



Phase 1 Preliminary Risk Assessment Proposed Retirement Living Scheme at Bamford Mews, Rochdale

Prepared for McCarthy Stone

August 2024

10/2529/001 Rev. 00

Robert Philip
Associate
robert.philip@clancy.co.uk
enquiries@clancy.co.uk
www.clancy.co.uk

Clancy Consulting Limited
4th Floor
Windmill Green
24 Mount Street
Manchester
M2 3NX

Document Control Sheet

Issued by	Clancy Consulting Limited 4 th Floor Windmill Green 24 Mount Street Manchester M2 3NX	Tel: 0161 613 6000 Email: enquiries@clancy.co.uk Website: www.clancy.co.uk
Client	McCarthy Stone Unit 3 Edward Court Altrincham WA14 5GL	
Document	Phase 1 Preliminary Risk Assessment	
Project Name	Proposed Retirement Living Scheme at Bamford Mews, Rochdale	
Reference	10/2529/001 Rev. 00	
Date	August 2024	

"This document has been prepared for the titled project, or named part thereof, and should not be relied upon or used for any other project, or part, without an independent check being made on it. Clancy Consulting shall not be liable for the consequences of using this document other than for the purpose for which it was commissioned, and any user and any other person using or relying on this document for such other purpose, agrees and will be such use or reliance be taken to confirm this agreement to indemnify Clancy Consulting for all loss or damage resulting therefrom".

Document Origin

Revision	Date	Revision Description		Name
00	August 2024	Original	Prepared	Robert Philip Associate robert.philip@clancy.co.uk
			Checked	Nick Riding Divisional Director nick.riding@clancy.co.uk
			Approved	Nick Riding Divisional Director nick.riding@clancy.co.uk

Executive Summary

Client	McCarthy Stone
Location	Bamford Mews, Bamford, Rochdale OL11 5NX.
Description	The site is located approximately 3.75km to the west of Rochdale train station at Ordnance Survey (OS) Coordinates 386170, 413190. The site is currently occupied by undeveloped roughly vegetated open land to the north and west of an existing residential development. The site is bordered to the north and west by grassed sports pitches with Bamford Mews present to the south and east. A further sports pitch is also present beyond Bamford Mews to the south. Residential properties, schools and shops are present from approximately 100m to the east of the site.
Development	A three-storey apartment building, with an associated parking area and soft landscaping is proposed in the western section of the site. Up to 12 detached bungalows are proposed in the northern section of the site.
Site History	Mapping from 1851 until 1968 indicated that the site was occupied by open undeveloped fields. From 1975 until the present day the site comprised green open space associated with developments to the south and east. Mapping from 1851 until 1938 indicate that Pitfield Mills (cotton) was present beyond the eastern boundary of the site. Two reservoirs and a circular tank structure were associated with the mill. Mapping from 1851 indicated that a gasometer was also present. A 'pit hole' was present immediately to the east of the mill beyond Nordon Road. Land use to the north, south and west was predominantly rural in nature. A feature labelled 'issues, sinks' was present immediately to the south and east of the site on mapping from 1959 until 1968. Pitfield Mills and the pit hole to the east were no longer indicated to be present at this time.
Geology	Based on British Geological Survey mapping, the geology beneath the site is indicated to comprise Devensian Till overlying the Pennine Lower Coal Measures. A fault line in the Pennine Lower Coal Measures is indicated to cross the northeast corner of the site.
Radon	Radon gas protection measures are not required in the construction of new dwellings or extensions.
Mining & Ground Stability	The site is located within a Coal Authority Coal Mining Reporting Area. A Development High Risk Area is present immediately to the east of the site but does not appear to encroach onto the proposed development. A Consultants Coal Mining Report obtained for the site indicates that no mine entries are indicated to be present within 20m of the site and no recorded worked coal seams are present beneath the site. The report does however state unrecorded coal mine workings may be present beneath the site at shallow depth. On the basis that the site lies outside a High Risk Development Area, a desk based Coal Mining Risk Assessment is not considered to be required for planning purposes. However, given the highlighted risk of potential unrecorded shallow workings beneath the site, an intrusive mining investigation is recommended to ensure that no voids are present beneath the development area at depths which could cause ground instability.

Flood Risk

According to the Flood Map for Planning, available on the gov.uk website, the site is located within Flood Zone 1, whereby there is less than a 0.1% (1 in 1,000) chance of flooding from rivers or the sea occurring each year. However, given that the proposed development area exceeds 1 ha, a Flood Risk Assessment will be required for planning purposes.

Environmental Setting

The site is underlain by an Undifferentiated Secondary Aquifer relating to the Devensian Till. The underlying Pennine Lower Coal Measures is classified as a Secondary A Aquifer. The site is not located within a groundwater source protection zone (SPZ) and the nearest recorded groundwater abstraction is located approximately 470m to the west of the site, used for agricultural purposes.

The Naden Brook is present from approximately 650m to the west of the site at its closest point.

UXO

Zetica Bomb Risk Mapping indicates the site to be in an area of low UXO risk. Therefore, no further assessment of the risk posed by UXO is required.

Further Works

Based on this Phase 1 study, the following further works are recommended:

- Prepare a Flood Risk Assessment report suitable for planning purposes.
- Undertake soil infiltration testing to assist with the development of a suitable drainage strategy.
- Carry out boreholes and / or trial pits to assess the shallow soil and groundwater conditions to allow both a contamination and geotechnical appraisal including a qualitative contamination risk assessment and recommendations for foundations.
- Drilling of rotary open hole boreholes to depths of at least 30m (final depth dependent on thickness and nature of drift strata) to investigate the presence of any voids associated with historic coal mining activities.
- Depending on the ground conditions encountered, there may also be a requirement for installing some boreholes with gas monitoring wells to undertake a gas risk assessment.

Contents

1.0	Introduction	1
1.1	Background	1
1.2	Objectives	1
1.3	Limitations of the Study	1
2.0	Desk Study	2
2.1	General	2
2.2	Site Setting and Description	2
2.3	Site History	2
2.4	UXO Risk Assessment	2
2.5	Geology	3
2.6	Mining and Ground Stability	3
2.7	Hydrogeology	3
2.8	Hydrology	4
2.9	Flood Risk	4
2.10	Radon Risk Potential	4
2.11	Landfill Sites	4
2.12	Industrial Land Uses	4
2.13	Sensitive Land Uses	4
2.14	Potential Geotechnical Constraints	4
3.0	Preliminary Conceptual Site Model	6
3.1	General	6
3.2	Guidance	6
3.3	Potential Contaminant Sources	6
3.4	Potential Pathways	6
3.5	Potential Receptors	6
3.6	Preliminary Risk Assessment	7
4.0	Conclusions	9

Drawings

Site Location Plan
Proposed Development Plan

Appendices

Appendix I	Drawings
Appendix II	Historical Maps
Appendix III	Zetica Bomb Risk Mapping
Appendix IV	Geological Maps
Appendix V	Consultants Coal Mining Report
Appendix VI	EA Site Sensitivity & Flood Risk Maps
Appendix VII	Environmental Datasheets

1.0 Introduction

1.1 Background

Clancy Consulting Limited has been instructed by McCarthy Stone to carry out a Phase 1 Preliminary Risk Assessment at Bamford Mews, Bamford, Rochdale OL11 5NX.

The site is proposed to be developed with a three-storey apartment building, associated parking area and soft landscaping in the west of the site. A series of 12 detached bungalows are proposed in the northern section of the site.

A site location plan and proposed development plan are presented in Appendix I.

1.2 Objectives

The objectives of this investigation are summarised below:

- Provide a review of the site's land use history by reference to ordnance survey maps of the area.
- Assess the environmental setting, geology, hydrology, hydrogeology, mining and subsidence history of the site and surrounding area.
- Consider the potential risk from unexploded ordnance (UXO).
- Consider the potential risk to end users of the site from hazardous ground gas.
- Develop a preliminary risk assessment and a detailed 'conceptual site model' with regard to potential contamination sources, pathways and receptors.
- Provide recommendations regarding the requirement for further investigations or remedial works, if required, to satisfy the Local Planning Authority and to inform detailed civil and structural design.

1.3 Limitations of the Study

Clancy Consulting Limited cannot be held responsible for any omissions, misrepresentation, errors or inaccuracies with the supplied third-party report information. The report is written in the context of an agreed scope of work and budget and should not be used in a different context. New information or improved practices and changes in legislation may require a reinterpretation of the report in whole or in part.

Clancy Consulting Limited reserves the right to amend either conclusions or recommendations in light of any further information that may become available. The report is provided for the sole use of McCarthy Stone for the objectives discussed previously only and is confidential to them.

The report may not be relied upon by any other party without prior written consent of Clancy Consulting Limited. Those using this information in subsequent assessments or evaluations do so at their own risk.

2.0 Desk Study

2.1 General

Background information was sought from the following sources:

- Ordnance Survey historical maps (selected copies included in Appendix II).
- Zetica Bomb Risk Mapping (Appendix III).
- British Geological Survey (BGS) sheets (Appendix IV).
- Consultants Coal Mining Report (Appendix V)
- Environment Agency site sensitivity & flood risk maps (Appendix VI).
- Environmental datasheets (Appendix VII).

2.2 Site Setting and Description

The site is located approximately 3.75km to the west of Rochdale train station at Ordnance Survey (OS) Coordinates 386170, 413190. The site is currently occupied by undeveloped, green open space. To the south and east is a small residential development known as Bamford Mews. To the north and west are soft landscaped recreational sports pitches. A further sports pitch is also present beyond Bamford Mews to the south. In the wider area are residential properties, schools and shops associated with Bamford approximately 100m to the east of the site.

2.3 Site History

To investigate the development history and previous land uses at the site and surrounding area, historical OS maps were examined. Copies of the maps are presented in Appendix II.

Table 1 below is not intended to provide a comprehensive review of all the changes which have occurred at the site and instead provides a summary of the most salient points relating to the development history of the site. The most significant historical land uses are highlighted in bold text for ease of reference.

Table 1: Site History

Date(s)	Site	Surrounding Land
1851 to 1938	The site was occupied by open rural fields.	Pitfield Mills (cotton) was present beyond the eastern boundary of the site. Two reservoirs and a circular tank structure were associated with the mill and mapping from 1851 indicated that a gasometer was present. A 'pit hole' was present immediately to the east of the mill beyond Nordon Road. Land use to the north, south and west was predominantly rural in nature. Residential houses were present beyond Pitfields Mill and Nordon Road to the east.
1957 to 1968	No significant changes.	A feature labelled 'issues, sinks' was present immediately to the south and east of the site, considered likely to be representative of a depression in the ground. Pitfield Mills and the pit hole to the east were no longer indicated to be present at this time.
1975 to 1993	The site comprised undeveloped green open space associated with developments to the south and east but remains essentially Greenfield.	Knowle View School was present to the south and east of the site.
1999 to present	No significant changes.	Knowle View School had been redeveloped as housing.

2.4 UXO Risk Assessment

The site is not located in an area at risk from unexploded ordnance and no further assessment is considered to be required. Zetica bomb risk mapping for the site is included in Appendix III.

2.5 Geology

Based on British Geological Survey mapping, the geology beneath the site is indicated to comprise Devensian Till overlying the Pennine Lower Coal Measures. A fault line in the Pennine Lower Coal Measures is indicated to cross the northeast corner of the site.

There are no historical BGS borehole records in close proximity to the site and as such, the ground conditions cannot be confirmed at this stage.

Copies of the geological plans are provided in Appendix IV.

2.6 Mining and Ground Stability

The site is located within a Coal Authority Coal Mining Reporting Area. A Development High Risk Area is present immediately to the southeast of the site. However, this does not appear to encroach onto the proposed development site. A Consultants Coal Mining Report obtained for the site indicates that no mine entries are indicated to be present within 200m of the site and no recorded worked coal seams are present beneath the site. The report states that no issues relating to subsidence of mine gases associated with the site have been reported in the past. On this basis, no further assessment of potential risks associated with historical coal mining is considered to be required. However, the report does not discount the possibility of unrecorded coal mine workings being present beneath the site.

On the basis that the site lies outside a High Risk Development Area, a desk based Coal Mining Risk Assessment is not considered to be required for planning purposes. However, given the highlighted risk of potential unrecorded shallow workings beneath the site, an intrusive mining investigation is recommended to ensure that no voids are present beneath the development area at depths at which they could adversely affect proposed buildings.

The Consultants Coal Mining Report is provided as Appendix V.

The environmental database report indicates that the site represents a low risk regarding ground stability issues relating to collapsible ground, landslides, shrinking/swelling clay, running sand, dissolution features and compressible ground.

