Scott Bennett Associates
consulting civil and structural engineers

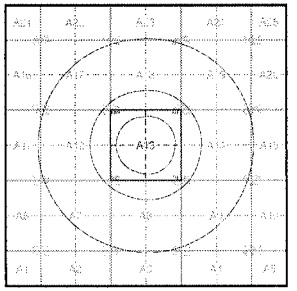
Historical Aerial Photography
Published 1948 - 1950
Source map scale - 1:10,560

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 The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot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

Map Name(s) and Date(s)

NS88SE 1948 1:10,560	NS98SW 1950 1:10,560
NS87NE 1950 1:10,560	NS97NW 1950 1:10,560

Historical Aerial Photography - Slice A



N

BRITISH LIBRARY

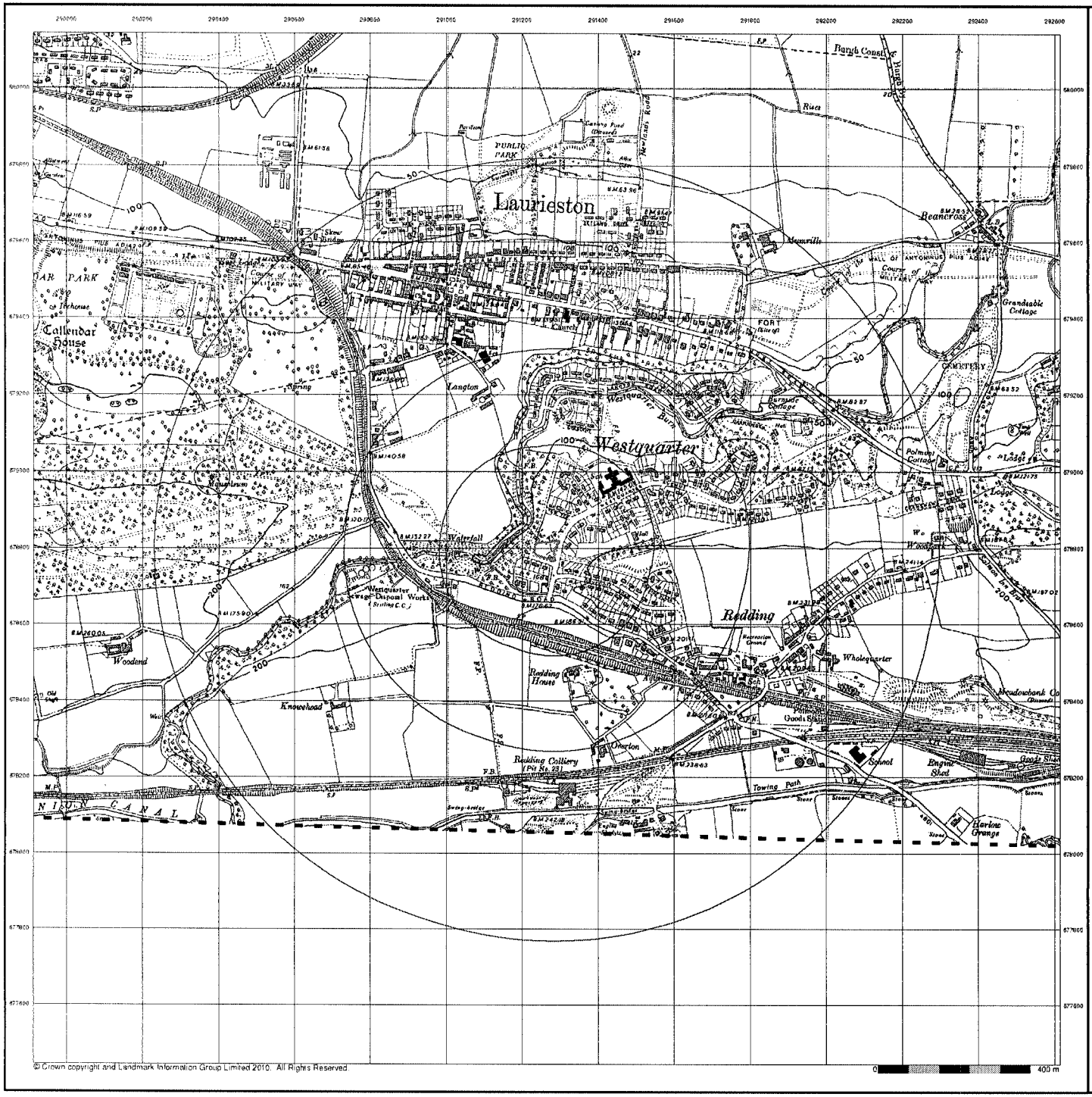
Order Details

Order Number:	31327701_2_1
Customer Ref:	J2429
National Grid Reference:	291270, 678800
Slice:	A
Site Area (Ha):	0.23
Search Buffer (m):	1000

Site Details

Westquarter Avenue, Falkirk

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

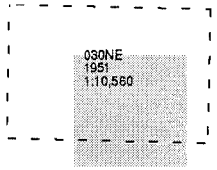


Scott Bennett Associates
consulting civil and structural engineers

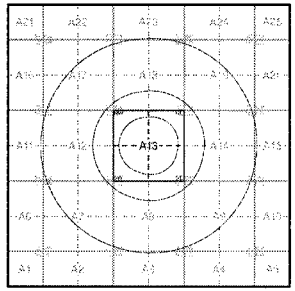
Stirlingshire
Published 1951
Source map scale - 1:10,560

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)



