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DESK STUDY AND CONCEPTUAL SITE MODEL
for the site at
BEVIN, BEVIN AND CO LIMITED, RIVER ROAD,
ARUNDEL, WEST SUSSEX, BN18 9DH
for
T HOLLISTER (CHERTSEY) LTD

Document Control	
Title: DESK STUDY AND CONCEPTUAL SITE MODEL Project: BEVIN, BEVIN AND CO. LTD, RIVER ROAD, ARUNDEL, WEST SUSSEX, BN18 9DH Client: T HOLLISTER (CHERTSEY) LTD Date: 09 JULY 2012 Reference: LS 0550 Version: 1.0	Prepared by: [REDACTED] Checked by: [REDACTED] Geo-Environmental Consultant: MICHAEL ROSE B.Sc, M.Sc, F.G.S., AEMA Managing Director: [REDACTED] (F.G.S., MIENVSCI)
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1.0 INTRODUCTION

1.1 General

Land Science (Brighton) Limited was instructed by T Hollister (Chertsey) Limited to prepare a phase I Geo-environmental Desk Study and Conceptual Site Model in relation to the proposed development of the site at Bevin, Bevin and co. Limited, River Road, Arundel, West Sussex, BN18 9DH (see Figure 1).

1.2 The Site

In summary, the site comprised a series of unoccupied two / three storey commercial buildings with associated yard and parking area. The layout of the existing site is indicated on Figure 2, and a site walkover survey is presented in Section 2.0.

1.3 Form of Development

It was understood that the proposed development was to comprise the renovation of the existing buildings and the construction of a series of new residential dwellings. The exact details of proposed development are still to be issued, however, it is believed that the proposed residential development will occupy the existing building footprint with the remainder of the site (the open yard) to comprise of car parking.

1.4 Standards

Where practicable, the ground investigation and subsequent geotechnical and environmental assessments were undertaken in accordance with the following documents and guidance:

- CLR11: Model Procedures for the Management of Contaminated Land, DEFRA and Environment Agency 2004.
- Environment Agency Guidance on Requirements for Land Contamination Reports, Version 1 dated July 2005.
- Planning Policy Statement (PPS) 23: Pollution.
- Building Regulations Approved Document C: Site preparation and resistance to contaminants and moisture.
- NHBC Standards Chapter 4.1 Land Quality - Managing Ground Conditions, September 1999.

Other technical sources have been identified in respect of specific aspects of the investigation, as referenced throughout the text.

1.5 Conditions

Environmental interpretations are inherently dependant on the conditions revealed by a limited set of data and the accepted means of interpreting that data in use at the time of the investigation. Every effort is made to ensure that such data is accurate and representative, and that any assessment is performed under current best practice. However, we do not accept any liability for

the scope of the investigation, for conditions that have not been directly revealed through the investigation, or for the ultimate reliability of any published and current assessment criteria or procedures adopted in interpreting that data.

Any spatial or temporal extrapolation or inference is conjectural and no liability can be accepted for its accuracy; in particular, differing conditions may be revealed between or under points of investigation, and the concentrations or levels of mobile liquid and gaseous materials are likely to vary over time. It is also an inherent aspect of any investigation that areas of concern not previously anticipated are identified as works progress, and elements of the project design may vary during or after completion of the investigation; whilst every effort is made to tailor the investigation to suit within practical constraints as works progress, it may become necessary to undertake additional investigation work.

Information contained in this report is intended for the use of the Client and his agents for the purposes set-out in the text, and Land Science (Brighton) Ltd makes no warranty or representation whatsoever express or implied with respect to the use of this information by any other party or for uses other than those described. We do not indemnify the Client or any third parties against any dispute, claim or consequential losses arising from any finding or other result of this investigation report. No aspect of this report should be taken as a guarantee that a site is free of hazardous or potentially contaminative materials.

Furthermore the contact indicated that a series of wells were located inside the eastern site boundary beneath the location of the current derelict sheds. The contact detailed that the wells had been backfilled and capped around fifty years ago.

Anecdotal information provided by the onsite contact indicated that a below ground petrol tank was present within the southern end of the site, a cover to the tank was observed but could not be lifted during the site walkover, and the contact confirmed that the tank had not been used in over fifty years. The contact also confirmed that an above ground diesel tank was located within the middle of the site but had been removed approximately five years ago, however, an interceptor associated with the tank was still present below ground.

The surrounding area sloped towards the River Arun to the south, the ground level on site was essentially level, with the northern end approximately two meters below the adjacent ground level.

A small area located between the northern end of the building and the northern site boundary could not be accessed due to overgrown vegetation.

The site was bounded to the east by Brewery Hill and to the south by River Road, residential dwellings were present beyond these roads. To the north west of the site were commercial properties fronting onto Tarrant Street, adjacent to the north west corner of the site was a Quaker Burial Ground. To the south west was a row of residential garage units with residential units to the west of the site.

The hard landscaped areas were generally covered with concrete hard standing with surface water drainage provision. The north eastern corner of the yard and car parking area was noted to be slightly raised above the surrounding ground level. There were no soft landscaping areas at the site, although numerous wild plants were present between cracks within the hard standing.

A small area located between the northern end of the building and the northern site boundary could not be accessed due to overgrown vegetation.

At the time of the assessment the building was unoccupied with the majority of the building comprising a small office block and interconnected warehouse storage areas containing wooden shelving units. The only evidence of any possible basements at the site was below the existing office and adjoining building to the north where the level of the lowest floor appeared to be slightly below the surrounding yard and car parking area. The flooring within the buildings was noted to be either brick or concrete and no evidence of cracking or staining was noted.

In summary, at the time of the investigation the site comprised an irregular shaped plot of land which contained a series of interconnected one to three storey brick and flint buildings. The area within the south eastern half of the site was a former yard and car parking area with a row of derelict sheds inside the eastern boundary. See Figure 3 and site photographs for details.

2.0 PHASE I DESK STUDY

2.1 Site Walkover Survey

A search was made of environmentally sensitive areas, including areas of green belt, scenic or natural beauty, parks, reserves, nitrate zones, or protected conservation and scientific areas. No such sensitive land uses were identified within a 250m radius of the site. The site was detailed as

2.5 Sensitive Land Uses

No surface water features were identified on the site itself. The River Arun was noted approximately 25m to the south. The site was not located within an area susceptible to flooding as it benefits from a series of flood defences to the north of the River Arun. The area to the south of the river was detailed as being susceptible to flooding.

2.4 Hydrology

The Envirocheck report indicates the site to overlie a Major Aquifer. Under the new classification system, this is likely to be a Principal Aquifer. The site does not lie within a groundwater Source Protection Zone. The soils at the site have been detailed as having a high vulnerability classification. Groundwater was likely to be encountered at shallow depths within the Raised Marine Deposits; groundwater flow was anticipated to be towards the south-east, at a shallow hydraulic gradient.

2.3 Hydrogeology

BGS records showed three historic boreholes to the east of the site (BGS Borehole Ref. TQ00NW1, NW2 and NW67). The records indicated that the underlying geology comprises a thickness of around 5.9m to 11.5m of Raised Marine Deposits (comprising of layers of Marsh clay – sandy clay (blue, brown) overlying sand and gravel) overlying at least 8.5m of Marl and Chalk. No groundwater was detailed as being encountered during the drilling of these boreholes.

Published Geological Succession

Area of the site	Unit	Details
North western half of the site	Spetisbury Chalk	Firm white chalk with regular large flint seams,
South eastern half of the site	Raised Marine Deposits	Variable lithology. Gravel (shingle), sand, silt and clay; commonly charged with organic debris (plant and shell); now above the level of the present shoreline as a result of earth movement or a general fall in sea level.
	Spetisbury Chalk	Firm white chalk with regular large flint seams,

British Geological Survey 1:50,000 sheet number 317/332 entitled "Chichester and Bognor" indicated the geology of the site to comprise the following succession:

2.2 Geology

No pollution incidents to controlled waters were identified onsite or within the immediate vicinity of the site.

A pollution incident to controlled waters was identified some distance to the east of the site, which detailed as being a Category 3 / minor incident relating to crude sewage discharge into the River Arun. The type, distance, and age of the incident, were such that these were not considered to be significant in terms of the site or the proposed redevelopment.

2.9 Pollution incidents to controlled waters

Other onsite sources of Land Gases (including hydrocarbons, VOCs and carbon dioxide) were identified during the site walkover.

With respect to section 2.2, Raised Marine Deposits was anticipated to be present on site; the organic materials within this stratum may comprise a source of land gases (Carbon Dioxide, methane, depleted Oxygen). The underlying Chalk may also be a source of Carbon Dioxide, however, this was unlikely to be significant.

No active or historic landfill sites were identified in the vicinity. However, a landfill site was identified some distance to the south west, at Fagins Den. However, there were no details relating to the type of waste received or to the dates of operation. This facility was unlikely to be significant in terms of the site and the proposed redevelopment.

2.8 Land Gases

The site lies within a HPA lower probability radon area with less than 1% of homes above the action level. BGS data confirms that no radon protective measures are necessary in the construction of new dwellings or extensions at the site.

2.7 Radon Gas

Searches of various databases were made as part of the desk study to identify industrial land uses within 250m of the site, such as IPPC registered sites, COMAH sites, fuel station entries, etc. No such uses were identified within 250m of the site.

No contemporary trade directory records were identified on site. Whilst a number of contemporary trade directory records were identified off site within 250m, the type, distance, and nature of intervening geology, were such that these were not considered to be significant in terms of the site or the proposed redevelopment.

2.6 Industrial Land Uses

Being located around 178m to the south west of the South Downs which are classified as being an Environmentally Sensitive Area and also a National Park. The site also lies within an area classified as being a Nitrate Vulnerable Zone.

2.10 Historical Maps

Historical maps dating back to 1876 were obtained as part of the desk study by Land Science, and a summary of the key features is presented on the table below.

Date	On Site	Off Site
1876	The north eastern half of the site was detailed as being Eagle Brewery with the remainder of the site being occupied by terraced housing.	The site was located within an area of Arundel that was already shown to have been developed with both residential and commercial buildings. A ship yard was located around 30m to the south. Two un-named roads border the site to the south and east with residential dwellings to the west and possible commercial buildings to the north.
1897	No significant changes are noted.	The road to the east was detailed as being Brewery Mill with the road to the south detailed as Ship Yard. A timber yard was located around 10m to the east. The ship yard located around 30m to the south was no longer present.
1912	The brewery has expanded to cover the whole of the site and the building outline appears to be commensurate with the present day.	The timber yard located around 10m to the east was detailed as being a saw mills.
1937	No significant changes are noted.	No significant changes are noted.
1971-74	The site was detailed as being a Warehouse. A building located within the north eastern corner of the site was no longer present, this area appears commensurate with the raised concrete slab identified within this part of the site during the walkover.	The saw mills located around 10m to the east have been redeveloped as a Works. The row of terraced housing located adjacent to the south west has been redeveloped as a row of garage units. A slipway had been constructed around 30m to the south east.
1977	No significant changes are noted.	No significant changes are noted.
1979-80	No significant changes are noted.	The slipway located around 30m to the south east was shown to contain tanks.
1988-89	No significant changes are noted.	No significant changes are noted.
1994	No significant changes are noted.	Malthouse cottage has been built adjacent to the north eastern corner. The Slipway and tanks to the south east are no longer present and the area has been developed as residential dwellings.

Summary of Historical Map extracts

Once the mixture has been boiled it is allowed to settle out (with the resultant solids removed) then cooled prior to the addition of the yeast. The mixture is then placed in fermentation tanks to allow the sugars to be converted into alcohol. Following fermentation the beer is placed into conditioning tanks from between weeks to months to allow the flavours to develop. Once

liquid called 'wort' is then strained (lautering) and boiled with hops or other added ingredients. The brewing process begins with malting where the barley grains are soaked in water, then spread out to allow germination and finally dried out. Once dried the grains are then milled to separate the different parts of the grain. The milled grain is then added to hot water and mashed; naturally occurring enzymes then break down the starches into sugars. The resultant product (a sugar rich

yeast, a source of starch (barley) and flavouring e.g. hops. A brewery was located at the site between 1795 and 1932. No specific DOE Industrial Profile exists for brewing, however, the basic process is described below with raw materials including: water,

2.13 Industrial Profiles

Land Science (Brighton) Ltd has not been made aware of any previous investigation that may have been undertaken on the site.

2.12 Previous Ground Investigations

Malt / brew house. These records indicated that a brewery was located at the site between 1785 and 1935. A historic map of Arundel dated 1785 details that the western half of the site may have formed the eastern part of a large orchard, the remainder of the site contained a possible commercial building, however, the actual usage was not detailed. Adjacent to the north eastern corner of the site was a

Old Arundel. Worthing Local Archives were visited in order to review further historical land use information for the site and the local area. The research included the inspection of trade and telephone directories dating back to 1840, a review of a historic map dated 1841 and a book on inns and Taverns of

2.11 Additional Historical Research

No visual evidence of bomb damage was noted within the north eastern part of the site during the site walkover where the building identified in 1937 was located suggesting that it was not destroyed by bombing raids during the Second World War.

Between 1970 and 1994 the buildings were detailed as being a Warehouse. In summary, initially the north eastern end of the site was occupied by Eagle Brewery with the remainder of the site containing residential dwellings in 1876. By 1912 the brewery had expanded to cover the whole site with the building outlines broadly commensurate with the present day.

An enquiry has been submitted to the Trading Standards at West Sussex County Council in regards to the possible location of buried tanks at the site, Land Science are currently awaiting the results of the enquiry at the time of finalising this report.

2.14 Petroleum Officer Enquiries

♦ - Indicate areas where contamination is most likely to occur.

DOE Profile for Road vehicle fuelling, service and repair: transport and haulage centres

Main group	Sub-group	Contaminant
Metals and their compounds	Lead	
		Chromium
		Zinc
		Copper
		Vanadium
Acids/alikalis		
Organic compounds		
		Non-halogenated solvents
		Halogenated solvents
		PAHs
		Fuels/hydrocarbons
		Ethylene glycol
		Polymerised glycol and ethers
		Detergents
Fuelling areas		
Workshops		
Vehicle washing areas		
Paint shops		
Location		

Since the middle of the twentieth century the site has been the location of a small distribution centre. The following table reproduces the tables of contaminants and their probable locations given in the former DOE Industrial Profile for Road Vehicle fuelling, service and repair - Transport and Haulage Centres.

A former below ground petrol tank associated with the brewery was identified during the site walkover with in the southern half of the site. It is considered that the use and storage of fuels would be the main source of potential contamination associated with the former brewery.

The waste products associated with the brewery may include waste water which may have been disposed of into the nearby River Arun, carbon dioxide and the solid waste ("brewer's grain") produced during filtration which may have been sold to local farmers as animal feed.

developed if they require the beers are then filtered to help stabilise its flavour prior to being placed into casks or bottles.

3.0 CONCEPTUAL SITE MODEL

3.1 General

Possible risks associated with potential contamination have been assessed following a source-pathway-receptor ('SPR') approach. A risk may only exist where a plausible SPR linkage is present, and where the quantity or concentration of a contaminant is sufficient so as to pose harm. The identification of potential sources, receptors, and plausible pathways in the following sections together forms a preliminary Conceptual Site Model ('CSM').

3.2 Potential Sources

A number of possible sources of contamination have been identified, as summarised below. The medium in which resultant contamination might exist is noted, i.e. soil phase (S), water phase (W) or gas/vapour phase (G).