A former sandstone quarry is indicated to be present approximately 365m to the east of the site. There are no other BGS recorded mineral sites indicated to be present within 500m of the site.

2.7 Hydrogeology

The site is underlain by an Undifferentiated Secondary Aquifer relating to the Devensian Till. These are layers of variable permeability where it has not been possible to designate the stratum as either a Secondary A or Secondary B Aquifer.

The underlying Pennine Lower Coal Measures is classified as a Secondary A Aquifer. These are layers that can provide modest amounts of water, but the nature of the rock or the aquifer's structure limits their use. They support water supplies at a local rather than strategic scale and remain important for rivers, wetlands and lakes.

The site is not located within a groundwater source protection zone (SPZ) and the nearest recorded groundwater abstraction is located approximately 470m to the west of the site, used for agricultural purposes.

Chemical groundwater quality beneath the site has been classified as 'poor' under the EA Local River Basin Management Plan for the area.

2.8 Hydrology

The Naden Brook is present from approximately 650m to the west of the site at its closest point. The chemical quality of this surface water feature has been classified as 'fail' under the EA Local River Basin Management Plan for the area.

There are no records of licensed surface water abstractions within 1km of the site.

There are no recorded of active discharge consents within 500m of the site.

There are no records of pollution incidents to controlled waters within 500m of the site.

2.9 Flood Risk

According to the Flood Map for Planning, available on the gov.uk website, the site is located within Flood Zone 1, whereby there is less than a 0.1% (1 in 1,000) chance of flooding from rivers or the sea occurring each year. The proposed development does however exceed 1 ha, and a Flood Risk Assessment will be required for planning purposes.

Copies of the site sensitivity and flood risk maps are included in Appendix VI.

2.10 Radon Risk Potential

The radon guidance on protective measures for new dwellings indicates that the site is in a 'low' probability radon area where less than 1% of homes are estimated to be at or above the Action Level.

Radon gas protection measures are therefore not necessary in the construction of new dwellings or extensions.

2.11 Landfill Sites

There is a record of one historical landfill site within 500m of the site. This relates to Clay Lane Water Treatment Works, located approximately 395m to the northwest of the site. Given its distance, this is not considered to represent a potentially significant risk to the site.

2.12 Industrial Land Uses

There is record of one Local Authority Pollution Prevention and Control permit recorded within 500m of the site. The relates to a dry cleaner, located approximately 120m to the east of the site.

There are no records of Integrated Pollution Prevention and Control permits recorded within 500m of the site.

There are records of three active Contemporary Trade Directory Entries within 500m of the site. These relate to a dry cleaner, air conditioning equipment and radiographic equipment.

Full details of the waste management and industrial land uses are detailed in the environmental database presented in Appendix VII.

2.13 Sensitive Land Uses

Natural England data indicates that there are no ecologically sensitive sites indicated within 500m of the site that constitute environmental receptors as defined within Table 1 of the DEFRA Environmental Protection Act 1990: Part 2A - Contaminated Land Statutory Guidance (2012).

2.14 Potential Geotechnical Constraints

The table below summarises the potential geotechnical hazards associated with the development. The table provides an assessment of whether the site is likely to be affected by the hazard and the possible consequences and engineering considerations.

Table 2: Geotechnical Risk Register

Hazard Description	Is hazard likely to be present / affect the site?	Comments/possible engineering requirements where hazard present
Sudden lateral/vertical changes in ground conditions	L/M	The site is indicated to be underlain by Devensian Till overlying the Pennine Lower Coal Measures. Given the limited development history of the site, a significant thickness of Made Ground is considered unlikely to be present. Variation beneath the site is likely to be associated with the composition and strength characteristics of the upper layers of the Devensian Till.
Highly compressible/low bearing capacity soils, (including peat and soft clay)	L/M	The upper layers of the Devensian Till may have low strength characteristics. This would need to be confirmed via intrusive site investigation.
Ground dissolution features/natural cavities	L	Ground conditions indicated beneath the site are not susceptible to ground dissolution hazards.
Shrinking and swelling clays	M	The Devensian Till, indicated to be present beneath the site, is cohesive in nature and likely to be susceptible to volume change hazards.
Slope stability/Retaining wall issues	L	New slopes or retaining structures are not indicated to form part of the proposed development. However, any temporary or permanent slopes or retaining walls created as part of the development should be subject to appropriate geotechnical design based on site-specific site investigation information.
High groundwater table (including waterlogged ground)	L/M	Shallow ground water beneath the site is likely restricted to granular horizons of the Devensian Till. This would need to be confirmed via intrusive site investigation.
Filled and Made Ground (including embankments)	L	Given the limited development history of the site, a significant thickness of Made Ground is considered unlikely to be present.
Obstructions (including foundations, services, basements, tunnels and adjacent sub-structures)	L	The site has had a limited development history. It is considered likely that obstructions in the ground may be removed using standard construction plant.
Underground mining	M/H	The site is located within a Coal Authority Coal Mining Reporting Area and immediately adjacent to a Development High Risk Area. A Consultants Coal Mining Report obtained for the site indicate that unrecorded shallow mine workings may be present beneath the site. If present this would present a ground stability and subsidence risk and will require further assessment by intrusive investigation.
Concrete classification	L/M	Made Ground and natural soils beneath the site may contain elevated concentrations of sulphate potential harmful to buried structures.
Seismic Activity	L	The Eurocode 8 seismic hazard zoning maps for the UK (Musson and Sargeant, 2007) indicate that horizontal Peak Ground Acceleration (PGA) values with 10% probability of being exceeded in 50 years (475 year return period) are between 0.00g and 0.02g, which is considered very low.
NOTES: H – High Risk M – Medium Risk L – Low risk		

3.0 Preliminary Conceptual Site Model

3.1 General

The “suitable for use” approach is adopted for the assessment of contaminated land and remedial measures are only undertaken where unacceptable risk to human health or the environment can be proven when taking into account the proposed use of the site and environmental setting.

A risk assessment process should be carried out to determine potential hazards to human health and the environment and be based on the “source” “pathway” “receptor” principal. For a potential risk to be present there must be a viable pollutant linkage whereby a contamination source may impact upon a receptor. The absence of one or more of these key components (source, pathway or receptor) prohibits a viable pollution linkage being formed.

3.2 Guidance

In accordance with the ‘Land Contamination Risk Management’ (LCRM) guidance on the gov.uk website (updated October 2020) and BSI 10175 “Code of Practice for Investigation of Potentially Contaminated Land” (2011), a Preliminary Conceptual Site Model was developed to identify potential contamination sources, migration pathways and receptors within the study area.

3.3 Potential Contaminant Sources

The proposed development site does not appear to have had a significant development history and is essentially Greenfield. However, given the proximity of the adjacent historical Pitfield Mills, there is potential for contamination to be present from this nearby off-site source, though given the likely presence of low permeability clay strata, the risk is low.

Whilst areas of deep Made Ground or landfilling have not been identified there is a potential risk from mine gas reaching ground surface, particularly given the presence of a fault which crosses the site. The level of risk will be dependent on the presence of worked coal seams beneath the site and the presence and thickness of any clay strata overlying the bedrock.

3.4 Potential Pathways

The potential risks to future site users via the dermal contact and ingestion pathways in areas of the site comprising building cover and hardstanding will be mitigated. Furthermore, the pathway for the airborne migration of soil/dust from these areas towards off-site receptors would not be active. However, these pathways may remain active in areas of soft landscaping.

There is potential for the on or off-site migration of contaminants of concern within granular layers of the Made Ground and natural strata.

There is potential for ground gas and volatile contaminants of concern in soil or groundwater (if present) to impact future site users via the pathway of inhalation within enclosed areas of the proposed development.

There is potential for the downward migration of contaminants of concern towards the Devensian Till Undifferentiated Secondary Aquifer and underlying Pennine Lower Coal Measures Secondary A Aquifer, indicated to be present beneath the site.

3.5 Potential Receptors

Potential human health receptors include site users and neighboring occupiers of residential dwellings.

The underlying Devensian Till Undifferentiated Secondary Aquifer and Pennine Lower Coal Measures Secondary A Aquifer are considered to be potential environmental receptors of concern.

The Naden Brook is present from approximately 650m to the west of the site at its closest point. Given its distance, this watercourse is not considered to be at significant risk from potential contaminants of concern beneath the site.

3.6 Preliminary Risk Assessment

A preliminary risk assessment can be carried out using guidance outlined in Section 6.3 of CIRIA Document C552 "Contaminated Land Risk Assessment – A Guide to Good Practice" (2001). For a risk to be present there must be a viable pollutant linkage whereby a contamination source can impact on a receptor via a pathway. To carry out the risk assessment an estimate must be made of the potential severity of the risk and the likelihood of the risk occurring. The following Tables set out the criteria for this principal.

Table 3: Severity of Risk

Severity	Description
Severe	Acute risk to human health likely to result in 'significant harm' i.e. very high concentrations of contamination or ground gases. Catastrophic damage to building i.e. by explosion from high gassing sites or VOC concentrations. Major pollution of controlled waters i.e. surface watercourses and Principal aquifers, source protection zones. Short term damage to ecosystems.
Medium	Long term risk to human health likely to result in 'significant harm' i.e. elevated concentrations of contaminants or ground gases. Pollution of sensitive controlled watercourses i.e. Principal or Secondary Aquifers. Significant effects on sensitive ecosystems or species.
Mild	Pollution of non-sensitive waters i.e. smaller surface watercourses or unproductive strata. Significant damage to crops, buildings, structures or services i.e. by explosion from sites with medium gassing potential, elevated concentrations of contaminants.
Minor	Non-permanent human health effects i.e. requirement for protective equipment during site works to mitigate health effects. Damage to non-sensitive ecosystems or species. Minor damage to buildings, structures or services.

Table 4: Probability of Risk Occurring

Probability	Description
High Likelihood	Pollutant linkage may be present that appears very likely in the short term and risk is almost certain to occur in long term or evidence of harm to receptor exists.
Likely	Pollutant linkage may be present and is likely that the risk will occur over the long term.
Low Likelihood	Pollutant linkage may be present and there is a possibility of the risk occurring although no certainty that it will do so.
Unlikely	Pollutant linkage may be present but the circumstances under which harm would occur even in the long term are improbable.

Table 5: Comparison of Risk & Probability

Probability	Severity			
	Severe	Medium	Mild	Minor
High Likelihood	Very High	High	Moderate	Moderate/Low
Likely	High	Moderate	Moderate/Low	Low
Low Likelihood	Moderate	Moderate/Low	Low	Very Low
Unlikely	Moderate/Low	Low	Very Low	Very Low

A summary of potential pollutant linkages and perceived risks for this site are outlined in the Table below:

Table 6: Pollutant Linkages & Perceived Risk

Sources of Contamination	Pathways	Receptors	Severity	Probability	Risk	Justification	Further Action Required
On site: Potential Made Ground	Inhalation, ingestion and dermal contact of soil	Future site users	Medium Long term risk to human health	Unlikely	Low	The site does not appear to have had a significant development history and significant sources of contamination have not been identified on site.	The proposed development site does not appear to have had a significant development history. However, given the proximity of the adjacent historical Pitfield Mills, there is potential for contamination to be present from this nearby off-site source. A Phase 2 Site Investigation is recommended in order to confirm the contamination status of soils beneath the site and to provide geotechnical information to enable foundation design.
		Construction workers during development	Minor Non-permanent human health effects i.e. requirement for protective equipment during site works to mitigate health effects	Low Likelihood	Very Low	If construction workers come into contact with potential contaminated soils during the construction phase, such contact would be short term, limiting potential exposure. Construction workers are expected to undertake good working practices including regular hand washing and other hygiene techniques which would reduce the likelihood of long-term exposure to any contamination.	
	Acidic ground conditions affecting future site buildings	Building infrastructure	Minor Minor damage to buildings	Low Likelihood	Very Low	Made Ground and natural soils beneath the site may contain elevated concentrations of sulphates and low pH. Chemical testing for water soluble sulphate and pH should be undertaken to inform concrete classification.	
	Vertical and lateral migration	Neighbouring commercial/residential properties	Medium Long term risk to human health	Unlikely	Low	There is potential for contaminants of concern sourced from the site to migrate off-site in groundwater towards neighbouring residential properties. However, the site does not appear to have had a significant development history and significant sources of contamination have not been identified on site.	
		Controlled waters	Mild Pollution of non-sensitive controlled water receptors	Unlikely	Very Low	The site is underlain by an Undifferentiated Secondary Aquifer relating to the Devensian Till. The underlying Pennine Lower Coal Measures is classified as a Secondary A Aquifer. The site is not located within a groundwater SPZ and the nearest recorded groundwater abstraction is located approximately 470m to the west of the site, used for agricultural purposes. Furthermore, significant sources of contamination have not been identified on site. The Naden Brook is present from approximately 650m to the west of the site at its closest point. Given its distance, this watercourse is not considered to be at significant risk from potential contaminants of concern beneath the site.	
	Off site: Historical cotton mill (including tank and gasometer) and 'pit hole'.	Lateral migration onto site with subsequent dermal contact of soils	Future site users	Medium Long term risk to human health	Low Likelihood	Moderate/Low	
Potential hazardous ground gas from shallow mine workings.	Migration of ground gas	Future site users	Severe Acute risk to human health (asphyxiation)	Unlikely	Moderate/Low	The thickness of Made Ground beneath the site is considered likely to be limited and unlikely to represent a significant source of ground gas.	If a significant thickness of Made Ground or putrescible material is encountered during intrusive works, or if mine workings are identified monitoring wells may be installed in borehole to allow monitoring of ground gas concentrations and flow rates.
		Building Infrastructure	Severe Significant damage to buildings (explosion)	Unlikely	Moderate/Low		

4.0 Conclusions

Clancy Consulting Limited was instructed by McCarthy Stone to carry out a Phase 1 Preliminary Risk Assessment in Bamford, Rochdale OL11 5NX. The proposed development includes a three-storey later living apartment block and 12 detached bungalows with associated parking and soft landscaping.