Historical Map - Slice A



Order Details

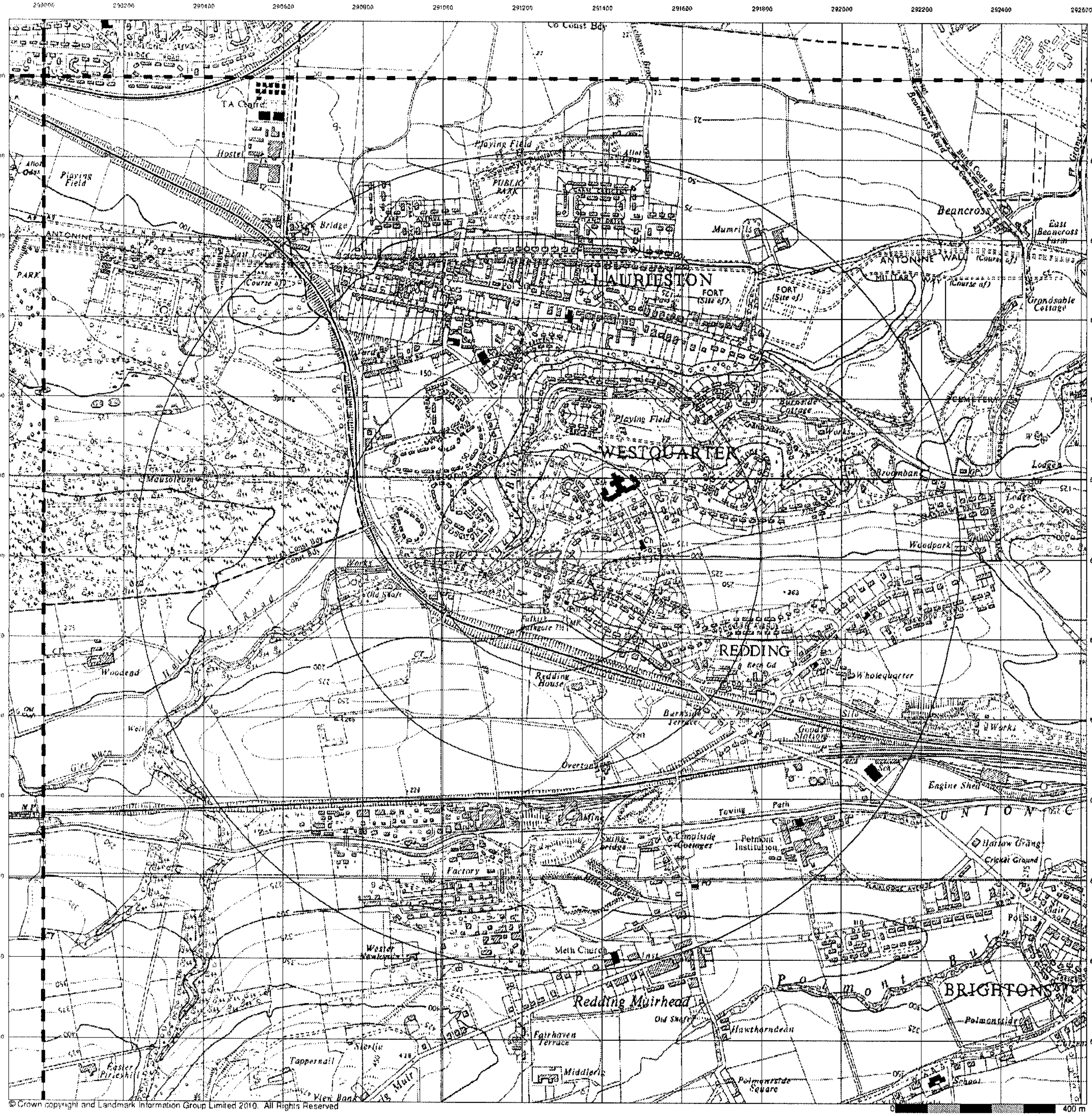
Order Number:	31327701_2_1
Customer Ref:	J2429
National Grid Reference:	291270, 678800
Slice:	A
Site Area (Ha):	0.23
Search Buffer (m):	1000

Site Details

Westquarter Avenue, Falkirk

Landmark Information Group

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



Scott Bennett Associates
consulting civil and structural engineers

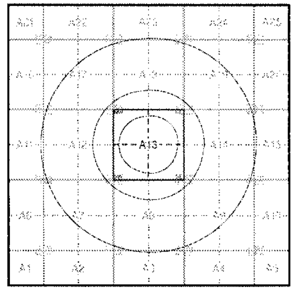
Ordnance Survey Plan
Published 1957 - 1958
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

NS88SE 1958 1:10,560	NS98SW 1958 1:10,560
NS87NE 1957 1:10,560	NS97NW 1958 1:10,560

Historical Map - Slice A



Order Details

Order Number: 31327701_2_1
Customer Ref: J2429
National Grid Reference: 291270, 678800
Slice: A
Site Area (Ha): 0.23
Search Buffer (m): 1000

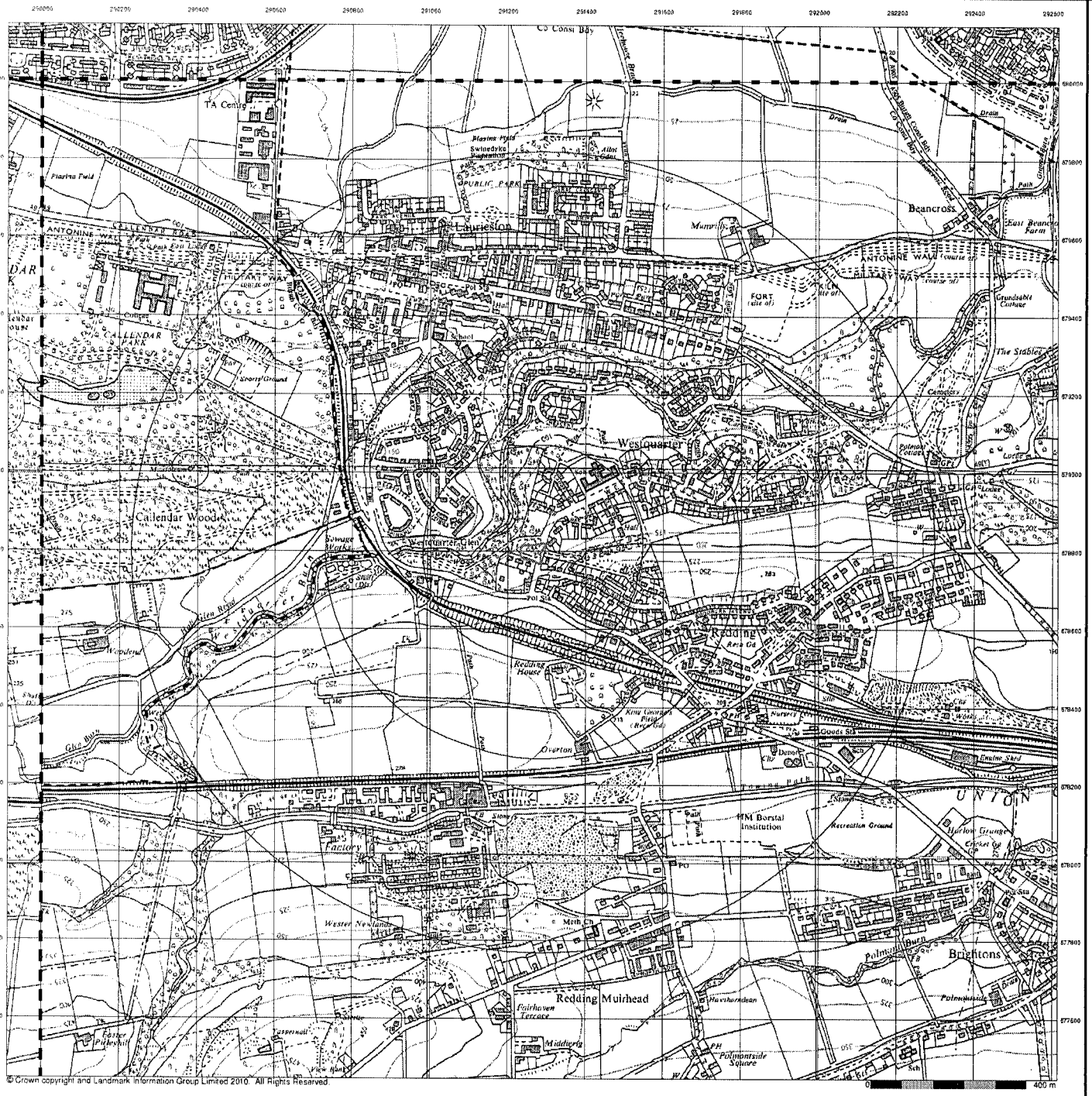
Site Details

Westquarter Avenue, Falkirk

Landmark

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

A Landmark Information Group Service v40.0 21-May-2010 Page 10 of 17



Scott Bennett Associates
consulting civil and structural engineers

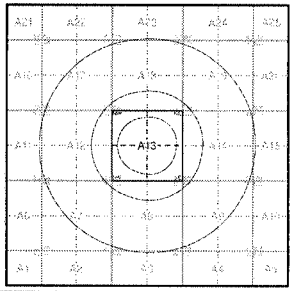
Ordnance Survey Plan
Published 1967 - 1969
Source map scale - 1:10,000

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)