Source	Description	Notes	S	W	G
Made Ground / Fill.	General background chemical quality of any imported Made Ground materials.	Possible elevated metals, non-metals, and organic contaminants. Possible generation of common land gases (Carbon Dioxide, Methane, and depleted Oxygen).	Y	Y	Y
Historic use of the site as a brewery	A brewery was based at the site between around 1785 to 1932.	A wide range of contaminants may be associated with a brewery including elevated metals, non-metals, and organic contaminants, ethanol, methanol, ammonia, storage and use of fuels and oils. A former buried petrol tank associated with the former brewery was present within the southern part of the site.	Y	Y	Y
Historic use of the site as a small haulage / distribution centre had been located at the site for the last fifty years.	A small scale kitchenware haulage / distribution centre had been located at the site for the last fifty years.	A wide range of contaminants may be associated with haulage / distribution centres, including metals, inorganics, solvents, fuel storage and use, oil water interceptors and soakaways. An above ground diesel tank associated with the distribution centre was removed from the site around five years ago; however an associated oil water interceptor was understood to still be present.	Y	Y	Y
Natural soils	Underlying Alluvial and chalk soils	Possible elevated carbon dioxide and methane			Y

Possible sources of possible soil contaminants

3.3 Identified Receptors

Potential receptors associated with the site and its redevelopment, identified or otherwise discounted, are summarised on the following table:

Receptor	Description	Sensitivity
Site Workers	Persons involved in construction and future maintenance. Ground works are proposed including foundation excavations.	Moderate
End Users	Occupants of the proposed residential redevelopment.	High
Adjacent land users	Residential dwellings were noted adjacent to the site	Moderate
Soft Landscaping	Areas of planting including lawns, shrubs, trees, etc.	Moderate
Building Materials	Built elements in contact with the ground; buried plastics (e.g. water supplies) and concrete (e.g. foundations).	High
Controlled Waters	The site is underlain by a Major Aquifer and the River Arun is located around 25m to the south of the site.	High

Possible Receptors of Contamination

Statutory ecological receptors as green belt or protected natural areas have not been identified as potential receptors in the vicinity of the site.

3.4 Associated Pathways

Based on the identified receptors, the following pathways have been evaluated in this assessment.

Controlled Waters	
• Leaching into pore water	• Diffusion and dispersal into groundwater
• Downward migration	• Lateral migration and dispersal
Human Health	
• Ingestion of soil and dust	• Inhalation of dust, gases and vapours
• Dermal contact with soil and dust	• Consumption of home-grown produce
• Ignition (fire, explosion)	• Inhalation of gases (asphyxiation)
Building materials	
• Chemical attack	
Identified Pathways	

3.5 Source-Pathway-Receptor Linkages

Whilst the various possible sources and receptors have been identified, the following matrix illustrates the identified pathways by which a contaminant linkage might plausibly exist:

Sources		Receptors								
Soils	Waters	Gases / Vapours	Inhalation, ignition	Inhalation, ignition	End Users	Building Materials	Soft Landscaping	Adjacent Land Users	Ground Water	
					Ingestion, dermal contact, inhalation	Ingestion, dermal contact, inhalation	Chemical attack	Plant uptake	None [1]	Leaching, downward migration, lateral migration
					None [1]	None [1]	Chemical attack	Plant uptake	None [1]	Lateral migration
					None [1]	None [1]	Chemical attack by VOC vapours	Plant uptake	Lateral migration, inhalation, ignition [2]	None
					None [1]	None [1]	Chemical attack by VOC vapours	Plant uptake	Lateral migration, inhalation, ignition [2]	None

Identified Source-Pathway-Receptor linkages

- [1] The depth to the water table was such that direct contact between site workers, end users, soft landscaping, adjacent land users, and groundwater was unlikely.
- [2] Arising from on-site sources (e.g tanks, filled ground etc) not from chalk or alluvial materials.

4.0 CONCLUSIONS

4.1 Summary

The conceptual site model identified a number of source-pathway-receptor linkages, which will need to be evaluated by means of intrusive ground investigation, namely:

- Exposure by site workers to contaminants in soil (during any demolition and ground works) and gases/vapours (especially in confined spaces such as deep excavations).
- Exposure by end users to contaminants in soils and gases/vapours.
- Chemical attack on building materials including buried pipework and concrete by soil and organic vapours.
- Plant uptake of contaminants within soft landscaping areas.
- Lateral migration of gases and vapours onto neighbouring properties.
- The leaching-out of contaminants in soils into the water table, and off-site migration.

4.2 Proposed Investigation Strategy

Based on the above, the following scope of investigation is proposed:

- Drilling of window sampler boreholes, to provide shallower soils information including any Made Ground and any field evidence of contamination into the underlying soils.
- The positions are targeted to specific areas of concern as identified, including adjacent to former tanks, interceptors, existing drainage runs, areas of anticipated made ground and sensitive areas such as proposed gardens and locations of mass excavations.
- Samples of any Made Ground should be collected for laboratory analysis at approximate 1m centres (including materials bearing field evidence of contamination). The main suite of analysis is identified below.
- All samples should be screened for VOCs in headspace using a photo-ionisation detector (PID). Where evidence of VOCs is recorded, a selection of samples should be submitted for speciated VOC and SVOC analysis.
- Gas and water monitoring standpipes should be installed including the area down gradient of the positions of the former tanks. An initial six monitoring visits should be undertaken over a period of two months, in accordance with CIRIA C665, and include periods of differing climatic and atmospheric pressure conditions.
- Where encountered, water samples should be collected from the monitoring standpipes for laboratory analysis including a similar suite of contaminants.

The analytical suite, based on the known site history, should include:

- General parameters: Acidity (pH), fraction of organic carbon.
- Metals: Arsenic, Cadmium, Chromium (total), Lead, Mercury, Selenium, Boron, Copper, Nickel and Zinc.
- Non-metals: water soluble Sulphate, Sulphide.
- Organic compounds: Monohydric Phenols, Speciated PAH (EPA16).

- Speciated TPH, VOC's and SVOC's to be considered where evidence of hydrocarbons is encountered.
- Visual asbestos screening of all Made Ground samples. Where possible asbestos fibres or ACMs are identified, these should be examined under a microscope to determine type.

Further boreholes may be required, additional samples analysed or additional determinands added to the analysis, as appropriate, based on any field evidence of possible contamination encountered.

Based on the above, the cost for ground investigation by a reputable Consultancy with proper insurance coverage and quality control practices is estimated to be in the order of £4,000 to £5,000 ex VAT.

Works associated with investigating and treating contaminated land may qualify for tax relief under the Land Remediation Relief scheme, whereby 150% of the costs may be recovered via a corporation tax credit. It is the current owners might not be able to directly benefit from this, but the scheme may influence the value of the land if sold onto a developer or the like.

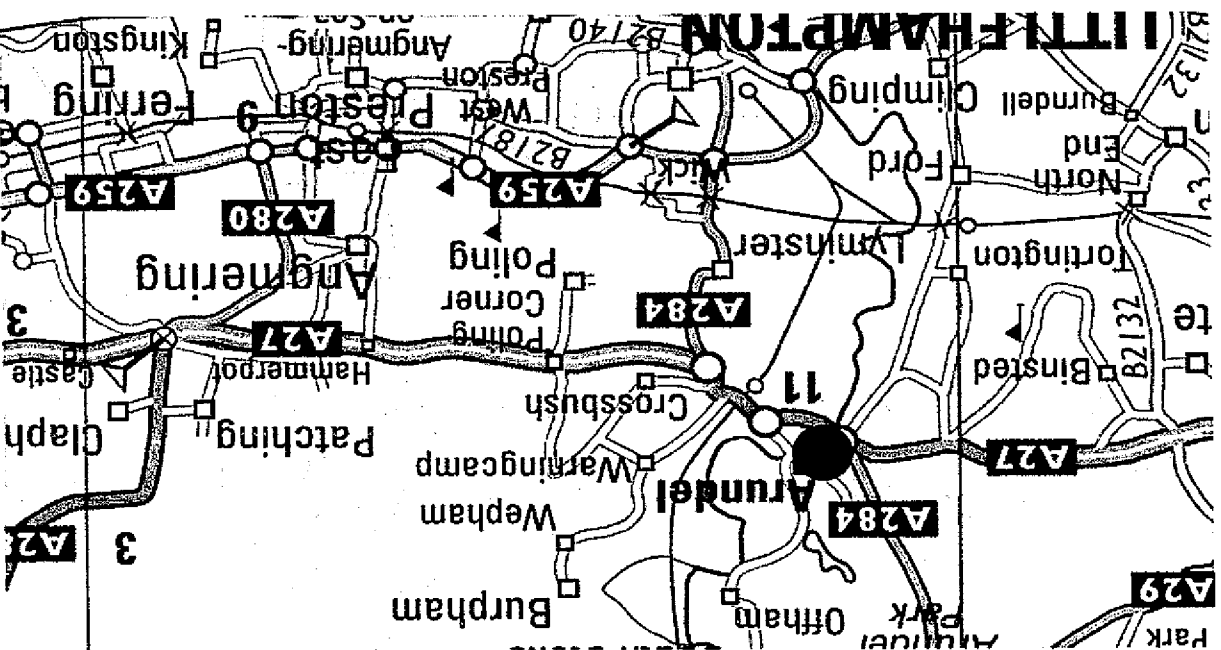
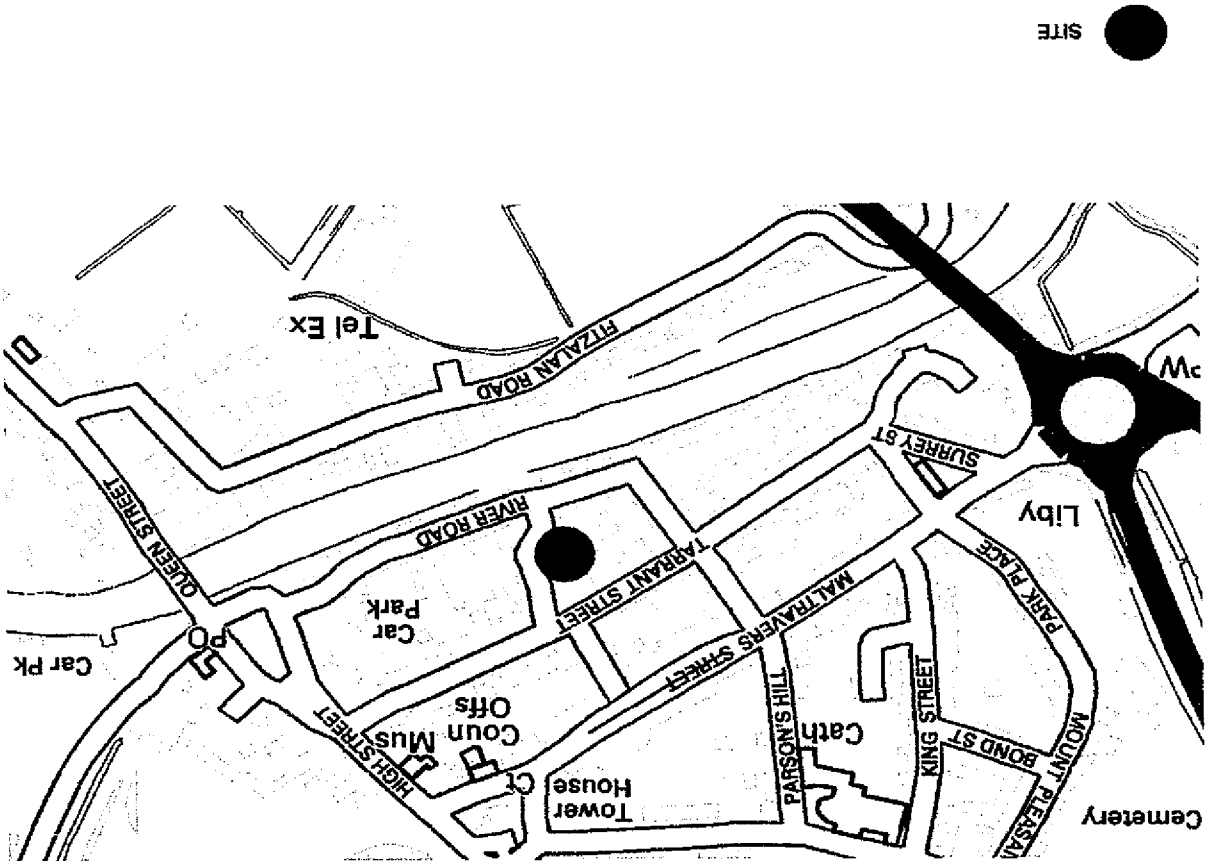
It may be possible to combine the environmental investigation with further boreholes and testing for geotechnical purposes.

GLOSSARY

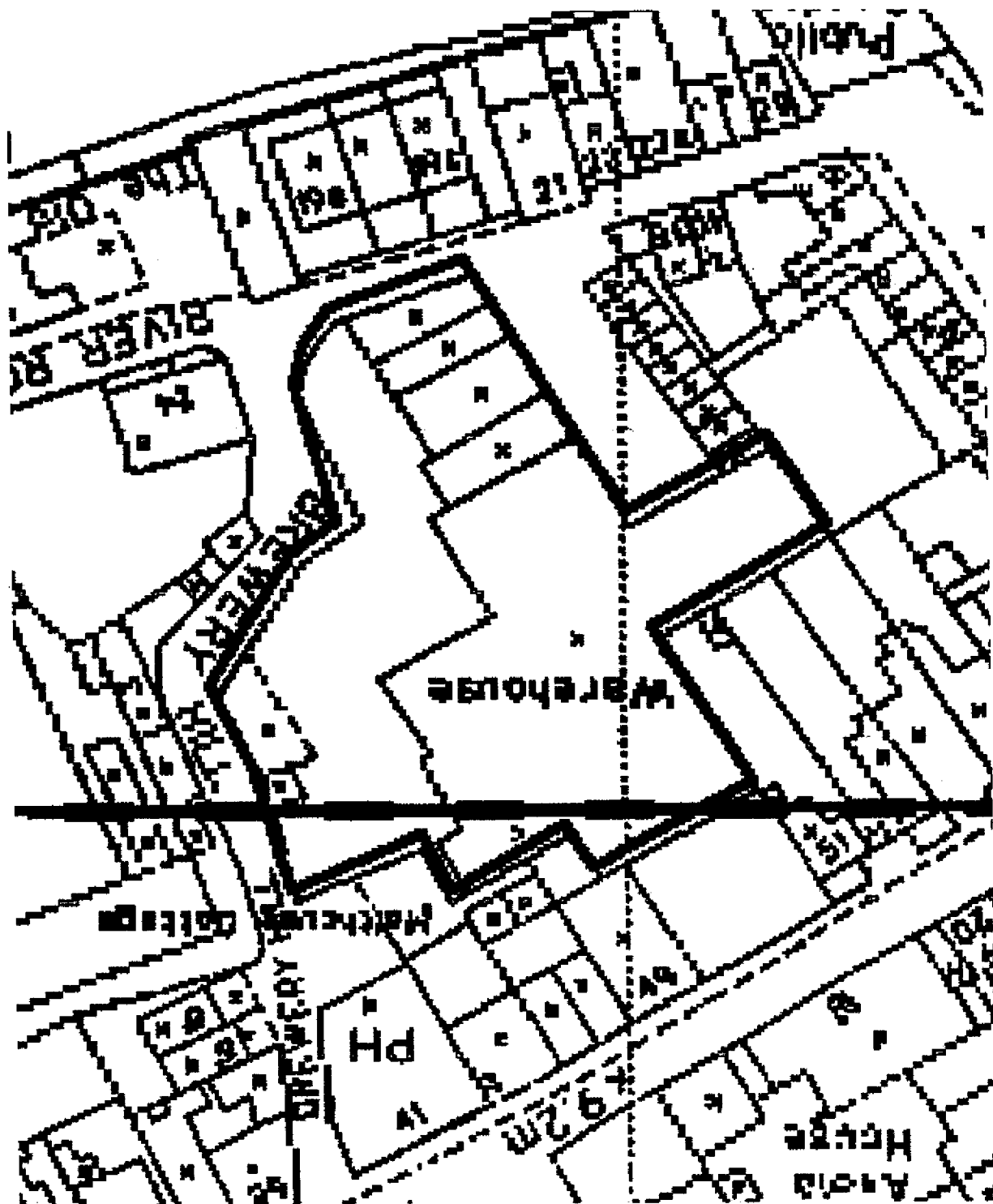
BGS	British Geological Survey
BH	Borehole
BRE	Building Research Establishment
BSI	British Standards Institute
CBR	California Bearing Ratio
CDM	Construction Design and Management regulations
CFA	Continual Flight Auger
CIRIA	Construction Industry Research and Information Association
CLEA	Contaminated Land Exposure Assessment model
CLR	Contaminated Land Remediation report
COSHH	Control of Substances Hazardous to Human Health regulations
COMAH	Control of Major Accident Hazards regulations
CSM	Conceptual Site Model
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department for Environment, Transport and the Regions
DORA	Detailed Quantitative Risk Assessment
DP	Dynamic Probe
EA	Environment Agency
EQS	Environmental Quality Standards
F.O.C	Fraction of Organic Carbon (used in environmental risk assessments in partitioning contaminants between soil organic matter and other phases)
GAC	Generic Assessment Criterion (a comparative concentration set for screening and assessing soil contamination based on standard exposure parameters)
GQRA	Generic Quantitative Risk Assessment (a preliminary assessment of risk from soil contamination using GAC)
Hot-spot	A distinct zone of elevated results in soil, gas or groundwater
HPA	Health Protection Agency
HSE	Health and Safety Executive
ICRCL	Inter-departmental Committee for the Redevelopment of Contaminated Land
IPC	Integrated Pollution Control
IPPC	Integrated Pollution Prevention and Control
NHBC	National House Building Council
NIHHS	Notification of Installations Handling Hazardous Substances
PAH's	Polycyclic Aromatic Hydrocarbons
PBET	Physiological Based Extraction Testing
PQRA	Preliminary Quantitative Risk Assessment

