highways england

A47/A11 Thickthorn Junction

Scheme Number: TR010037

Volume 6
6.3 Environmental Statement Appendices
Appendix 9.3 – Preliminary Sources Study Report Part 2 of 2

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

March 2021

Infrastructure Planning

Planning Act 2008

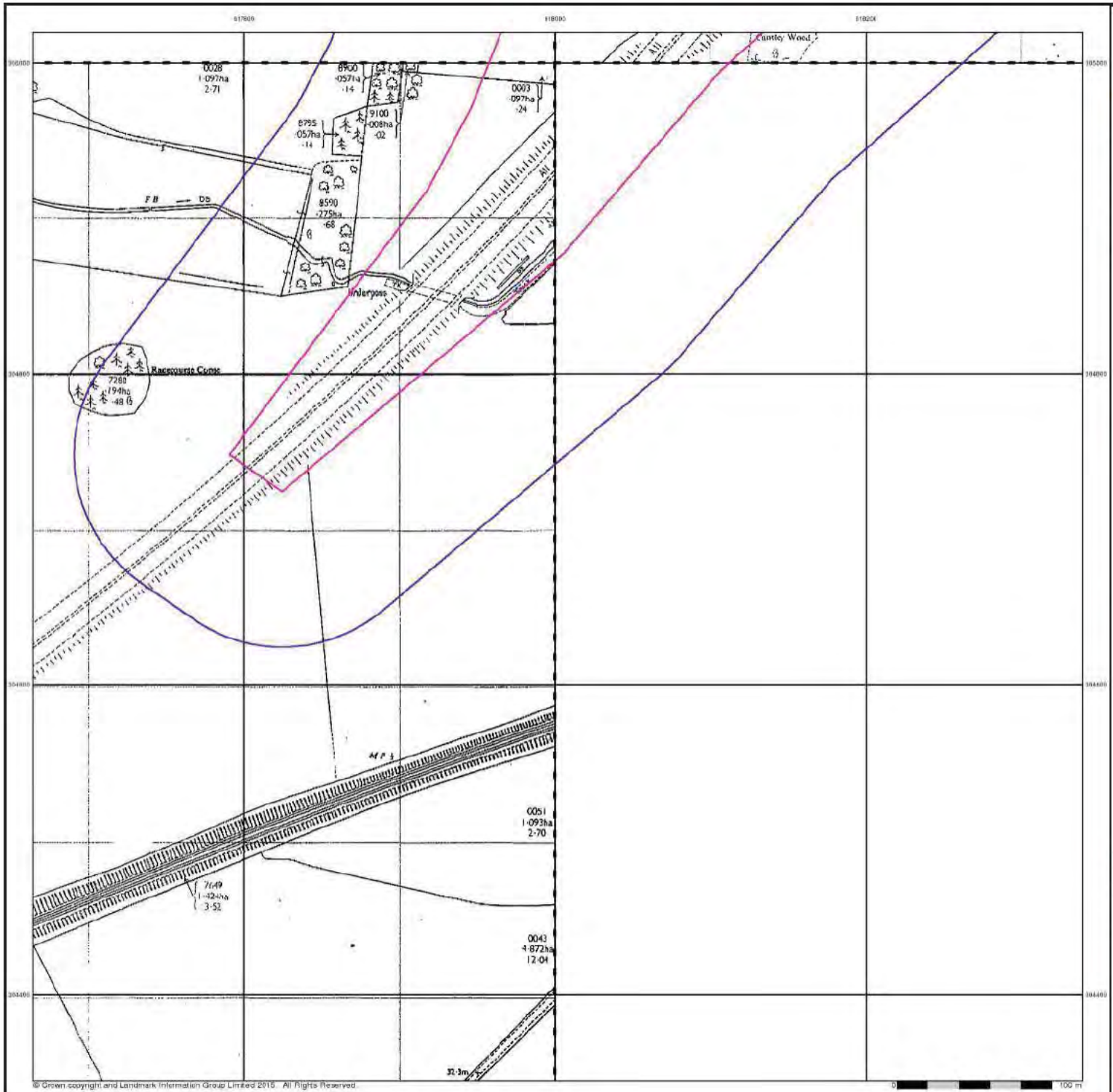
The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

The A47/A11 Thickthorn Junction Development Consent Order 202[x]

ENVIRONMENTAL STATEMENT APPENDICES
Appendix 9.3 – Preliminary Sources Study Report Part 2 of 2

Regulation Number:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010037
Application Document Reference	TR010037/APP/6.3
BIM Document Reference	HE551492-ACM-HGT-TJ-RP-CE-00001
Author:	A47/A11 Thickthorn Junction Project Team, Highways England

Version	Date	Status of Version
Rev 0	March 2021	Application Issue



Envirocheck®

LANDMARK INFORMATION GROUP®

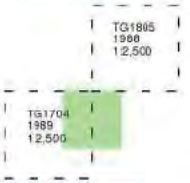
Additional SIMs

Published 1988 - 1989

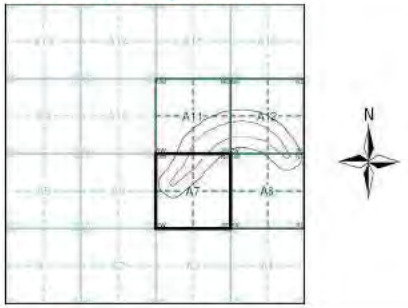
Source map scale - 1:2,500

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 A7



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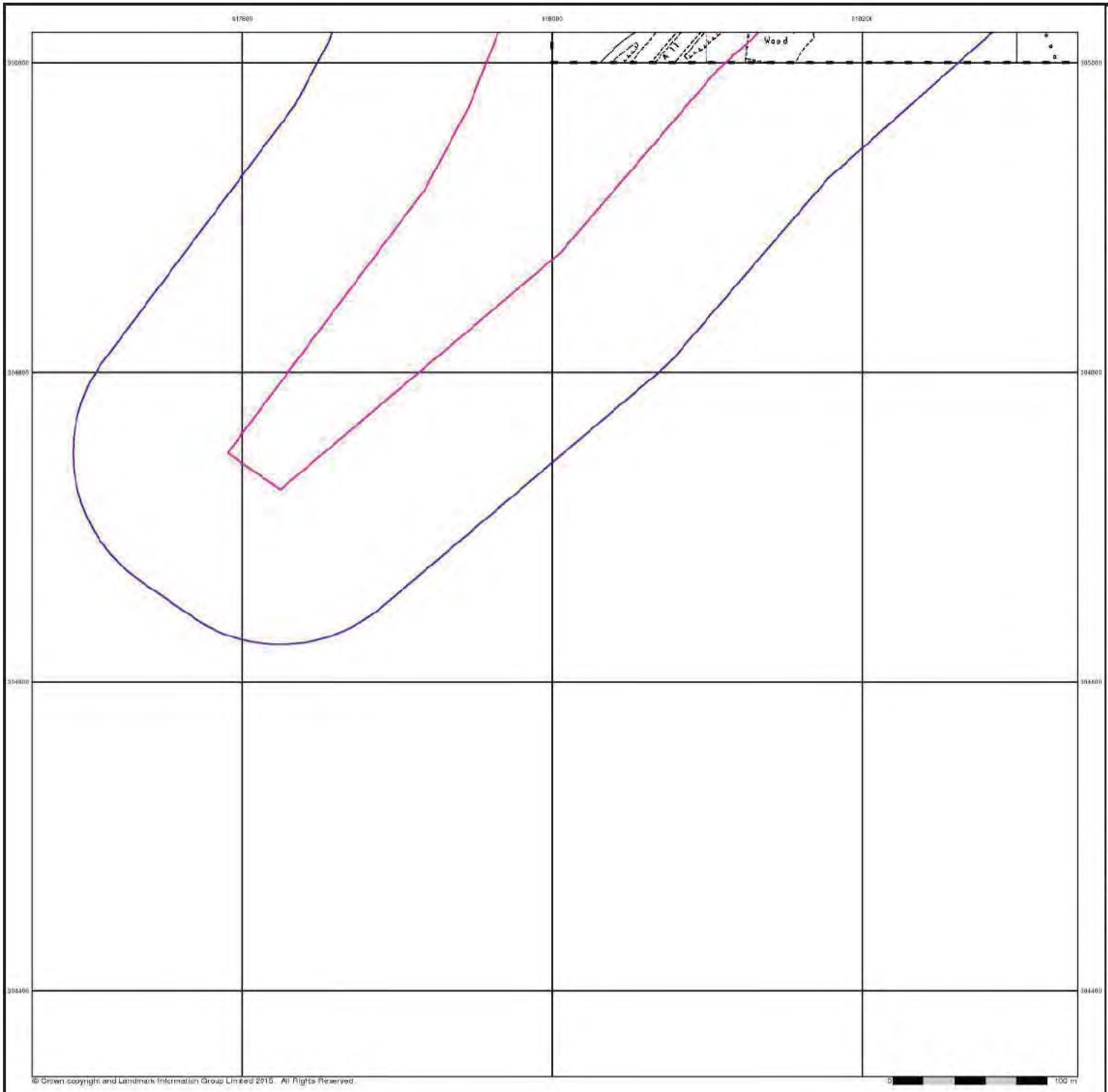
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP

[redacted]



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LANDMARK INFORMATION GROUP®

Additional SIMs

Published 1993

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.

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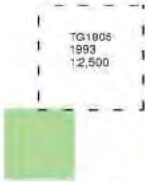
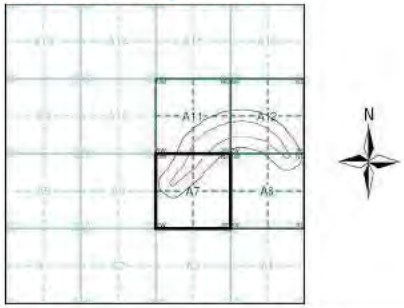


Historical Map - Segment A7



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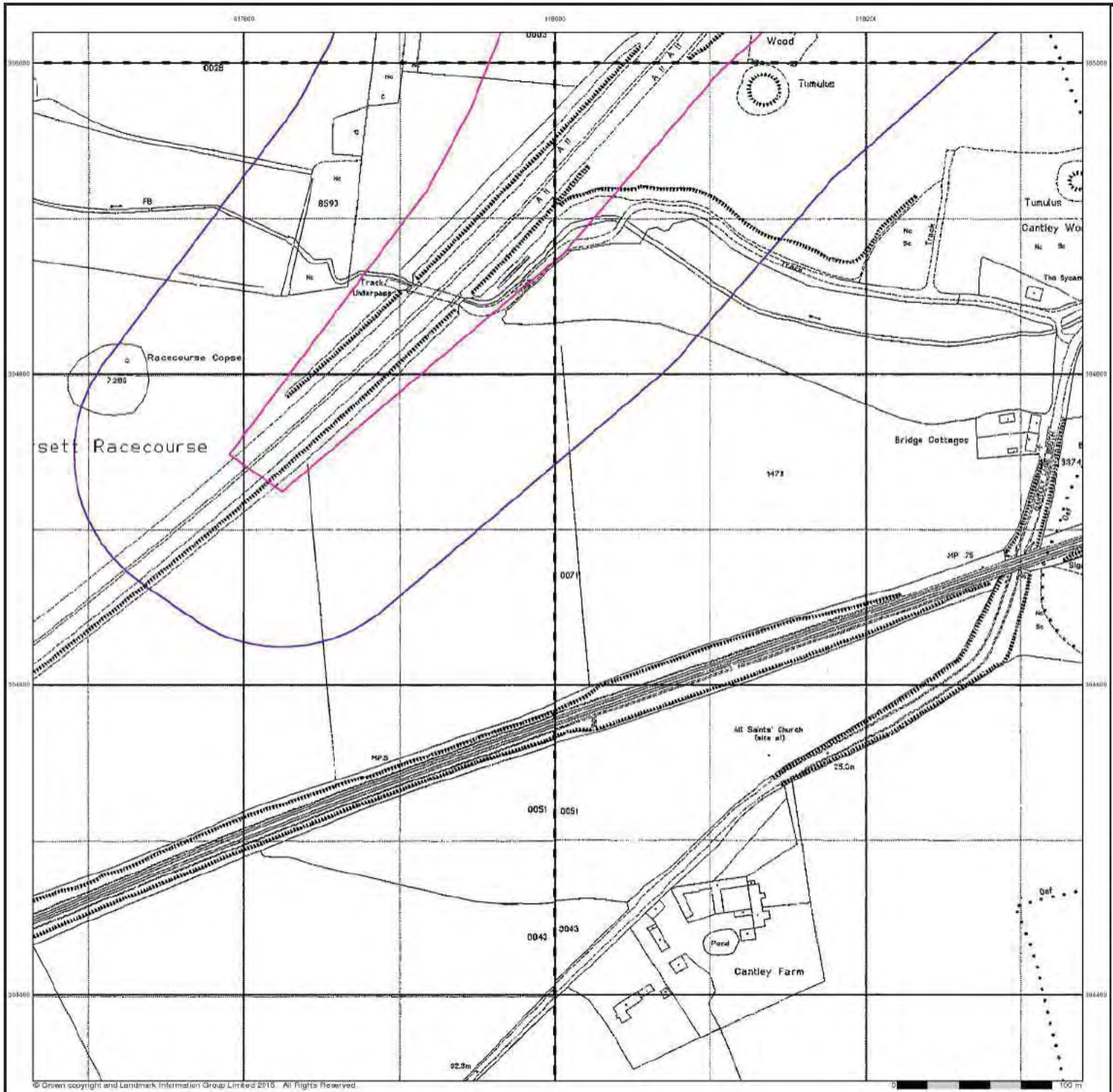
Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

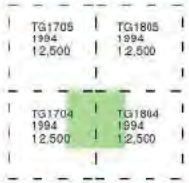
Large-Scale National Grid Data

Published 1994

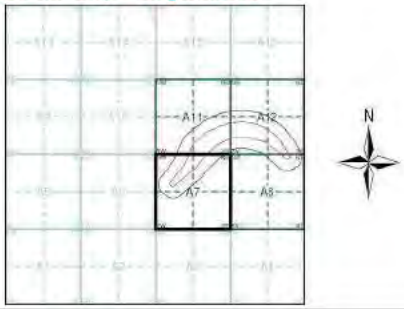
Source map scale - 1:2,500

'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)



Historical Map - Segment A7



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Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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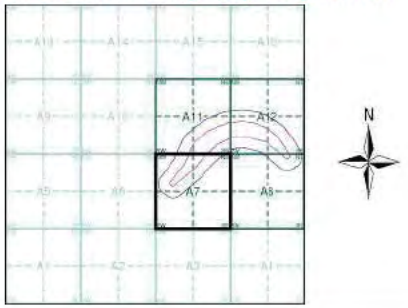
LANDMARK INFORMATION GROUP®

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 A7



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Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

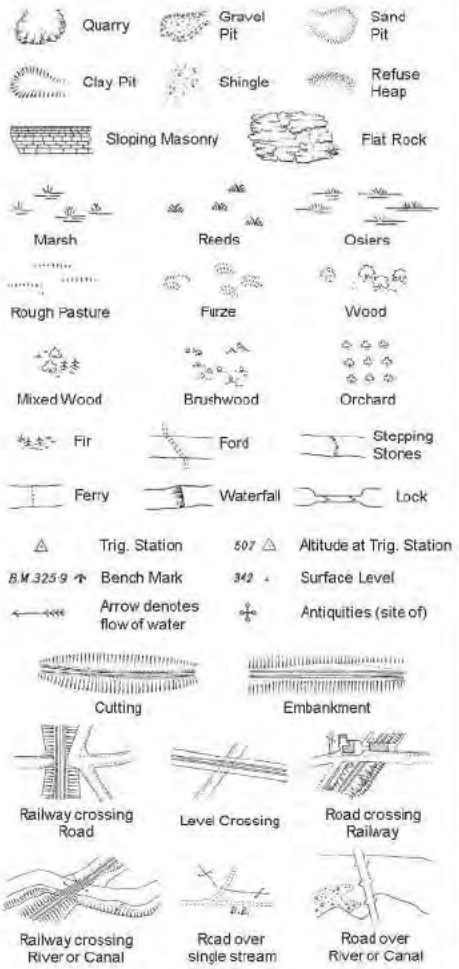
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP

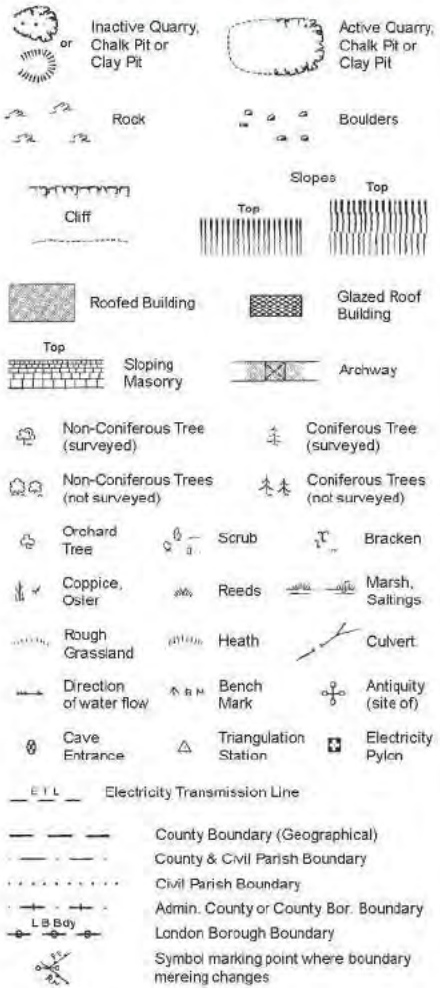
Historical Mapping Legends

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



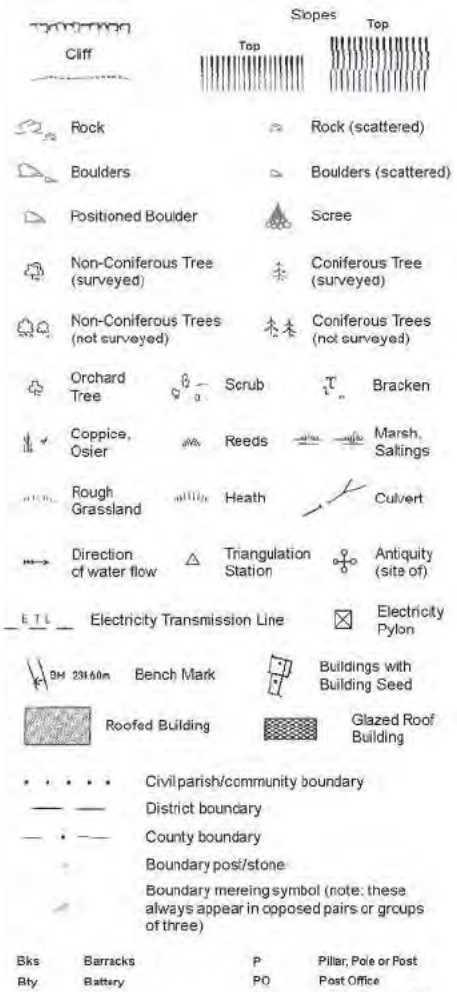
B.P. B.S.	Boundary Post or Stone	P.C.B.	Police Call Box
B.R.	Bridle Road	P	Pump
E.P.	Electricity Pylon	S.P.	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sg.	Spring
G.P.	Guide Post or Board	T.C.B.	Telephone Call Box
M.S.	Mile Stone	Tr.	Trough
M.P. M.R.	Mooring Post or Ring	W.	Well

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



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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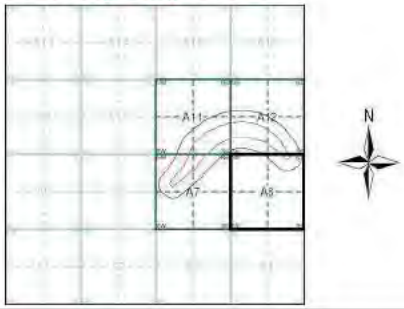
LANDMARK INFORMATION GROUP

Historical Mapping & Photography included:

Historical Map - Segment A8



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National Grid Reference: 618010, 304990
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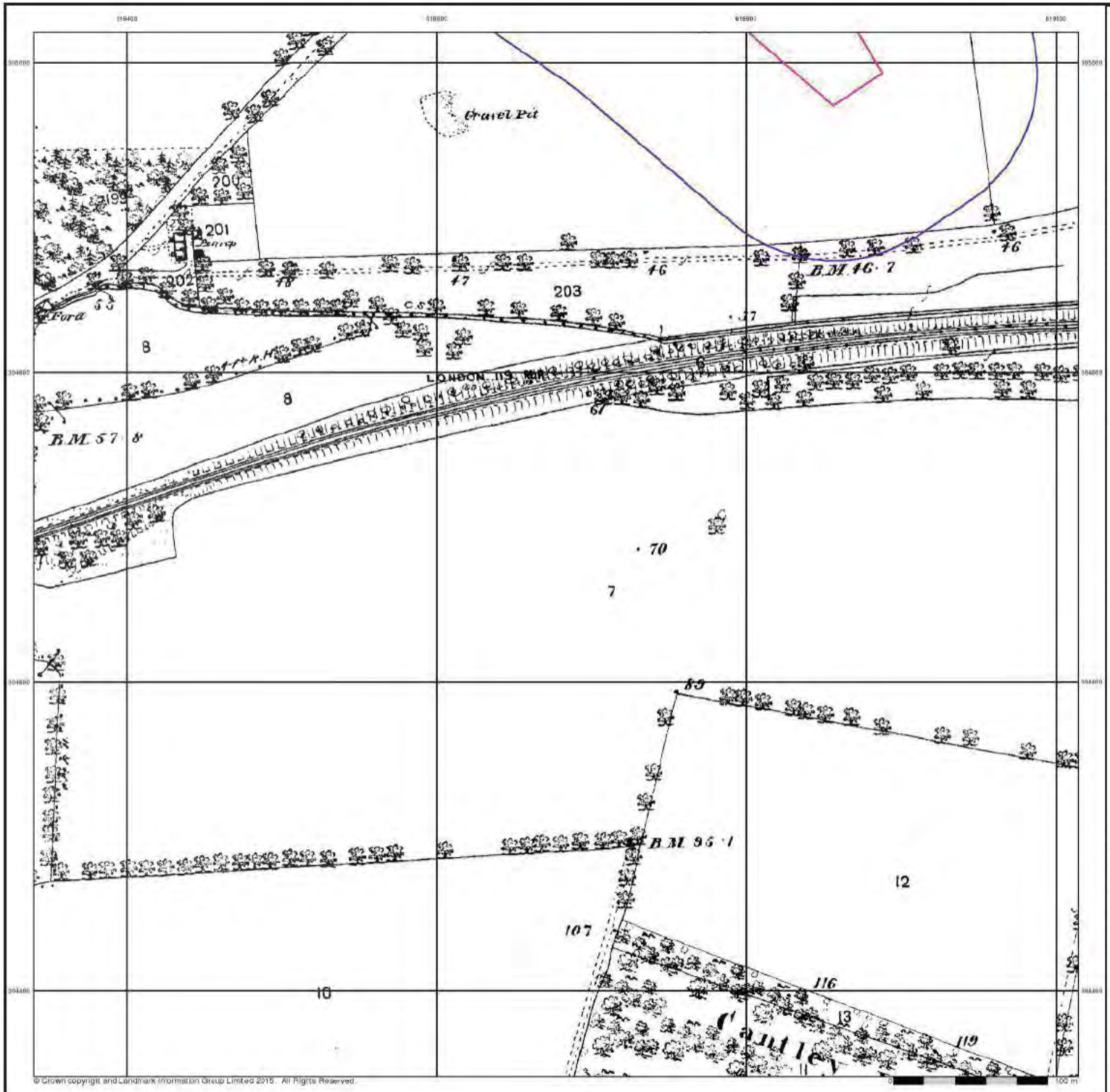
Site Area (Ha): 15.75
Search Buffer (m): 100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP

Norfolk

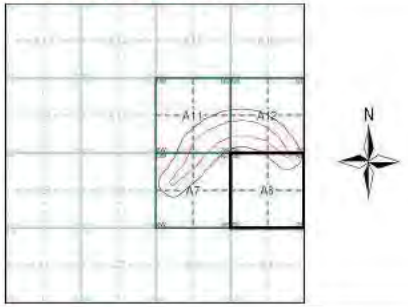
Published 1882

Source map scale - 1:2,500

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

Map Name(s) and Date(s)

Historical Map - Segment A8



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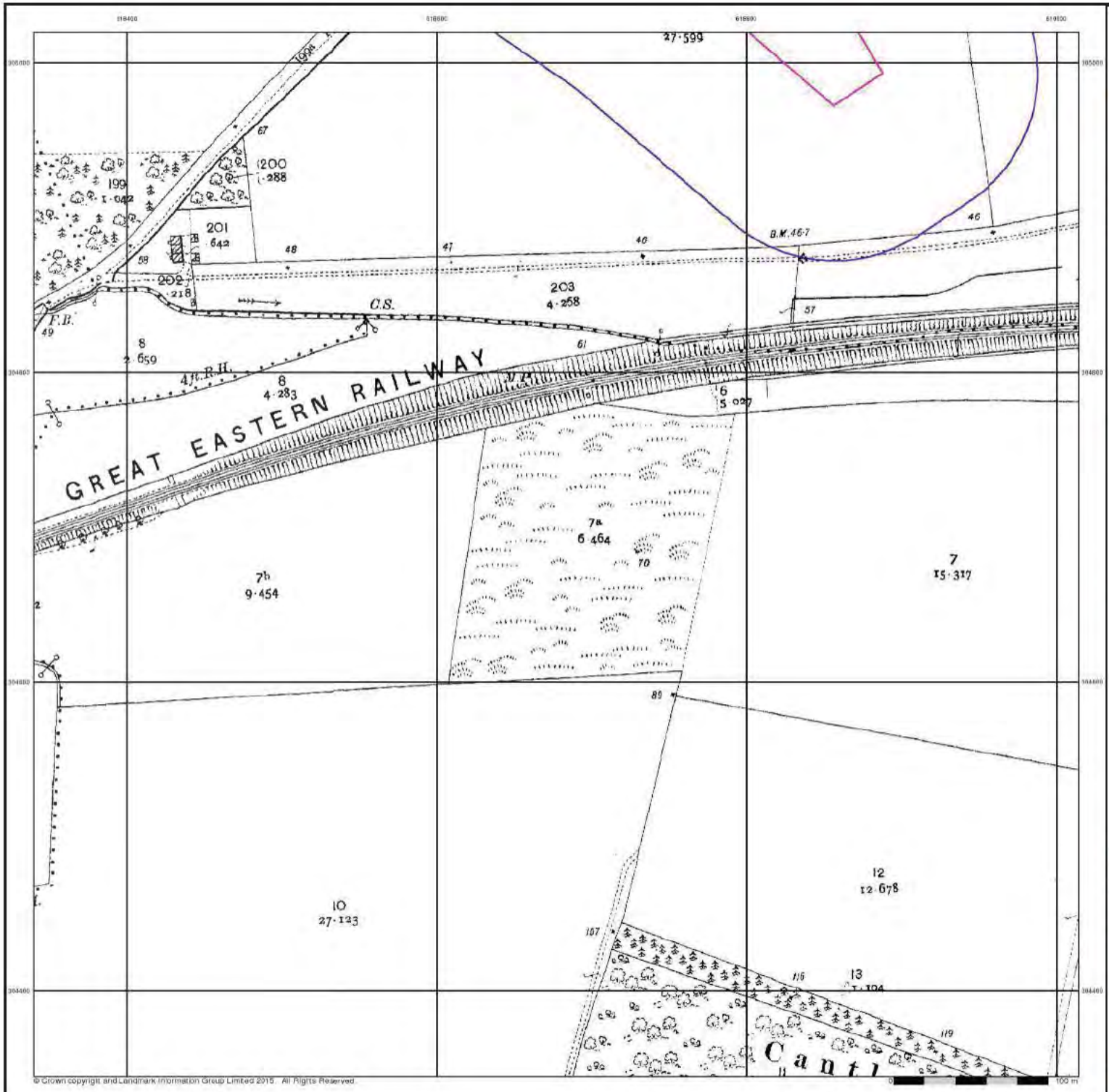
Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Norfolk

Published 1907

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.

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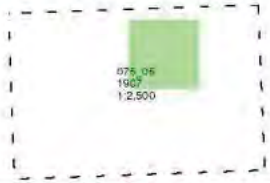
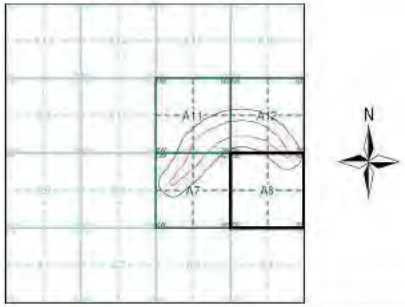


Historical Map - Segment A8



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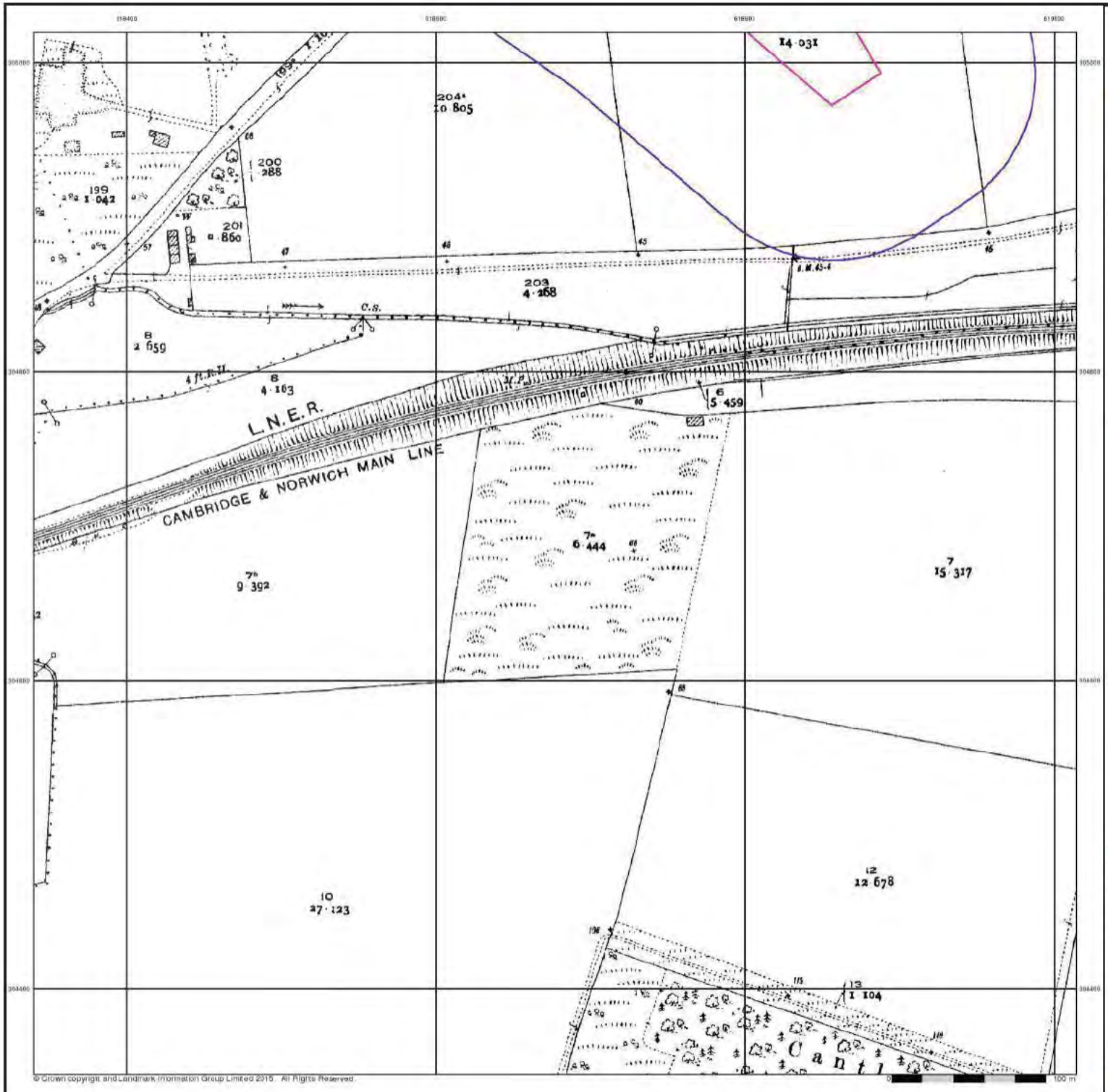
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Norfolk

Published 1928

Source map scale - 1:2,500

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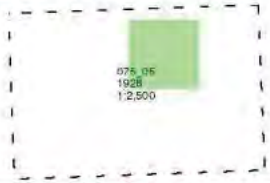

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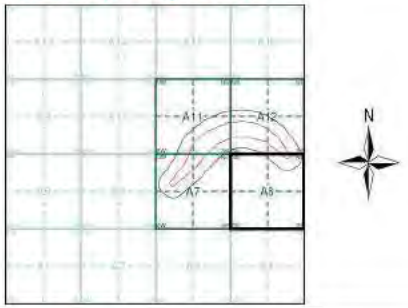

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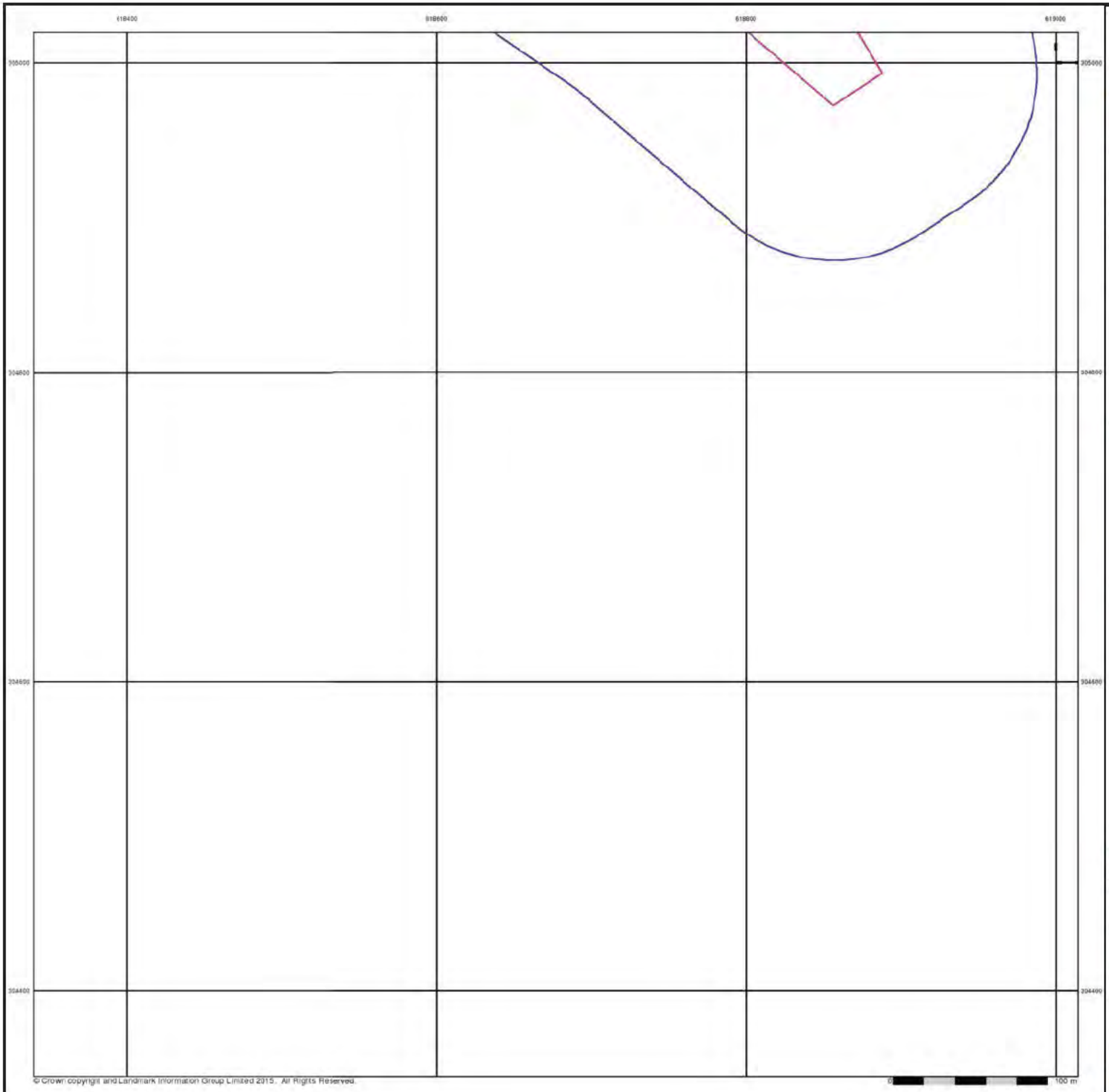

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LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1964

Source map scale - 1:1,250

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.

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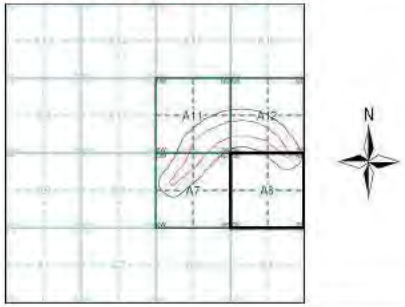
Historical Map - Segment A8



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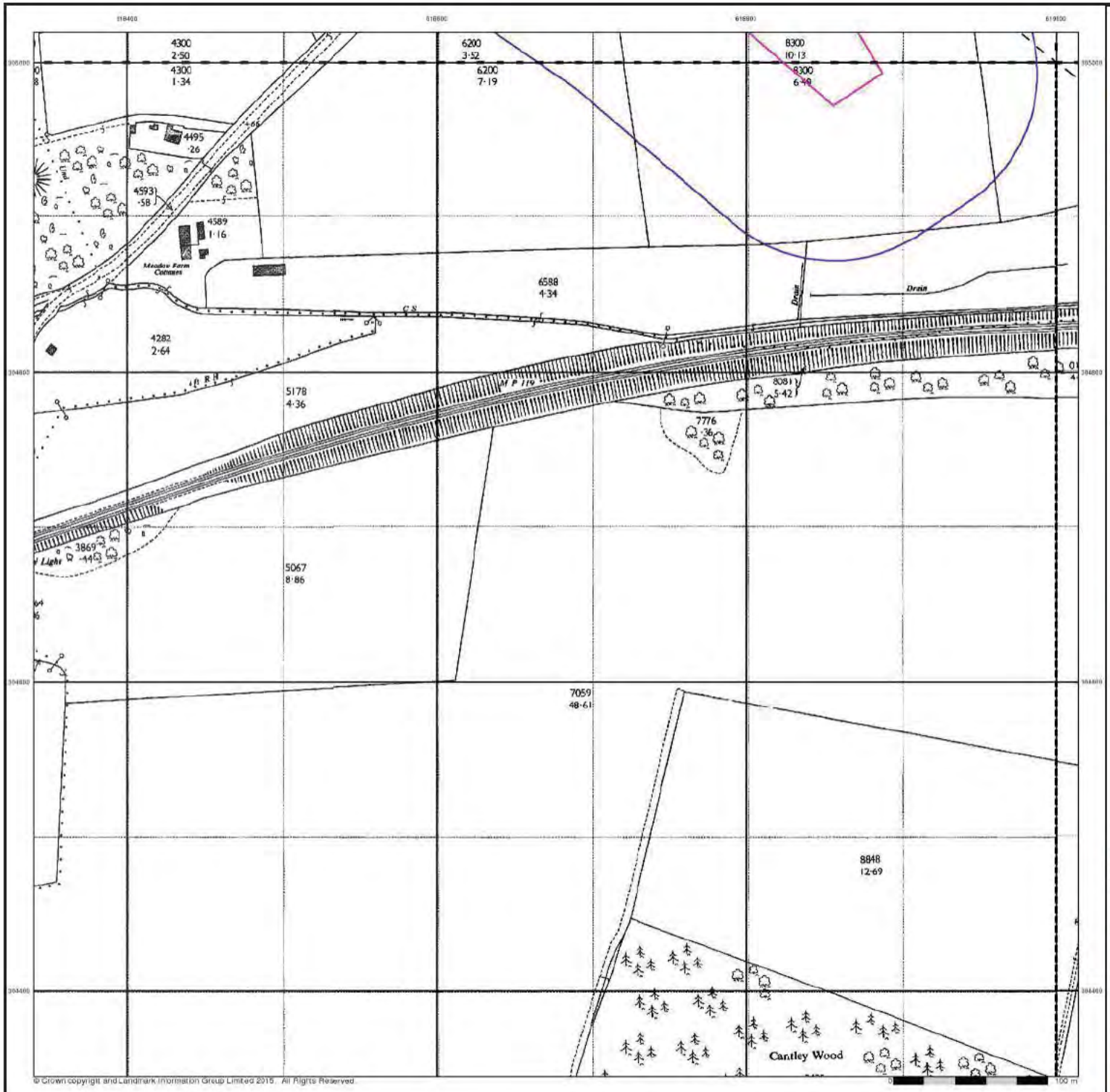
Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1966 - 1967

Source map scale - 1:2,500

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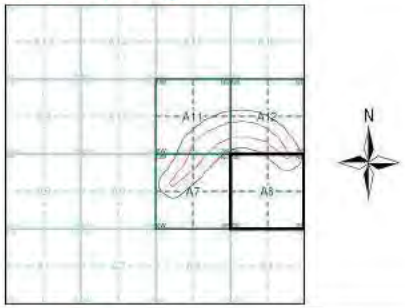

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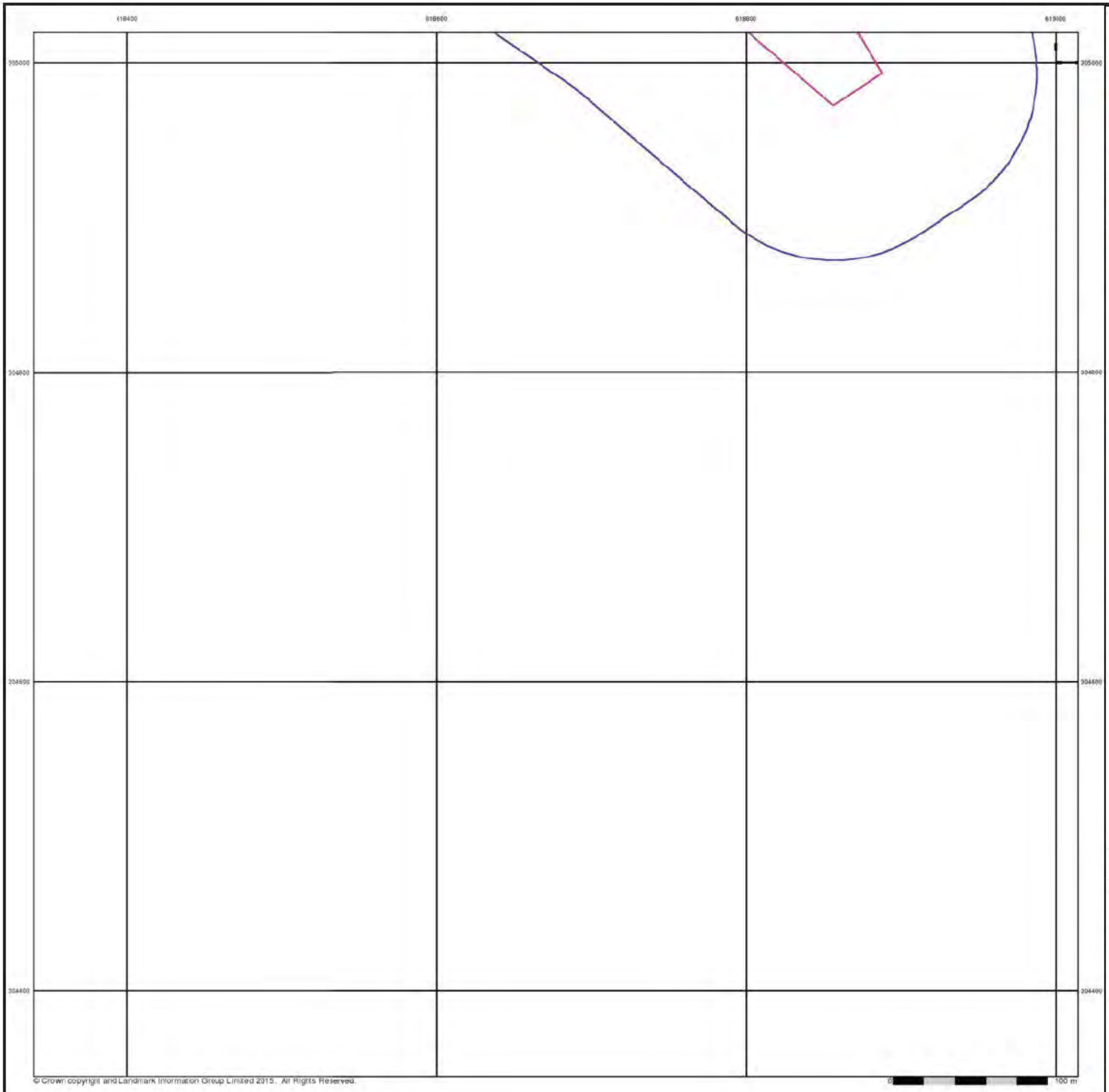
Landmark® INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1968

Source map scale - 1:1,250

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.

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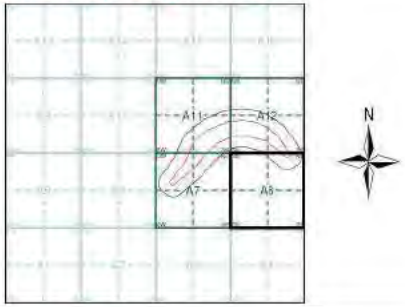

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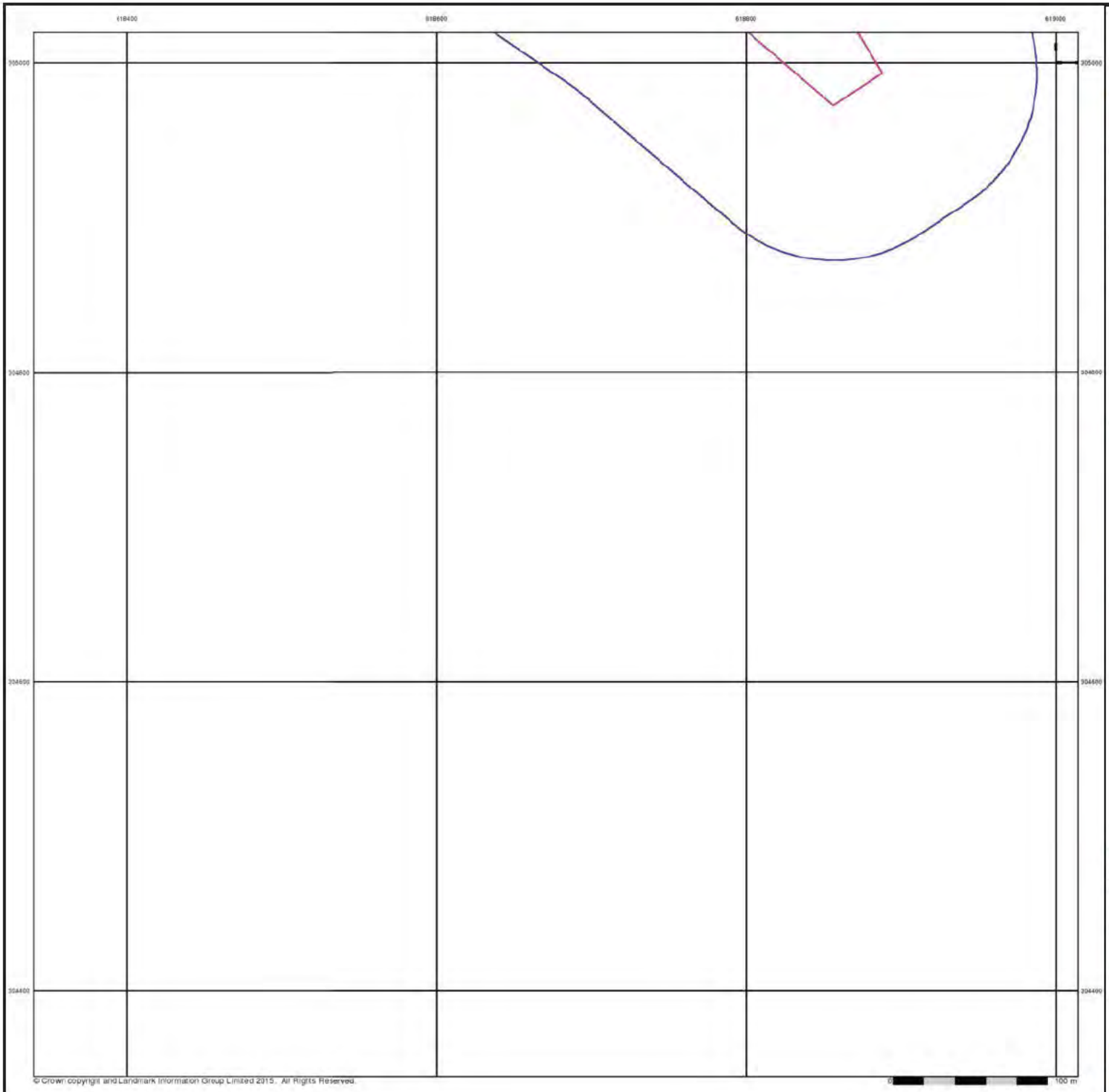
Landmark® INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1972

Source map scale - 1:1,250

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.