NS88SE 1967 1:10,560	NS98SW 1968 1:10,560
NS87NE 1967 1:10,560	NS97NW 1969 1:10,560

Historical Map - Slice A



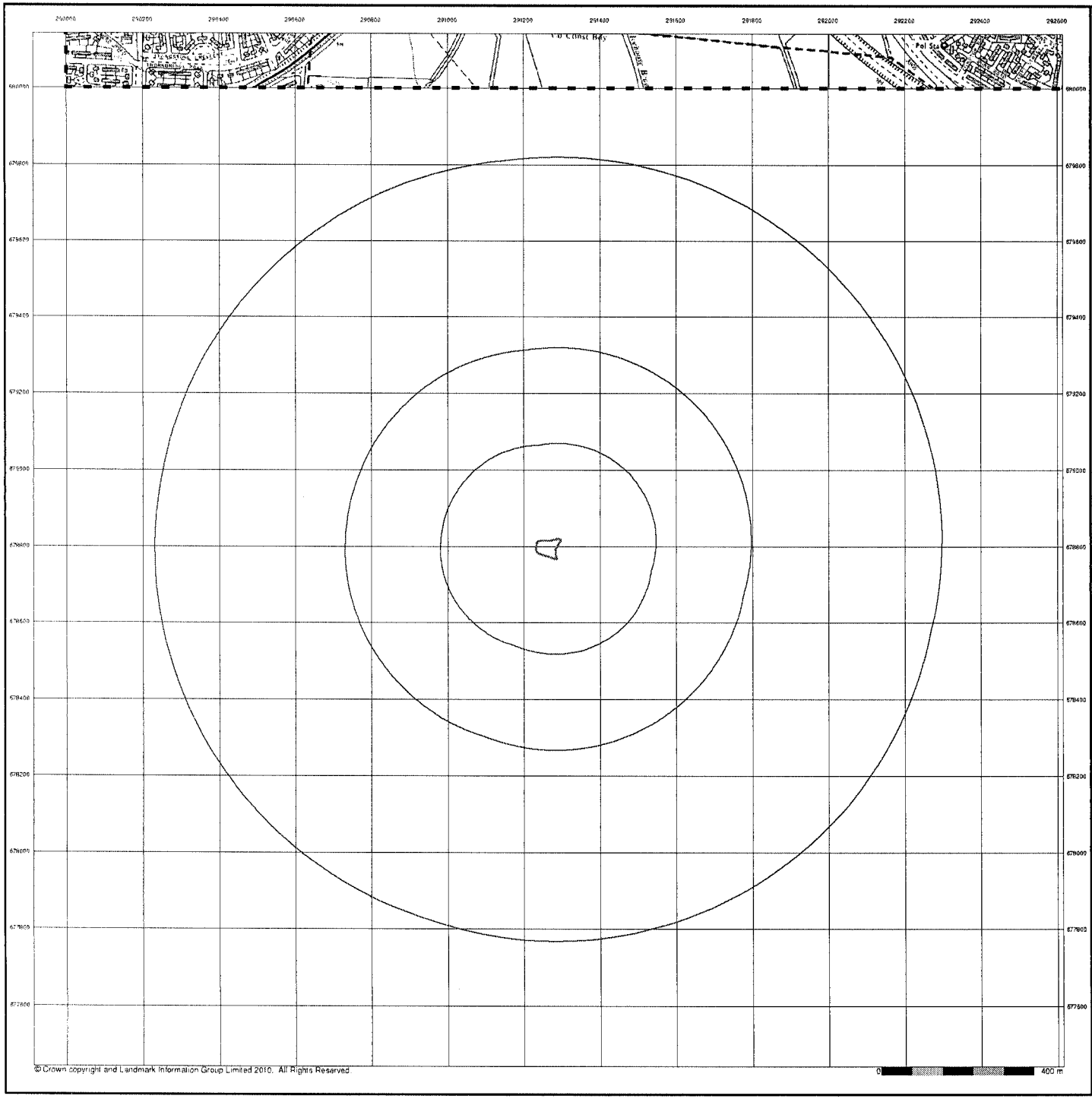
Order Details

Order Number:	31327701_2_1
Customer Ref:	J2429
National Grid Reference:	291270, 678800
Slice:	A
Site Area (Ha):	0.23
Search Buffer (m):	1000

Site Details

Westquarter Avenue, Falkirk

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



Scott Bennett Associates
consulting civil and structural engineers

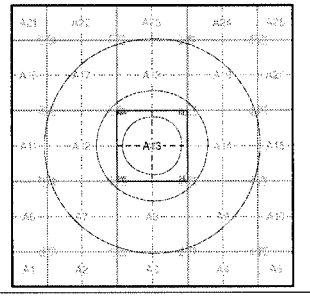
Ordnance Survey Plan
Published 1973
Source map scale - 1:10,000

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)

NS98SW
1973
1:10,000

Historical Map - Slice A



Order Details

Order Number:	31327701_2_1
Customer Ref:	J2429
National Grid Reference:	291270, 678800
Slice:	A
Site Area (Ha):	0.23
Search Buffer (m):	1000

Site Details

Westquarter Avenue, Falkirk

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

Scott Bennett Associates
consulting civil and structural engineers

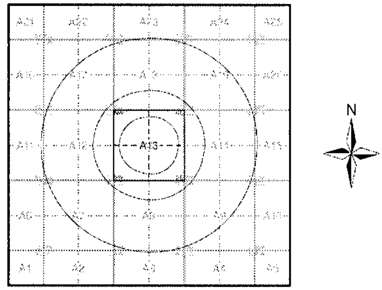
Ordnance Survey Plan
Published 1980 - 1987
Source map scale - 1:10,000

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)

NS88SE 1982 1:10,000	NS98SW 1987 1:10,000
NS87NE 1981 1:10,000	NS97NW 1980 1:10,000

Historical Map - Slice A



Order Details

Order Number:	31327701_2_1
Customer Ref:	J2429
National Grid Reference:	291270, 678800
Slice:	A
Site Area (Ha):	0.23
Search Buffer (m):	1000