QRA	Quantitative Risk Assessment
SGV	Soil Guideline Value (a GAC calculated by the Environment Agency using the CLEA model)
SOM	Soil Organic Matter (a measure of organic compounds within soil, used in risk assessments)
SPZ	Source Protection Zone (an area placed around a groundwater abstraction borehole of potable quality to protect quality)
SPT	Standard Penetration Test (either a cone or split-spoon driven by a hammer of set weight and dropped a set distance used as a gauge of the density or consistency of soils)
ST-WEL	Short Term Workplace Exposure Limit (a maximum acceptable concentration of a contaminant in air for commercial premises)
SVOC's	Semi-Volatile Organic Compounds
TP	Trial Pit (an excavation made to investigate near surface ground and groundwater conditions, usually undertaken by machine)
TPH	Total Petroleum Hydrocarbons (a bulk measure of all organic compounds usually with equivalent carbon numbers of c10 to c40, some times sub-divided into aromatic and aliphatic species and differing groups of equivalent carbon numbers)
TRRL	Transport Road Research Laboratory
TT	Trial Trench (an elongate excavation usually across a specific feature or area to investigate near surface ground and groundwater conditions)
TWA-WEL	Time Weighted Average Workplace Exposure Limit (an acceptable concentration of a contaminant in air for commercial premises based on average exposure over 8 hours)
VOC's	Volatile Organic Compounds
WAC	Waste Acceptance Criteria (a series of threshold concentrations defining wastes as inert, Hazardous or Non-Hazardous)
WRAS	Water Regulations Advisory Scheme
WS	Window Sampler (a low-impact drilling technique involving 1m long small diameter tubes driven into the ground)

PREPARED: MR	CHECK: ET	DATE: 05/07/2012	SHEET No: page: 1 of 1
CLIENT: T Hollister (Chertsey) Ltd	FIGURE: 1	PROJECT: Bevin & Bevin, Brewery Hill, Arundel, BN18 9DH	VERSION v1
TITLE: Site Location	REF: LS0550		



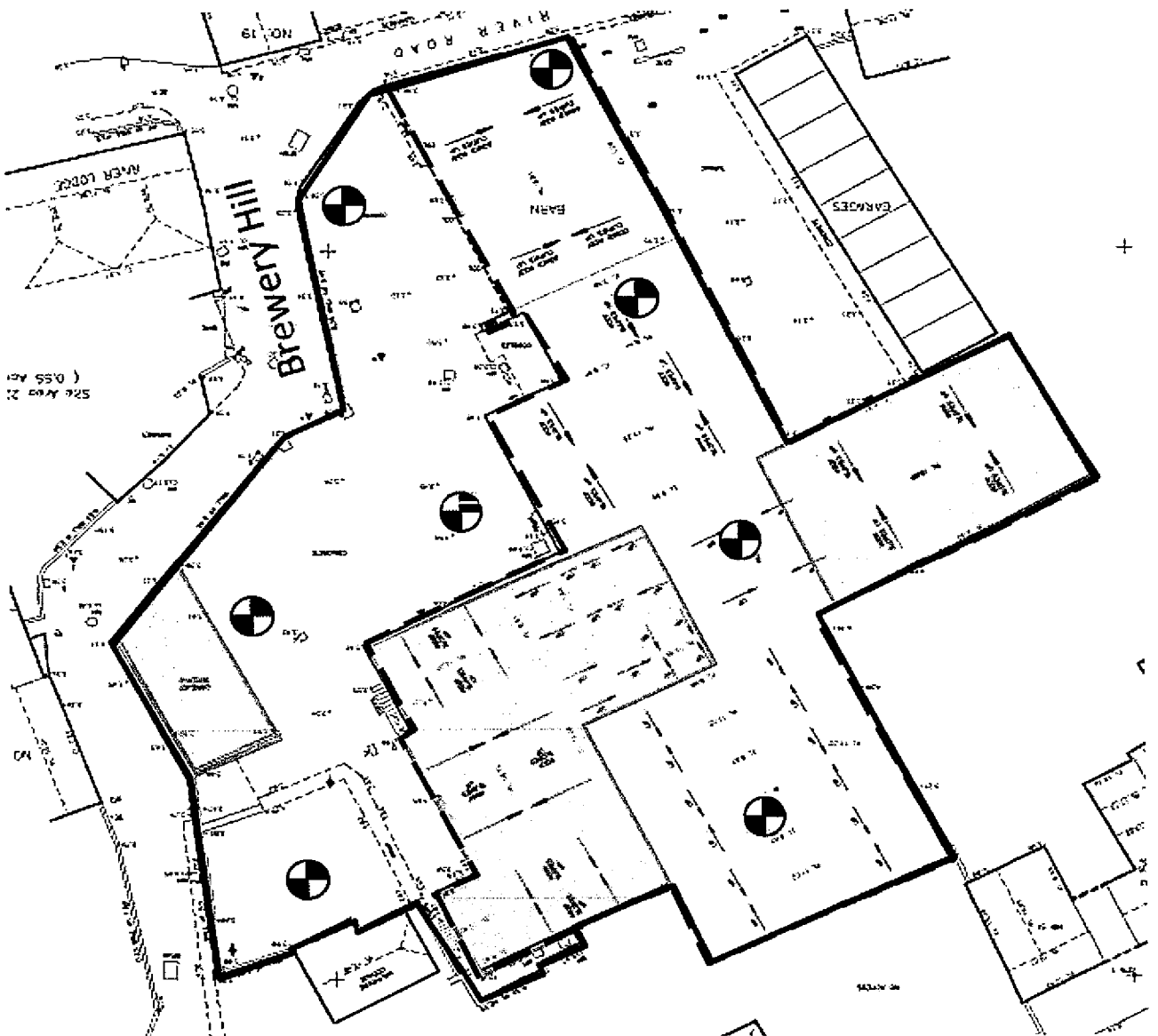
PREPARED: ET	CHECK: ET	DATE: 26/06/2012	SHEET No: page: 1 of 1
CLIENT: T Hollister (Chertsey) Ltd	FIGURE: 1		
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PREPARED: MR	CHECK: ET	DATE: 07/07/2012	SHEET No: page: 1 of 1
CLIENT: T Hollister (Chertsey) Ltd	FIGURE: 3	PROJECT: Bevin & Bevin, Brewery Hill, Arundel, BN18 9DH	VERSION: V1
TITLE: Site Layout Plan	REF: LS 0550		

Very low headroom / unsafe structures - unable to locate any exploratory positions in these areas

Proposed exploratory position - subject to confirmation of proposed development layout (depending on access and head room)

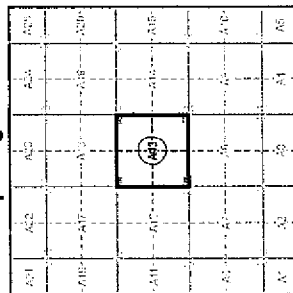


APPENDIX A

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Py
Sussex	1:2,500	1876	2
Sussex	1:2,500	1887	3
Sussex	1:2,500	1912	4
Sussex	1:2,500	1937	5
Ordnance Survey Plan	1:2,500	1971 - 1973	6
Supply of Unpublished Survey Information	1:2,500	1973 - 1974	7
Supply of Unpublished Survey Information	1:2,500	1974	8
Supply of Unpublished Survey Information	1:2,500	1976	9
Additional Sills	1:2,500	1977 - 1989	10
Ordnance Survey Plan	1:2,500	1979 - 1989	11
Additional Sills	1:2,500	1988 - 1989	12
Additional Sills	1:2,500	1991	13
Large-Scale National Grid Data	1:2,500	1994	14

Historical Map - Segment A13



Order Details

Order Number: 39904393_1_1
 Customer Ref: LS 0550
 National Grid Reference: 501710, 108950
 Slice: A
 Site Area (Ha): 0.22
 Search Buffer (m): 100

Site Details

Benit Bevin & Co Ltd, River Road, ARUNDEL, West Sussex, BN18 9DH

Historical Mapping Legends

Ordnance Survey County Series and
 Ordnance Survey Plan 1:2,500
 Large-Scale National Grid Data 1:2,500 and
 1:1,250
 Supply of Unpublished Survey Information
 1:2,500 and 1:1,250

Active Quarry, Chalk Pit or Clay Pit Inactive Quarry, Chalk Pit or Clay Pit Rock Boulders Positioned Boulder Non-Confiferous Tree (surveyed) Non-Confiferous Trees (not surveyed) Orchard Tree Copice, Osler Rough Grassland Direction of water flow Electricity Transmission Line Electricity Pylon Buildings with Building Seed Glazed Roof Building Civil parish/community boundary District boundary County boundary Boundary just/stone Boundary marking symbol (note: these always appear in opposed pairs or groups of three)	Slopes Top Rock (scattered) Boulders (scattered) Screen Confiferous Tree (surveyed) Confiferous Trees (not surveyed) Bracken Marsh Salttings Culvert Antiquity (site of) Electricity Pylon Buildings with Building Seed Glazed Roof Building Civil parish/community boundary District boundary County boundary Boundary just/stone Boundary marking symbol (note: these always appear in opposed pairs or groups of three)	Bar House Boundary Post or Stone Capitan, Crane Chimney Drinking Fountain Electricity Pylon or Post Fire Alarm Pylon Foot Bridge Guida Post Hydrant or Hydraulic Level Crossing Manhole Mele Post or Meeting Post Mile Stone Natural Tidal Limit NTL P Post Office Public Convenience Public House Pump Signal Post or Light Spring Tank or Truck Telephone Call Box Telephone Call Post Trough Well Wind Pump	Bar House Boundary Post or Stone Capitan, Crane Chimney Drinking Fountain Electricity Pylon or Post Fire Alarm Pylon Foot Bridge Guida Post Hydrant or Hydraulic Level Crossing Manhole Mele Post or Meeting Post Mile Stone Natural Tidal Limit NTL P Post Office Public Convenience Public House Pump Signal Post or Light Spring Tank or Truck Telephone Call Box Telephone Call Post Trough Well Wind Pump
--	---	---	---

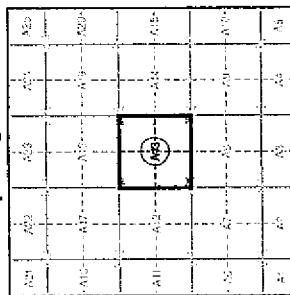
Ordnance Survey County Series and
 Ordnance Survey Plan 1:2,500

Quarry Gravel Pit Refuse Heap Clay Pit Sloping Masonry Flat Rock Marsh Reeds Fuze Brushwood Mixed Wood Fir Ferry Trig. Station Bench Mark Arrow denotes flow of water Cutting Embankment Road crossing Railway Level Crossing Road over single stream Road over River or Canal	Sand Pit Refuse Heap Flat Rock Ostlers Wood Orchard Stepping Stones Lock Altitude at Trig. Station Surface Level Antiquities (site of) Cutting Embankment Road crossing Railway Level Crossing Road over single stream Road over River or Canal	County Boundary (Geographical) County & Civil Parish Boundary Administrative County & Civil Parish Boundary County Borough Boundary (England) County Borough Boundary (Scotland) County Boundary (Geographical) County & Civil Parish Boundary Administrative County & Civil Parish Boundary County Borough Boundary (England) County Borough Boundary (Scotland)	County Boundary (Geographical) County & Civil Parish Boundary Administrative County & Civil Parish Boundary County Borough Boundary (England) County Borough Boundary (Scotland)
--	--	---	---

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Details:
Order Number: 39904393_1_1
Customer Ref: LS 0550
National Grid Reference: 501710, 106980
Slice: A
Site Area (Ha): 0.22
Search Buffer (m): 100

Site Details

Site Details
Bevin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex.
BN18 9DH



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Web: www.enyirocheck.co.uk

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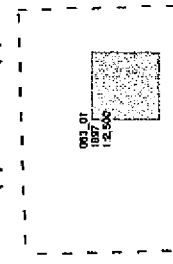
Sussex

Published 1897

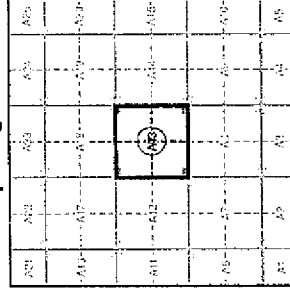
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1940's. In 1884 the 1:2,500 scale was used for mapping urban areas and by 1898 it covered the whole of what was considered to be the cultivated parts of Great Britain. The published data given below is often some years later than the surveyed data. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