The site is effectively Greenfield having never been developed other than by soft landscaping as part of the adjacent Bamford Mews residential development. Surrounding areas land. Much of the surrounding has also been largely rural with some residential and commercial development. The only significant off-site historical land use was a cotton mill with two reservoirs and a gasometer which were present to the east during the late 1800s and early 1900s.

Based on British Geological Survey mapping, the geology beneath the site is indicated to comprise predominantly cohesive Devensian Till deposits overlying interbedded mudstone, siltstone and sandstone of the Pennine Lower Coal Measures. A fault line in the Pennine Lower Coal Measures is indicated to cross the northeast corner of the site.

The radon guidance on protective measures for new dwellings indicates that the site is in a 'low' probability radon area where less than 1% of homes are estimated to be at or above the Action Level. Radon gas protection measures are therefore not required in the construction of new dwellings or extensions.

The Lower Pennine Coal Measures are known to be coal bearing and have been mined extensively. A Consultants Coal Mining Report obtained for the site indicates that no mine entries are present within 200m of the site and no recorded worked coal seams are present beneath the site. The report does also states however that the possibility of unrecorded coal mine workings being present beneath the site cannot be discounted. It is also noteworthy that the site lies immediately adjacent to a Coal Authority designated Development High Risk Area. On this basis it is recommended that intrusive mining investigations be undertaken to assess whether any voids are present at shallow depth (less than 30m) which could lead to ground subsidence.

The environmental database report indicates that the site represents a low risk regarding ground stability issues relating to collapsible ground, landslides, shrinking/swelling clay, running sand, dissolution features and compressible ground.

The site is located within Flood Zone 1, however, as the proposed development area exceeds 1 ha a Flood Risk Assessment will be required for planning purposes.

The site is underlain by an Undifferentiated Secondary Aquifer relating to the Devensian Till. The underlying Pennine Lower Coal Measures is classified as a Secondary A Aquifer. The site is not located within a groundwater SPZ and the nearest recorded groundwater abstraction is located approximately 470m to the west of the site, used for agricultural purposes. Naden Brook is present from approximately 650m to the west of the site at its closest point. Based on the above it can be concluded that no sensitive controlled waters receptors have been identified within close proximity to the site.

Zetica Bomb Risk Mapping indicates the site to be in an area of low UXO risk. Therefore, no further assessment of the risk posed by UXO is required.

The site does not appear to have had a significant development history. However, given the proximity of the adjacent historical Pitfield Mills, there is potential for contamination to be present from this nearby off-site source, though the risk of any significant contamination impacting the site is low. It is recommended that any future intrusive investigation incorporates some chemical testing to assess the contamination status of the soils.

Based on the findings of this Phase 1 study, we would recommend the following Phase 2 works be undertaken at the site:

- Prepare a Flood Risk Assessment report suitable for planning purposes.
- Undertake soil infiltration testing to assist with the development of a suitable drainage strategy.
- Carry out boreholes and / or trial pits to assess the shallow soil and groundwater conditions to allow both a contamination and geotechnical appraisal including a qualitative contamination risk assessment and recommendations for foundations.
- Drilling of rotary open hole boreholes to depths of at least 30m (final depth dependent on thickness and nature of drift strata) to investigate the presence of any voids associated with historic coal mining activities.
- Depending on the ground conditions encountered, there may also be a requirement for installing some boreholes with gas monitoring wells to undertake a gas risk assessment.

APPENDIX I
DRAWINGS



! "

\$

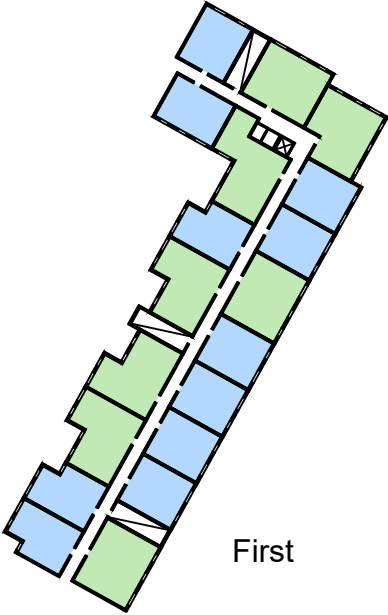
00 Rev	13/08/2024 Date	Original Description	SP By	CHK. Check	APP. App.	Drawn	SP	Date	13/08/2024	COPYRIGHT: THE COPYRIGHT OF THIS DRAWING IS VESTED IN CLANCY CONSULTING. IT SHALL NOT BE USED WITHOUT PERMISSION BY ANYONE FOR ANY PURPOSE. DO NOT SCALE THIS DRAWING ELECTRONICALLY OR MANUALLY. WORK TO FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. DO NOT TURN ON LAYERS THAT HAVE BEEN TURNED OFF. DO NOT THAW LAYERS THAT HAVE BEEN FROZEN.	Job number	Drawing number	Revision
						Checked	RP	Scale @ A4	NTS				
						Approved	RP	Status	Live				
											10/2529	001	-



McCARTHY STONE
Life, well lived



Second



First

Bamford Rev B

ACCOMMODATION SCHEDULE

	1 BED	2BED		
01.L GROUND				
02.GROUND	10	5		
03.FIRST	11	8		
04.SECOND	8	8		
05.THIRD				
06.FOURTH				
APARTMENTS	29	21	50	TOTAL
BUNGALOWS			12	TOTAL
PARKING (apts)			37	TOTAL