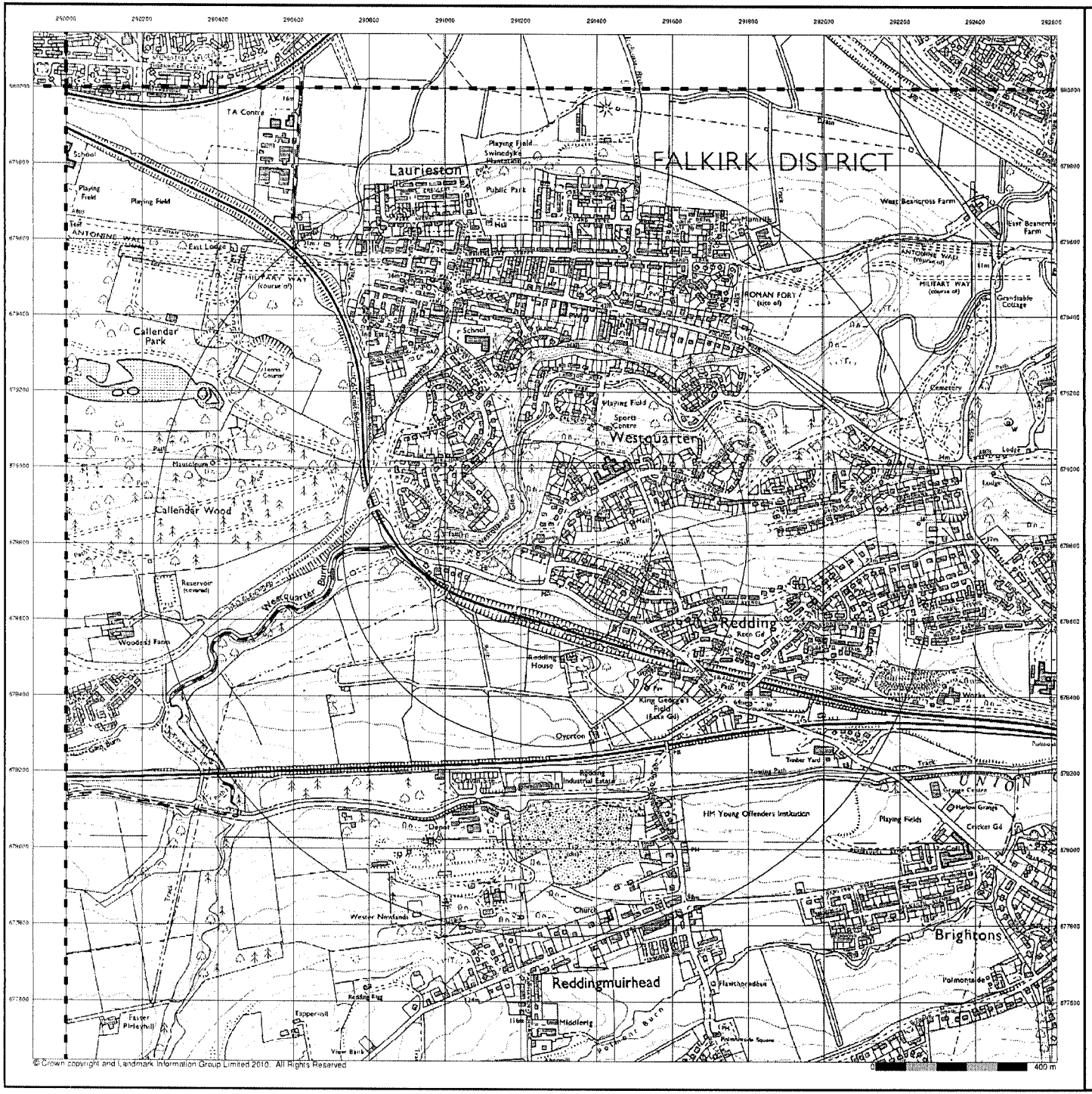
Site Details

Westquarter Avenue, Falkirk

Landmark Information Group

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

A Landmark Information Group Service v40.0 21-May-2010 Page 13 of 17



Scott Bennett Associates
consulting civil and structural engineers

Ordnance Survey Plan
Published 1990 - 1993
Source map scale - 1:10,000

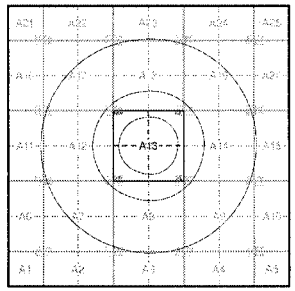
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some 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)

NS88SE	NS98SW
1992	1993
1:10,000	1:10,000

NS87NW
1990
1:10,000

Historical Map - Slice A



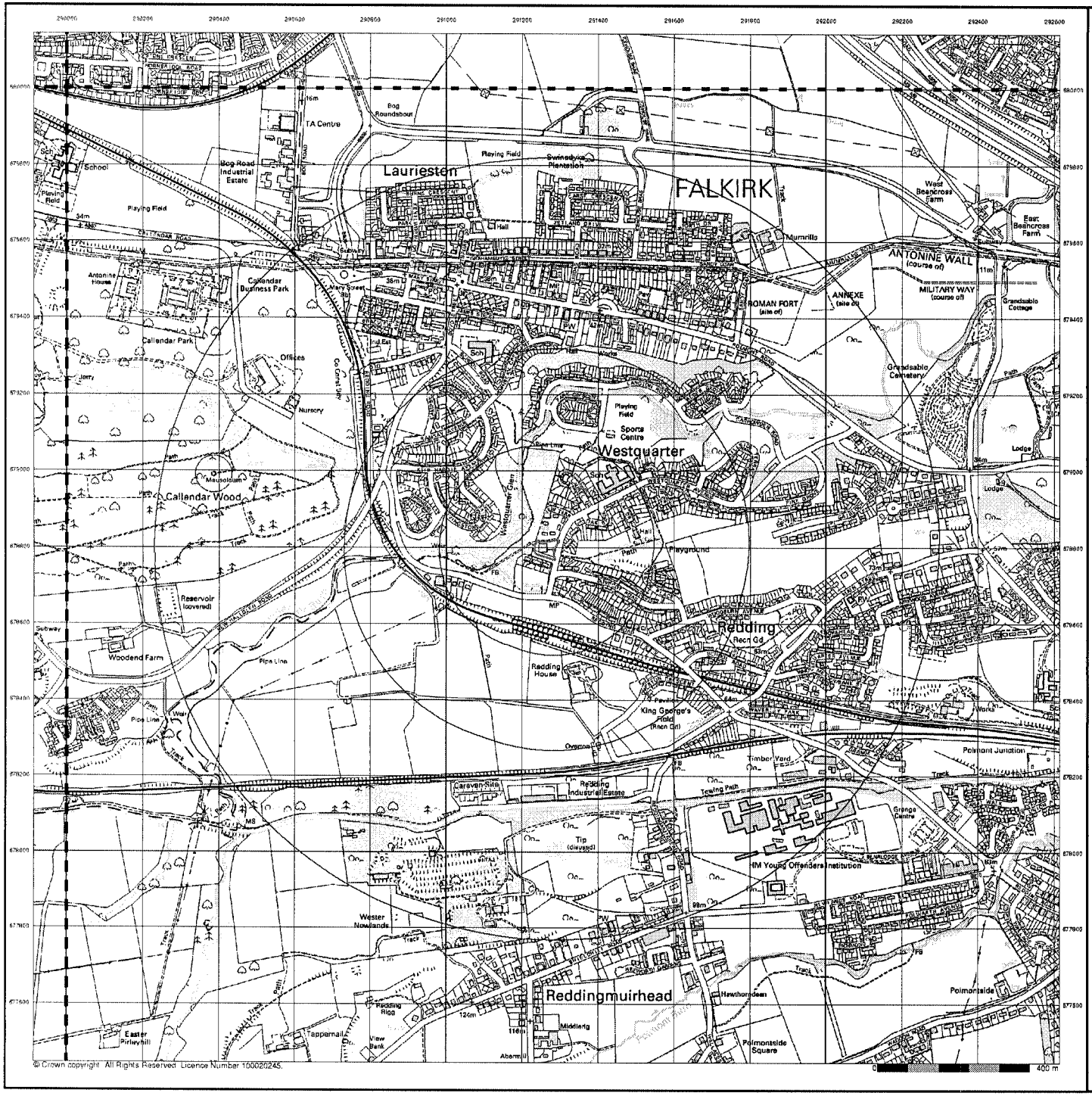
Order Details

Order Number:	31327701_2_1
Customer Ref:	J2429
National Grid Reference:	291270, 678800
Slice:	A
Site Area (Ha):	0.23
Search Buffer (m):	1000

Site Details

Westquarter Avenue, Falkirk

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



Scott Bennett Associates
consulting civil and structural engineers

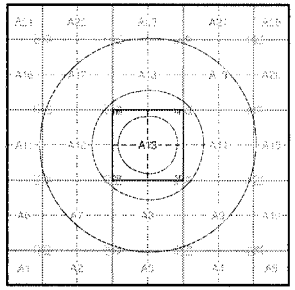
10k Raster Mapping
Published 1999
Source map scale - 1:10,000