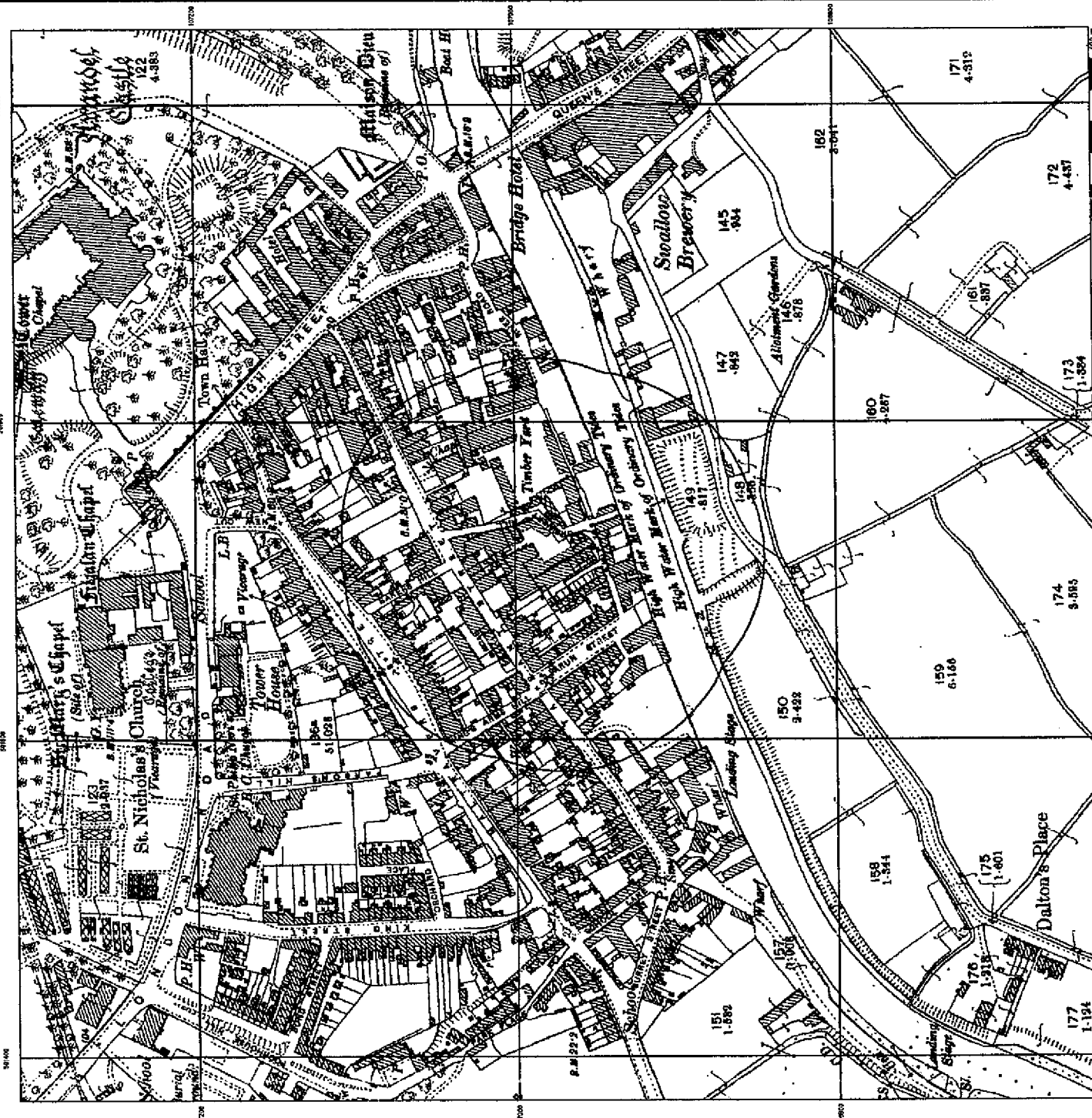


Order Details

Order Number: 38904393_1_1
Customer Ref: LS 0550
National Grid Reference: 501710, 106980
Site: A
Site Area (Ha): 0.22
Search Buffer (m): 100

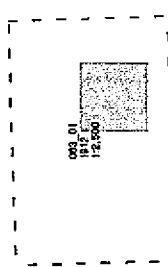
Site Details

Bevin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex, BN18 9DH

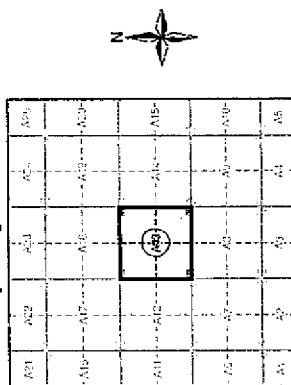


The historical maps shown were reproduced from maps predominantly held at the state archive for England and Wales, Scotland in the 1940's. In 1854 there were 12,600 maps for mapping under a sea and by 1938 it was the whole of what were considered to be the cultivated parts of Great Britain. The published data below is often some years later than the surveyed data. See 1938, all OS maps were based on the Cassini projection, with independent surveys of a single county or group of counties, reflecting time to significant inaccuracies in outlining areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Details
Order Number: 39904393_1_1
Customer Ref: LS 0550
National Grid Reference: 501710, 106980
Slice: A
Site Area (Ha): 0.22
Search Buffer (m): 100

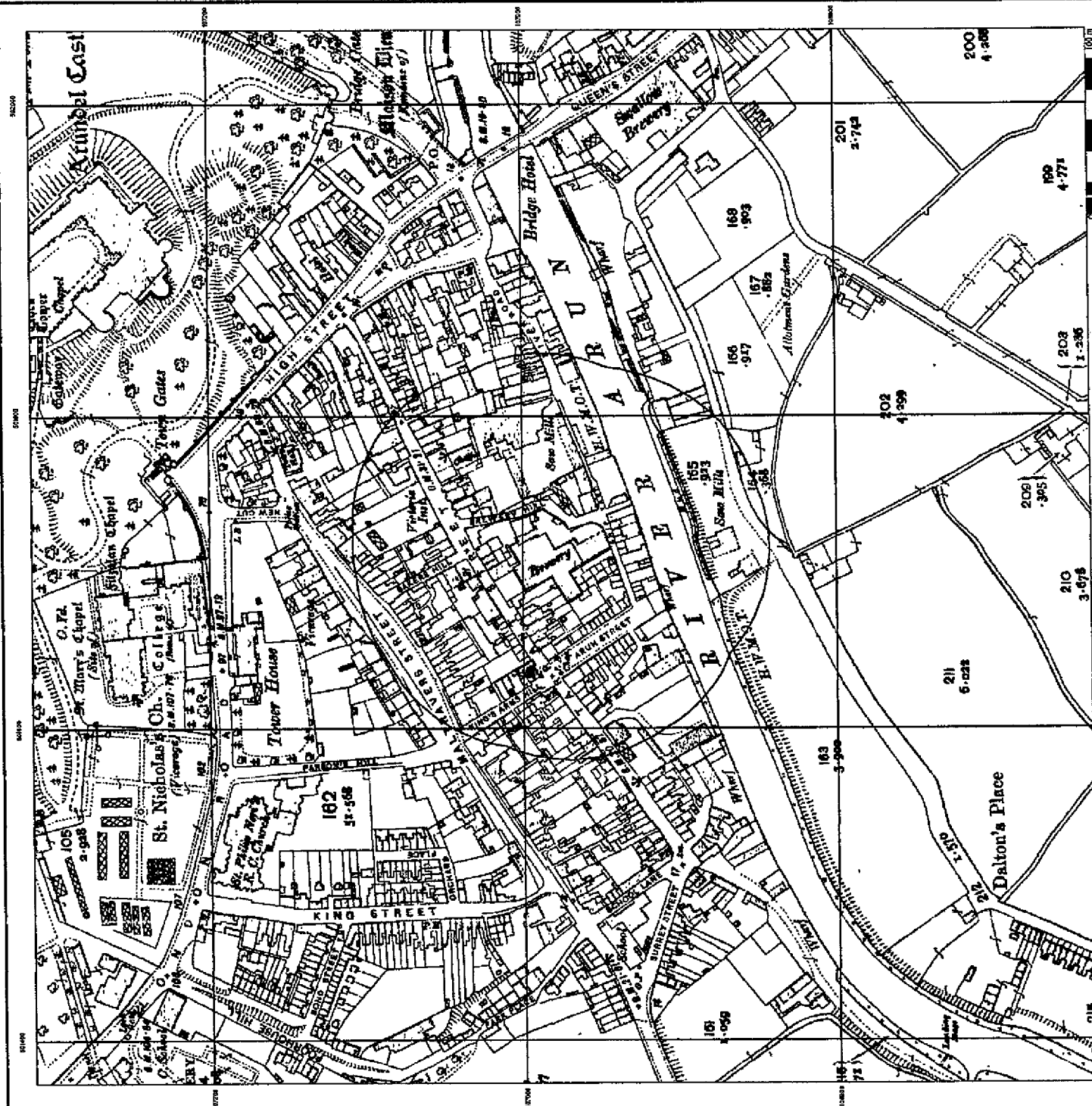
Site Details

Site Details
Bevin Bayn & Co Ltd, River Road, ARUNDEL, West Sussex,
BN18 9DH



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Web: www.enfrachreck.co.uk

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Sussex

Published 1937

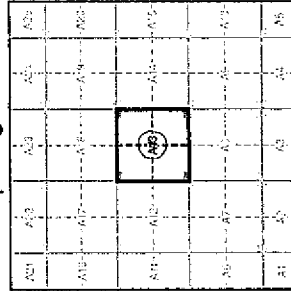
Source map scale - 1:2,500

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 1895 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

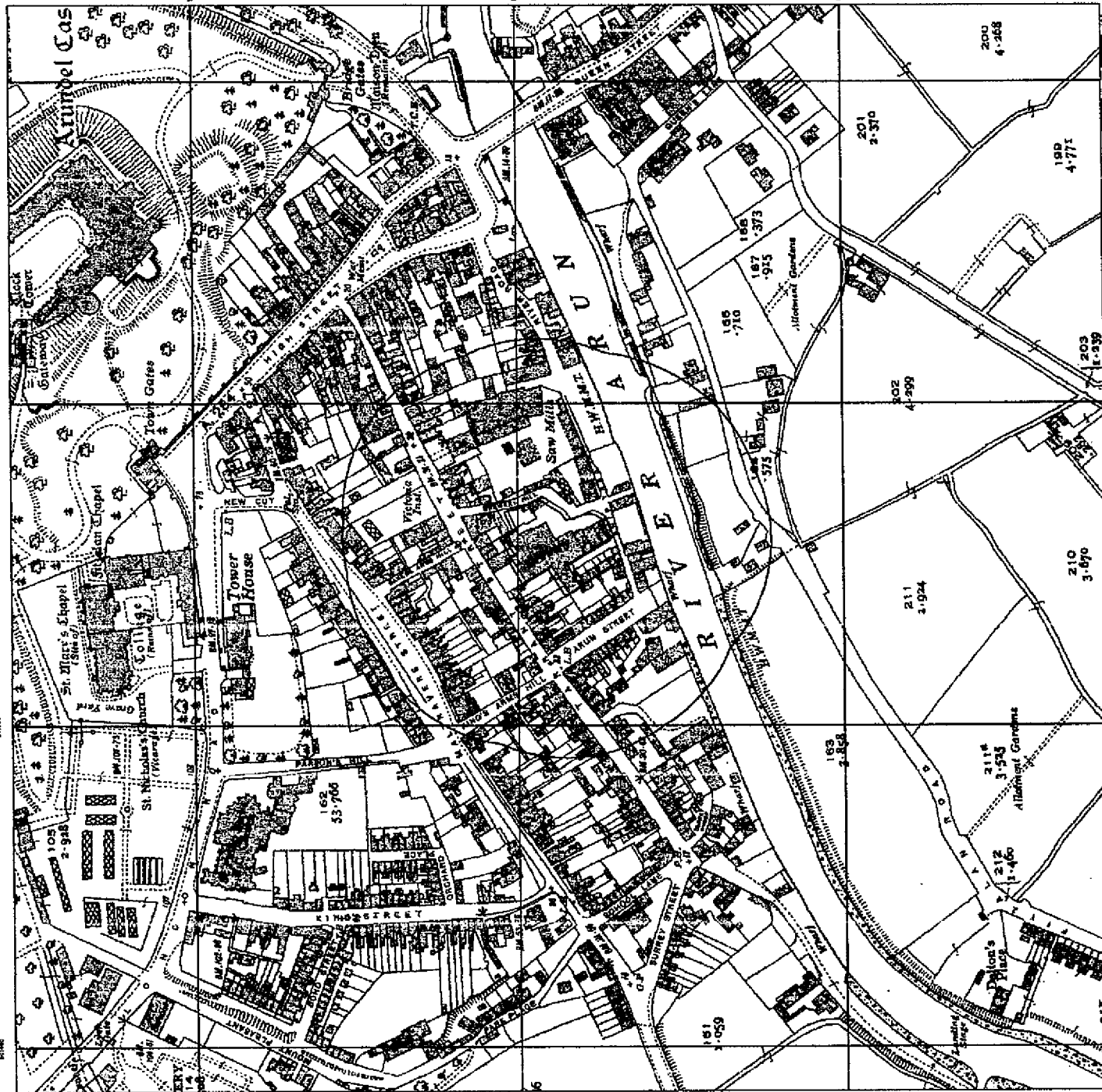


Order Details

Order Number: 39904393_1_1
Customer Ref: LS 0550
National Grid Reference: 507170, 106960
Site: A
Site Area (Ha): 0.22
Search Buffer (m): 100

Site Details

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Published 1971 - 1973

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 1:250,000 scale of what were considered to be the published parts of Great Britain. The published data below is often some years later than the surveyed data. Before 1939, all OS maps were based on the Cassini projection, with independent surveys of a single county or group of counties, often due to significant inaccuracies in outlying areas.

TC00107	TC00207
1973	1972
12,500	32,500
TC00108	TC00208
1973	1972
12,500	32,500

The figure shows a 5x5 grid of points. The points are labeled as follows:

- Row 1: A1, A2, A3, A4, A5
- Row 2: A6, A7, A8, A9, A10
- Row 3: A11, A12, A13, A14, A15
- Row 4: A16, A17, A18, A19, A20
- Row 5: A21, A22, A23, A24, A25

A central square is formed by points A12, A13, A14, and A15. Inside this square, there is a circle with a dot in the center, labeled A13.

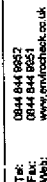


Order Number: 0000400002121
Customer Ref: LS 0550

Site: 0.22

Site Area (Ha):

Site Details
Bevin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex,
BN18 9DH





Supply of Unpublished Survey Information

Published 1973 - 1974

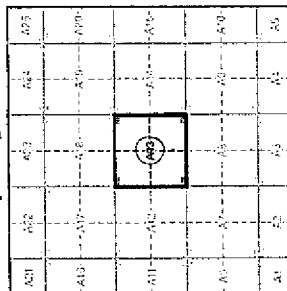
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