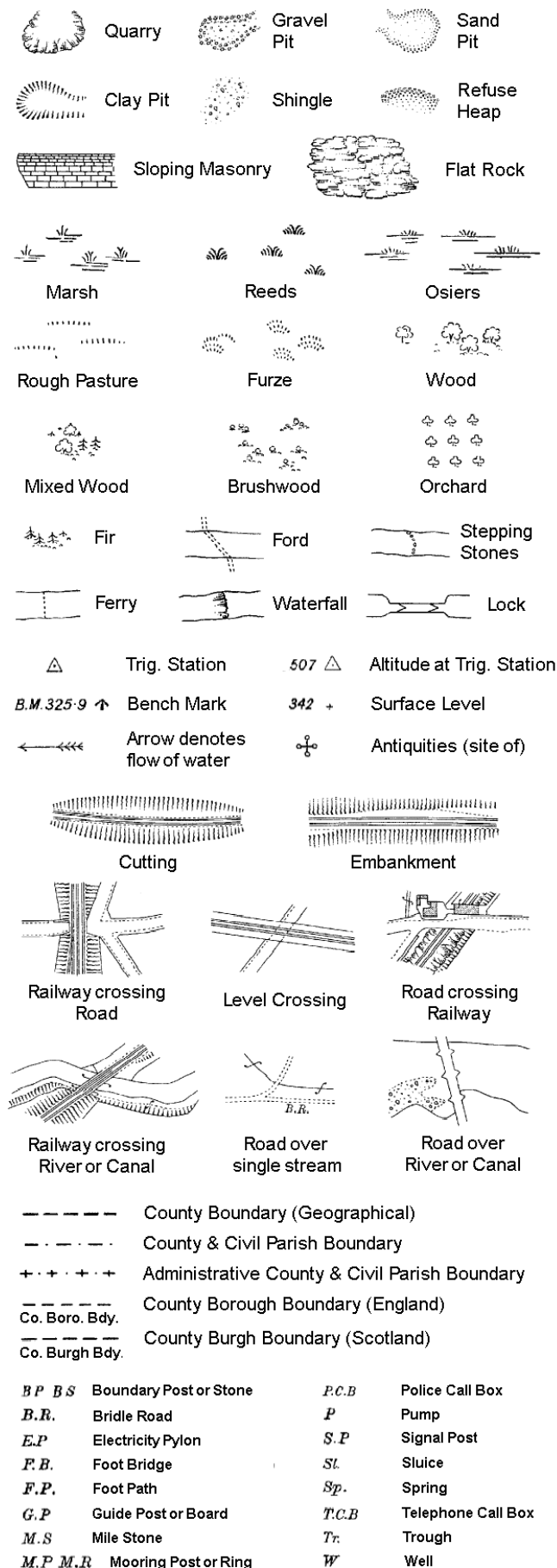
Playing Fields



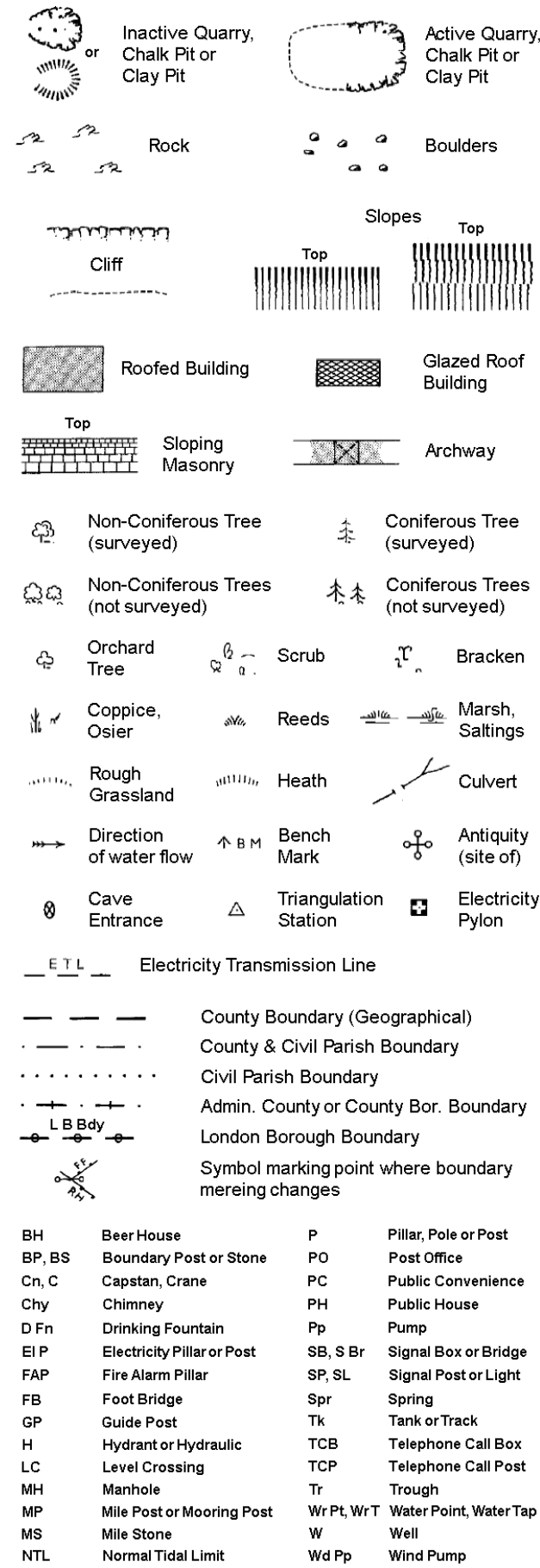
APPENDIX II
HISTORICAL MAPS

Historical Mapping Legends

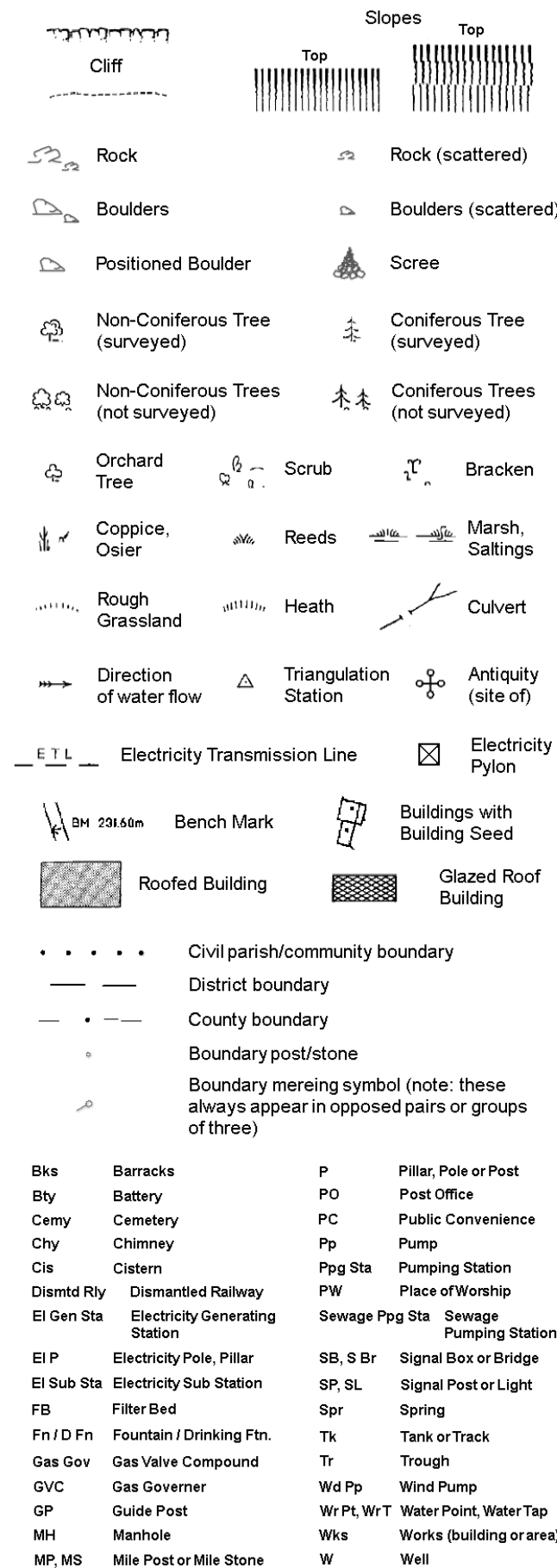
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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



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



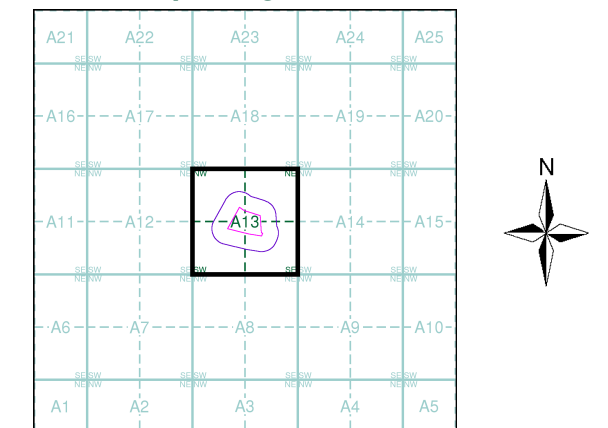
Envirocheck®

LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1890	2
Lancashire And Furness	1:2,500	1910	3
Lancashire And Furness	1:2,500	1930	4
Ordnance Survey Plan	1:1,250	1957 - 1959	5
Ordnance Survey Plan	1:2,500	1957 - 1963	6
Additional SIMs	1:2,500	1957 - 1963	7
Ordnance Survey Plan	1:1,250	1966 - 1988	8
Ordnance Survey Plan	1:1,250	1973 - 1990	9
Supply of Unpublished Survey Information	1:1,250	1974 - 1975	10
Supply of Unpublished Survey Information	1:2,500	1975	11
Supply of Unpublished Survey Information	1:1,250	1975	12
Supply of Unpublished Survey Information	1:2,500	1975	13
Additional SIMs	1:1,250	1977 - 1987	14
Additional SIMs	1:2,500	1979	15
Additional SIMs	1:1,250	1982 - 1990	16
Additional SIMs	1:1,250	1985	17
Additional SIMs	1:2,500	1991	18
Large-Scale National Grid Data	1:2,500	1992	19
Large-Scale National Grid Data	1:1,250	1992	20
Large-Scale National Grid Data	1:1,250	1994	21
Historical Aerial Photography	1:2,500	1999	22

Historical Map - Segment A13



Order Details

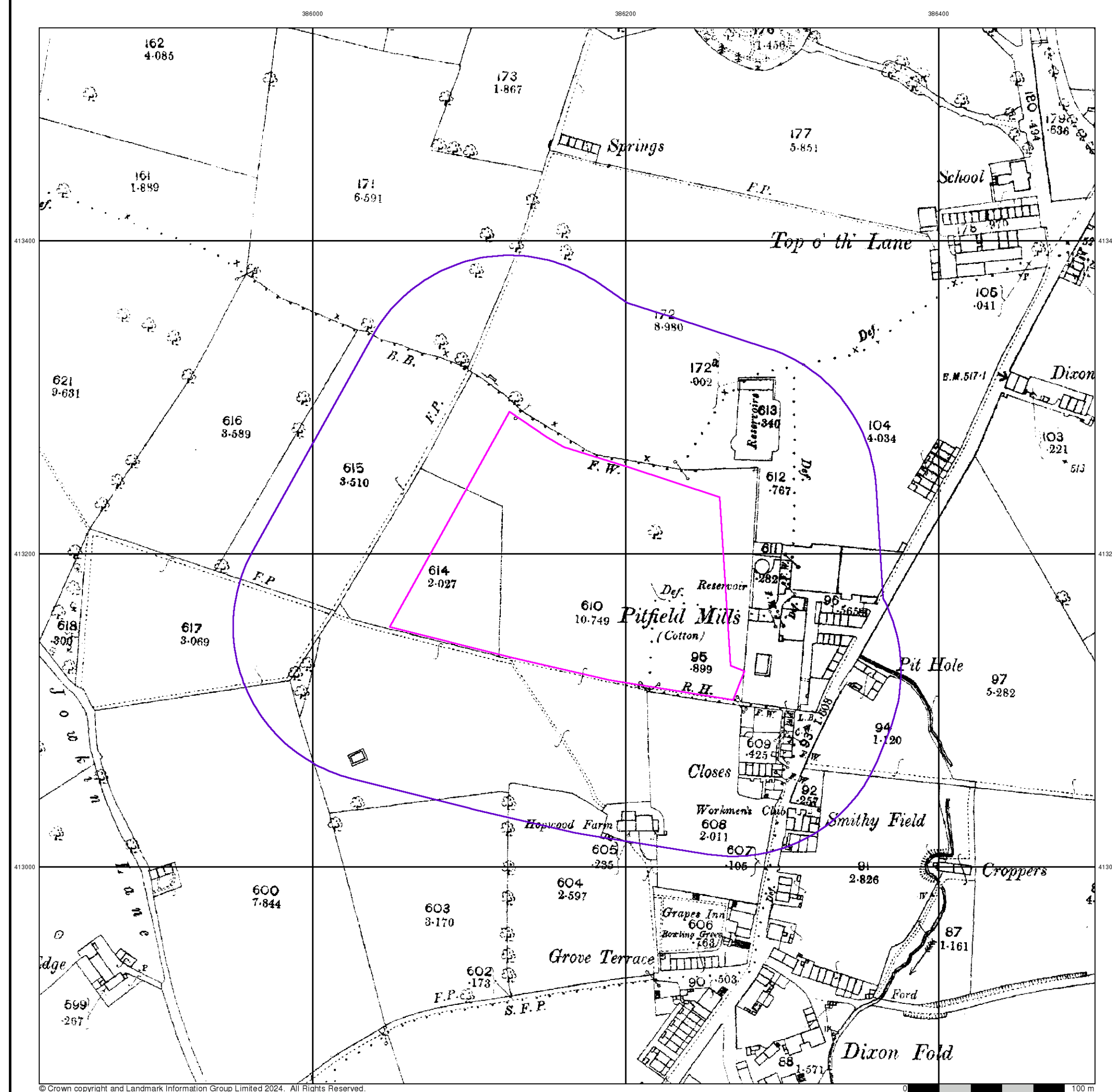
Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