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)

NS88SE 1999 1:10,000	NS98SW 1999 1:10,000
NS87NE 1999 1:10,000	NS97NW 1999 1:10,000

Historical Map - Slice A



Order Details

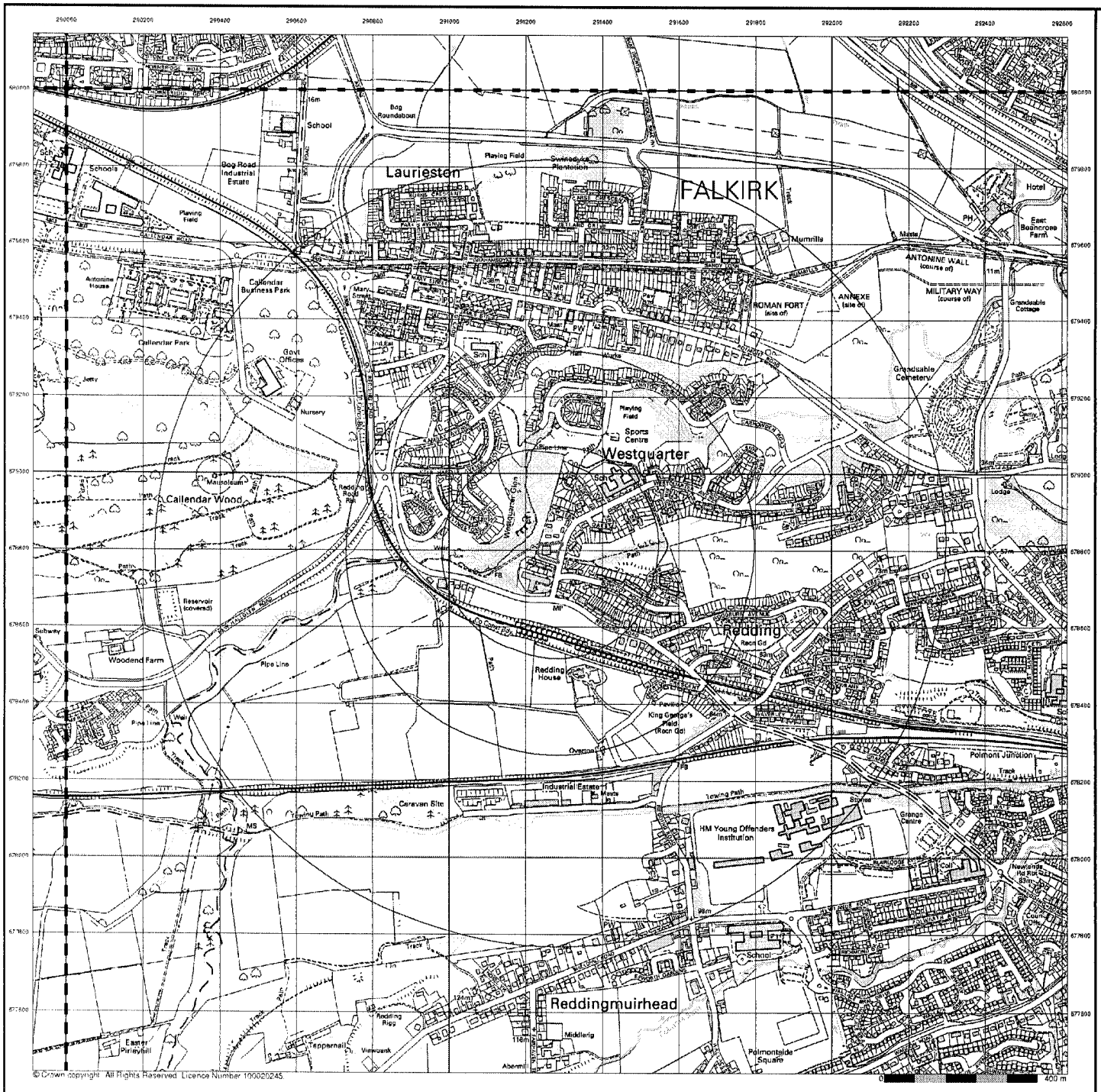
Order Number:	31327701_2_1
Customer Ref:	J2429
National Grid Reference:	291270, 678800
Slice:	A
Site Area (Ha):	0.23
Search Buffer (m):	1000

Site Details

Westquarter Avenue, Falkirk

Landmark Information Group

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



Scott Bennett Associates
consulting civil and structural engineers

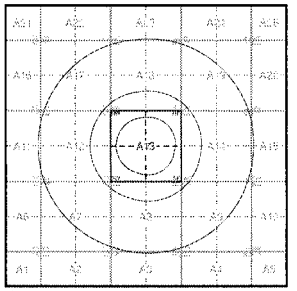
10k Raster Mapping
Published 2006
Source map scale - 1:10,000

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)

