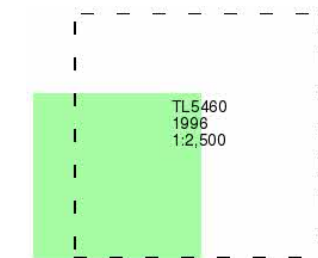
Large-Scale National Grid Data

Published 1996

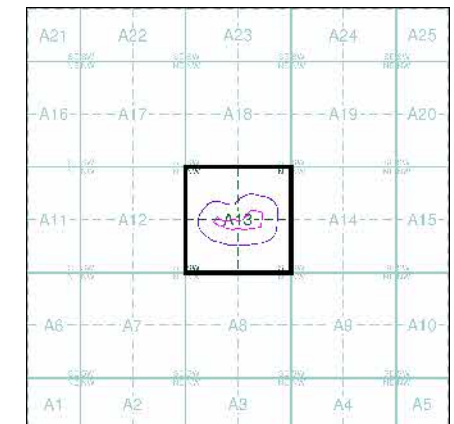
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

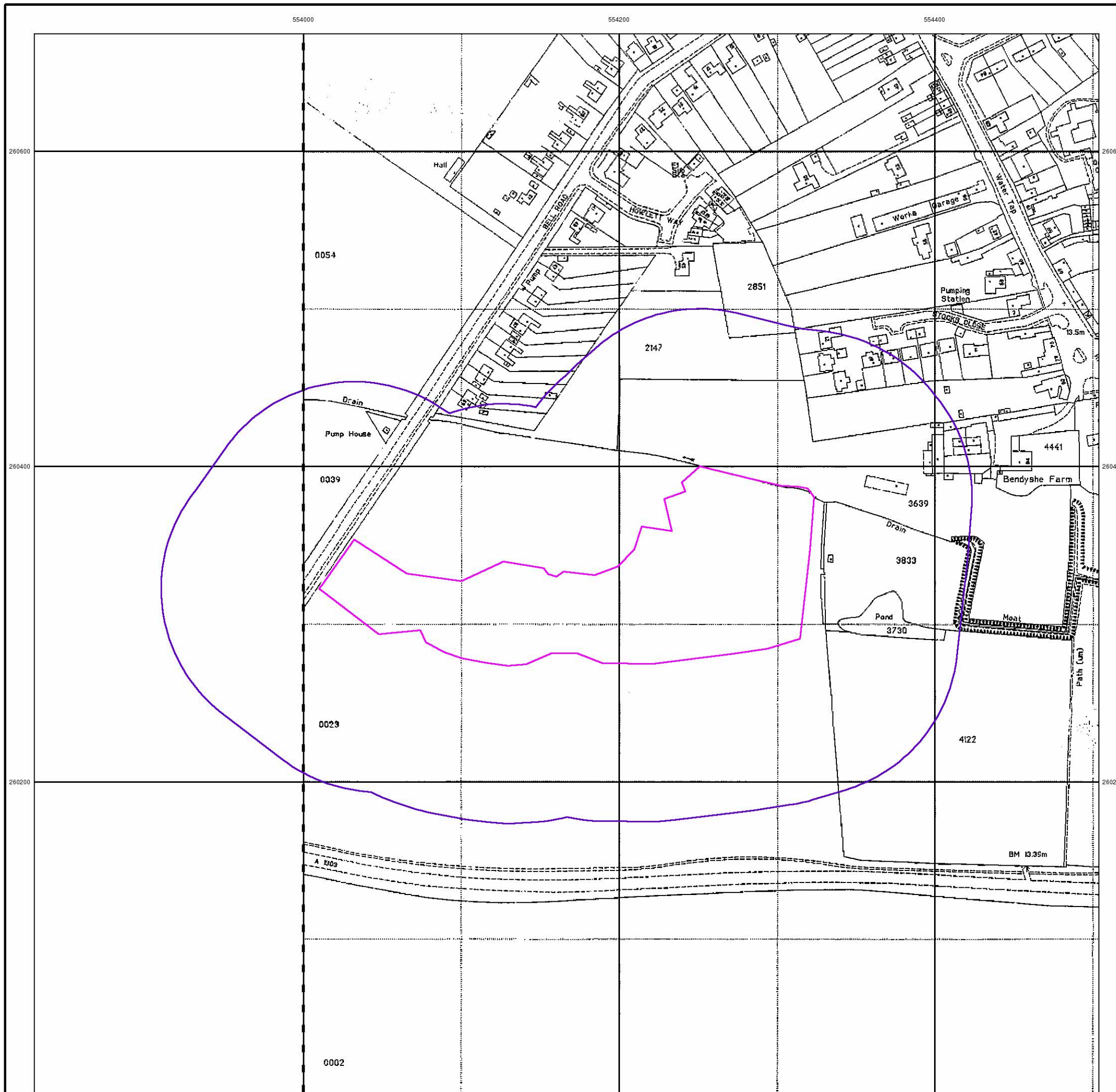


Order Details

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 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 100

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



554000 554200 554400

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● LANDMARK INFORMATION GROUP®

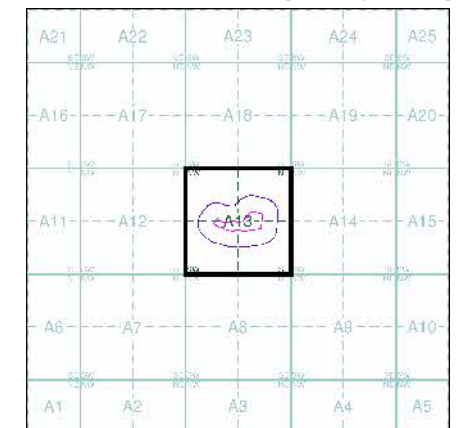
Historical Aerial Photography

Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain



Historical Aerial Photography - Segment A13



Order Details

Order Number: 220424530_1_1
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Site Details

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

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit, **Sand Pit**, **Other Pits**
Quarry, **Shingle**, **Orchard**
Osiers, **Reeds**, **Marsh**
Mixed Wood, **Deciduous**, **Brushwood**
Fir, **Furze**, **Rough Pasture**
 Arrow denotes flow of water, **Trigonometrical Station**
Site of Antiquities, **Bench Mark**
Pump, Guide Post, Signal Post, **Well, Spring, Boundary Post**
-285 Surface Level
Sketched Contour, **Instrumental Contour**
Main Roads (Fenced, Un-Fenced), **Minor Roads** (Fenced, Un-Fenced)
Sunken Road, **Raised Road**
Road over Railway, **Railway over River**
Railway over Road, **Level Crossing**
Road over River or Canal, **Road over Stream**
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
County Burgh Boundary (Scotland)
Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry, **Gravel Pit**
Sand Pit, **Disused Pit or Quarry**
Refuse or Slag Heap, **Lake, Loch or Pond**
Dunes, **Boulders**
Coniferous Trees, **Non-Coniferous Trees**
Orchard, **Scrub**, **Coppice**
Bracken, **Heath**, **Rough Grassland**
Marsh, **Reeds**, **Saltings**
Building, **Glasshouse**
Sloping Masonry, **Pylon**, **Electricity Transmission Line**, **Pole**
Cutting, **Embankment**, **Standard Gauge Multiple Track**
Road Under, **Road Over**, **Level Crossing**, **Foot Bridge**, **Standard Gauge Single Track**
Siding, Tramway or Mineral Line, **Narrow Gauge**
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency (Shown only when not coincident with other boundaries)
Civil Parish (Shown alternately when coincidence of boundaries occurs)
BP, BS Boundary Post or Stone, **Pol Sta** Police Station
Ch Church, **PO** Post Office
CH Club House, **PC** Public Convenience
F E Sta Fire Engine Station, **PH** Public House
FB Foot Bridge, **SB** Signal Box
Fn Fountain, **Spr** Spring
GP Guide Post, **TCB** Telephone Call Box
MP Mile Post, **TCP** Telephone Call Post
MS Mile Stone, **W** Well

1:10,000 Raster Mapping

Gravel Pit, **Refuse tip or slag heap**
Rock, **Rock (scattered)**
Boulders, **Boulders (scattered)**
Shingle, **Mud**, **Mud**
Sand, **Sand Pit**
Slopes, **Top of cliff**
General detail, **Underground detail**
Overhead detail, **Narrow gauge railway**
Multi-track railway, **Single track railway**
County boundary (England only), **Civil, parish or community boundary**
District, Unitary, Metropolitan, London Borough boundary, **Constituency boundary**
Area of wooded vegetation, **Non-coniferous trees**
Non-coniferous trees (scattered), **Coniferous trees**
Coniferous trees (scattered), **Positioned tree**
Orchard, **Coppice or Osiers**
Rough Grassland, **Heath**
Scrub, **Marsh, Salt Marsh or Reeds**
Water feature, **Flow arrows**
MHW(S) Mean high water (springs), **MLW(S)** Mean low water (springs)
Telephone line (where shown), **Electricity transmission line (with poles)**
Bench mark (where shown), **Triangulation station**
Point feature (e.g. Guide Post or Mile Stone), **Pylon, flare stack or lighting tower**
Site of (antiquity), **Glasshouse**
General Building, **Important Building**

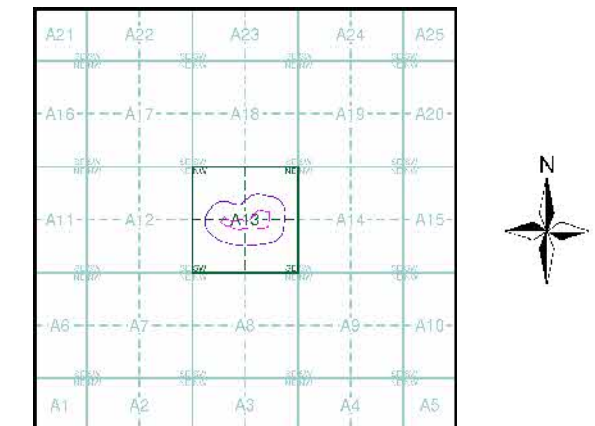
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Cambridgeshire & Isle Of Ely	1:10,560	1886	2
Cambridgeshire & Isle Of Ely	1:10,560	1903	3
Cambridgeshire & Isle Of Ely	1:10,560	1926	4
Historical Aerial Photography	1:10,560	1948	5
Cambridgeshire & Isle Of Ely	1:10,560	1952	6
Ordnance Survey Plan	1:10,000	1958	7
Ordnance Survey Plan	1:10,000	1960 - 1966	8
Ordnance Survey Plan	1:10,000	1970 - 1975	9
Ordnance Survey Plan	1:10,000	1974	10
Ordnance Survey Plan	1:10,000	1981 - 1988	11
Ordnance Survey Plan	1:10,000	1990	12
10K Raster Mapping	1:10,000	2000	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2019	15

Historical Map - Slice A



Order Details

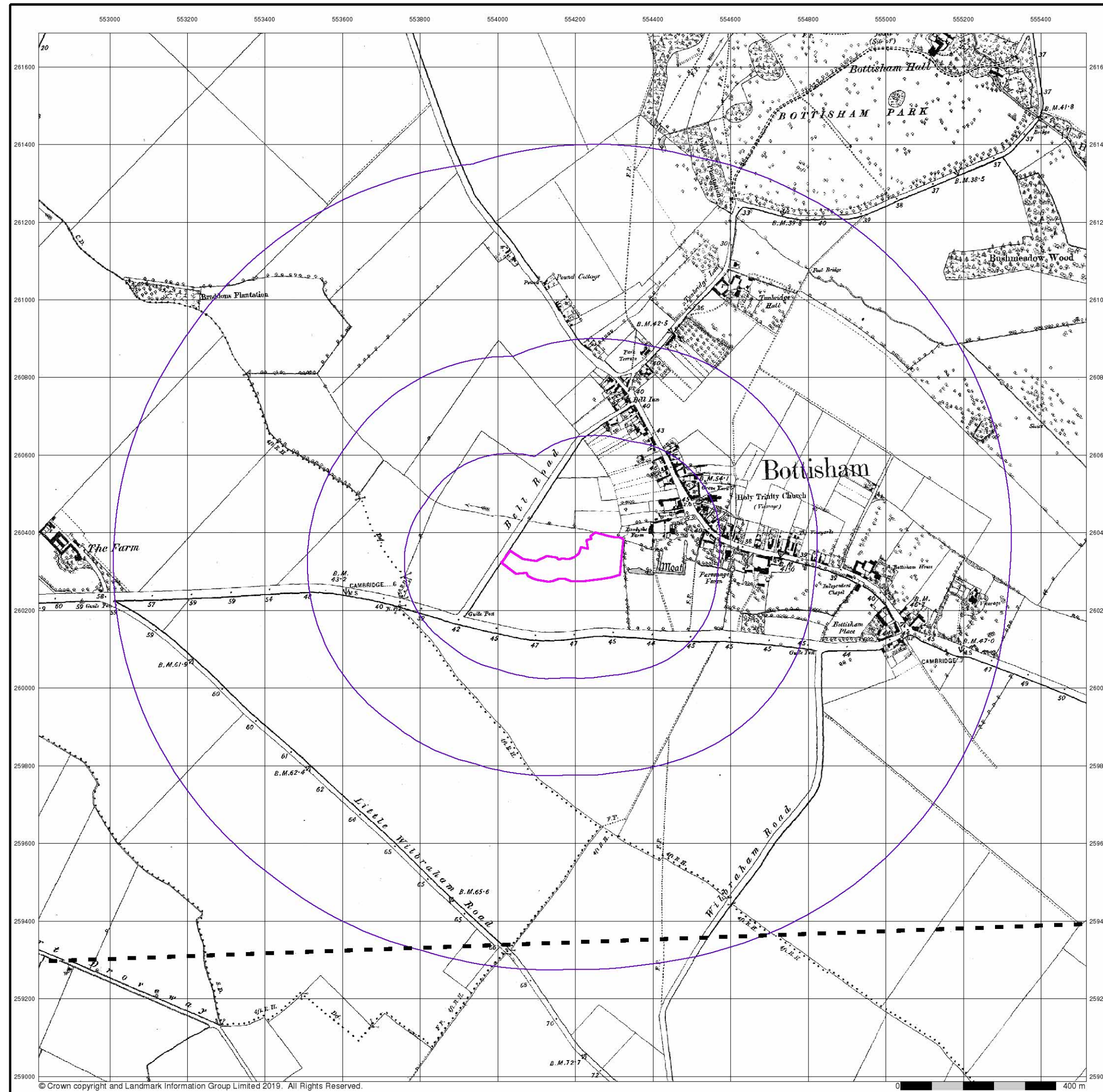
Order Number: 220424530_1_1
 Customer Ref: 4159,GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL

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Cambridgeshire & Isle Of Ely

Published 1886

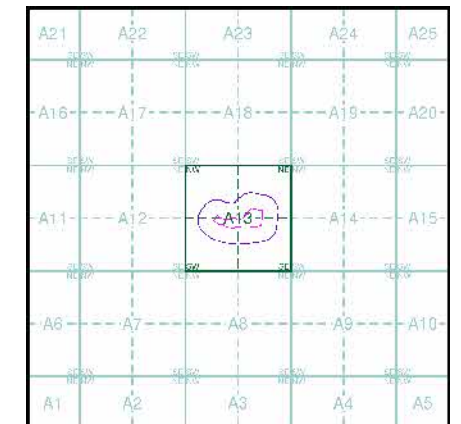
Source map scale - 1:10,560

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

041SW	1886	1:10,560
048NW	1886	1:10,560

Historical Map - Slice A

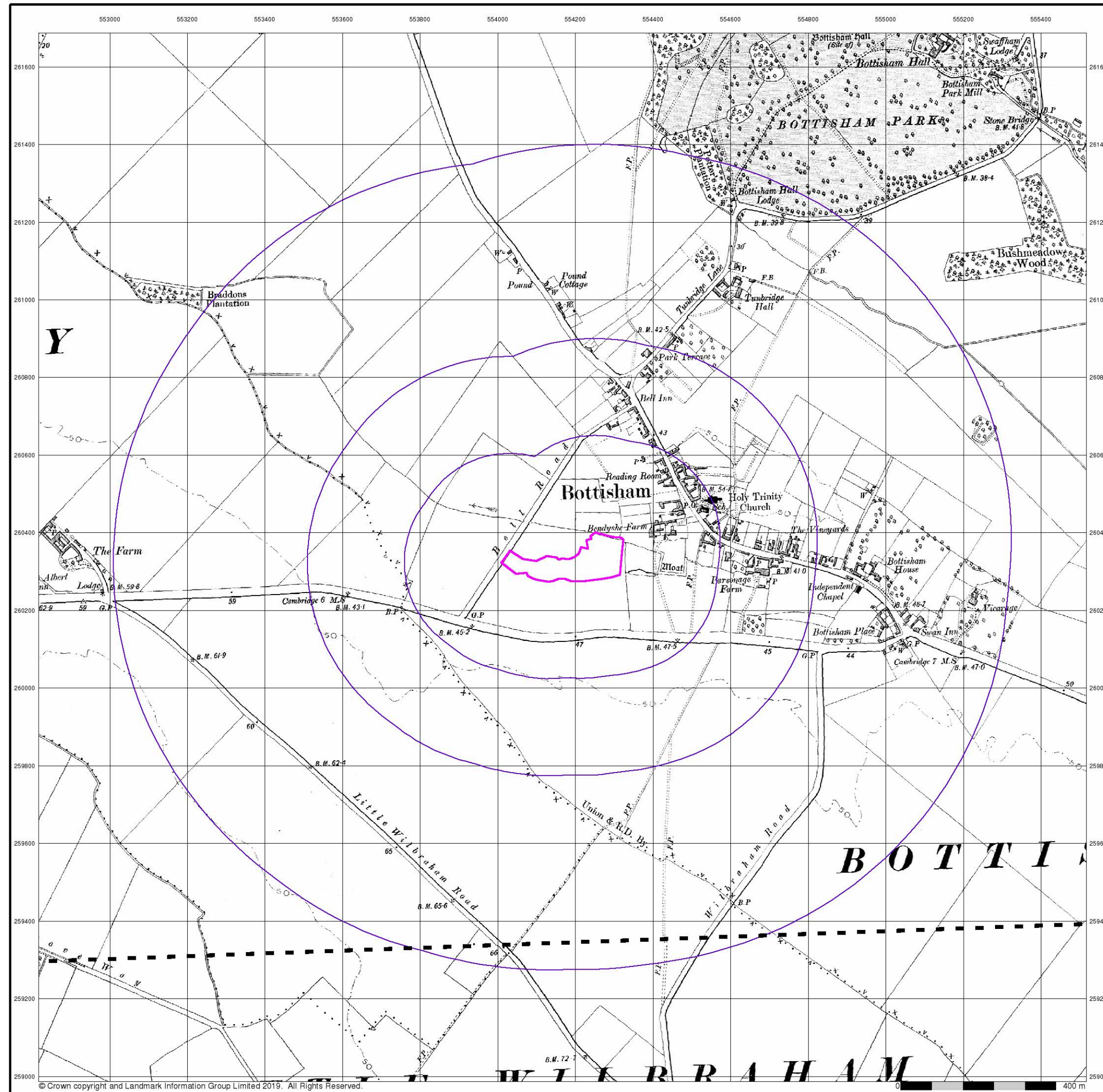


Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,G1
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