TC0107	TC0107
1973	1974
1:2,500	1:2,500
TC0108	TC0108
1973	1974
1:2,500	1:2,500

Historical Map - Segment A13



Order Details

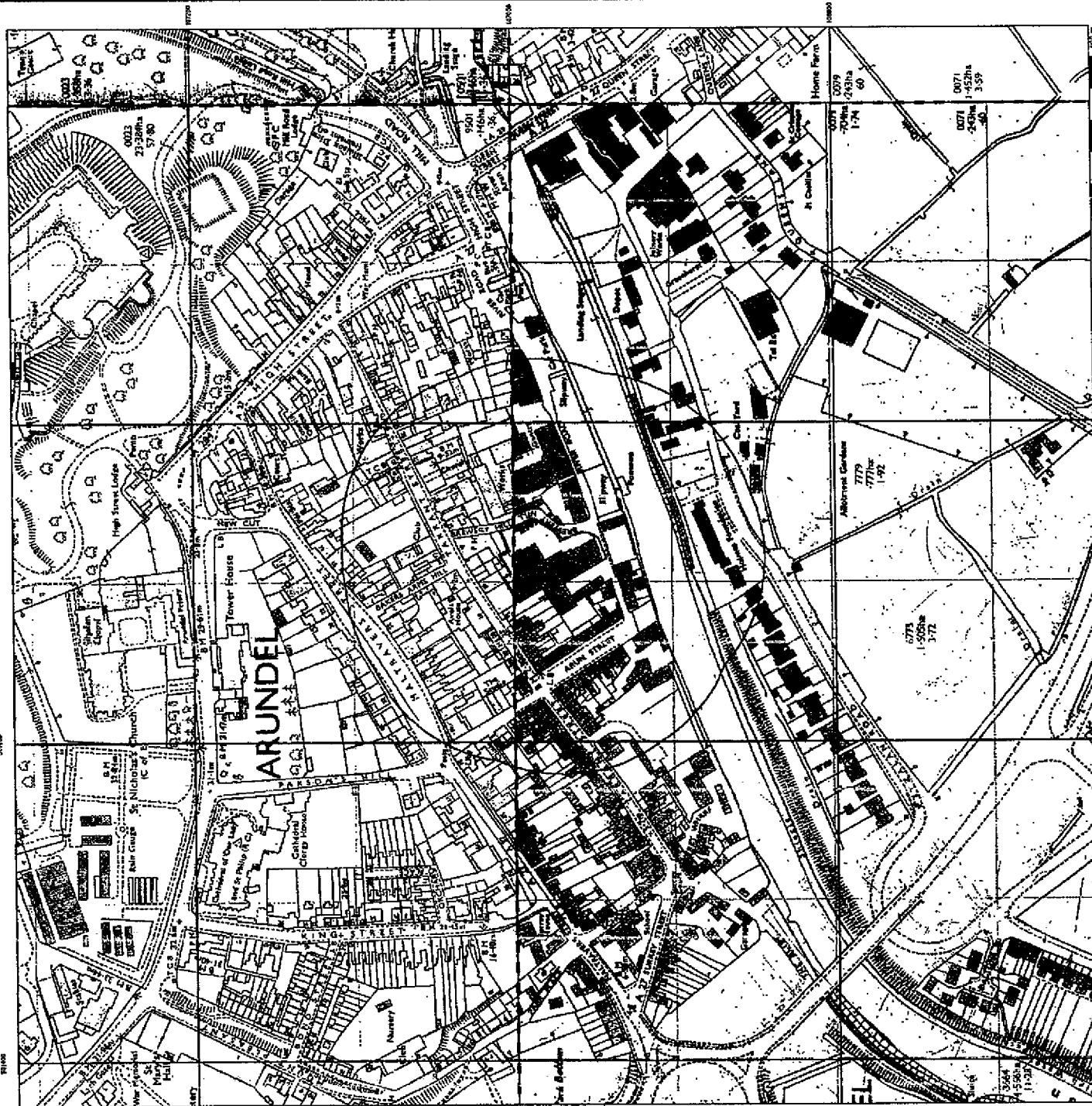
Order Number: 39904393_1_1
Customer Ref: LS 0550
National Grid Reference: 501710, 106980
Site: A
Site Area (Ha): 0.22
Search Buffer (m): 100

Site Details

Bevin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex, BN18 9DH



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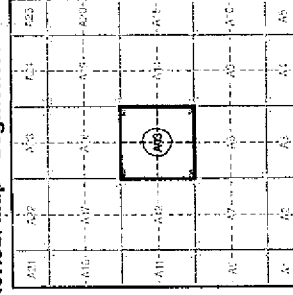
Supply of Unpublished Survey Information Published 1974 Source map scale - 1:2,500

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

Map Name(s) and Date(s)

TO2007	1974
TO2008	1974
TO2009	1974
TO2010	1974
TO2011	1974
TO2012	1974
TO2013	1974
TO2014	1974
TO2015	1974
TO2016	1974
TO2017	1974
TO2018	1974
TO2019	1974
TO2020	1974
TO2021	1974
TO2022	1974
TO2023	1974
TO2024	1974
TO2025	1974
TO2026	1974
TO2027	1974
TO2028	1974
TO2029	1974
TO2030	1974
TO2031	1974
TO2032	1974
TO2033	1974
TO2034	1974
TO2035	1974
TO2036	1974
TO2037	1974
TO2038	1974
TO2039	1974
TO2040	1974
TO2041	1974
TO2042	1974
TO2043	1974
TO2044	1974
TO2045	1974
TO2046	1974
TO2047	1974
TO2048	1974
TO2049	1974
TO2050	1974
TO2051	1974
TO2052	1974
TO2053	1974
TO2054	1974
TO2055	1974
TO2056	1974
TO2057	1974
TO2058	1974
TO2059	1974
TO2060	1974
TO2061	1974
TO2062	1974
TO2063	1974
TO2064	1974
TO2065	1974
TO2066	1974
TO2067	1974
TO2068	1974
TO2069	1974
TO2070	1974
TO2071	1974
TO2072	1974
TO2073	1974
TO2074	1974
TO2075	1974
TO2076	1974
TO2077	1974
TO2078	1974
TO2079	1974
TO2080	1974
TO2081	1974
TO2082	1974
TO2083	1974
TO2084	1974
TO2085	1974
TO2086	1974
TO2087	1974
TO2088	1974
TO2089	1974
TO2090	1974
TO2091	1974
TO2092	1974
TO2093	1974
TO2094	1974
TO2095	1974
TO2096	1974
TO2097	1974
TO2098	1974
TO2099	1974
TO2100	1974

Historical Map - Segment A13



Order Details

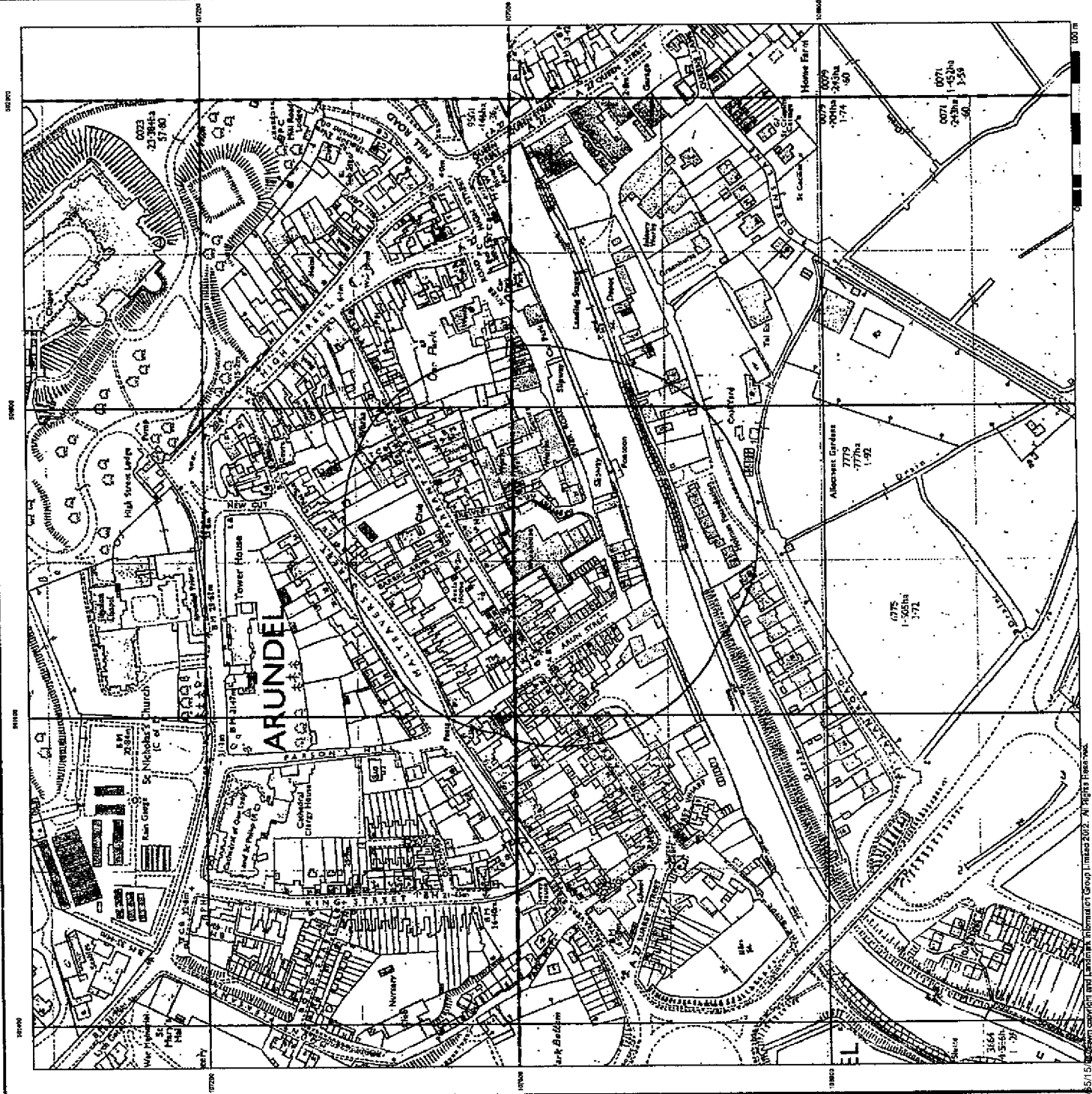
Order Number: 39504393_1_1
Customer Ref: LS 0550
National Grid Reference: 501710, 106850
Site: A
Site Area (Ha): 0.22
Search Buffer (m): 100

Site Details

Bevin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex,
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Web: www.envirocheck.co.uk



Supply of Unpublished Survey Information

Published 1976

Source map scale - 1:2,500

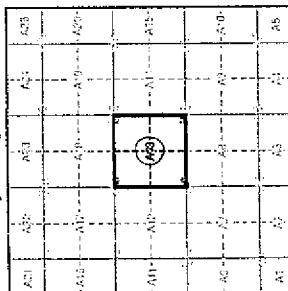
SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed the progress of individual areas on a map. These maps were unpublished, and they do not represent a single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

Map Name(s) and Date(s)



TQ3000
1970
1:2,500

Historical Map - Segment A13

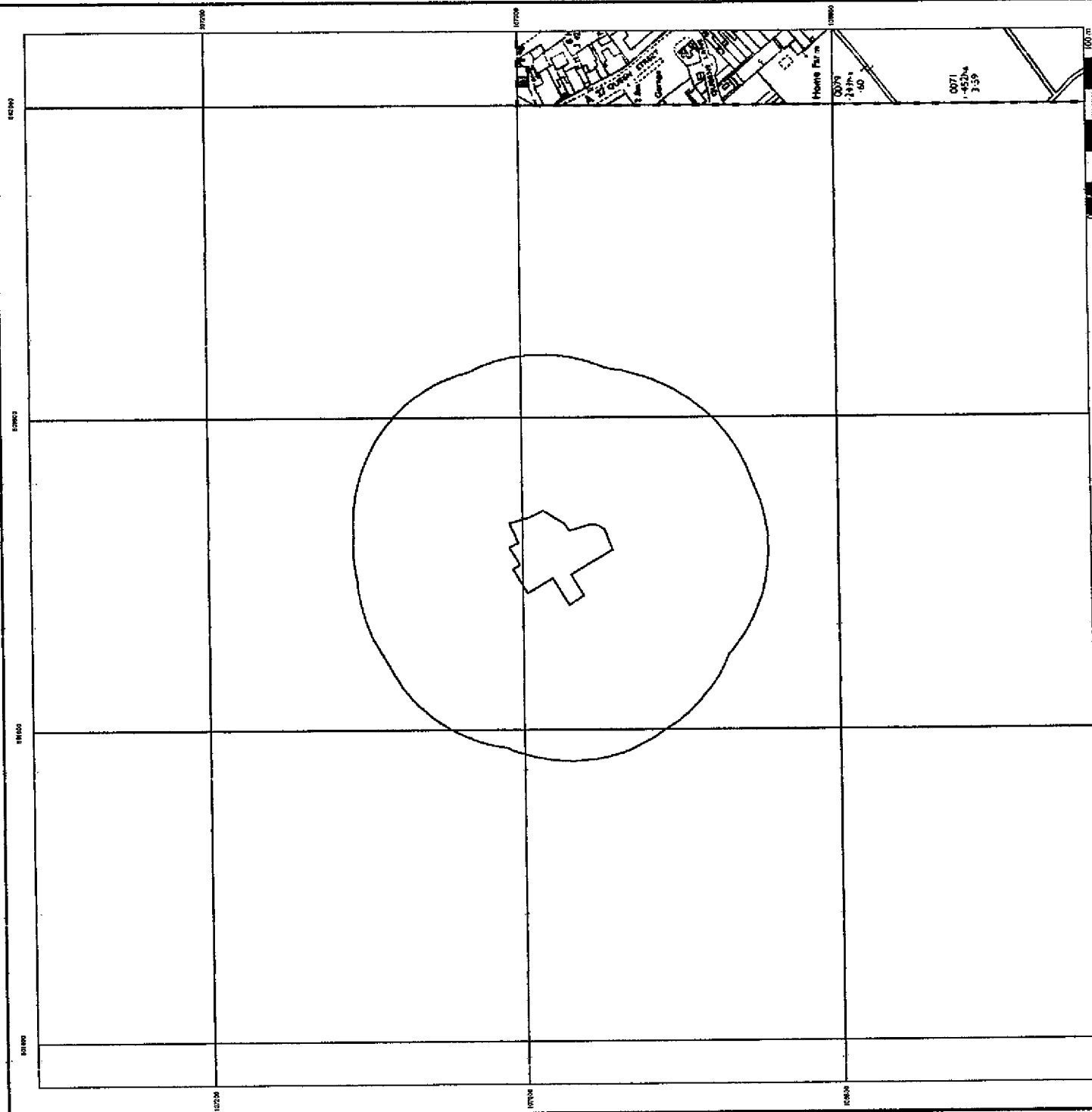


Order Details

Order Number: 39904393_1_1
Customer Ref: LS 0560
National Grid Reference: 501710, 106960
Site: A
Site Area (Ha): 0.22
Search Buffer (m): 100

Site Details

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BN18 8DH





Published 1977 - 1989

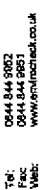
The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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

TC0107	1977	12,500	TC0206	1977	12,500
TC0207	1981	12,500	TC0106	1977	12,500

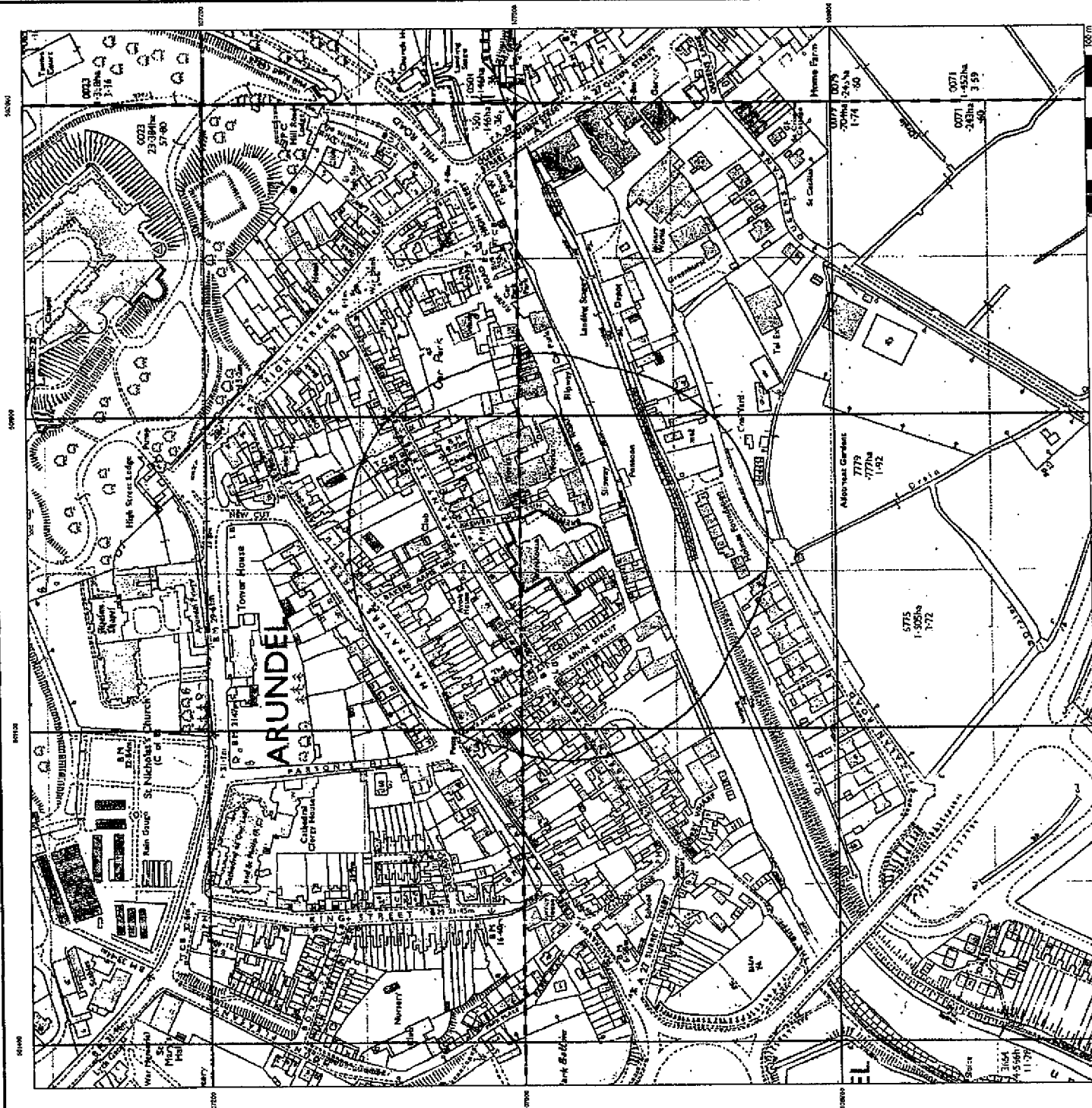
A21	A22	A23	A24	A25
A15	A17	A13	A19	A11
A16	A12	A18	A14	A10
A1	A2	A3	A4	A5