NS88SE 2006 1:10,000	NS98SW 2006 1:10,000
NS87NE 2006 1:10,000	NS97NW 2006 1:10,000

Historical Map - Slice A



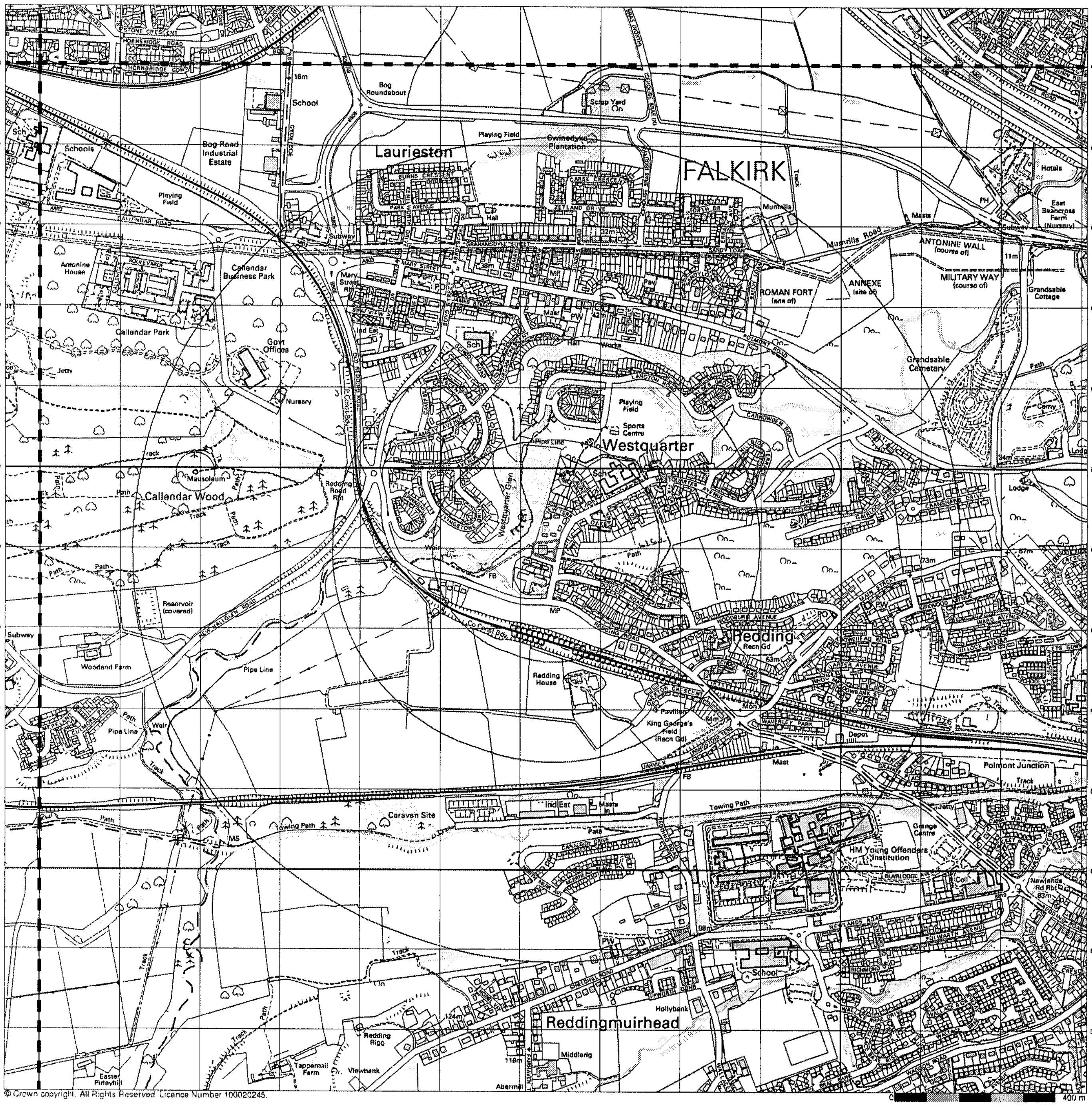
Order Details

Order Number:	31327701_2_1
Customer Ref:	J2429
National Grid Reference:	291270, 678800
Slice:	A
Site Area (Ha):	0.23
Search Buffer (m):	1000

Site Details

Westquarter Avenue, Falkirk

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



Scott Bennett Associates
consulting civil and structural engineers

10k Raster Mapping

Published 2010

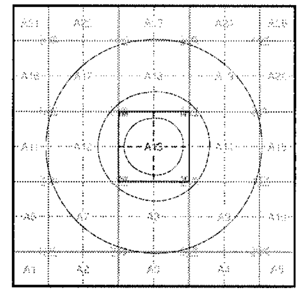
Source map scale - 1:10,000

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)

NS88SE 2010 1:10,000	NS98SW 2010 1:10,000
NS87NE 2010 1:10,000	NS97NW 2010 1:10,000

Historical Map - Slice A



Order Details

Order Number: 31327701_2_1
Customer Ref: J2429
National Grid Reference: 291270, 678800
Slice: A
Site Area (Ha): 0.23
Search Buffer (m): 1000

Site Details

Westquarter Avenue, Falkirk

Landmark Information Group

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

A Landmark Information Group Service v40.0 21-May-2010 Page 17 of 17

Appendix D

Sampling Protocol

Scott Bennett Associates

Scott Bennett Associates (Group 1) Limited
No.19 South Castle Drive, Carnegie Campus, Dunfermline KY11 8PD
T: +44 (0)1383 627537 F: +44 (0)1383 627538
E: enquiries@sbascotland.com W: www.sbascotland.com

SAMPLING PROTOCOL

The site investigations generally followed the procedures outlined in the available guidance (BS 5930:1999 'Code of Practise for Site Investigations' and BS 10175:2001 'Investigation of Potentially Contaminated Land').

Trial Pitting

The trial excavations are undertaken by a mechanical excavator and positioned across the site to provide a broad coverage of the site area. The excavations are directed and supervised by an engineering geologist who recorded the properties of the various strata encountered. The soils are described in accordance with BS 5930:1999, generally including composition, strength, colour, density, odour and any other notable features.

Boreholes

Soils

Soils boring are generally undertaken using the cable percussion method of drilling, although alternative methods are available and typically utilised when access constraints are present.

In-situ sampling and geotechnical testing is undertaken at regular intervals as the bores are advanced.

Gas/groundwater standpipes installed within the bores generally comprise 50mm diameter slotted polythene pipe placed to the specified depth, typically with a 1m length of plain polythene placed above. The hole is then backfilled with an appropriate gravel surrounding the response zone and a bentonite and cement seal placed around the pipe at the surface. A gas valve is placed in the top of the installation, with a metal cover placed over the installation to prevent damage or disturbance. The installations allow monitoring of groundwater depths and gaseous conditions, and also permit groundwater sampling.

Rock

Rotary bores are employed to extend the investigation beyond the limit of the soils bores into the hard formation. Core drilling recovers continuous intact samples, while open hole methods provide fast effective penetration.

The open hole bores are drilled at nominal 125 mm diameter, using water flush techniques. The drilling foreman assesses the rock chippings that are returned to the surface and records the general colour and odour in order to identify the rock type. The presence, or otherwise, of any broken ground and approximate depth of each notable change in rock strata is also noted.

Soil Infiltration Tests

Soakaways tests are carried out in accordance with BRE Digest 365. A trial pit of sufficient size is excavated to represent a section of the design soakaway. The trial pit should be excavated to the same depth as

Scott Bennett Associates (Group 1) Limited
No.19 South Castle Drive, Carnegie Campus, Dunfermline KY11 8PD
T: +44 (0)1383 627537 F: +44 (0)1383 627538
E: enquiries@sbascotland.com W: www.sbascotland.com

anticipated in the full size soakaway, typically 1.5m to 2.5m and should be approximately 0.3m to 1.0m wide and 1.0m to 3.0m long with vertical sides.

The pit is filled to the maximum effective depth and the water level and time from filling are recorded, at sufficiently close intervals to clearly define water level versus time. This is repeated three times to represent soil moisture conditions typical of the site when the soakaway becomes operative and should be done on the same or consecutive days. The infiltration rate is calculated from the time taken for the water level to fall from 75% to 25% effective storage depth.

Soil Sampling

The sampling regime for the recovery of samples was generally in accordance with BS 10175:2001.

Disturbed representative soil samples of approximately 1kg weight are obtained and placed in a clean sealed appropriate container supplied by the testing laboratory. Sampling is undertaken at regular intervals, including a sample from each stratum. Bulk samples are also obtained from the boring. The samples are labelled with depth, number and location to allow identification for subsequent analysis. Potentially contaminated samples are labelled as hazardous where appropriate.

Undisturbed samples of cohesive materials are also obtained from the bores, where possible. The sample tube is sealed with wax and fitted with plastic end caps.

Chain of custody documentation accompanied the samples during transit from the contractor's store to the testing laboratory. All samples are stored appropriately and analysed without undue delay.

Groundwater Sampling

Any groundwater observed in sufficient quantities within the trial excavations was sampled.

Where possible, groundwater samples were recovered from the installations placed within the bores. Prior to sampling, the well was developed and purged of the appropriate volume of water. Samples were collected into clean containers and labelled accordingly.

Gas/Groundwater Monitoring

Ground gases (carbon dioxide, methane, oxygen, hydrogen sulphide and nitrogen) are monitored from the installations utilising a portable LMS gas monitor and flow meter. The atmospheric pressure is also recorded during each monitoring. Following the gas monitoring, groundwater depths are monitored using a dip meter.

Analytical Procedures

The scope of chemical testing was based on the interpreted origin of the soils encountered in association with their description. This is consistent with best practice under current contaminated land guidance. Analytical procedures adopted during the chemical analyses, carried out on our behalf by the testing laboratory, conform to recognised practices, allowing the award of NAMAS accreditation. The laboratory also participates in the MCERTS scheme.