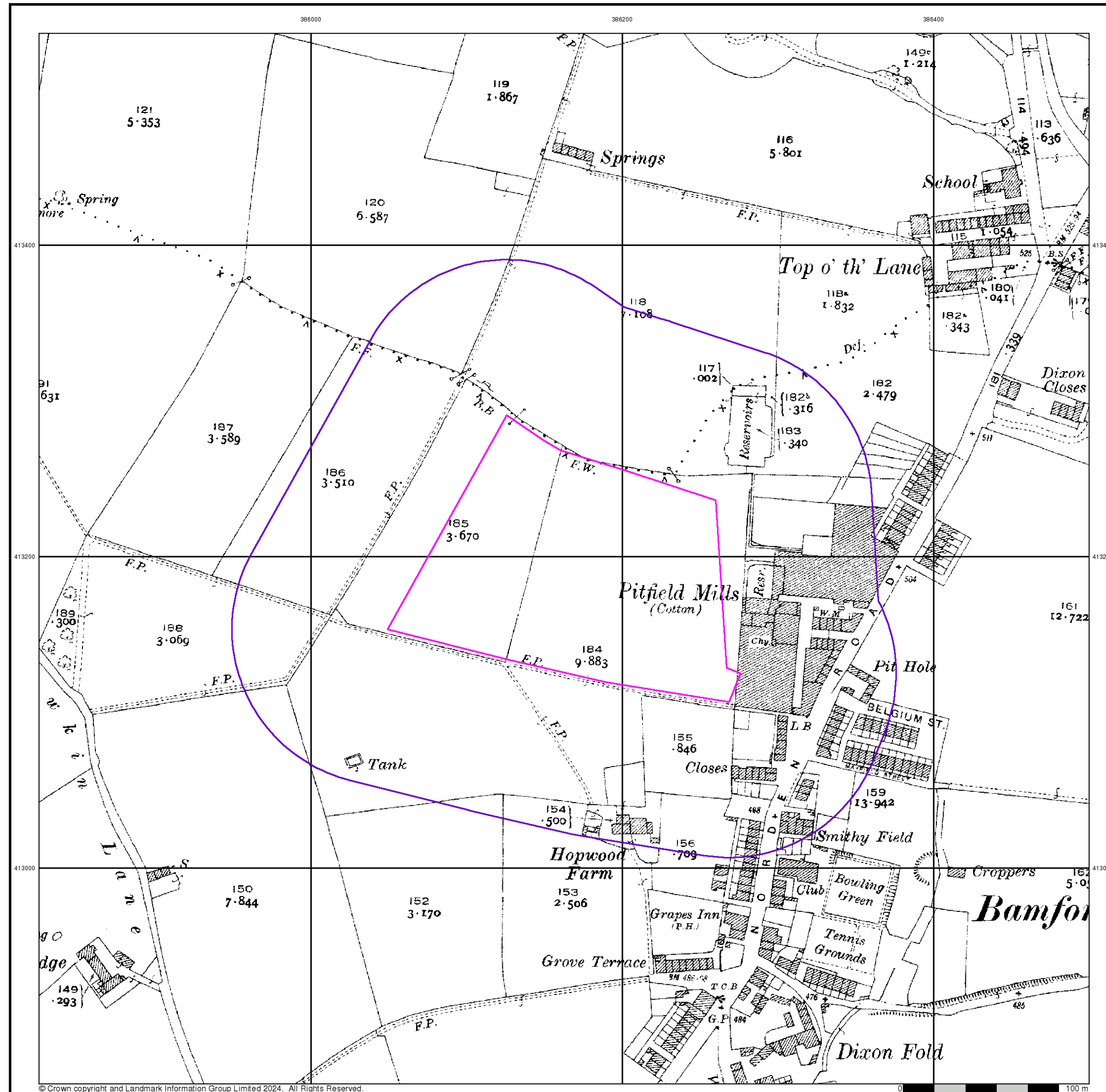
Site Details

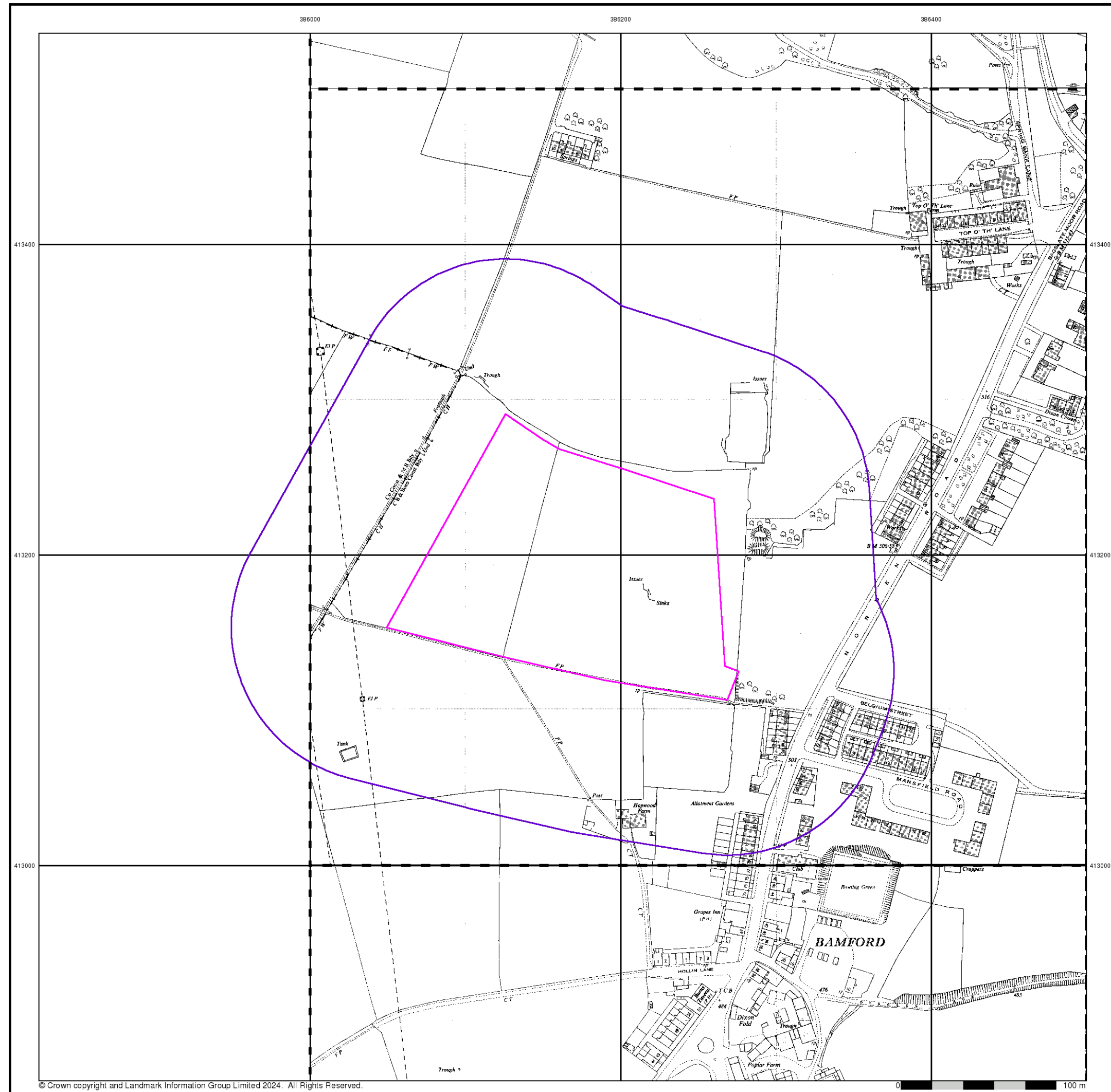
Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark®
INFORMATION GROUP

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







Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1957 - 1959

Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SD8613NW	SD8613NE
1959	1959
1:1,250	1:1,250
SD8613SW	SD8613SE
1959	1959
1:1,250	1:1,250
SD8612NW	SD8612NE
1957	1957
1:1,250	1:1,250

Historical Map - Segment A13

Order Details

Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

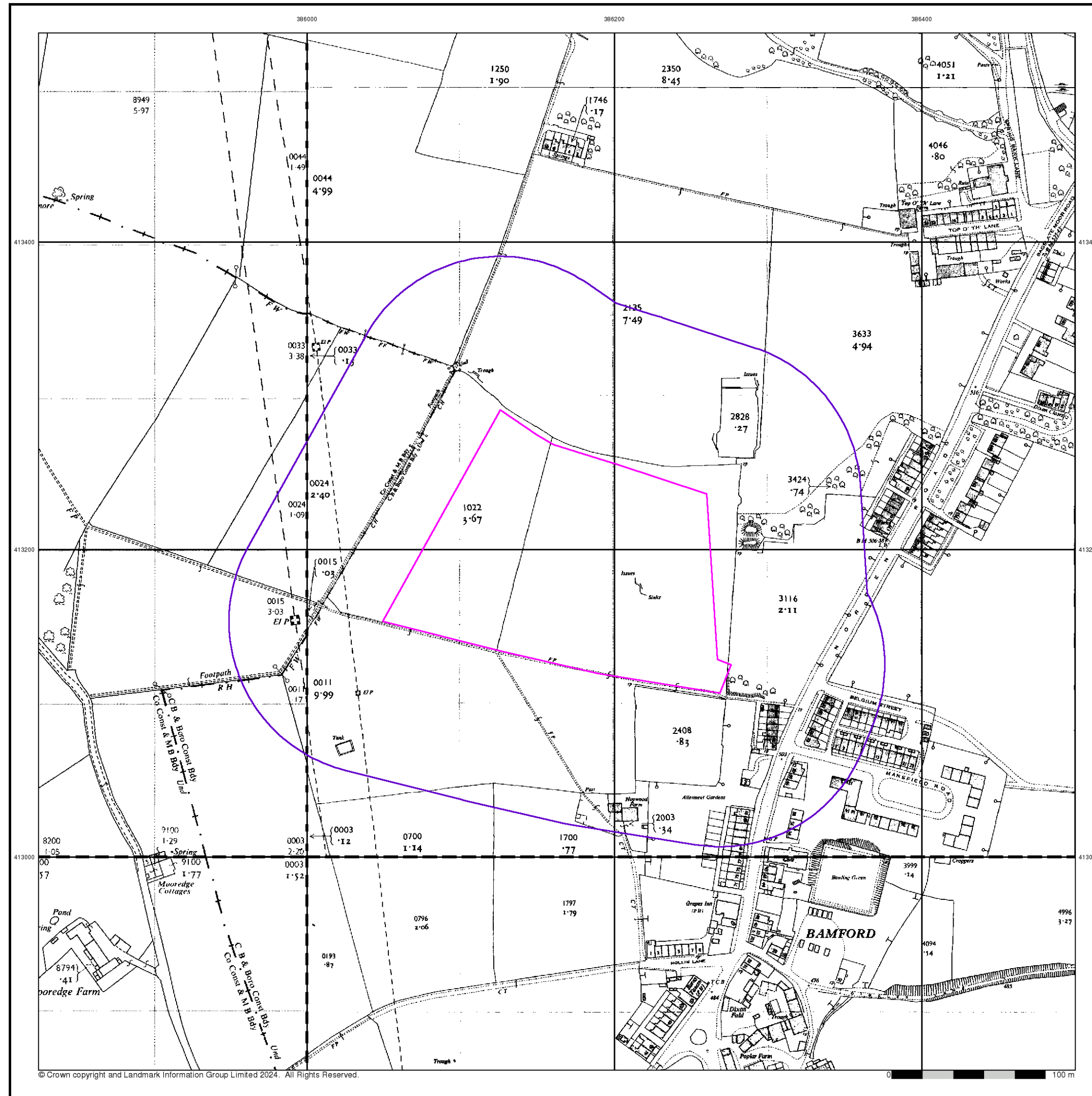
Landmark®

INFORMATION GROUP

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

© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

A Landmark Information Group Service v50.0 08-Aug-2024 Page 5 of 22



© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1957 - 1963

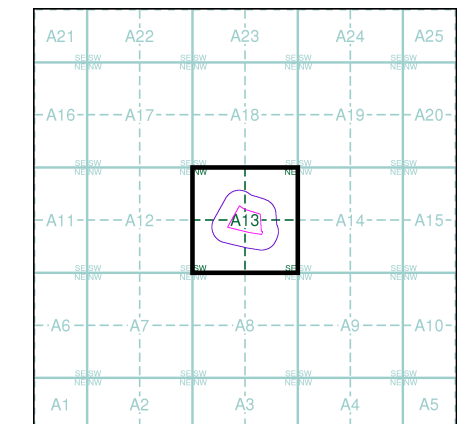
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SD8513 1963 12,500	SD8613 1960 12,500
SD8512 1963 12,500	SD8612 1957 12,500

Historical Map - Segment A13



Order Details

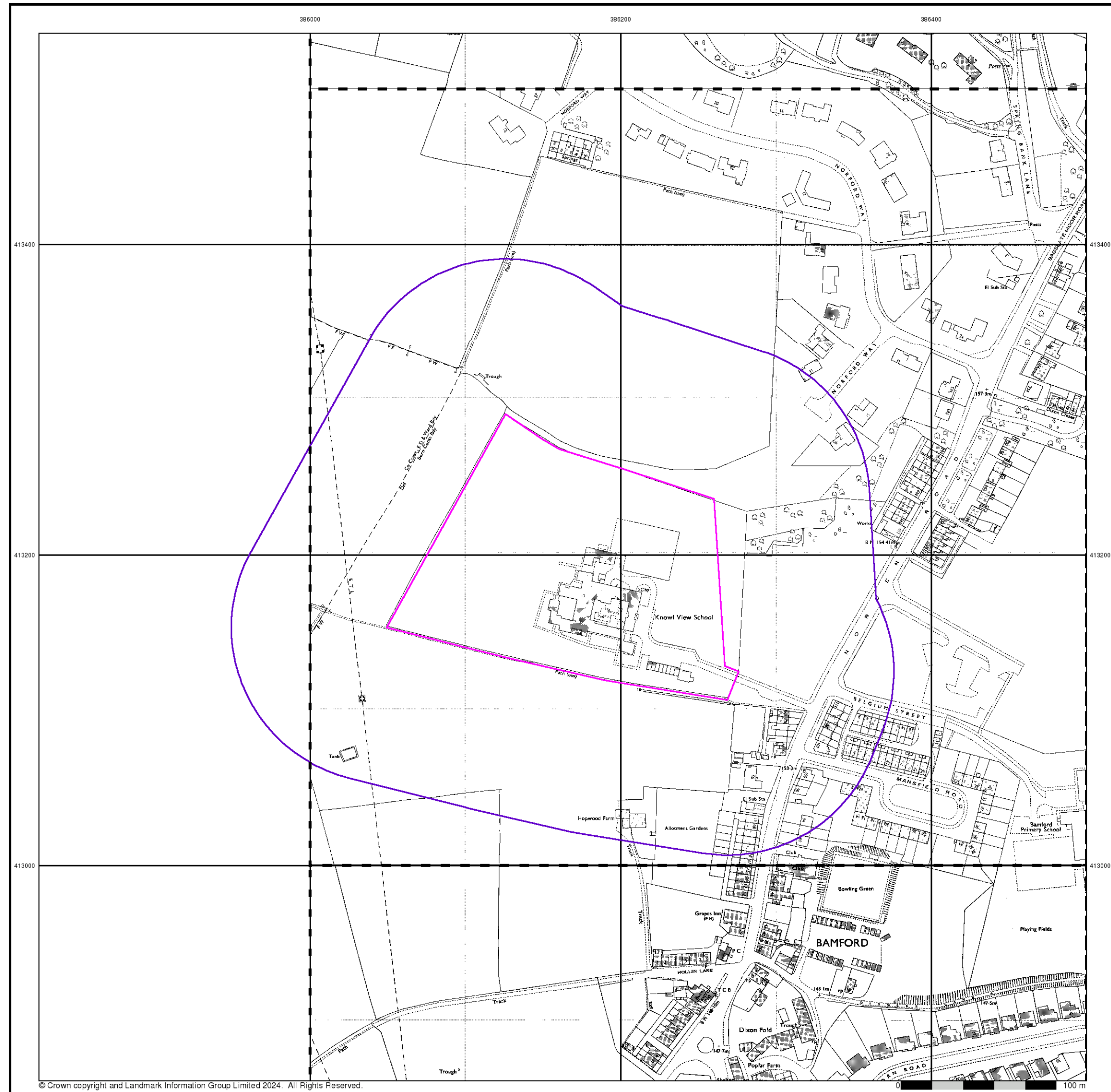
Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark®
INFORMATION GROUP