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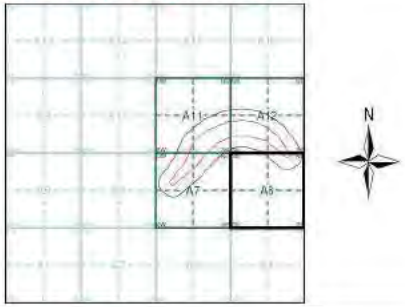

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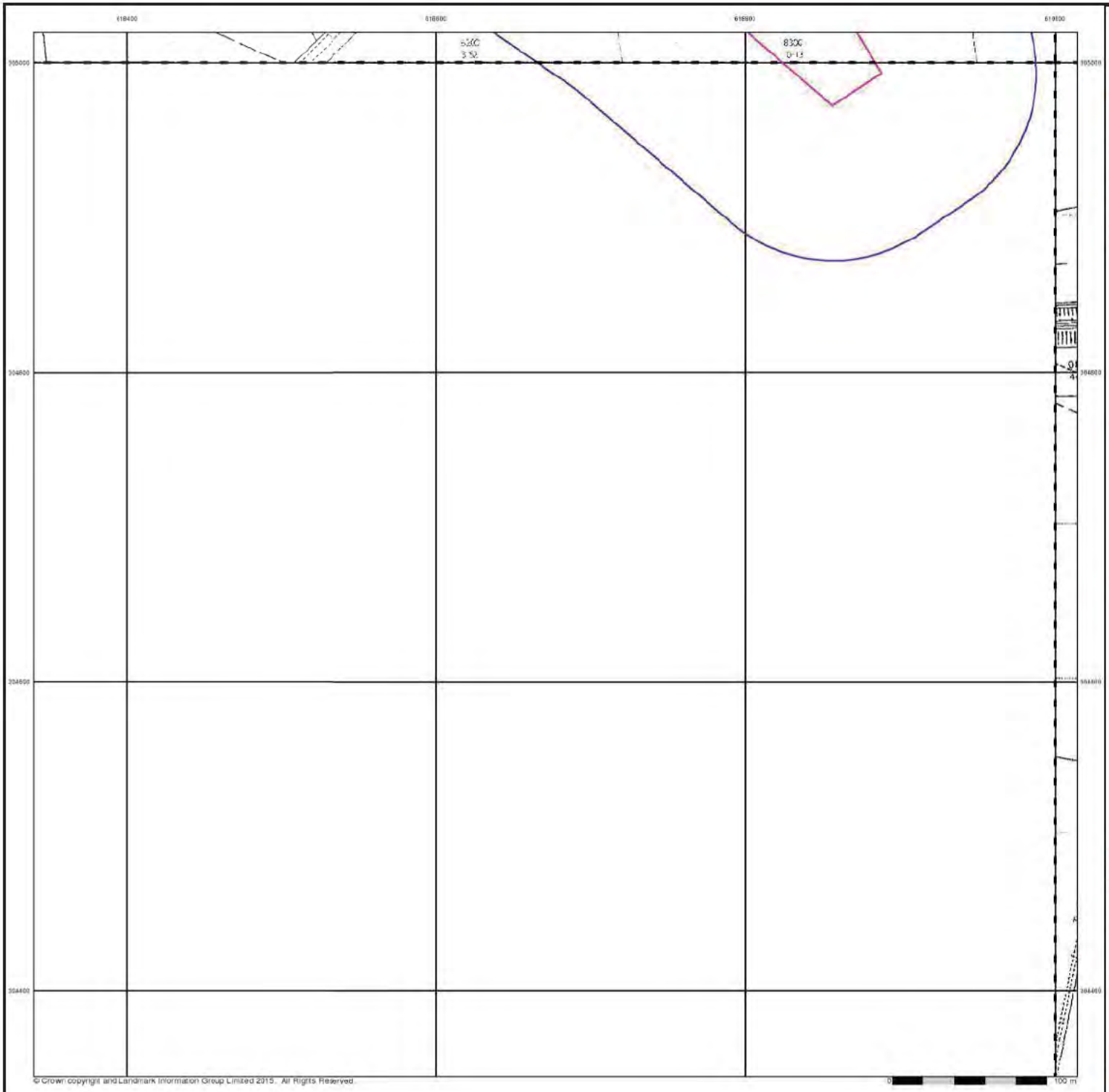

Envirocheck®

LANDMARK INFORMATION GROUP®

Additional SIMs

Published 1979 - 1980

Source map scale - 1:2,500

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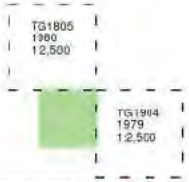
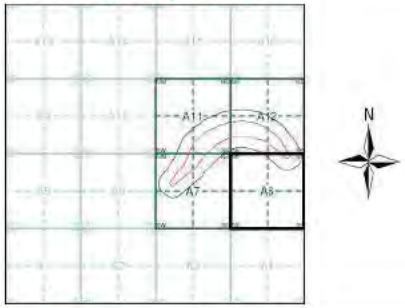
Map Name(s) and Date(s)



Historical Map - Segment A8



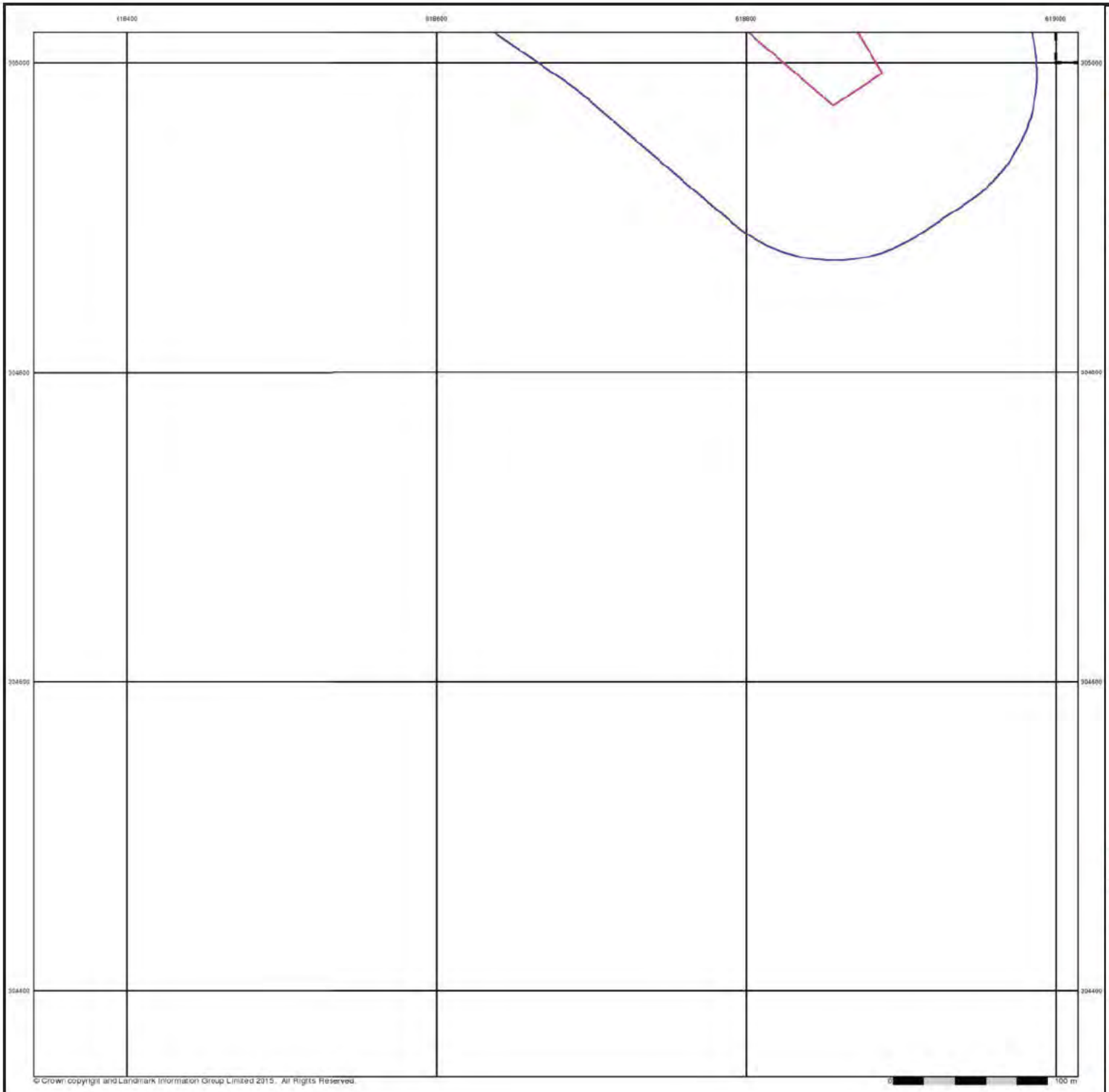
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

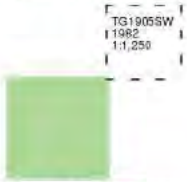
Additional SIMs

Published 1982

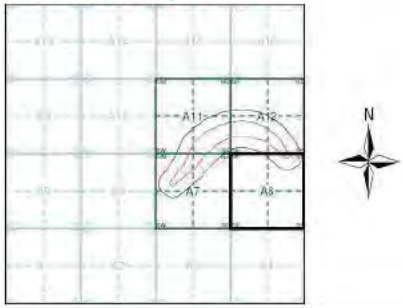
Source map scale - 1:1,250

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 A8



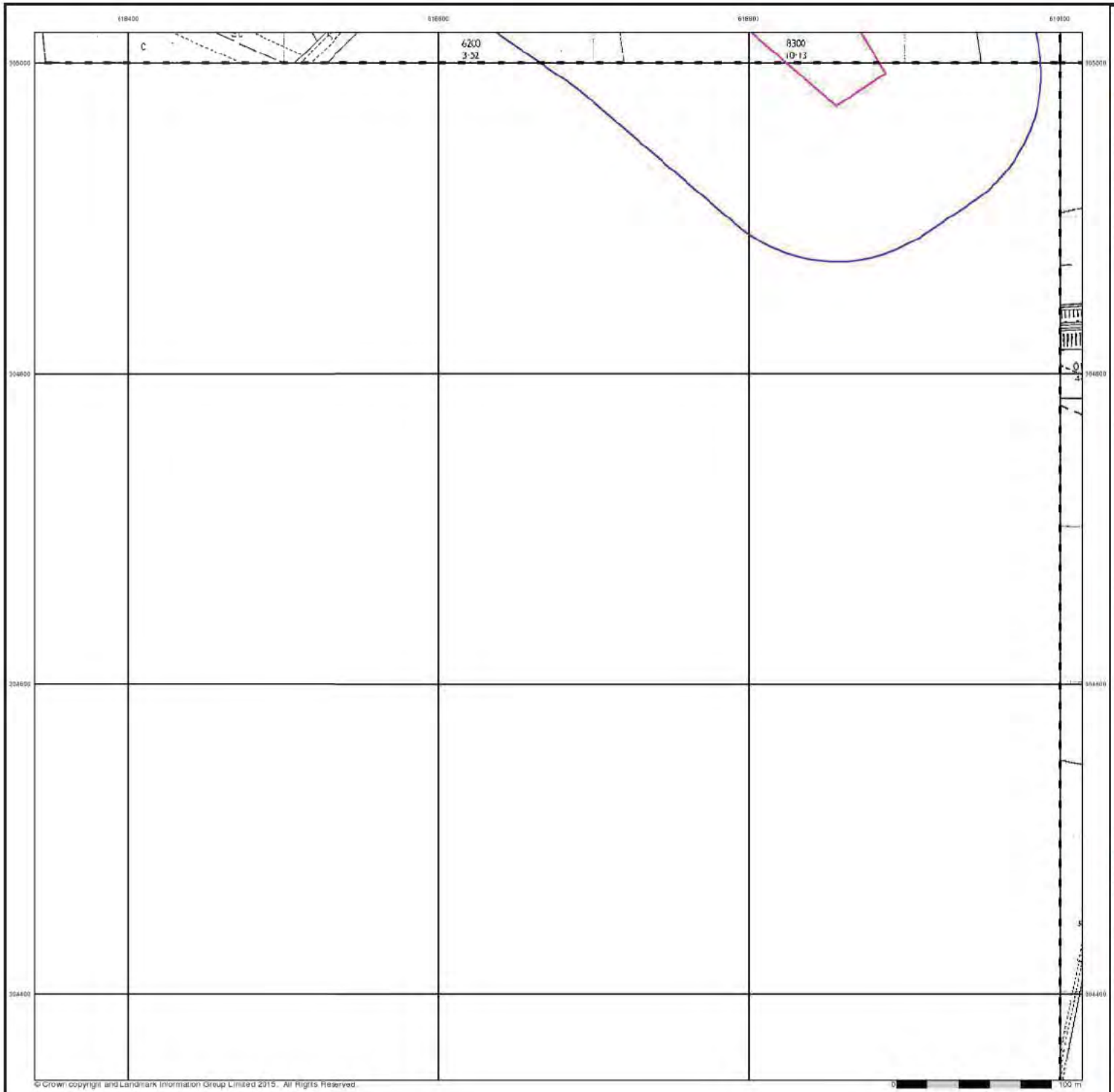
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

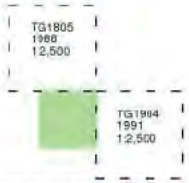
Additional SIMs

Published 1988 - 1991

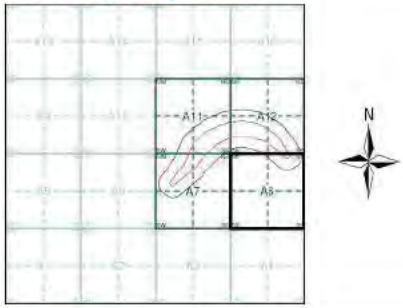
Source map scale - 1:2,500

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 A8



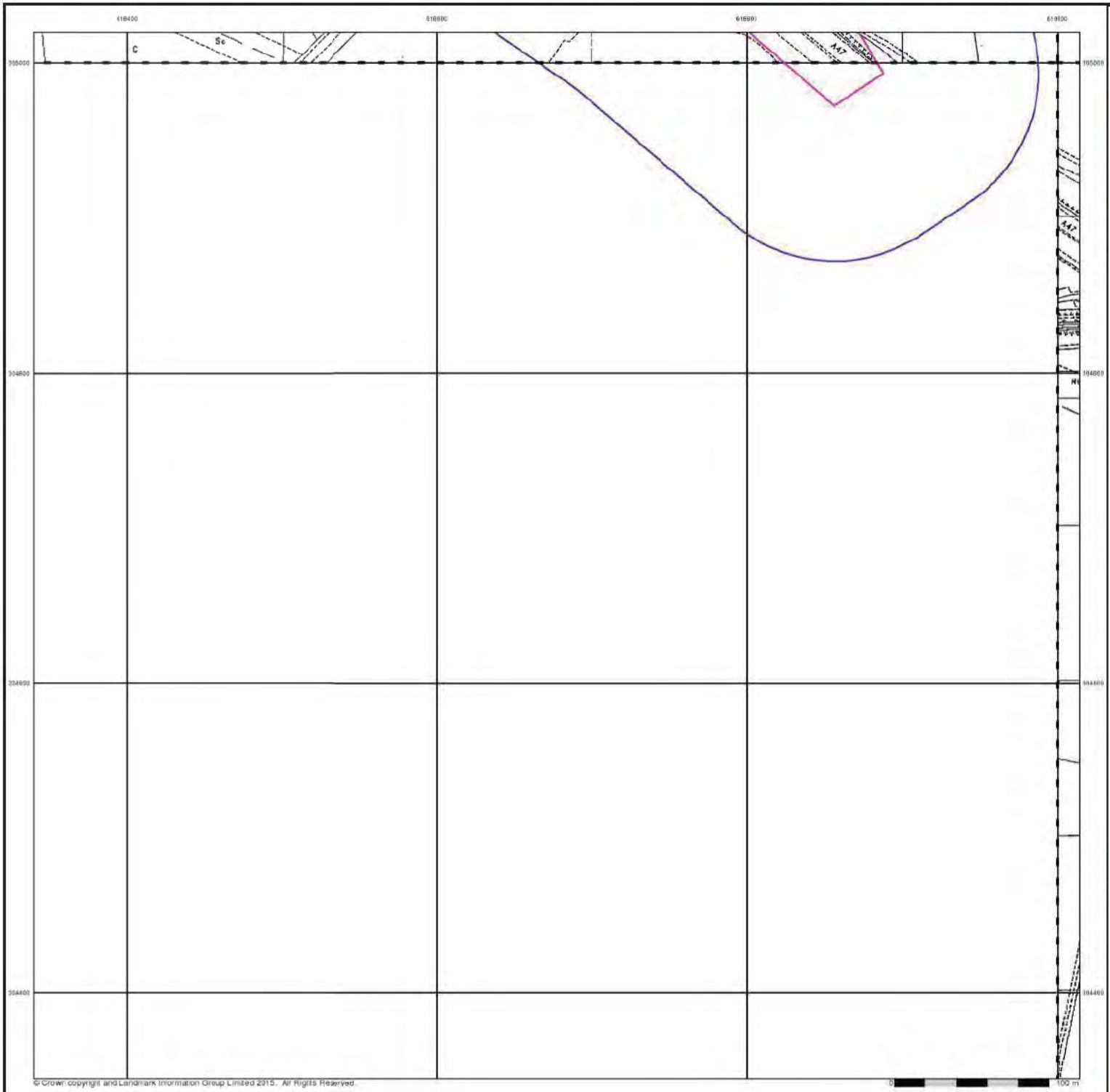
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

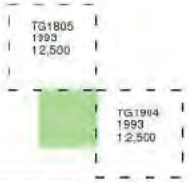
Additional SIMs

Published 1993

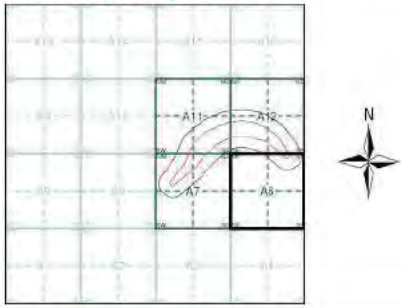
Source map scale - 1:2,500

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 A8



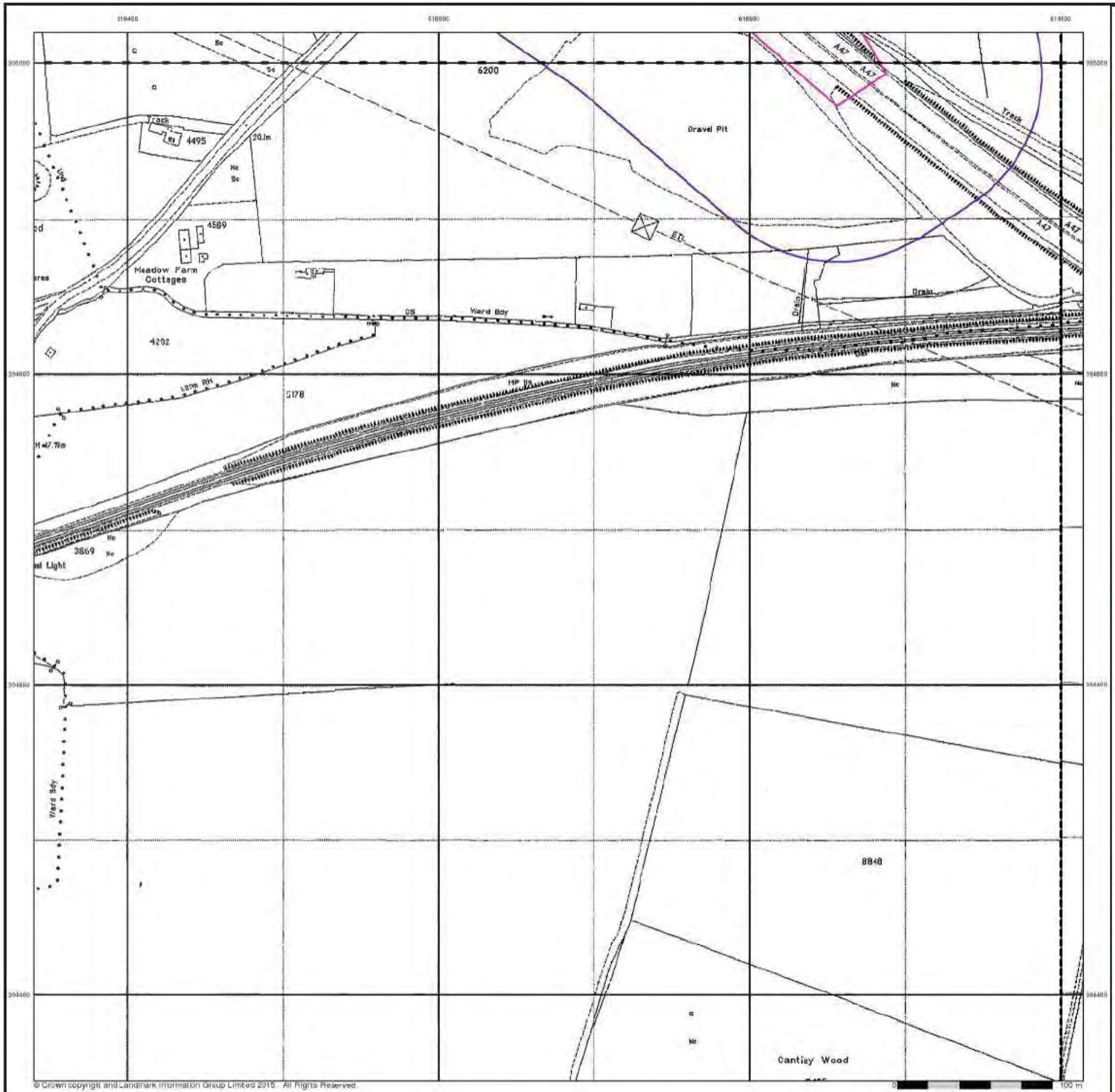
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

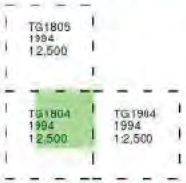
Large-Scale National Grid Data

Published 1994

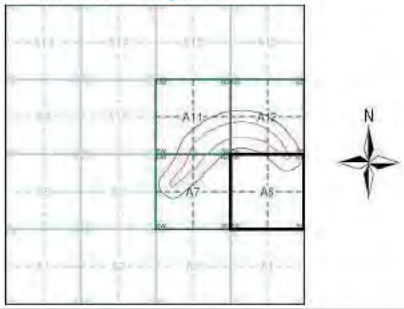
Source map scale - 1:2,500

'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)



Historical Map - Segment A8



Order Details

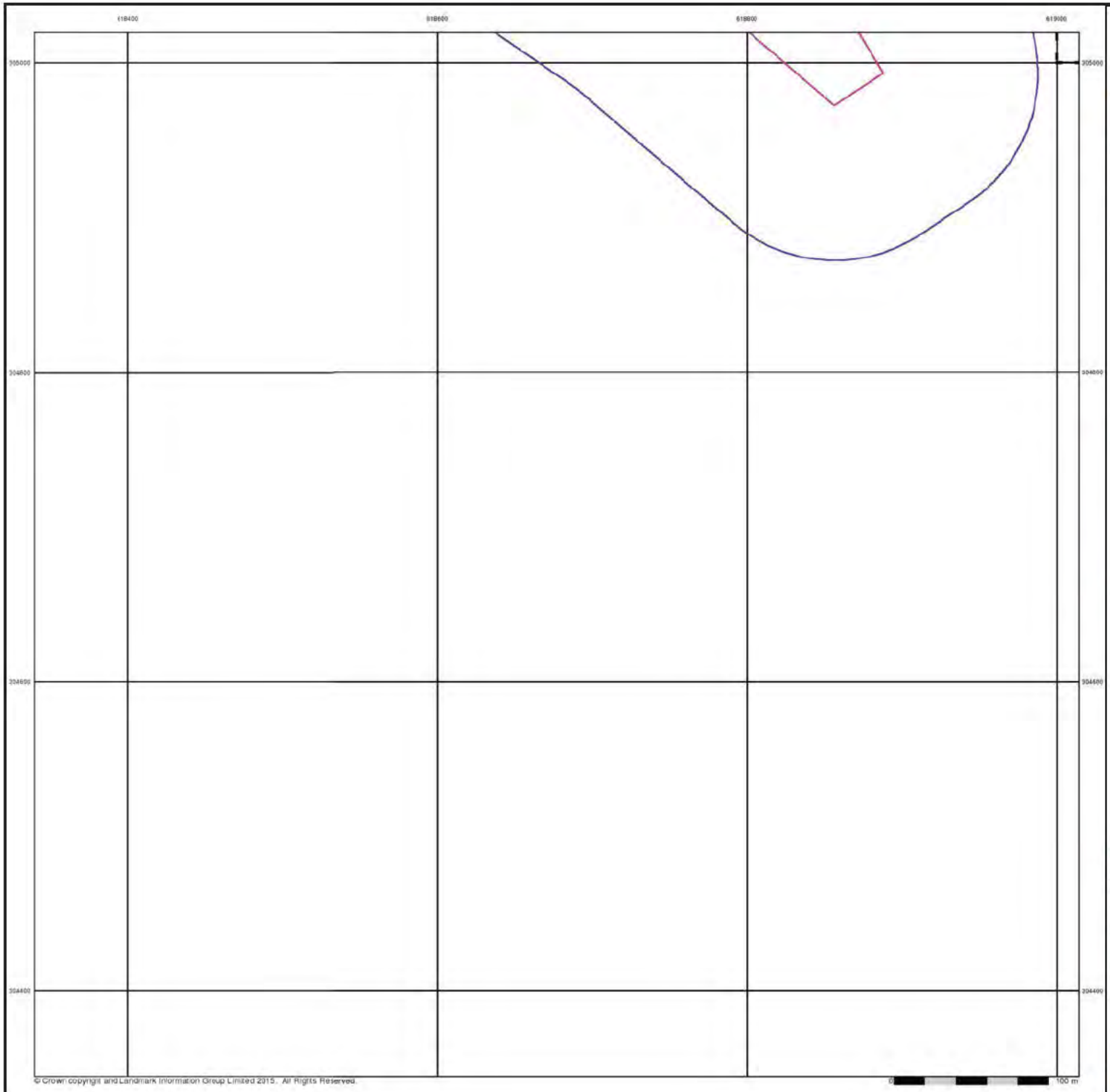
Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP

[redacted].uk



Envirocheck®

LANDMARK INFORMATION GROUP®

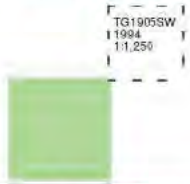
Large-Scale National Grid Data

Published 1994

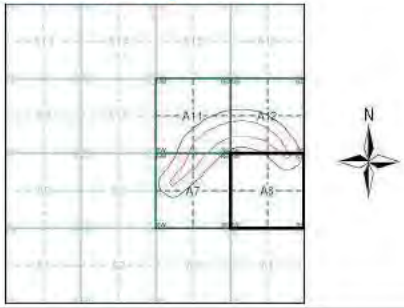
Source map scale - 1:1,250

'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 A8



Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP

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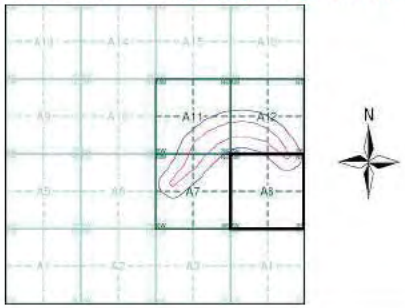
LANDMARK INFORMATION GROUP®

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 A8



Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

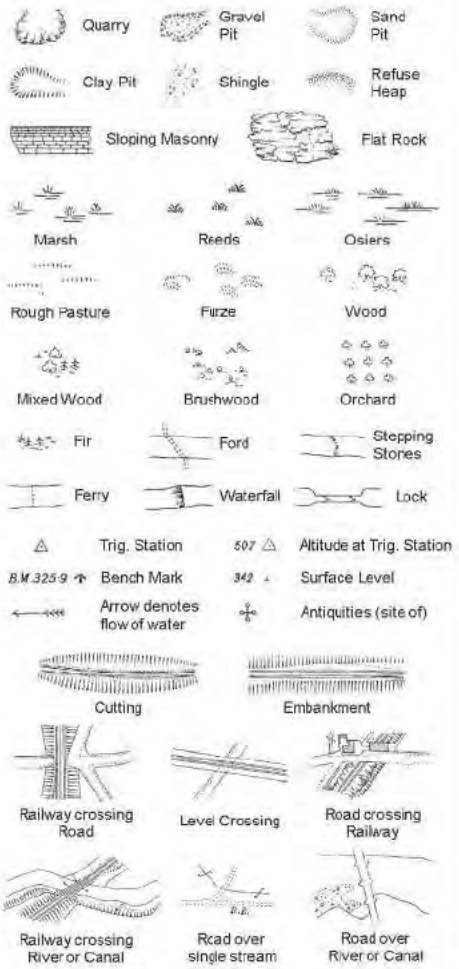
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP

Historical Mapping Legends

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

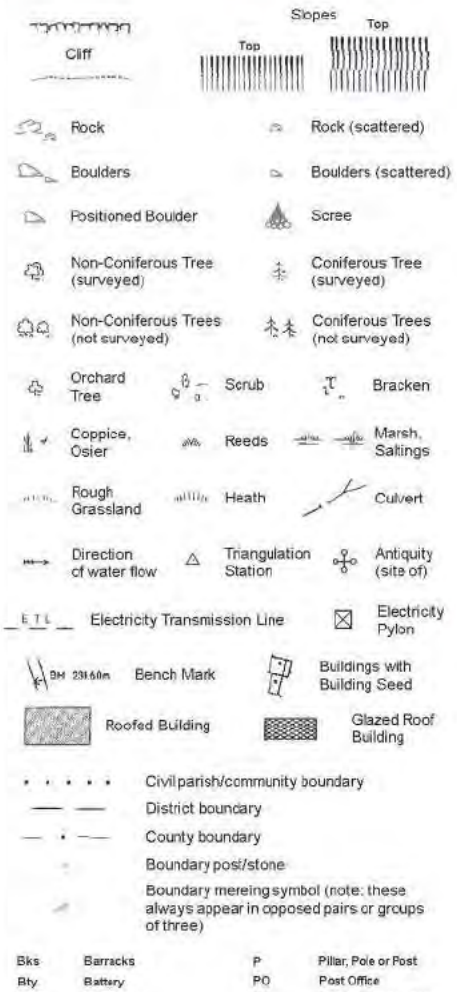


B.S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl	Sluice
F.P.	Foot Path	Sg.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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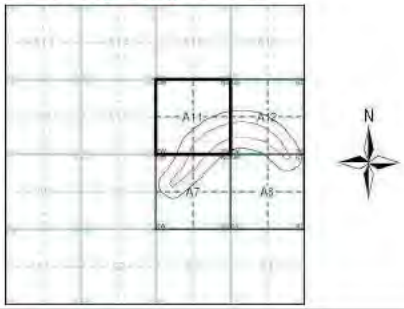
LANDMARK INFORMATION GROUP

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Norfolk	1:2,500	1882	2
Norfolk	1:2,500	1907	3
Norfolk	1:2,500	1928	4
Ordnance Survey Plan	1:2,500	1966 - 1967	5
Additional SIMs	1:2,500	1966 - 1980	6
Additional SIMs	1:2,500	1988	7
Additional SIMs	1:2,500	1993	8
Large-Scale National Grid Data	1:2,500	1994	9
Historical Aerial Photography	1:2,500	1999	10

Historical Map - Segment A11



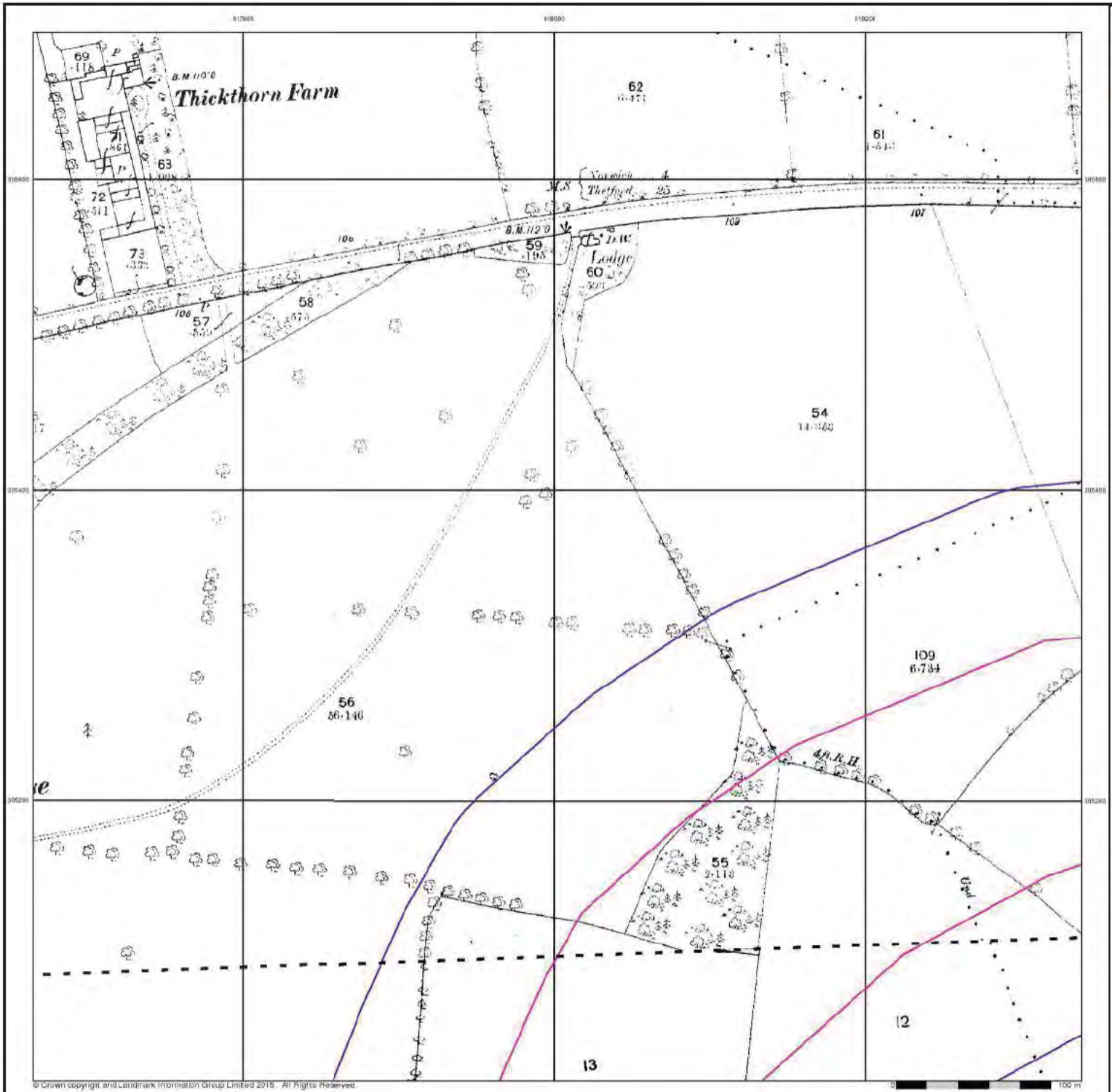
Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
National Grid Reference: 618010, 304990
Slice: A
Site Area (Ha): 15.75
Search Buffer (m): 100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

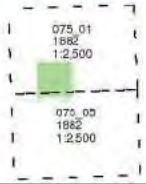
Norfolk

Published 1882

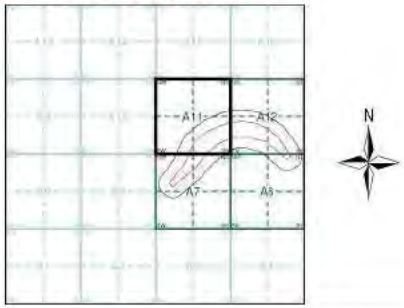
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



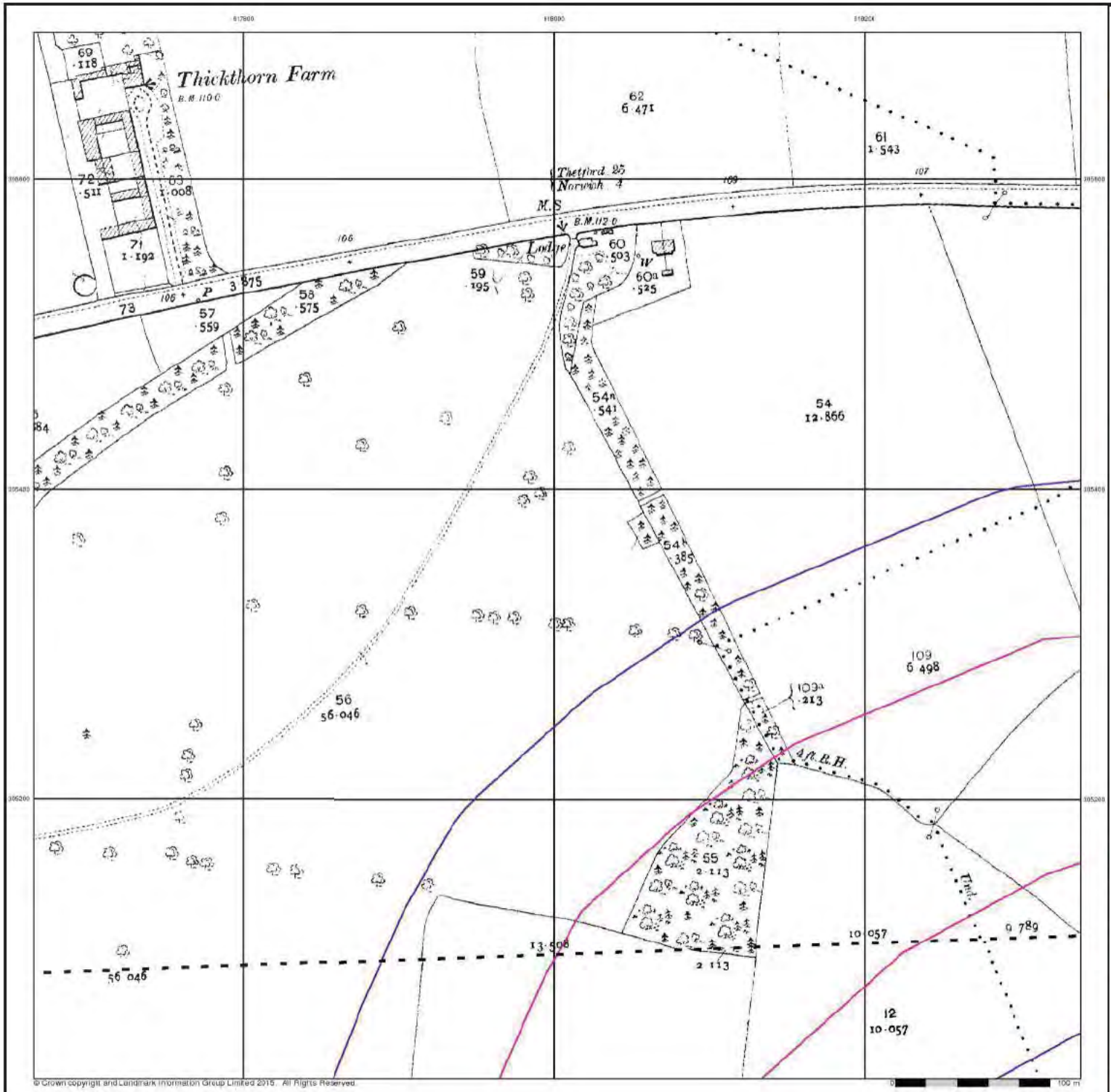
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

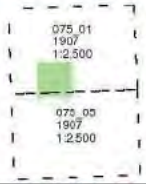
Norfolk

Published 1907

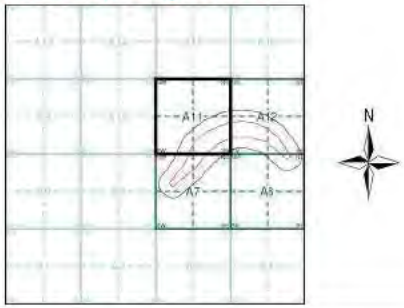
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

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Customer Ref:	A47 Thickthorn
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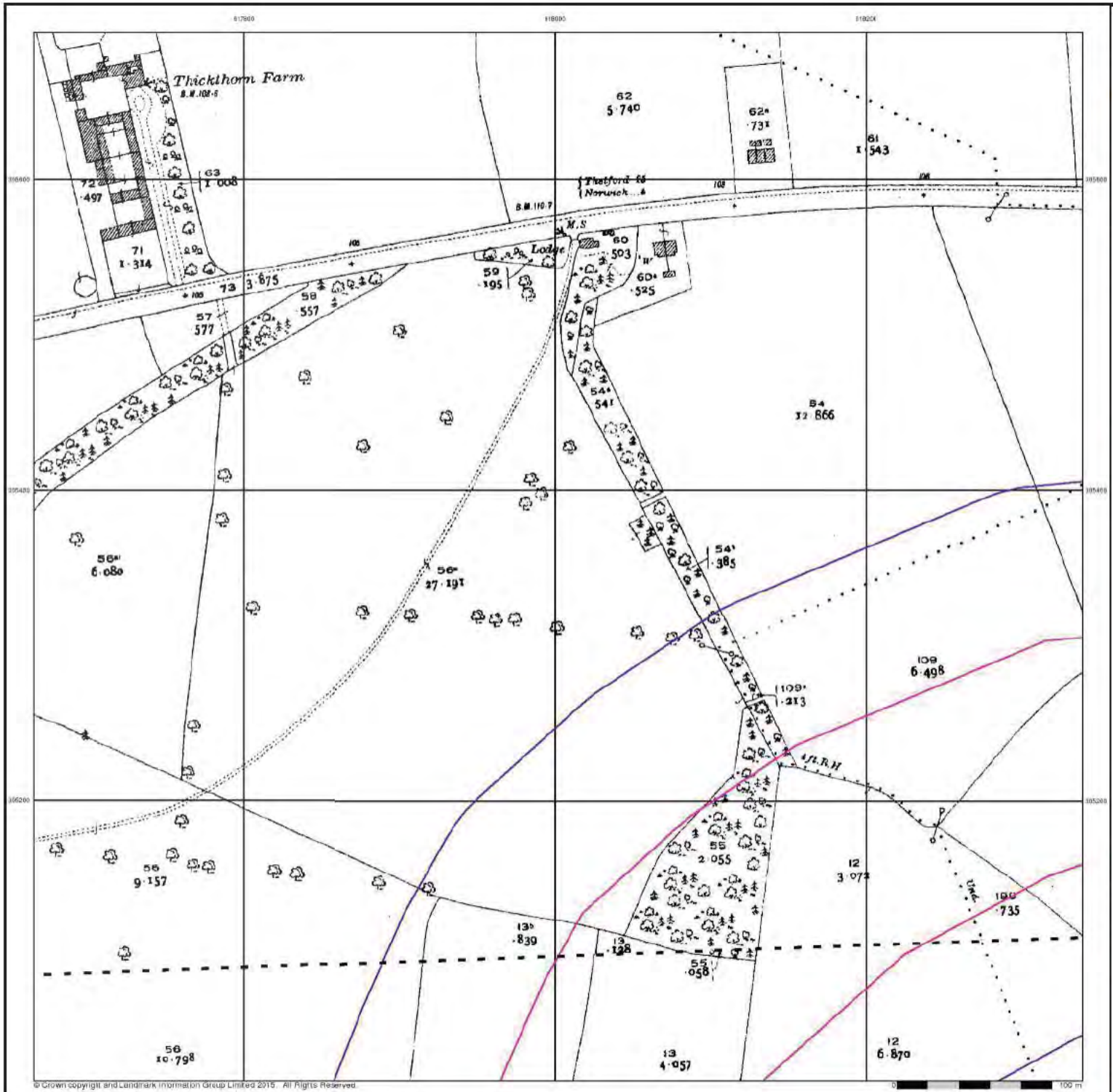
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP

[redacted].uk



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LANDMARK INFORMATION GROUP®

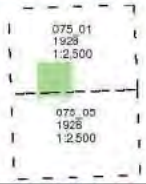
Norfolk

Published 1928

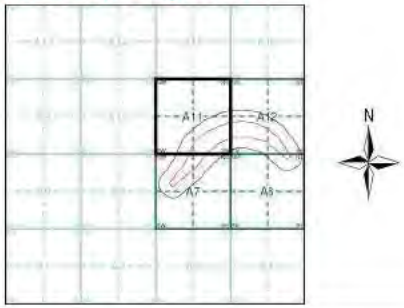
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

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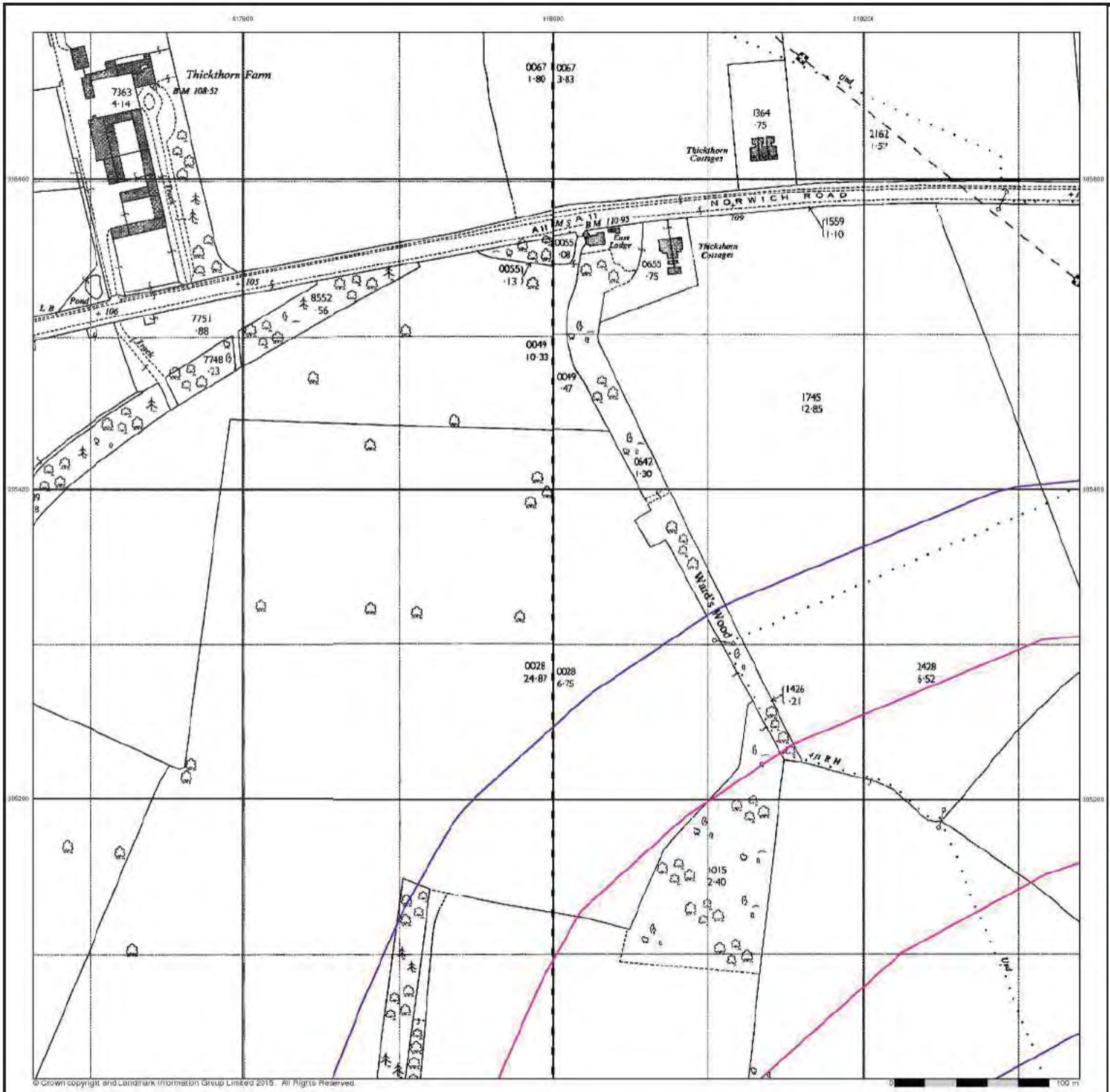
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck

LANDMARK INFORMATION GROUP

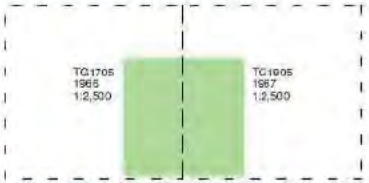
Ordnance Survey Plan

Published 1966 - 1967

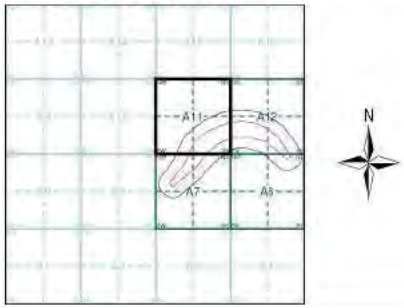
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

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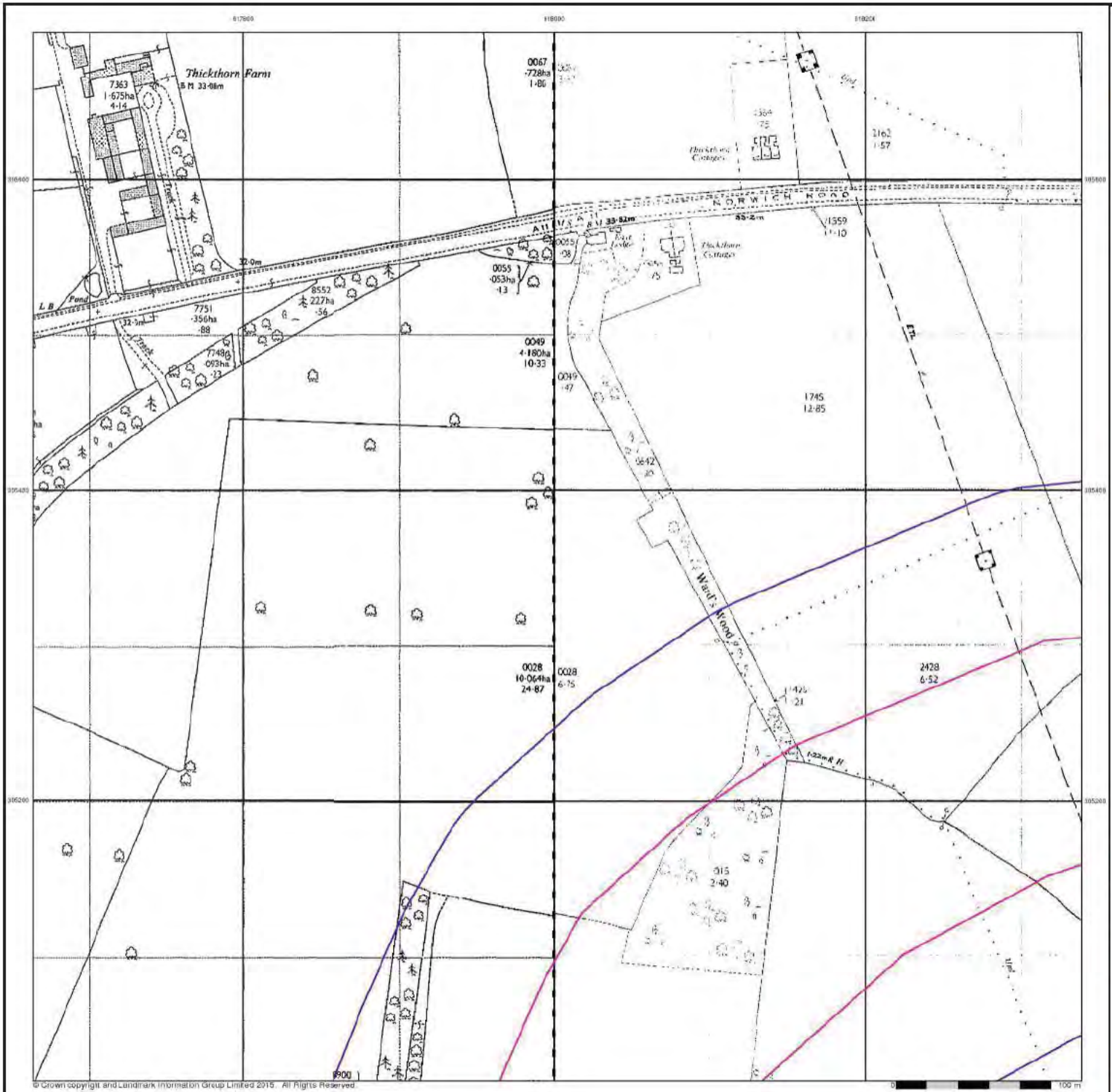
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