Cambridgeshire & Isle Of Ely

Published 1903

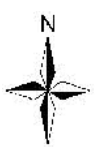
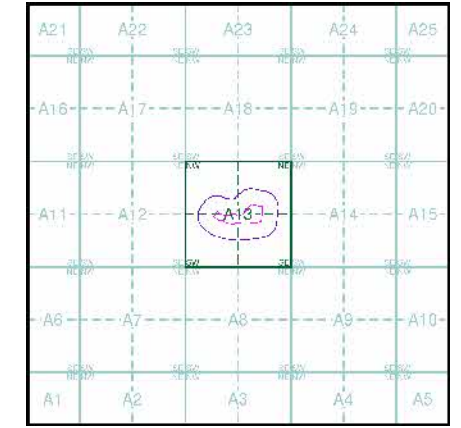
Source map scale - 1:10,560

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

041SW	1903	1:10,560
048NW	1903	1:10,560

Historical Map - Slice A

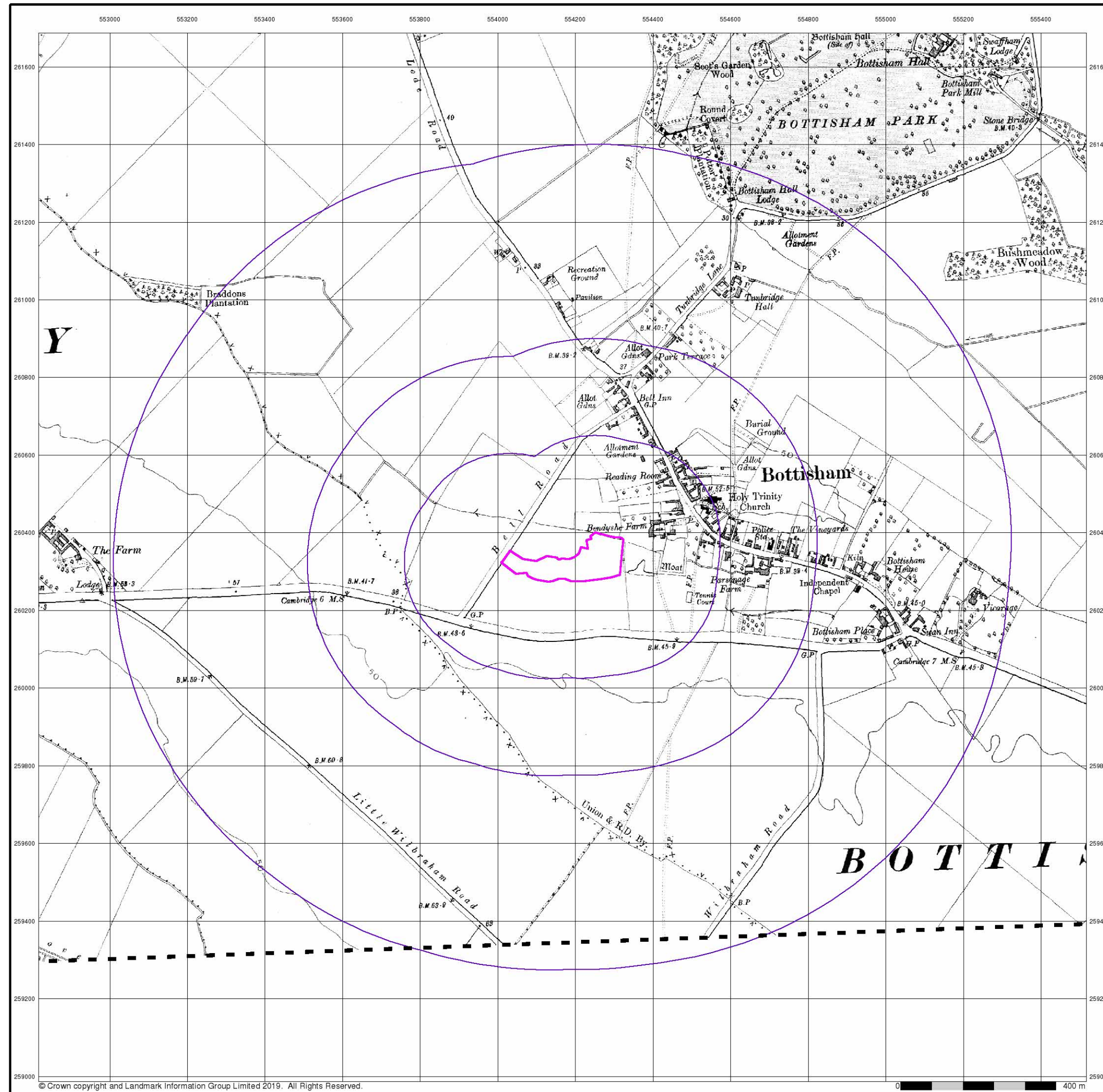


Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,G1
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 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



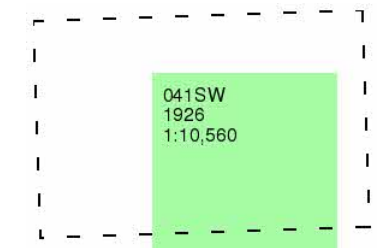
Cambridgeshire & Isle Of Ely

Published 1926

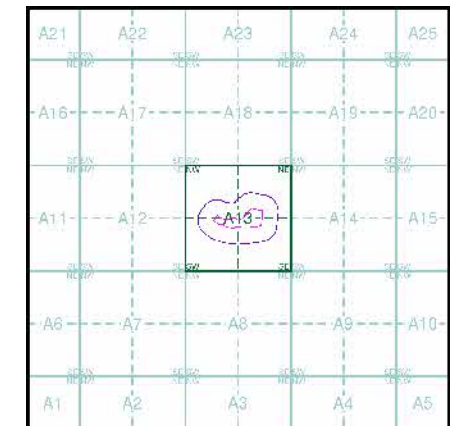
Source map scale - 1:10,560

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 220424530_1_1
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Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL

Historical Aerial Photography

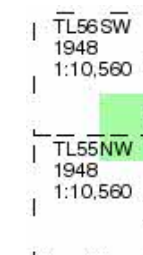
Published 1948

Source map scale - 1:10,560

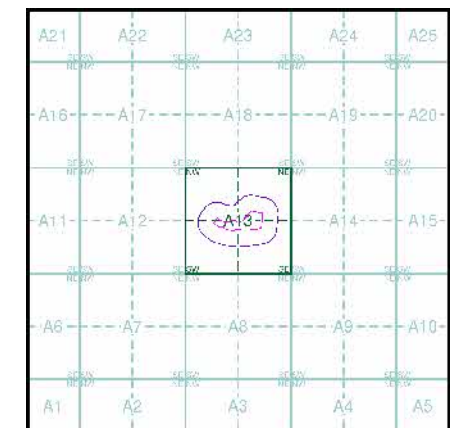
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



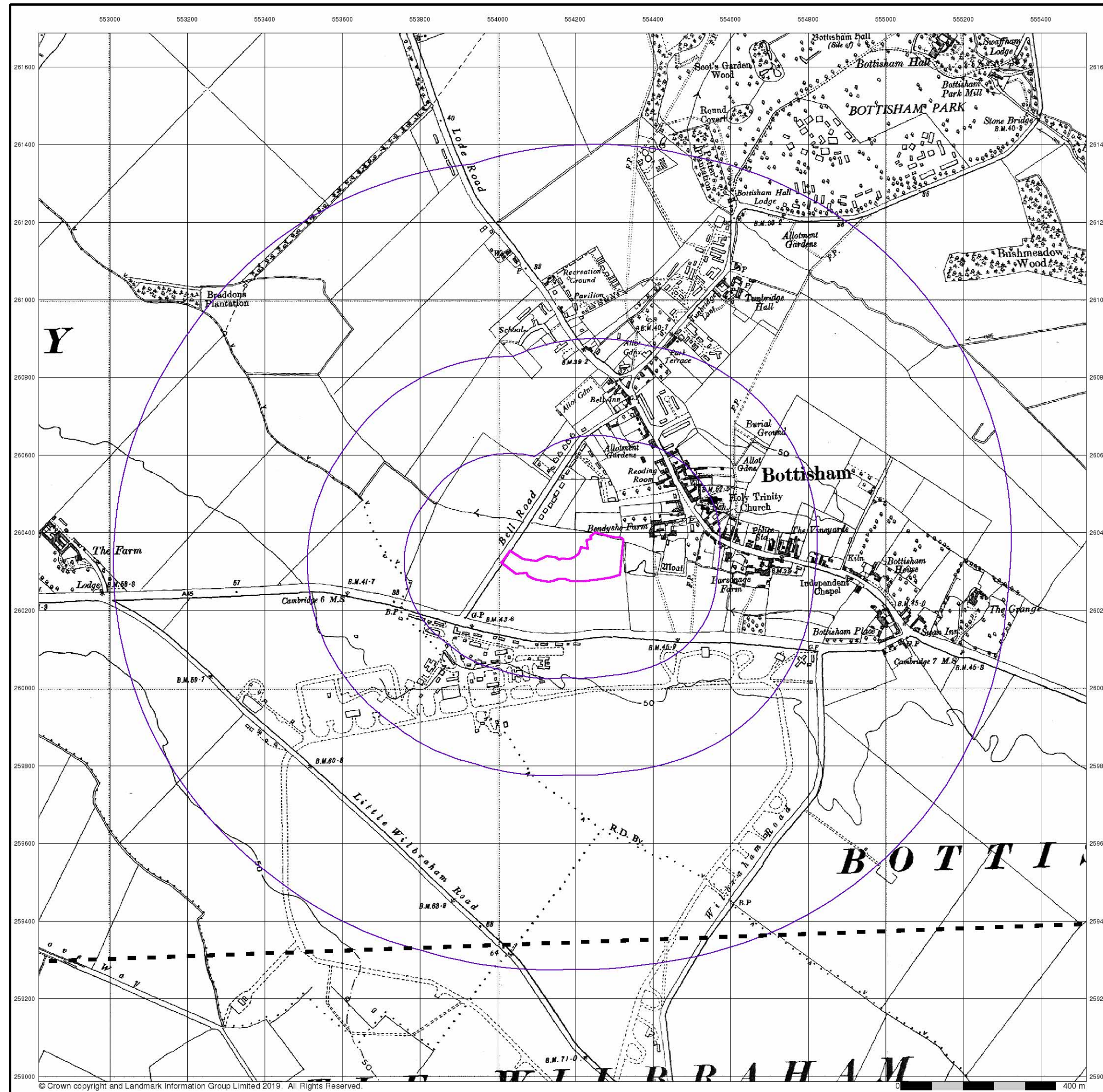
Order Details

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Customer Ref: 4159,GI
National Grid Reference: 554180, 260330
Slice: A
Site Area (Ha): 2.14
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Site Details

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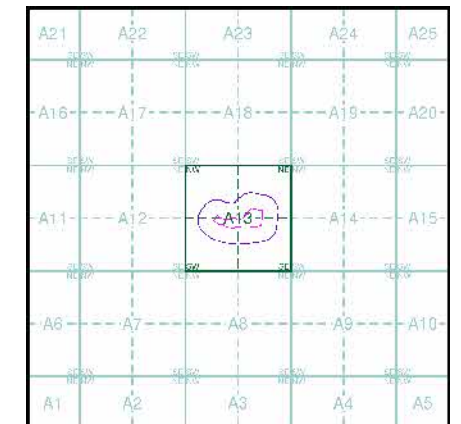


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

041SW	1952	1:10,560
048NW	1952	1:10,560

Historical Map - Slice A

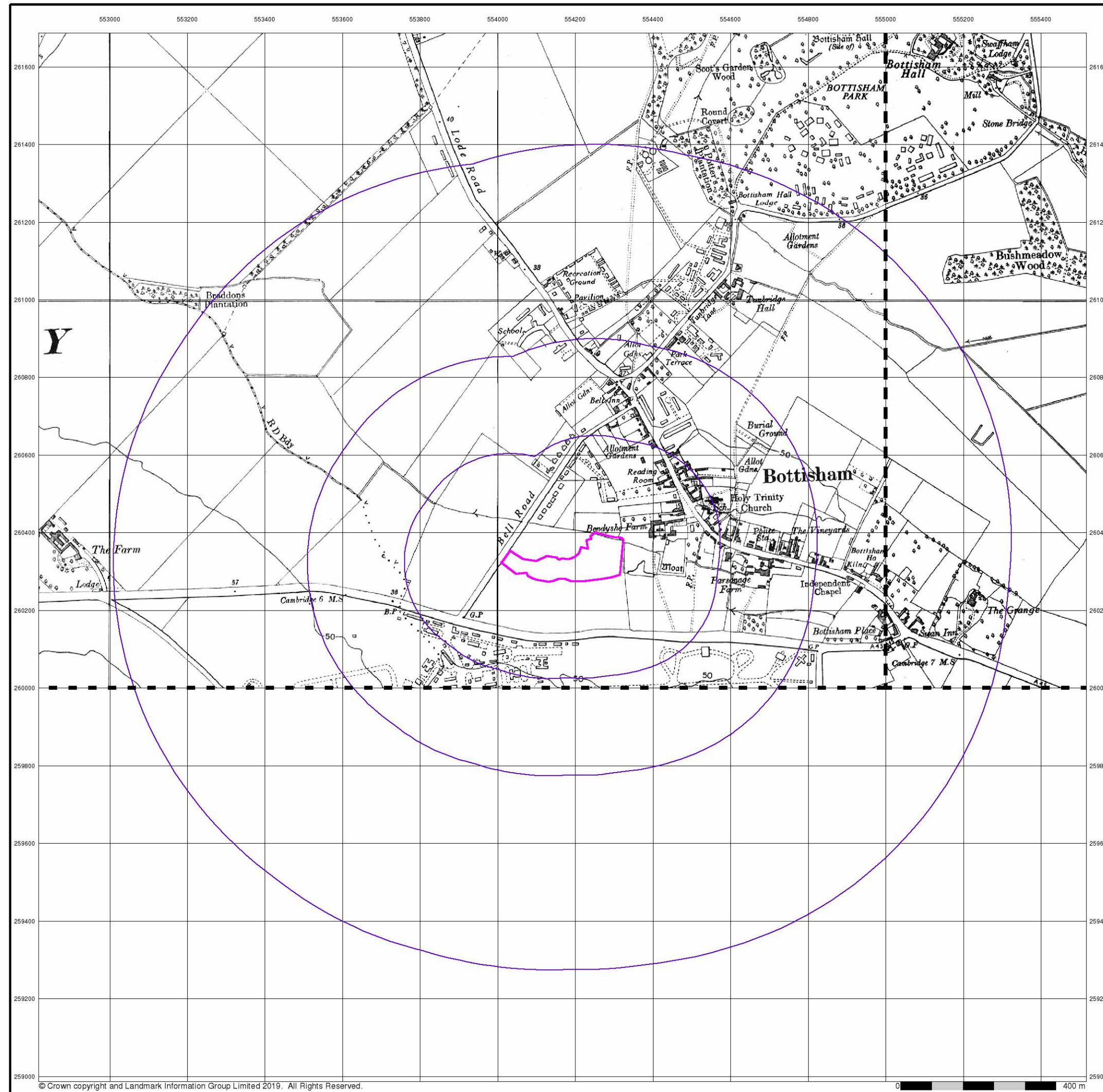


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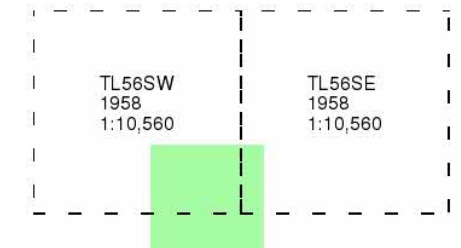
Ordnance Survey Plan

Published 1958

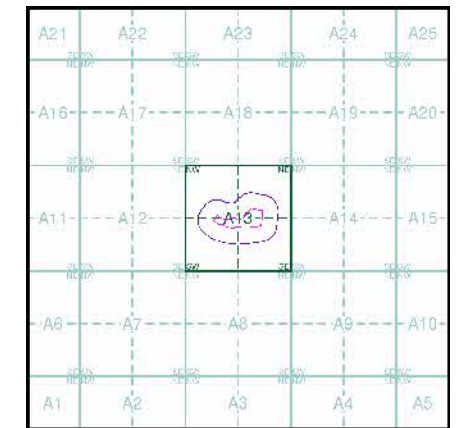
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

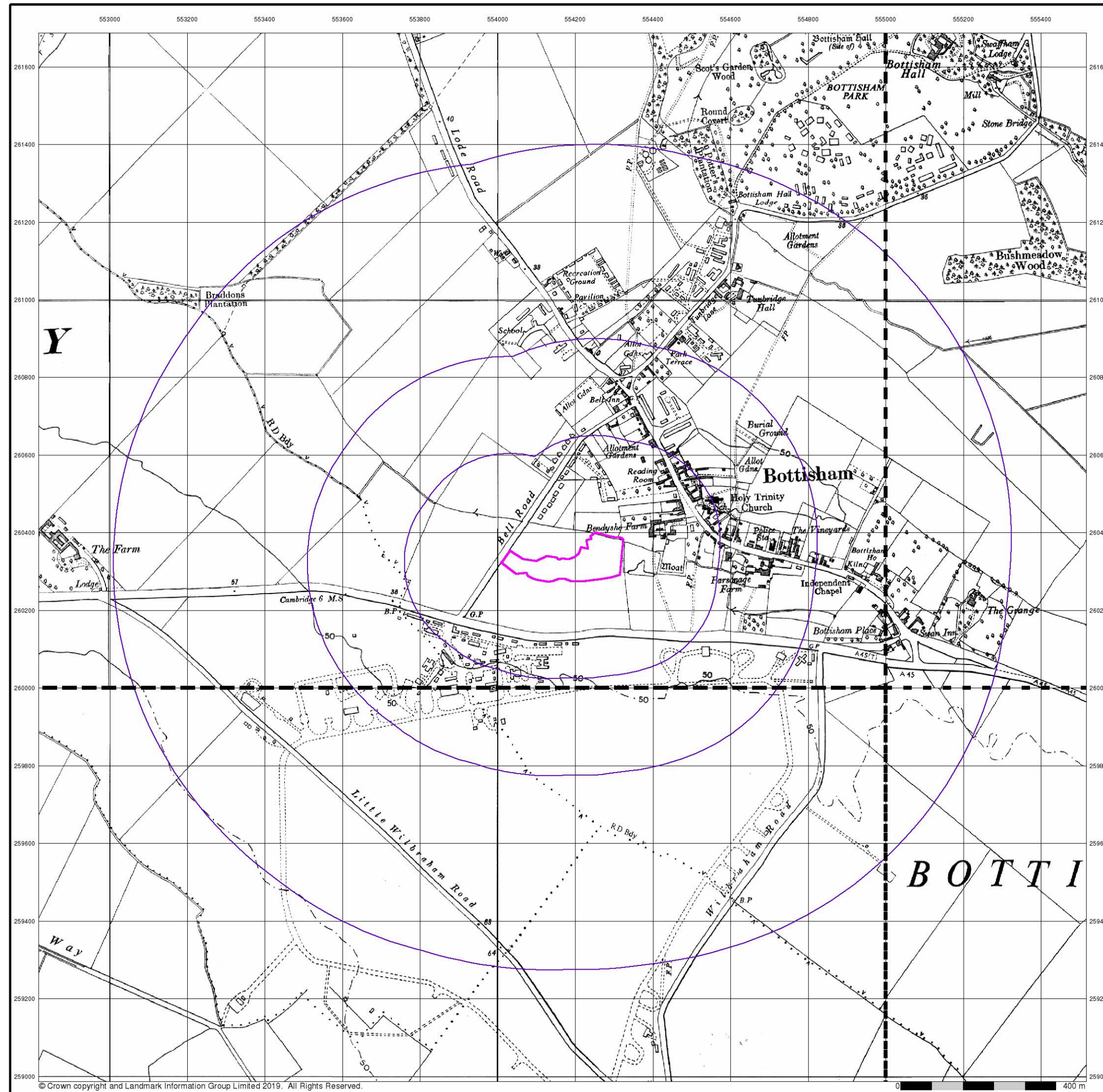
Order Number: 220424530_1_1
 Customer Ref: 4159,GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL

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Ordnance Survey Plan

Published 1960 - 1966

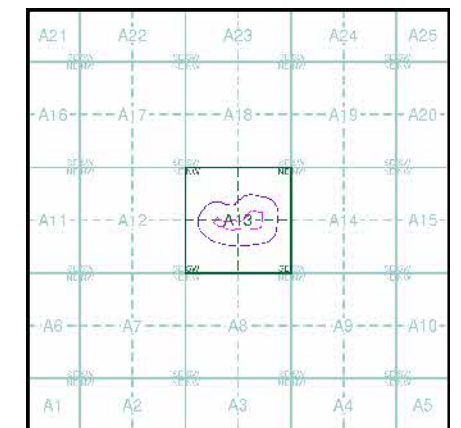
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

TL56SW 1966 1:10,560	TL56SE 1965 1:10,560
TL55NW 1960 1:10,560	TL55NE 1960 1:10,560

Historical Map - Slice A

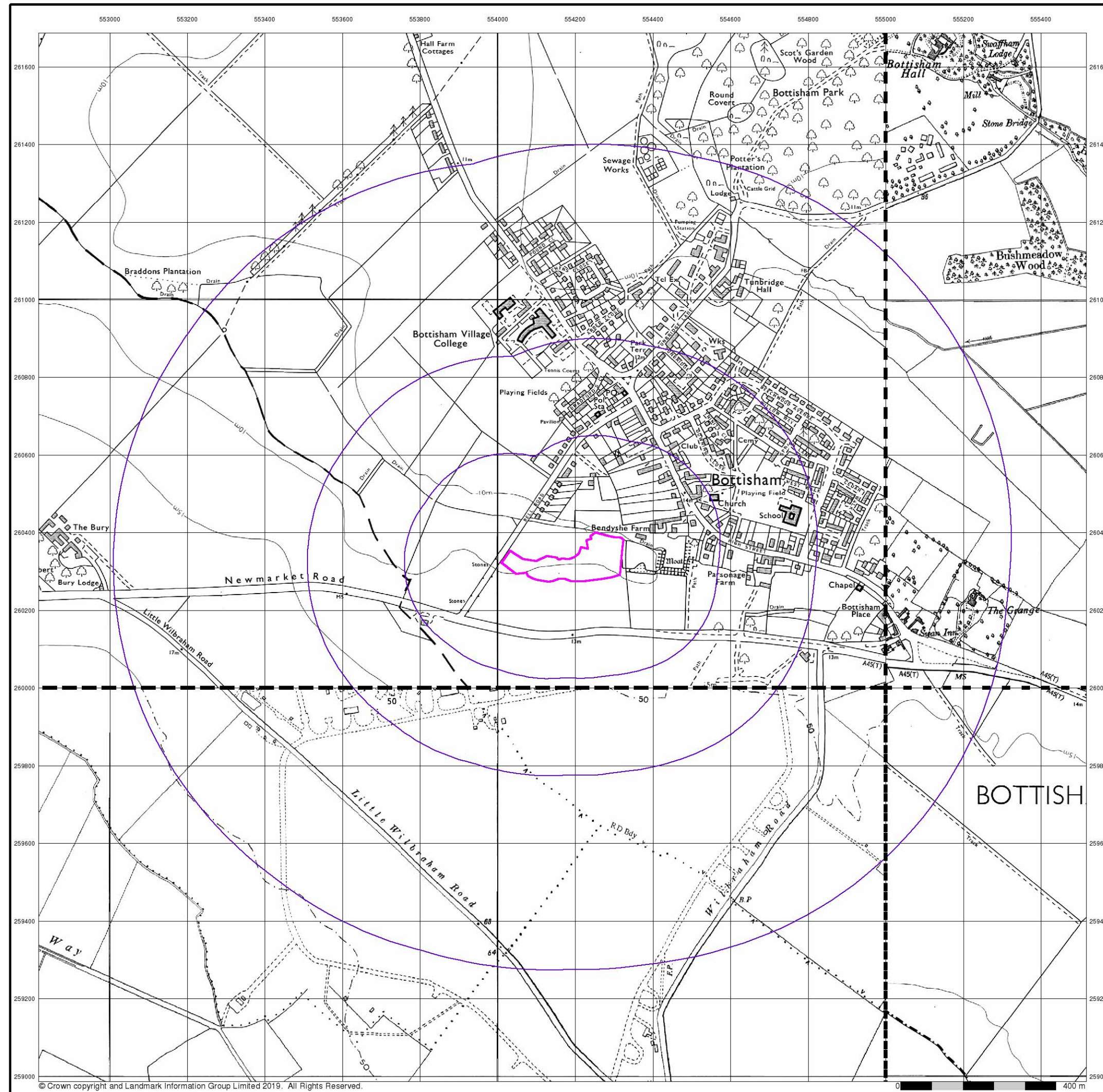


Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan

Published 1970 - 1975

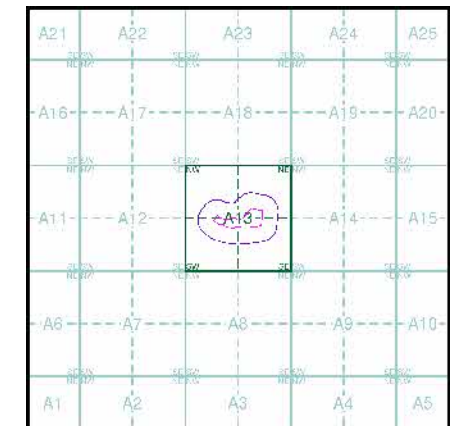
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

TL56SW 1975 1:10,000	TL56SE 1970 1:10,560
TL55NW 1970 1:10,560	TL55NE 1973 1:10,000

Historical Map - Slice A

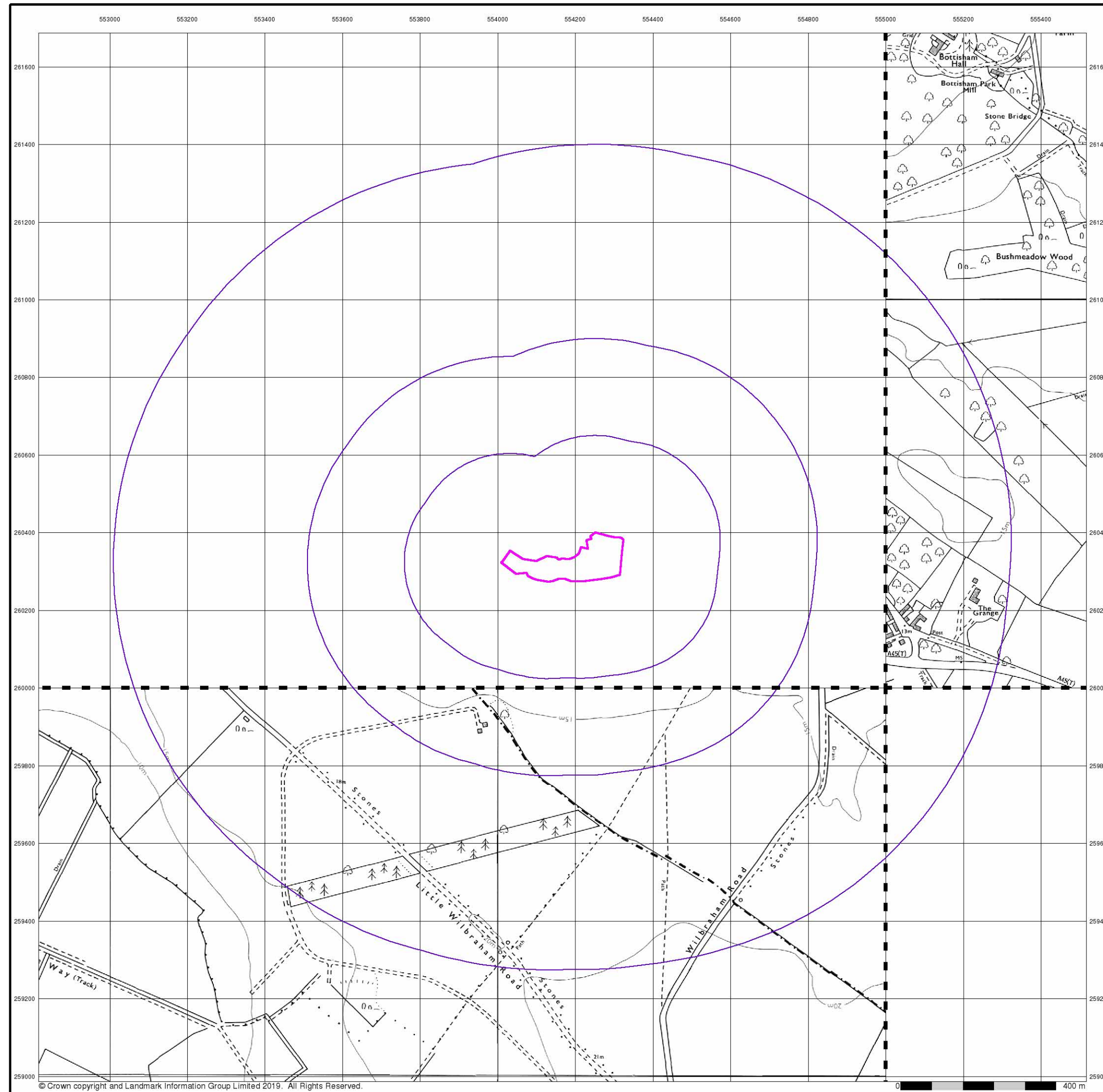


Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



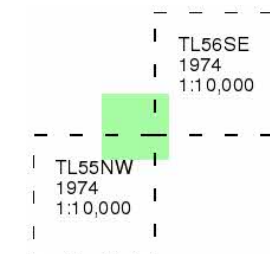
Ordnance Survey Plan

Published 1974

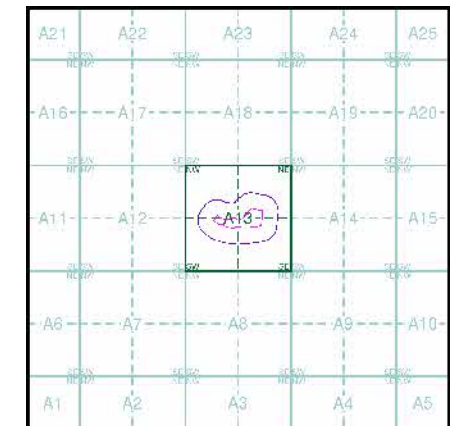
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

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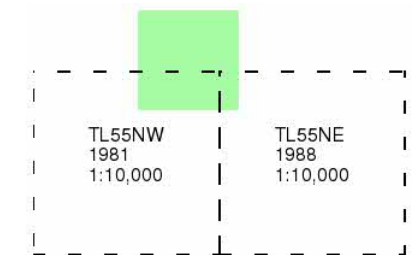
Ordnance Survey Plan

Published 1981 - 1988

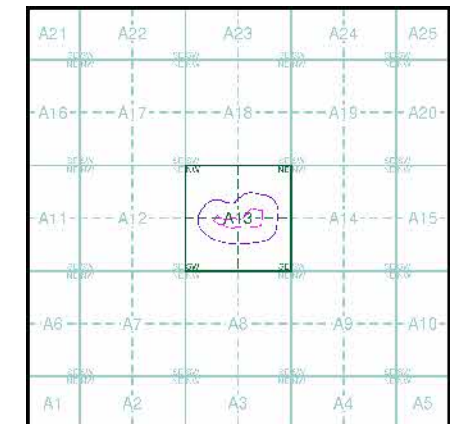
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A

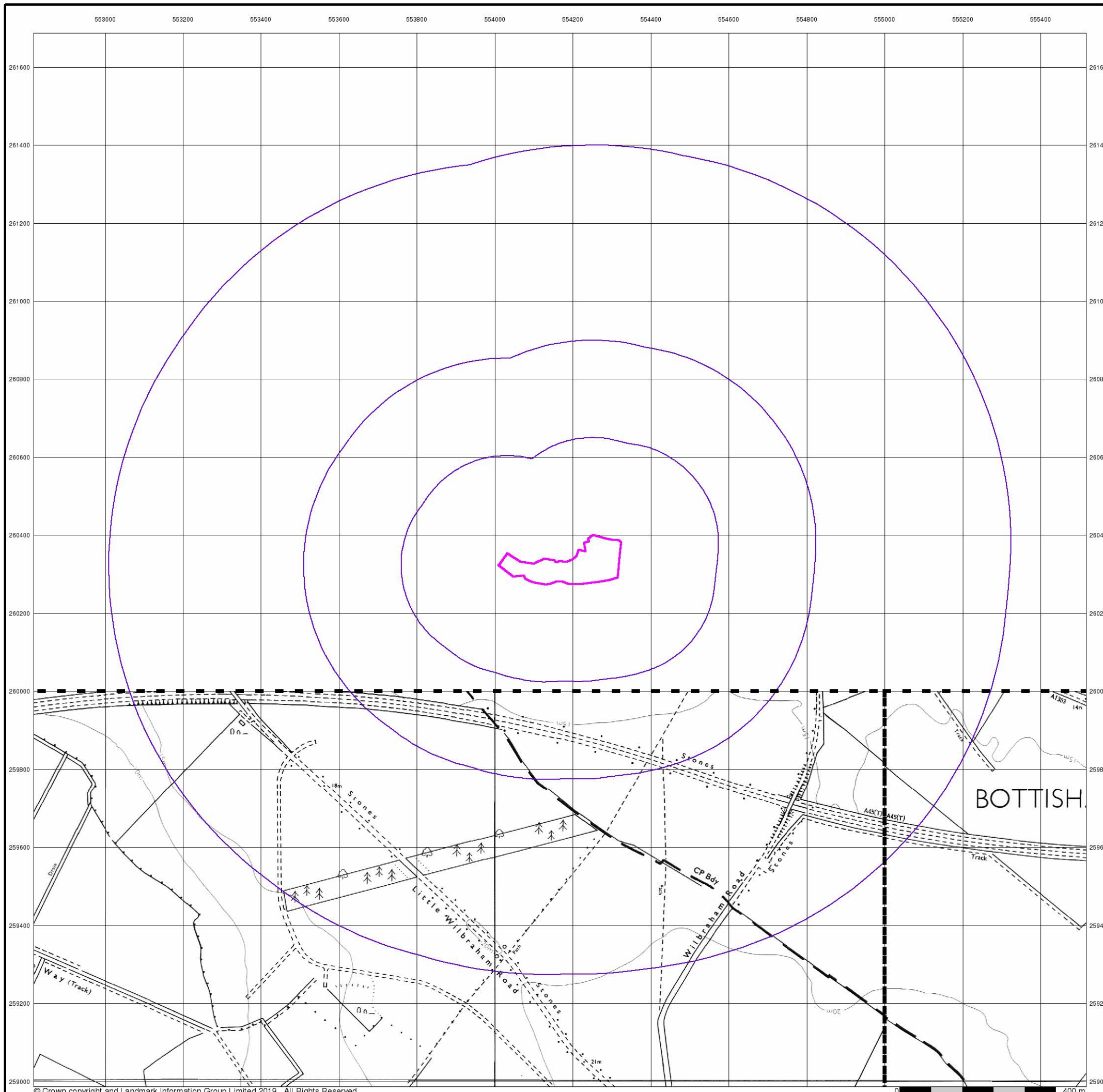


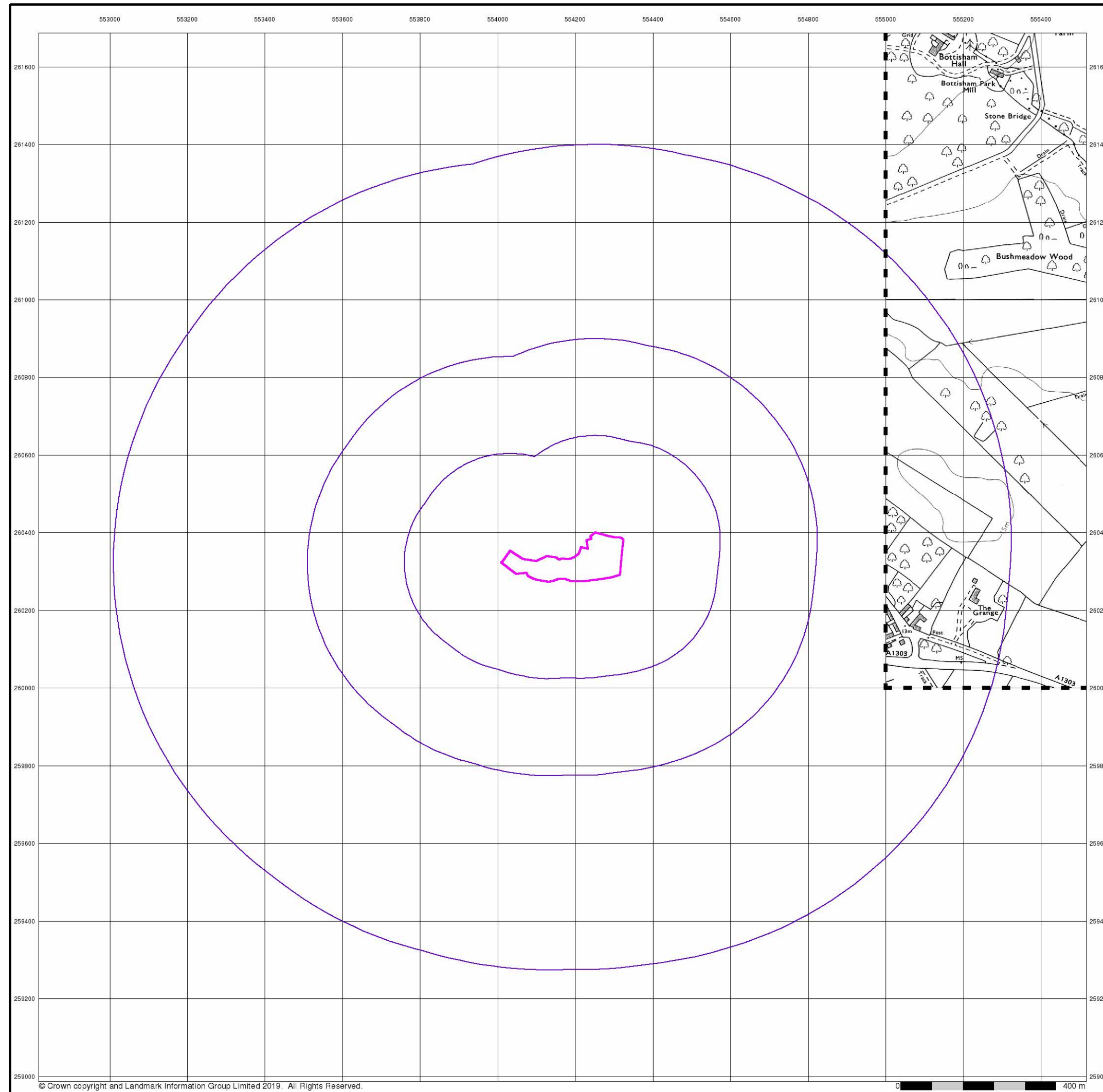
Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159_GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