Order Number: 39904393_1_1
 Customer Ref: LS 0550
 National Grid Reference: 501710, 106980
 Slice: A
 Site Area (Ha): 0.22
 Search Buffer (m): 100

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BN18 9DH



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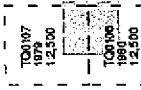
Ordnance Survey Plan

Published 1979 - 1980

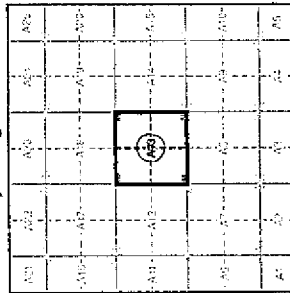
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1940's. In 1964 the 1:2,500 scale was adopted for mapping urban areas and by 1980 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published data given below is often some years later than the surveyed data. Before 1930, all OS maps were based on the Cassini Projection, with inappreciable surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

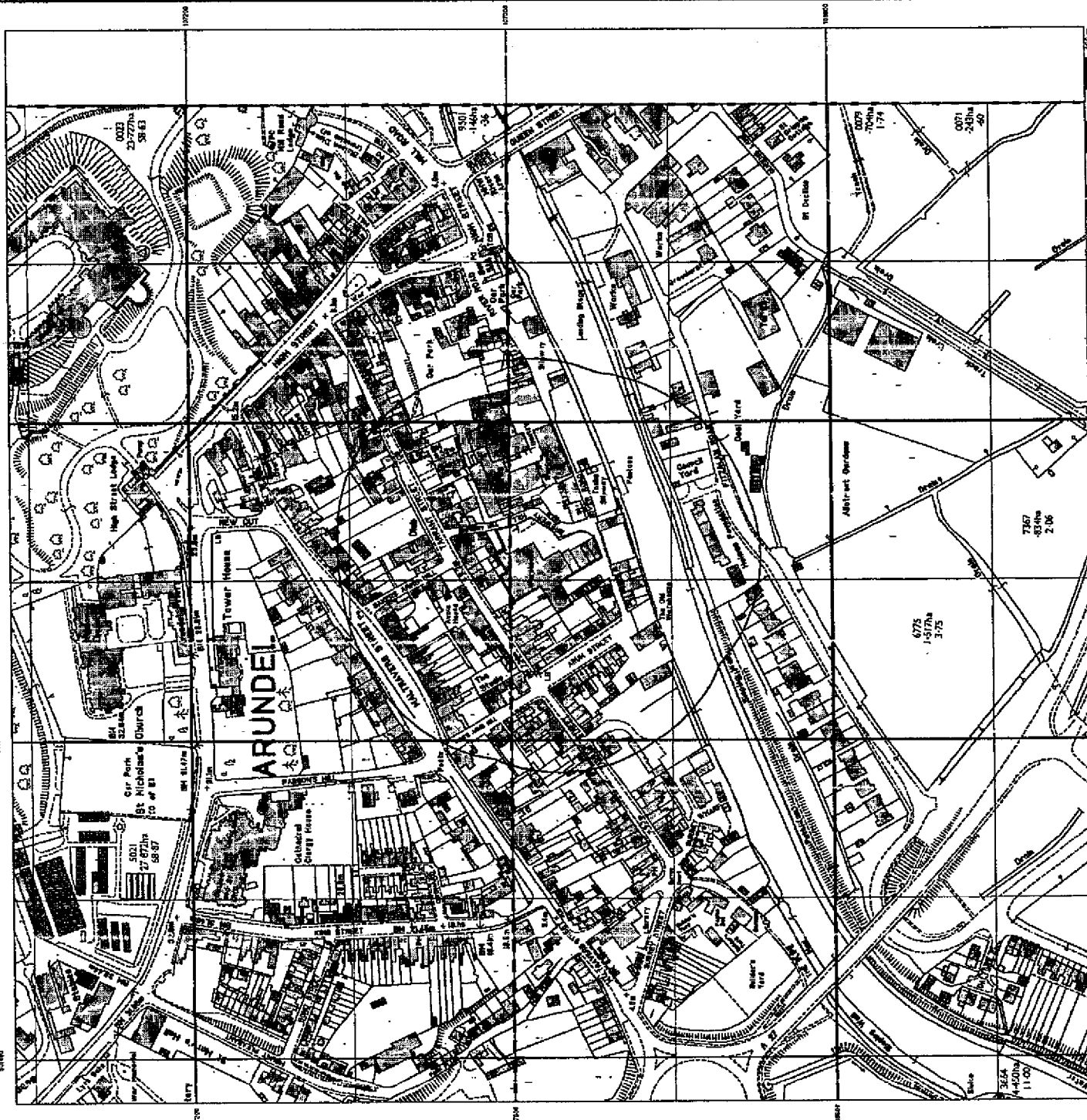


Order Details

Order Number: 38904393_1_1
Customer Ref: LS 0550
National Grid Reference: 501710, 106980
Slice: A
Site Area (Ha): 0.22
Search Buffer (m): 100

Site Details

Bevin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex, BN18 9DH





Published 1988 - 1989

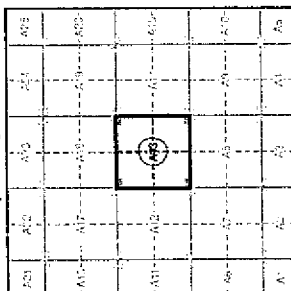
Source map scale - 1:2,500

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 A13



Order Details

Order Details
 Order Number: 39904393_1_1
 Customer Ref: LS 0550
 National Grid Reference: 501710, 106980
 Slips: A
 Site Area (Ha): 0.22
 Search Buffer (m): 100

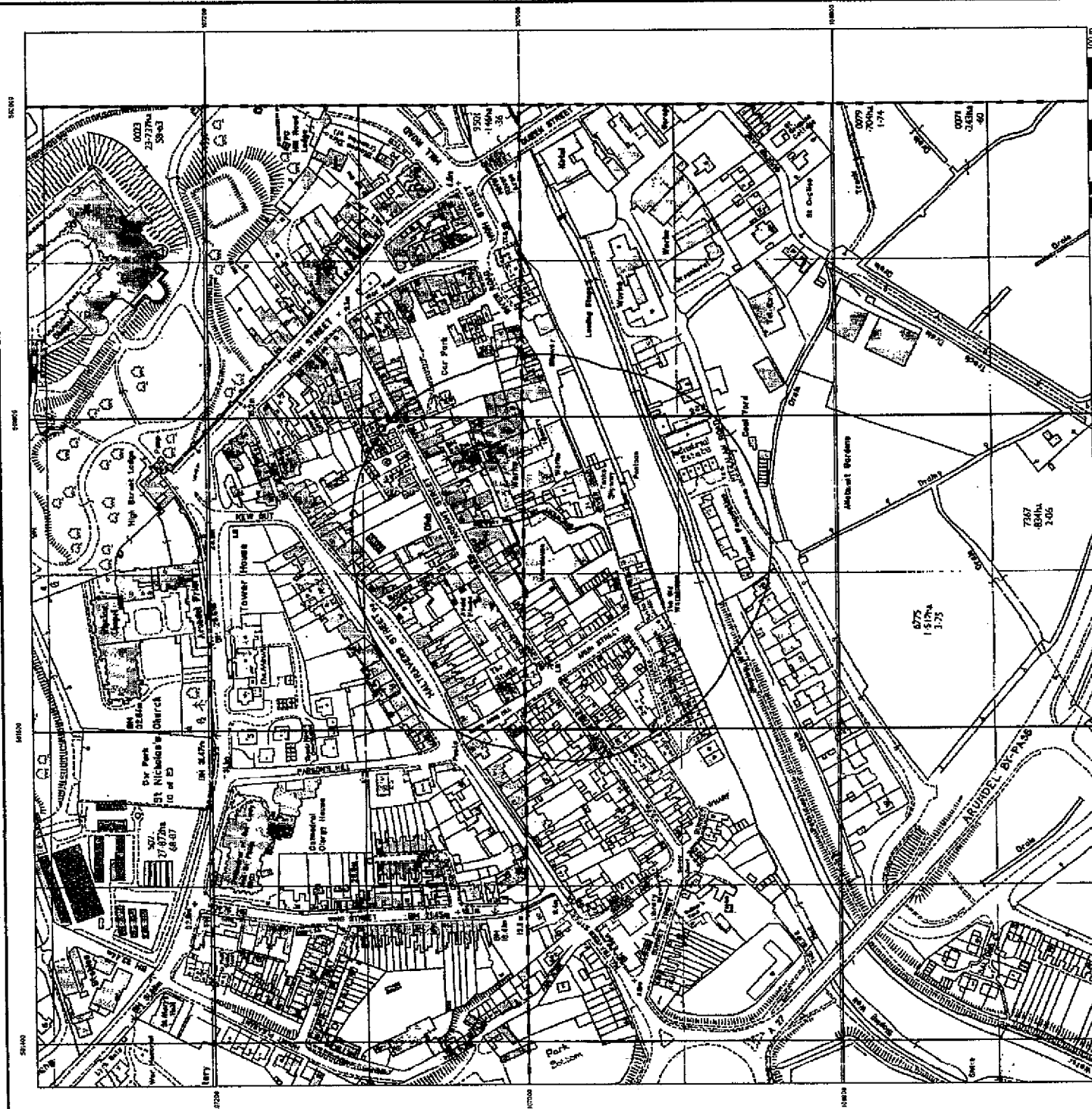
Site Details

Site Details
Bevin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex,
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Web: www.enr.techweek.co.uk

A 1 Amendment Information Admin Service v67.0 27-Jul-2012 Page 12 of 14

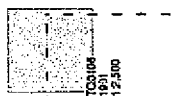


**Additional SIMs
Published 1991**

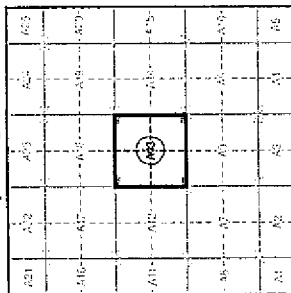
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

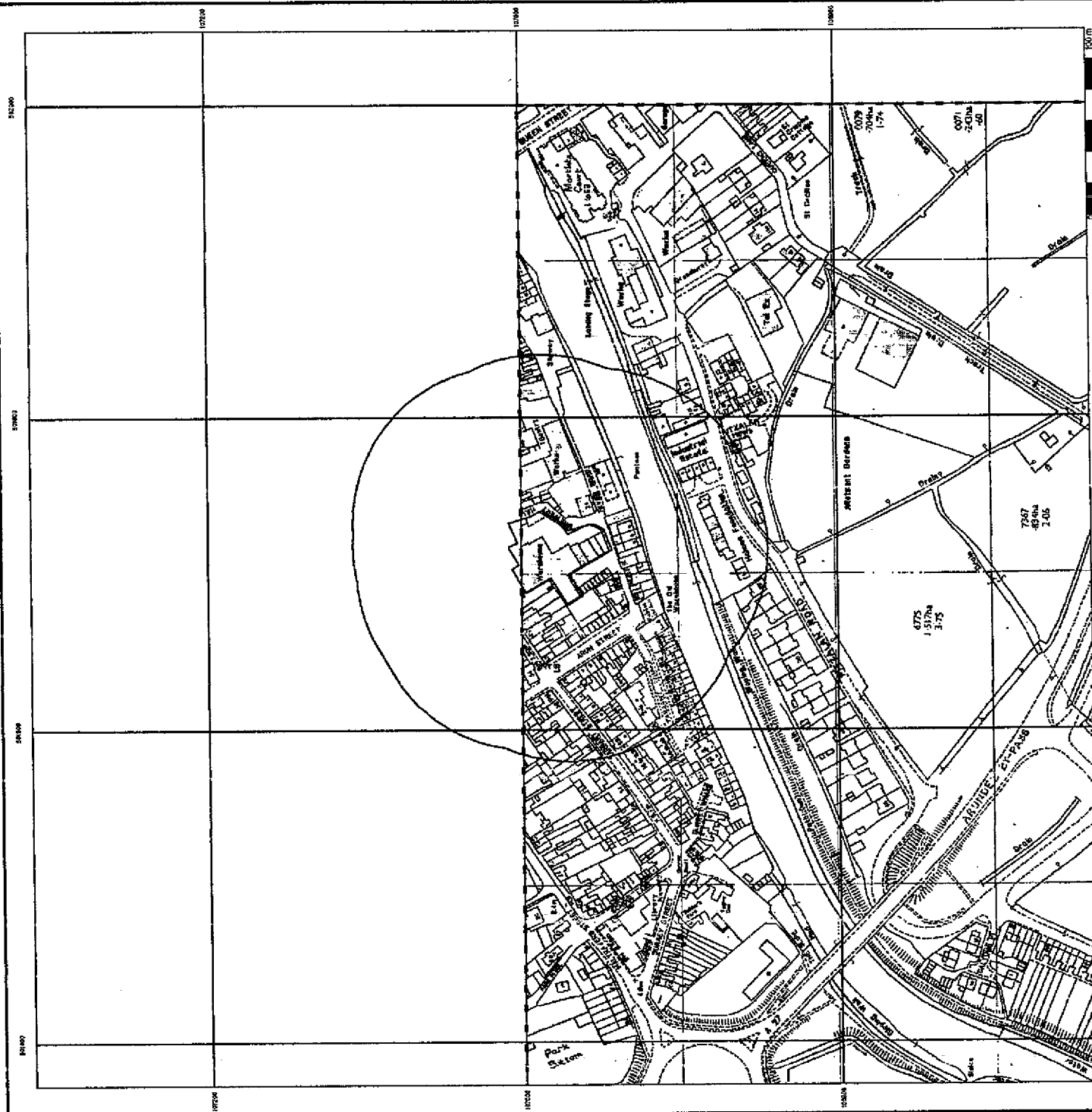


Order Details

Order Number: 39904393_1_1
 Customer Ref: LS 0550
 National Grid Reference: 501710, 106960
 Site: A
 Site Area (Ha): 0.22
 Search Buffer (m): 100