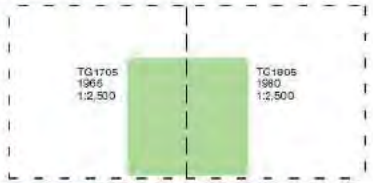
Additional SIMs

Published 1966 - 1980

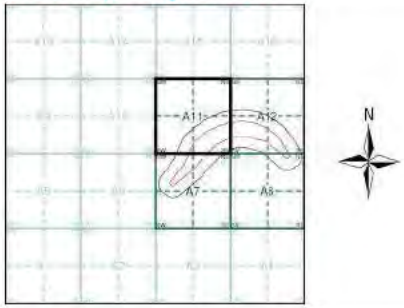
Source map scale - 1:2,500

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 A11



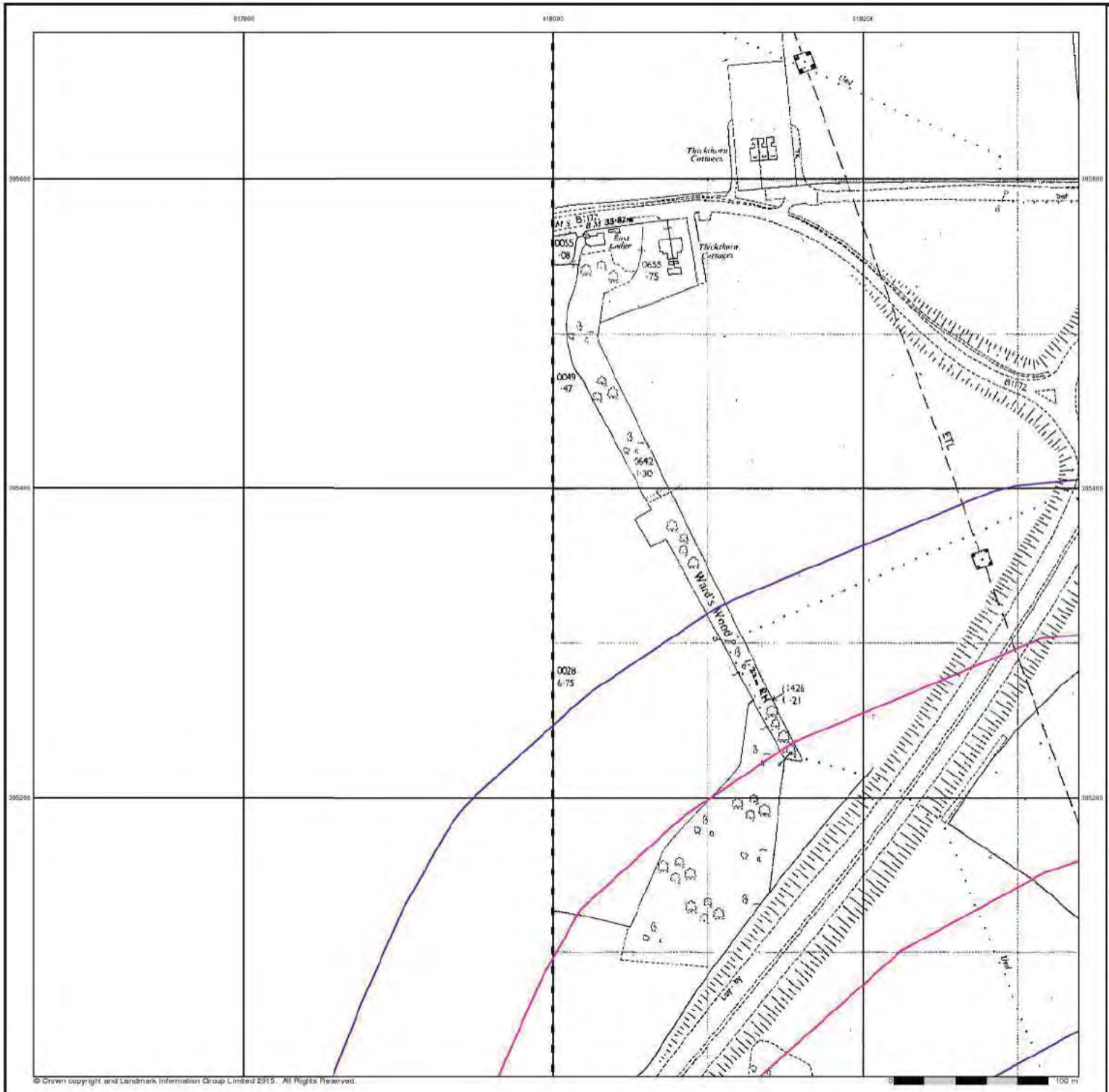
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

Additional SIMs

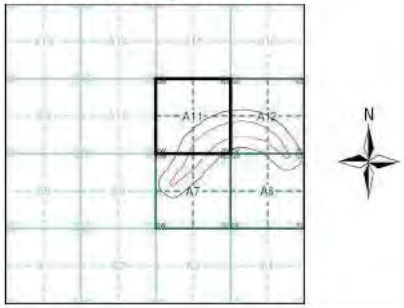
Published 1988

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 A11



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National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP

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Additional SIMs

Published 1993

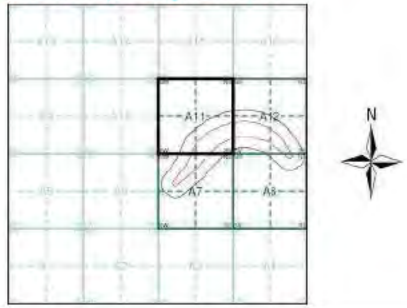
Source map scale - 1:2,500

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)

TG1806
1993
1:2,500

Historical Map - Segment A11



Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
National Grid Reference: 618010, 304990
Slice: A
Site Area (Ha): 15.75
Search Buffer (m): 100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP

[redacted]

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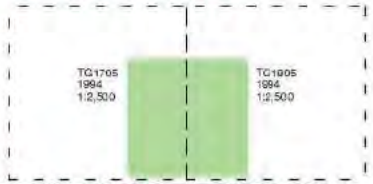
Large-Scale National Grid Data

Published 1994

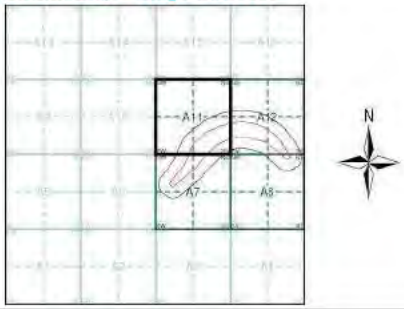
Source map scale - 1:2,500

'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)



Historical Map - Segment A11



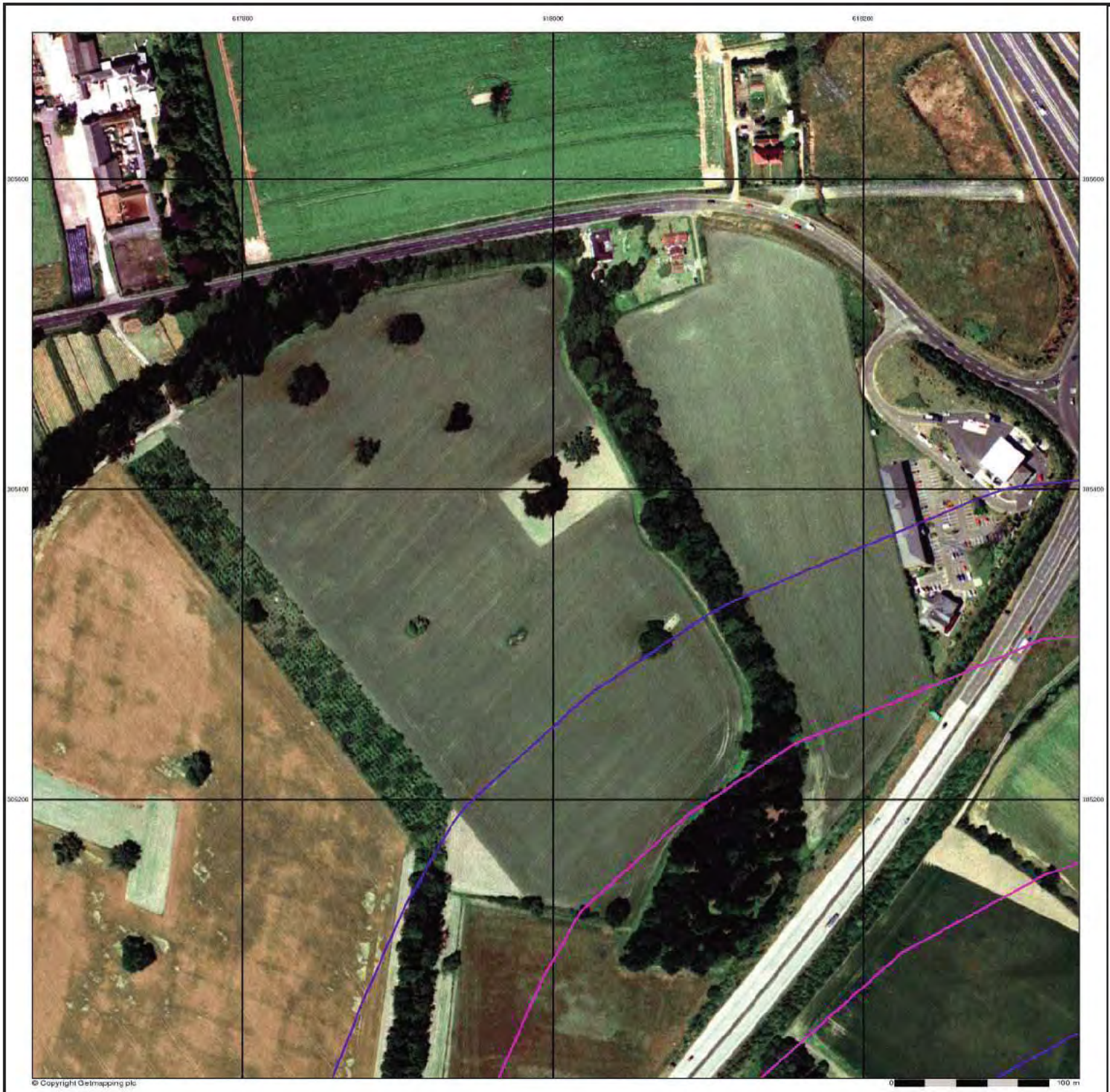
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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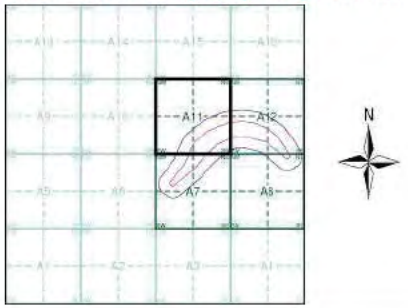
LANDMARK INFORMATION GROUP®

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 A11



Order Details

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Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP

Historical Mapping Legends

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

Quarry
Gravel Pit
Sand Pit
Clay Pit
Shingle
Refuse Heap
Sloping Masonry
Flat Rock
Marsh
Reeds
Osiers
Rough Pasture
Furze
Wood
Mixed Wood
Brushwood
Orchard
Fir
Ford
Stepping Stones
Ferry
Waterfall
Lock
Trig. Station
507 Altitude at Trig. Station
B.M.325·9 Bench Mark
342 Surface Level
Arrow denotes flow of water
Antiquities (site of)
Cutting
Embankment
Railway crossing Road
Level Crossing
Road crossing Railway
Railway crossing River or Canal
Road over single stream
Road over River or Canal
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B.P. B.S.	Boundary Post or Stone	P.C.B.	Police Call Box
B.R.	Bridle Road	P	Pump
E.P.	Electricity Pylon	S.P.	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sg.	Spring
G.P.	Guide Post or Board	T.C.B.	Telephone Call Box
M.S.	Mile Stone	Tr.	Trough
M.P. M.R.	Mooring Post or Ring	W.	Well

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

Inactive Quarry, Chalk Pit or Clay Pit
Active Quarry, Chalk Pit or Clay Pit
Rock
Boulders
Cliff
Slopes
Top
Roofed Building
Glazed Roof Building
Sloping Masonry
Archway
Non-Coniferous Tree (surveyed)
Coniferous Tree (surveyed)
Non-Coniferous Trees (not surveyed)
Coniferous Trees (not surveyed)
Orchard Tree
Scrub
Bracken
Coppice, Osier
Reeds
Marsh, Saltings
Rough Grassland
Heath
Culvert
Direction of water flow
Bench Mark
Antiquity (site of)
Cave Entrance
Triangulation Station
Electricity Pylon
Electricity Transmission Line
County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L.B.Bdy. London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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

Cliff
Slopes
Top
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Positioned Boulder
Scree
Non-Coniferous Tree (surveyed)
Coniferous Tree (surveyed)
Non-Coniferous Trees (not surveyed)
Coniferous Trees (not surveyed)
Orchard Tree
Scrub
Bracken
Coppice, Osier
Reeds
Marsh, Saltings
Rough Grassland
Heath
Culvert
Direction of water flow
Triangulation Station
Antiquity (site of)
Electricity Transmission Line
Electricity Pylon
BM 231.60m Bench Mark
Buildings with Building Seed
Roofed Building
Glazed Roof Building
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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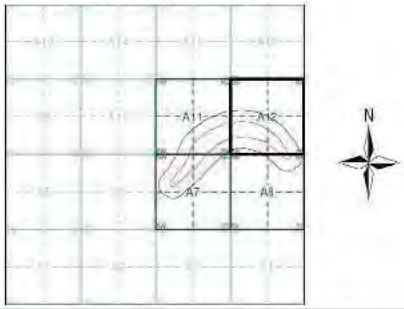
LANDMARK INFORMATION GROUP

Historical Mapping & Photography included:

Historical Map - Segment A12



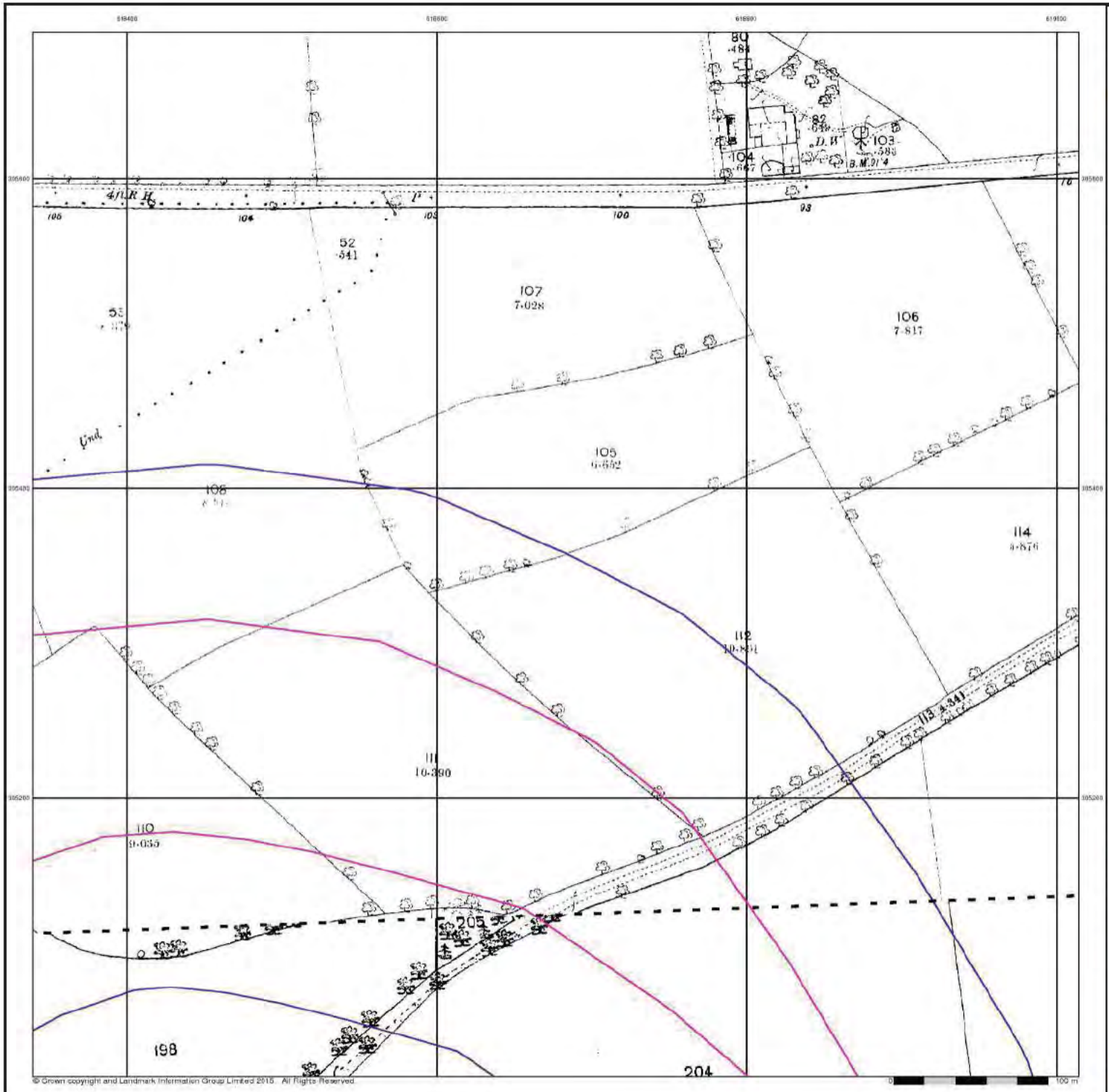
Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
National Grid Reference: 618010, 304990
Slice: A
Site Area (Ha): 15.75
Search Buffer (m): 100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

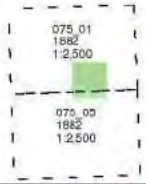
Norfolk

Published 1882

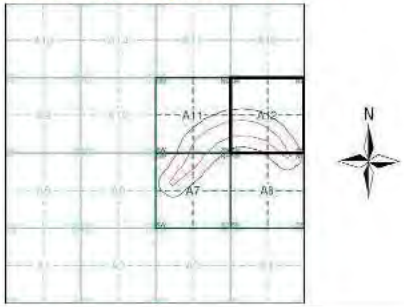
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A12



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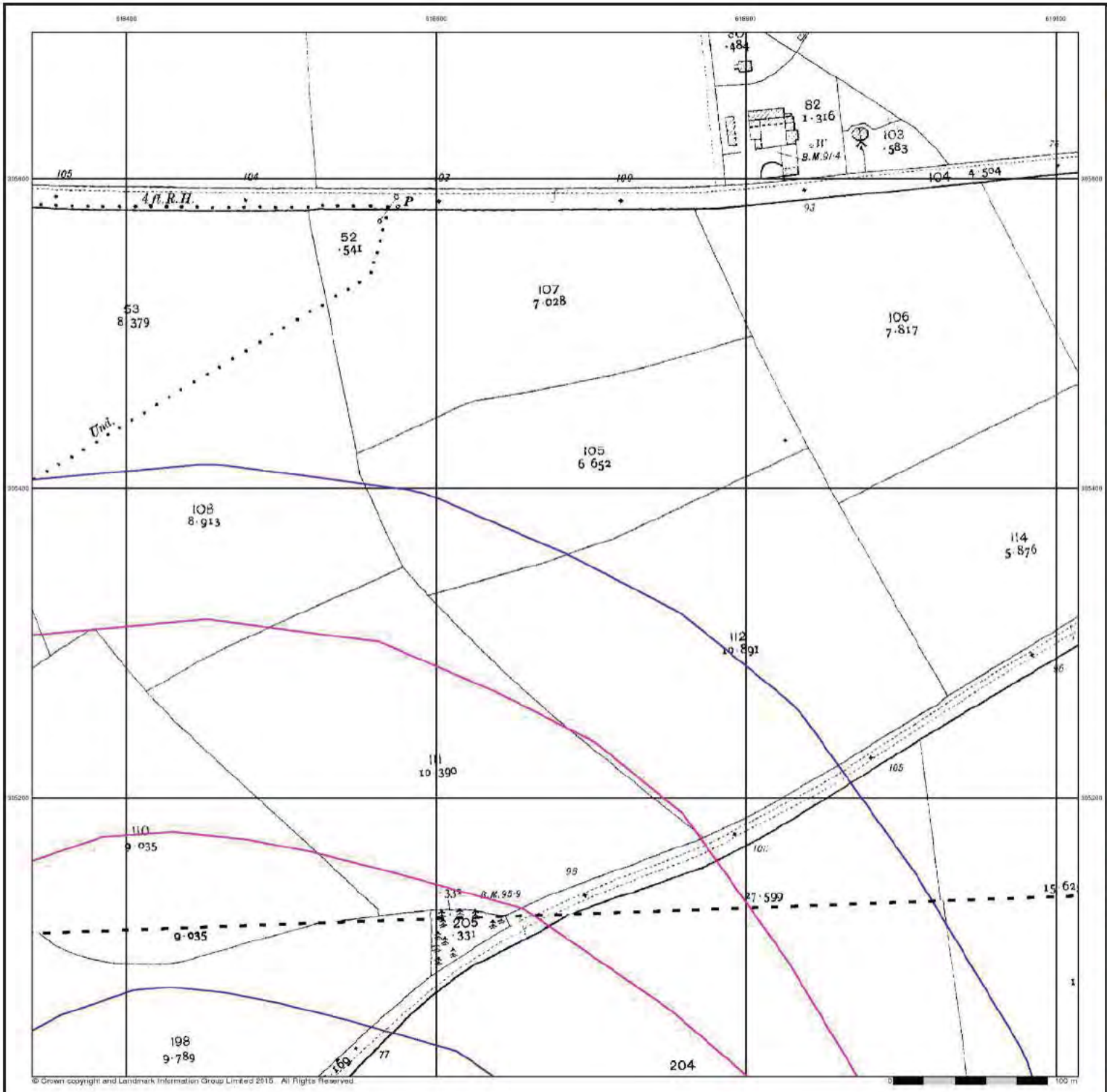
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

Norfolk

Published 1907

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.

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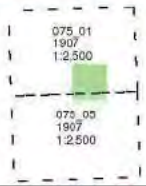
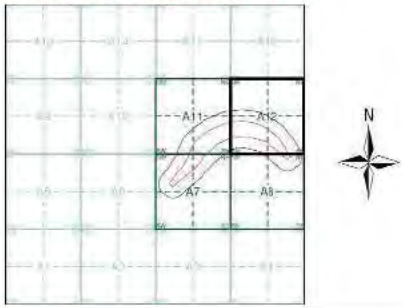


Historical Map - Segment A12



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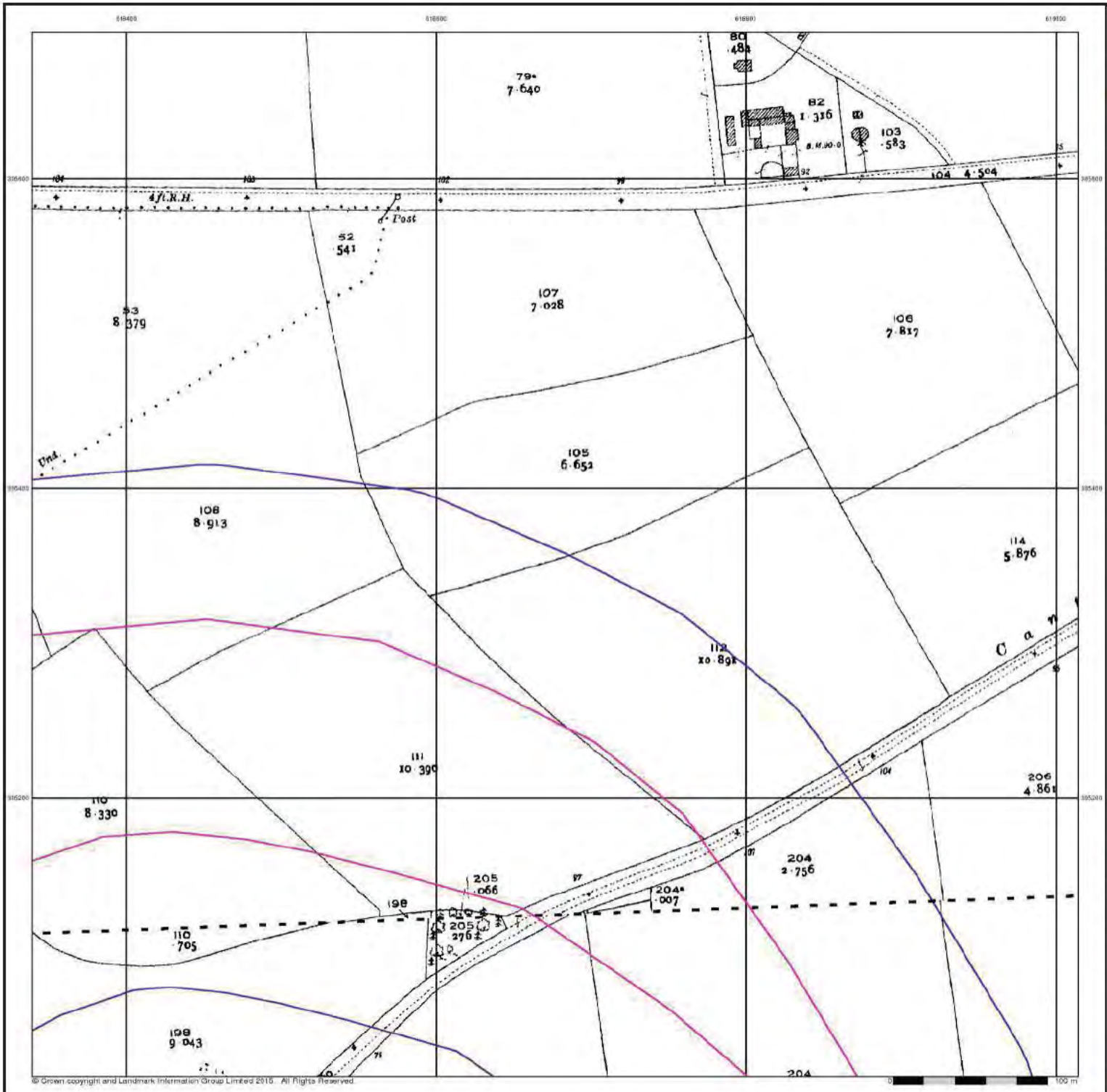
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

Norfolk

Published 1928

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.

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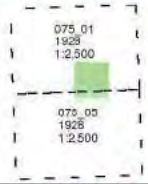
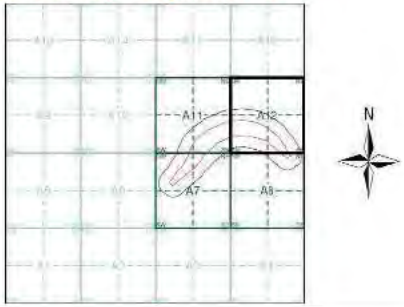


Historical Map - Segment A12



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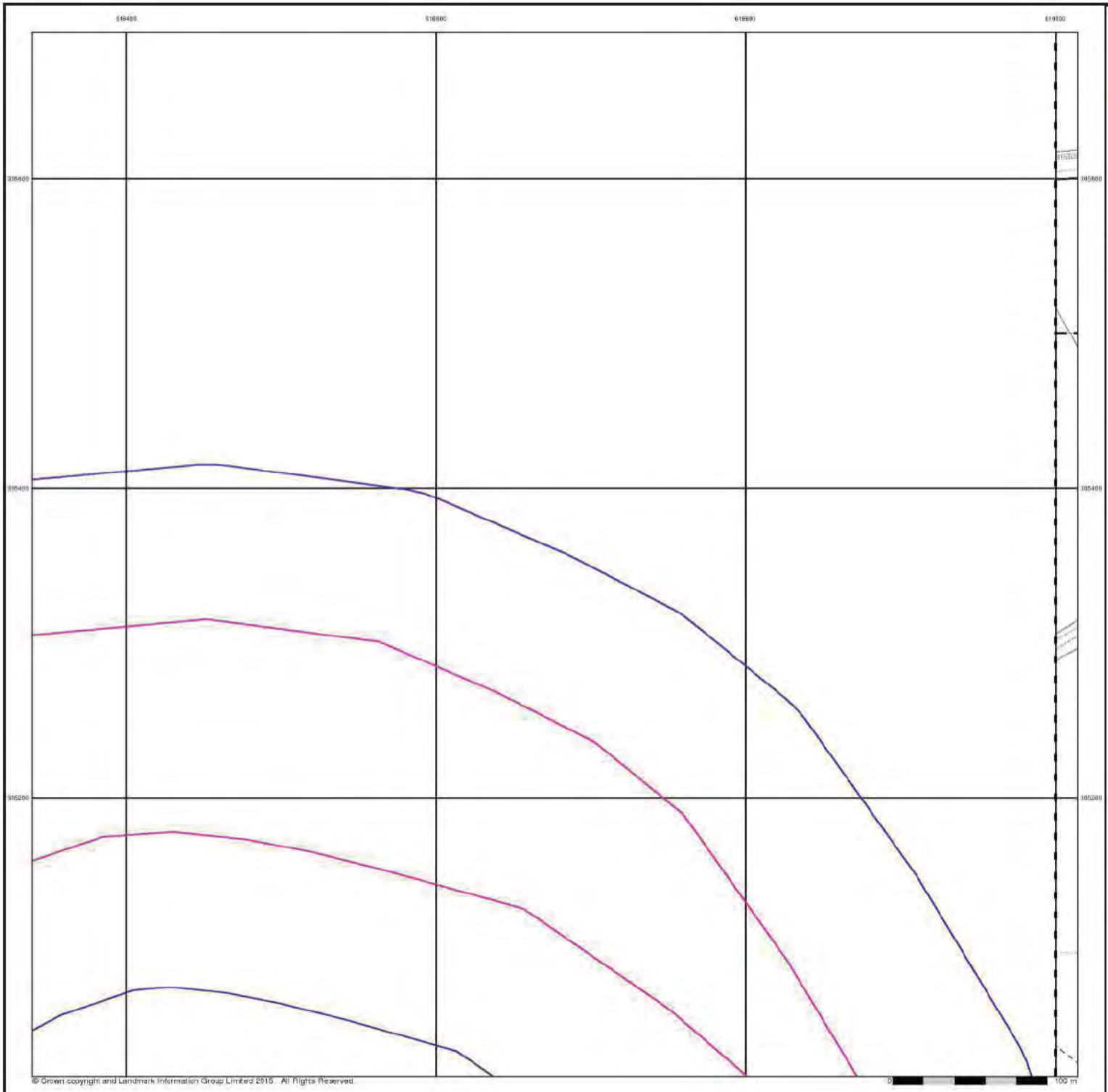
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP

[redacted]



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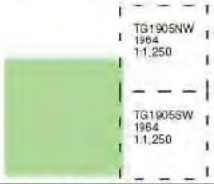
Ordnance Survey Plan

Published 1964

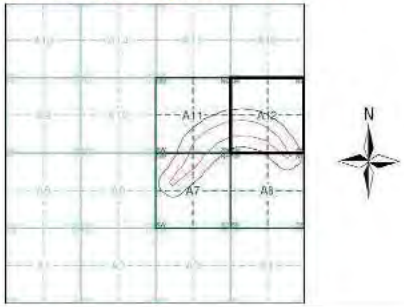
Source map scale - 1:1,250

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 A12



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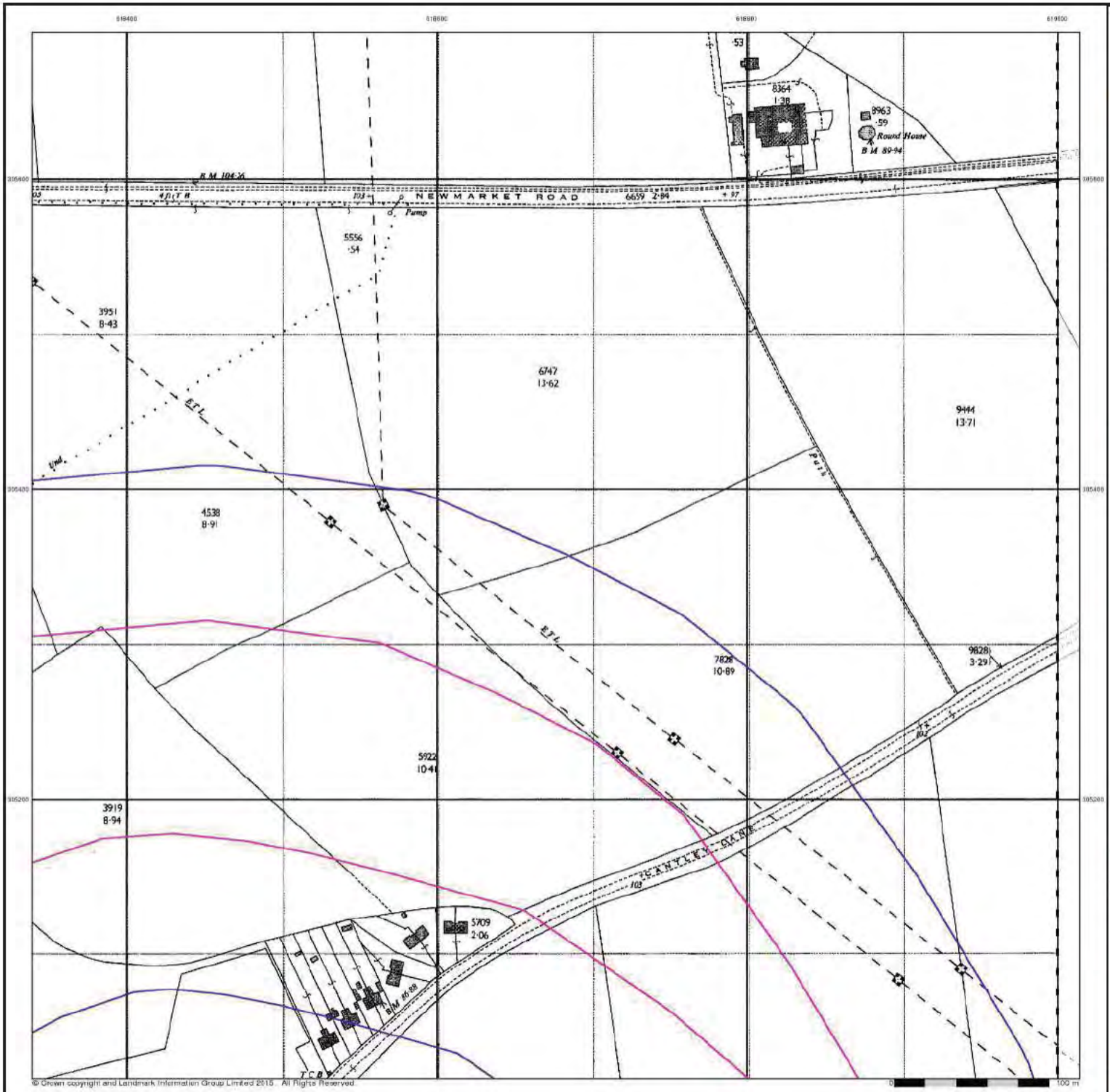
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

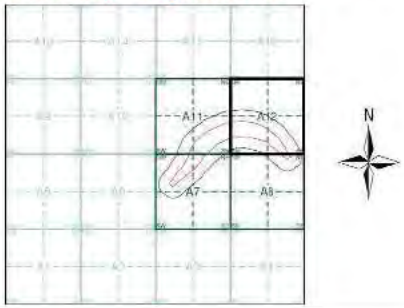
Published 1967

Source map scale - 1:2,500

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

Map Name(s) and Date(s)

Historical Map - Segment A12



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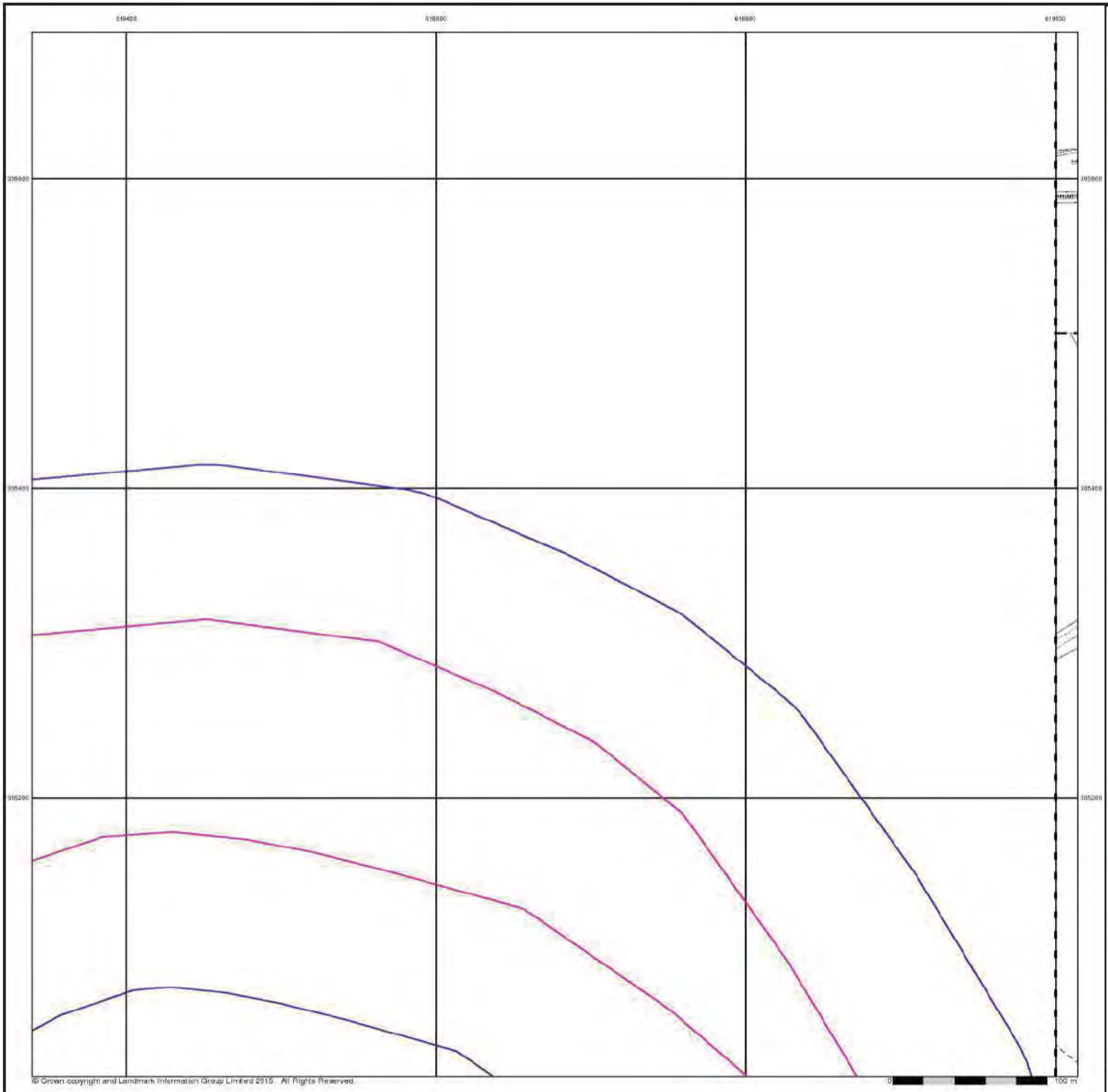
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

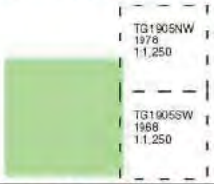
Ordnance Survey Plan

Published 1968 - 1978

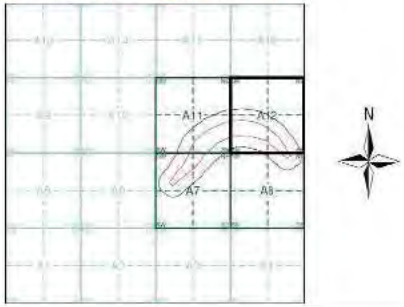
Source map scale - 1:1,250

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 A12



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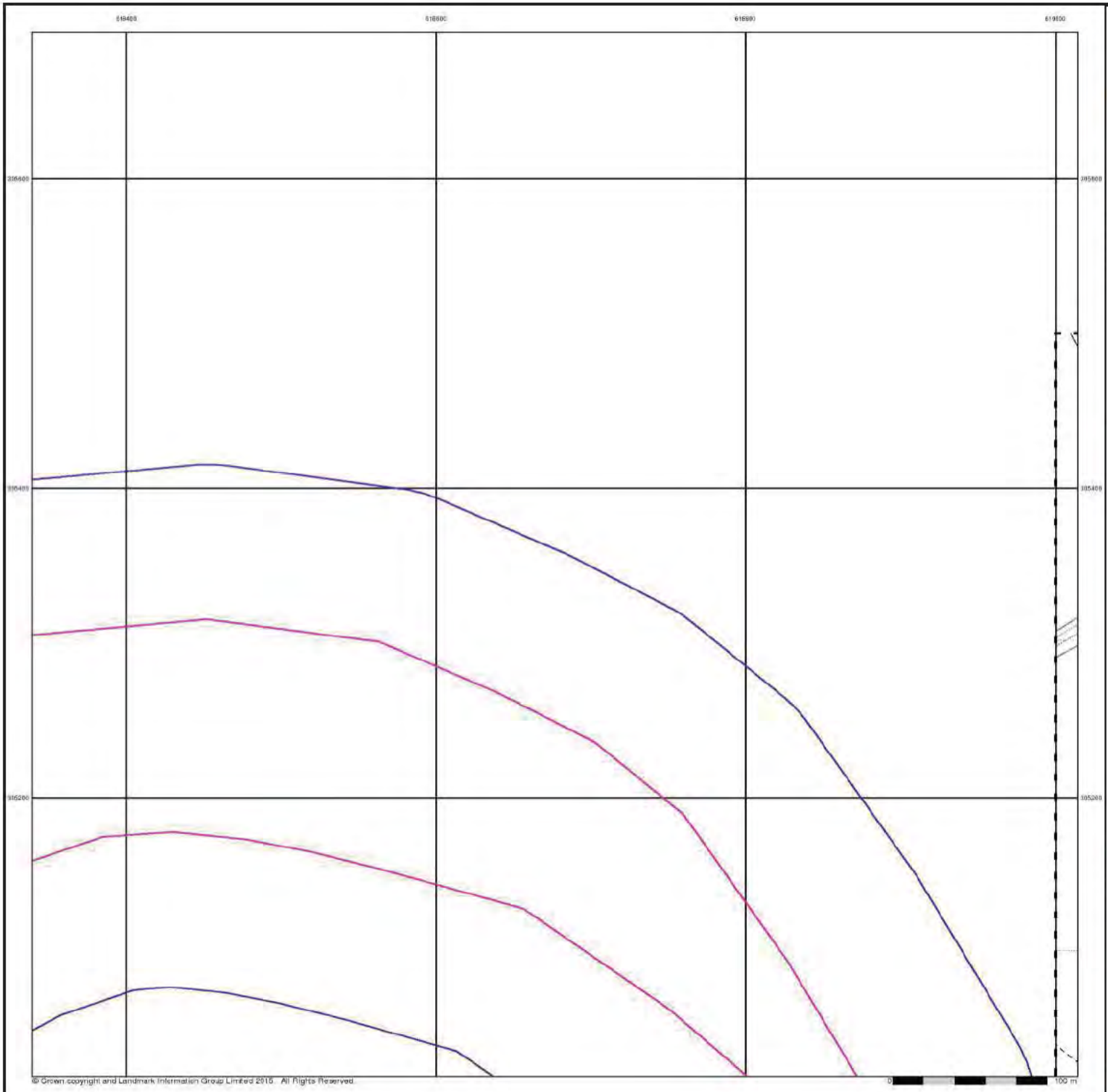
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

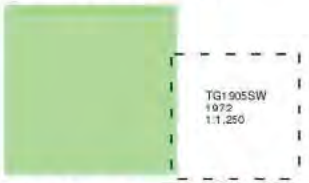
Ordnance Survey Plan

Published 1972

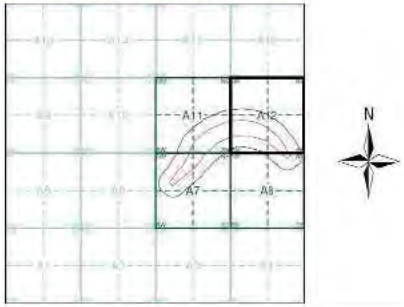
Source map scale - 1:1,250

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 A12



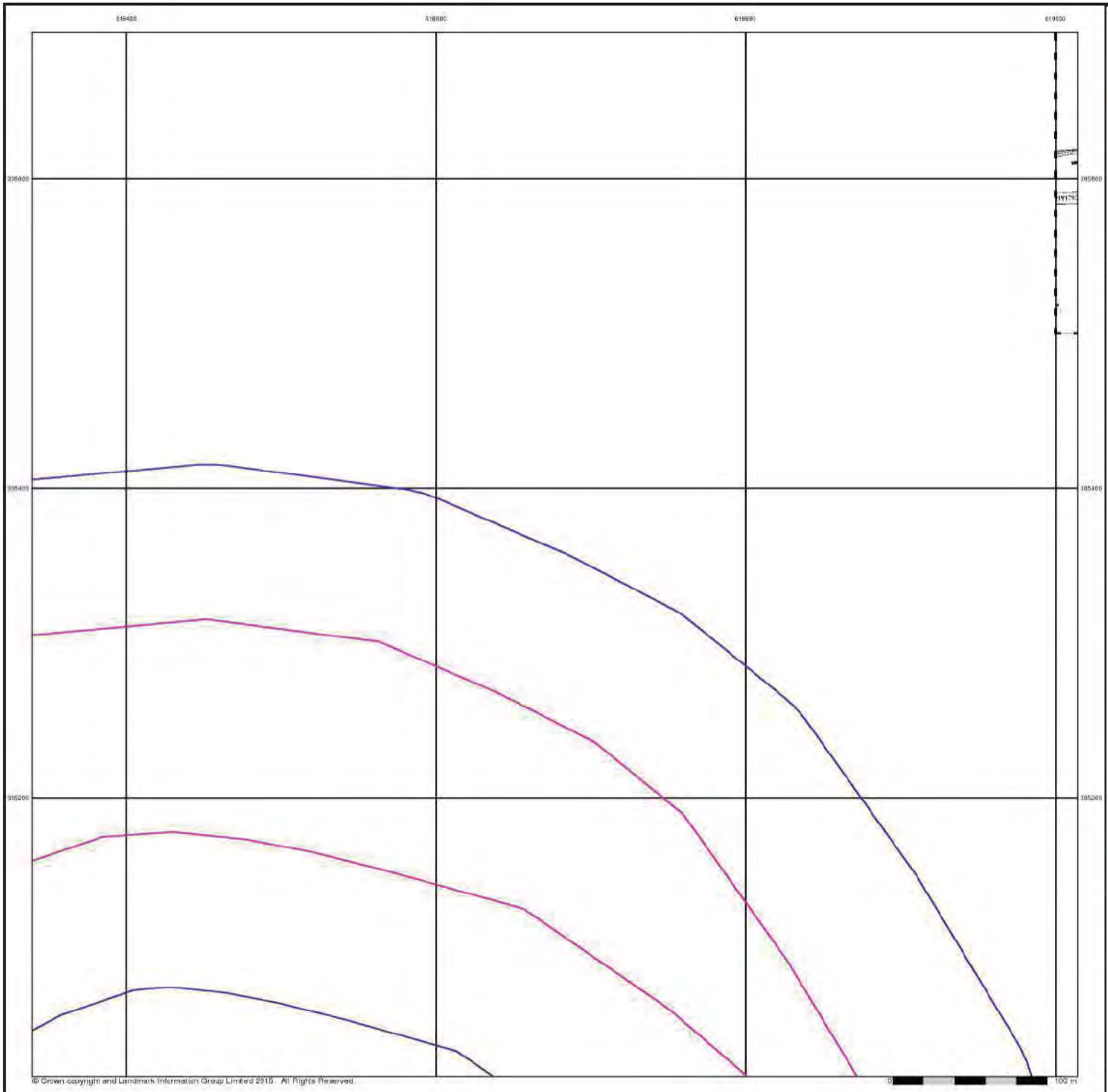
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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Supply of Unpublished Survey Information