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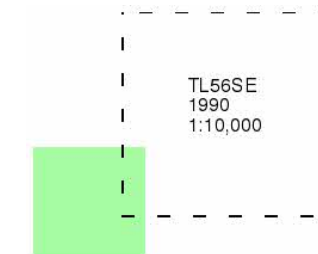
Ordnance Survey Plan

Published 1990

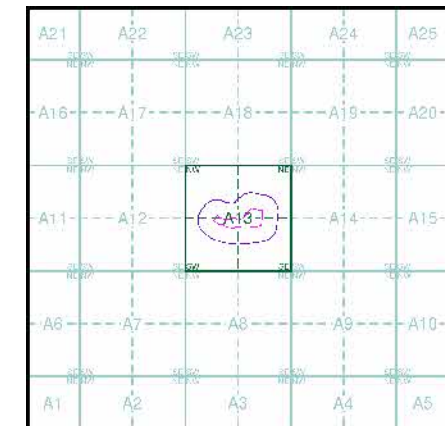
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore 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. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,GI
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

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10k Raster Mapping

Published 2000

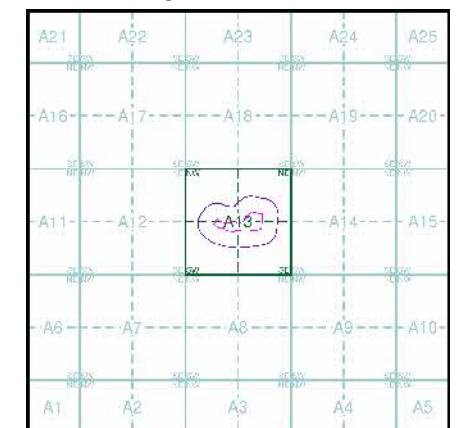
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

TL56SW 2000 1:10,000	TL56SE 2000 1:10,000
TL55NW 2000 1:10,000	TL55NE 2000 1:10,000

Historical Map - Slice A



Order Details

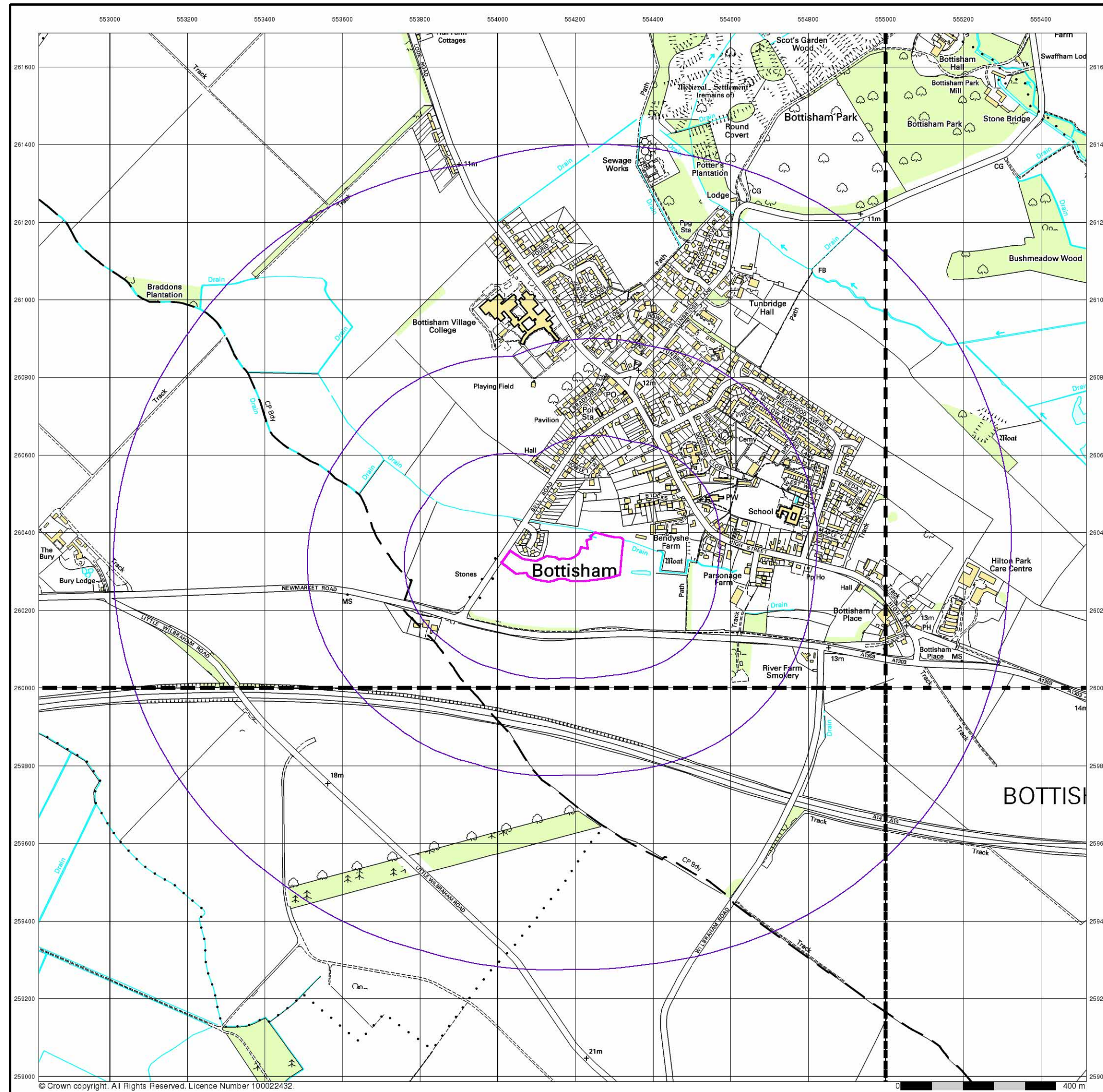
Order Number: 220424530_1_1
 Customer Ref: 4159,G1
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL

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10k Raster Mapping

Published 2006

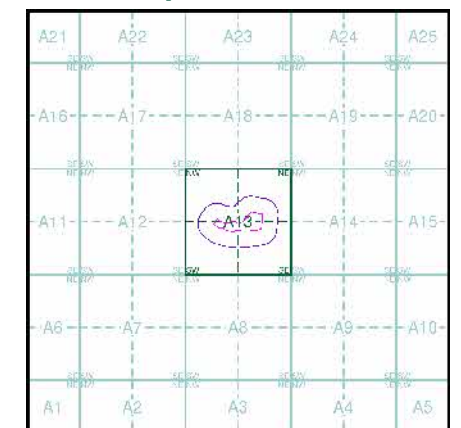
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

TL56SW 2006 1:10,000	TL56SE 2006 1:10,000
TL55NW 2006 1:10,000	TL55NE 2006 1:10,000

Historical Map - Slice A



Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,G1
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL



VectorMap Local

Published 2019

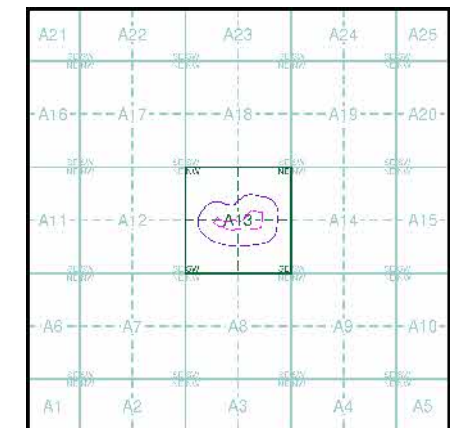
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

TL56SW 2019 Variable	TL56SE 2019 Variable
TL55NW 2019 Variable	TL55NE 2019 Variable

Historical Map - Slice A



Order Details

Order Number: 220424530_1_1
 Customer Ref: 4159,G1
 National Grid Reference: 554180, 260330
 Slice: A
 Site Area (Ha): 2.14
 Search Buffer (m): 1000

Site Details

Land off Bell Road, Bottisham, Cambridge, CB25 9FL

Appendix 6 – Comparison of Consequences Against Probability

		Consequence (Severity of Linkage)			
		Severe (S)	Moderate (Mo)	Mild (Mi)	Negligible (N)
Probability (Likelihood of linkage from)	Highly Likely (HL)	Very High Risk (VH)	High Risk (HR)	Moderate Risk (MR)	Moderate/Low Risk (MR-LR)
	Likely (L)	High Risk (HR)	Moderate Risk (MR)	Moderate/Low Risk (MR-LR)	Low Risk (LR)
	Unlikely (U)	Moderate Risk (MR)	Moderate/Low Risk (MR-LR)	Low Risk (LR)	Negligible Risk (NR)
	Negligible (N)	Moderate/Low Risk (MR-LR)	Low Risk (LR)	Negligible Risk (NR)	Negligible Risk (NR)

This table is to provide reference information in conjunction with the GEL Conceptual Model attached within the Hazard Risk Assessment section of this report, Table 4 – Conceptual Model.

Very High Risk (VH)

- There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is happening currently.
- Urgent investigation and remediation are likely to be required and advised.

High Risk (HR)

- Harm is likely to arise to a designated receptor from an identified hazard.
- Urgent investigation is required and remedial works are likely necessary in both the short to long term.

Moderate Risk (MR)

- It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.

- Investigation is required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.

Low Risk (LR)

- It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild. Limited investigation recommended.

Negligible Risk (NR)

- There is a minimal possibility that harm could arise to a receptor. In the event of such harm being realised it is high likely to not be severe. Investigation not deemed necessary.

Appendix 7 – Exploratory Hole Logs

Windowless Sample Hole Logs

(WS01 to WS10)

Trial Pit Logs

(TP01 to TP03)

CLIENT: Peterhouse UoC c/o Bidwells PROJECT: Land off Bell Road, Bottisham GROUND LEVEL m HOLE No. WS01
 LOGGED BY: AT CHECKED BY: GF DATE: 07/11/2019 EXCAVATION METHOD: Window Sampler Grid Reference: SHEET 1 OF 1
 TEMPLATE REF: GEL AGS BH BETA Uncased to 4.0 m DATES 10/10/2019 - 10/10/2019 PROJECT NO. 4159,GI

Date/Time and Depth	Depth of Casing	Depth of Water	Piez.	Description of Strata	Strata		Graphical Representation				Sampling/In-Situ Testing				Laboratory Testing						Additional Tests and Notes	
					Leg	Reduced Level	Depth	SPT 'N' Value				Depths	Type	No.	Blows	SPT N	<425 %	WC %	PL %	LL %		ρ Mg/m ³
				Soft brown slightly sandy slightly gravelly slightly organic CLAY. Sand is fine to coarse. Gravel is fine and medium subrounded chert (TOPSOIL)		0.00					0											
				Light brown mottled lighter brown slightly silty slightly gravelly CLAY. Gravel is fine and medium subrounded chalk. [Weathered Chalk]		0.20					0.20	J	1									
				Structureless CHALK recovered as cream slightly sandy gravelly SILT. Gravel is subrounded extremely weak low density light brown chalk. (WEST MELBURY CHALK FORMATION)		0.40																
						0.70					0.70	J	2									
						0.90					0.90	D	1.9	5 7 7 5 6 5	23							
						1.90					1.90	D	2									
						2.00					2.00	J	3	4 6 7 6 7 7	27							
						2.90					2.90	D	3									
						3.00					3.00	J	4	6 8 8 8 11 9	36							
						3.90					3.90	D	4	6 7 8 9 14 13	44							
						4.00																
				BOREHOLE TERMINATED AT 4.0m BGL.																		

GEL AGS BH BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19

*WATER Standing water level PIEZOMETER Upper seal Response zone Lower seal

D Small disturbed sample B Bulk disturbed sample U Undisturbed sample P Piston sample J Disturbed jar sample ES Environmental soil sample W Water Sample

S Standard penetration test C Cone penetration test K Permeability test

Blows SPT blows for each 75mm increment (35) Undisturbed sample blow count
 SPT N N = SPT N value (blows after seating)
 N*120 = Total blows/penetration including seating
 <425 Sample % passing 425 micron sieve

DEPTH All depths, level and thicknesses in metres

Geosphere Environmental Ltd
 Brightwell Barns, Ipswich Road
 Brightwell, Suffolk, IP10 0BJ
 Telephone: 01603 298076

PROJECT NO
4159,GI
 SHEET
1 OF 1
 HOLE No.
WS01

CLIENT: Peterhouse UoC c/o Bidwells PROJECT: Land off Bell Road, Bottisham GROUND LEVEL m HOLE No. WS02
 LOGGED BY: AT FIELDWORK BY: GEL CHECKED BY: GF DATE: 07/11/2019 EXCAVATION METHOD: Window Sampler Grid Reference: SHEET 1 OF 1
 TEMPLATE REF: GEL AGS BH BETA DATES 10/10/2019 - 10/10/2019 PROJECT NO. 4159,GI
 Uncased to 2.0 m

Date/Time and Depth	Depth of Casing	Depth* of Water	Piez.	Description of Strata	Strata		Graphical Representation				Sampling/In-Situ Testing				Laboratory Testing						Additional Tests and Notes
					Leg	Reduced Level	Depth	SPT 'N' Value				Depths	Type	No.	Blows	SPT N	<425 %	WC %	PL %	LL %	
				Soft brown slightly sandy slightly gravelly slightly organic CLAY. Sand is fine to coarse. Gravel is fine and medium subrounded chert (TOPSOIL)		0.00					0										
				Friable light yellow brown slightly gravelly slightly sandy silty calcareous CLAY with occasional pale yellow and white pockets. Gravel is fine to medium subrounded chert. Sand is fine to coarse		0.30					0.20	J	1								
				Structureless CHALK recovered as cream with occasional orange staining slightly sandy gravelly SILT. Gravel is subrounded extremely weak low density light brown chalk. Sand is fine to coarse (Grade Dc). (WEST MELBURY CHALK FORMATION)		0.50					0.50	D	1								
							0.60					0.60	J	2							
				BOREHOLE REFUSED AT 2.0m BGL.		0.85					1.00	1	D	2	6 7 7 8 10 10	35					
							2.00					2			7 9 14 16 20	66*					

GEL AGS BH BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19

*WATER Standing water level PIEZOMETER Upper seal Response zone Lower seal

SAMPLE AND TEST KEY
 D Small disturbed sample
 B Bulk disturbed sample
 U Undisturbed sample
 P Piston sample
 J Disturbed jar sample
 ES Environmental soil sample
 W Water Sample

S Standard penetration test
 C Cone penetration test
 K Permeability test

Blows SPT blows for each 75mm increment (35) Undisturbed sample blow count
 SPT N N = SPT N value (blows after seating)
 N* 120 = Total blows/penetration including seating
 <425 Sample % passing 425 micron sieve

DEPTH All depths, level and thicknesses in metres

Geosphere Environmental Ltd
 Brightwell Barns, Ipswich Road
 Brightwell, Suffolk, IP10 0BJ
 Telephone: 01603 298076

PROJECT NO
4159,GI
 SHEET
1 OF 1
 HOLE No.
WS02

CLIENT: Peterhouse UoC c/o Bidwells PROJECT: Land off Bell Road, Bottisham GROUND LEVEL m HOLE No. WS04
 LOGGED BY: AT CHECKED BY: GF DATE: 07/11/2019 EXCAVATION METHOD: Window Sampler Grid Reference: SHEET 1 OF 1
 TEMPLATE REF: GEL AGS BH BETA DATES 10/10/2019 - 10/10/2019 PROJECT NO. 4159,GI

Date/Time and Depth	Depth of Casing	Depth of Water	Piez.	Description of Strata	Strata		Graphical Representation				Sampling/In-Situ Testing				Laboratory Testing						Additional Tests and Notes	
					Leg	Reduced Level	Depth	SPT 'N' Value				Depths	Type	No.	Blows	SPT N	<425 %	WC %	PL %	LL %		ρ Mg/m ³
				Soft brown slightly sandy slightly gravelly slightly silty ORGANIC CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular and subrounded chert (TOPSOIL)		0.00					0											
				Light brown and cream mottled slightly silty slightly gravelly CLAY. Gravel is fine to coarse angular chert.		0.35					0.20	J	1									
				Structureless CHALK recovered as light grey slightly sandy clayey marly SILT. Gravel is subrounded fine and medium chert and chalk. Sand is fine to coarse (WEST MELBURY CHALK FORMATION)		0.90					0.70	D	1									
						1.00					1.00	J	2	4 7 8 10 14 14	46							
						1.50					1.50	D	2									
						2.00					2.00	J	3	11 11 11 11 12 10	44							
						2.50					2.50	D	3									
						3.00					3.00	J	4	7 8 9 10 12 9	40							
						3.50					3.50	D	4									
						4.00					4.00	J	4	6 8 8 11 14 13	46							
				BOREHOLE TERMINATED AT 4.0m BGL.																		