Site Details

Baylin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex,
 BN18 9DH





**Large-Scale National Grid Data
Published 1994**

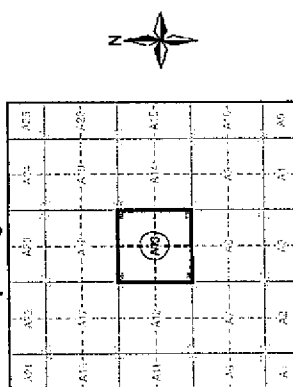
Source map scale - 1:2,500

The Large Scale National Grid Data supervised SIM maps (Ordnance Survey's Survey of Information on Microfilm) in 1992, and continued to be produced until 1999. These maps were the forerunners 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)

TQ0107	TC0207
1994	1994
12,500	12,500
TQ0108	TQ0208
1994	1994
12,500	12,500

Historical Map - Segment A13



Order Details

Order Details:

Order Number: 39904393_1_1
Customer Ref: LS 0550
National Grid Reference: 501710, 106980

Slice: A
Site Area (Ha): 0.22
Search Buffer (m): 100

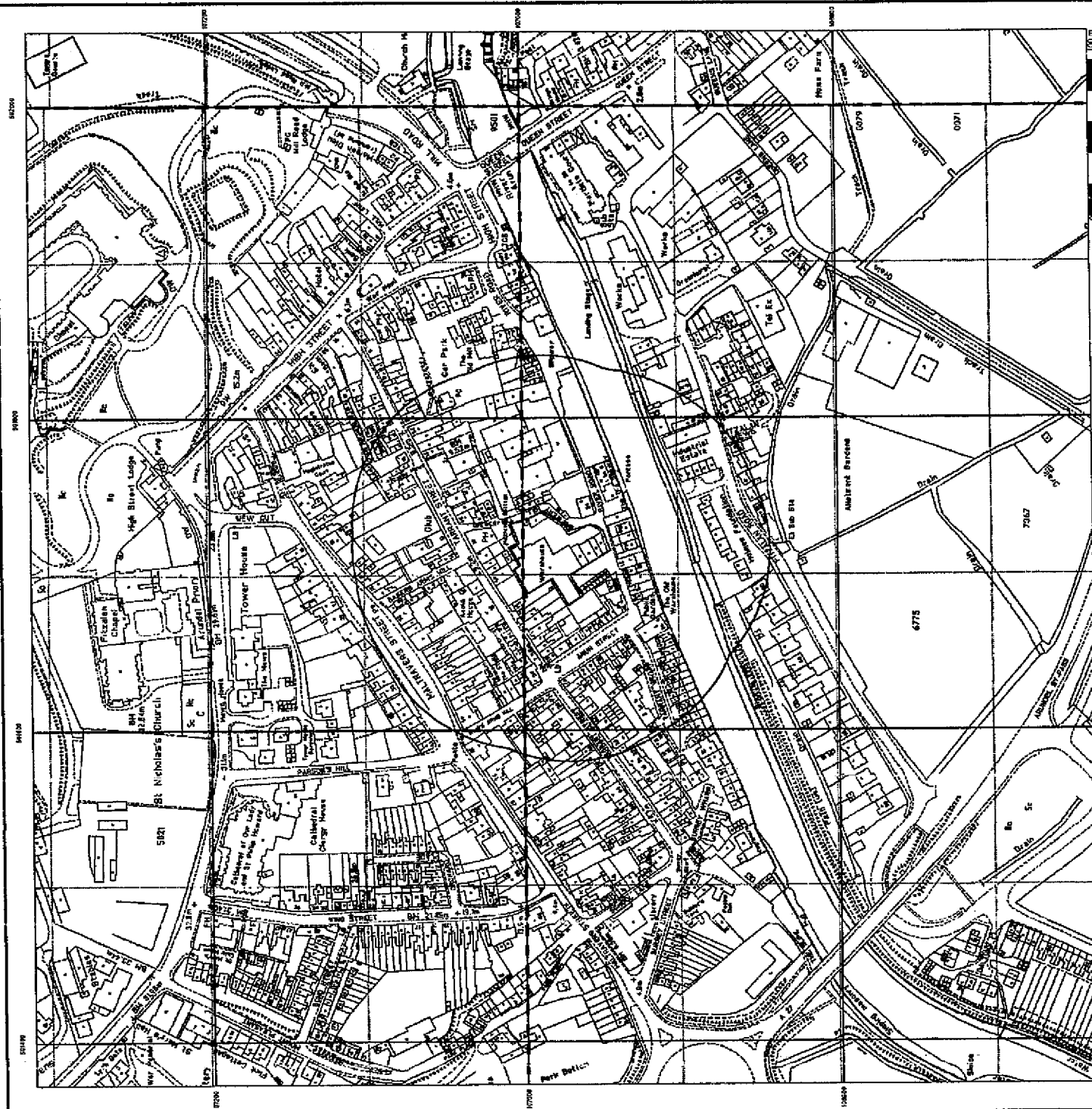
Site Details

Site Details
Bevin Bevin & Co Ltd, River Road, ARUNDEL, West Sussex,
BN18 9DH



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Fax: 0844 844 9051
Web: www.rnvi.roctadk.co.uk

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APPENDIX B

Groundwater Vulnerability

General

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

Agency and Hydrological

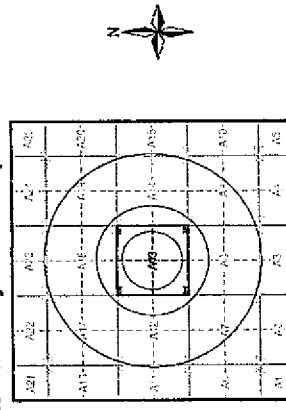
Geological Classes

Major Aquifer (Highly Permeable)
 Minor Aquifer (Varily Permeable)
 Non-Aquifer (Negligibly Permeable)
 Water or Sea
 Drift Deposit

Soil Classes

High (H) 1, 2, 3, U
 Intermediate (I) 1, 2
 Low
 High (H) 1, 2, 3, U
 Intermediate (I) 1, 2
 Low

Site Sensitivity Context Map - Slice A

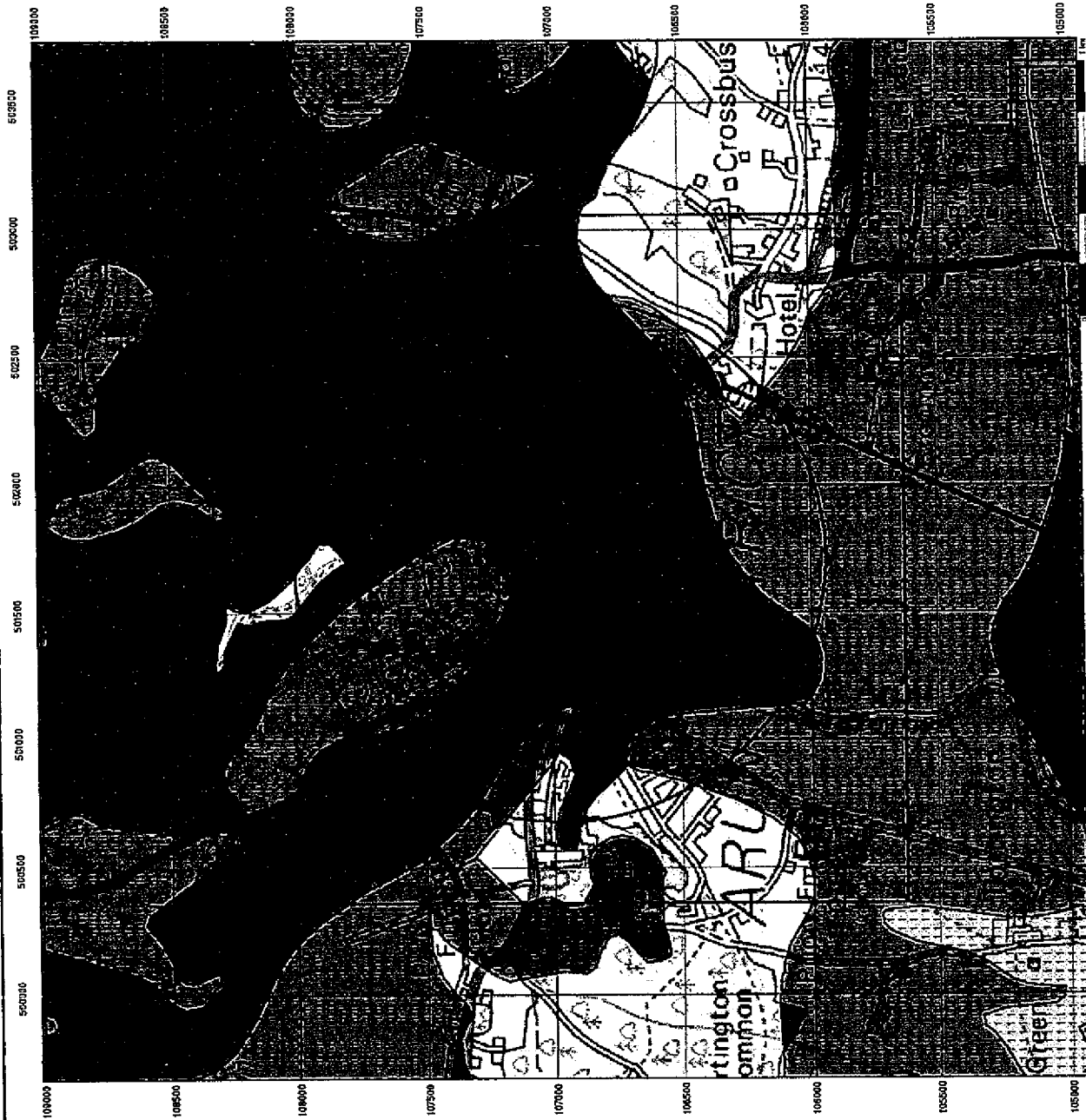


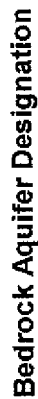
Order Details

Order Number: 39004506_1.1
 Customer Ref: LS 0650
 National Grid Reference: 501110; 106580
 Slice: 0.22
 Search Buffer (m): 1000

Site Details

Bavin Bavin & Co Ltd, River Road, ARUNDEL, West Sussex, BN18 9DH





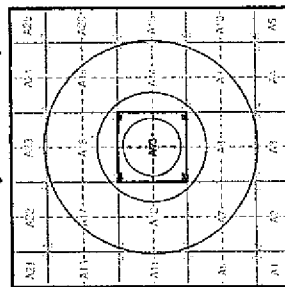
General

- | Specified Slope | Specified Surface | Bearing Reference Point |
|-----------------|-------------------|-------------------------|
| | | |
| | | |

Agency and Hydrological

Geological Class

- | Principal Aquifer | Secondary A Aquifer | Secondary B Aquifer | Secondary Undifferentiated | Unproductive Strata | Unknown |
|---|---|---|---|---|---|
|  |  |  |  |  |  |



Order Details

Order Details

Order Number:	39904508_1.1
Customer Ref:	LS 0560
National Grid Reference:	501710, 106980
Slices:	A
Site Area (Ha):	0.22
Search Buffer (m):	1000

Site Details

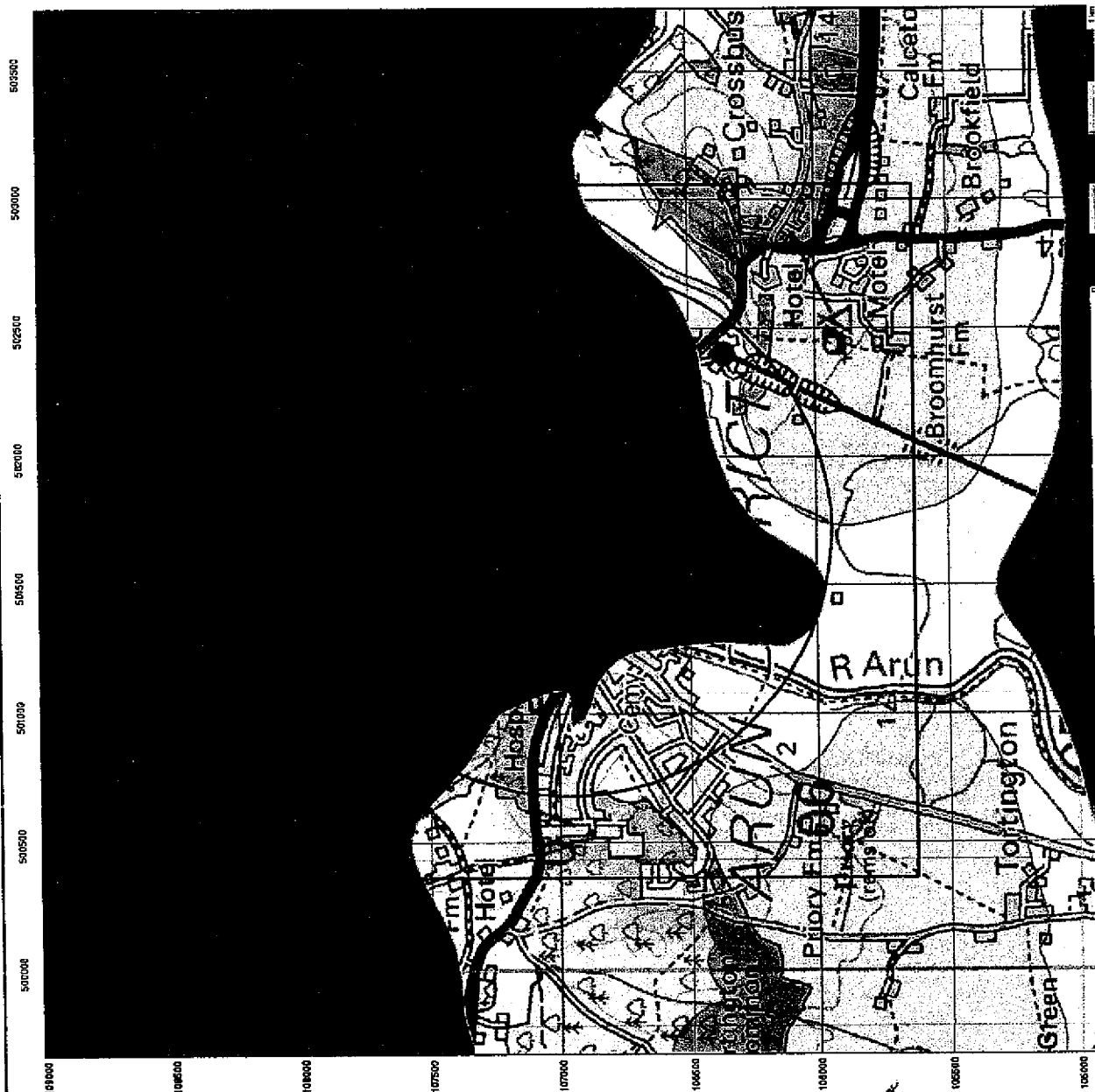
Site Details
Bevin Bayn & Co Ltd, River Road, ARUNDEL, West Sussex, BN18 9DH



Tel: 0844 844 8852
Fax: 0844 844 8961
E-Mail: www.enr@rochemb.com

Alt and Inari: Information Group Service v13.0 27-Jun-2012

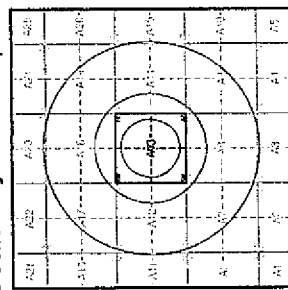
Page 2 of 5



Superficial Aquifer Designation

- General**
- Specified Site
 - Specified Eutrophy
 - Bearing Reference Point
 - Site ID
 - Map ID
- Agency and Hydrological**
- Principal Aquifer
 - Secondary A Aquifer
 - Secondary B Aquifer
 - Secondary Undifferentiated
 - Unproductive Strata
 - Unknown