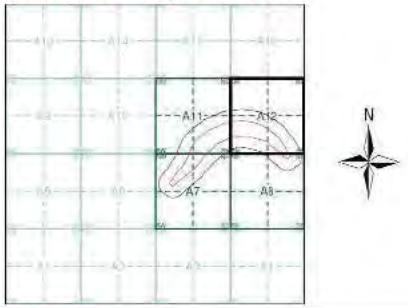
Published 1975

Source map scale - 1:1,250

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 A12



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Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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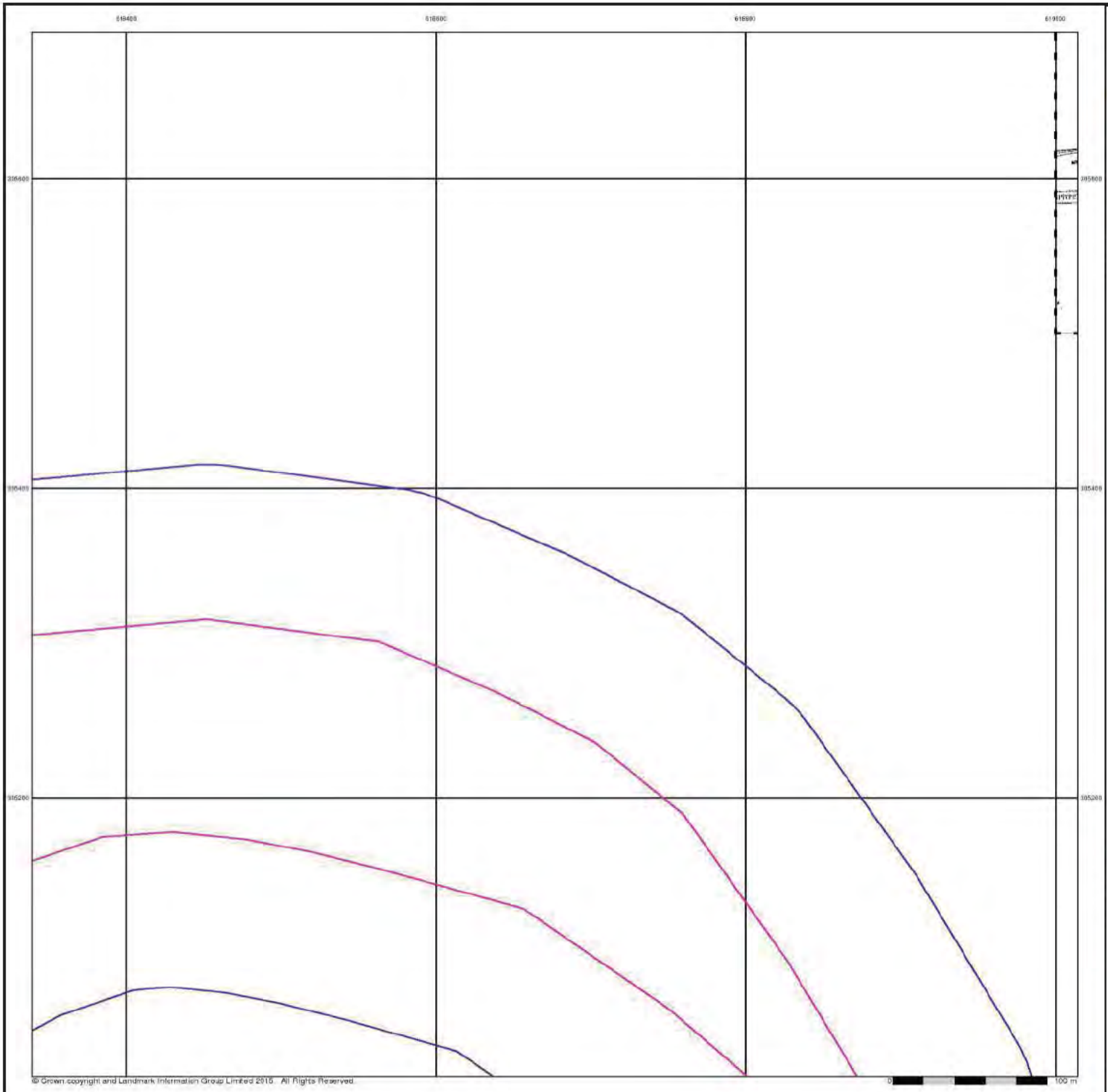
[redacted]



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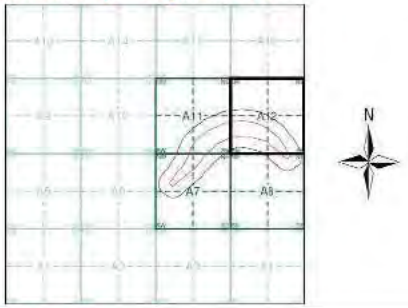
Map Name(s) and Date(s)

Historical Map - Segment A12



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Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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[redacted]

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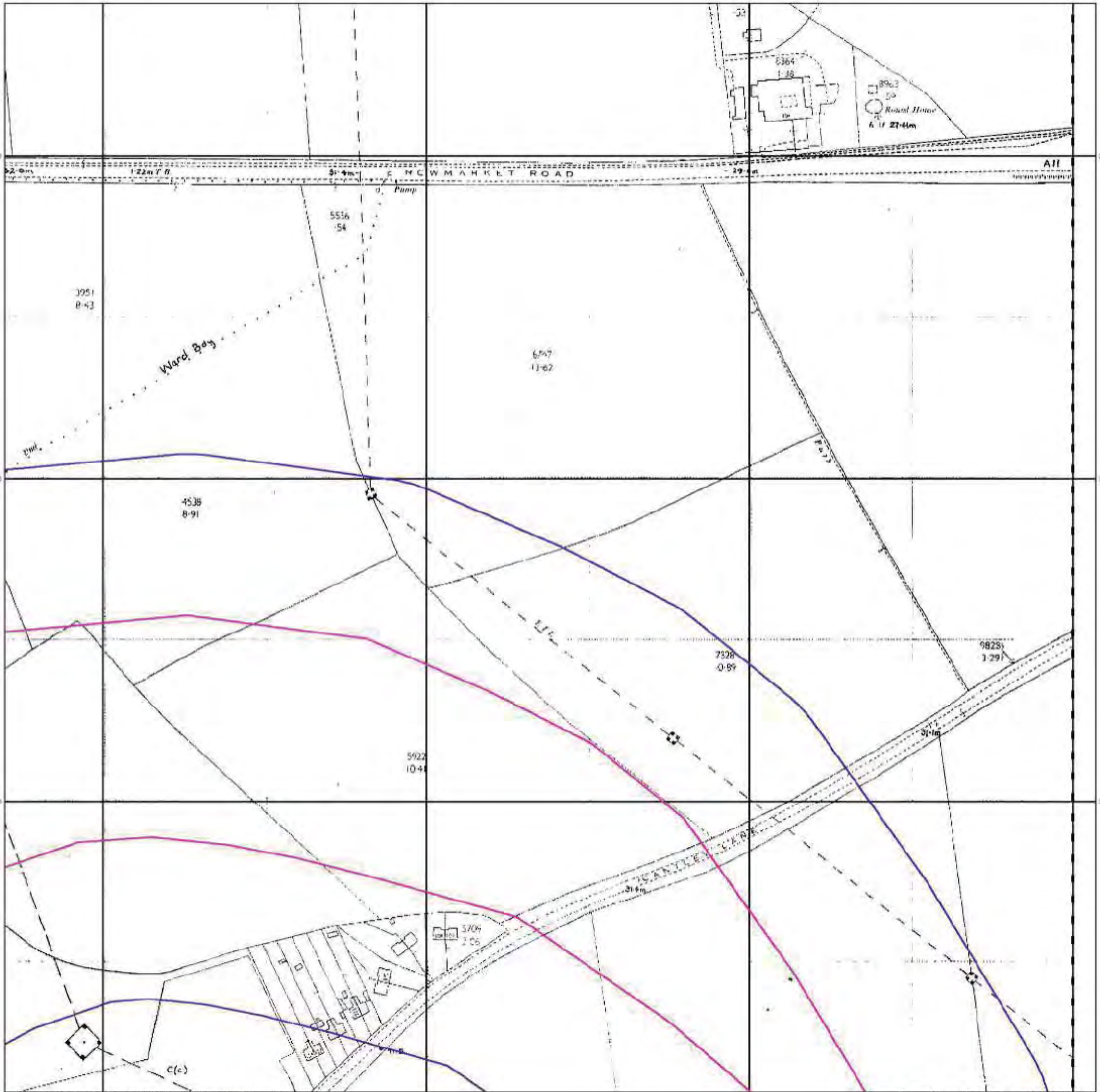
Additional SIMs

Published 1980

Source map scale - 1:2,500

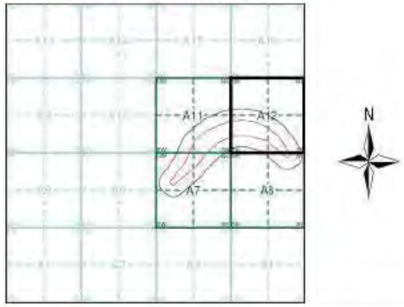
The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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



Map Name(s) and Date(s)

TQ1805
1980
1:2,500

Historical Map - Segment A12



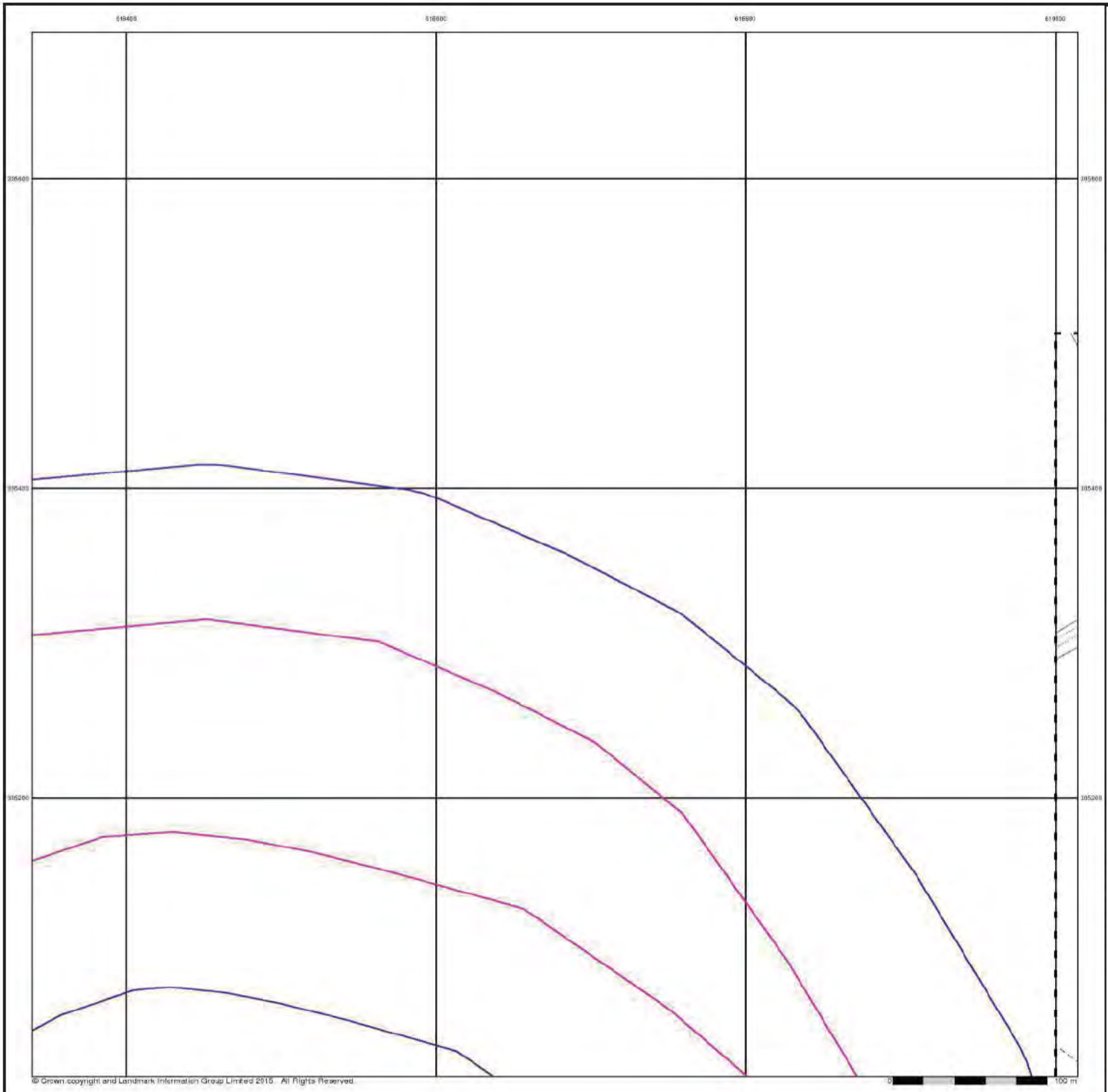
Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
National Grid Reference: 618010, 304990
Slice: A
Site Area (Ha): 15.75
Search Buffer (m): 100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP



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Additional SIMs

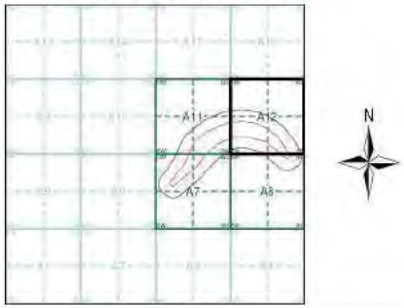
Published 1982

Source map scale - 1:1,250

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 A12



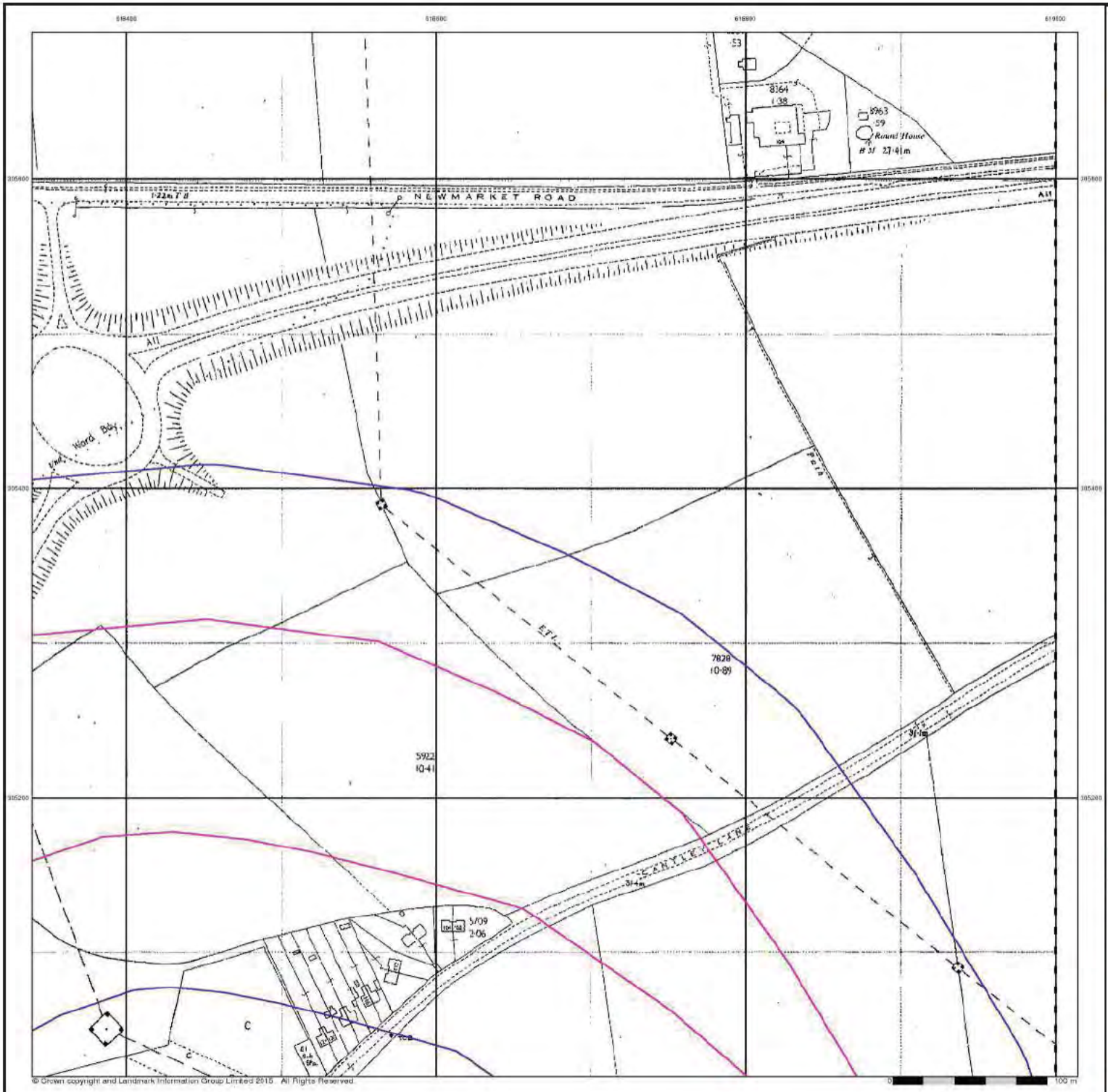
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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Additional SIMs

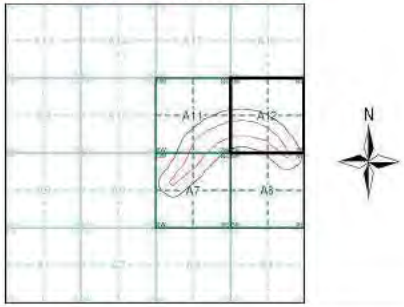
Published 1988

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 A12



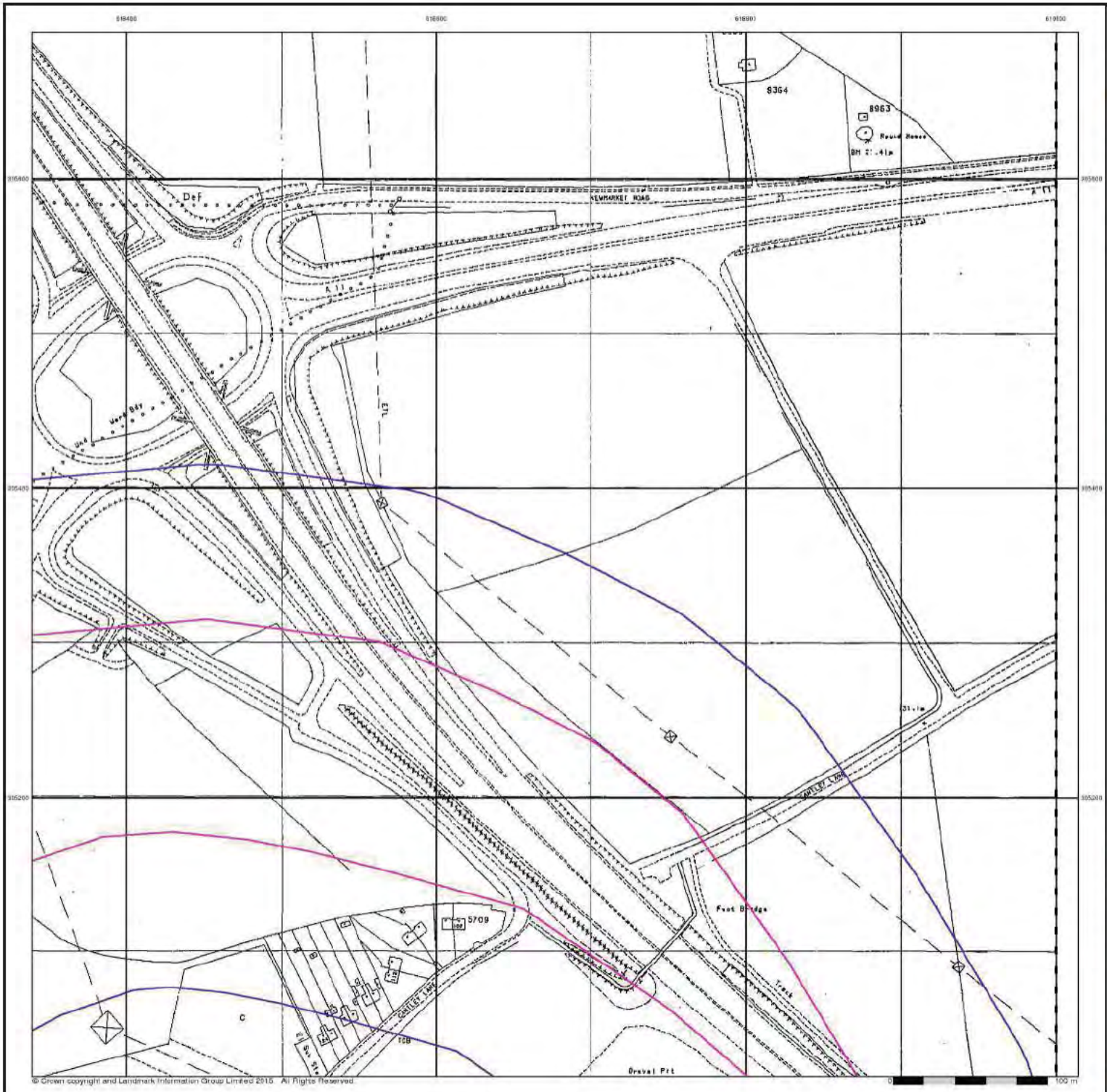
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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Additional SIMs

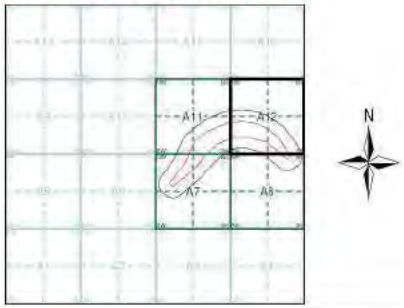
Published 1993

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 A12



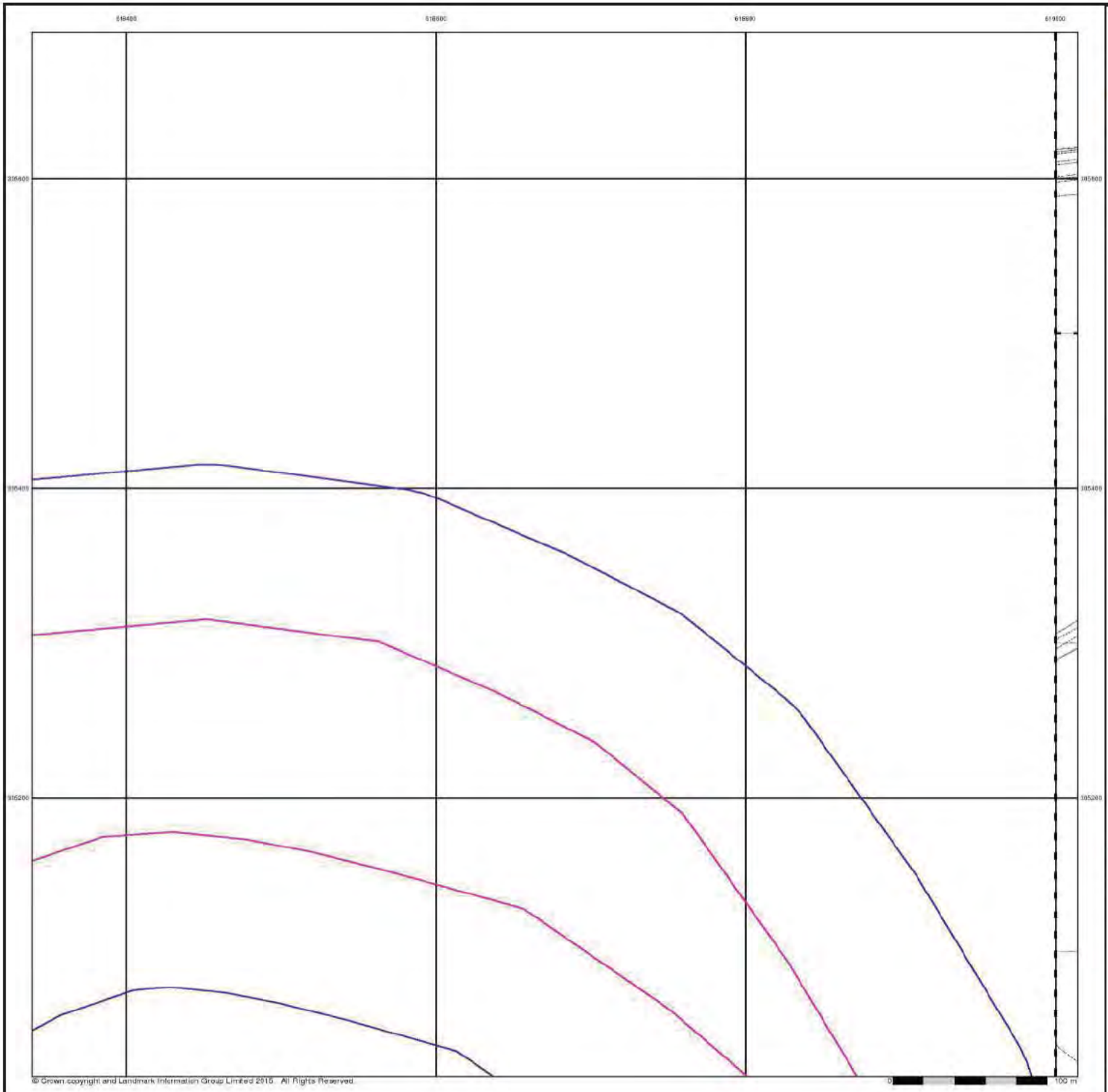
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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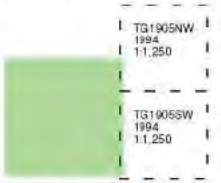
Large-Scale National Grid Data

Published 1994

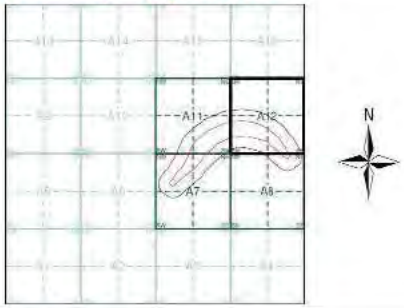
Source map scale - 1:1,250

'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 A12



Order Details

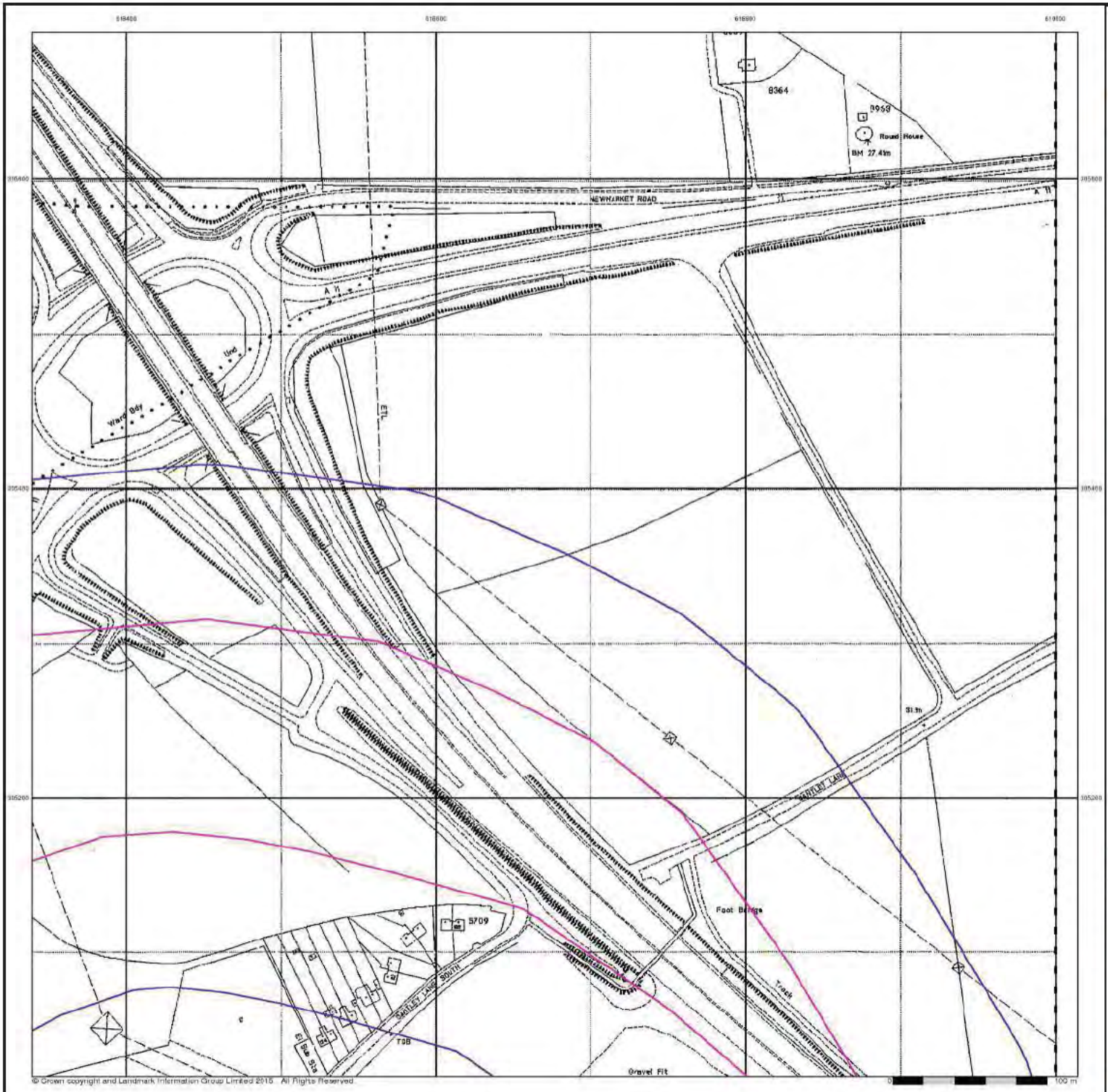
Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP

Tel: [redacted]



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LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

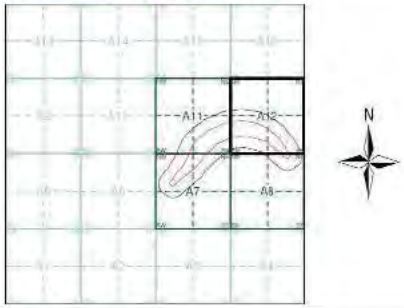
Published 1994

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)

Historical Map - Segment A12



Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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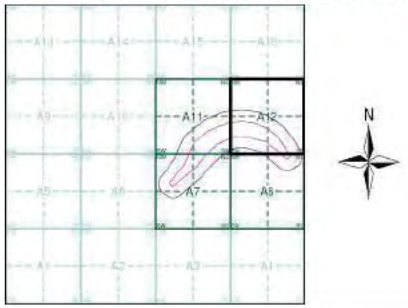
Historical Aerial Photography

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 A12



Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	618010, 304990
Slice:	A
Site Area (Ha):	15.75
Search Buffer (m):	100

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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Envirocheck® Report:

Datasheet

Order Details:

Order Number:
108824762_1_1

Customer Reference:
A47 Thickthorn

National Grid Reference:
619370, 305050

Slice:
B

Site Area (Ha):
15.75

Search Buffer (m):
1000

Site Details:

A47 Thickthorn Junction
Cringleford
Norfolk

Client Details:

[redacted]
AECOM Ltd
Saxon House
27 Duke Street
Chelmsford
Essex
CM1 1HT

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Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Copyright Notice

Natural England Copyright Notice

Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v50.0

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2				1
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2		Yes		
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 3			1	7 (*12)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 7	Yes	n/a	n/a	n/a
Drift Deposits	pg 8	1	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Source Protection Zones	pg 8		2		
Extreme Flooding from Rivers or Sea without Defences	pg 8	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 8	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Detailed River Network Lines	pg 8		Yes	Yes	n/a
Detailed River Network Offline Drainage	pg 9		Yes	Yes	n/a

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 11	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 11			1	
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 12	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 12	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 13			2	3
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 14	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 14	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 14	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 15	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 17				1
Fuel Station Entries					
Points of Interest - Commercial Services	pg 17				1
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 17				3
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental	pg 17				1
Gas Pipelines					
Underground Electrical Cables					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas	pg 18				1
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 18	2			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	2	618400 304950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	2	618950 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9SW (NW)	0	2	619300 305100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW (SW)	18	2	619350 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	23	2	618950 304950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	26	2	618400 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	54	2	618800 304950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5NW (W)	63	2	619100 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(W)	73	2	618900 304900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	76	2	619000 304950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	81	2	618700 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	87	2	618750 304950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	94	2	618700 304650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	109	2	618650 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(W)	123	2	618850 304850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(W)	128	2	618750 304850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5NW (SW)	146	2	619050 304900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	165	2	618500 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	167	2	618500 304900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9SW (W)	213	2	619350 305050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW (W)	213	2	619150 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	214	2	618500 304950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	223	2	619000 304750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B5NE (S)	232	2	619374 305000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5NW (S)	247	2	619350 304700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5NW (SW)	257	2	619150 304850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	264	2	618700 304700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5NW (SW)	265	2	619050 304750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	273	2	619000 304700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	293	2	618750 304700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW (SW)	293	2	619150 304750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NE (S)	299	2	619374 304900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (W)	313	2	619350 305045
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5NW (SW)	326	2	619250 304800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5NW (SW)	362	2	619150 304700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW (S)	411	2	619300 304800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SE (SE)	463	2	619374 305045
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SE (N)	466	2	619374 305050
1	**Discharge Consents** Operator: Mrs S Turner Property Type: Domestic Property (Single) Location: Railway Crossing Cott Intwood Road, Cringleford, Norwich, Nr4 6tg Authority: Environment Agency, Anglian Region Catchment Area: Upper River Yare / River Tiffey Reference: Pr4nf921 Permit Version: 1 Effective Date: 18th March 1987 Issued Date: 18th March 1987 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Trib River Yare **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	B5NE (SE)	719	3	619600 304900
	Nearest Surface Water Feature	B5NW (SW)	141	-	619020 304847

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Water Abstractions** Operator: [redacted] Licence Number: 7/34/13/*G/0062 Permit Version: 100 Location: 2 Wells At Meadow Fm,Crin'Ford Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: E chalk; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st December 1965 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B5NW (SW)	424	3	619310 304960
3	**Water Abstractions** Operator: [redacted] Licence Number: 7/34/13/*G/0151 Permit Version: 100 Location: Well, Newmarket Rd,Cringleford Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: E chalk; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B9NW (N)	648	3	619170 305690
4	**Water Abstractions** Operator: [redacted] Licence Number: 7/34/13/*G/0179 Permit Version: 102 Location: Bore,Intwood Hall,Keswick Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Intwood Hall, Norfolk Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 8th June 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B1NW (S)	883	3	619120 304130
4	**Water Abstractions** Operator: [redacted] Licence Number: 7/34/13/*G/0179 Permit Version: 101 Location: Bore,Intwood Hall,Keswick Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Intwood Hall, Norfolk Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 20th September 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B1NW (S)	883	3	619120 304130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Water Abstractions** Operator: Intwood Farms Ltd Licence Number: 7/34/13/*G/0179 Permit Version: 100 Location: Bore,Intwood Hall,Keswick Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: E chalk; Status: Perpetuity Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st July 1997 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B1NW (S)	883	3	619120 304130
5	**Water Abstractions** Operator: [redacted] Licence Number: 7/34/13/*G/0179 Permit Version: 102 Location: Bore,Intwood Hall,Keswick Authority: Environment Agency, Anglian Region Abstraction: Household Water Supply: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th June 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B1NW (S)	884	3	619350 304240
5	**Water Abstractions** Operator: [redacted] Licence Number: 7/34/13/*G/0179 Permit Version: 101 Location: Bore,Intwood Hall,Keswick Authority: Environment Agency, Anglian Region Abstraction: Household Water Supply: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 20th September 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B1NW (S)	884	3	619350 304240
5	**Water Abstractions** Operator: Intwood Farms Ltd Licence Number: 7/34/13/*G/0018 Permit Version: 100 Location: Bore,Intwood Hall,Keswick Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: E chalk; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st December 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B1NW (S)	884	3	619350 304240

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: [redacted] Licence Number: [redacted]/34/13/*7139 Permit Version: Not Supplied Location: Well At Keswickhall Farm, KESWICK Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 3 Yearly Rate (m3): 9000 Details: Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B10SE (E)	1156	3	620040 305080
	Water Abstractions Operator: [redacted] Licence Number: 7/34/13/*S/0247 Permit Version: 101 Location: Intwood Stream At Intwood Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 November Authorised End: 28 February Permit Start Date: 8th June 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B2SW (S)	1396	3	619780 303920
	Water Abstractions Operator: Intwood Farms Ltd Licence Number: 7/34/13/*S/0247 Permit Version: 100 Location: Intwood Stream At Intwood Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Time Limit Authorised Start: 01 November Authorised End: 28 February Permit Start Date: 1st November 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B2SW (S)	1396	3	619780 303920
	Water Abstractions Operator: Roeday Properties Ltd Licence Number: 7/34/13/*s/162 Permit Version: Not Supplied Location: Dyke Adjacent To Yare, CRINGLEFORD Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 27 Yearly Rate (m3): 182000 Details: Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B14NW (N)	1572	3	619830 306340

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Bartram Mowers Ltd Licence Number: 7/34/13/*G/0262 Permit Version: 1 Location: Borehole In Bluebell Road Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Spray Irrigation Definition Order Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: E Chalk; Status: Temporary Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 20th August 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1787	3	620010 306465
	Water Abstractions Operator: Bartram Mowers Ltd Licence Number: 7/34/13/*G/0262 Permit Version: 1 Location: Borehole In Bluebell Road Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: E Chalk; Status: Temporary Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 20th August 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1791	3	620015 306465
	Water Abstractions Operator: Bartram Mowers Ltd Licence Number: 7/34/13/*g/262 Permit Version: Not Supplied Location: Borehole, Eaton, CRINGLEFORD, Norfolk Authority: Environment Agency, Anglian Region Abstraction: Unspecified Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 7 Yearly Rate (m3): 19500 Details: E Chalk; Status: Temporary Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1791	3	620010 306470
	Water Abstractions Operator: Bartram Mowers Ltd Licence Number: 7/34/13/*g/193 Permit Version: Not Supplied Location: Bore, Bluebell Road, NORWICH Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 14 Yearly Rate (m3): 46000 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1798	3	620050 306440

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: [redacted] Licence Number: 7/34/13/*G/0098 Permit Version: 100 Location: Bore At Avondale Nrsy,E Gar'Tn Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: E chalk; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1980	3	619330 303050
	Water Abstractions Operator: R & J M Place Ltd Licence Number: 7/34/13/*g/210 Permit Version: Not Supplied Location: Bore, Bluebell Road, NORWICH Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 11 Yearly Rate (m3): 545000 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(N)	1981	3	619930 306790
	Water Abstractions Operator: University Of East Anglia Licence Number: An/034/0013/014 Permit Version: 1 Location: Borehole At University Of East Anglia Norwich Authority: Environment Agency, Anglian Region Abstraction: Commercial Private Water Undertaking: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Earlham Rd Norwich Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2013 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(N)	1997	3	619930 306810
	Water Abstractions Operator: University Of East Anglia Licence Number: 7/34/13/*G/0266 Permit Version: 1 Location: Borehole At University Of East Anglia Authority: Environment Agency, Anglian Region Abstraction: Commercial Private Water Undertaking: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Earlham Rd Norwich Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th January 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(N)	1997	3	619930 306810
	Groundwater Vulnerability Soil Classification: Soils of Intermediate Leaching Potential (I1) - Soils which can possibly transmit a wide range of pollutants Map Sheet: Sheet 26 East Norfolk Scale: 1:100,000	B9SE (SE)	0	3	619374 305045

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Drift Deposits Drift Deposit: Low permeability drift deposits occuring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 26 East Norfolk Scale: 1:100,000	(NW)	0	3	618794 305311
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	B5NE (S)	0	2	619374 305000
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	B9SE (SE)	0	2	619374 305045
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(NW)	0	2	618927 305277
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B5NE (SE)	0	2	619409 304966
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B9SE (SE)	0	2	619374 305045
6	**Source Protection Zones** Name: Various Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	(NW)	60	3	618991 305759
7	**Source Protection Zones** Name: Various Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	(NW)	64	3	618991 305759
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	B5NE (SE)	0	3	619405 304975
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	B5NE (SE)	0	3	619410 304970
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
8	**Detailed River Network Lines** River Type: Secondary River River Name: Drain Hydrographic Area: B05 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B5NW (SW)	140	3	619020 304848

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Drain Hydrographic Area: B05 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	B5NW (SW)	196	3	619117 304856
10	**Detailed River Network Lines** River Type: Secondary River River Name: Drain Hydrographic Area: B05 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	B5NW (S)	267	3	619331 304882
11	**Detailed River Network Lines** River Type: Secondary River River Name: Drain Hydrographic Area: B05 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	B5NE (S)	382	3	619418 304877
12	**Detailed River Network Lines** River Type: Secondary River River Name: Drain Hydrographic Area: B05 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	B5NW (SW)	421	3	619301 304913
13	**Detailed River Network Lines** River Type: Secondary River River Name: Drain Hydrographic Area: B05 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk Other Rivers Management Status: Water Course Name: Not Supplied Water Course Reference: Not Supplied	B5NE (S)	457	3	619411 304899
14	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	B5NW (SW)	234	3	619049 304808
15	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	B5NW (SW)	237	3	619047 304807
16	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	B5NW (SW)	251	3	619052 304786

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	B5NW (SW)	410	3	619270 304845
18	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	B5NW (SW)	417	3	619272 304829
19	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	B5NE (SE)	417	3	619476 304863
20	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D005	B5NE (S)	421	3	619388 304837

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Norfolk County Council - Has supplied landfill data		0	5	619374 305045
	Local Authority Landfill Coverage Name: South Norfolk District Council - Has no landfill data to supply		0	4	619374 305045
21	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1995	B5NW (S)	444	-	619262 304722

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: White Chalk Subgroup	B9SE (SE)	0	2	619374 305045
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B5NE (SE)	0	2	619409 304966
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 20 - 40 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	B9SE (SE)	0	2	619374 305045
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 20 - 40 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	B5NE (S)	0	2	619458 304824
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B2NE (SE)	168	2	620068 304283
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B9SE (N)	365	2	619373 305051
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B5SE (S)	787	2	619538 304401

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	B13SW (N)	921	2	619286 306015
22	**BGS Recorded Mineral Sites** Site Name: Intwood Hall Pit Location: , Intwood, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197648 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	B5SW (SW)	424	2	619143 304655
23	**BGS Recorded Mineral Sites** Site Name: Intwood Pit Location: , Intwood, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197658 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	B5NW (S)	459	2	619251 304713
24	**BGS Recorded Mineral Sites** Site Name: Cringleford Pit Location: , Cringleford, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197657 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Sheringham Cliffs Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	B9NW (N)	625	2	619282 305531
25	**BGS Recorded Mineral Sites** Site Name: Cringleford Pit Location: , Cringleford, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197656 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Sheringham Cliffs Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	B9NE (N)	751	2	619509 305417
26	**BGS Recorded Mineral Sites** Site Name: Intwood Hall Pit Location: , Intwood, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197643 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Lowestoft Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	B5SE (S)	975	2	619622 304352

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619458 304824
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619374 305000
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	2	619374 305045
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	2	619409 304966
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	2	619374 305045
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619458 304824
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619374 305000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	2	619374 305045
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	2	619409 304966
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619374 305000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619458 304824
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619356 304967
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	2	619454 305026
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	43	2	619374 305045
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NW (W)	104	2	619035 305009
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	137	2	619374 305000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	226	2	619565 304869
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619374 305000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	2	619374 305045
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	102	2	619356 304967
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (W)	104	2	619035 305009
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NW (SW)	139	2	619070 304890
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NW (SW)	160	2	619030 304885
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	226	2	619458 304824
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	2	619565 304869
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	2	619409 304966
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	2	619374 305045
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	102	2	619356 304967
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (W)	104	2	619035 305009
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	137	2	619374 305000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	226	2	619458 304824
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (SW)	0	2	619330 305000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	2	619409 304966
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619458 304824
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	2	619374 305045
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619374 305002
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	2	619374 305045
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	2	619374 305002

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	2	619374 305045

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	**Contemporary Trade Directory Entries** Name: Panther Dryers Location: Hillside House, Intwood, Norwich, NR4 6TG Classification: Printing Equipment Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SE)	679	-	619551 304850
28	**Points of Interest - Commercial Services** Name: Drive Cool Location: 3 Colney Drive, Norwich, NR4 7RH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SE (N)	979	6	619506 305822
29	**Points of Interest - Manufacturing and Production** Name: Tank Location: NR4 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B13SW (N)	674	6	619193 305704
30	**Points of Interest - Manufacturing and Production** Name: Tank Location: NR4 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B13SW (N)	715	6	619137 305802
31	**Points of Interest - Manufacturing and Production** Name: Sheep Wash and Sheep Pens Location: NR4 Category: Farming Class Code: Sheep Dips and Washes Positional Accuracy: Positioned to address or location	B1NW (S)	855	6	619165 304175
32	**Points of Interest - Recreational and Environmental** Name: Playground Location: Dragonfly Lane, NR4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	B13SW (N)	836	6	619071 305986

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	**Environmentally Sensitive Areas** Name: Broads Multiple Areas: Y Total Area (m2): 382941888.19 Source: Natural England	B5NE (SE)	719	7	619604 304927
34	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Groundwater Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	B9SE (SE)	0	8	619374 305045
35	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	B9SE (SE)	0	8	619374 305045

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Broadland District Council - Environmental Health Department	April 2014	Annual Rolling Update
South Norfolk District Council - Environmental Health Department	December 2014	Annual Rolling Update
Norwich City Council - Environmental Health Department	November 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - Anglian Region	October 2016	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Anglian Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Anglian Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Anglian Region	October 2016	Quarterly
Local Authority Integrated Pollution Prevention And Control		
South Norfolk District Council - Environmental Health Department	June 2014	Annual Rolling Update
Norwich City Council - Environmental Health Department	March 2015	Annual Rolling Update
Broadland District Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
South Norfolk District Council - Environmental Health Department	June 2014	Annual Rolling Update
Norwich City Council - Environmental Health Department	March 2015	Annual Rolling Update
Broadland District Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
South Norfolk District Council - Environmental Health Department	June 2014	Annual Rolling Update
Norwich City Council - Environmental Health Department	March 2015	Annual Rolling Update
Broadland District Council - Environmental Health Department	September 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - Anglian Region	September 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Anglian Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Anglian Region	March 2013	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Eastern Area	October 2016	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	October 2016	Quarterly
Water Industry Act Referrals		
Environment Agency - Anglian Region	October 2016	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	August 2015	As notified

Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	October 2016	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	October 2016	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	October 2016	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	October 2016	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	October 2016	Quarterly
Flood Defences Environment Agency - Head Office	October 2016	Quarterly
Detailed River Network Lines Environment Agency - Head Office	September 2014	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Anglian Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Anglian Region - Eastern Area	August 2016	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Eastern Area	October 2016	Quarterly
Local Authority Landfill Coverage		
Broadland District Council	May 2000	Not Applicable
Norfolk County Council - Planning & Transportation - Minerals & Waste	May 2000	Not Applicable
Norwich City Council	May 2000	Not Applicable
South Norfolk District Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Broadland District Council	May 2000	Not Applicable
Norfolk County Council - Planning & Transportation - Minerals & Waste	May 2000	Not Applicable
Norwich City Council	May 2000	Not Applicable
South Norfolk District Council - Environmental Health Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	July 2016	Bi-Annually
Explosive Sites		
Health and Safety Executive	September 2016	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Broadland District Council	February 2016	Annual Rolling Update
Norfolk County Council - Planning & Transportation - Minerals & Waste	June 2007	Annual Rolling Update
Norwich City Council	October 2015	Annual Rolling Update
South Norfolk District Council	October 2015	Annual Rolling Update
Planning Hazardous Substance Consents		
Broadland District Council	February 2016	Annual Rolling Update
Norfolk County Council - Planning & Transportation - Minerals & Waste	June 2007	Annual Rolling Update
Norwich City Council	October 2015	Annual Rolling Update
South Norfolk District Council	October 2015	Annual Rolling Update

Data Currency

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	October 2016	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2016	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	September 2016	Quarterly
Points of Interest - Education and Health PointX	September 2016	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2016	Quarterly
Points of Interest - Public Infrastructure PointX	September 2016	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2016	Quarterly
Underground Electrical Cables National Grid	January 2016	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	August 2016	Bi-Annually
Areas of Outstanding Natural Beauty Natural England	September 2016	Bi-Annually
Environmentally Sensitive Areas Natural England	September 2016	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	September 2016	Bi-Annually
Marine Nature Reserves Natural England	September 2016	Bi-Annually
National Nature Reserves Natural England	September 2016	Bi-Annually
National Parks Natural England	August 2016	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites Natural England	April 2016	Bi-Annually
Sites of Special Scientific Interest Natural England	April 2016	Bi-Annually
Special Areas of Conservation Natural England	September 2016	Bi-Annually
Special Protection Areas Natural England	September 2016	Bi-Annually
World Heritage Sites English Heritage - National Monument Record Centre	September 2015	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: [redacted] Fax: [redacted] Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: [redacted] Email: enquiries@environment-agency.gov.uk
4	**South Norfolk District Council - Environmental Health Department** South Norfolk House, Swan Lane, Long Stratton, Norwich, Norfolk, NR15 2XE	Telephone: [redacted] Fax: [redacted] Website: www.south-norfolk.gov.uk
5	**Norfolk County Council - Planning & Transportation - Minerals & Waste** County Hall, Martineau Lane, Norwich, Norfolk, NR1 2DH	Telephone: [redacted] Fax: [redacted] Email: information@norfolk.gov.uk Website: www.norfolk.gov.uk
6	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
7	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone [redacted] Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
8	**Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)** Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	Telephone: [redacted] Fax: [redacted]
9	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: [redacted] Fax [redacted]
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: [redacted] Fax [redacted] Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: [redacted] Fax: [redacted] Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Geology 1:10,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene
	WGR	Worked Ground (Undivided)	Void	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Pleistocene
	HPLO	Happisburgh Glacigenic Formation And Lowestoft Formation (Undifferentiated)	Sand and Gravel	Anglian - Flandrian
	LOFT	Lowestoft Formation	Diamicton	Anglian - Flandrian
	RTD1	River Terrace Deposits, 1	Sand and Gravel	Quaternary - Ryazanian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	CRAG	Crag Group	Sand and Gravel	Pleistocene - Pliocene
	LPCK	Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (Undifferentiated)	Chalk	Campanian - Turonian

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Geology 1:10,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:10,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around a site. This mapping may be more up to date than previously published paper maps.

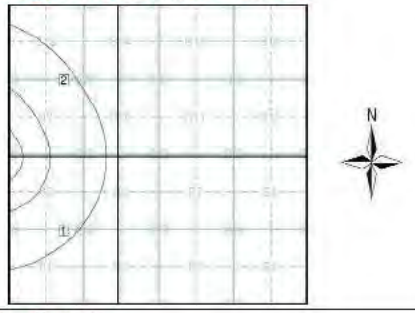
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page.