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



Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Ordnance Survey Plan

Published 1966 - 1988

Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SD8613NW	SD8613NE
1966	1966
1:1,250	1:1,250
SD8613SW	SD8613SE
1975	1988
1:1,250	1:1,250
SD8612NW	SD8612NE
1970	1970
1:1,250	1:1,250

Historical Map - Segment A13

Order Details

Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

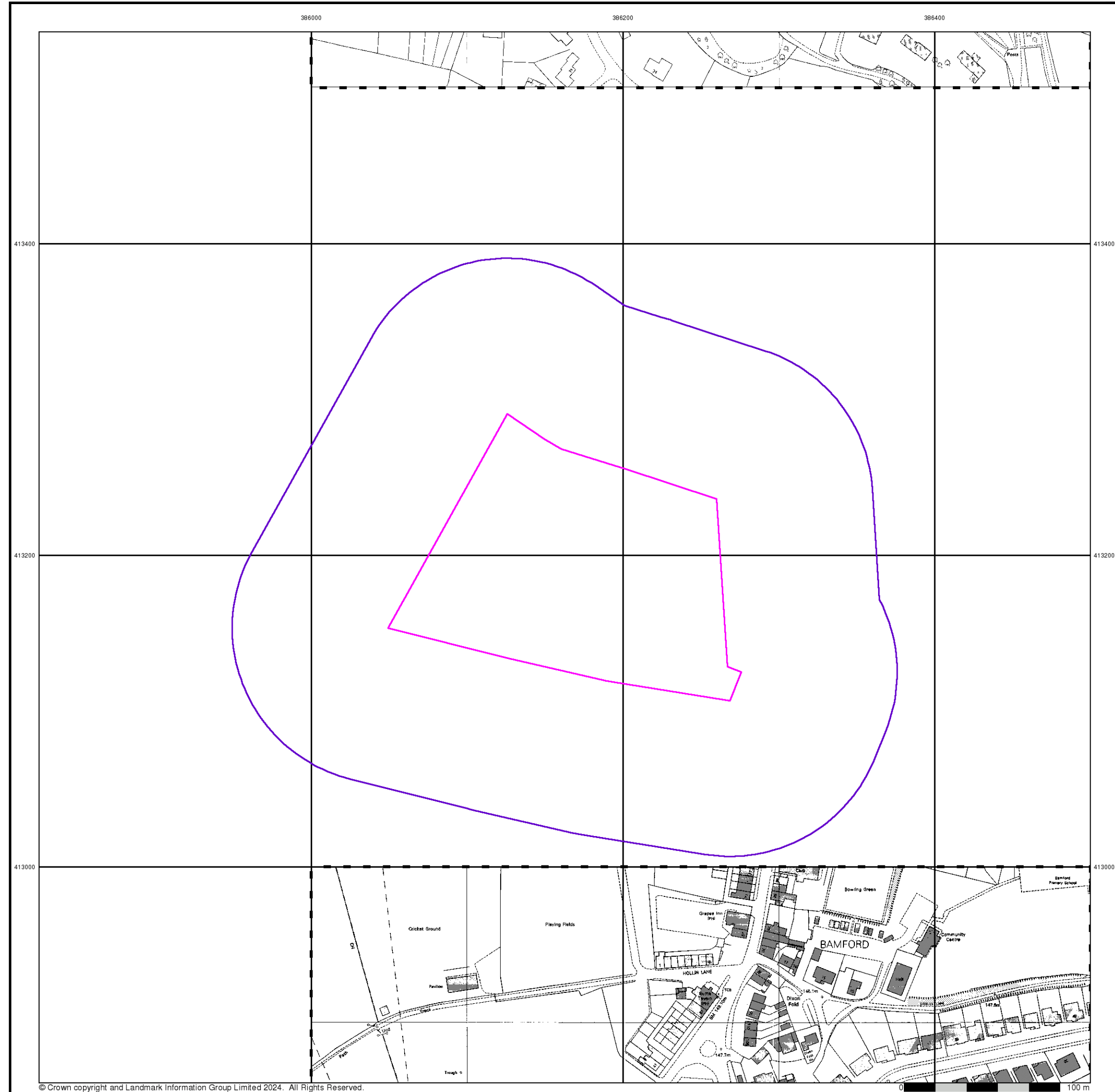
Landmark[®]

INFORMATION GROUP

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

A Landmark Information Group Service v50.0 08-Aug-2024 Page 8 of 22

© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.



Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Ordnance Survey Plan

Published 1973 - 1990

Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SD8613NW	1975	1:1,250
SD8613NE	1973	1:1,250
SD8612NW	1990	1:1,250

Historical Map - Segment A13

Order Details

Order Number:	355152863_1_1
Customer Ref:	10/2529
National Grid Reference:	386170, 413190
Slice:	A
Site Area (Ha):	2.54
Search Buffer (m):	100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

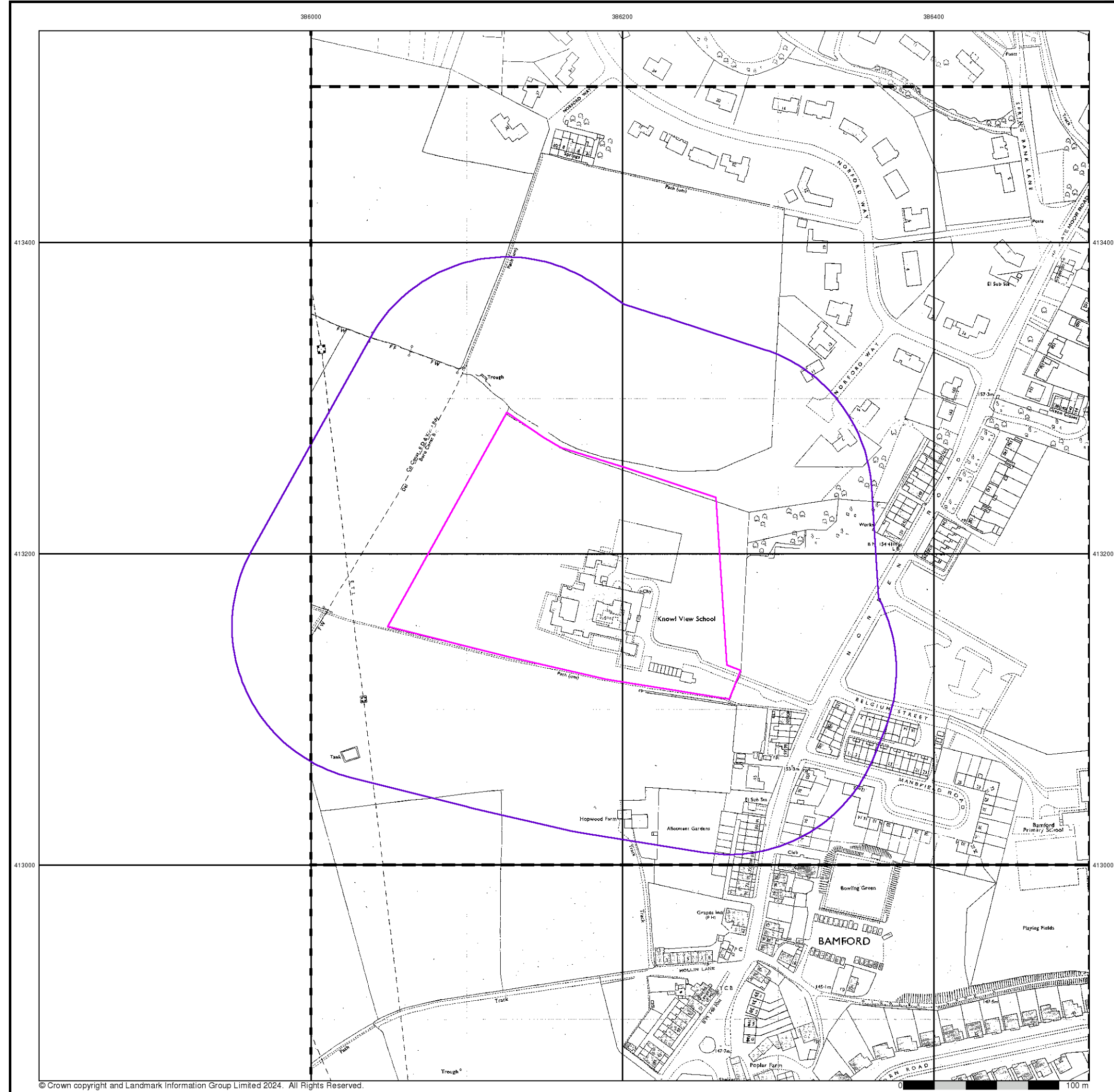
Landmark[®]

INFORMATION GROUP

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

© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

A Landmark Information Group Service v50.0 08-Aug-2024 Page 9 of 22



Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Supply of Unpublished Survey Information

Published 1974 - 1975

Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SD8613NW	SD8613NE
1975	1975
1:1,250	1:1,250

SD8613SW	SD8613SE
1975	1975
1:1,250	1:1,250

SD8612NW	SD8612NE
1974	1975
1:1,250	1:1,250

Historical Map - Segment A13

Order Details

Order Number:	355152863_1_1
Customer Ref:	10/2529
National Grid Reference:	386170, 413190
Slice:	A
Site Area (Ha):	2.54
Search Buffer (m):	100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

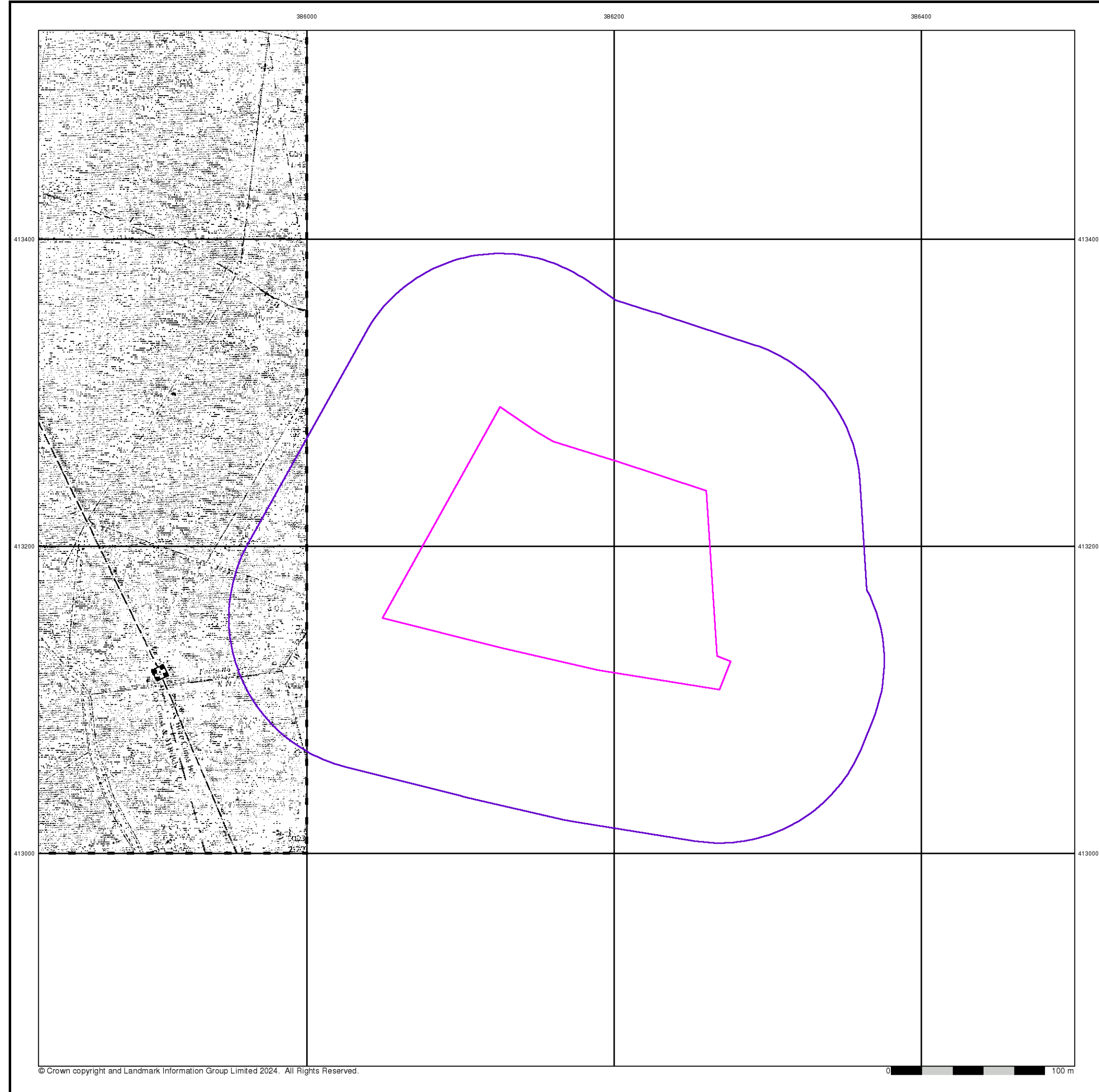
Landmark[®]