GEL AGS BH BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19

*WATER Standing water level PIEZOMETER Upper seal Response zone Lower seal

D Small disturbed sample B Bulk disturbed sample U Undisturbed sample P Piston sample J Disturbed jar sample ES Environmental soil sample W Water Sample

S Standard penetration test C Cone penetration test K Permeability test

Blows SPT blows for each 75mm increment (35) Undisturbed sample blow count
 SPT N N = SPT N value (blows after seating)
 N*120 = Total blows/penetration including seating
 <425 Sample % passing 425 micron sieve

GEO Geosphere Environmental Ltd
 Brightwell Barns, Ipswich Road
 Brightwell, Suffolk, IP10 0BJ
 Telephone: 01603 298076

PROJECT NO
4159,GI
 SHEET
1 OF 1
 HOLE No.
WS04

DEPTH All depths, level and thicknesses in metres

CLIENT: Peterhouse UoC c/o Bidwells PROJECT: Land off Bell Road, Bottisham GROUND LEVEL m HOLE No. WS05
 LOGGED BY: AT FIELDWORK BY: GEL CHECKED BY: GF DATE: 07/11/2019 EXCAVATION METHOD: Window Sampler Grid Reference: SHEET 1 OF 1
 TEMPLATE REF: GEL AGS BH BETA DATES 10/10/2019 - 10/10/2019 PROJECT NO. 4159,GI

Date/Time and Depth	Depth of Casing	Depth of Water	Piez.	Description of Strata	Strata		Graphical Representation				Sampling/In-Situ Testing				Laboratory Testing						Additional Tests and Notes
					Leg	Reduced Level	Depth	SPT 'N' Value				Depths	Type	No.	Blows	SPT N	<425 %	WC %	PL %	LL %	
				Soft brown slightly sandy slightly gravelly slightly silty ORGANIC CLAY. Gravel is fine to coarse subangular and subrounded chert. Sand is fine to coarse. (TOPSOIL)		0.00					0										
				Structureless CHALK composed of cream occasionally stained orange and yellow slightly sandy slightly gravelly SILT. Gravel is subrounded extremely weak low density light brown chalk. Sand is fine to coarse (Grade Dm) (WEST MELBURY CHALK FORMATION)		0.40					0.20	J	1								
											0.50	J	2								
				1.50 - 2.00 Very gravelly							1.00	D	1	4 6 6 7 9 12	34						
											2.00	D J	2 3	7 9 11 9 12 12	44						
											3.00			9 7 7 8 10 8	33						
											3.50	D	3								
				BOREHOLE TERMINATED AT 4.0m BGL.		4.00					4.00	J	4	8 8 9 8 9 10	36						

GEL AGS BH BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19

*WATER Standing water level PIEZOMETER Upper seal Response zone Lower seal

SAMPLE AND TEST KEY
 D Small disturbed sample
 B Bulk disturbed sample
 U Undisturbed sample
 P Piston sample
 J Disturbed jar sample
 ES Environmental soil sample
 W Water Sample

S Standard penetration test
 C Cone penetration test
 K Permeability test

Blows SPT blows for each 75mm increment (35) Undisturbed sample blow count
 SPT N N = SPT N value (blows after seating)
 N*120 = Total blows/penetration including seating
 <425 Sample % passing 425 micron sieve

GEO Geosphere Environmental Ltd
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 Brightwell, Suffolk, IP10 0BJ
 Telephone: 01603 298076

PROJECT NO
4159,GI
 SHEET
1 OF 1
 HOLE No.
WS05

DEPTH All depths, level and thicknesses in metres

CLIENT: Peterhouse UoC c/o Bidwells PROJECT: Land off Bell Road, Bottisham GROUND LEVEL m HOLE No. WS06
 LOGGED BY: AT CHECKED BY: GF DATE: 07/11/2019 EXCAVATION METHOD: Window Sampler Grid Reference: SHEET 1 OF 1
 TEMPLATE REF: GEL AGS BH BETA DATES 10/10/2019 - 10/10/2019 PROJECT NO. 4159,GI

Date/Time and Depth	Depth of Casing	Depth of Water	Piez.	Description of Strata	Strata		Graphical Representation				Sampling/In-Situ Testing				Laboratory Testing						Additional Tests and Notes	
					Leg	Reduced Level	Depth	SPT 'N' Value				Depths	Type	No.	Blows	SPT N	<425 %	WC %	PL %	LL %		ρ Mg/m ³
				MADE GROUND (Brown slightly silty sandy CLAY. Sand is fine to coarse).		0.00																
				MADE GROUND (Orange brown and brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is fine to coarse angular to subrounded chert, sandstone, brick and clinker).		0.10																
				MADE GROUND (Firm brown slightly gravelly slightly sandy CLAY. Gravel is fine to coarse subangular to subrounded flint and rare brick).		0.40																
				Friable brown slightly gravelly slightly sandy silty calcareous CLAY with occasional shell fragments. Gravel is angular to subangular chert. Sand is fine to coarse		0.70																
				Firm dark grey brown slightly gravelly slightly sandy silty calcareous CLAY with frequent shell fragments. Gravel is fine angular chert.		1.25																
				1.50 Becoming Grade Dc.		1.40																
				Structureless CHALK composed of cream occasionally stained yellow brown slightly sandy slightly gravelly SILT. Gravel is subrounded extremely weak low density light brown chalk. Sand is fine to coarse (Grade Dm) (WEST MELBURY CHALK FORMATION)		1.55																
						2.00																
						3.00																
						4.00																
				BOREHOLE TERMINATED AT 4.0m BGL.		4.00																

GEL AGS BH BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19

*WATER Standing water level	PIEZOMETER	Upper seal	Response zone	Lower seal	SAMPLE AND TEST KEY	D Small disturbed sample	B Bulk disturbed sample	U Undisturbed sample	P Piston sample	J Disturbed jar sample	ES Environmental soil sample	W Water Sample	S Standard penetration test	C Cone penetration test	K Permeability test	Blows SPT blows for each 75mm increment (35) Undisturbed sample blow count	SPT N N = SPT N value (blows after seating)	N*120 = Total blows/penetration including seating	<425 Sample % passing 425 micron sieve	Geosphere Environmental Ltd Brightwell Barns, Ipswich Road Brightwell, Suffolk, IP10 0BJ Telephone: 01603 298076	PROJECT NO 4159,GI SHEET 1 OF 1 HOLE No. WS06
Water strikes																					

DEPTH All depths, level and thicknesses in metres

CLIENT: Peterhouse UoC c/o Bidwells PROJECT: Land off Bell Road, Bottisham GROUND LEVEL m HOLE No. WS07
 LOGGED BY: AT CHECKED BY: GF DATE: 07/11/2019 EXCAVATION METHOD: Window Sampler Grid Reference: SHEET 1 OF 1
 TEMPLATE REF: GEL AGS BH BETA Uncased to 4.0 m DATES 11/10/2019 - 11/10/2019 PROJECT NO. 4159,GI

Date/Time and Depth	Depth of Casing	Depth of Water	Piez.	Description of Strata	Strata		Graphical Representation				Sampling/In-Situ Testing				Laboratory Testing						Additional Tests and Notes
					Leg	Reduced Level	Depth	SPT 'N' Value				Depths	Type	No.	Blows	SPT N	<425 %	WC %	PL %	LL %	
				Soft brown slightly sandy slightly silty ORGANIC CLAY. Sand is fine to coarse. Gravel is fine to coarse subrounded chert. (TOPSOIL)		0.00					0										
				Structureless CHALK recovered as cream mottled yellow slightly sandy gravelly SILT. Gravel is subrounded extremely weak low density light brown chalk. Sand is fine to coarse (Grade Dm) (WEST MELBURY CHALK FORMATION)		0.30					0.20	J	1								
											0.40	J	2								
											0.60	D	1								
											1.00	1	J	3	44 45 66	21					
											2.00	2	D J	2 4	88 86 77	28					
											3.00	3	D	3	56 76 77	27					
											4.00	4			76 65 1010	31					
				BOREHOLE TERMINATED AT 4.0m BGL.																	

GEL AGS BH BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19

*WATER Standing water level PIEZOMETER Upper seal Response zone Lower seal

D Small disturbed sample B Bulk disturbed sample U Undisturbed sample P Piston sample J Disturbed jar sample ES Environmental soil sample W Water Sample

S Standard penetration test C Cone penetration test K Permeability test

Blows SPT blows for each 75mm increment (35) Undisturbed sample blow count
 SPT N N = SPT N value (blows after seating)
 N*120 = Total blows/penetration including seating
 <425 Sample % passing 425 micron sieve

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PROJECT NO
4159,GI
 SHEET
1 OF 1
 HOLE No.
WS07

DEPTH All depths, level and thicknesses in metres

CLIENT: Peterhouse UoC c/o Bidwells PROJECT: Land off Bell Road, Bottisham GROUND LEVEL m HOLE No. WS09
 LOGGED BY: AT FIELDWORK BY: GEL CHECKED BY: GF DATE: 07/11/2019 EXCAVATION METHOD: Window Sampler Grid Reference: SHEET 1 OF 1
 TEMPLATE REF: GEL AGS BH BETA Uncased to 4.0 m DATES 11/10/2019 - 11/10/2019 PROJECT NO. 4159,GI

Date/Time and Depth	Depth of Casing	Depth of Water	Piez.	Description of Strata	Leg	Reduced Level	Depth	Graphical Representation				Sampling/In-Situ Testing				Laboratory Testing						Additional Tests and Notes
								SPT 'N' Value				Depths	Type	No.	Blows	SPT N	<425 %	WC %	PL %	LL %	ρ Mg/m ³	
				Soft brown slightly gravelly slightly sandy slightly silty ORGANIC CLAY. Gravel is fine to coarse subangular to subrounded chert. Sand is fine to coarse. (TOPSOIL)			0.00					0										
				Soft friable yellow brown slightly gravelly slightly sandy slightly shelly CLAY. Sand is fine to coarse. Gravel is fine and medium subangular and subrounded flint and fine rounded coal			0.30					0.20	J	1								
				Structureless CHALK recovered as cream slightly sandy gravelly SILT. Gravel is subrounded extremely weak low density light brown chalk. Sand is fine to coarse (Grade Dm) (WEST MELBURY CHALK FORMATION)			0.60					0.50	J	2								
								1.00					0.60	D	1							
												1.00			5	7	39					
															8	9						
															11	11						
												1.60	D	2								
												2.00			5	6	29					
															7	7						
															8	7						
												3.00			7	6	28					
															6	7						
															8	7						
												4.00			9	7	34					
															7	7						
															9	11						

*WATER Standing water level PIEZOMETER
 Water strikes

Upper seal
 Response zone
 Lower seal

SAMPLE AND TEST KEY
 D Small disturbed sample
 B Bulk disturbed sample
 U Undisturbed sample
 P Piston sample
 J Disturbed jar sample
 ES Environmental soil sample
 W Water Sample

S Standard penetration test
 C Cone penetration test
 K Permeability test

Blows SPT N
 SPT N = SPT N value (blows after seating)
 N * 120 = Total blows/penetration including seating
 <425 Sample % passing 425 micron sieve

SPT blows for each 75mm increment (35) Undisturbed sample blow count

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PROJECT NO 4159,GI
 SHEET 1 OF 1
 HOLE No. WS09

DEPTH All depths, level and thicknesses in metres

GEL AGS BH BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19

CLIENT: Peterhouse UoC c/o Bidwells PROJECT: Land off Bell Road, Bottisham GROUND LEVEL m HOLE No. WS10
 LOGGED BY: AT FIELDWORK BY: GEL CHECKED BY: GF DATE: 07/11/2019 EXCAVATION METHOD: Window Sampler Grid Reference: SHEET 1 OF 1
 TEMPLATE REF: GEL AGS BH BETA DATES 11/10/2019 - 11/10/2019 PROJECT NO. 4159,GI

Date/Time and Depth	Depth of Casing	Depth* of Water	Piez.	Description of Strata	Strata		Graphical Representation				Sampling/In-Situ Testing				Laboratory Testing						Additional Tests and Notes
					Leg	Reduced Level	Depth	SPT 'N' Value				Depths	Type	No.	Blows	SPT N	<425 %	WC %	PL %	LL %	
				Soft brown slightly gravelly slightly sandy slightly silty ORGANIC CLAY. Gravel is fine to coarse subangular to subrounded chert. Sand is fine to coarse. (TOPSOIL)		0.00					0										
				Friable yellow brown slightly silty slightly gravelly slightly sandy calcareous CLAY. Gravel is fine to coarse subrounded chalk and rare chert. Sand is fine to coarse		0.40					0.30	J	1								
				Structureless CHALK recovered as cream mottled white slightly sandy gravelly SILT. Gravel is subrounded extremely weak low density light brown chalk. Sand is fine to coarse (Grade Dm) (WEST MELBURY CHALK FORMATION)		0.70					0.50	D	1								
							0.60					0.60	J	2							
				2.70 Becoming Grade Dc.							1			57	78	99	33				
												1.50	D	2							
				2.70 Becoming Grade Dc.							2			611	97	87	31				
												3			32	45	65	20			
				BOREHOLE TERMINATED AT 4.0m BGL.		4.00					3.90	D	3	75	65	56	22				

GEL AGS BH BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19

*WATER Standing water level PIEZOMETER Upper seal Response zone Lower seal

SAMPLE AND TEST KEY
 D Small disturbed sample
 B Bulk disturbed sample
 U Undisturbed sample
 P Piston sample
 J Disturbed jar sample
 ES Environmental soil sample
 W Water Sample

S Standard penetration test
 C Cone penetration test
 K Permeability test

Blows SPT blows for each 75mm increment (35) Undisturbed sample blow count
 SPT N N = SPT N value (blows after seating)
 N*120 = Total blows/penetration including seating
 <425 Sample % passing 425 micron sieve

DEPTH All depths, level and thicknesses in metres

Geosphere Environmental Ltd
 Brightwell Barns, Ipswich Road
 Brightwell, Suffolk, IP10 0BJ
 Telephone: 01603 298076

PROJECT NO
4159,GI
 SHEET
1 OF 1
 HOLE No.
WS10

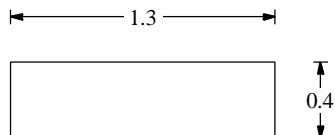


TRIAL PIT LOG

Project Land off Bell Road, Bottisham		Client Peterhouse UoC c/o Bidwells		TRIAL PIT No TP01
Job No 4159,GI	Date 08-10-19	Ground Level (m)	Coordinates ()	
Fieldwork By GEL		Logged By PC		Sheet 1 of 1

Depth	DESCRIPTION	Legend	Depth	No	Remarks/Tests
0.00-0.25	Soft brown slightly gravelly sandy ORGANIC CLAY. Gravel is fine and medium chert. Sand is fine to coarse (TOPSOIL)				
0.25-1.90	Structureless CHALK recovered as light grey occasionally brown stained gravelly fine to coarse SAND with moderate cobble content of chalk. Gravel is subrounded fine and medium chert and chalk. (WEST MELBURY CHALK FORMATION)				
HOLE COMPLETED AT 1.90m BGL. NO GROUNDWATER ENCOUNTERED					

GEL-AGS-TP-BETA-4159-GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS.3_1.GDT 8/11/19



Shoring/Support: None
 Stability: Stable

All dimensions in metres Scale 1:16.6666666666667	Method Trial Pit/trench	Plant Used MECHANICAL EXCAVATOR	Checked By GF
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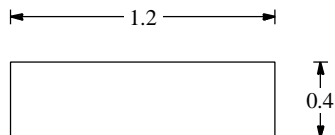


TRIAL PIT LOG

Project Land off Bell Road, Bottisham		Client Peterhouse UoC c/o Bidwells		TRIAL PIT No TP02
Job No 4159,GI	Date 08-10-19	Ground Level (m)	Coordinates ()	
Fieldwork By GEL		Logged By PC		Sheet 1 of 1

Depth	DESCRIPTION	Legend	Depth	No	Remarks/Tests
0.00-0.35	Soft brown slightly gravelly sandy ORGANIC CLAY. Gravel is fine and medium chert. Sand is fine to coarse (TOPSOIL)				
0.35-1.60	Structureless CHALK recovered as light grey occasionally brown stained gravelly SAND with low cobble content of chalk. Gravel is subrounded fine and medium chert and chalk. (WEST MELBURY CHALK FORMATION)				
HOLE COMPLETED AT 1.60m BGL. NO GROUNDWATER ENCOUNTERED					

GEL AGS TP BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19



Shoring/Support: None
 Stability: Stable

All dimensions in metres Scale 1:16.6666666666667	Method Trial Pit/trench	Plant Used MECHANICAL EXCAVATOR	Checked By GF
--	-------------------------	---------------------------------	---------------

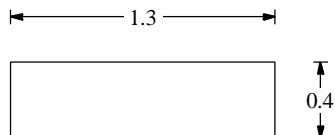


TRIAL PIT LOG

Project Land off Bell Road, Bottisham		Client Peterhouse UoC c/o Bidwells		TRIAL PIT No TPO3
Job No 4159,GI	Date 08-10-19	Ground Level (m)	Coordinates ()	
Fieldwork By GEL		Logged By PC		Sheet 1 of 1

Depth	DESCRIPTION	Legend	Depth	No	Remarks/Tests
0.00-0.30	Soft brown slightly gravelly sandy ORGANIC CLAY. Gravel is fine and medium chert. Sand is fine to coarse (TOPSOIL)				
0.30-1.75	Structureless CHALK recovered as light grey occasional brown stained gravelly SAND with low cobble content of chalk. Gravel is subrounded fine and medium chert and chalk. (WEST MELBURY CHALK FORMATION)				
HOLE COMPLETED AT 1.75m BGL. NO GROUNDWATER ENCOUNTERED					

GEL AGS TP BETA 4159,GI, BELL ROAD BOTTISHAM, 16-10-2019.GPJ GINT STD AGS 3_1.GDT 8/11/19



Shoring/Support: None
 Stability: Stable

All dimensions in metres Scale 1:16.6666666666667	Method Trial Pit/trench	Plant Used MECHANICAL EXCAVATOR	Checked By GF
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Appendix 8 – Infiltration Test Results

Appendix 9 – Gas and Groundwater Monitoring Data

GROUND GAS AND GROUNDWATER MONITORING DATA



Project Number: 4159,GI

Project Name: Land off Bell Road, Bottisham, Cambridgeshire

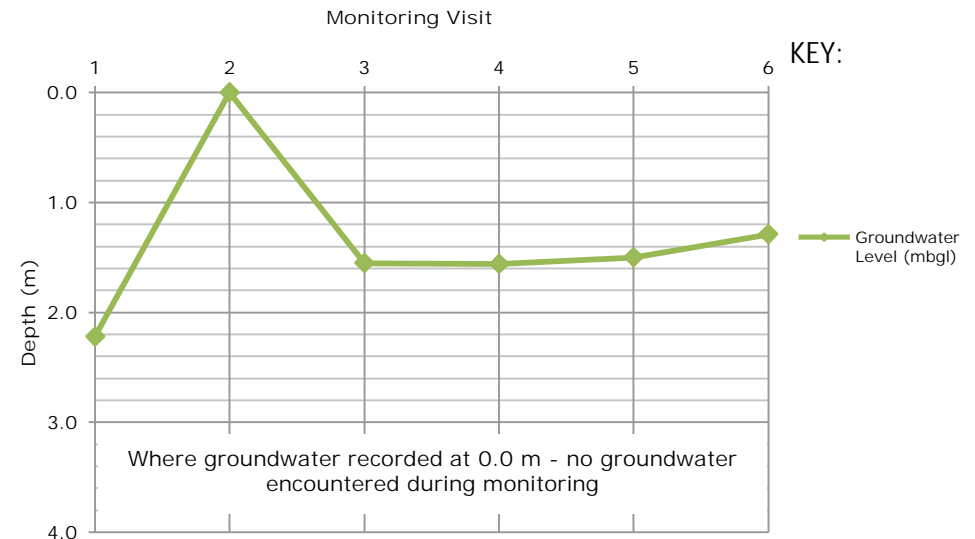
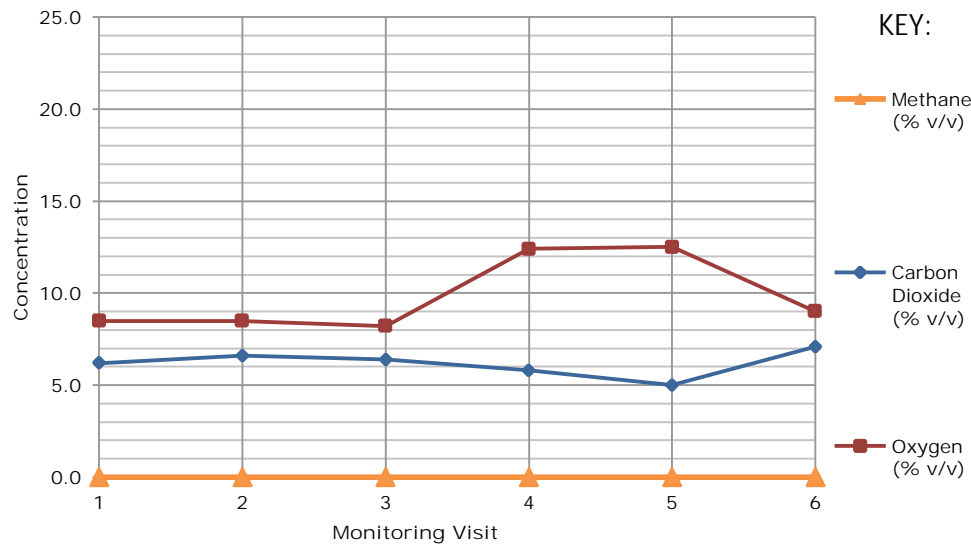
Date: 09/01/2020