Please Note: Not all of the layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:10,000 Maps Coverage

Map ID:	1	**Map ID:**	
Map Name:	TG10SE	**Map Name:**	TG20NW
Map Date:	1976	**Map Date:**	1976
Bedrock Geology:	Available	**Bedrock Geology:**	Available
Superficial Geology:	Available	**Superficial Geology:**	Available
Artificial Geology:	Not Available	**Artificial Geology:**	Available
Faults:	Not Available	**Faults:**	Not Available
Landslip:	Not Available	**Landslip:**	Not Available
Rock Segments:	Not Available	**Rock Segments:**	Not Available
Map ID:		**Map ID:**	2
Map Name:	TG20SW	**Map Name:**	TG10NE
Map Date:	1976	**Map Date:**	1976
Bedrock Geology:	Available	**Bedrock Geology:**	Available
Superficial Geology:	Available	**Superficial Geology:**	Available
Artificial Geology:	Available	**Artificial Geology:**	Available
Faults:	Not Available	**Faults:**	Not Available
Landslip:	Not Available	**Landslip:**	Not Available
Rock Segments:	Not Available	**Rock Segments:**	Not Available

Geology 1:10,000 Maps - Slice B



Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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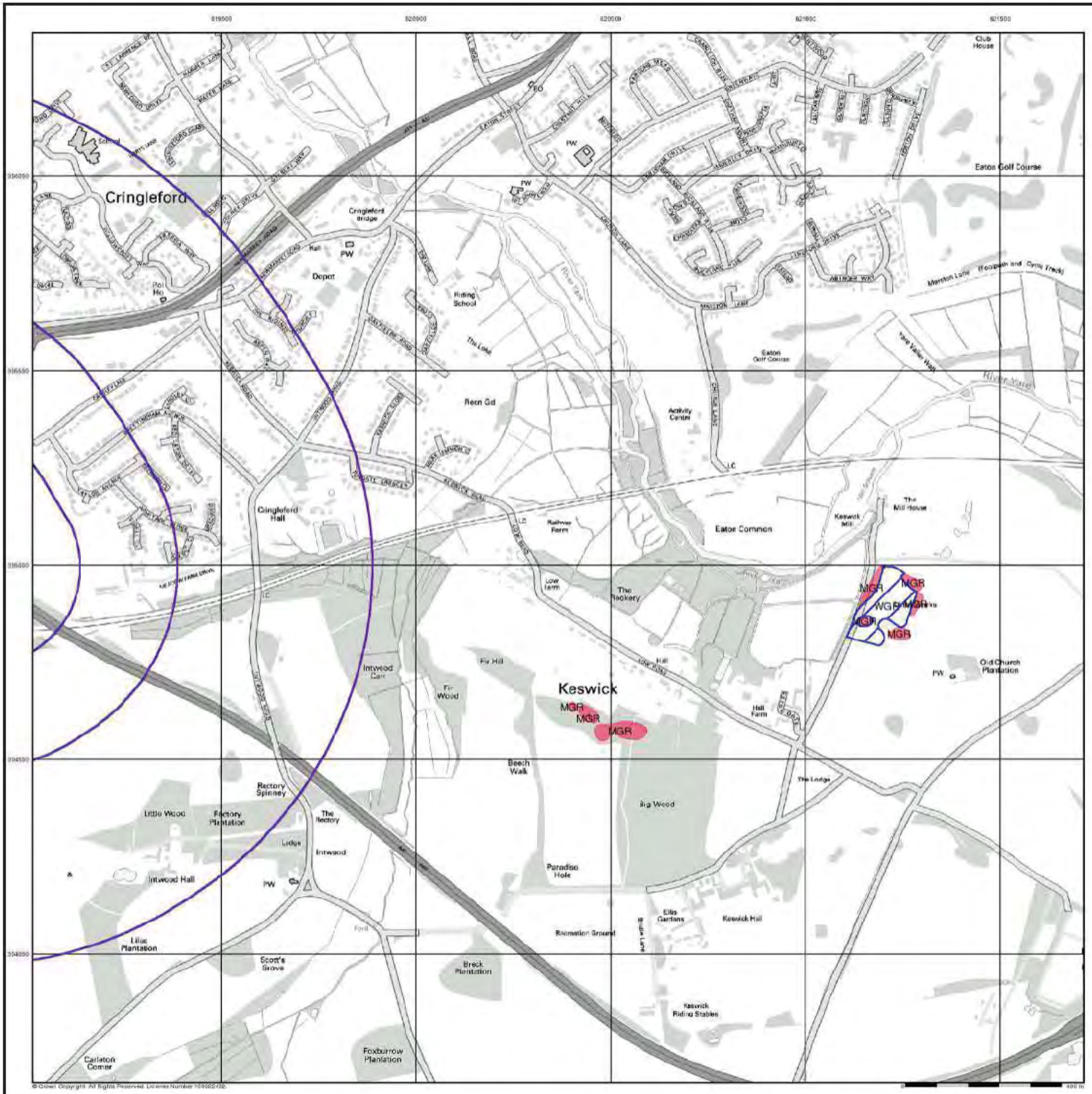

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Artificial Ground and Landslip

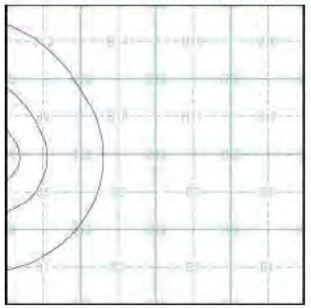
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice B



Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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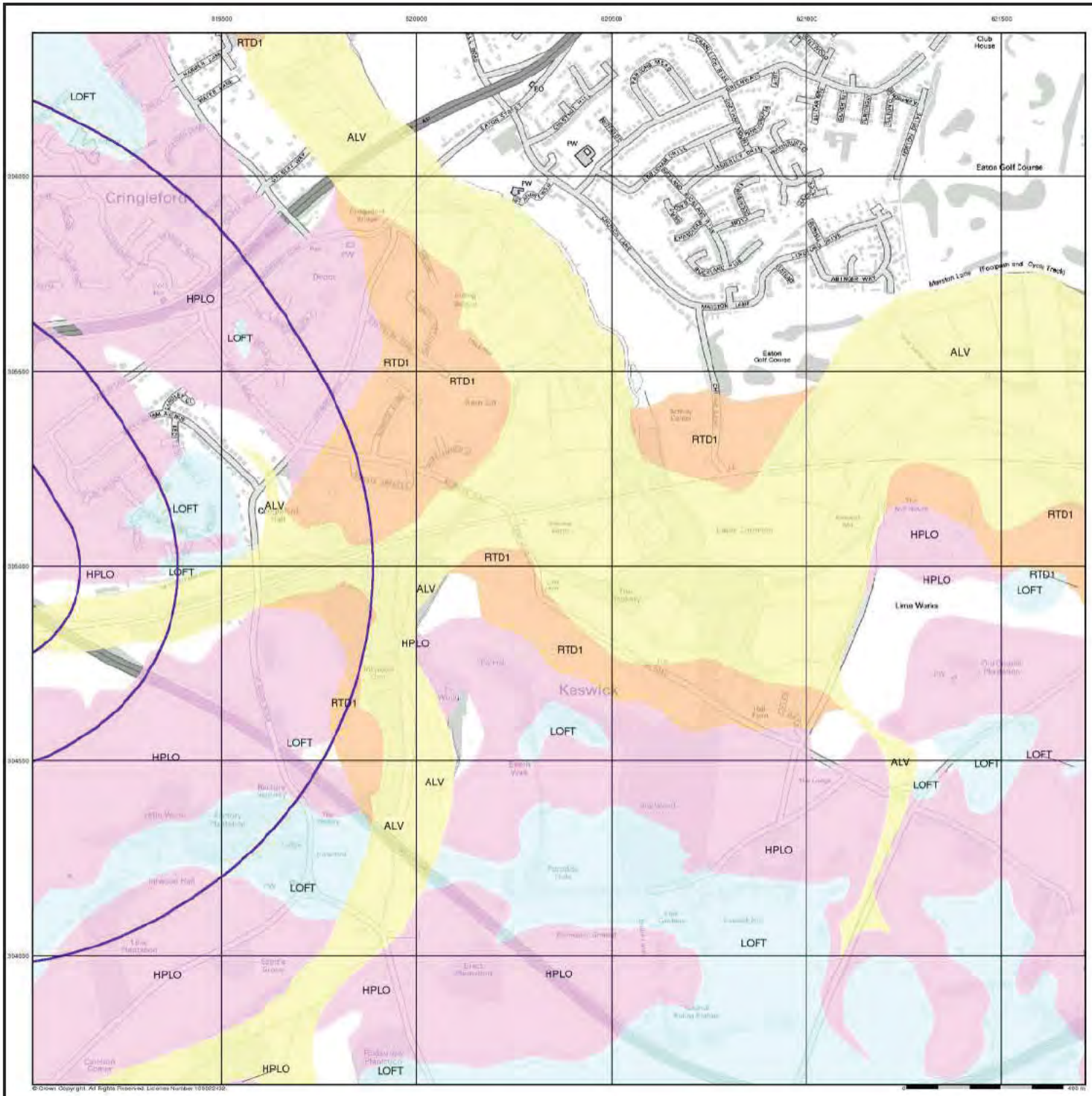

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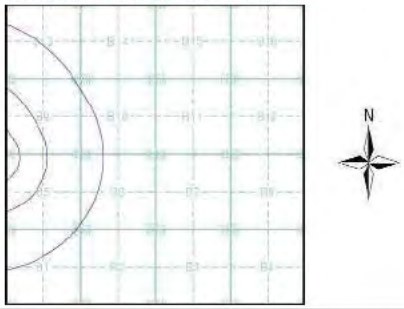
Superficial Geology

BGS 1:10,000 Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice B

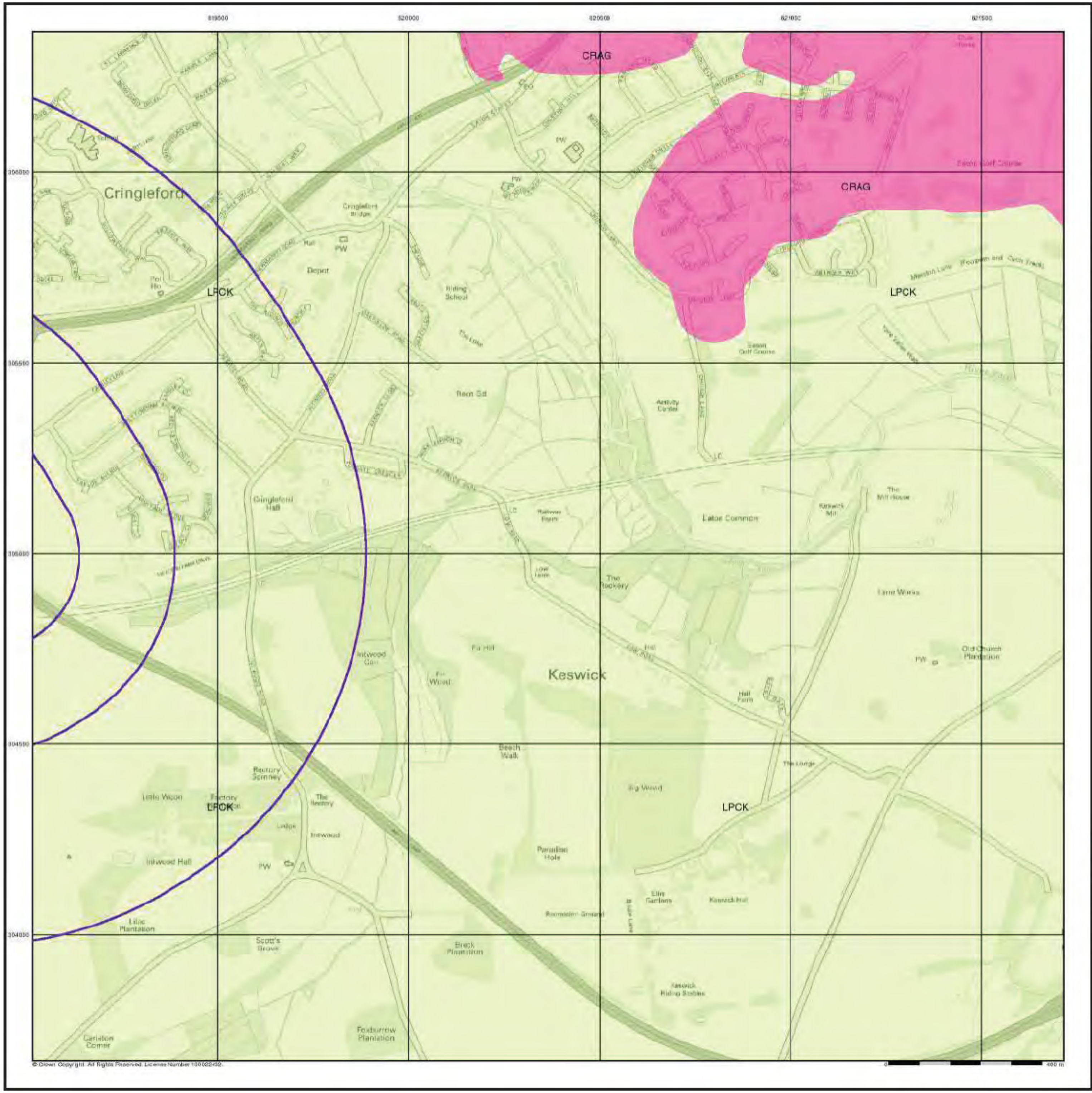


Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk



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Bedrock and Faults

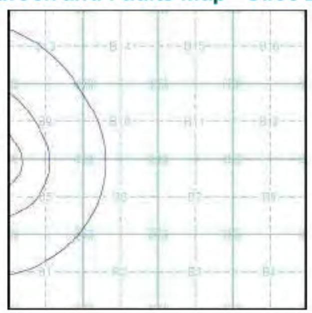
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice B



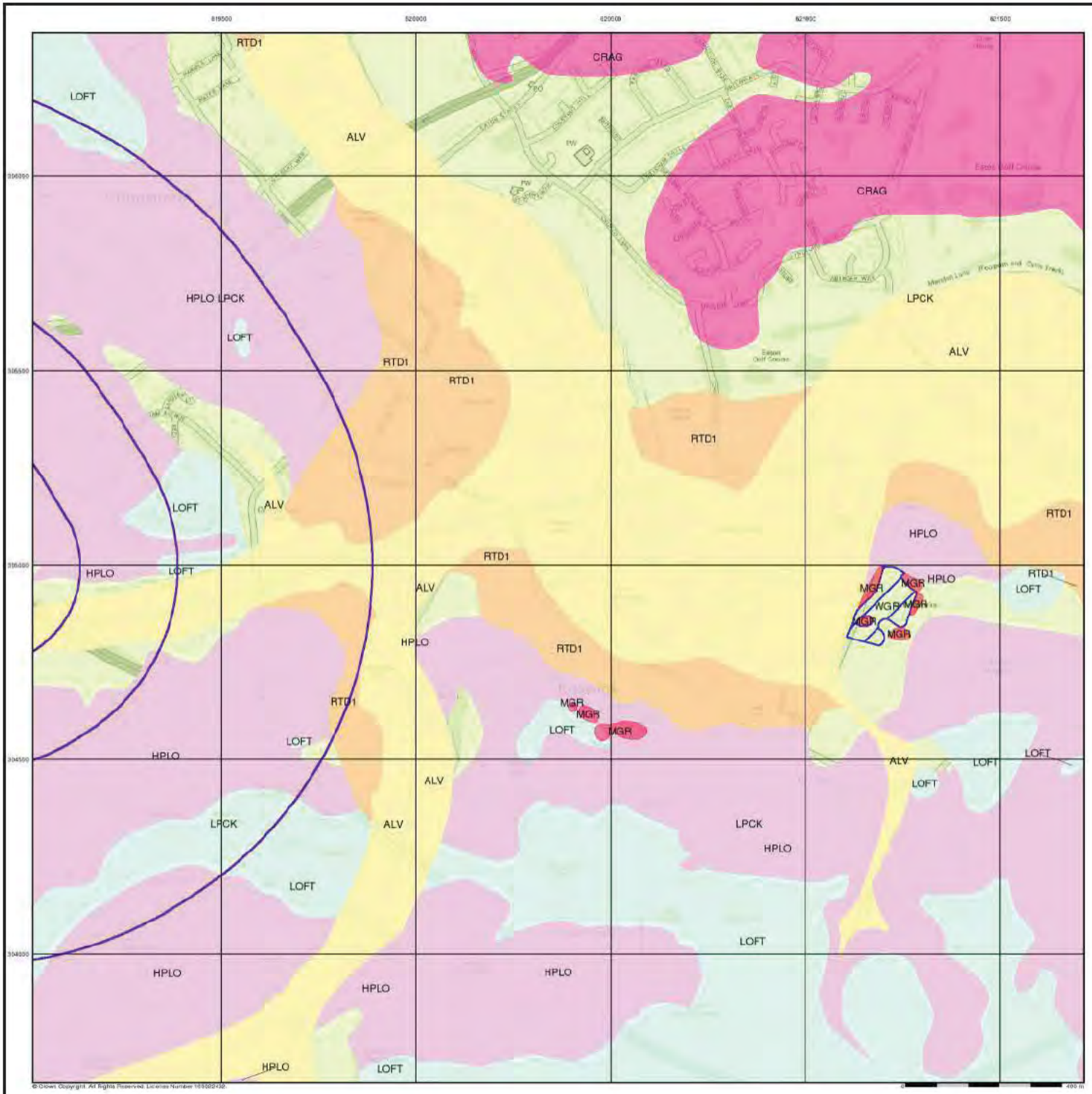
Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
National Grid Reference: 619370, 305050
Slice: B
Site Area (Ha): 15.75
Search Buffer (m): 1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP



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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

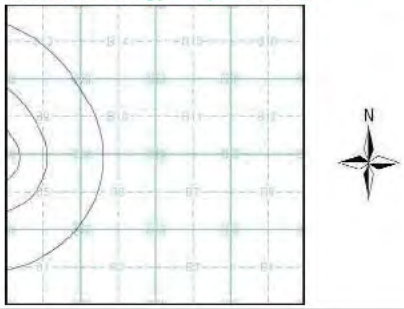
Additional Information

More information on 1:10,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice B



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Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

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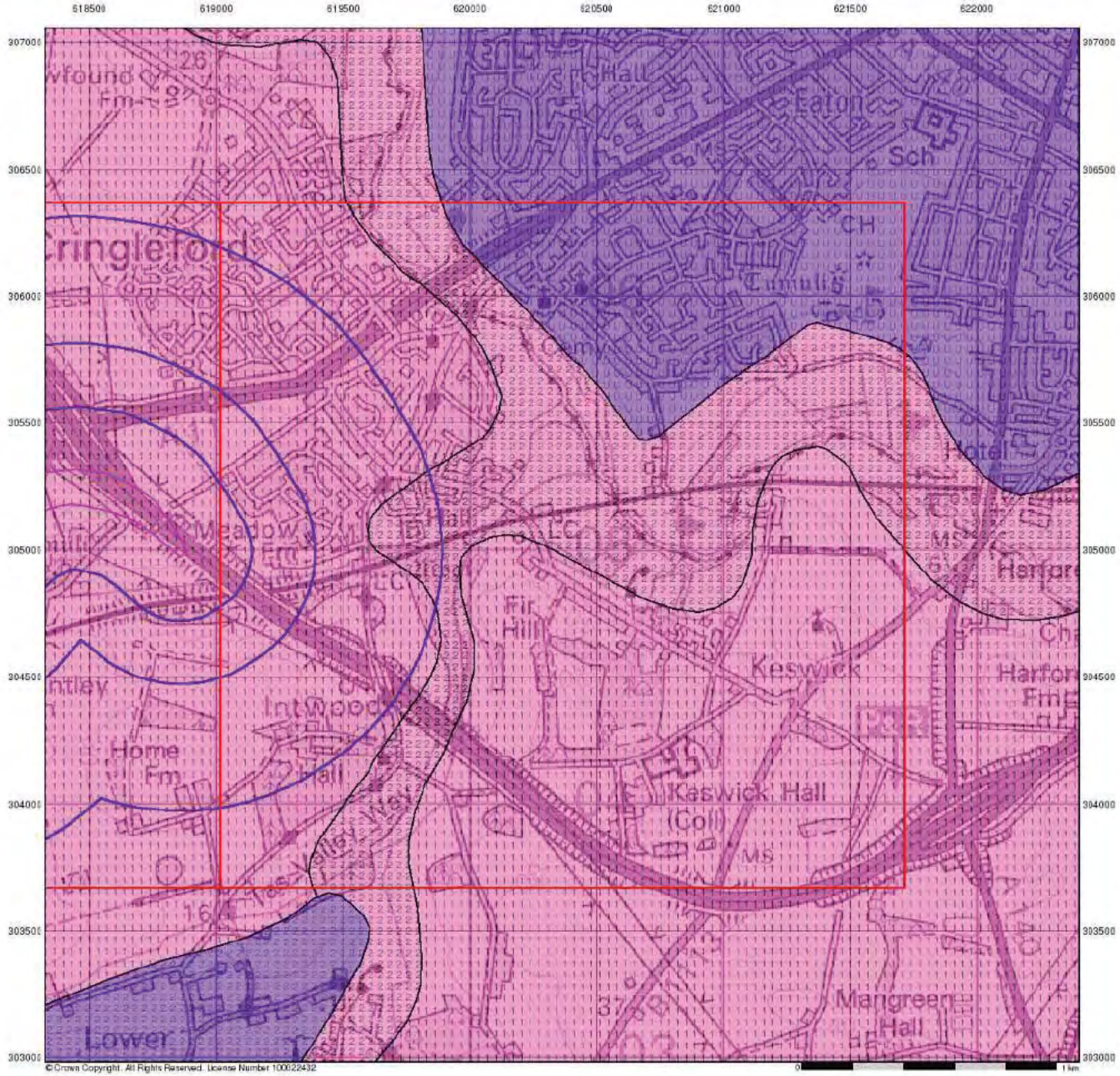

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Groundwater Vulnerability

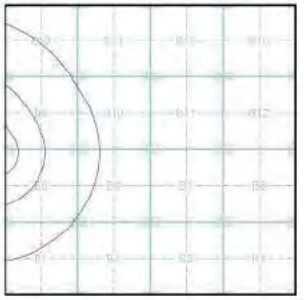
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice B



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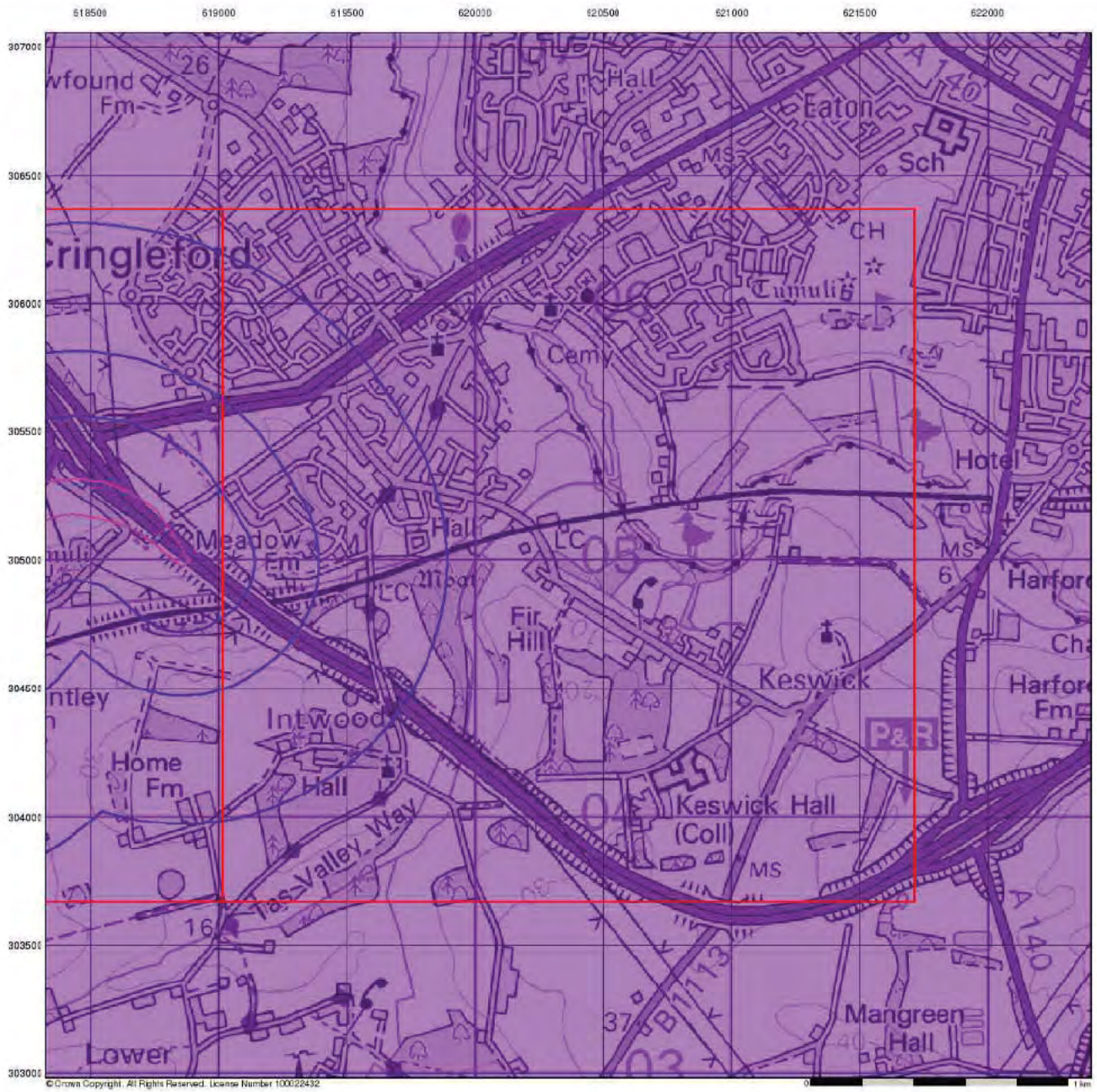
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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Bedrock Aquifer Designation

General

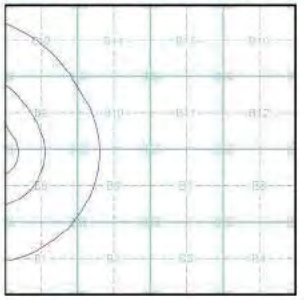
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice B



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Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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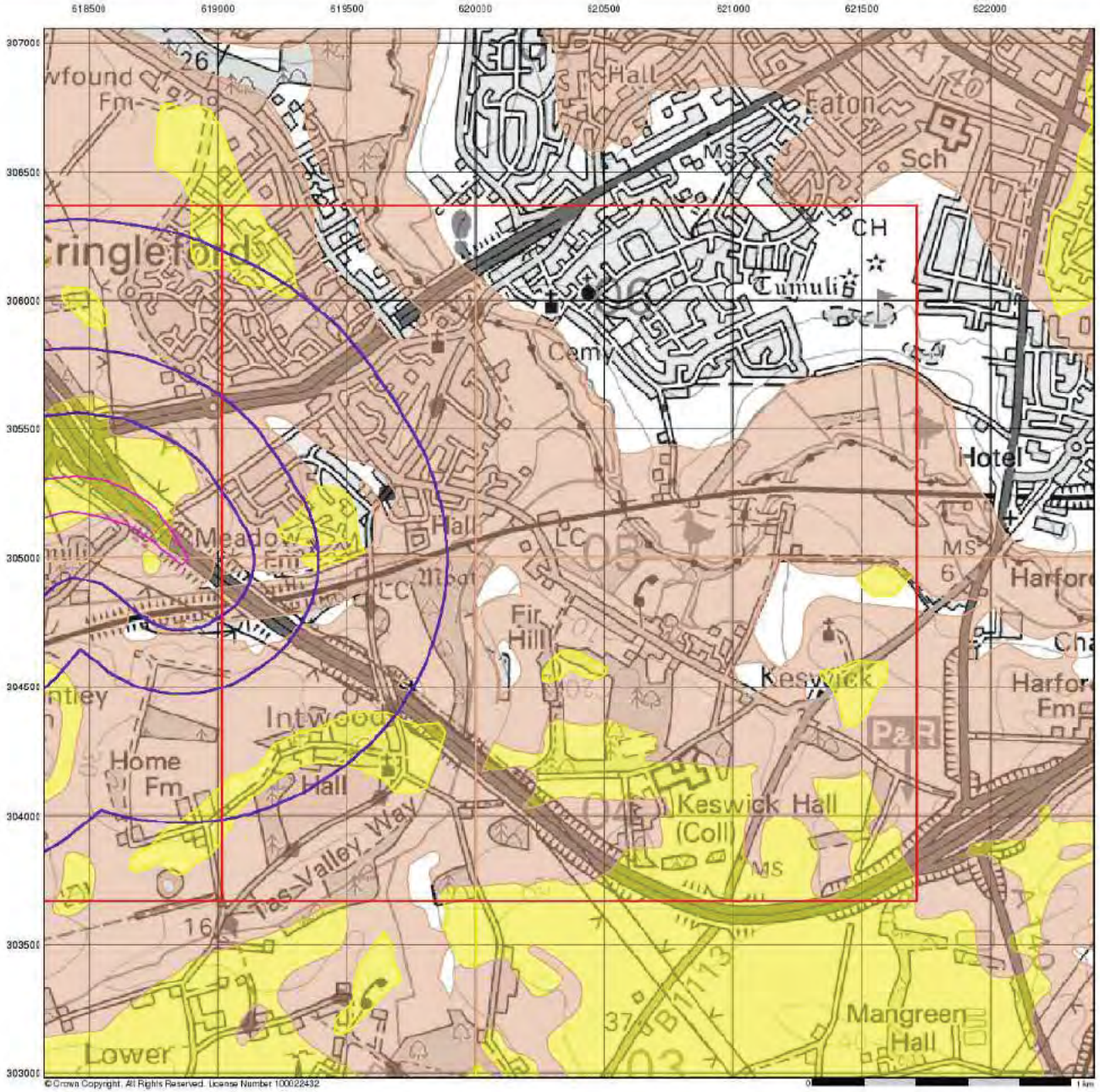

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Superficial Aquifer Designation

General

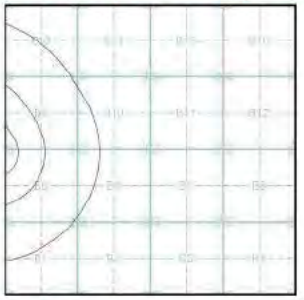
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice B



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National Grid Reference:	619370, 305050
Slice:	B
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Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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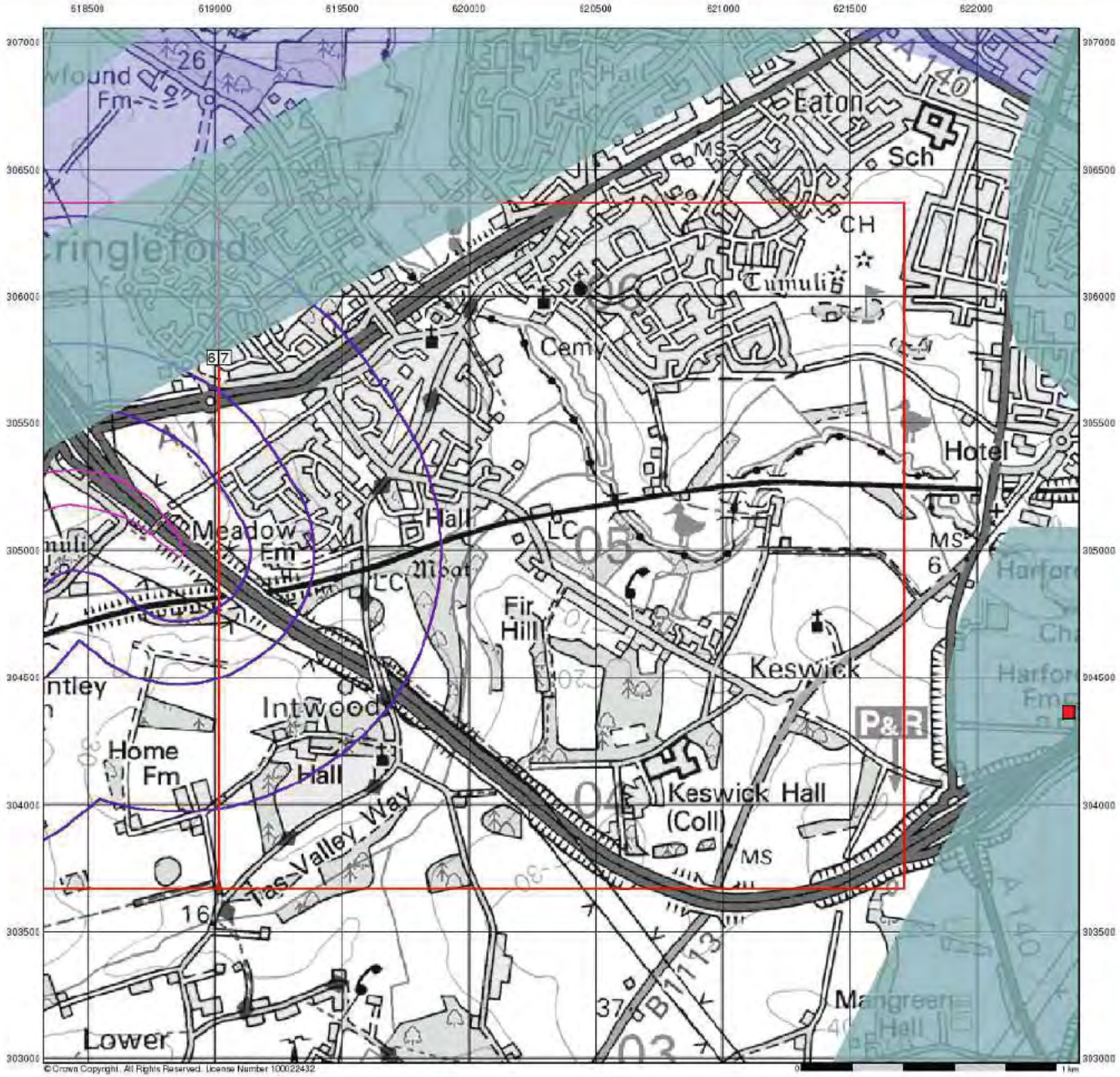

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Source Protection Zones

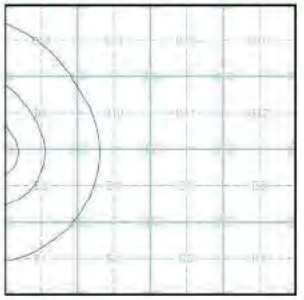
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice B



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Slice:	B
Site Area (Ha):	15.75
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Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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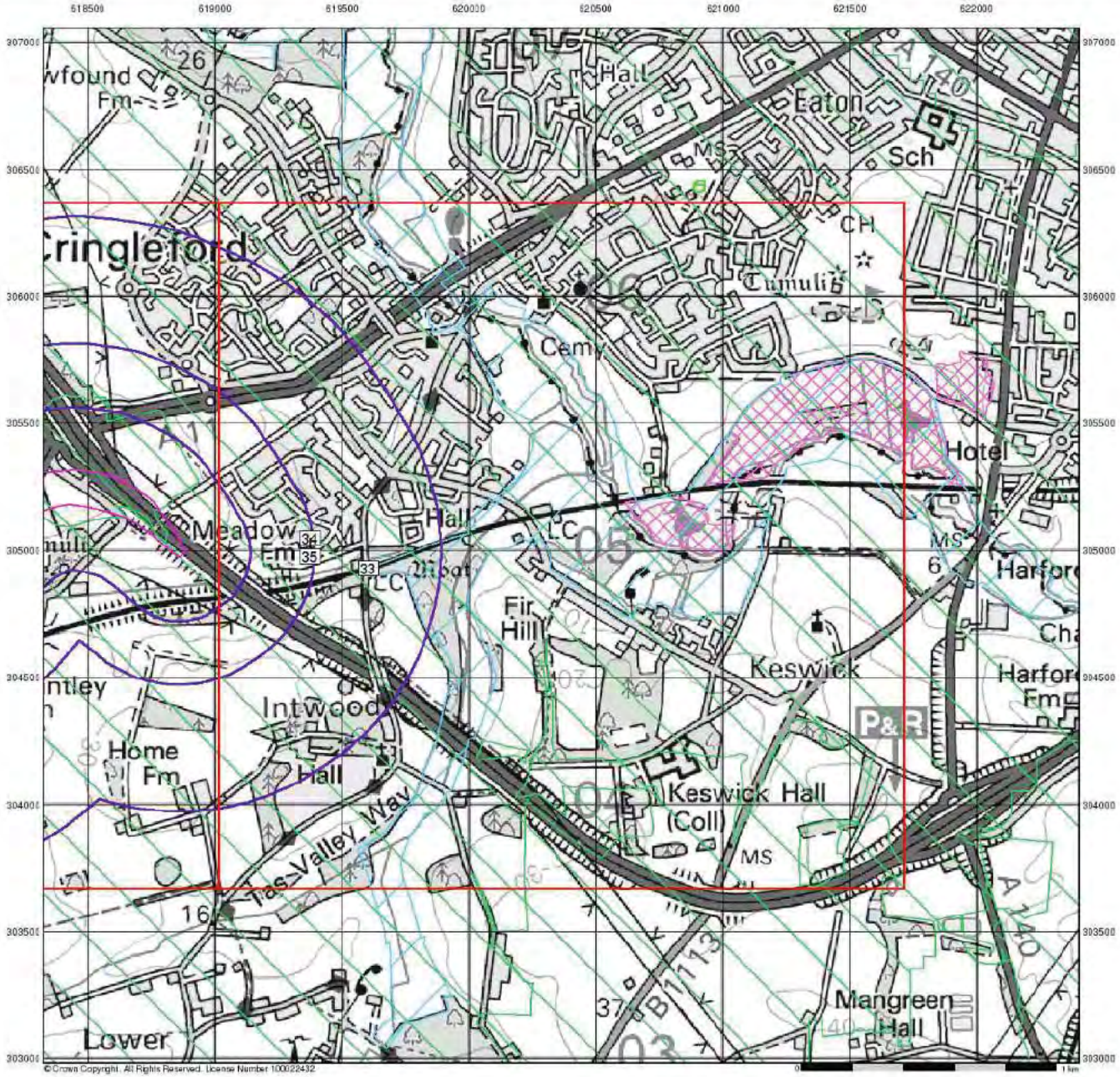

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Sensitive Land Uses

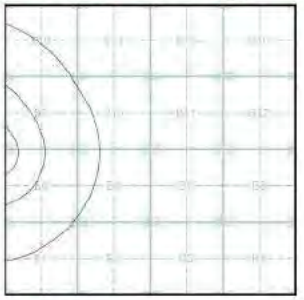
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice B



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Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP

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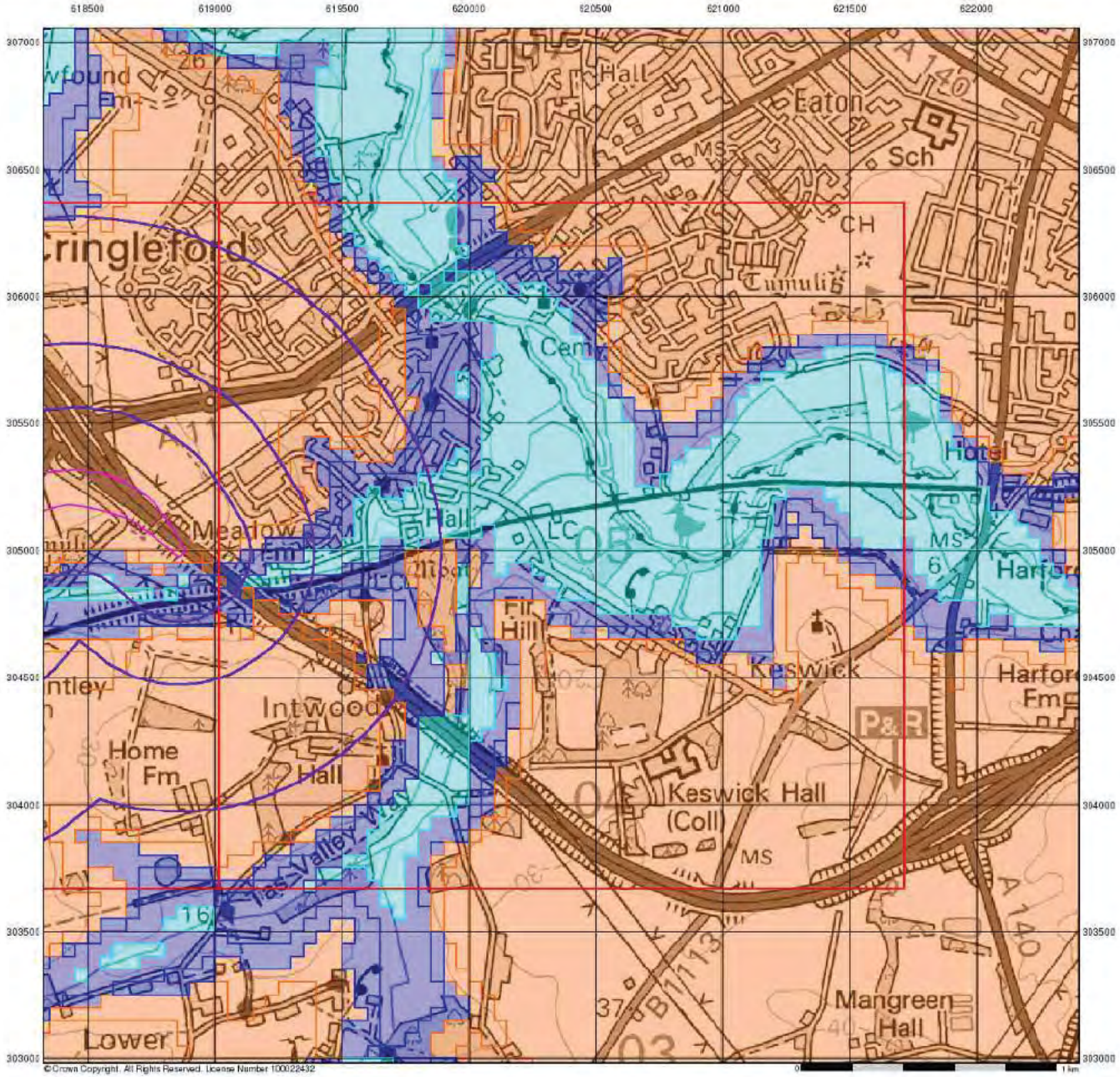

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BGS Flood GFS Data

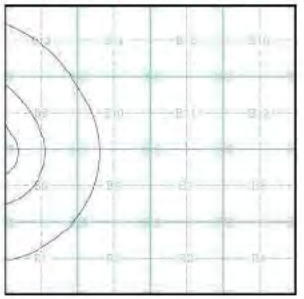
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice B



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Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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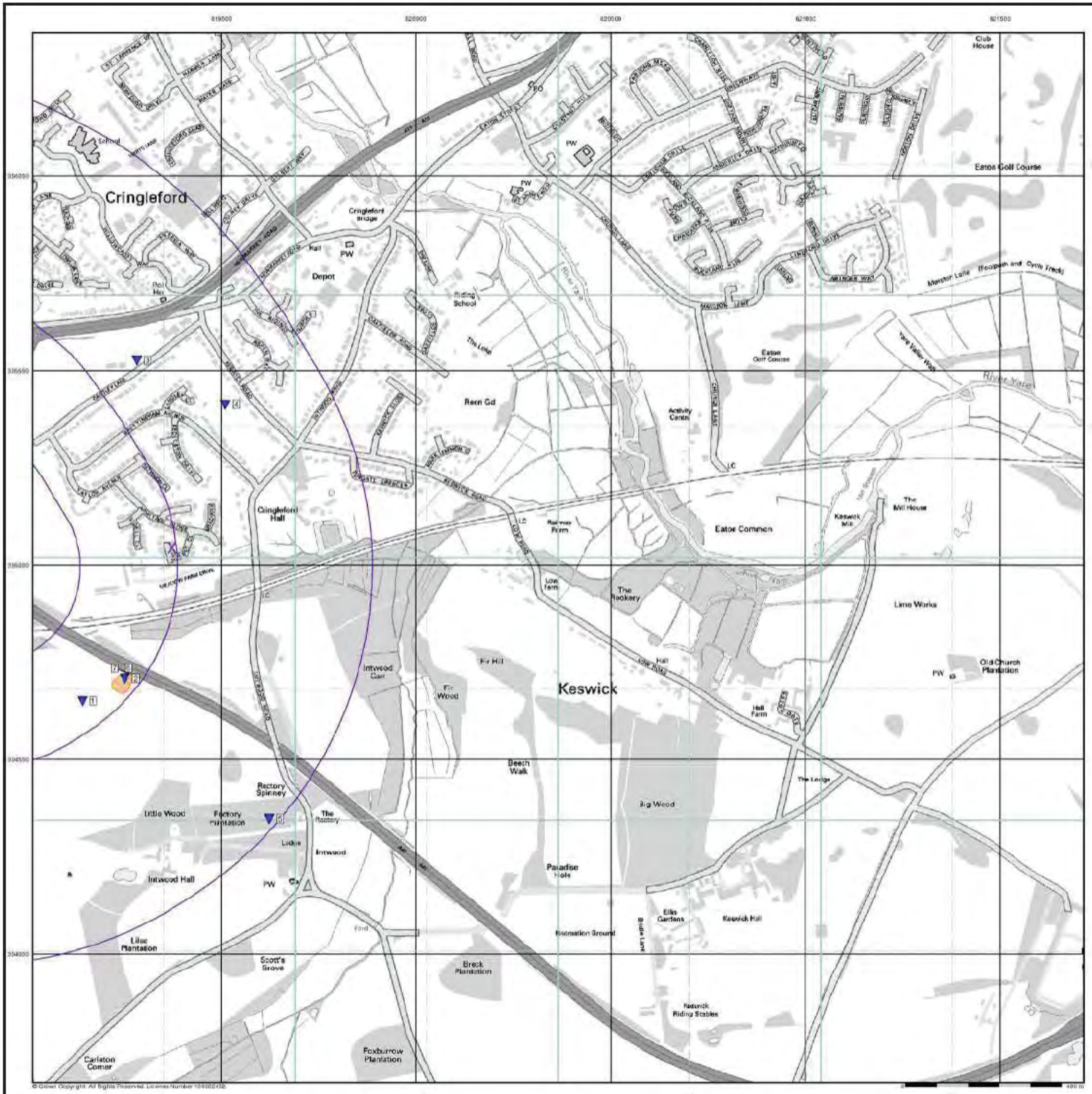

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Historical Land Use Information (1:10,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

Historical Land Use

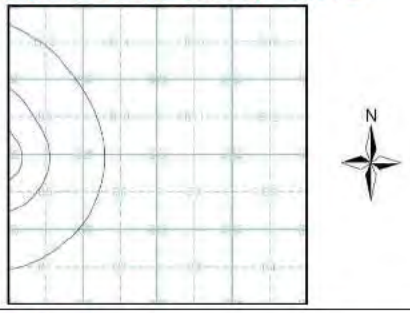
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice B



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Slice:	B
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Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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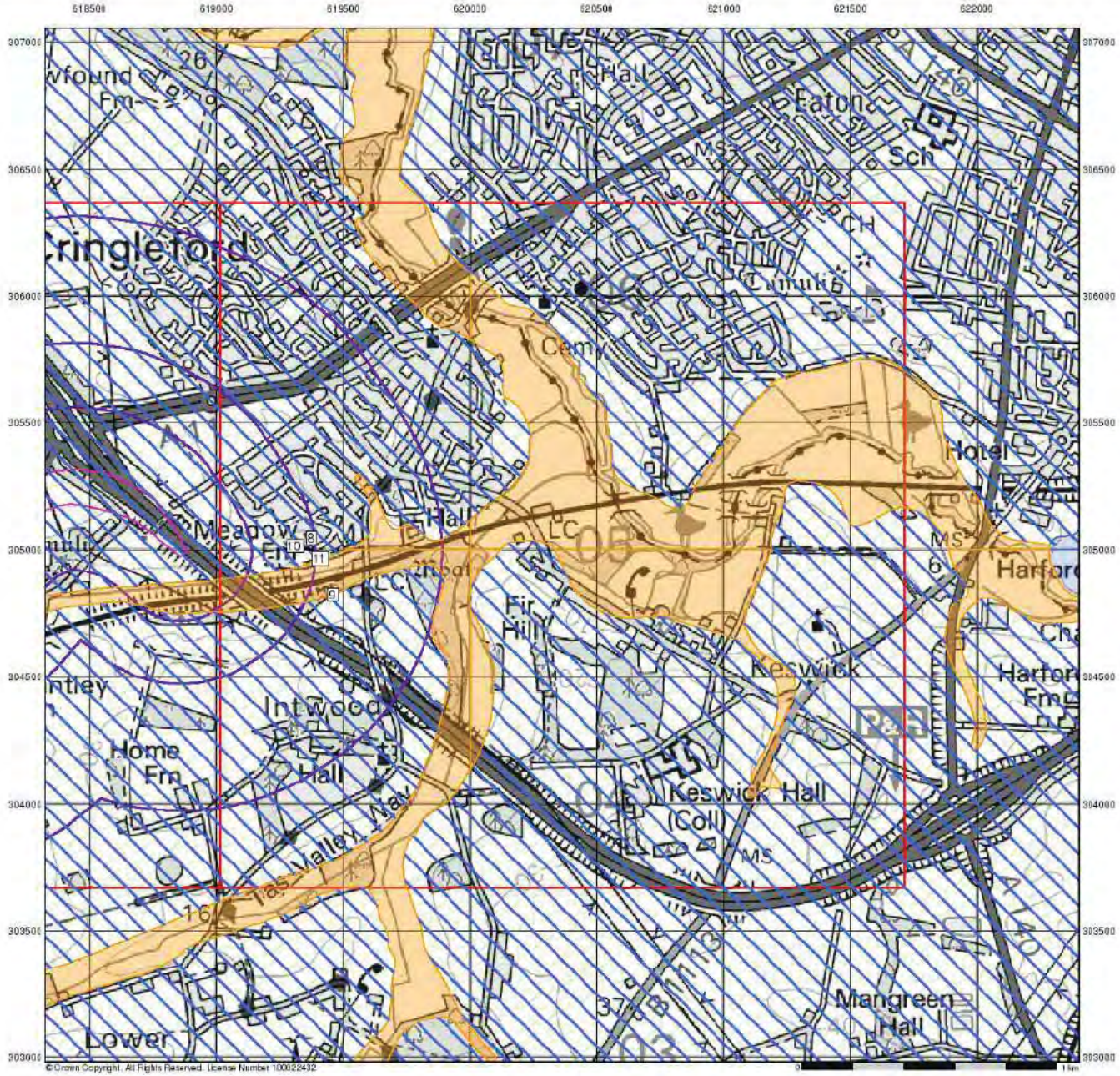

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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

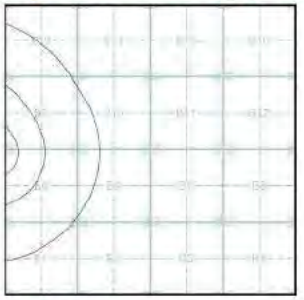
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice B