INFORMATION GROUP

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

© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

A Landmark Information Group Service v50.0 08-Aug-2024 Page 10 of 22



Envirocheck[®]

● LANDMARK INFORMATION GROUP[®]

Supply of Unpublished Survey Information

Published 1975

Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SD8513
1975
1:2,500

Historical Map - Segment A13

A21	A22	A23	A24	A25
A16	A17	A18	A19	A20
A11	A12	A13	A14	A15
A6	A7	A8	A9	A10
A1	A2	A3	A4	A5

Order Details

Order Number:	355152863_1_1
Customer Ref:	10/2529
National Grid Reference:	386170, 413190
Slice:	A
Site Area (Ha):	2.54
Search Buffer (m):	100

Site Details

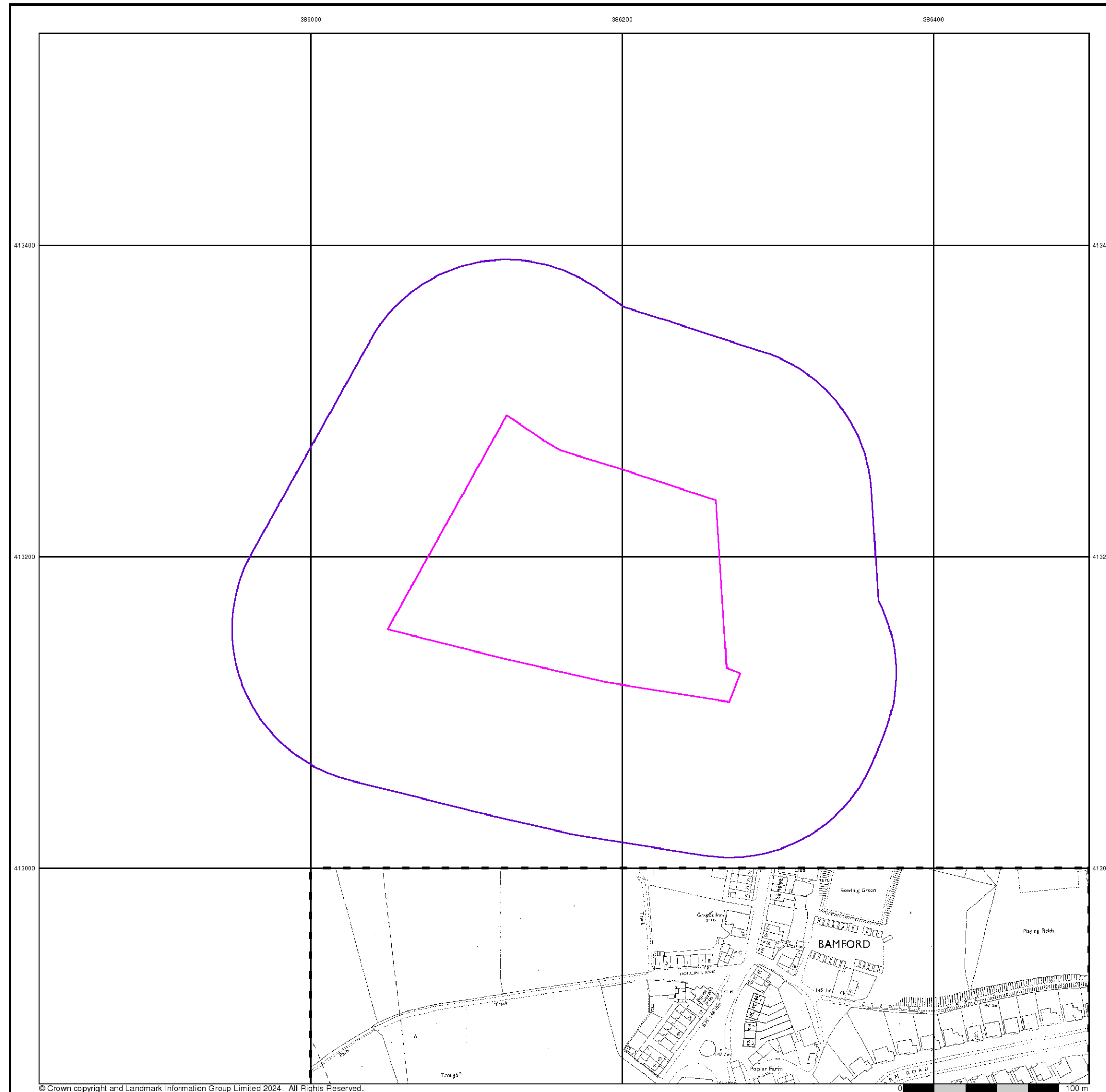
Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark[®]

● INFORMATION GROUP

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

A Landmark Information Group Service v50.0 08-Aug-2024 Page 11 of 22



Envirocheck®

LANDMARK INFORMATION GROUP®

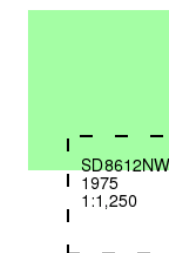
Supply of Unpublished Survey Information

Published 1975

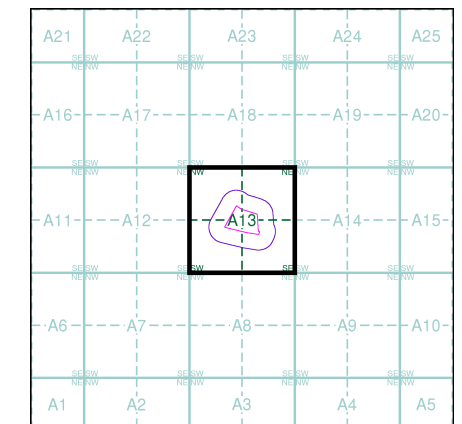
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark®
INFORMATION GROUP

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



LANDMARK INFORMATION GROUP®

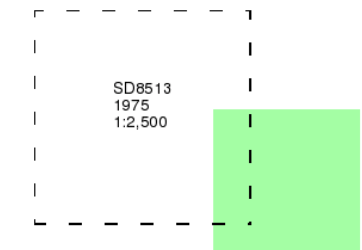
Supply of Unpublished Survey Information

Published 1975

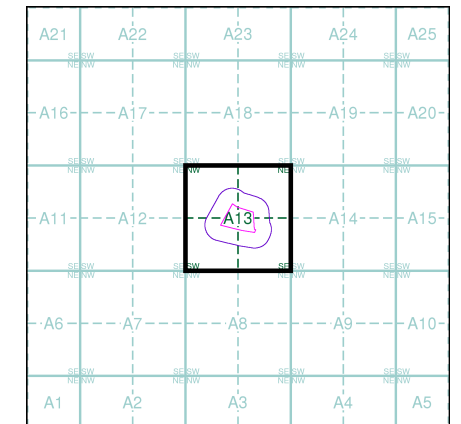
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

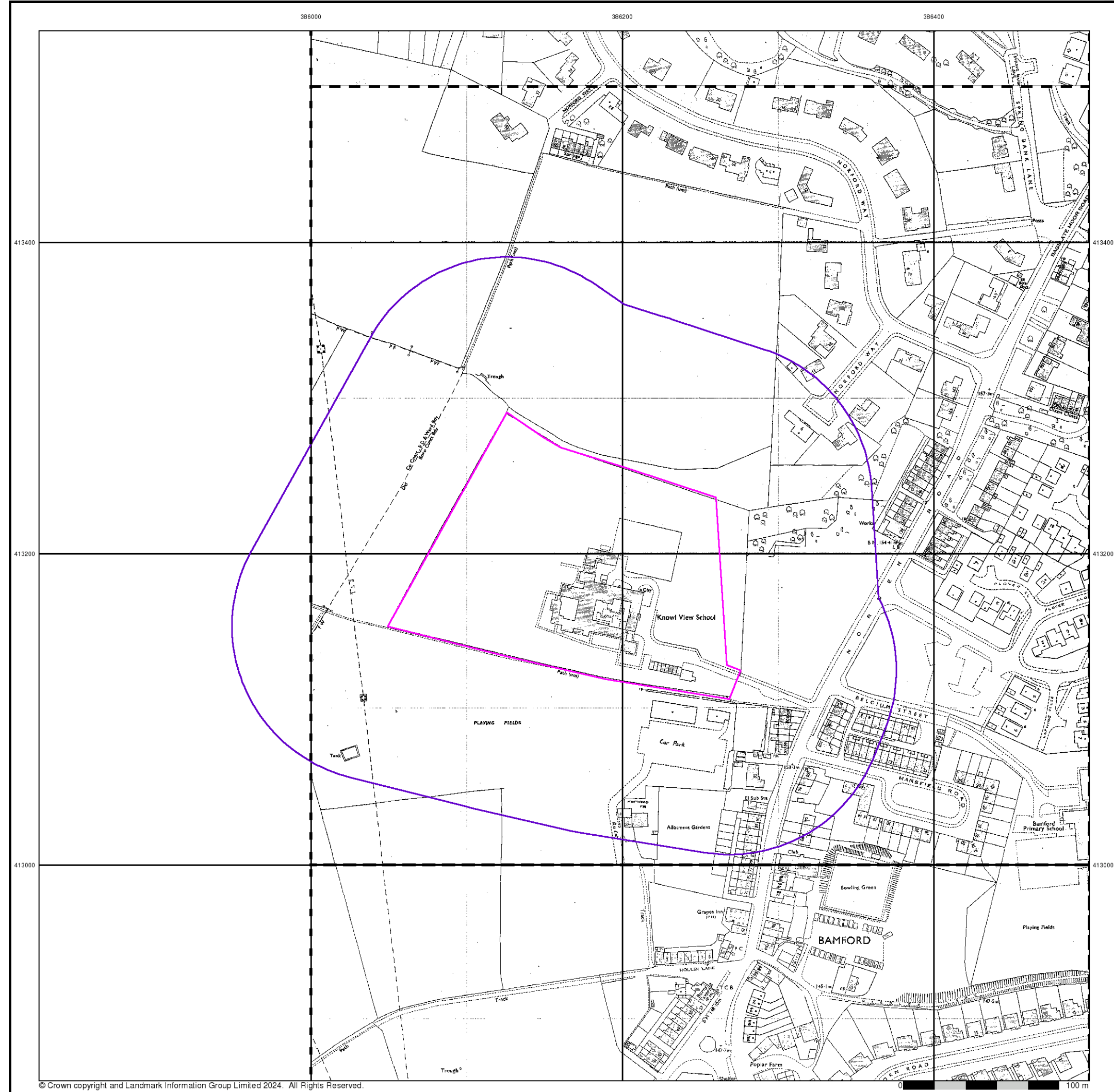
Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark®
INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

Additional SIMs

Published 1977 - 1987

Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SD8613NW	SD8613NE
1985	1987
1:1,250	1:1,250
SD8613SW	SD8613SE
1977	1979
1:1,250	1:1,250
SD8612NW	SD8612NE
1977	1977
1:1,250	1:1,250