Exploratory Hole Location		WS01											Date of Installation		10/10/2019
Return Visit #	Monitoring Date	Atmospheric Pressure (mb)	Methane Content		Carbon Dioxide (% v/v)	Oxygen (% v/v)	Flow Rate (l/hr)	H2S (ppm)	CO (ppm)	VOC (ppm)	Water Level (mbgl)	Base of Well (mbgl)	Weather Conditions	Comments / Pressure Rise or Fall	
			(% v/v)	(% LEL)											
1st visit	14/11/2019	997	<0.1	<2	6.2	8.5	0.0	0	0	0	2.22	2.40	Cold, sunny, wet, calm	Falling pressure during visit	
2nd visit	25/11/2019	1003	<0.1	<2	6.6	8.5	0.0	0	0	0	Dry	2.40	Cool, cloudy, damp, breezy		
3rd visit	04/12/2019	1020	<0.1	<2	6.4	8.2	0.0	0	0	0	1.55	2.40	Cold, overcast, wet, calm		
4th visit	11/12/2019	1001	<0.1	<2	5.8	12.4	0.0	0	0	0	1.56	2.40	Cool, sunny, damp, calm		
5th visit	16/12/2019	1000	<0.1	<2	5.0	12.5	-0.2	0	0	0	1.50	2.40	Cool, overcast, damp, calm		
6th visit	08/01/2020	997	<0.1	<2	7.1	9.0	0.0	0	0	0	1.29	2.40	Cool, overcast, dry, calm		

Instruments Used: GFM436 gas analyser / PID MultiRAE lite

NOTE: n/a Not applicable
nm Not measured

REMARKS:



GROUND GAS AND GROUNDWATER MONITORING DATA



Project Number: 4159,GI

Project Name: Land off Bell Road, Bottisham, Cambridgeshire

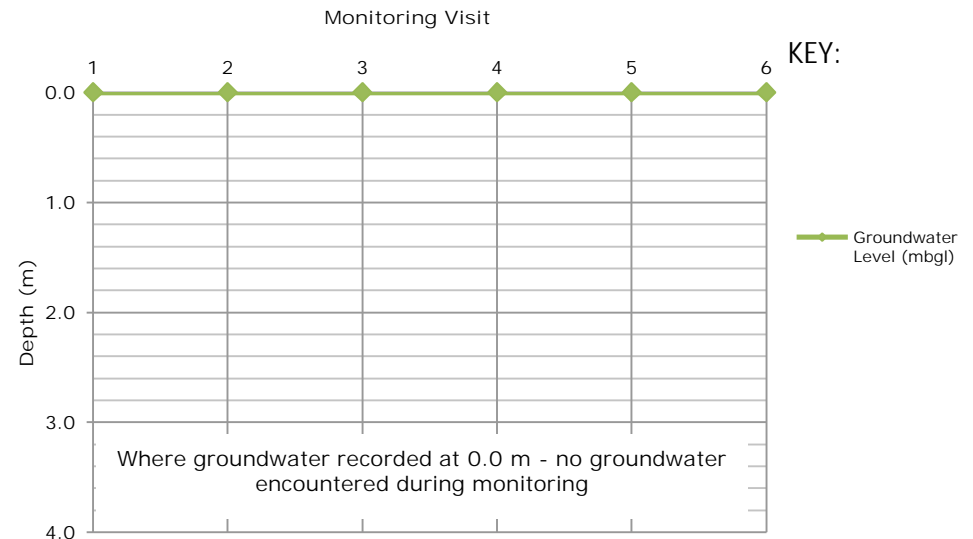
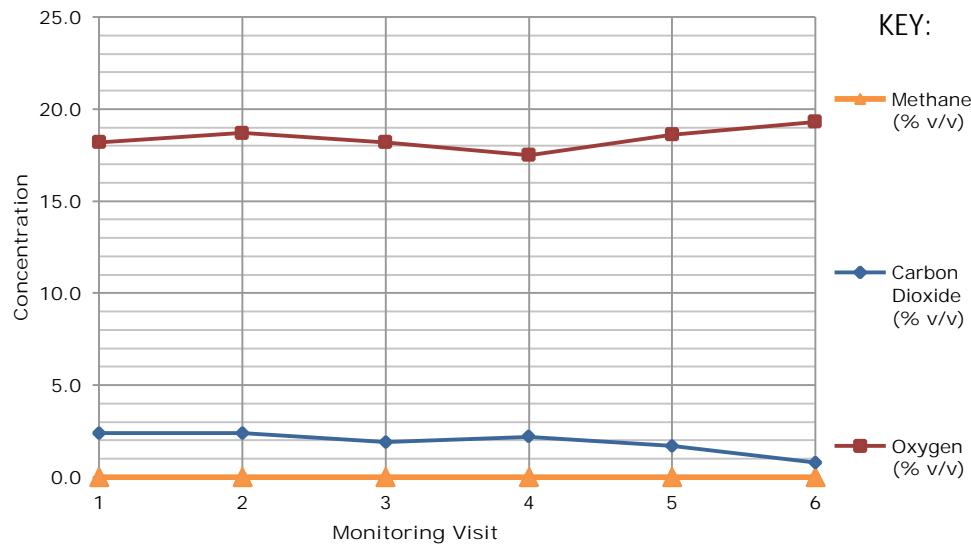
Date: 09/01/2020

Exploratory Hole Location		WS10											Date of Installation		11/10/2019
Return Visit #	Monitoring Date	Atmospheric Pressure (mb)	Methane Content		Carbon Dioxide (% v/v)	Oxygen (% v/v)	Flow Rate (l/hr)	H2S (ppm)	CO (ppm)	VOC (ppm)	Water Level (mbgl)	Base of Well (mbgl)	Weather Conditions	Comments / Pressure Rise or Fall	
			(% v/v)	(% LEL)											
1st visit	14/11/2019	999	<0.1	<2	2.4	18.2	0.0	0	0	0	Dry	1.85	Cold, sunny, wet, calm	Falling pressure during visit	
2nd visit	25/11/2019	1003	<0.1	<2	2.4	18.7	0.0	0	0	0	Dry	1.85	Cool, cloudy, damp, breezy		
3rd visit	04/12/2019	1020	<0.1	<2	1.9	18.2	0.0	0	0	0	Dry	1.85	Cold, overcast, wet, calm		
4th visit	11/12/2019	1001	<0.1	<2	2.2	17.5	0.0	0	0	0	Dry	1.85	Cool, sunny, damp, calm		
5th visit	16/12/2019	1000	<0.1	<2	1.7	18.6	0.1	0	0	0	Dry	1.85	Cool, overcast, damp, calm		
6th visit	08/01/2020	1023	<0.1	<2	0.8	19.3	0.1	0	0	0	Dry	1.85	Cool, overcast, dry, calm		

Instruments Used: GFM436 gas analyser / PID MultiRAE lite

NOTE: n/a Not applicable
nm Not measured

REMARKS:



Appendix 10 – Environmental Laboratory Test Results



Ashleigh Thorneycroft
Geosphere Environmental Ltd
Brightwell Barns
Ipswich Road
Brightwell
Suffolk
IP10 0BJ

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 19-14769

Site Reference: Land off Bell Road, Bottisham

Project / Job Ref: 4159,GI

Order No: 4159,GI

Sample Receipt Date: 16/10/2019

Sample Scheduled Date: 16/10/2019

Report Issue Number: 1

Reporting Date: 25/10/2019

Authorised by:



Dave Ashworth
Technical Manager

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DETS Ltd
 Unit 1, Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Maidstone
 Kent ME17 2JN
 Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 19-14769	Date Sampled	10/10/19	10/10/19	10/10/19	10/10/19	10/10/19
Geosphere Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land off Bell Road, Bottisham	TP / BH No	WS01	WS01	WS01	WS01	WS04
Project / Job Ref: 4159,G1	Additional Refs	J1	J2	J3	J4	J1
Order No: 4159,G1	Depth (m)	0.20	0.70	2.00	3.00	0.20
Reporting Date: 25/10/2019	DETS Sample No	441799	441800	441801	441802	441803

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected			Not Detected
pH	pH Units	N/a	MCERTS	7.9	8.4	8.5	8.6
Total Cyanide	mg/kg	< 2	NONE	< 2			
Total Sulphate as SO ₄	mg/kg	< 200	NONE	775			
Total Sulphate as SO ₄	%	< 0.02	NONE	0.08			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	11	17	15	16
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.01	0.02	0.02	0.02
Organic Matter	%	< 0.1	MCERTS	3			
Arsenic (As)	mg/kg	< 2	MCERTS	8			8
Barium (Ba)	mg/kg	< 5	NONE	67			42
Beryllium (Be)	mg/kg	< 0.5	NONE	0.7			0.5
W/S Boron	mg/kg	< 1	NONE	< 1			< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.3			0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	15			13
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			< 2
Copper (Cu)	mg/kg	< 4	MCERTS	23			13
Lead (Pb)	mg/kg	< 3	MCERTS	41			16
Mercury (Hg)	mg/kg	< 1	NONE	< 1			< 1
Molybdenum (Mo)	mg/kg	< 1	NONE	< 1			< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	16			14
Selenium (Se)	mg/kg	< 3	NONE	< 3			< 3
Vanadium (V)	mg/kg	< 2	NONE	22			21
Zinc (Zn)	mg/kg	< 3	MCERTS	59			35

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

Subcontracted analysis (S)

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



DETS Ltd
 Unit 1, Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Maidstone
 Kent ME17 2JN
 Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 19-14769	Date Sampled	10/10/19	10/10/19	10/10/19	10/10/19	10/10/19
Geosphere Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land off Bell Road, Bottisham	TP / BH No	WS04	WS04	WS04	WS06	WS06
Project / Job Ref: 4159,GI	Additional Refs	J2	J3	J4	J1	J2
Order No: 4159,GI	Depth (m)	1.00	2.00	3.00	0.20	0.60
Reporting Date: 25/10/2019	DETS Sample No	441804	441805	441806	441807	441808

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025					Not Detected
pH	pH Units	N/a	MCERTS	8.5	8.6	8.5	8.3	8.3
Total Cyanide	mg/kg	< 2	NONE				< 2	
Total Sulphate as SO ₄	mg/kg	< 200	NONE				492	
Total Sulphate as SO ₄	%	< 0.02	NONE				0.05	
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	12	14	< 10	28
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.01	0.01	< 0.01	0.03
Organic Matter	%	< 0.1	MCERTS				1.1	
Arsenic (As)	mg/kg	< 2	MCERTS				11	6
Barium (Ba)	mg/kg	< 5	NONE				26	49
Beryllium (Be)	mg/kg	< 0.5	NONE				< 0.5	0.6
W/S Boron	mg/kg	< 1	NONE				< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS				0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS				14	16
Chromium (hexavalent)	mg/kg	< 2	NONE				< 2	
Copper (Cu)	mg/kg	< 4	MCERTS				8	12
Lead (Pb)	mg/kg	< 3	MCERTS				14	9
Mercury (Hg)	mg/kg	< 1	NONE				< 1	< 1
Molybdenum (Mo)	mg/kg	< 1	NONE				< 1	
Nickel (Ni)	mg/kg	< 3	MCERTS				11	16
Selenium (Se)	mg/kg	< 3	NONE				< 3	< 3
Vanadium (V)	mg/kg	< 2	NONE				34	24
Zinc (Zn)	mg/kg	< 3	MCERTS				35	35

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C
 Subcontracted analysis (S)



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Soil Analysis Certificate						
DETS Report No: 19-14769	Date Sampled	10/10/19	10/10/19	11/10/19	11/10/19	11/10/19
Geosphere Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land off Bell Road, Bottisham	TP / BH No	WS06	WS07	WS07	WS07	WS07
Project / Job Ref: 4159,GI	Additional Refs	J3	J1	J2	J3	J4
Order No: 4159,GI	Depth (m)	1.40	0.20	0.40	1.00	2.00
Reporting Date: 25/10/2019	DETS Sample No	441809	441810	441811	441812	441813

Determinand	Unit	RL	Accreditation			(n)	(n)
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected		
pH	pH Units	N/a	MCERTS	7.9	8.1	8.5	8.6
Total Cyanide	mg/kg	< 2	NONE		< 2	< 2	
Total Sulphate as SO ₄	mg/kg	< 200	NONE		807	783	
Total Sulphate as SO ₄	%	< 0.02	NONE		0.08	0.08	
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	46	11	26	18
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.05	0.01	0.03	0.02
Organic Matter	%	< 0.1	MCERTS		2.6	0.7	
Arsenic (As)	mg/kg	< 2	MCERTS		8	2	
Barium (Ba)	mg/kg	< 5	NONE		51	17	
Beryllium (Be)	mg/kg	< 0.5	NONE		0.5	< 0.5	
W/S Boron	mg/kg	< 1	NONE		< 1	< 1	
Cadmium (Cd)	mg/kg	< 0.2	MCERTS		0.3	< 0.2	
Chromium (Cr)	mg/kg	< 2	MCERTS		15	7	
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2	< 2	
Copper (Cu)	mg/kg	< 4	MCERTS		15	14	
Lead (Pb)	mg/kg	< 3	MCERTS		18	4	
Mercury (Hg)	mg/kg	< 1	NONE		< 1	< 1	
Molybdenum (Mo)	mg/kg	< 1	NONE		< 1	< 1	
Nickel (Ni)	mg/kg	< 3	MCERTS		16	10	
Selenium (Se)	mg/kg	< 3	NONE		< 3	< 3	
Vanadium (V)	mg/kg	< 2	NONE		22	7	
Zinc (Zn)	mg/kg	< 3	MCERTS		44	12	

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C
 Subcontracted analysis (S)



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Soil Analysis Certificate					
DETS Report No: 19-14769	Date Sampled	11/10/19	11/10/19	11/10/19	
Geosphere Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	
Site Reference: Land off Bell Road, Bottisham	TP / BH No	WS09	WS09	WS10	
Project / Job Ref: 4159,G1	Additional Refs	J1	J2	J1	
Order No: 4159,G1	Depth (m)	0.20	0.50	0.30	
Reporting Date: 25/10/2019	DETS Sample No	441814	441815	441816	

Determinand	Unit	RL	Accreditation			
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected		Not Detected
pH	pH Units	N/a	MCERTS	8.2		8.1
Total Cyanide	mg/kg	< 2	NONE	< 2		< 2
Total Sulphate as SO ₄	mg/kg	< 200	NONE	804		816
Total Sulphate as SO ₄	%	< 0.02	NONE	0.08		0.08
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	14		14
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.01		0.01
Organic Matter	%	< 0.1	MCERTS	2.7		2.1
Arsenic (As)	mg/kg	< 2	MCERTS	8	7	8
Barium (Ba)	mg/kg	< 5	NONE	55	70	48
Beryllium (Be)	mg/kg	< 0.5	NONE	0.6	0.6	0.5
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.3	< 0.2	0.3
Chromium (Cr)	mg/kg	< 2	MCERTS	17	17	13
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2
Copper (Cu)	mg/kg	< 4	MCERTS	14	11	14
Lead (Pb)	mg/kg	< 3	MCERTS	19	7	27
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1
Molybdenum (Mo)	mg/kg	< 1	NONE	< 1		< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	16	18	15
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3
Vanadium (V)	mg/kg	< 2	NONE	25	26	20
Zinc (Zn)	mg/kg	< 3	MCERTS	39	34	34

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C
 Subcontracted analysis (S)



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 19-14769	Date Sampled	10/10/19	10/10/19	10/10/19	11/10/19	11/10/19
Geosphere Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land off Bell Road, Bottisham	TP / BH No	WS01	WS06	WS07	WS07	WS09
Project / Job Ref: 4159,G1	Additional Refs	J1	J1	J1	J2	J1
Order No: 4159,G1	Depth (m)	0.20	0.20	0.20	0.40	0.20
Reporting Date: 25/10/2019	DETS Sample No	441799	441807	441810	441811	441814

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.25	0.13	0.18	< 0.1	0.19
Pyrene	mg/kg	< 0.1	MCERTS	0.21	0.11	0.15	< 0.1	0.16
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.24	0.18	0.21	< 0.1	0.22
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.20	0.17	0.18	< 0.1	0.19
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.30	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 19-14769	Date Sampled	11/10/19				
Geosphere Environmental Ltd	Time Sampled	None Supplied				
Site Reference: Land off Bell Road, Bottisham	TP / BH No	WS10				
Project / Job Ref: 4159,G1	Additional Refs	J1				
Order No: 4159,G1	Depth (m)	0.30				
Reporting Date: 25/10/2019	DETS Sample No	441816				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	0.16			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	0.46			
Pyrene	mg/kg	< 0.1	MCERTS	0.38			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.45			
Chrysene	mg/kg	< 0.1	MCERTS	0.13			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.35			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.27			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.34			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.13			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	2.7			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



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Soil Analysis Certificate - Sample Descriptions

DETS Report No: 19-14769	
Geosphere Environmental Ltd	
Site Reference: Land off Bell Road, Bottisham	
Project / Job Ref: 4159,G1	
Order No: 4159,G1	
Reporting Date: 25/10/2019	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
441799	WS01	J1	0.20	15.9	Brown loamy sand
441800	WS01	J2	0.70	17.1	Beige sandy clay
441801	WS01	J3	2.00	15.1	Beige sandy clay
441802	WS01	J4	3.00	13.9	Beige sandy clay
441803	WS04	J1	0.20	14.3	Brown loamy sand with stones and vegetation
441804	WS04	J2	1.00	15.4	Beige sandy clay
441805	WS04	J3	2.00	14.2	Beige sandy clay
441806	WS04	J4	3.00	12.4	Beige sandy clay
441807	WS06	J1	0.20	12.2	Brown loamy sand with vegetation
441808	WS06	J2	0.60	12.4	Brown sandy clay
441809	WS06	J3	1.40	18.4	Brown sandy clay
441810	WS07	J1	0.20	15.4	Brown loamy sand with vegetation
441811	WS07	J2	0.40	17.2	Light grey sandy clay
441812	WS07	J3	1.00	16.6	White chalk
441813	WS07	J4	2.00	14.8	White chalk
441814	WS09	J1	0.20	14.8	Brown loamy sand
441815	WS09	J2	0.50	13.3	Brown sandy clay with stones
441816	WS10	J1	0.30	13.6	Brown loamy sand with vegetation

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{I/S}

Unsuitable Sample ^{U/S}



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Soil Analysis Certificate - Methodology & Miscellaneous Information	
DETS Report No:	19-14769
Geosphere Environmental Ltd	
Site Reference:	Land off Bell Road, Bottisham
Project / Job Ref:	4159,G1
Order No:	4159,G1
Reporting Date:	25/10/2019

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LOM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
 AR As Received

Appendix 11 – Geotechnical Laboratory Test Results



TEST REPORT
ISSUED BY SOIL PROPERTY TESTING LTD
DATE ISSUED: 31/10/2019



Contract	Land off Bell Road, Bottisham	
Serial No.	36013	
Client:	Geosphere Environmental Ltd Head Office Brightwell Barns Ipswich Road Brightwell Suffolk IP10 0BJ	Soil Property Testing Ltd 15, 16, 18 Halcyon Court, St Margaret's Way, Stukeley Meadows, Huntingdon, Cambridgeshire, PE29 6DG Tel: 01480 455579 Email: enquiries@soilpropertytesting.com Website: www.soilpropertytesting.com
Samples Submitted By:	Geosphere Environmental Ltd	Approved Signatories:
Samples Labelled:	Land off Bell Road, Bottisham	<input checked="" type="checkbox"/> J.C. Garner B.Eng (Hons) FGS Technical Director & Quality Manager <input type="checkbox"/> S.P. Townend FGS Chairman <input type="checkbox"/> W. Johnstone Materials Lab Manager <input type="checkbox"/> D. Sabnis Operations Manager
Date Received:	18/10/2019	Samples Tested Between: 18/10/2019 and 31/10/2019
Remarks: For the attention of Ashleigh Thorneycroft Your Reference No: 4159,G1		
Notes:		
1	All remaining samples or remnants from this contract will be disposed of after 21 days from today, unless we are notified to the contrary.	
2	(a) UKAS - United Kingdom Accreditation Service. (b) Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.	
3	Tests marked "NOT UKAS ACCREDITED" in this test report are not included in the UKAS Accreditation Schedule for this testing laboratory.	
4	This test report may not be reproduced other than in full except with the prior written approval of the issuing laboratory.	



TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD
DATE ISSUED: 31/10/2019



0998

Contract	Land off Bell Road, Bottisham
Serial No.	36013

SUMMARY OF WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT, PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole /Pit No.	Depth (m)	Type	Ref.	Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquidity Index	SAMPLE PREPARATION				Description	CLASS
									Method	Ret'd 0.425mm (%)	Corr'd W/C <0.425mm	Curing Time (hrs)		
WS02	0.50	D	1	19.5	30	18	12	0.13	Wet Sieved	11 (M)	21.9*	28	Friable light yellowish brown slightly gravelly slightly sandy silty calcareous CLAY with occasional pale yellow and white pockets, and recently active roots. Gravel is fine to medium chert.	CL
WS03	0.90	D	1	4.7	19	15	4	-2.59	Wet Sieved	16 (M)	5.5*	9	Brownish yellow gravelly slightly silty slightly clayey fine to medium SAND with occasional friable sandy clay lumps. Gravel is fine to medium chert and chalk.	ML
WS04	0.70	D	1	13.8	26	16	10	-0.22	Wet Sieved	22 (M)	17.6*	28	Very stiff friable light grey slightly gravelly slightly sandy clayey marly CHALK with rare recently active roots. Gravel is fine to medium chert and chalk.	CL
WS06	0.70	D	1	19.4	31	21	10	-0.16	Wet Sieved	6 (M)	20.7*	28	Friable brown slightly gravelly slightly sandy silty calcareous CLAY with occasional shell debris. Gravel is fine chert.	CL
WS06	1.30	D	2	25.8	34	21	13	0.37	Wet Sieved	6 (M)	27.5*	24	Firm dark greyish brown slightly gravelly slightly sandy silty calcareous CLAY with frequent shell debris. Gravel is fine chert.	CL
WS08	0.50	D	1	19.3	34	19	15	0.02	Wet Sieved	9 (M)	21.2*	27	Firm brown slightly gravelly slightly sandy silty chalky CLAY with occasional recently active roots. Gravel is fine to medium chert and chalk.	CL
WS10	0.50	D	1	20.5	32	22	10	-0.15	Wet Sieved	21 (M)	26.0*	27	Friable yellowish brown slightly gravelly slightly sandy silty calcareous CLAY with occasional recently active roots. Gravel is fine to coarse chalk, and rare chert.	CL

Method Of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2:1990:4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2:1990:3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter
 Comments: *Corrected water content assume material greater than 0.425mm is non-porous. See BS1377: Part 2: 1990 Clause 3 Note 1.

Table Notation: Ret'd 0.425mm: (A) = Assumed, (M) = Measured



TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD
DATE ISSUED: 31/10/2019

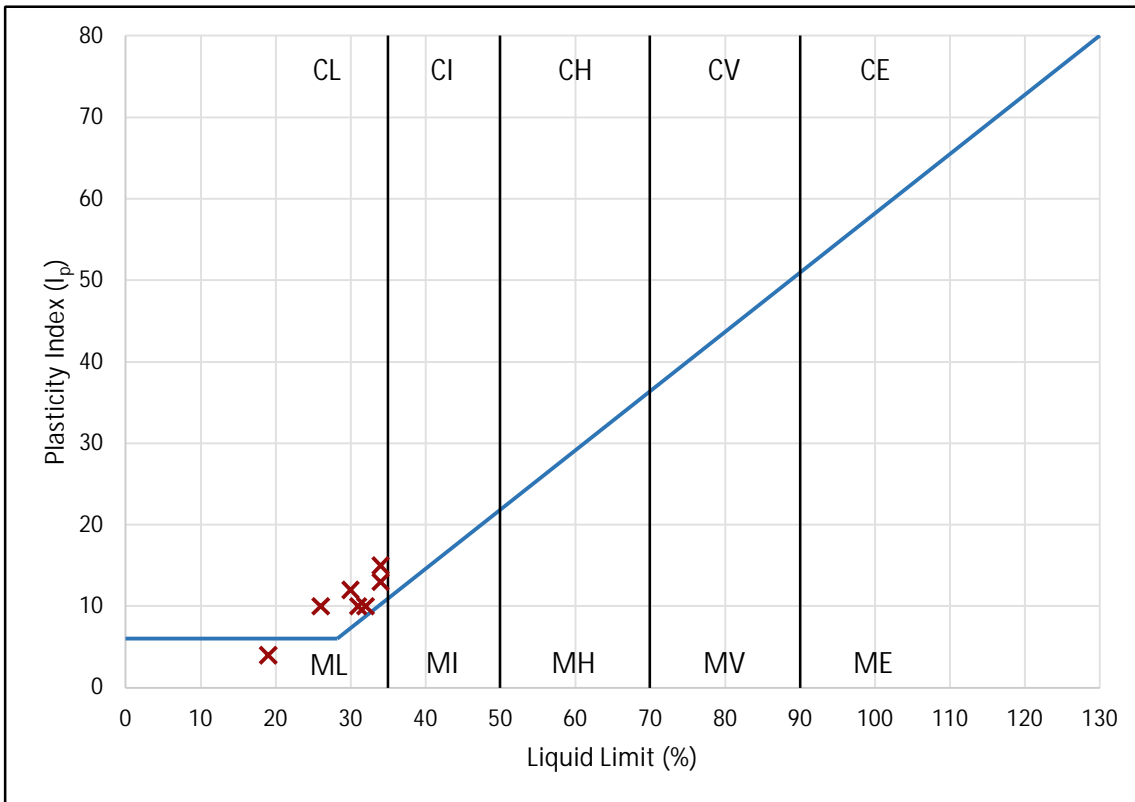


0998

Contract	Land off Bell Road, Bottisham
Serial No.	36013

PLOT OF PLASTICITY INDEX AGAINST LIQUID LIMIT USING CASAGRANDE CLASSIFICATION CHART

Plasticity				
Low	Medium	High	Very High	Extremely High



Plasticity Chart BS5930: 2015: Figure 8

High	NHBC Volume Change Potential
Medium	
Low	

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS1377: Part 2: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter
Comments:	Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index



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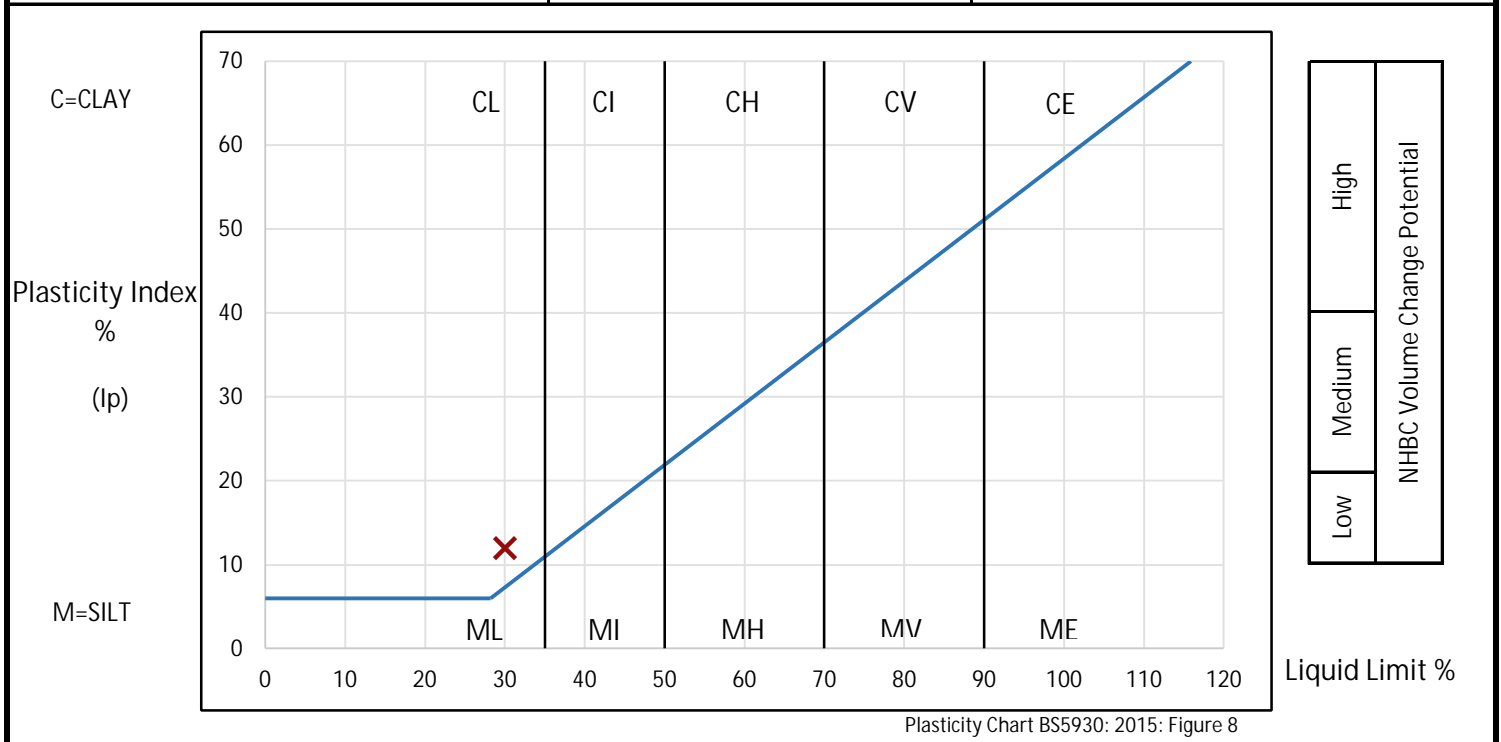


Contract	Land off Bell Road, Bottisham
Serial No.	36013

**DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND
DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX**

Borehole / Pit No.	Depth m	Sample		Water Content (W) %	Description	Remarks
		Type	Reference			
WS02	0.50	D	1	19.5	Friable light yellowish brown slightly gravelly slightly sandy silty calcareous CLAY with occasional pale yellow and white pockets, and recently active roots. Gravel is fine to medium chert.	

PREPARATION			Liquid Limit	30 %	
Method of preparation	Wet sieved over 0.425mm sieve		Plastic Limit	18 %	
Sample retained 0.425mm sieve	(Measured)	11 %	Plasticity Index	12 %	
Corrected water content for material passing 0.425mm		21.9 %	Liquidity Index	0.13	
Sample retained 2mm sieve	(Measured)	5 %	NHBC Modified (I'p)	11 %	
Curing time	28 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments: Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1
 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
 Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)



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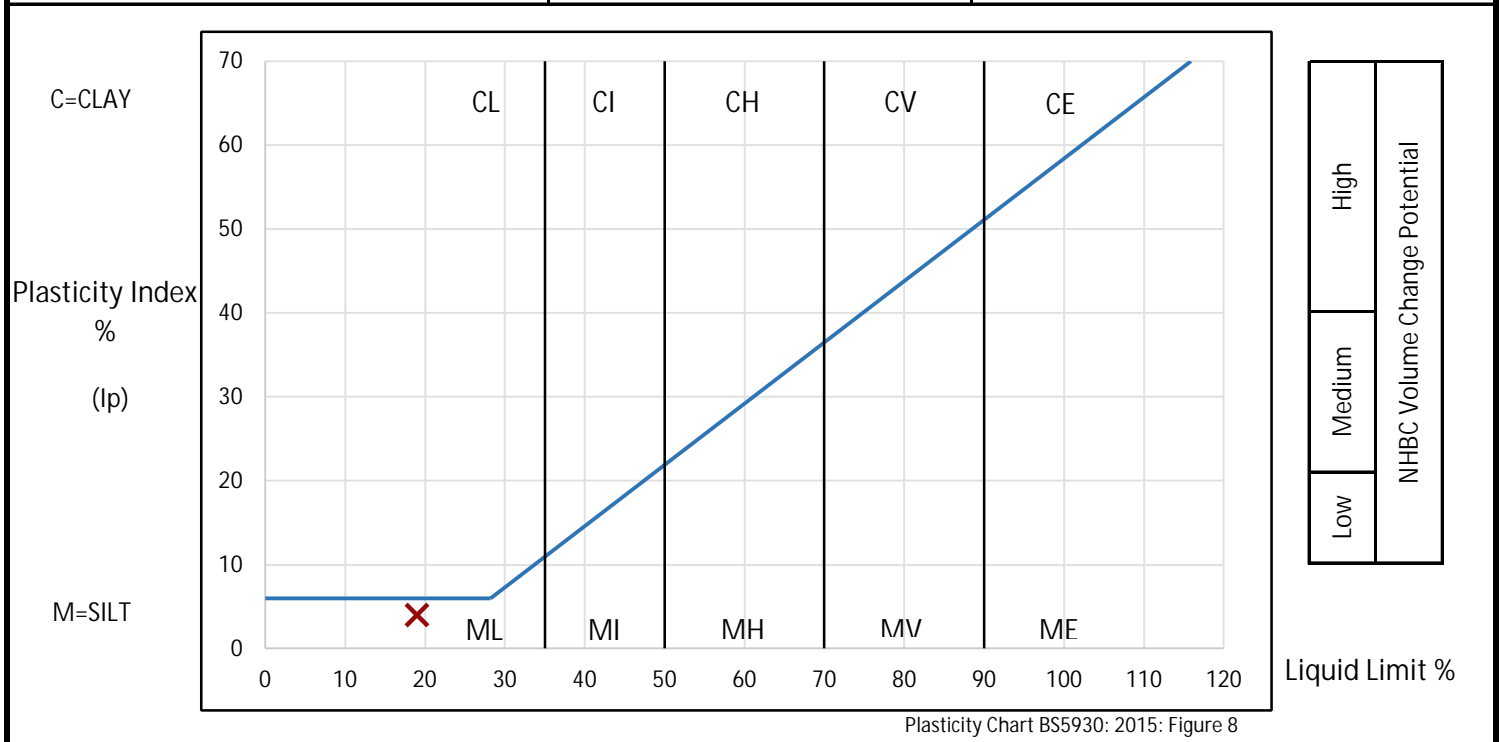


Contract	Land off Bell Road, Bottisham
Serial No.	36013

DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample		Water Content (W) %	Description	Remarks
		Type	Reference			
WS03	0.90	D	1	4.7	Brownish yellow gravelly slightly silty slightly clayey fine to medium SAND with occasional friable sandy clay lumps. Gravel is fine to medium chert and chalk.	

PREPARATION			Liquid Limit	19 %	
Method of preparation		Wet sieved over 0.425mm sieve	Plastic Limit	15 %	
Sample retained 0.425mm sieve	(Measured)	16 %	Plasticity Index	4 %	
Corrected water content for material passing 0.425mm			Liquidity Index	-2.59	
Sample retained 2mm sieve	(Measured)	9 %	NHBC Modified (I'p)	3 %	
Curing time	9 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments: Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1
 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
 Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)



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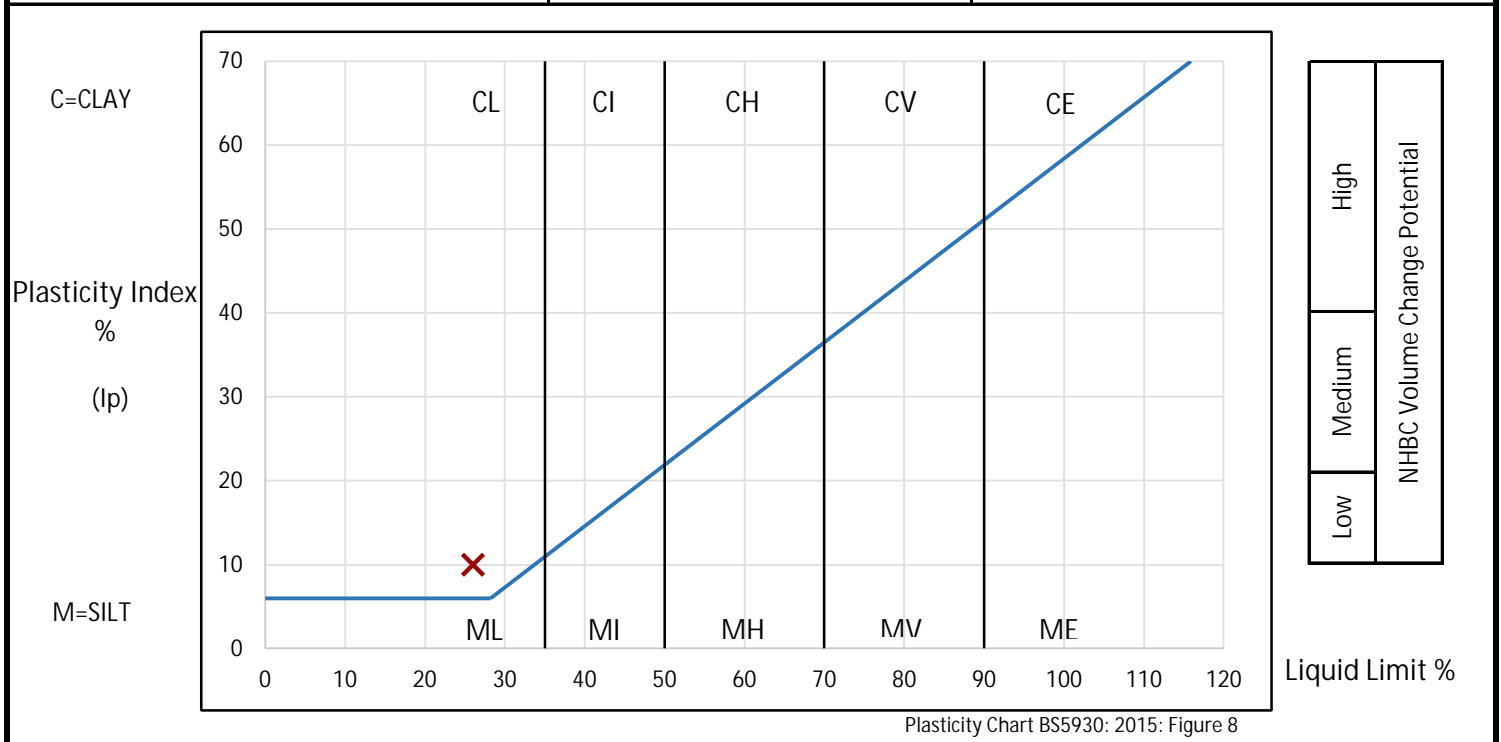


Contract	Land off Bell Road, Bottisham
Serial No.	36013

DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample		Water Content (W) %	Description	Remarks
		Type	Reference			
WS04	0.70	D	1	13.8	Very stiff friable light grey slightly gravelly slightly sandy clayey marly CHALK with rare recently active roots. Gravel is fine to medium chert and chalk.	