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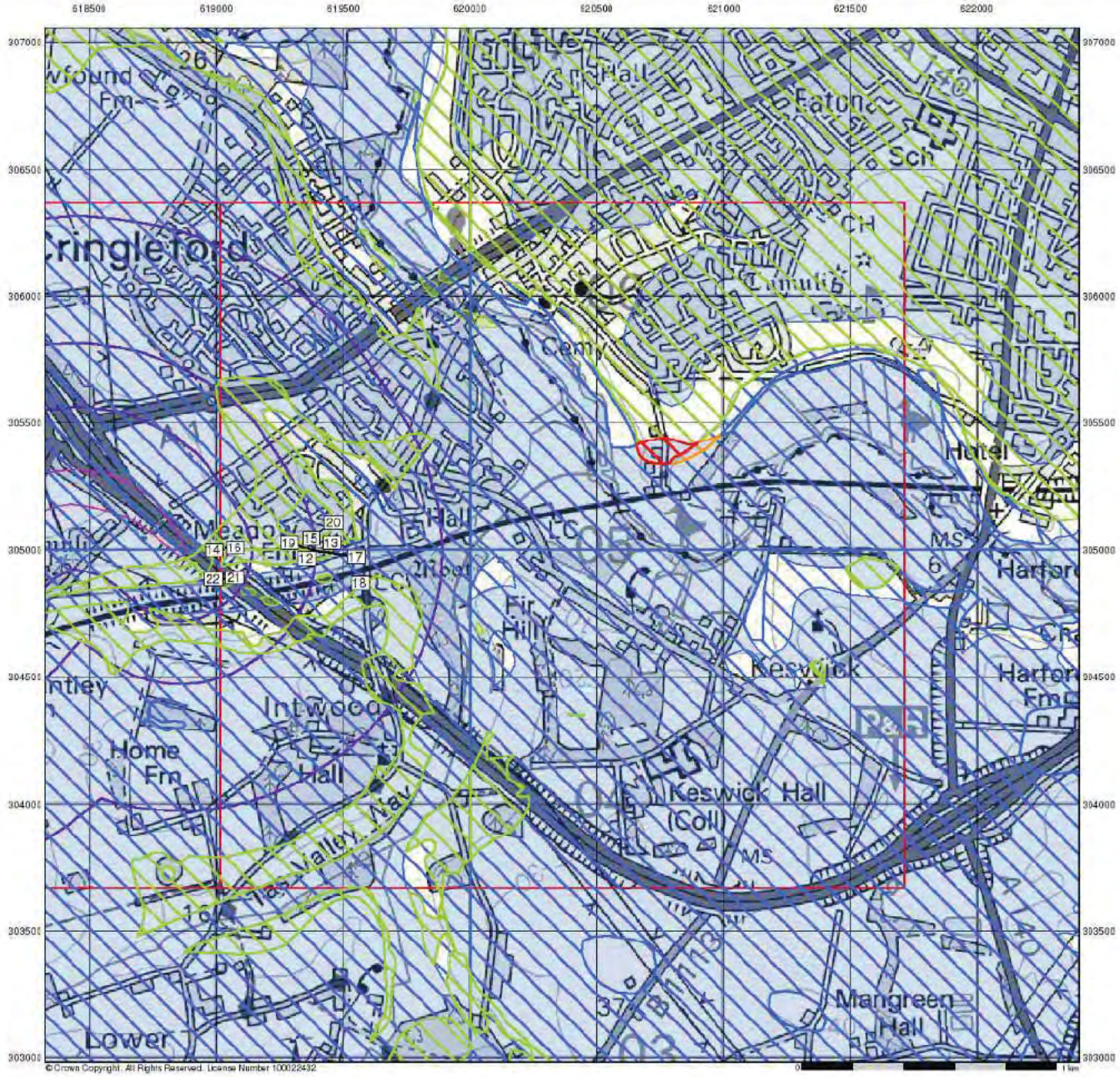

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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

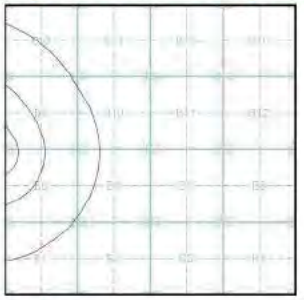
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice B



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Slice:	B
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Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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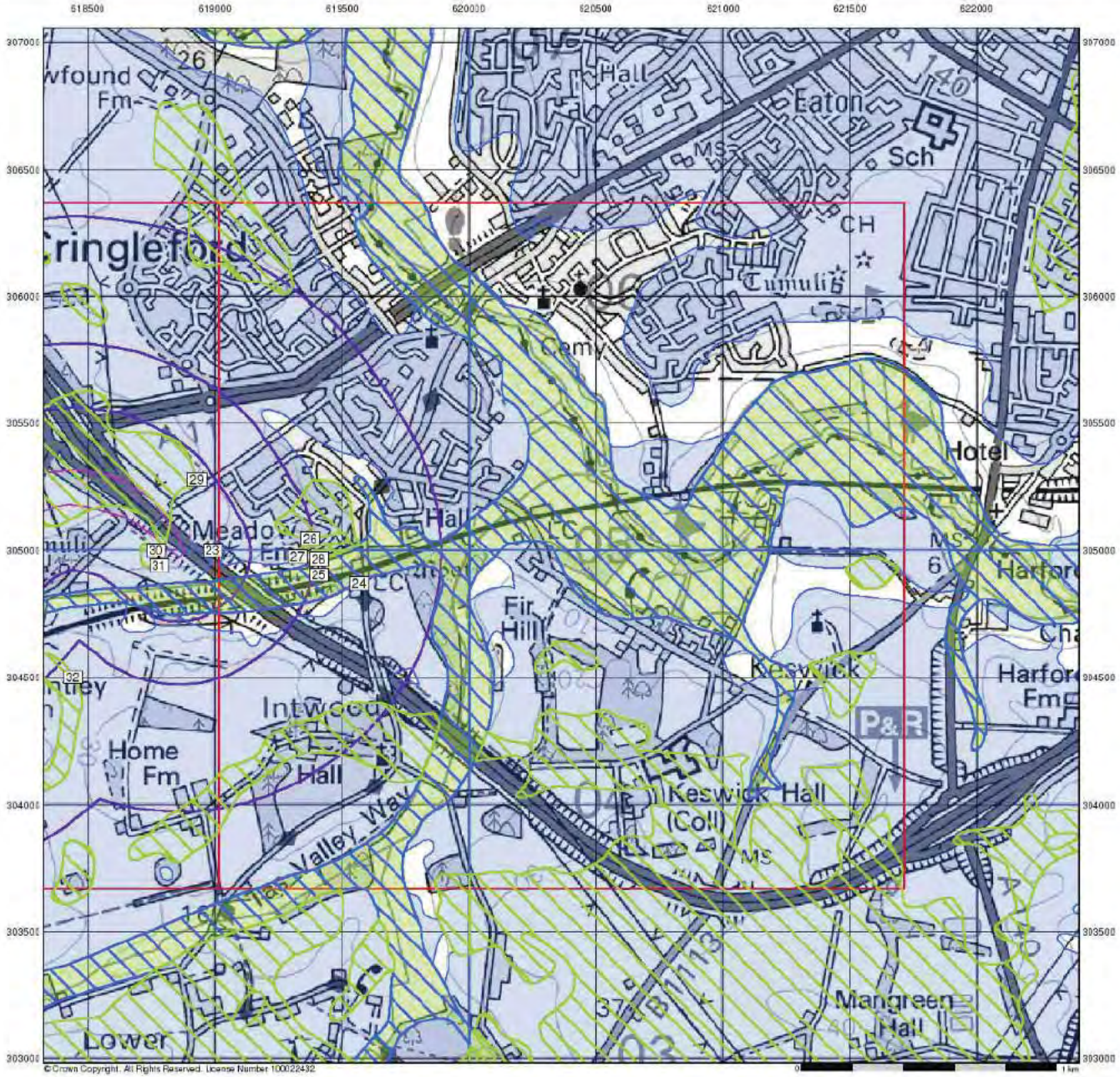

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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

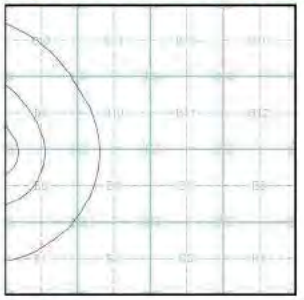
Potential for Running Sand Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice B



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Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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[redacted]

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
108824762_1_1

Customer Reference:
A47 Thickthorn

National Grid Reference:
619370, 305050

Slice:
B

Site Area (Ha):
15.75

Search Buffer (m):
1000

Site Details:

A47 Thickthorn Junction
Cringleford
Norfolk

Client Details:

[redacted]
AECOM Ltd
Saxon House
27 Duke Street
Chelmsford
Essex
CM1 1HT

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Contents

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Report Version v50.0

Contents

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1			2	3
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability			n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 1	Yes		n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)				n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents					
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits	pg 2			1	
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 2			1	
Potentially Infilled Land (Water)					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Ground Stability Data (1:50,000)					
Brine Compensation Area			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 3	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 3	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Salt Mining Related Features					
Subsidence Insurance Claims				n/a	n/a
Subsidence Investigations				n/a	n/a
Motion Map Data (1:2,500)					
Motion Map (100m)				n/a	n/a

Report Version v50.0

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Intwood Hall Pit Location: , Intwood, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197648 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	B5SW (SW)	424	1	619143 304655
2	**BGS Recorded Mineral Sites** Site Name: Intwood Pit Location: , Intwood, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197658 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	B5NW (S)	459	1	619251 304713
3	**BGS Recorded Mineral Sites** Site Name: Cringleford Pit Location: , Cringleford, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197657 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Sheringham Cliffs Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	B9NW (N)	625	1	619282 305531
4	**BGS Recorded Mineral Sites** Site Name: Cringleford Pit Location: , Cringleford, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197656 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Sheringham Cliffs Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	B9NE (N)	751	1	619509 305417
5	**BGS Recorded Mineral Sites** Site Name: Intwood Hall Pit Location: , Intwood, Norwich, Norfolk Source: British Geological Survey, National Geoscience Information Service Reference: 197643 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Lowestoft Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	B5SE (S)	975	1	619622 304352
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619458 304824
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619374 305000
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	1	619374 305045

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1889	B5NW (S)	444	-	619262 304722
7	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1995	B5NW (S)	444	-	619262 304722

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Brine Compensation Area The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
8	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	1	619374 305045
9	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619458 304824
10	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619374 305000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	1	619409 304966
11	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	1	619409 304966
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	1	619374 305045
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619374 305000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619458 304824
12	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619356 304967
13	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (E)	0	1	619454 305026
14	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(W)	12	1	618991 305000
15	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	43	1	619374 305045
16	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NW (W)	104	1	619035 305009
17	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	137	1	619374 305000
18	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	226	1	619565 304869
19	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619374 305000
20	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	1	619374 305045
21	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NW (SW)	139	1	619070 304890
22	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NW (SW)	160	1	619030 304885

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	102	1	619356 304967
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (W)	104	1	619035 305009
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	226	1	619458 304824
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(SW)	235	1	618756 304734
23	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	618991 305000
24	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	1	619565 304869
25	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	1	619409 304966
26	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	1	619374 305045
27	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	137	1	619374 305000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	102	1	619356 304967
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (W)	104	1	619035 305009
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	226	1	619458 304824
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(SW)	235	1	618756 304734
28	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NE (SE)	0	1	619409 304966
29	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(NW)	0	1	618927 305277
30	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(W)	36	1	618767 305000
31	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(W)	38	1	618780 304974
32	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(SW)	168	1	618442 304500
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (SW)	0	1	619330 305000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	619458 304824
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	0	1	619374 305045

Historical Map List

No Historical Land Use information available.

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Norfolk	075_NW	1889
Norfolk	075_NW	1908
Norfolk	075_NW	1929
Norfolk	075_NW	1938
Ordnance Survey Plan	TG10NE	1957
Ordnance Survey Plan	TG10SE	1957
Ordnance Survey Plan	TG20NW	1957
Ordnance Survey Plan	TG20SW	1957
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	TG20NW	1989
Ordnance Survey Plan	TG10NE	1995
Ordnance Survey Plan	TG10SE	1995
Ordnance Survey Plan	TG20SW	1995

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Man Made Mining Cavities Peter Brett Associates	November 2016	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	November 2016	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	September 2016	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
Brine Compensation Area Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Subsidence Insurance Claims SP Property Services	November 2016	Quarterly
Subsidence Investigations CET Structures Ltd	November 2016	Quarterly

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	
Johnson Poole & Bloomer	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: [redacted] Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Ove Arup & Partners** Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	Telephone: [redacted] Fax: [redacted]
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: [redacted] Fax: [redacted] Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Flandrian
	LOFT	Lowestoft Formation	Diamicton	Anglian - Anglian
	HPLO	Happisburgh Glaciqenic Formation And Lowestoft Formation (Undifferentiated)	Sand and Gravel	Anglian - Anglian
	SMCL	Sheringham Cliffs Formation	Sand and Gravel	Pleistocene - Pleistocene
	LEHI	Leet Hill Sand And Gravel Member	Sand and Gravel	Pleistocene - Pleistocene
	RTD1	River Terrace Deposits, 1	Sand and Gravel	Quaternary - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	CRAG	Crag Group	Sand and Gravel	Pleistocene - Pliocene
	LPCK	Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (Undifferentiated)	Chalk	Campanian - Turonian

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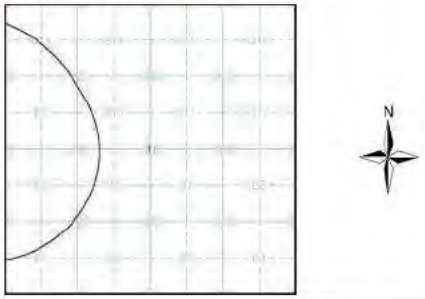
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	161
Map Name:	Norwich
Map Date:	1975
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Not Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice B



Order Details:

Order Number:	108824762_1_1
Customer Reference:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details:

A47 Thickthorn Junction, Cringleford, Norfolk

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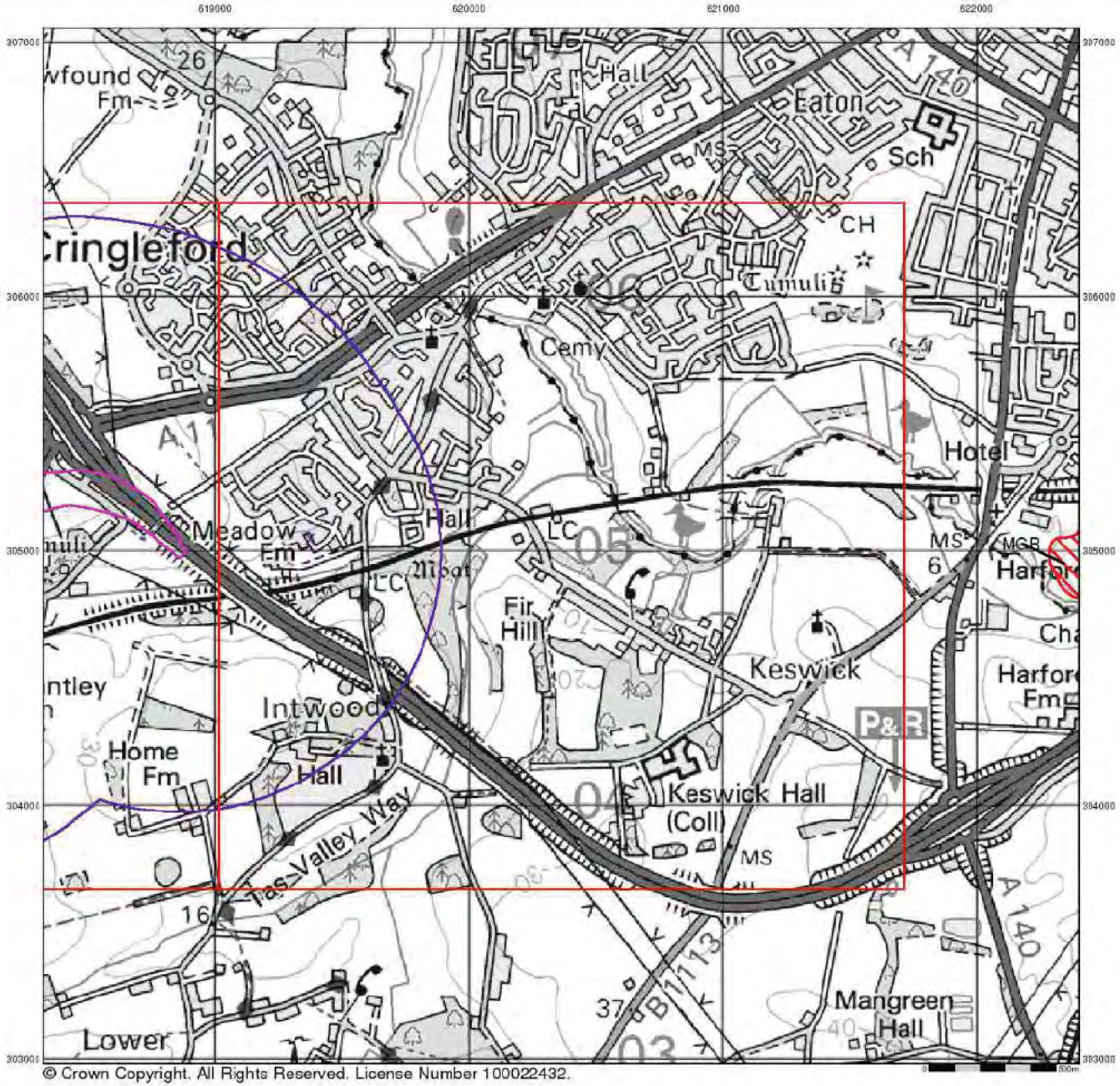

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Artificial Ground and Landslip

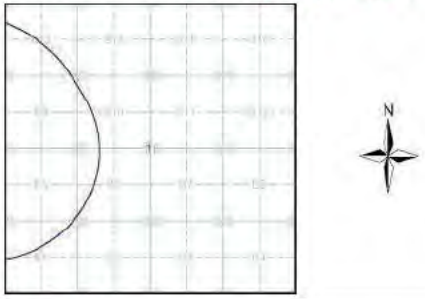
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice B



Order Details:

Order Number:	108824762_1_1
Customer Reference:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details:

A47 Thickthorn Junction, Cringleford, Norfolk

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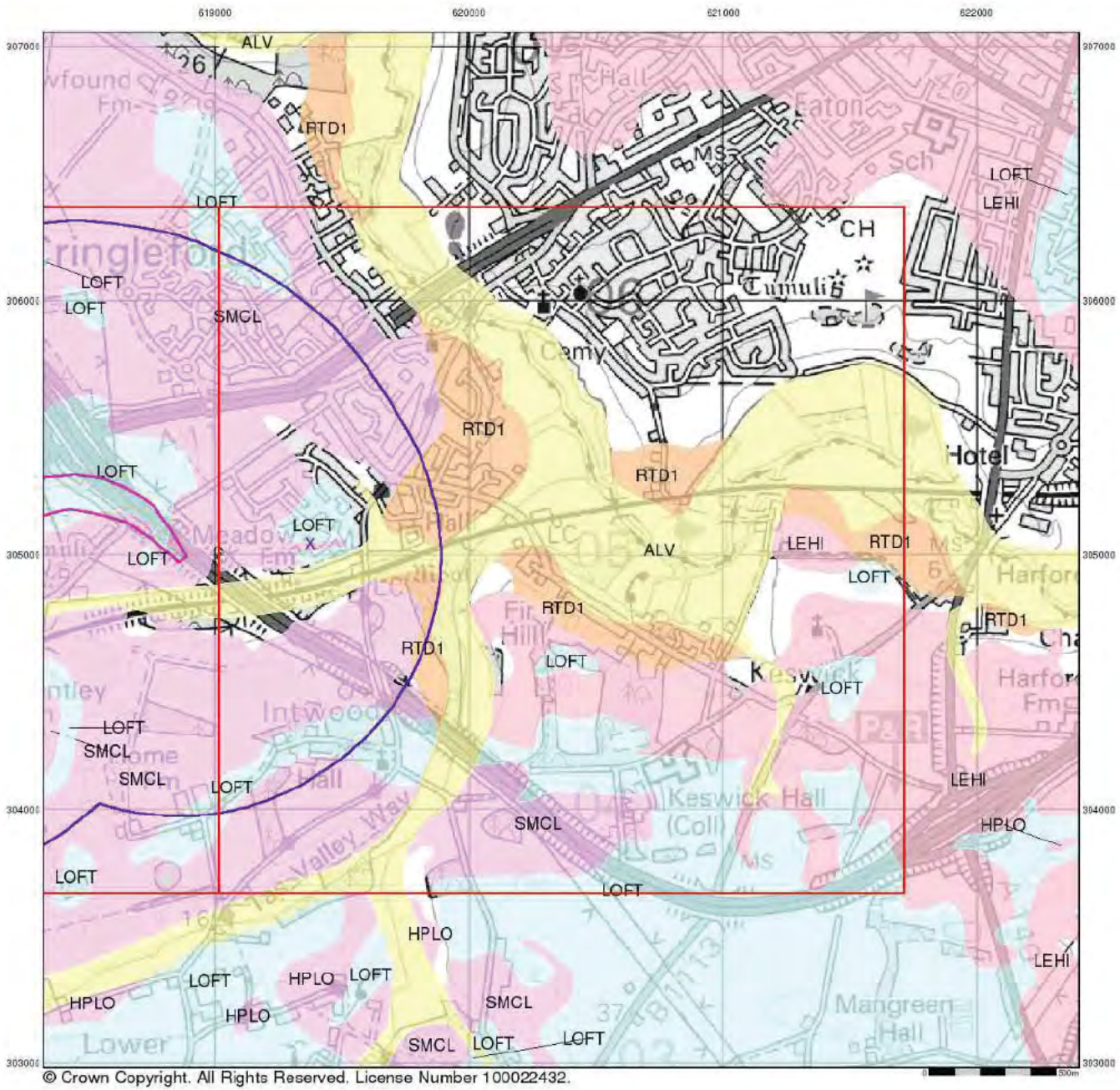
[redacted]



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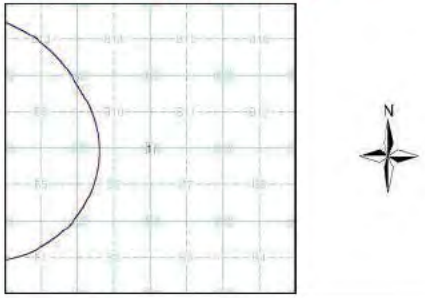
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice B



Order Details:

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Customer Reference:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details:

A47 Thickthorn Junction, Cringleford, Norfolk

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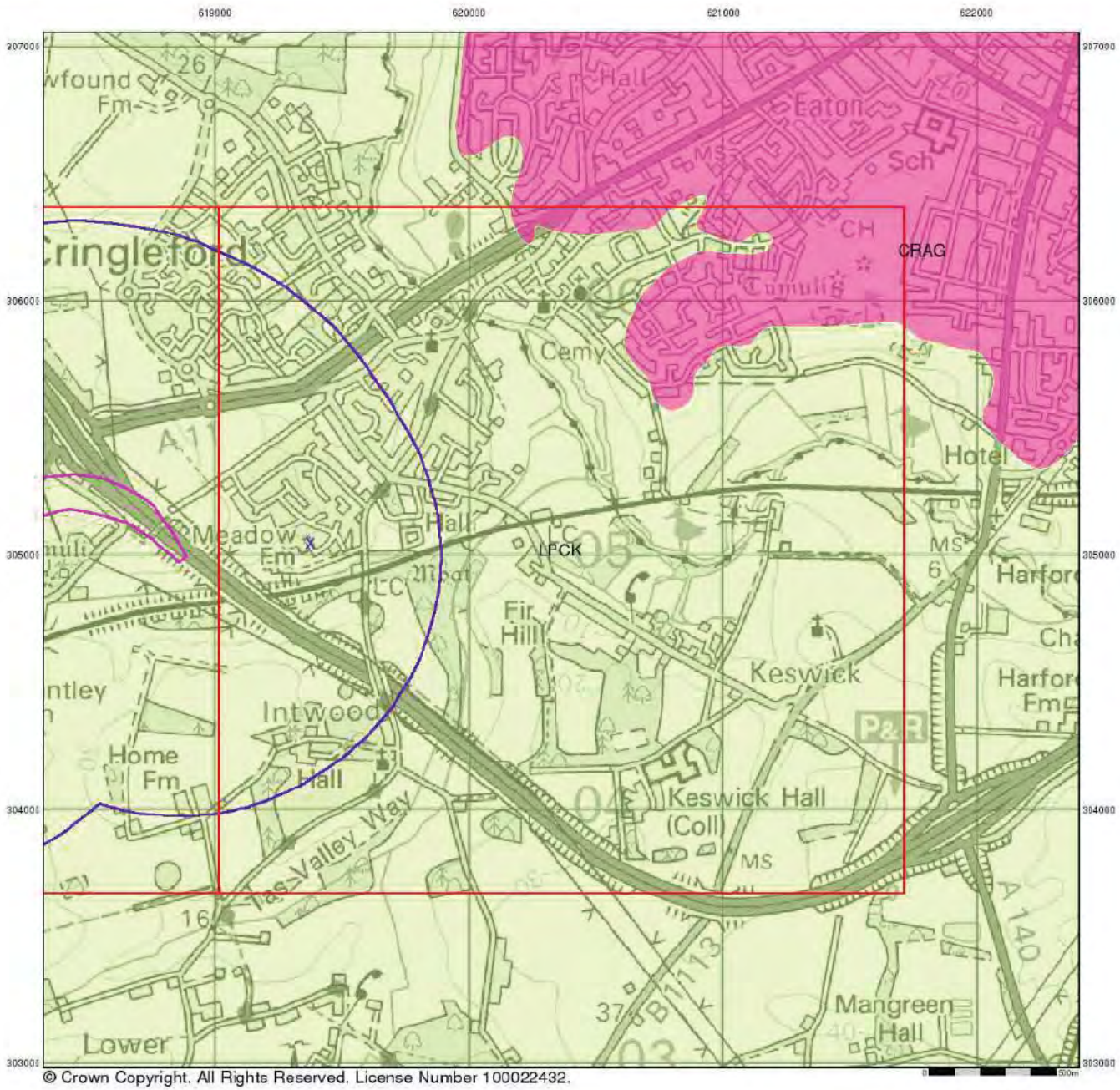

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Bedrock and Faults

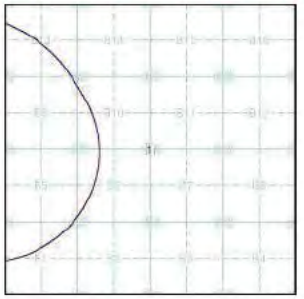
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice B



Order Details:

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Customer Reference:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details:

A47 Thickthorn Junction, Cringleford, Norfolk

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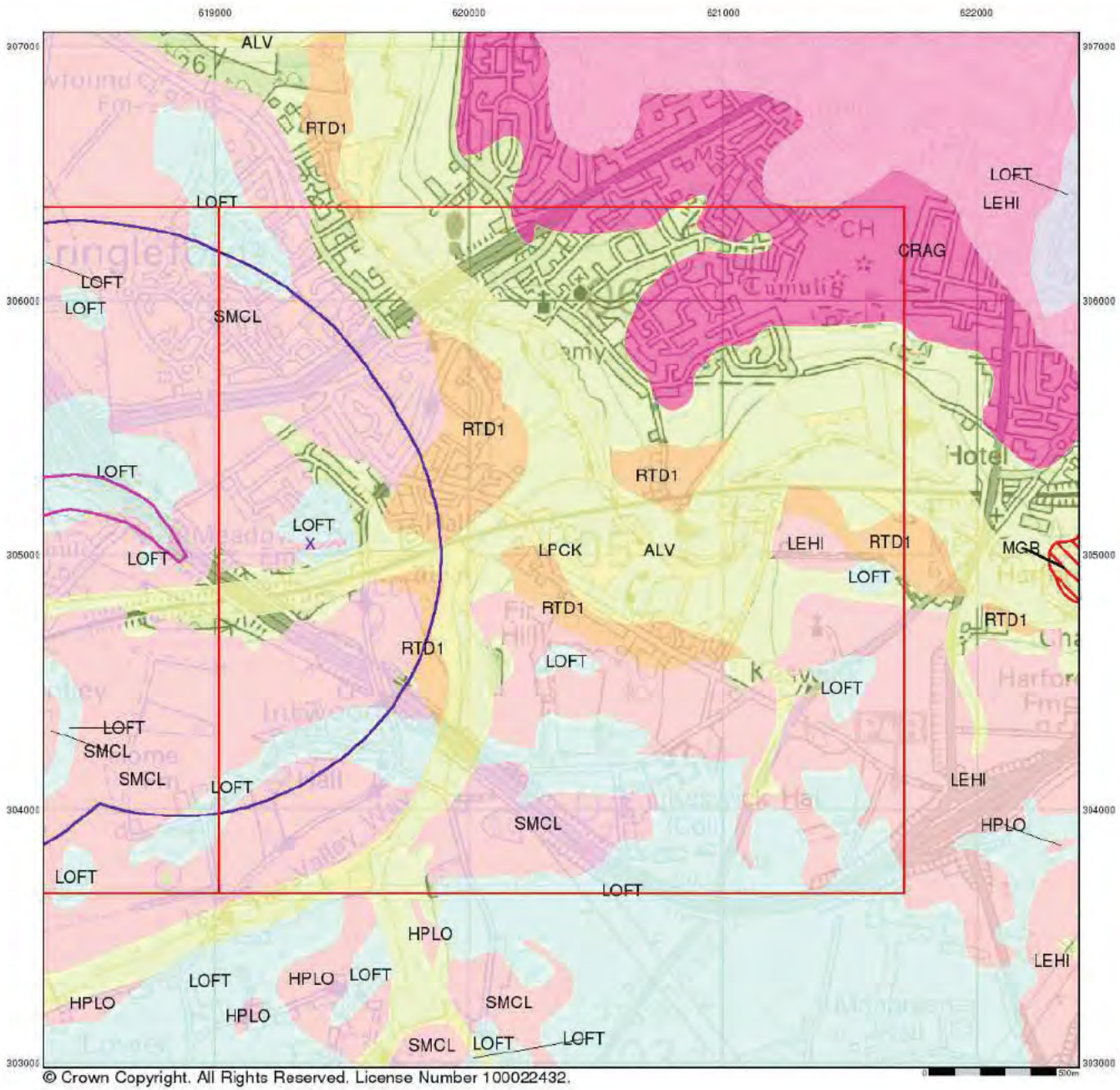
[redacted]



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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

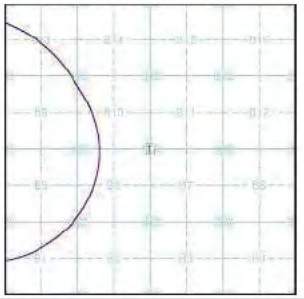
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice B



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National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details:

A47 Thickthorn Junction, Cringleford, Norfolk

[redacted]

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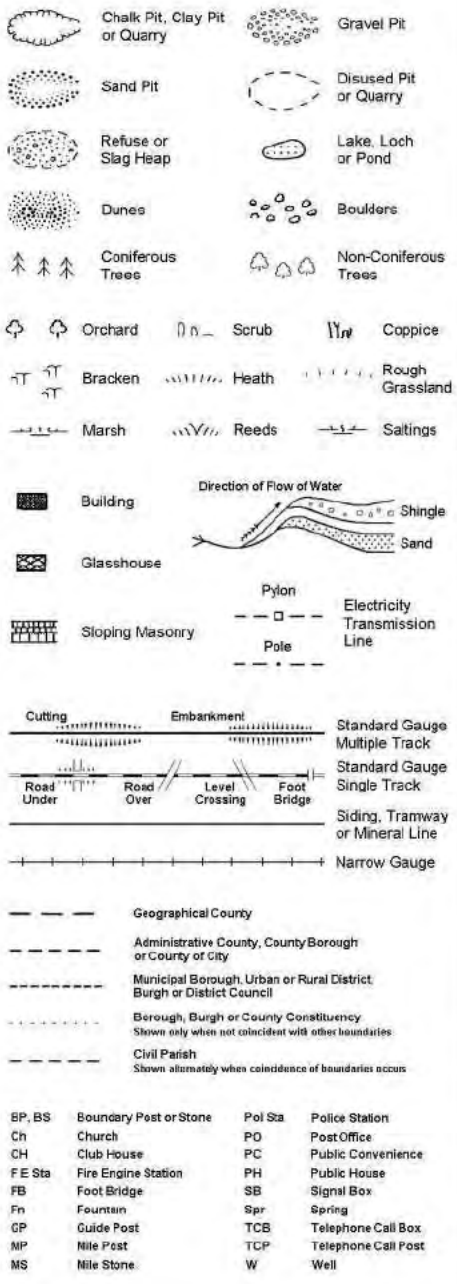
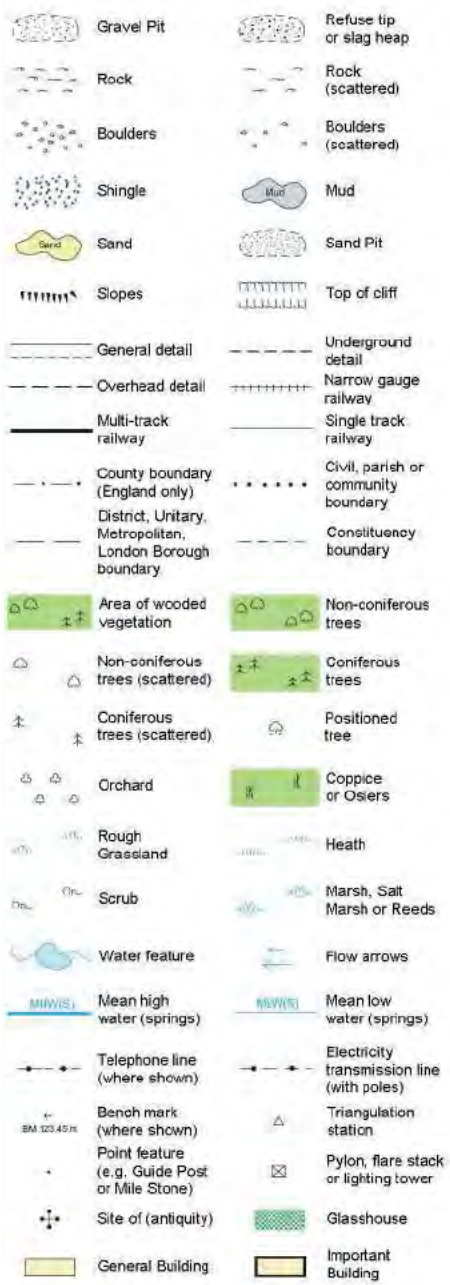
Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Ordnance Survey Plan 1:10,000



1:10,000 Raster Mapping



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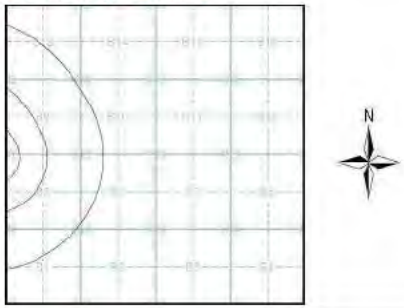
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Norfolk	1:10,560	1886	3
Norfolk	1:10,560	1908	4
Norfolk	1:10,560	1919	5
Norfolk	1:10,560	1929	6
Norfolk	1:10,560	1938	7
Norfolk	1:10,560	1951	8
Ordnance Survey Plan	1:10,000	1957	9
Ordnance Survey Plan	1:10,000	1971 - 1979	10
Norwich	1:10,000	1980	11
Ordnance Survey Plan	1:10,000	1982 - 1989	12
Ordnance Survey Plan	1:10,000	1995	13
10K Raster Mapping	1:10,000	2000	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2016	16

Historical Map - Slice B



Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
National Grid Reference: 619370, 305050
Slice: B
Site Area (Ha): 15.75
Search Buffer (m): 1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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[redacted]

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Fireproof Building
- Prominent Fireproof Building
- Non-fireproof Building
- Non-fireproof Building (non-dwelling)
- Factory, mill, and flour mill, with chimneys
- Factory, mill, and flour mill, without chimneys
- Power Station, drawn to scale
- Hydroelectric Power Station
- Radio Station, drawn to scale
- Telephone Station, drawn to scale
- Abandoned Open-pit Mine or Quarry
- Open-pit Salt Mine
- Pit
- Oil Deposit or Well
- Oil Seepage
- Tailings Pile
- Fuel Storage Tanks
- Natural Gas Tank
- Bench Mark
- Drill Hole
- Burial Mound
- Triangulation Point on Burial Mound
- Single-track Railroad
- Double-track Railroad and Station Building
- Coniferous Forest
- Deciduous Forest
- Mixed Forest
- Lawns
- Citrus Orchard
- Wet Ground
- Scattered Vegetation

243,8 Values for prominent elevations

186.0 Numbers for spot elevations, depth soundings, contour lines, etc.

0.2 Velocity of the current, width of river bed, depth of river

180/12 180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (-)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Partly Demolished Buildings
- Demolished Buildings
- Built-Up Area with Fireproof Buildings Predominant
- Built-Up Area with Non-Fireproof Buildings Predominant
- Individual Fireproof Building
- Prominent Industrial Building
- Individual Dwelling, Fireproof
- Ruins of an Individual Dwelling
- Factory or Mill Chimney
- Factory or Mill with Chimney
- Factory or Mill without Chimney
- Mine or Open Pit Mine
- Operating Shaft or Mine
- Non-Operating Shaft or Mine
- Salt Mine
- Tailings Pile
- Pit
- Stone Quarry
- Gas Pump or Service Station
- Fuel Storage or Natural Gas Tank
- Oil or Natural Gas Derrick
- Small Hydroelectric Power Station
- Power Station
- Transformer Station
- Cemetery
- Burial Mound (height in metres)
- Triangulation Point on Burial Mound
- Triangulation Point
- Bench Mark
- Bench Mark (monumented)
- Telegraph Office
- Telephone Station
- Radio Station
- Radio Tower
- Airfield or Seaplane Base
- Landing Strip
- Main Highway
- Highway under Construction
- Improved Dirt Road (former truck road)
- Double-track Railroad with First Class Station
- Dismantled Railroad
- Railroad Under Construction
- Shore Embankment
- River or Ditch with Embankment
- Direction and velocity of current
- Water Level Mark
- Well
- Water Reservoir or Rain Water Pit
- Spring
- Isobath with value
- Heavy (Index) Contour Line
- Contour Line and Value
- Half Contour Line
- Spot Elevation Value
- Coniferous
- Deciduous
- Mixed
- Scrub

Key to Numbers on Mapping

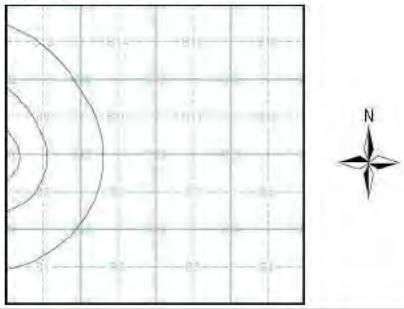
Envirocheck®

LANDMARK INFORMATION GROUP

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Norfolk	1:10,560	1886	3
Norfolk	1:10,560	1908	4
Norfolk	1:10,560	1919	5
Norfolk	1:10,560	1929	6
Norfolk	1:10,560	1938	7
Norfolk	1:10,560	1951	8
Ordnance Survey Plan	1:10,000	1957	9
Ordnance Survey Plan	1:10,000	1971 - 1979	10
Norwich	1:10,000	1980	11
Ordnance Survey Plan	1:10,000	1982 - 1989	12
Ordnance Survey Plan	1:10,000	1995	13
10K Raster Mapping	1:10,000	2000	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2016	16

Russian Map - Slice B



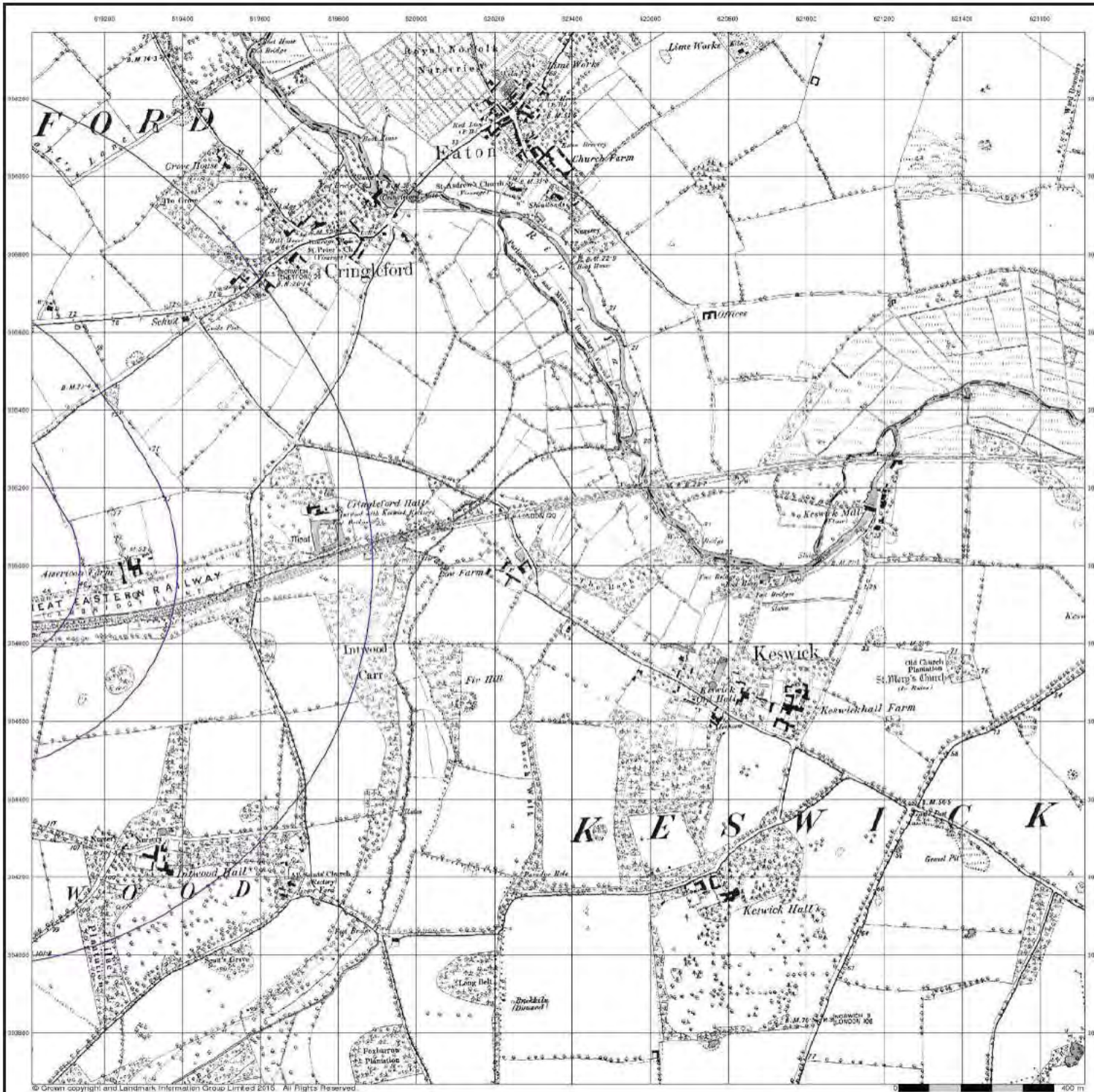
Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
National Grid Reference: 619370, 305050
Slice: B
Site Area (Ha): 15.75
Search Buffer (m): 1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

[redacted]



Envirocheck®

LANDMARK INFORMATION GROUP®

Norfolk

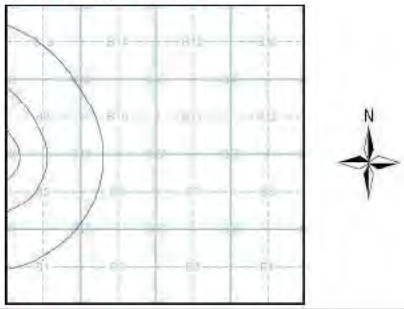
Published 1886

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)

Historical Map - Slice B



Order Details

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National Grid Reference:	619370, 305050
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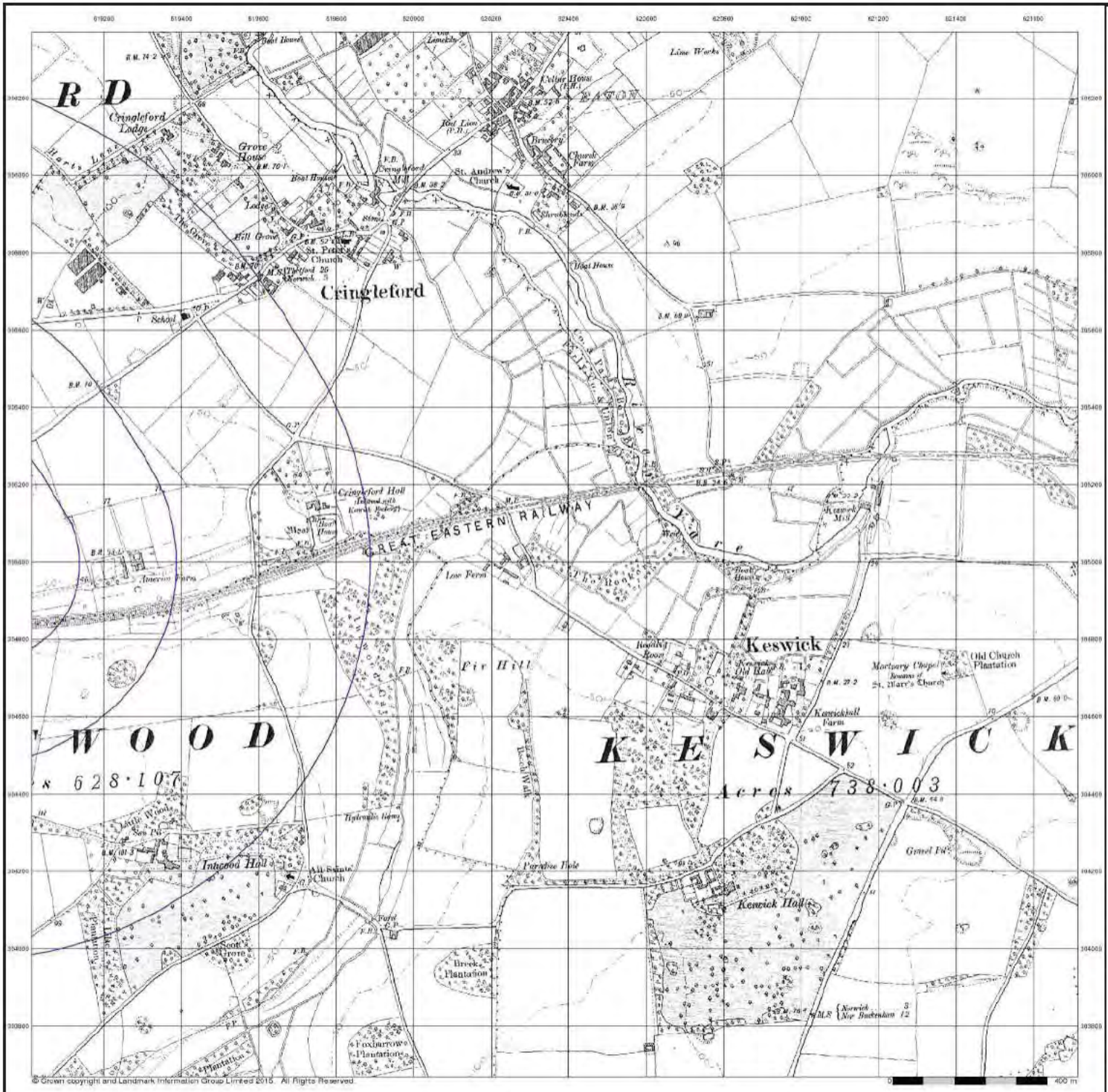
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Norfolk

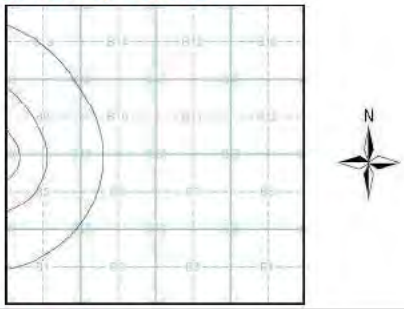
Published 1908

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 B



Order Details

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Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
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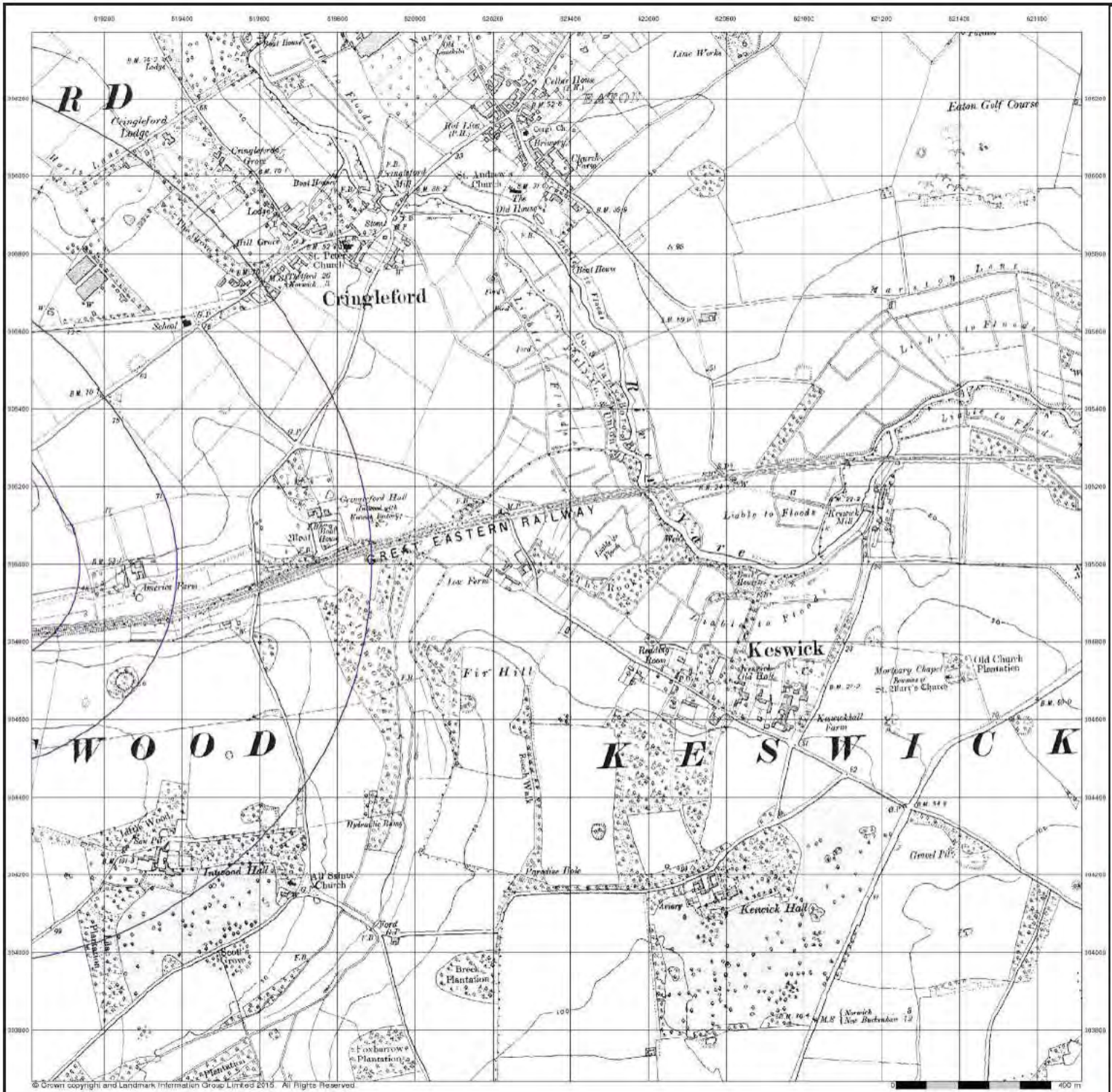
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Norfolk