Site Sensitivity Context Map - Slice A

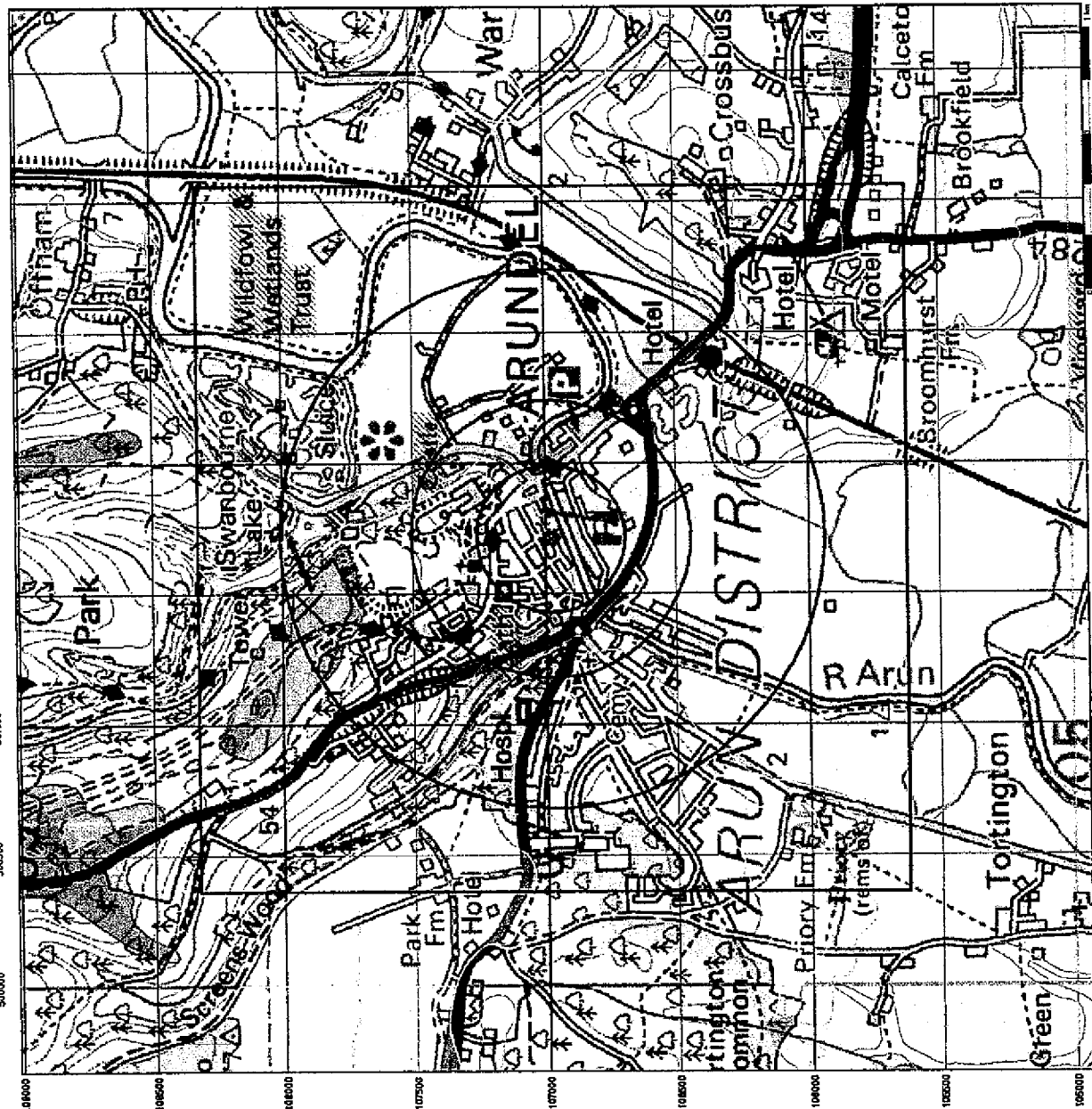


Order Details

Order Number: 39904508_1.1
 Customer Ref: LS 0550
 National Grid Reference: 501710, 106860
 Slice: A
 Site Area (ha): 0.22
 Search Buffer (m): 1000

Site Details

Bevin Berlin & Co Ltd, River Road, ARUNDEL, West Sussex, BN16 9DH

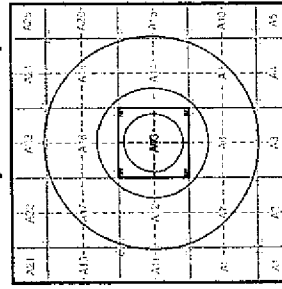




Source Protection Zones

- General**
- Specified Site
 - Specified Borehole
 - Bearing Reference Point
 - Site
 - Map ID
- Agency and Hydrological**
- Source Protection Zone I
 - Source Protection Zone II
 - Source Protection Zone III
 - Zone of Special Interest
 - Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



Order Details

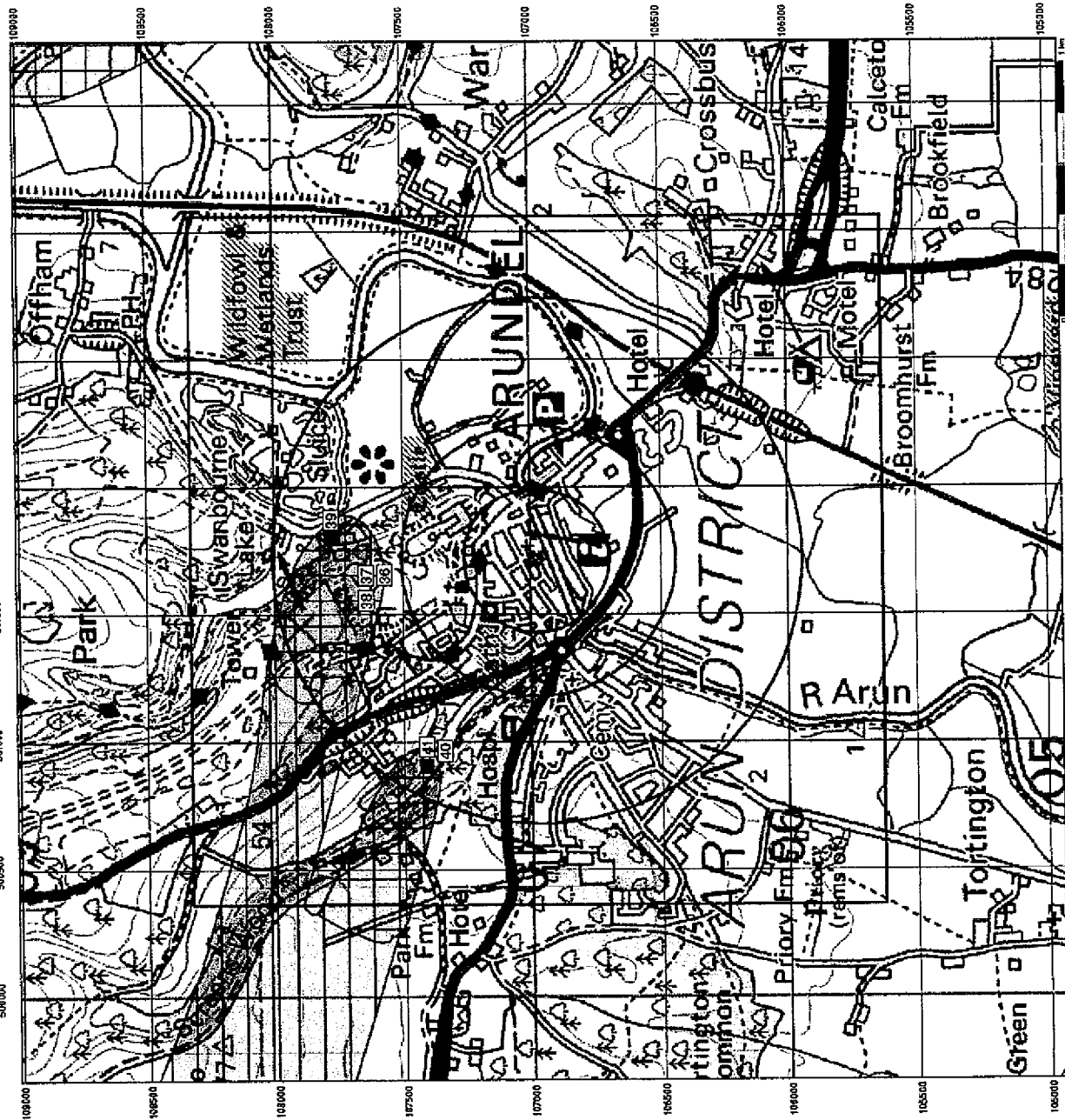
Order Number: 30004500_1.1
Customer Ref: US1050
National Grid Reference: 501710, 106680
Site: A
Site Area (ha): 0.22
Search Buffer (m): 1000

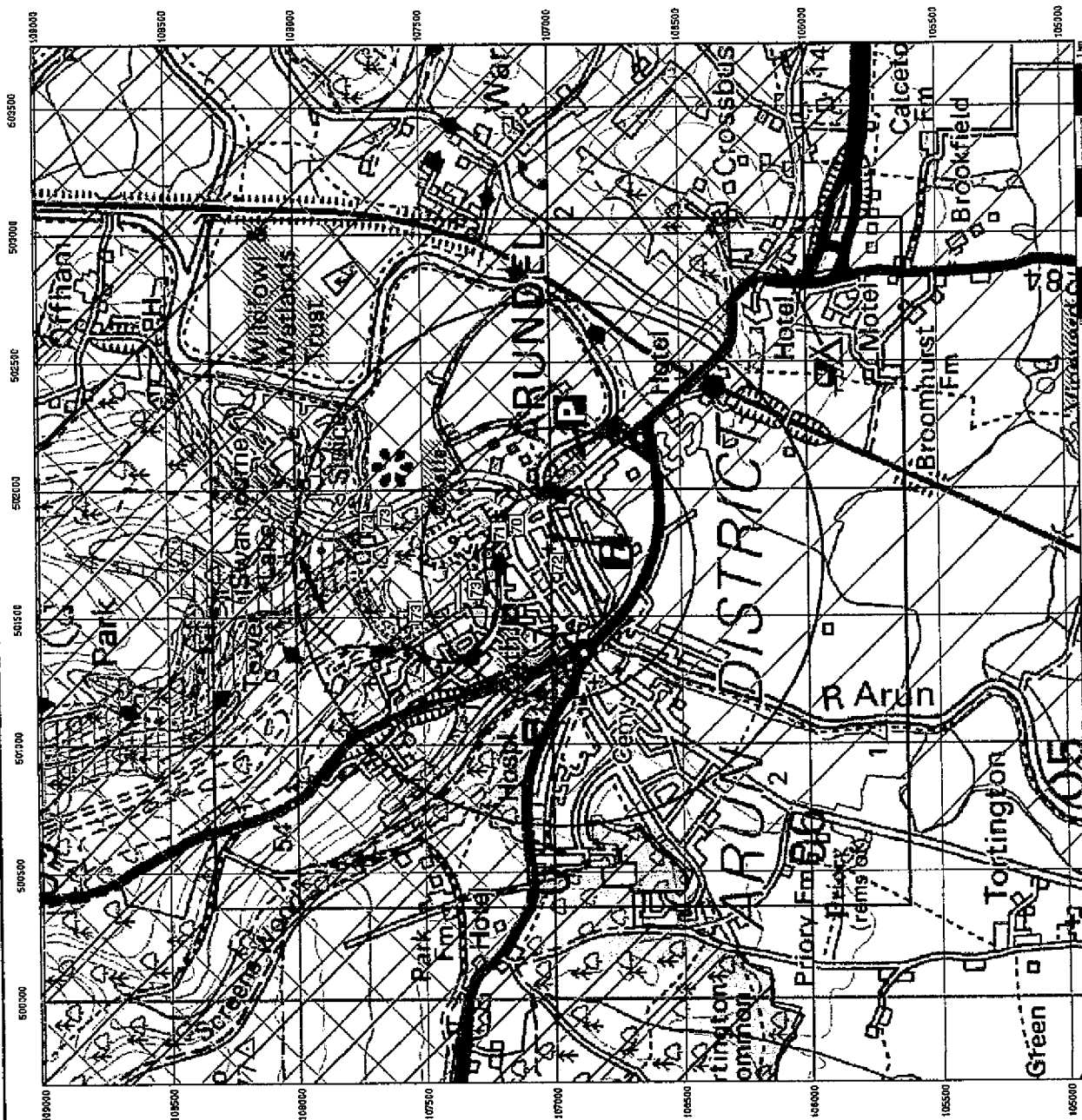
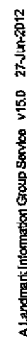
Site Details

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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number: 39904508_1_1
Customer Reference: LS 0550
National Grid Reference: 501710, 106980
A
Slice:
Site Area (Ha): 0.22
Search Buffer (m): 1000

Site Details:

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River Road
ARUNDEL
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BN18 9DH

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Prepared For:

T Hollister (Chertsey) Ltd

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Hazardous Substances	21
Geological	22
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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 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.

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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						
Contaminated Land Register Entries and Notices						
Discharge Consents	pg 1	6	5	17		
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	pg 8			1		
Local Authority Pollution Prevention and Control Enforcements						
Nearest Surface Water Feature	pg 8	Yes				
Pollution Incidents to Controlled Waters	pg 8	3	5	5		
Prosecutions Relating to Authorised Processes						
Prosecutions Relating to Controlled Waters						
Registered Radioactive Substances						
River Quality	pg 10	1				
River Quality Biology Sampling Points						
River Quality Chemistry Sampling Points						
Substantiated Pollution Incident Register						
Water Abstractions	pg 10					6 (*6)
Water Industry Act Referrals						
Groundwater Vulnerability	pg 13	Yes	n/a	n/a	n/a	
Bedrock Aquifer Designations	pg 13	Yes	n/a	n/a	n/a	
Superficial Aquifer Designations	pg 13	Yes	n/a	n/a	n/a	
Source Protection Zones	pg 13					6
Extreme Flooding from Rivers or Sea without Defences	pg 14	Yes	n/a	n/a	n/a	
Flooding from Rivers or Sea without Defences	pg 17	Yes	n/a	n/a	n/a	
Areas Benefiting from Flood Defences						n/a
Flood Water Storage Areas						n/a
Flood Defences	pg 19		Yes	n/a	n/a	n/a
Waste						
BGS Recorded Landfill Sites						
Historical Landfill Sites	pg 20		1		2	
Integrated Pollution Control Registered Waste Sites						
Licensed Waste Management Facilities (Landfill Boundaries)						
Licensed Waste Management Facilities (Locations)						
Local Authority Recorded Landfill Sites						
Registered Landfill Sites						
Registered Waste Transfer Sites						
Registered Waste Treatment or Disposal Sites						

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites	pg 21				1
Notification of Installations Handling Hazardous Substances (NIHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 22	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 22	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 32				1
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 32	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 32	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 32	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 32	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 32	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards				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 34		16	6	8
Fuel Station Entries	pg 36			1	

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas	pg 37		1		
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks	pg 37		1		
Nitrates Sensitive Areas					
Nitrates Vulnerable Zones	pg 37	1			
Ramsar Sites					
Sites of Special Scientific Interest	pg 37			1	
Special Areas of Conservation					
Special Protection Areas					