Appendix E

Record of Exploratory Holes

Rotary Borehole Logs
Cable Percussive Borehole Logs
Trial Pit Logs

Project Name	Westquarter Avenue, Falkirk	Exploratory Probe Log	Hole ID.
Project No.	TD7359		R01
Engineer	Scott Bennett Associates (Group 1) Ltd		
Employer	Hanover (Scotland) Housing Association		Sheet 1 of 1

Ground Level	-	Coordinates	-
Hole Type	IP+RO	Inclination	Vertical

Description of Strata	Legend	Depth (Thickness)	Datum Level	Flush Details and Remarks				
				Zone	Return	Remarks	Type	Colour
TARMAC.		(0.30) 0.30						
RED ASH BRICK.		(0.50) 0.80						
OVERBURDEN.		(3.20) 4.00						
SOFT GROUND.		(0.50) 4.50						
HARD.		(4.00) 8.50						
COAL.		(1.00) 9.50						
SANDSTONE.		(4.00) 13.50						
COAL TRACE.		(0.50) 14.00						
SANDSTONE.		(6.00)						

Exploratory hole complete at 20.00 m.

Hole Formation							Hole Diameter		Casing	
Top	Base	Type	Start Date	End Date	Equipment	Remarks	Diameter	Depth	Diameter	Depth
0.00	1.20	IP	19/03/2014	19/03/2014	Hand Tools	Water Flush. Loss of flush from 4.00 to 8.50m.	63	20.00	89	4.00
1.20	20.00	RO	19/03/2014	19/03/2014	Deltabase 420	Backfilled with cement/bentonite grout.				

NOTES: All depths in metres, all diameters in millimetres.
All strata descriptions are Driller Foremans best description from flush returns.
For details of abbreviations, see key

Log Print Date And Time: 24/03/2014 09:50:04

SOIL engineering

Part of the Bachy Soletanche group

Project Name	Westquarter Avenue, Falkirk	Exploratory Probe Log	Hole ID.
Project No.	TD7359		R02
Engineer	Scott Bennett Associates (Group 1) Ltd		
Employer	Hanover (Scotland) Housing Association		Sheet 1 of 1

Ground Level	-	Coordinates	-
Hole Type	IP+RO	Inclination	Vertical

Description of Strata	Legend	Depth (Thickness)	Datum Level	Flush Details and Remarks				
				Zone	Return	Remarks	Type	Colour
INFILL.		(0.50) 0.50						
OVERBURDEN.		(1.50) 2.00						
SANDSTONE.		(7.50) 9.50						
COAL.		(0.50) 10.00						
SANDSTONE.		(3.00) 13.00						
COAL TRACE.		(0.50) 13.50						
SANDSTONE.		(6.50)						

Exploratory hole complete at 20.00 m.

Hole Formation							Hole Diameter		Casing	
Top	Base	Type	Start Date	End Date	Equipment	Remarks	Diameter	Depth	Diameter	Depth
0.00	1.20	IP	19/03/2014	19/03/2014	Hand Tools	Water Flush. Full Returns.	63	20.00	89	2.00
1.20	20.00	RO	19/03/2014	19/03/2014	Deltabase 420	Backfilled with cement/bentonite grout.				

NOTES: All depths in metres, all diameters in millimetres.
All strata descriptions are Driller Foremans best description from flush returns.
For details of abbreviations, see key

Log Print Date And Time: 24/03/2014 09:50:07

SOIL ENGINEERING

Part of the Bachy Soletanche group

Project Name	Westquarter Avenue, Falkirk	Exploratory Probe Log	Hole ID.
Project No.	TD7359		R03
Engineer	Scott Bennett Associates (Group 1) Ltd		
Employer	Hanover (Scotland) Housing Association		Sheet 1 of 1

Ground Level	-	Coordinates	-
Hole Type	IP+RO	Inclination	Vertical

Description of Strata	Legend	Depth (Thickness)	Datum Level	Flush Details and Remarks				
				Zone	Return	Remarks	Type	Colour
TARMAC.		(0.30) 0.30						
RED ASH RUBBLE.		(0.20) 0.50						
SANDY CLAY.		(2.50) 3.00						
OVERBURDEN.		(1.00) 4.00						
SANDSTONE.		(4.50) 8.50						
COAL.		(1.00) 9.50						
SANDSTONE.		(3.50) 13.00						
COAL TRACE.		(0.50) 13.50						
SANDSTONE.		(6.50)						

Exploratory hole complete at 20.00 m.

Hole Formation							Hole Diameter		Casing	
Top	Base	Type	Start Date	End Date	Equipment	Remarks	Diameter	Depth	Diameter	Depth
0.00	1.20	IP	19/03/2014	19/03/2014	Hand Tools	Water Flush. Full Returns.	63	20.00	89	4.00
1.20	20.00	RO	19/03/2014	19/03/2014	Deltabase 420	Backfilled with cement/bentonite grout				

NOTES: All depths in metres, all diameters in millimetres.
All strata descriptions are Driller Foremans best description from flush returns.
For details of abbreviations, see key

Log Print Date And Time: 24/03/2014 09:50:10

SOIL ENGINEERING

Part of the Bachy Soletanche group

Project Name	Westquarter Avenue, Falkirk	Exploratory Probe Log	Hole ID.
Project No.	TD7359		R04
Engineer	Scott Bennett Associates (Group 1) Ltd		
Employer	Hanover (Scotland) Housing Association		Sheet 1 of 1

Ground Level	-	Coordinates	-
Hole Type	IP+RO	Inclination	Vertical

Description of Strata	Legend	Depth (Thickness)	Datum Level	Flush Details and Remarks				
				Zone	Return	Remarks	Type	Colour
SOIL RED ASH.		(1.20) 1.20						
OVERBURDEN.		(1.30) 2.50						
SANDSTONE.		(5.50) 8.00						
COAL.		(0.50) 8.50						
SOFT BROKEN.		(1.00) 9.50						
HARD.		(2.50) 12.00						
SOFT.		(0.50) 12.50						
HARD.		(7.50)						

Exploratory hole complete at 20.00 m.

Hole Formation

Top	Base	Type	Start Date	End Date	Equipment	Remarks
0.00	1.20	IP	19/03/2014	19/03/2014	Hand Tools	Water Flush. Loss of flush at 12.50m.
1.20	20.00	RO	19/03/2014	19/03/2014	Deltabase 420	Backfilled with cement/bentonite grout.

Hole Diameter		Casing	
Diameter	Depth	Diameter	Depth
63	20.00	89	2.50

NOTES: All depths in metres, all diameters in millimetres.
All strata descriptions are Driller Foremans best description from flush returns.
For details of abbreviations, see key

Log Print Date And Time: 24/03/2014 09:50:14

SOIL engineering

Part of the Bachy Soletanche group

AITKEN LABORATORIES LTD

Site	Borehole Number
WESTQUARTER AVENUE, FALKIRK	BH1

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 3.60m			J725
	Location	**Dates** 21/03/2014	**Engineer** SCOTT BENNETT ASSOCIATES LIMITED	**Sheet** 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.10)	#MADE GROUND (Tarmac)		
						0.10			
0.20	V1					(0.20)	MADE GROUND (Reddish brown slightly clayey fine to coarse sand and fine to coarse gravel of burnt shale)		
0.20	T1					0.30			
0.20	J1					(0.80)	MADE GROUND (Brown sandy slightly gravelly clay with brick and burnt shale. Gravel content is fine to coarse)		
0.50	V2								
0.50	T2								
0.50	J2								
1.00	V3					1.10			
1.00	T3					(0.10)	#Sandy CLAY		
1.00	J3					1.20			
1.20-1.65	SPT N=11			1,2/4,2,3,2			Medium dense brown very silty gravelly fine to coarse SAND. Gravel content is fine to coarse		
1.20-1.65	B4								
						(1.40)			
2.00-2.45	SPT N=13			3,4/4,3,3,3					
2.00-2.45	B5					2.60			
							Loose brown very silty slightly gravelly fine to coarse SAND. Gravel content is fine to coarse		
3.00-3.45	SPT N=7			1,1/2,1,2,2		(1.00)			
3.00-3.45	B6								
				21/03/2014:DRY		3.60	#OBSTRUCTION (Bedrock or boulder) Complete at 3.60m		

Remarks
# Denotes drillers' description
A 50mm diameter standpipe was installed at a depth of 3.60m
Chiselling from 2.50m to 2.60m for 0.50 hours. Chiselling from 3.50m to 3.60m for 1 hour. Excavating from 0.00m to 1.20m for 1 hour.