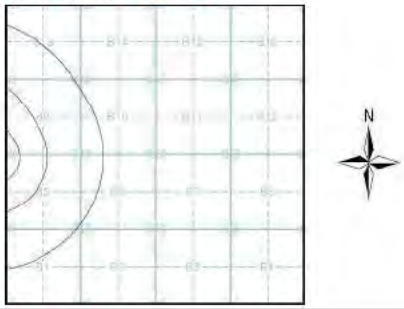
Published 1919

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 B



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National Grid Reference:	619370, 305050
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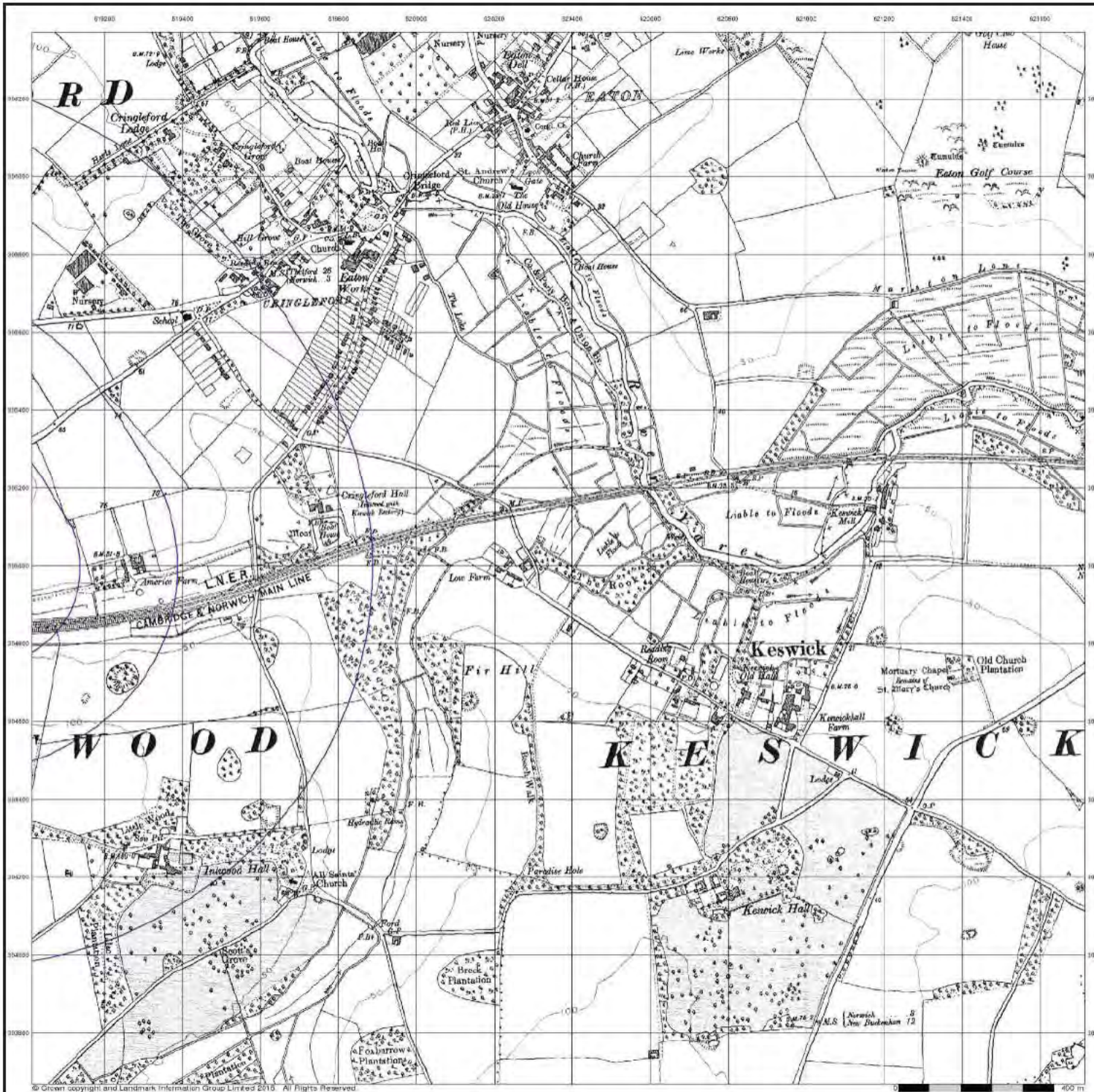
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Norfolk

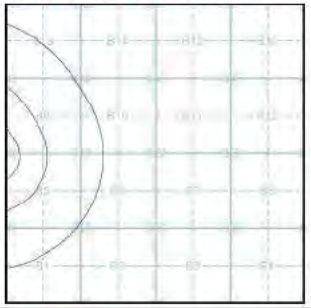
Published 1929

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 B



Order Details

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National Grid Reference:	619370, 305050
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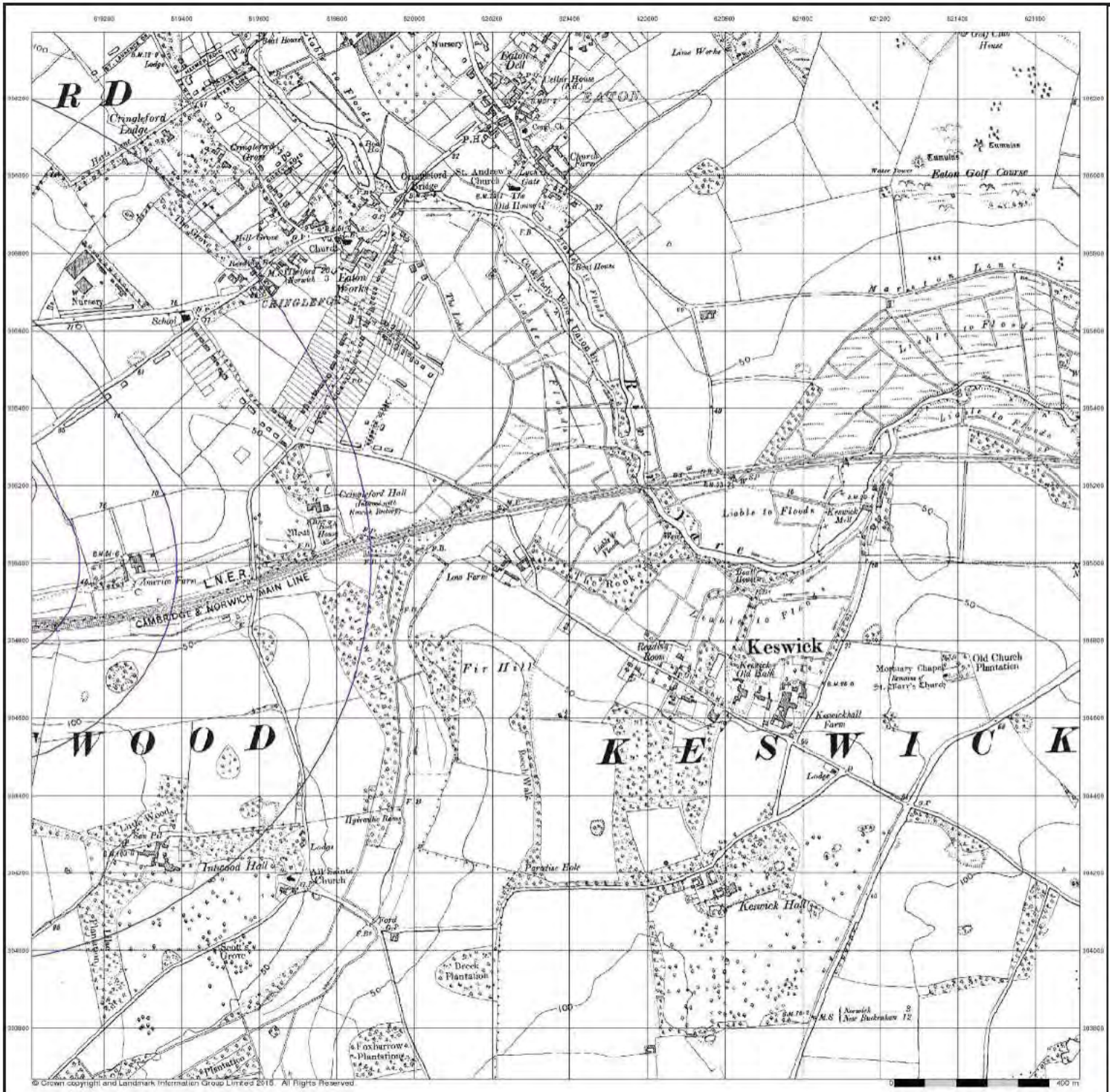
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP®

Norfolk

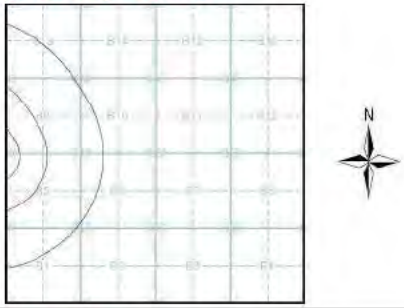
Published 1938

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 B



Order Details

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Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
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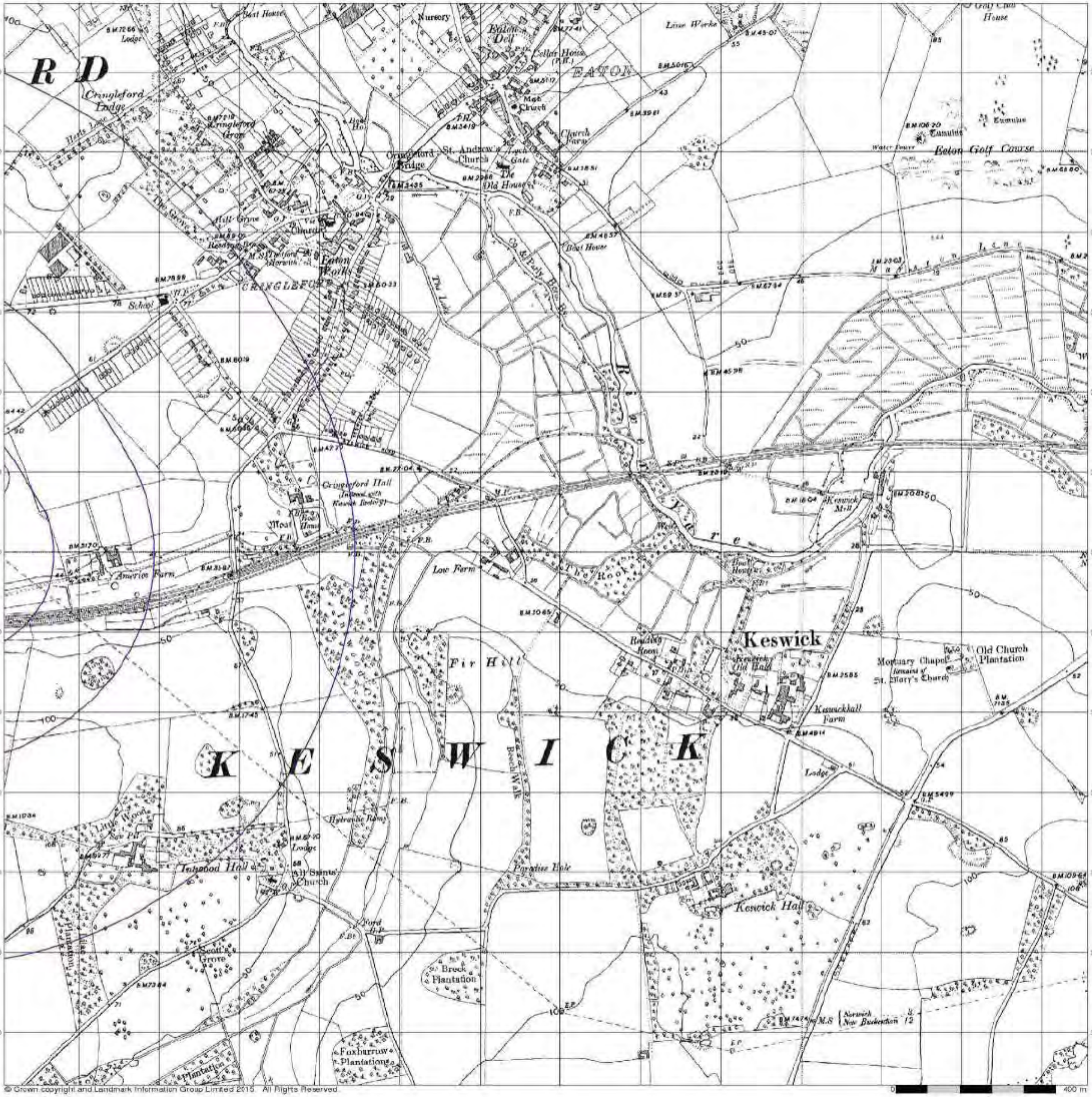
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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LANDMARK INFORMATION GROUP

Norfolk

Published 1951

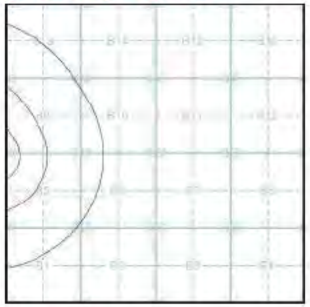
Source map scale - 1:10,560

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)

075NW
1951
1:10,560

Historical Map - Slice B



Order Details

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Customer Ref: A47 Thickthorn
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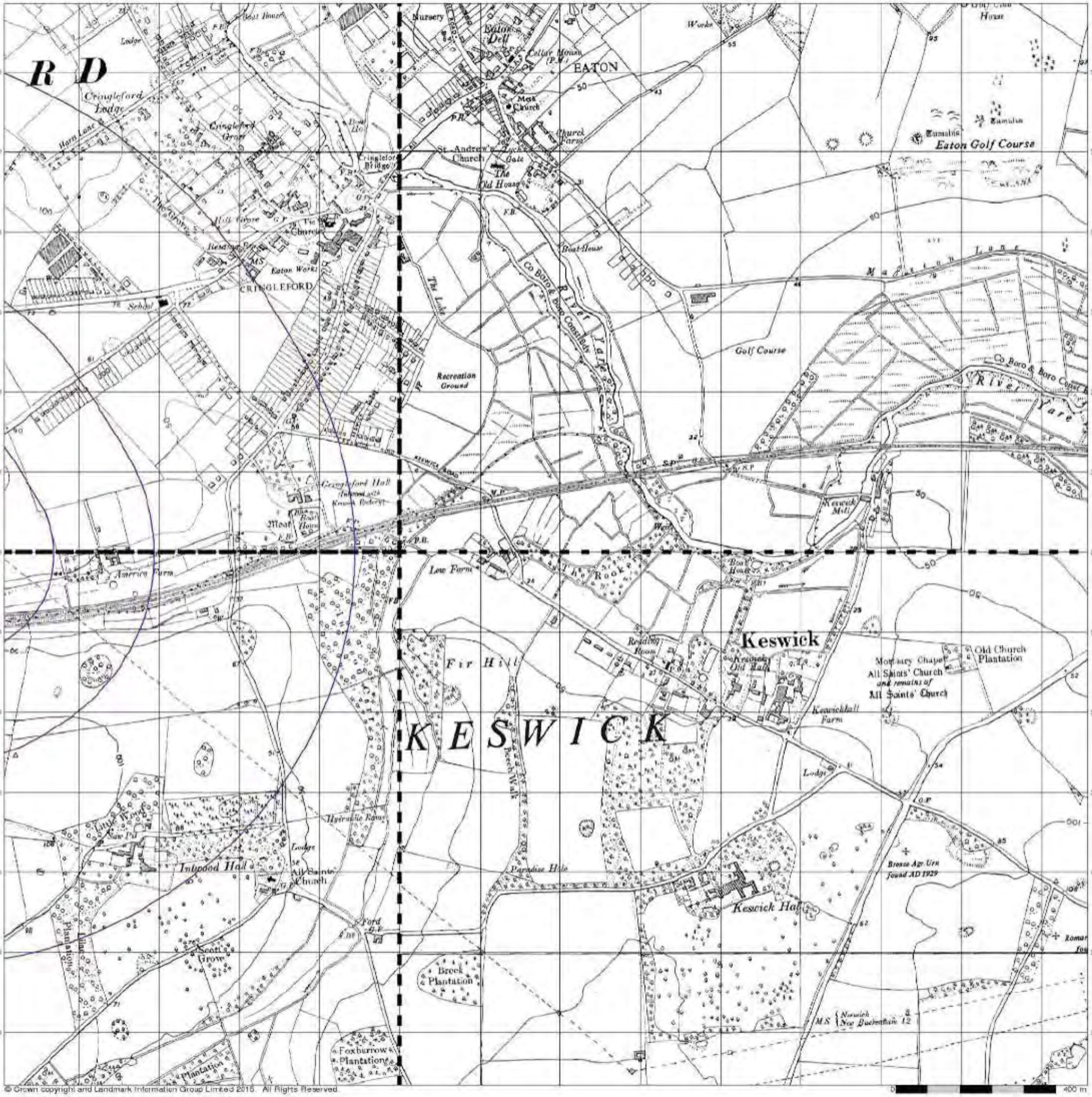
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



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Ordnance Survey Plan

Published 1957

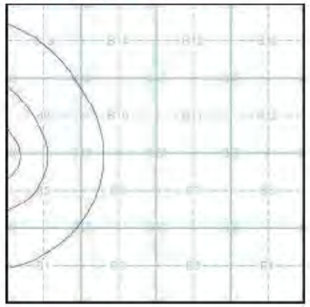
Source map scale - 1:10,000

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)

TG10NE 1957 1:10,560	TG20NW 1957 1:10,560
TG10SE 1957 1:10,560	TG20SW 1957 1:10,560

Historical Map - Slice B



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Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
National Grid Reference: 619370, 305050
Slice: B
Site Area (Ha): 15.75
Search Buffer (m): 1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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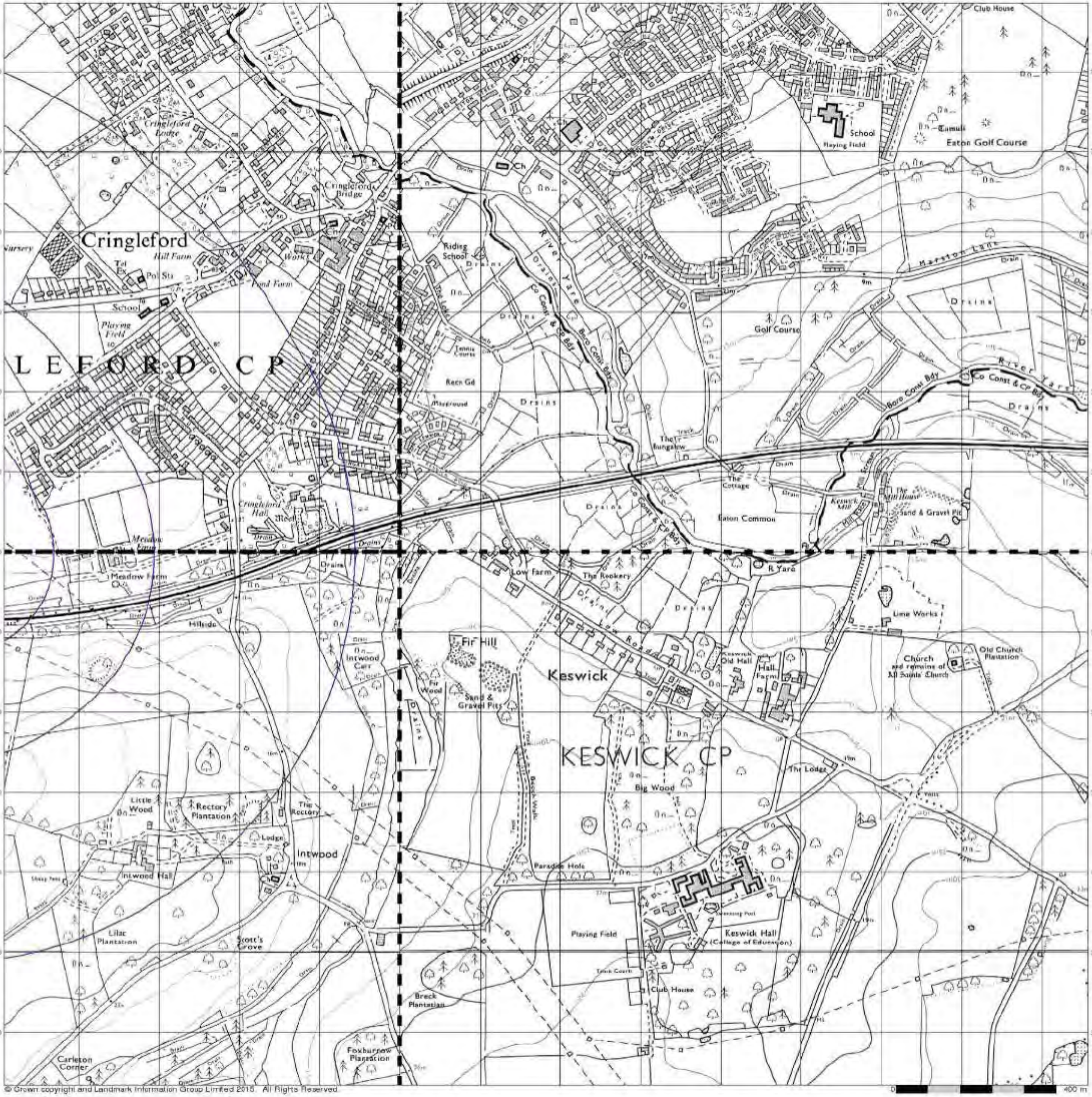

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Ordnance Survey Plan

Published 1971 - 1979

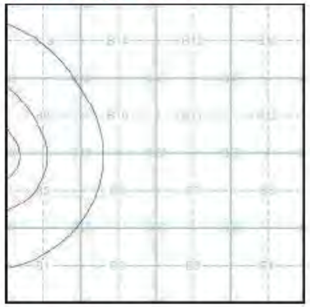
Source map scale - 1:10,000

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)

TG10NE 1971 1:10,560	TG20NW 1979 1:10,000
TG10SE 1975 1:10,000	TG20SW 1977 1:10,000

Historical Map - Slice B



Order Details

Order Number: 108824762_1_1
Customer Ref: A47 Thickthorn
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Slice: B
Site Area (Ha): 15.75
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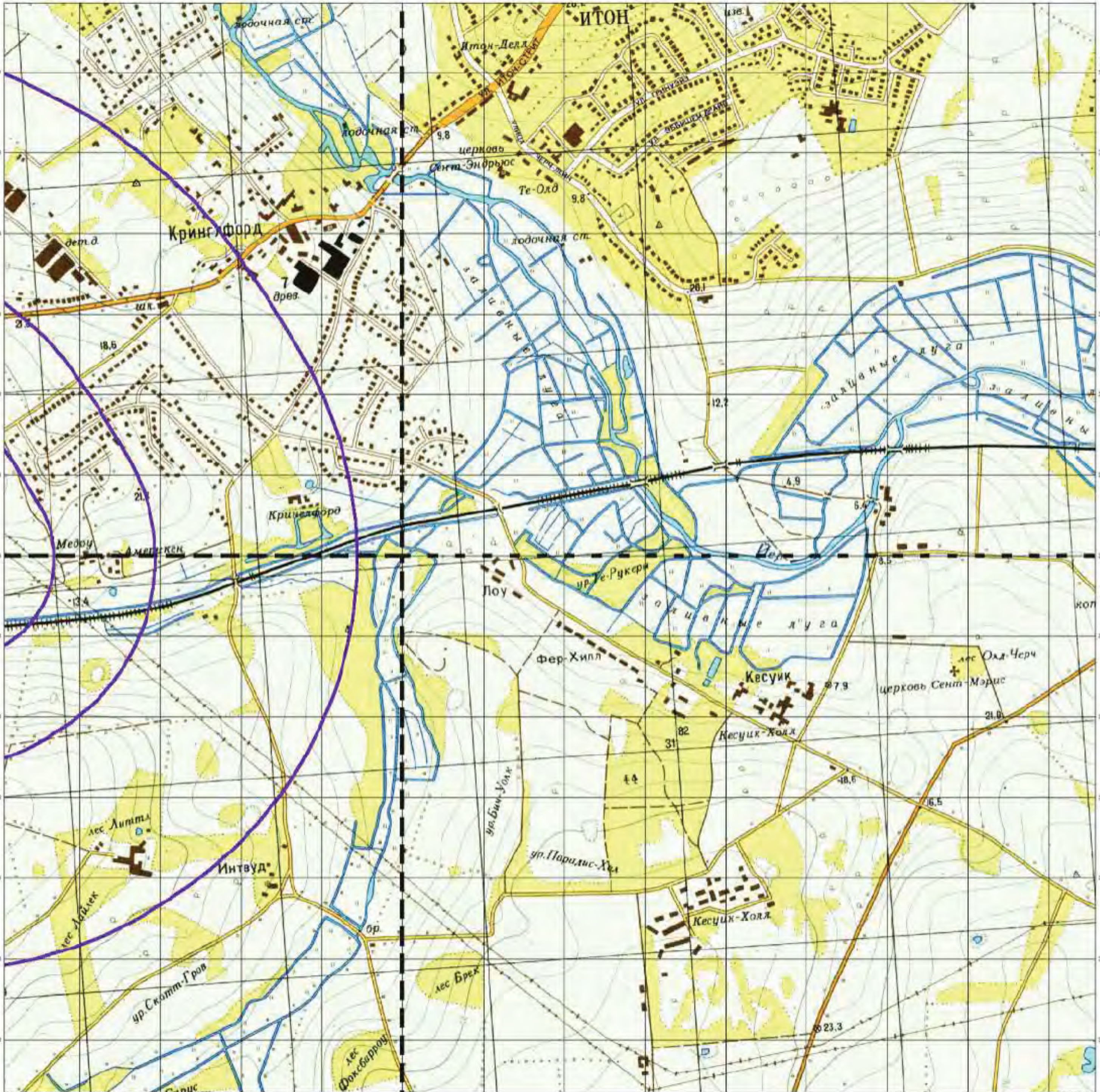
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk



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LANDMARK INFORMATION GROUP®

Norwich

Published 1980

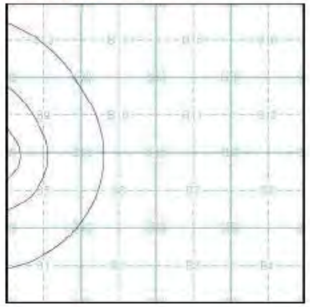
Source map scale - 1:10,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

TG10NE 1980 1:10,000	TG20NW 1980 1:10,000
TG10SE 1980 1:10,000	TG20SW 1980 1:10,000

Russian Map - Slice B



Order Details

Order Number: 108824762_1_1
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Slice: B
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Search Buffer (m): 1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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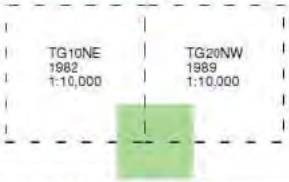
Ordnance Survey Plan

Published 1982 - 1989

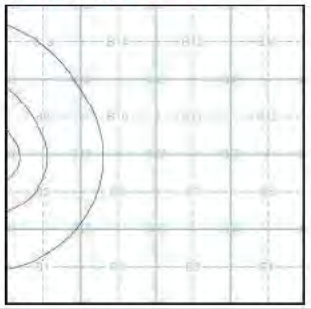
Source map scale - 1:10,000

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 B



Order Details

Order Number:	108824762_1_1
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Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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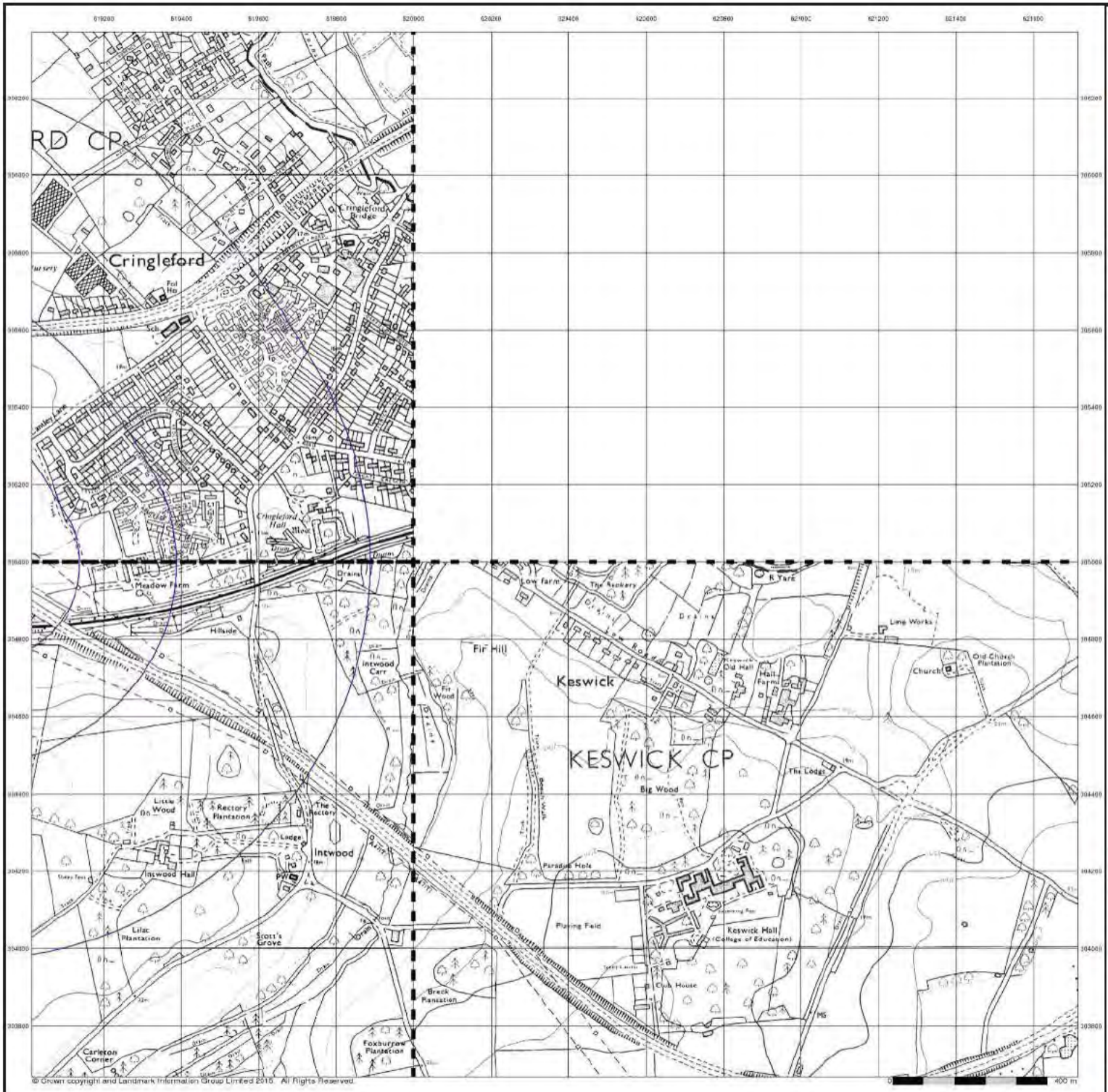

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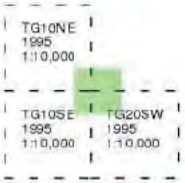
Ordnance Survey Plan

Published 1995

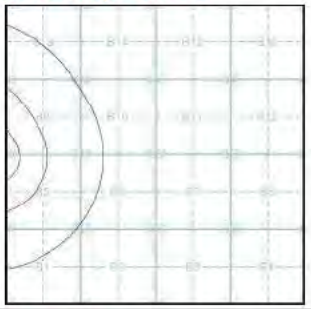
Source map scale - 1:10,000

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 B



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Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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10k Raster Mapping

Published 2000

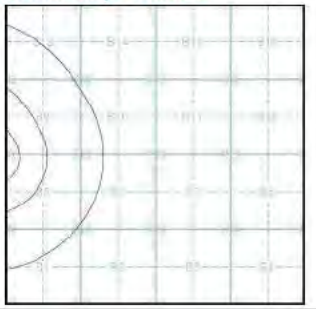
Source map scale - 1:10,000

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)

TG10NE 2000 1:10,000	TG20NW 2000 1:10,000
TG10SE 2000 1:10,000	TG20SW 2000 1:10,000

Historical Map - Slice B



Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

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10k Raster Mapping

Published 2006

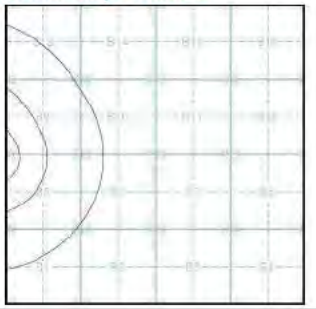
Source map scale - 1:10,000

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)

TG10NE 2006 1:10,000	TG20NW 2006 1:10,000
TG10SE 2006 1:10,000	TG20SW 2006 1:10,000

Historical Map - Slice B



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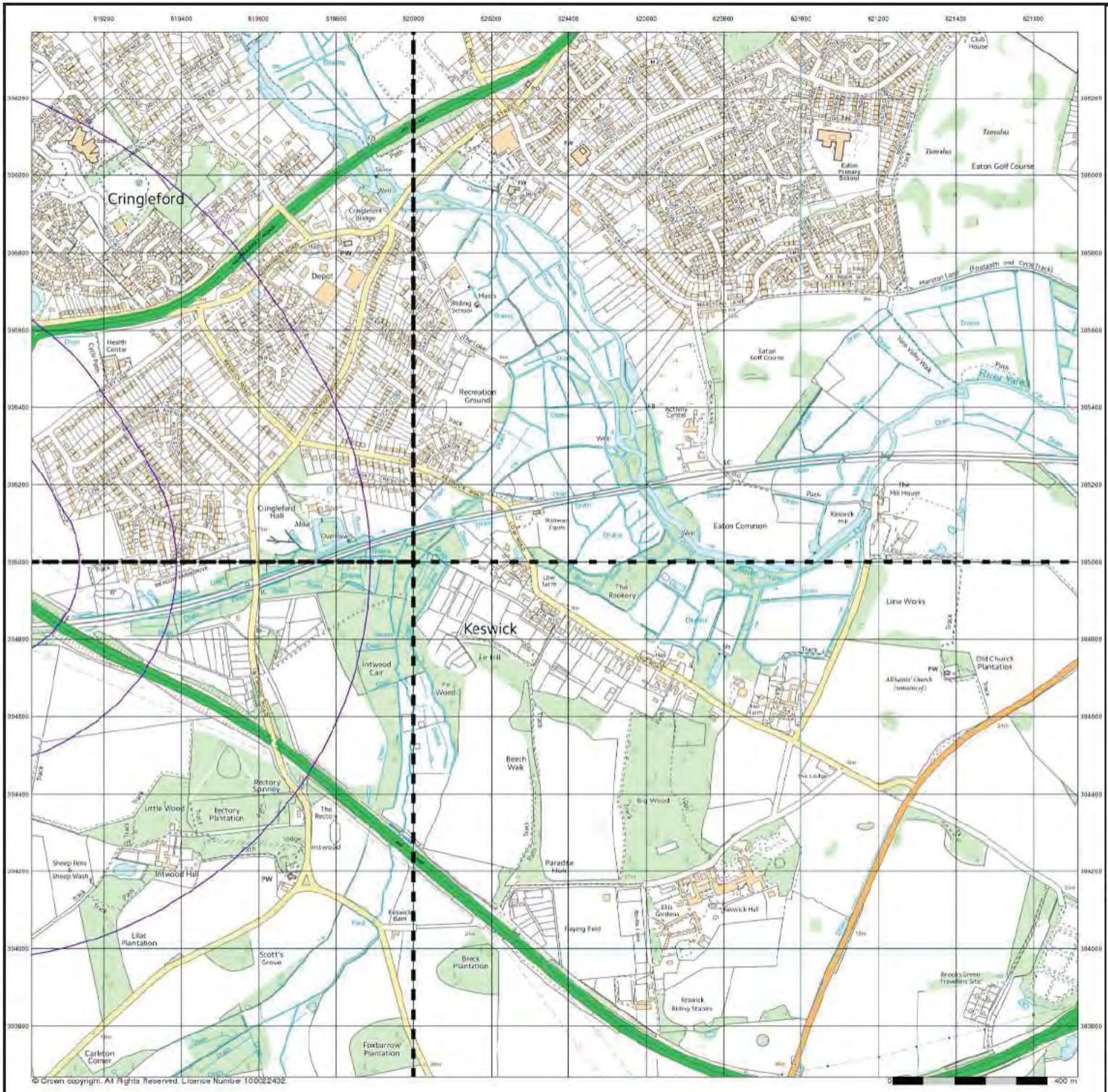
A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

VectorMap Local

Published 2016

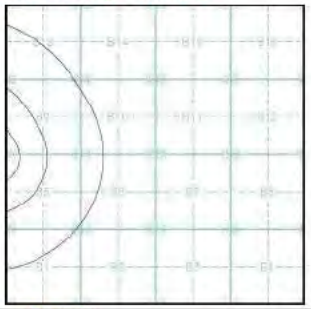
Source map scale - 1:10,000

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)

TG10NE 2016 Variable	TG20NW 2016 Variable
TG10SE 2016 Variable	TG20SW 2016 Variable

Historical Map - Slice B



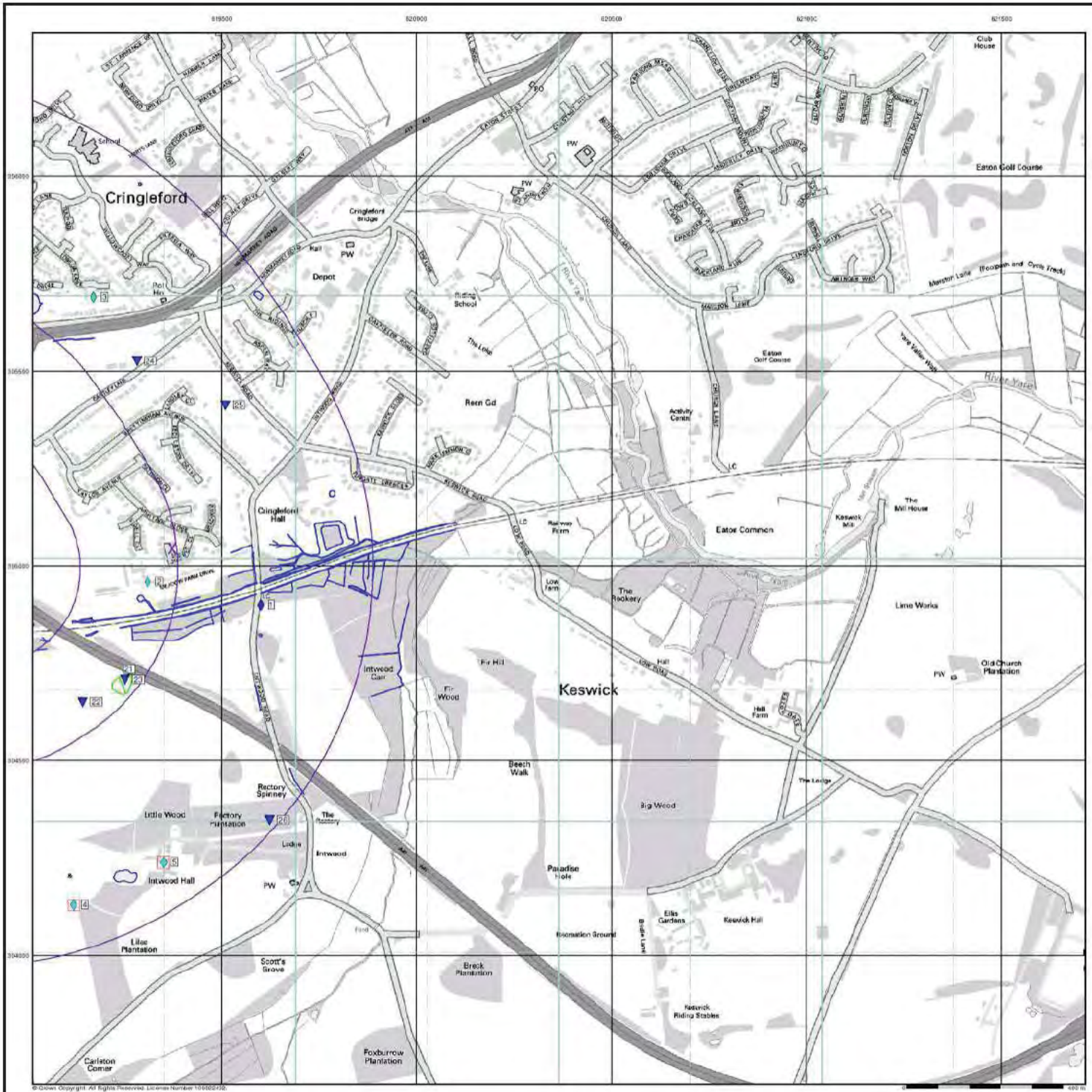
Order Details

Order Number:	108824762_1_1
Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Pent Buffered to 100m)
- Registered Landfill Site (Pent Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

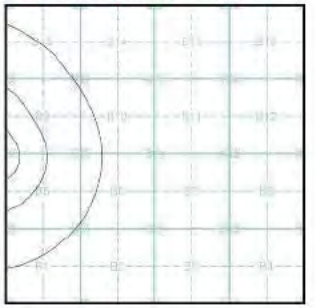
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Geological

- BGS Recorded Mineral Site

Site Sensitivity Map - Slice B



Order Details

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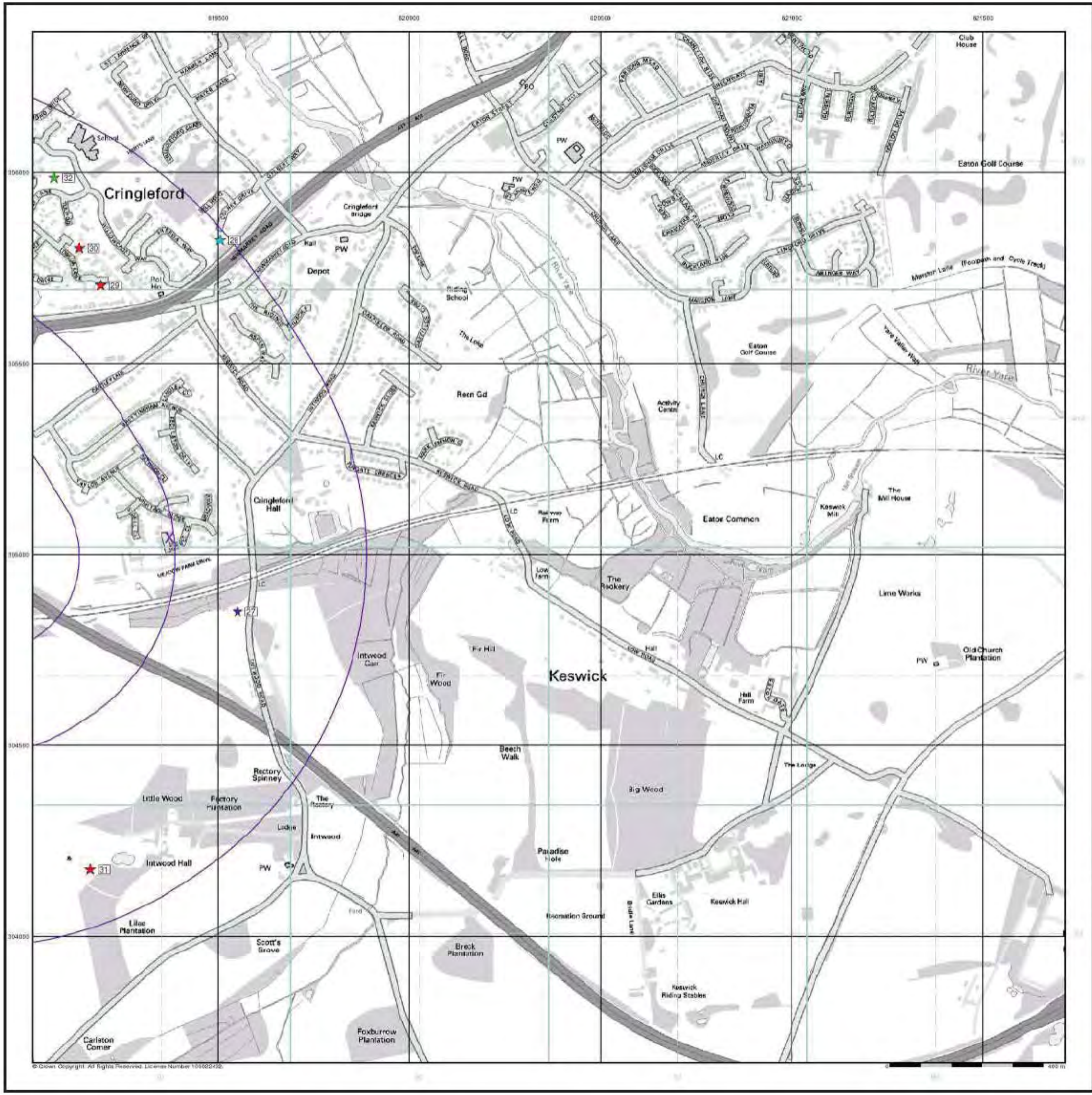
Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

Industrial Land Use Map

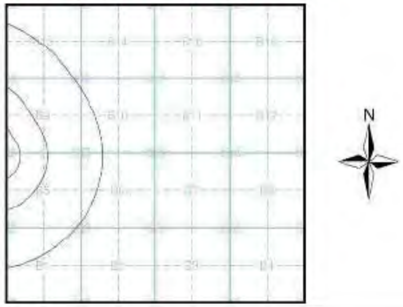
General

Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice
Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice B



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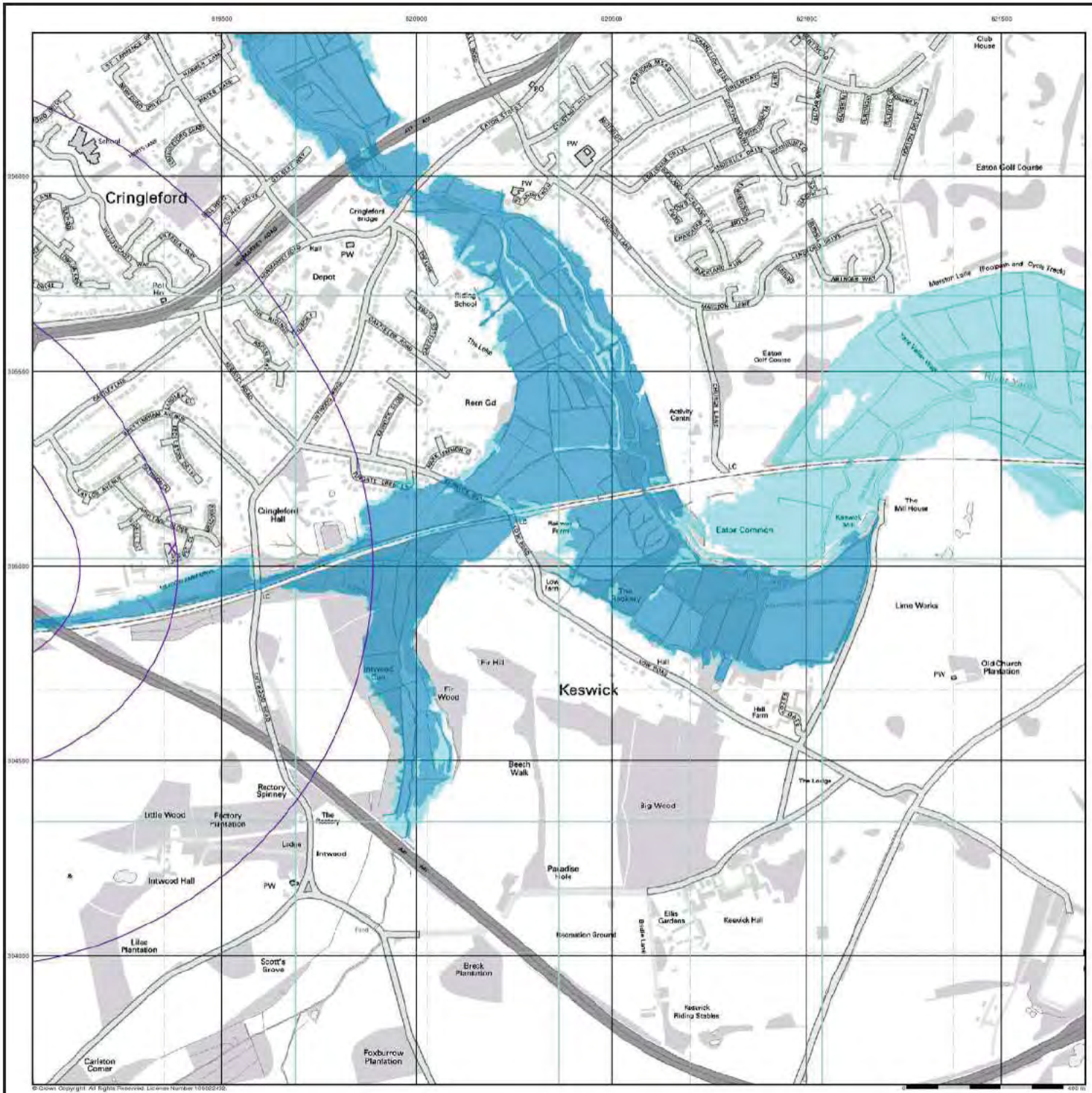
Customer Ref:	A47 Thickthorn
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

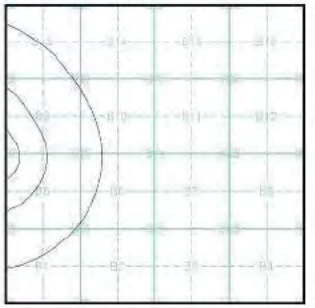
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice B