PREPARATION			Liquid Limit	26 %	
Method of preparation	Wet sieved over 0.425mm sieve		Plastic Limit	16 %	
Sample retained 0.425mm sieve	(Measured)	22 %	Plasticity Index	10 %	
Corrected water content for material passing 0.425mm		17.6 %	Liquidity Index	-0.22	
Sample retained 2mm sieve	(Measured)	17 %	NHBC Modified (I'p)	8 %	
Curing time	28 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments: Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1
 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
 Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)



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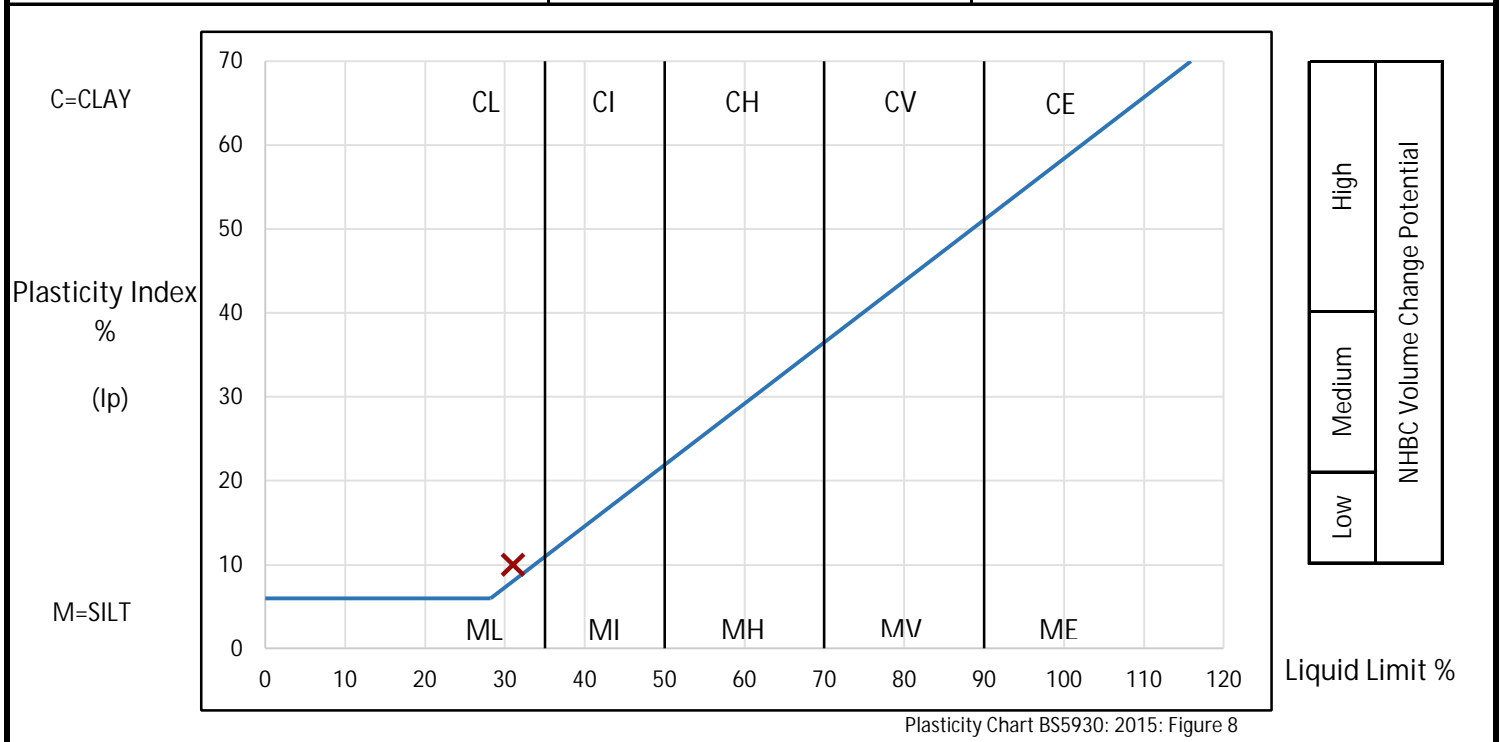


Contract	Land off Bell Road, Bottisham
Serial No.	36013

**DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND
DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX**

Borehole / Pit No.	Depth m	Sample		Water Content (W) %	Description	Remarks
		Type	Reference			
WS06	0.70	D	1	19.4	Friable brown slightly gravelly slightly silty calcareous CLAY with occasional shell debris. Gravel is fine chert.	

PREPARATION			Liquid Limit	31 %	
Method of preparation			Wet sieved over 0.425mm sieve	Plastic Limit	21 %
Sample retained 0.425mm sieve	(Measured)	6 %	Plasticity Index	10 %	
Corrected water content for material passing 0.425mm			20.7 %	Liquidity Index	-0.16
Sample retained 2mm sieve	(Measured)	1 %	NHBC Modified (I'p)	9 %	
Curing time	28 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments: Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1
 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
 Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)



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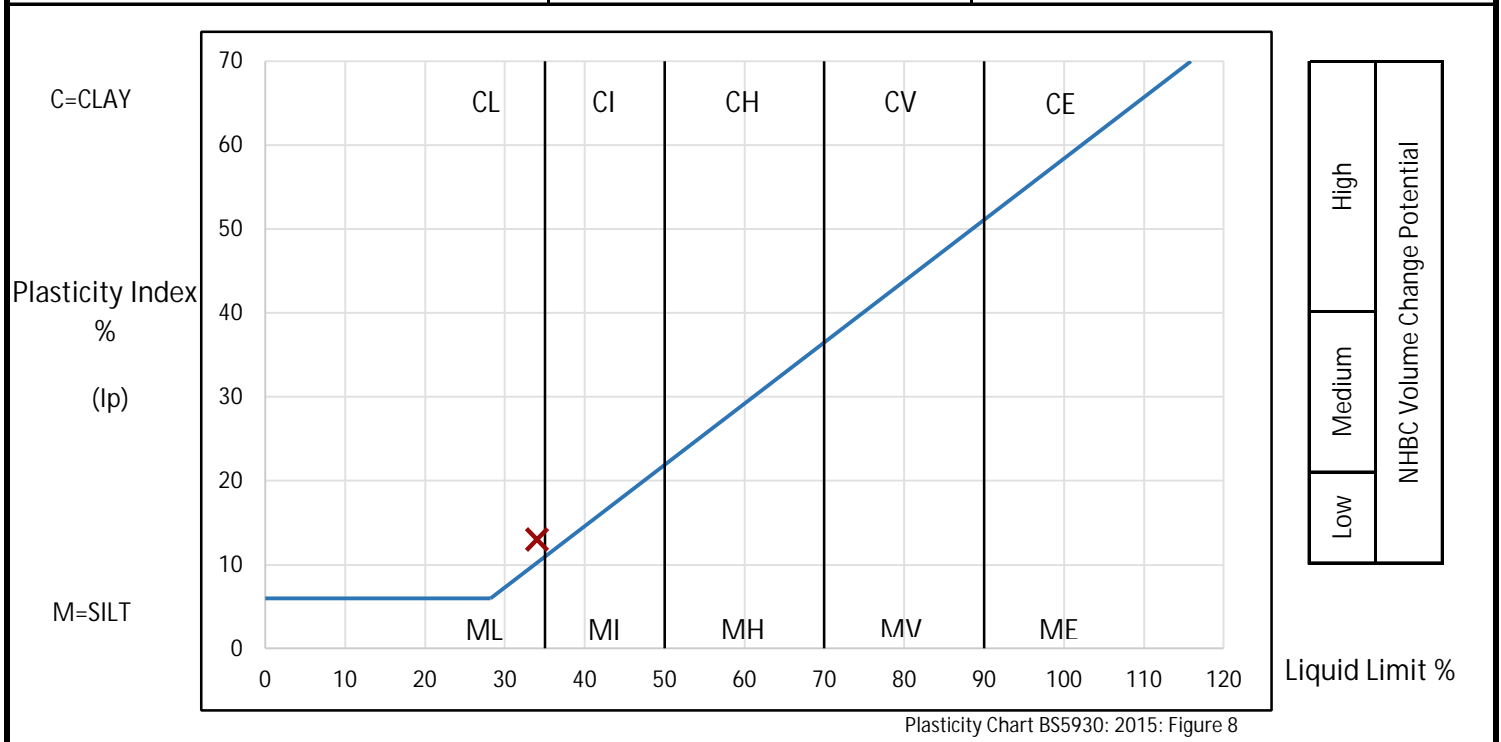
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Contract	Land off Bell Road, Bottisham
Serial No.	36013

**DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND
DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX**

Borehole / Pit No.	Depth m	Sample		Water Content (W) %	Description	Remarks
		Type	Reference			
WS06	1.30	D	2	25.8	Firm dark greyish brown slightly gravelly slightly sandy silty calcareous CLAY with frequent shell debris. Gravel is fine chert.	

PREPARATION			Liquid Limit	34 %	
Method of preparation			Wet sieved over 0.425mm sieve	Plastic Limit	21 %
Sample retained 0.425mm sieve	(Measured)	6 %	Plasticity Index	13 %	
Corrected water content for material passing 0.425mm			27.5 %	Liquidity Index	0.37
Sample retained 2mm sieve	(Measured)	1 %	NHBC Modified (I'p)	12 %	
Curing time	24 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments: Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1
 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
 Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)



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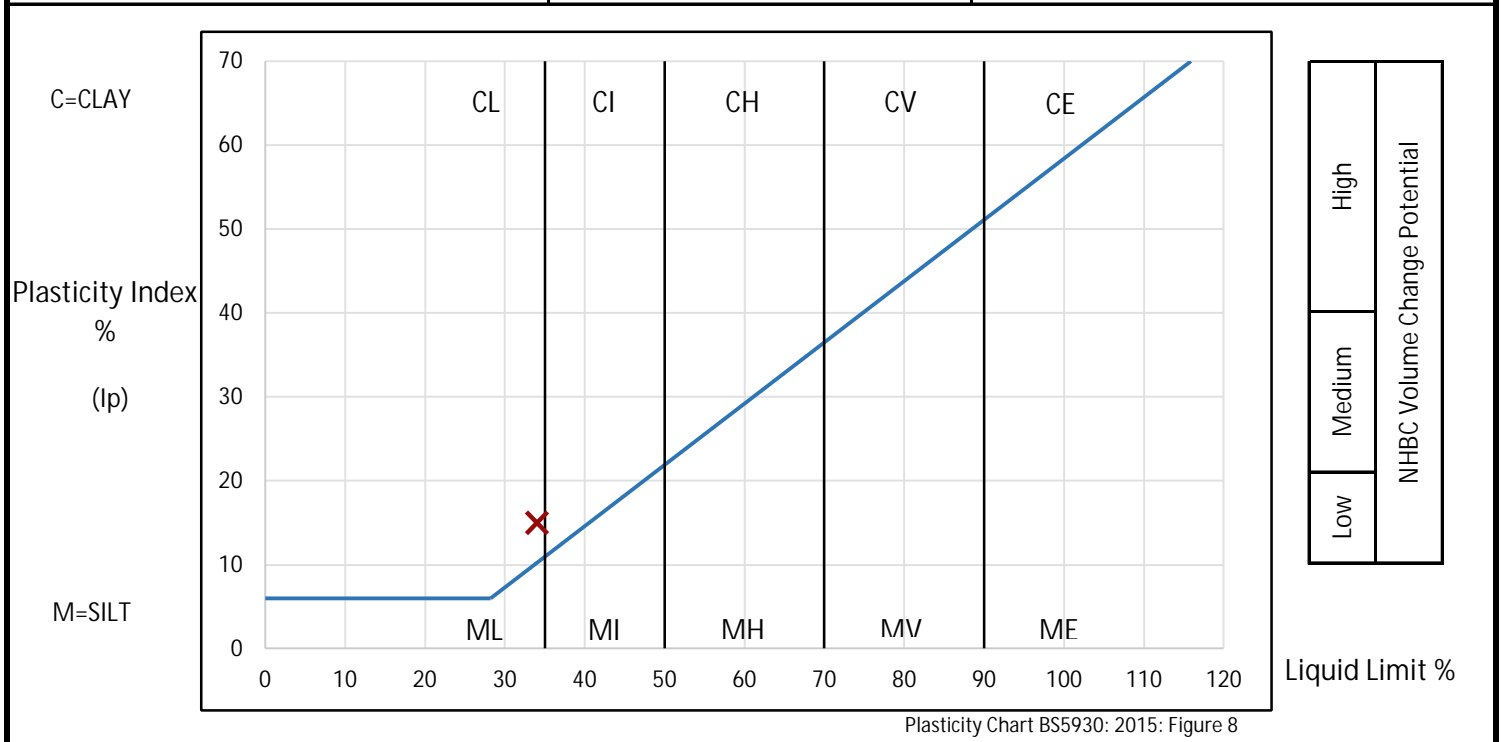
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Contract	Land off Bell Road, Bottisham
Serial No.	36013

**DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND
DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX**

Borehole / Pit No.	Depth m	Sample		Water Content (W) %	Description	Remarks
		Type	Reference			
WS08	0.50	D	1	19.3	Firm brown slightly gravelly slightly sandy silty chalky CLAY with occasional recently active roots. Gravel is fine to medium chert and chalk.	

PREPARATION			Liquid Limit	34 %	
Method of preparation			Wet sieved over 0.425mm sieve	Plastic Limit	19 %
Sample retained 0.425mm sieve	(Measured)	9 %	Plasticity Index	15 %	
Corrected water content for material passing 0.425mm			21.2 %	Liquidity Index	0.02
Sample retained 2mm sieve	(Measured)	6 %	NHBC Modified (I'p)	14 %	
Curing time	27 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments: Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1
 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
 Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)



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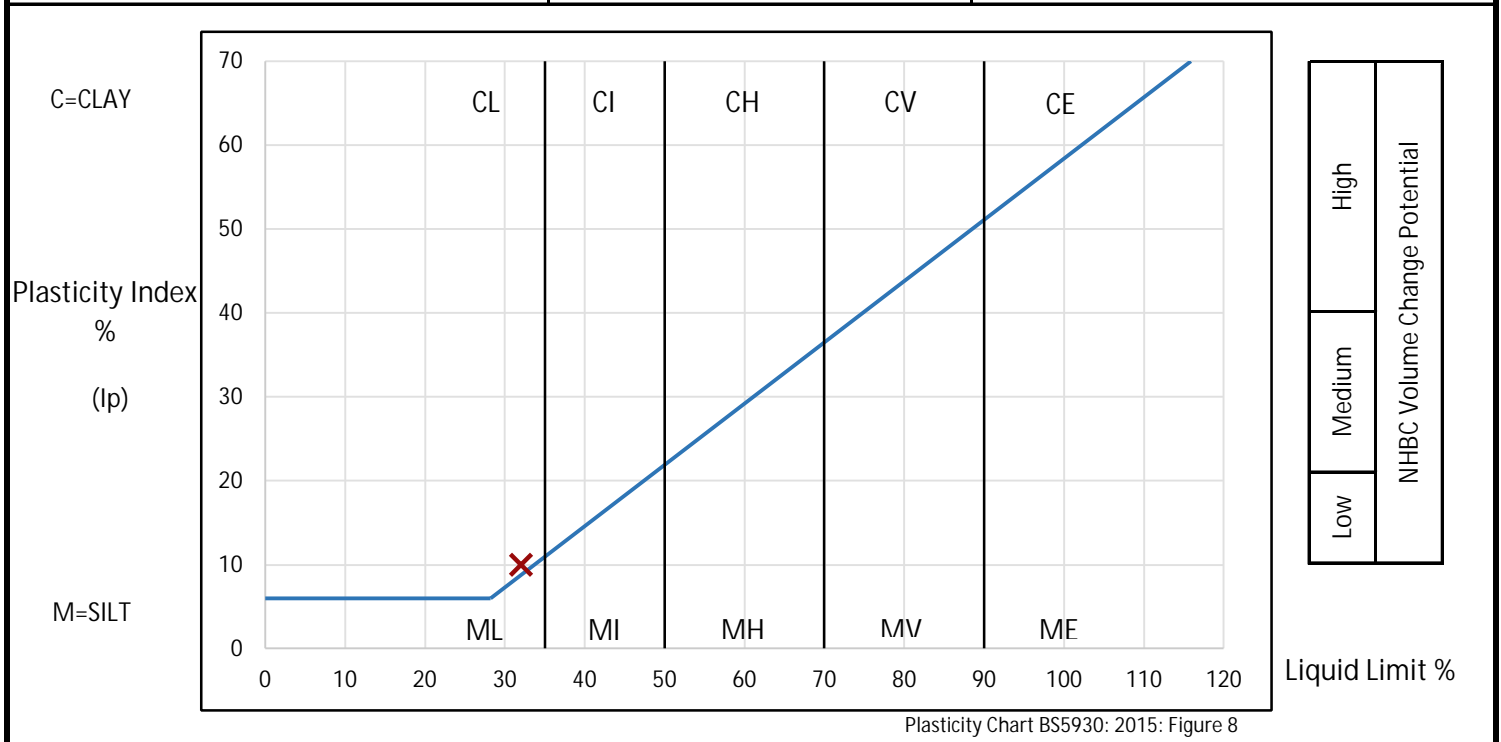
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Contract	Land off Bell Road, Bottisham
Serial No.	36013

DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample		Water Content (W) %	Description	Remarks
		Type	Reference			
WS10	0.50	D	1	20.5	Friable yellowish brown slightly gravelly slightly sandy silty calcareous CLAY with occasional recently active roots. Gravel is fine to coarse chalk, and rare chert.	

PREPARATION			Liquid Limit	32 %	
Method of preparation			Wet sieved over 0.425mm sieve	Plastic Limit	22 %
Sample retained 0.425mm sieve	(Measured)	21 %	Plasticity Index	10 %	
Corrected water content for material passing 0.425mm			26.0 %	Liquidity Index	-0.15
Sample retained 2mm sieve	(Measured)	17 %	NHBC Modified (I'p)	8 %	
Curing time	27 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments: Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1
 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
 Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)

Appendix 12 – Photographs

Photograph 1



Photograph 2



DESCRIPTION
Photograph 1
General Site View

Photograph 2
General Site View

Photograph 3
General Site View

Photograph 3



Photograph 4



Photograph 4
General Site View

PROJECT
Land off Bell Road, Bottisham,
Cambridgeshire

PROJECT NUMBER
4159,GI

TITLE
Selected photographs relating to
site walkover and ground
investigation

DATE
17/12/2019

PAGE NO. 1 of 3

Photograph 5



Photograph 6



DESCRIPTION

Photograph 5
Recovered material, WS1

Photograph 6
Recovered material, WS2

Photograph 7
Recovered material, WS3

Photograph 7



Photograph 8



Photograph 8
Recovered material, WS4

PROJECT

Land off Bell Road, Bottisham,
Cambridgeshire

PROJECT NUMBER

4159,GI

TITLE

Selected photographs relating to
site walkover and ground
investigation

DATE

17/12/2019

PAGE NO.

2 of 3

Photograph 9



Photograph 10



Photograph 11



Photograph 12



DESCRIPTION

Photograph 9
Recovered material, WS5

Photograph 10
Recovered material, WS6

Photograph 11
Recovered material, WS7

Photograph 12
Installed Gas Monitoring Well

PROJECT

Land off Bell Road, Bottisham,
Cambridgeshire

PROJECT NUMBER

4159,GI

TITLE

Selected photographs relating to
site walkover and ground
investigation

DATE

17/12/2019

PAGE NO.

3 of 3



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Knotweed.

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