Scale (approx)	Logged By
1:50	SM

Figure No. J725.BH1

AITKEN LABORATORIES LTD

Site	Borehole Number
WESTQUARTER AVENUE, FALKIRK	BH2

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion				J725
	Location	**Dates** 21/03/2014	**Engineer** SCOTT BENNETT ASSOCIATES LIMITED	**Sheet** 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.10)	TOPSOIL		
						0.10			
						(0.10)	MADE GROUND (Reddish brown slightly clayey fine to coarse sand and fine to coarse gravel of burnt shale with concrete)		
						0.20			
						(0.60)			
				21/03/2014:DRY					
						0.80	MADE GROUND (Brown silty fine to coarse sand and fine to coarse gravel with brick, sandstone and burnt shale)		
							#OBSTRUCTION (Bedrock or boulder) Complete at 0.80m		

Remarks
BH2 terminated on an obstruction at a depth of 0.80m. BH2A was put down at an adjacent location
# Denotes drillers' description
Excavating from 0.00m to 0.80m for 1 hour.

Scale (approx)	Logged By
1:50	PJ

Figure No.
J725.BH2

AITKEN LABORATORIES LTD

Site	Borehole Number
WESTQUARTER AVENUE, FALKIRK	BH2A

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 1.20m			J725
	Location	**Dates** 21/03/2014	**Engineer** SCOTT BENNETT ASSOCIATES LIMITED	**Sheet** 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.10) 0.10	TOPSOIL		
0.20	V1					(0.10) 0.20	MADE GROUND (Reddish brown slightly clayey fine to coarse sand and fine to coarse gravel of burnt shale with concrete)		
0.20	T1								
0.20	J1					(1.00)	MADE GROUND (Brown silty fine to coarse sand and fine to coarse gravel with brick, sandstone and burnt shale) #OBSTRUCTION (Bedrock or boulder)		
0.50	V2								
0.50	T2								
0.50	J2								
1.00	V3								
1.00	T3					1.20			
1.00	J3			21/03/2014:DRY			Complete at 1.20m		

Remarks
# Denotes drillers' description
Chiselling from 1.10m to 1.20m for 1 hour. Excavating from 0.00m to 1.20m for 1 hour.

Scale (approx)	Logged By
1:50	SM

Figure No. J725.BH2A

AITKEN LABORATORIES LTD

Site	Trial Pit Number
WESTQUARTER AVENUE, FALKIRK	TP1

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
JCB 3CX	3.00x0.60m			J725
	Location	**Dates** 21/03/2014	**Engineer** SCOTT BENNETT ASSOCIATES LIMITED	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.05) 0.05	MADE GROUND (Tarmac)		
0.20	V1				(0.20) 0.25	MADE GROUND (Burnt shale)		
0.20	T1							
0.20	J1				(0.15) 0.40	MADE GROUND (Brown sandy gravelly clay with ash and cobbles. Gravel content is fine to coarse)		
0.50	V2				(0.60) 1.00	Light brown fine to coarse GRAVEL with cobbles (Possible Made Ground)		
0.50	T2							
0.50	J2					Brown sandy fine to coarse GRAVEL with cobbles and boulders		
1.00	V3							
1.00	T3							
1.00	J3							
1.00	B3							
1.50	B4				(1.90)			
2.50	B5				2.90	OBSTRUCTION (Bedrock or boulder)		
						Complete at 2.90m		

Plan

Remarks

Trial pit walls remained dry and stable throughout

Scale (approx)	Logged By	Figure No.
1:50	CB	J725.TP1

AITKEN LABORATORIES LTD

Site	Trial Pit Number
WESTQUARTER AVENUE, FALKIRK	TP2

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
JCB 3CX	3.00x0.60m			J725
	Location	**Dates** 21/03/2014	**Engineer** SCOTT BENNETT ASSOCIATES LIMITED	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.05) 0.05	MADE GROUND (Tarmac)		
0.20	V1				(0.20) 0.25	MADE GROUND (Burnt shale)		
0.20	J1							
0.20	T1				(0.35) 0.60	MADE GROUND (Brown sandy gravelly clay with ash and cobbles. Gravel content is fine to coarse)		
0.50	V2							
0.50	J2							
0.50	T2					Brown sandy fine to coarse GRAVEL with cobbles and boulders		
1.00	V3							
1.00	J3							
1.00	T3							
1.00	B3				(1.60)			
2.00	B4				2.20			
						Brown silty fine and medium SAND		
2.50	B5				(0.60)			
					2.80			
						OBSTRUCTION (Bedrock or boulder)		
						Complete at 2.80m		

Plan

Remarks

Trial pit walls remained dry and stable throughout

Scale (approx)	Logged By	Figure No.
1:50	CB	J725.TP2

AITKEN LABORATORIES LTD

Site	Trial Pit Number
WESTQUARTER AVENUE, FALKIRK	TP3

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
JCB 3CX	6.00x0.60m			J725
	Location	**Dates** 21/03/2014	**Engineer** SCOTT BENNETT ASSOCIATES LIMITED	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	MADE GROUND (Burnt shale and ash)		
0.20	V1				0.20	MADE GROUND (Brown sandy fine to coarse gravel with cobbles, brick, ash, burnt shale and boulders)		
0.20	T1							
0.20	J1							
0.50	V2				(1.00)			
0.50	T2							
0.50	J2							
1.00	V3							
1.00	T3				1.20			
1.00	J3					Broken blonde SANDSTONE (Possible Made Ground)		
1.00	B3				(0.50)			
					1.70	SANDSTONE (Possible bedrock or boulder) Complete at 1.70m		

Plan

Remarks

Trial pit walls remained dry and stable throughout

Scale (approx)	Logged By	Figure No.
1:50	CB	J725.TP3

AITKEN LABORATORIES LTD

Site	Trial Pit Number
WESTQUARTER AVENUE, FALKIRK	TP4

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
JCB 3CX	6.00x0.60m			J725
	Location	**Dates** 21/03/2014	**Engineer** SCOTT BENNETT ASSOCIATES LIMITED	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	V1				(0.20) 0.20	TOPSOIL with burnt shale		
0.20	T1					Brown clayey sandy fine to coarse GRAVEL with cobbles and boulders		
0.20	J1				(0.60)			
0.50	V2				0.80	SANDSTONE (Bedrock)		
0.50	T2					Complete at 0.80m		
0.50	J2							

Plan

Remarks

Trial pit walls remained dry and stable throughout

Scale (approx)	Logged By	Figure No.
1:50	CB	J725.TP4

Appendix F

Geotechnical Test Results