Order Details

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National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Envirocheck®

LANDMARK INFORMATION GROUP®

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

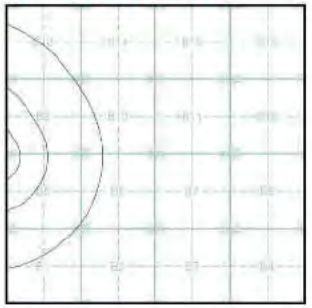
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice B



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National Grid Reference:	619370, 305050
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Site Area (Ha):	15.75
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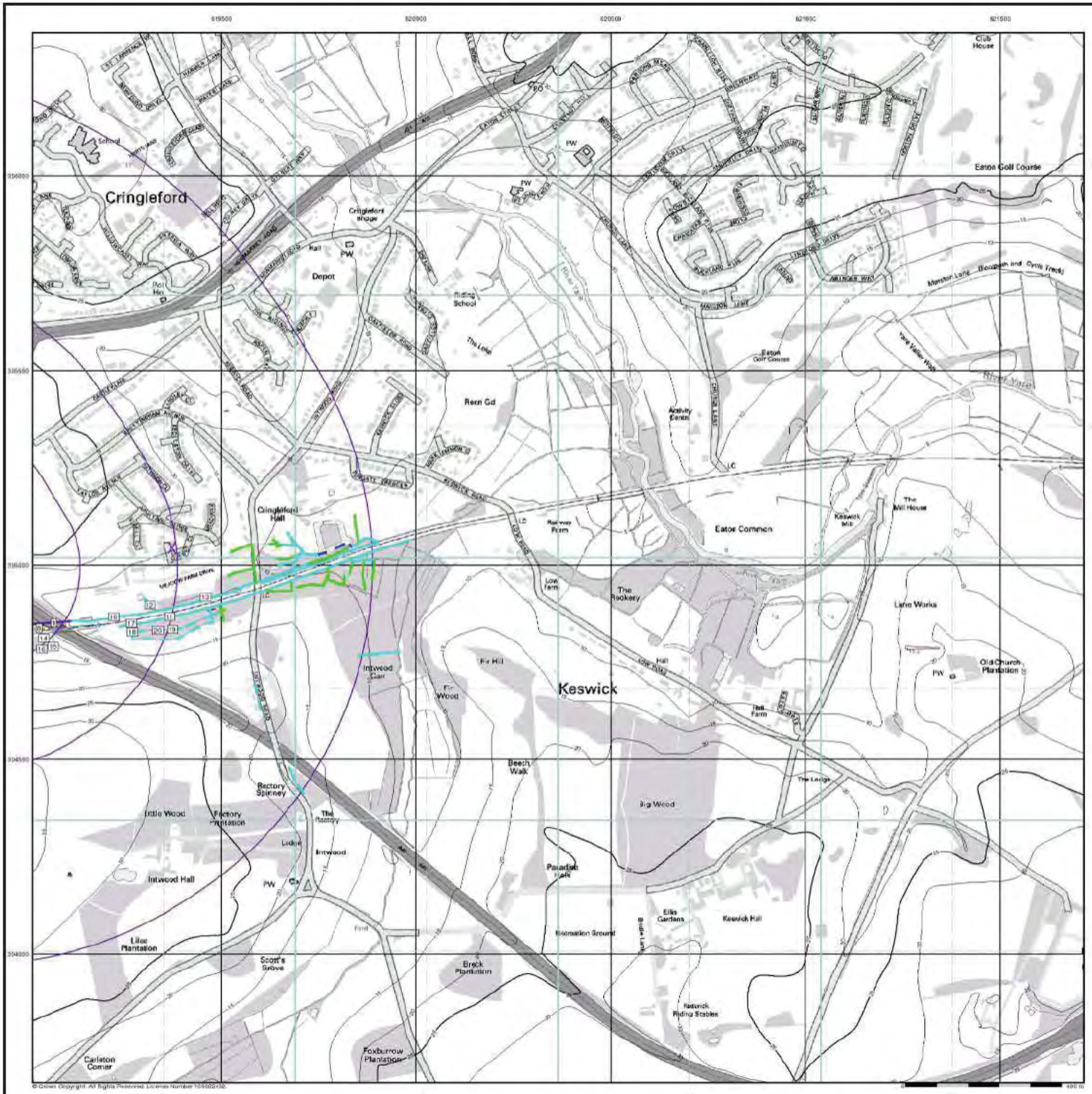
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

General

- Specified Site
- Specified Buffer(s)
- X Bearing/Reference Point
- Map ID

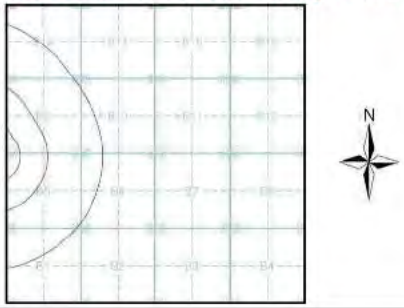
Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Offline Drainage Feature
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature

Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height
- MLW = Mean Low Water
- MHW = Mean High Water

EA/NRW Detailed River Network Map - Slice B



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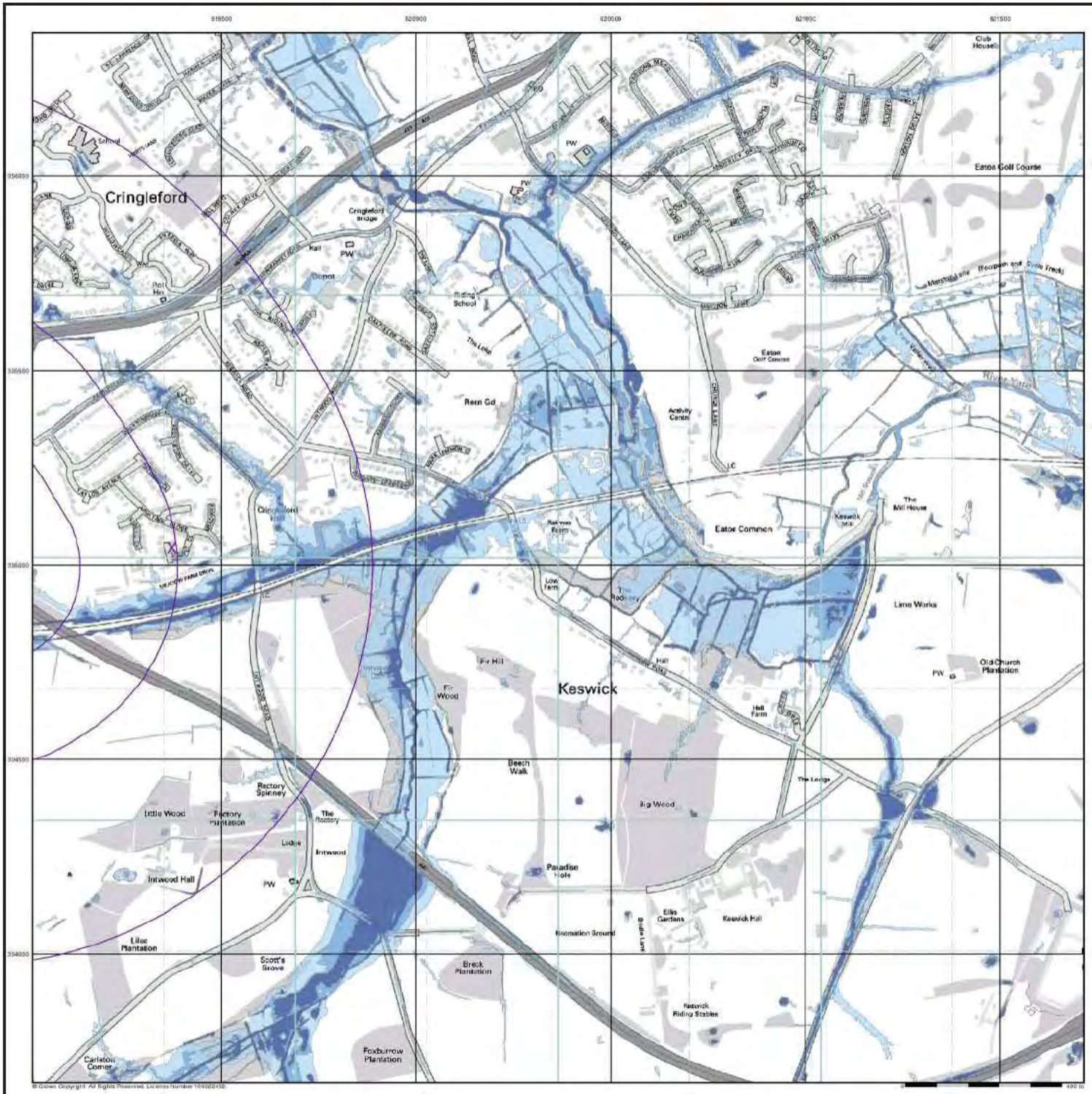
National Grid Reference:	619370, 305050
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Risk of Flooding from Surface Water

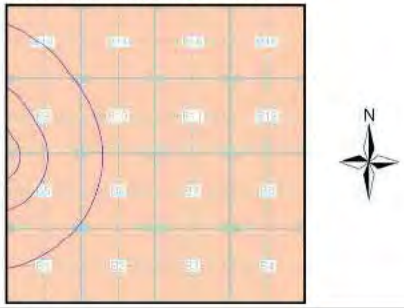
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice B



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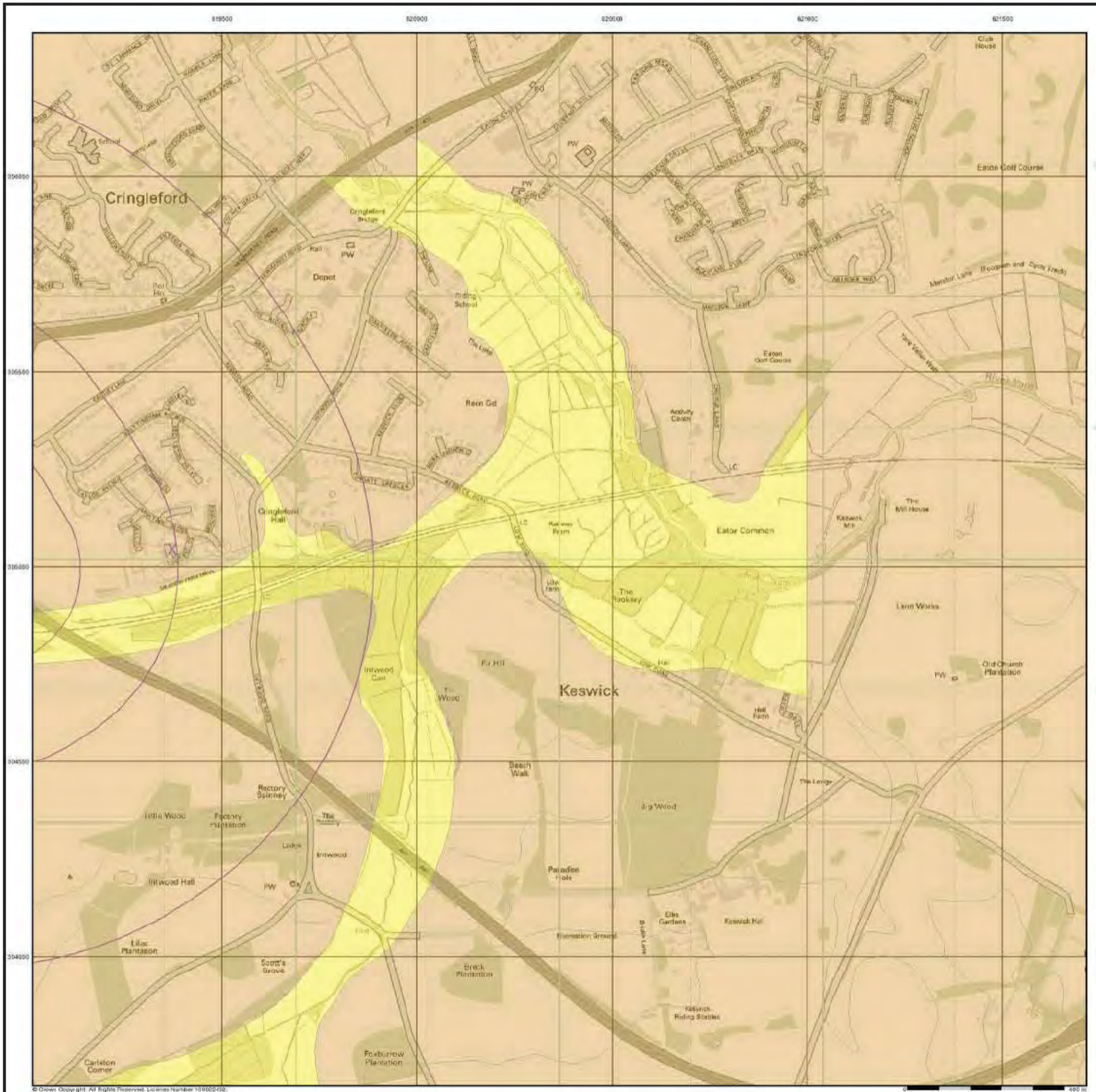
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

General

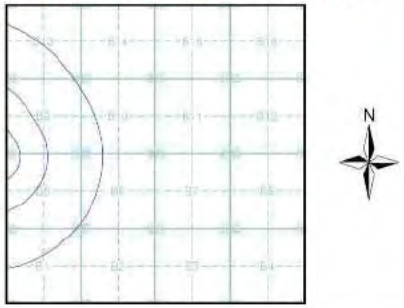
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice B



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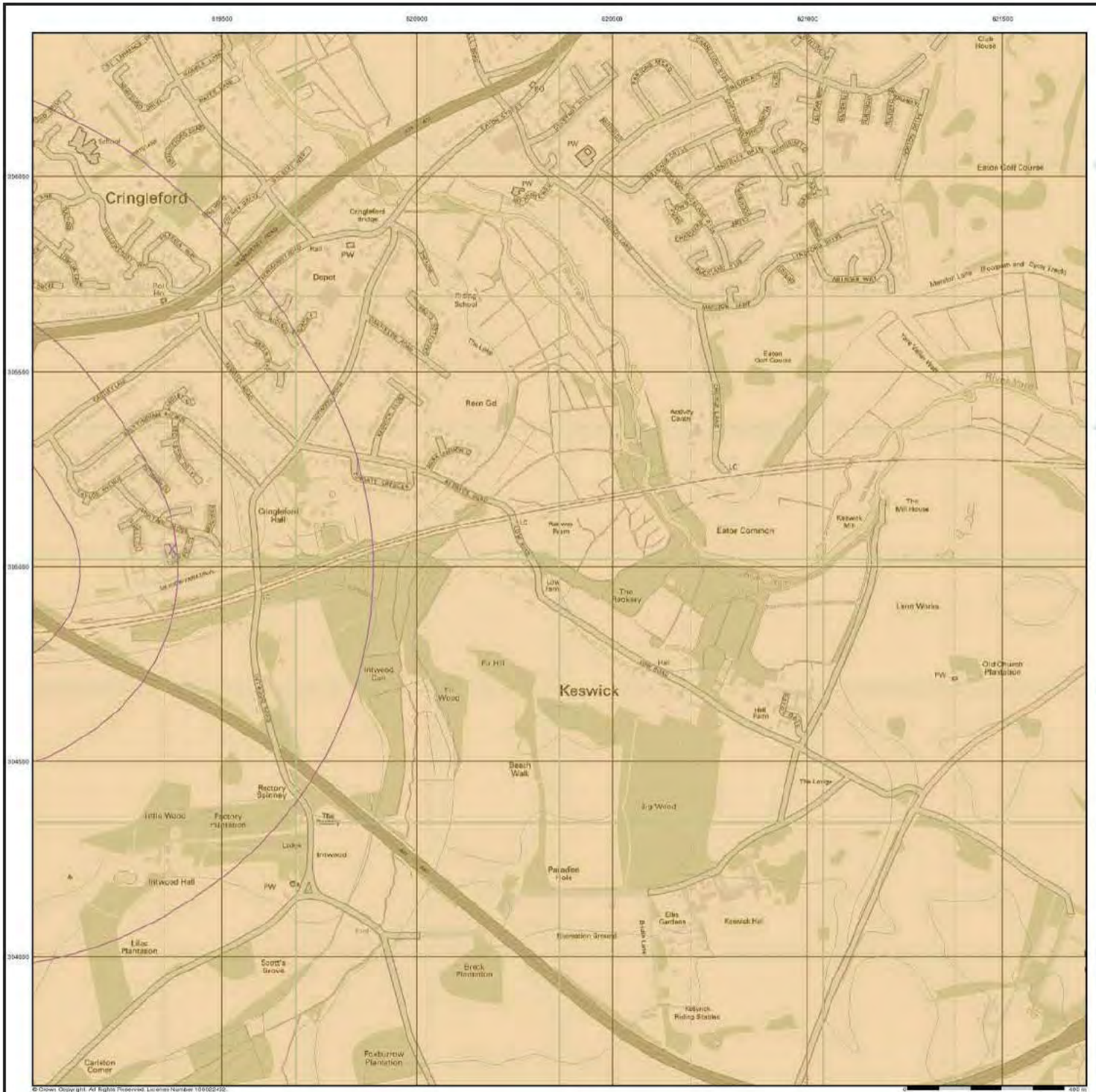
Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

General

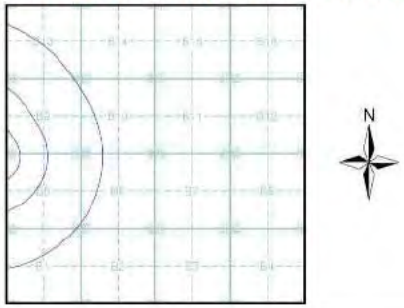
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice B



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Customer Ref:	A47 Thickthorn
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Slice:	B
Site Area (Ha):	15.75
Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Envirocheck®

LANDMARK INFORMATION GROUP®

General

Specified Site

Specified Buffer(s)

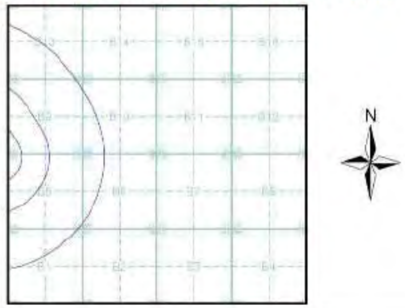
X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice B



Order Details

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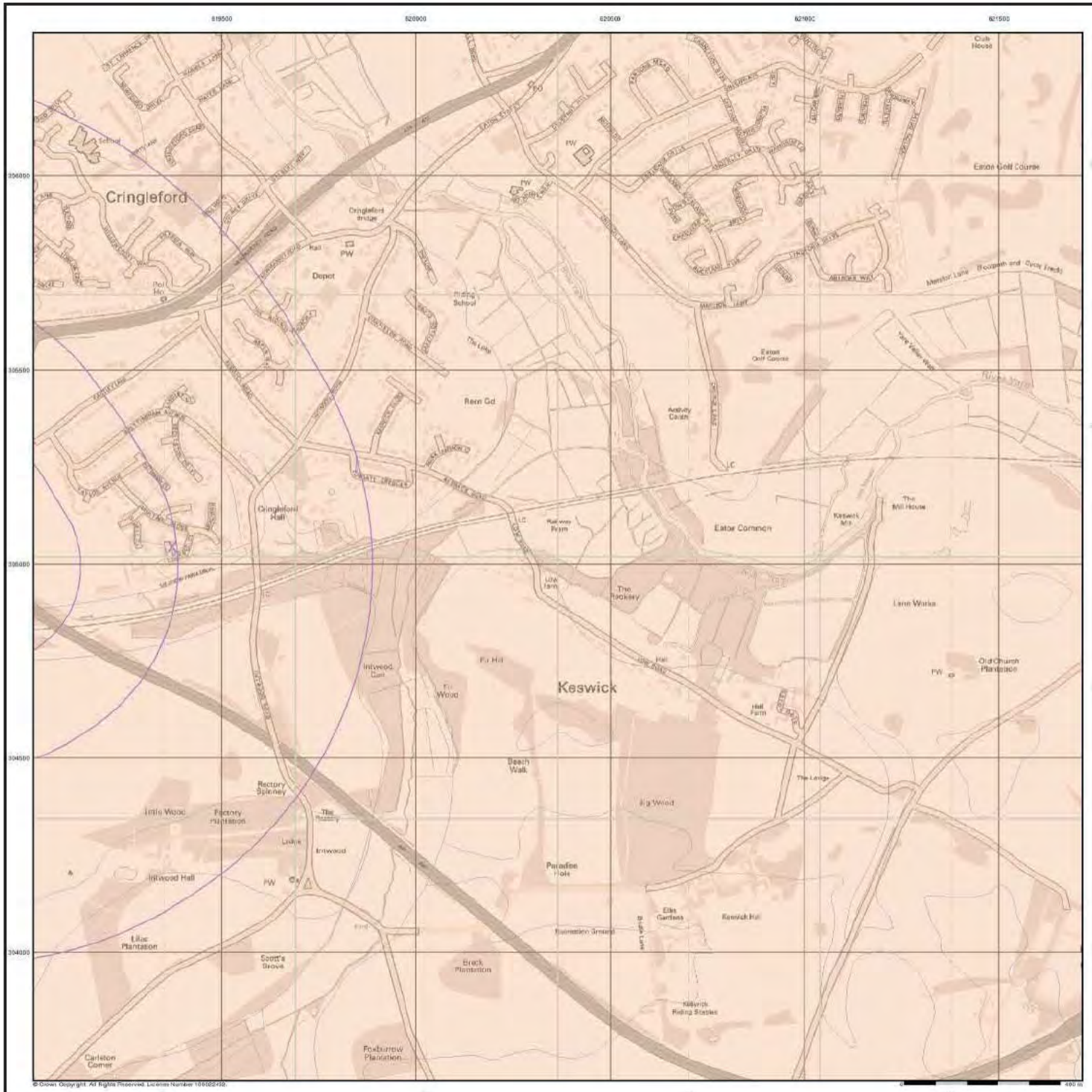
Customer Ref: A47 Thickthorn
National Grid Reference: 619370, 305050
Slice: B
Site Area (Ha): 15.75
Search Buffer (m): 1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP



Envirocheck®

LANDMARK INFORMATION GROUP®

General

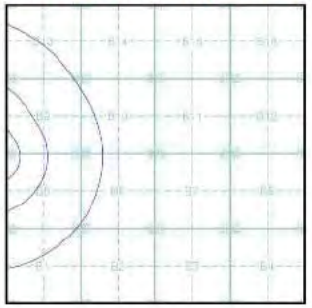
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice B



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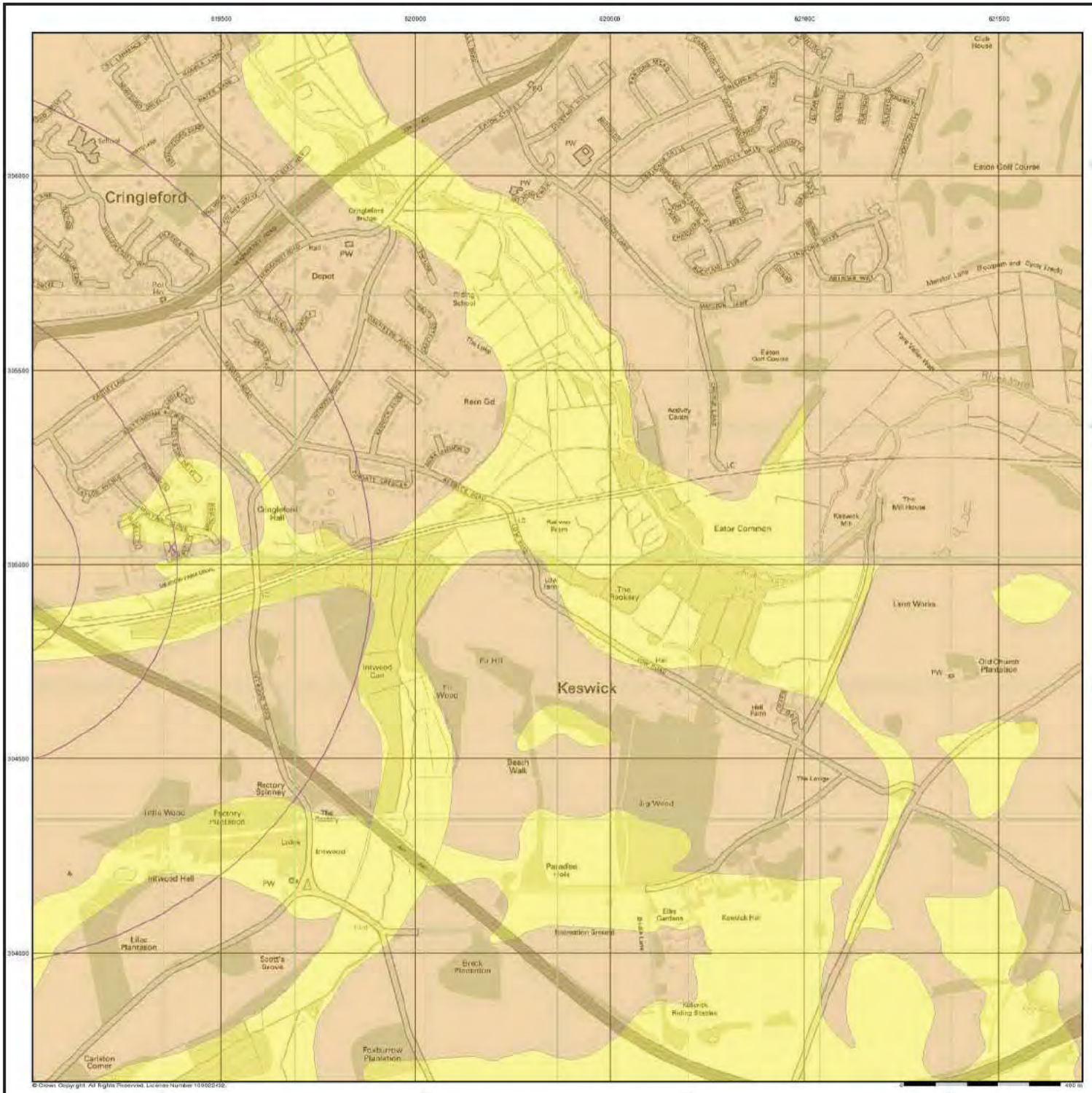
Site Details

A47 Thickthorn Junction, Cringleford, Norfolk



Envirocheck®

LANDMARK INFORMATION GROUP®

General

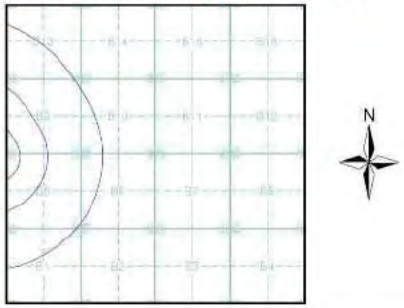
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice B



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Slice:	B
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Search Buffer (m):	1000

Site Details

A47 Thickthorn Junction, Cringleford, Norfolk

Landmark® INFORMATION GROUP

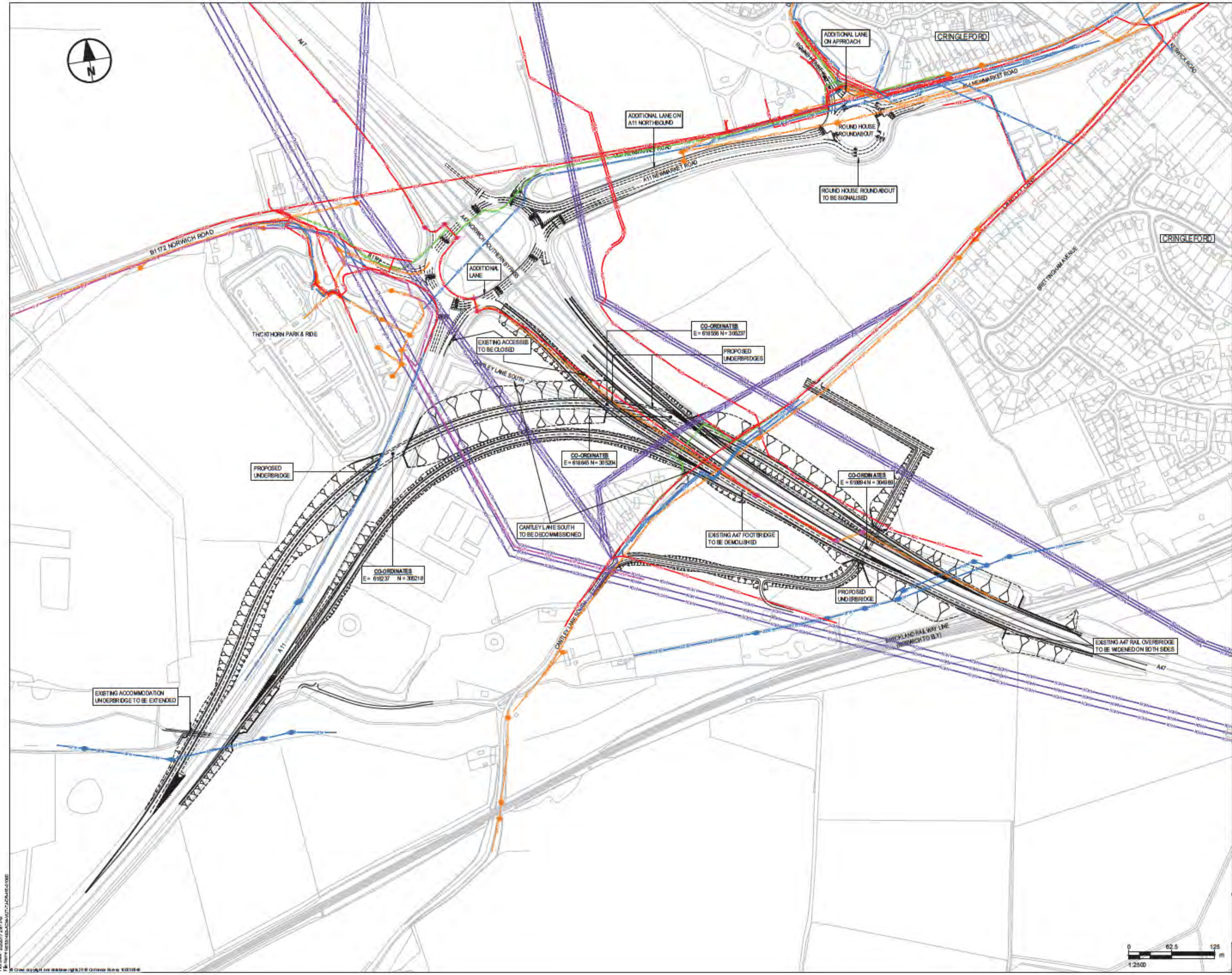
Appendix F: BGS GeoSure Ground Stability Rating

Appendix 1 GeoSure Legends

CLASS	COLLAPSIBLE DEPOSITS	RUNNING SAND	COMPRESSIBLE DEPOSITS	SLOPE INSTABILITY (LANDSLIDES)	SOLUBLE ROCKS (DISSOLUTION)	SHRINK SWELL
A	Deposits with potential to collapse when loaded and saturated are believed not to be present	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on land use due to running conditions.	Compressible strata are not thought to occur.	Slope instability problems are not thought to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.	Ground conditions predominantly non-plastic.
B	Deposits with potential to collapse when loaded and saturated are unlikely to be present	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.	Ground conditions predominantly low plasticity.
C	Deposits with potential to collapse when loaded and saturated are possibly present in places.	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.	Compressibility and uneven settlement potential may be present. Land use should consider specifically the compressibility and variability of the site.	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.	Soluble rocks are present within the ground. Some dissolution features may be present. Potential for difficult ground conditions are at a level where they may be considered, localised subsidence need not be considered except in exceptional circumstances.	Ground conditions predominantly medium plasticity.
D	Deposits with potential to collapse when loaded and saturated are probably present in places	Running sand conditions are probably present. Constraints may apply to land uses involving excavation or the addition or removal of water.	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.	Soluble rocks are present within the ground. Many dissolution features may be present. Potential for difficult ground conditions are at a level where they should be considered. Potential for subsidence is at a level where it may need to be considered.	Ground conditions predominantly high plasticity.
E	Deposits with potential to collapse when loaded and saturated are present	Running sand conditions are almost certainly present. Constraints will apply to land uses involving excavation or the addition or removal of water.	Highly compressible strata present. Significant constraint on land use depending on thickness.	Slope instability problems almost certainly present and may be active. Significant constraint on land use.	Soluble rocks are present within the ground. Numerous dissolution features may be present. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered.	Ground conditions predominantly very high plasticity.

Appendix G: Statutory Undertakers

Drawing Number	Title
HE551492-ACM-VUT-TJ-DR-HE-01060	A47/A11 Thickthorn Single Option C3 Enquiries – Statutory Undertakers



KEY LOCATION PLAN
SCALE 1:25000

KEY
- EXISTING VIRGIN MEDIA
- EXISTING UKPN UNDERGROUND ELECTRICITY
- EXISTING UKPN OVERHEAD ELECTRICITY
- EXISTING BT COMMUNICATIONS
- EXISTING GAS MP MAIN
- EXISTING GAS LP MAIN
- EXISTING FOUL WATER PIPE
- EXISTING SURFACE WATER PIPE
- EXISTING POTABLE WATER
- EXISTING VODAFONE
- EXISTING VIRGIN MEDIA CHAMBER
- EXISTING BT CHAMBER
- EXISTING ANGLIAN WATER CHAMBER
- CUT OR FILL SLOPE

NOTES
1. THE LOCATION OF EXISTING SERVICES IS BASED ON INFORMATION RECEIVED FROM EACH STATUTORY UNDERTAKER, NO GUARANTEE IS GIVEN TO ITS ACCURACY OR COMPLETENESS AND SHOULD THEREFORE BE TREATED AS INDICATIVE ONLY.
2. SERVICES WITHIN EXISTING CRINGLEFORD HOUSING DEVELOPMENTS NOT SHOWN.

Revision Details	By / Check	Date	Suffix

Purpose of Issue
INFORMATION

Client
Highways England

Project Title
A47 CORRIDOR
PCF STAGE 2

Drawing Title
A47/A11 THICKTHORN
SINGLE OPTION
C3 ENQUIRIES
STATUTORY UNDERTAKERS

Designed	Drawn	Checked	Approved	Date
EH	PJB	KAM	RQ	02-03-2017

Scale @ A1: 1:2500

AECOM Infrastructure & Environment UK Limited

AECOM

Drawing Number
HE551492-ACM-VUT-TJ-DR-HE-01060

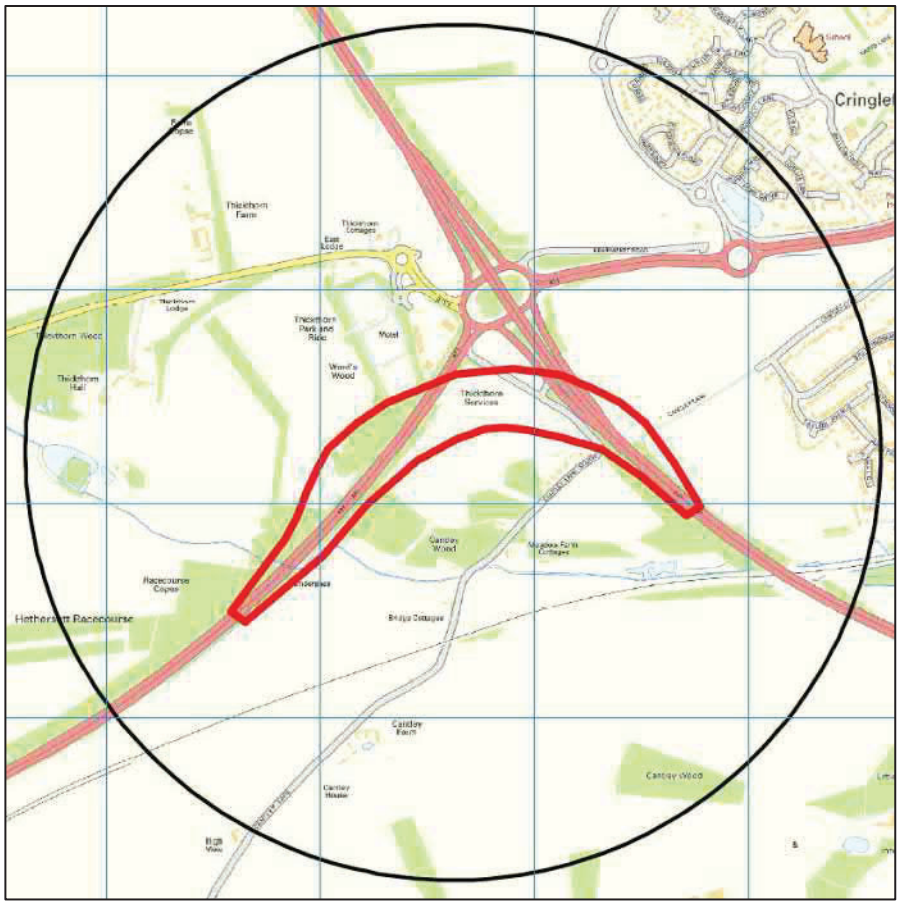
Appendix H: Preliminary UXO Risk Assessment

Landmark Information Group Ltd
Imperium, Imperial Way
Reading, Berkshire
RG2 0TD,
United Kingdom

T: [redacted]
W: www.envirocheck.co.uk

PRELIMINARY UNEXPLODED ORDNANCE (UXO) THREAT ASSESSMENT

Meeting the requirements of *CIRIA* C681 'Unexploded Ordnance (UXO) – A guide for the Construction Industry' Risk Management Framework



6 ALPHA PROJECT NUMBER	P5667	**ORIGINATOR**	[redacted]
LANDMARK ORDER NUMBER	108824762_2	**REVIEWED BY**	[redacted] (23rd December 2017)
CLIENT REFERENCE	A47 Thickthorn	**RELEASED BY**	[redacted] (3rd January 2017)
SITE	A47 Thickthorn Junction, Cringleford, Norfolk		
RATING	**LOW** – No further action is required to address the UXO risk at this Site		

UNEXPLODED ORDNANCE THREAT ASSESSMENT

STUDY SITE

The Study Site is described as 'A47 Thickthorn Junction, Cringleford, Norfolk', and it is centred on National Grid Reference 618310, 305120.

THREAT POTENTIAL AND RECOMMENDATIONS

UXO PROBABILITY ASSESSMENT = 2 RATING, INDICATING A LOW PROBABILITY OF UXO ENCOUNTER

The rating scale can be seen on Figure 2 (Probability of UXO Encounter). In accordance with current guidelines (CIRIA C681 Chapter 5), the highest threat rating has been determined at this specific site for UXO threat consideration and has been used for the final assessment and recommendations.

In accordance with CIRIA C681 Chapter 5 on managing UXO risks, *6 Alpha* recommends that **NO FURTHER ACTION** is required to address the UXO risk at this Study Site. Should you have any queries, please contact *Envirocheck*.

Telephone: [redacted] Email: customerservice@envirocheck.co.uk

REPORT SUMMARY

During WWII the Study Site was situated within *Forehoe & Henstead Rural District*, which recorded two High Explosive (HE) bomb strikes per 100 hectares; a low level of bombing.

Luftwaffe aerial reconnaissance photography associated with the Site did not identify a primary bombing target on-site or within 1,000m. Nevertheless, railway lines and a railway station located in the vicinity may have been considered secondary bombing targets.

Neither *Air Raid Precaution* (ARP) records nor official bomb damage mapping could be located. Nevertheless, an analysis of pre and post-WWII mapping and further research of historical records did not indicate any evidence of bomb damage within close proximity to the Site.

As there was no bombing or bomb damage recorded in the Site's vicinity during WWII, there is no evidence to suggest that further investigation into UXO is warranted.

USING THIS REPORT

This Preliminary Assessment is designed to inform environmental and construction professionals of the potential threat of military related explosives and/or ordnance on, or in, the vicinity of the Study Site.

This assessment is designed to be employed as a site-screening tool to meet with the requirement of Phase One of the *CIRIA UXO Risk Management Framework*; there are two broad prospective outcomes; either the threat level requires a detailed threat & risk assessment; or no further action is required. In the former instance we can provide a report within 14 working days (or more quickly upon application).

Two figures accompany the report, the *Second World War* (WWII) High Explosive (HE) Bomb Density and the final Probability of UXO Encounter. The purpose of this approach is to demonstrate that whilst bomb density statistics give an indication for WWII bombing, they should not be relied upon exclusively to generate a holistic assessment.

For further information, please contact *Envirocheck*:

Website: http://www.envirocheck.co.uk

Telephone: [redacted]

Email: customerservice@envirocheck.co.uk

DATA FINDINGS

Threat Source (within 1,000m)		Detail	
		Identified	Comments
	Airfields/Military Facilities	✔	A WWII *Government Pipelines and Storage System (GPSS) Hethersett* (865m south-west).
	Ordnance Manufacture/Storage	✘	None recorded within 1,000m.
	WWII Decoy Bombing Sites	✘	None recorded within 1,000m.
	WWII Defensive Features	✘	None recorded within 1,000m.
	WWII *Luftwaffe* Designated Bombing Targets	✘	*Luftwaffe* aerial photography did not identify a primary bombing target within 1,000m.
	Secondary Bombing Targets	✔	Railway lines (145m south) and a railway station 830m (west-south-west).
	WWII Bomb Strikes Within Site Boundary	✘	ARP records were not available.
	WWII Bomb Strikes Near Site Boundary	✘	ARP records were not available.
	WWII Bomb Damage	✘	Post-WWII mapping did not identify bomb damage within close proximity.
	Abandoned Bomb Register	✘	The official abandoned bomb list did not identify an abandoned bomb within 1,000m.
	WWII Bombing Density Per 100 Hectares	✔	The Site was located within *Forehoe & Henstead Rural District*, which recorded two HE bomb strikes per 100 hectares.

IMPORTANT NOTES

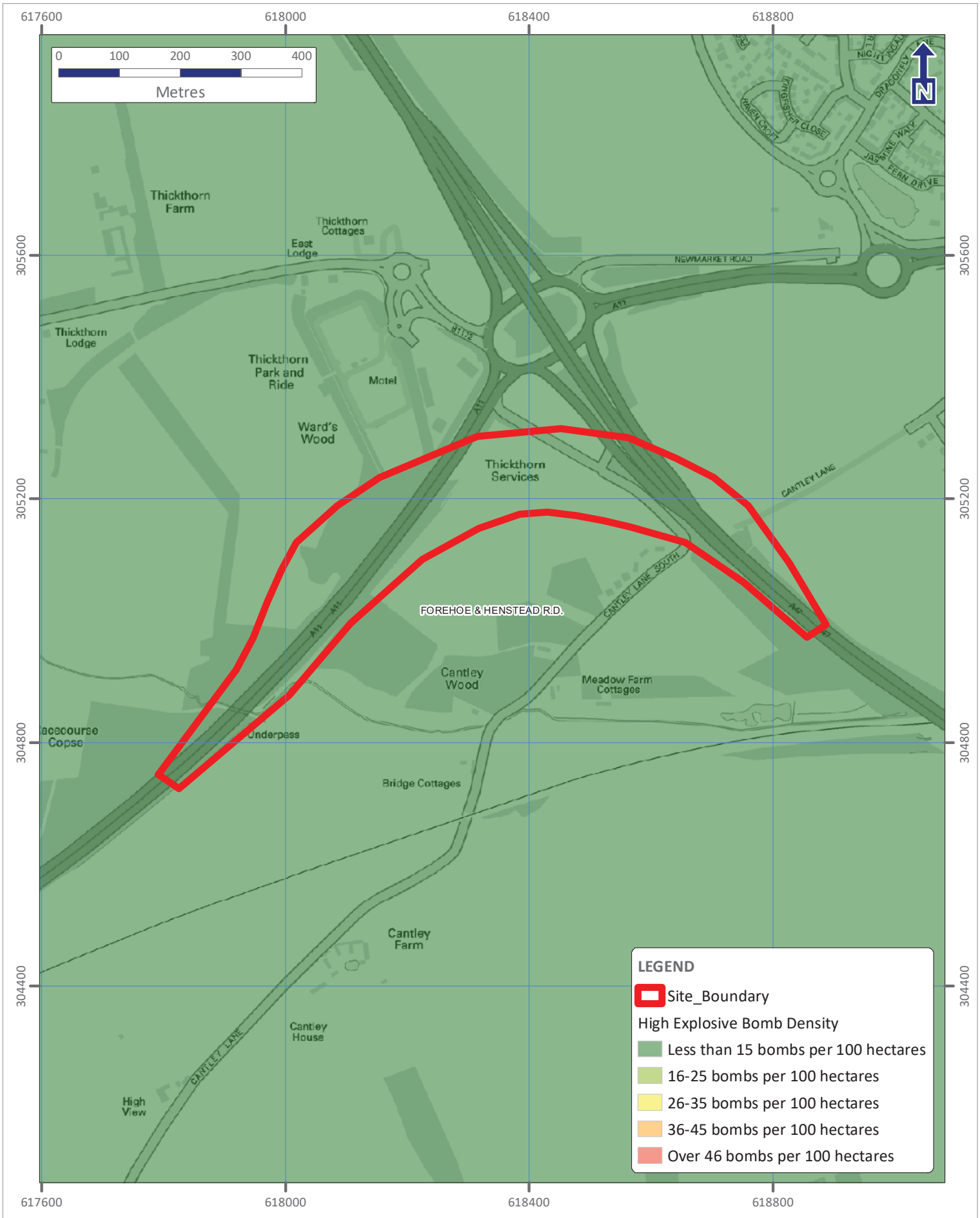
1. The term 'Preliminary UXO Threat Assessment' has been used to describe this report, to fall in line with the *CIRIA* C681 guidelines. Whilst the term 'Risk' can be justifiably used at this stage, the reader should note that the 'Consequence' function of 'Risk' is not considered. Should it be required, this would be addressed in the 'Detailed UXO Threat & Risk Assessment' (Stages 2 and 3).
2. This report is accurate and up to date at the time of writing.
3. The assessment levels have been generated from historical data and third party sources. Where possible *6 Alpha* have sought to verify the accuracy of such data, but cannot be held accountable for inherent errors that may be in third party data sets (e.g. *National Archives* or library sources).
4. *6 Alpha* have exercised all reasonable care, skill and due diligence in producing this service.
5. Whilst every effort has been used to identify all potential UXO/explosive threats, there were a number of private facilities, which may not have released privately recorded information concerning UXO/explosive threats into the public domain. It is therefore possible that some of the aforementioned sites may not be included within the database.

BRITISH NATIONAL GRID

A47 THICKTHORN JUNCTION, CRINGLEFORD, NORFOLK

WWII High Explosive Bomb Density

BOMB SEARCH
WWW.6ALPHA.COM



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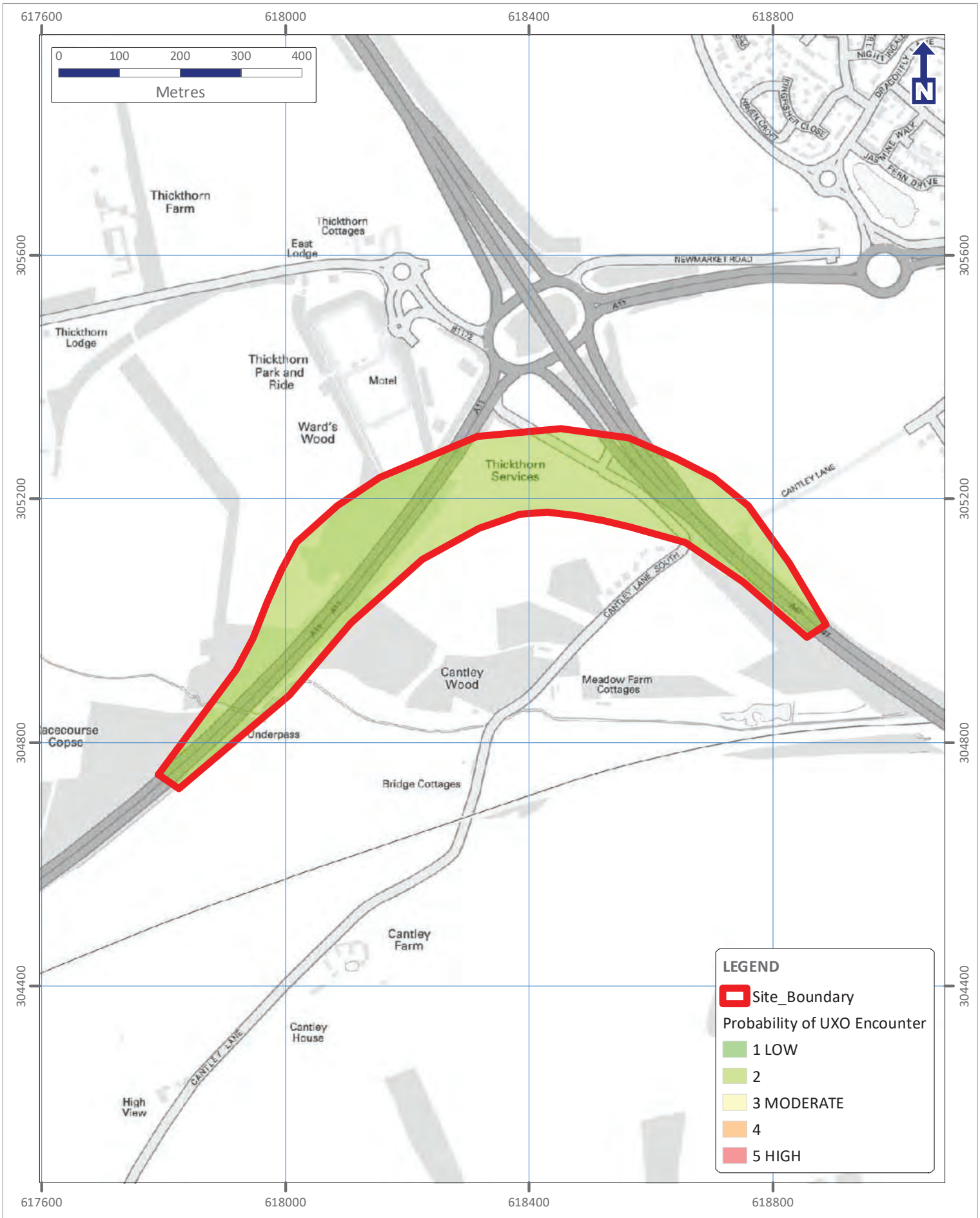
BRITISH NATIONAL GRID

A47 THICKTHORN JUNCTION, CRINGLEFORD, NORFOLK

Probability of UXO Encounter

BOMB SEARCH
WWW.6ALPHA.COM



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