Historical Map - Segment A13

Order Details

Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

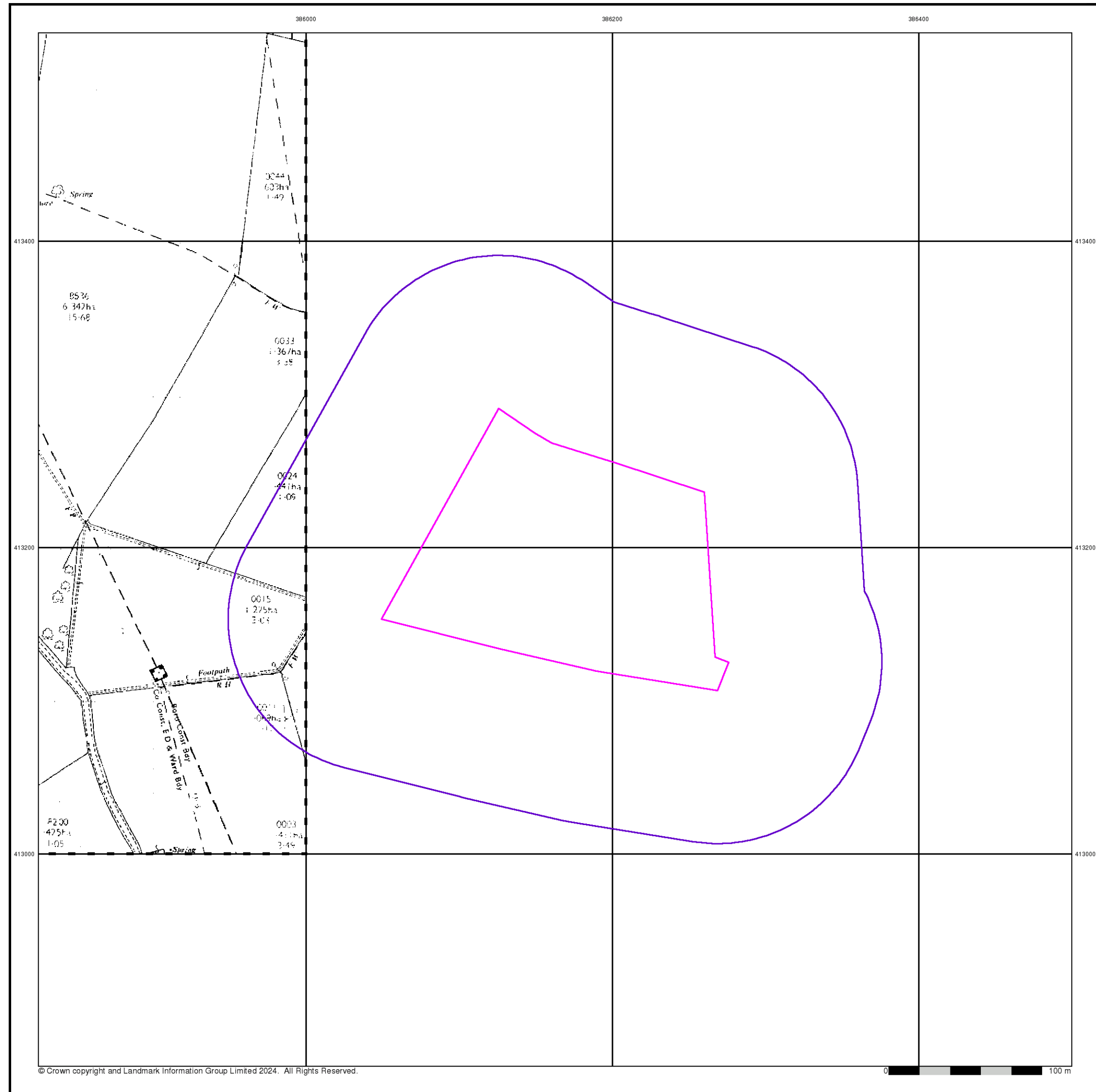
Landmark®

INFORMATION GROUP

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

© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

A Landmark Information Group Service v50.0 08-Aug-2024 Page 14 of 22



Envirocheck[®]

● LANDMARK INFORMATION GROUP[®]

Additional SIMs

Published 1979

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)

SD8513
1979
1:2,500

Historical Map - Segment A13

Order Details

Order Number:	355152863_1_1
Customer Ref:	10/2529
National Grid Reference:	386170, 413190
Slice:	A
Site Area (Ha):	2.54
Search Buffer (m):	100

Site Details

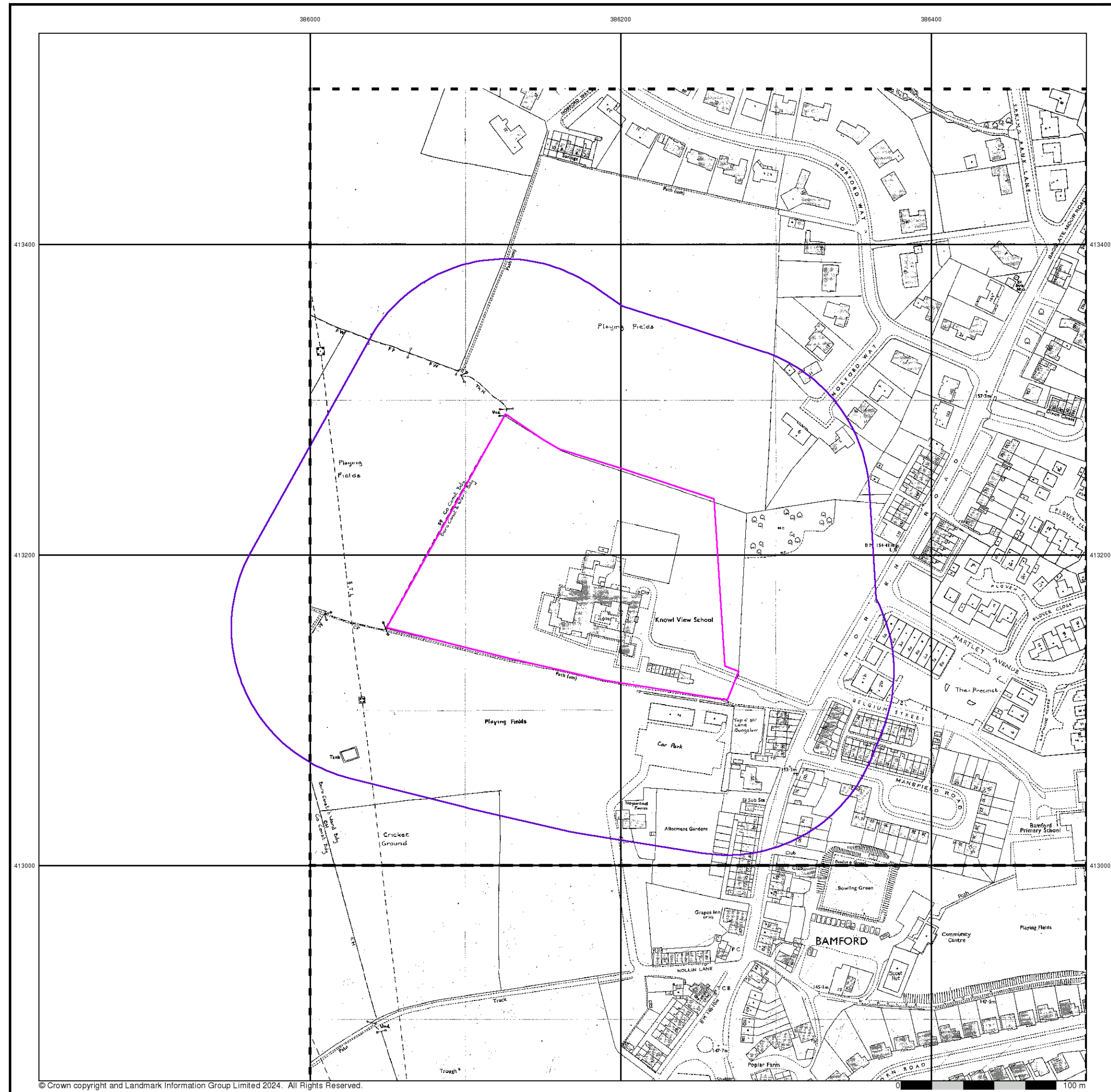
Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark[®]

● INFORMATION GROUP

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

A Landmark Information Group Service v50.0 08-Aug-2024 Page 15 of 22



Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Additional SIMs

Published 1982 - 1990

Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SD8613SW 1990 1:1,250	SD8613SE 1982 1:1,250
SD8612NW 1988 1:1,250	SD8612NE 1990 1:1,250

Historical Map - Segment A13

Order Details

Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

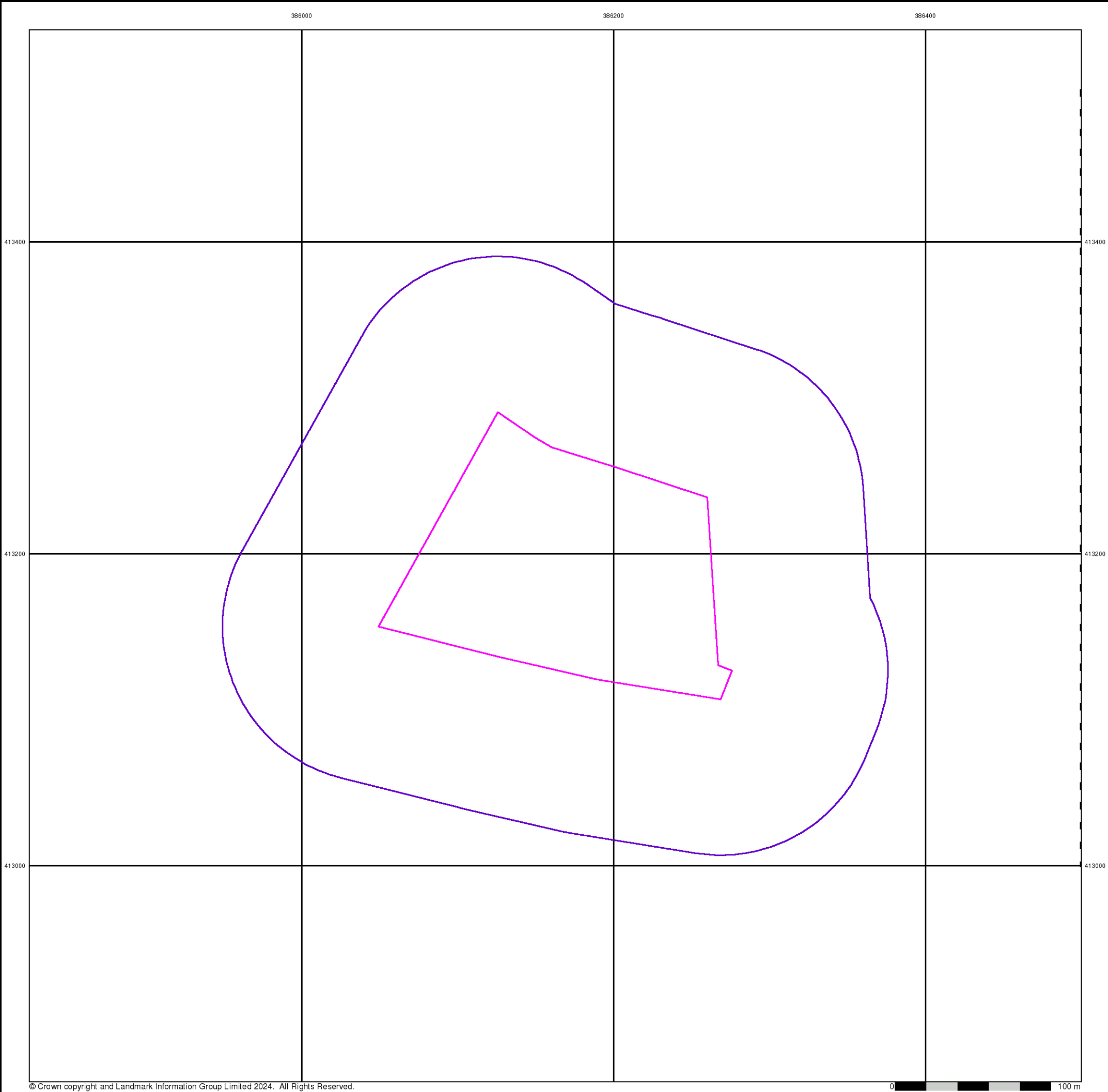
Landmark[®]

INFORMATION GROUP

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

A Landmark Information Group Service v50.0 08-Aug-2024 Page 16 of 22

© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.



© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

Envirocheck®

● LANDMARK INFORMATION GROUP®

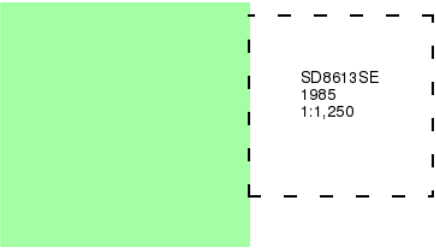
Additional SIMs

Published 1985

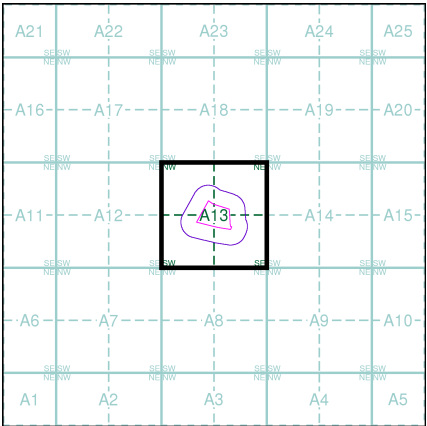
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

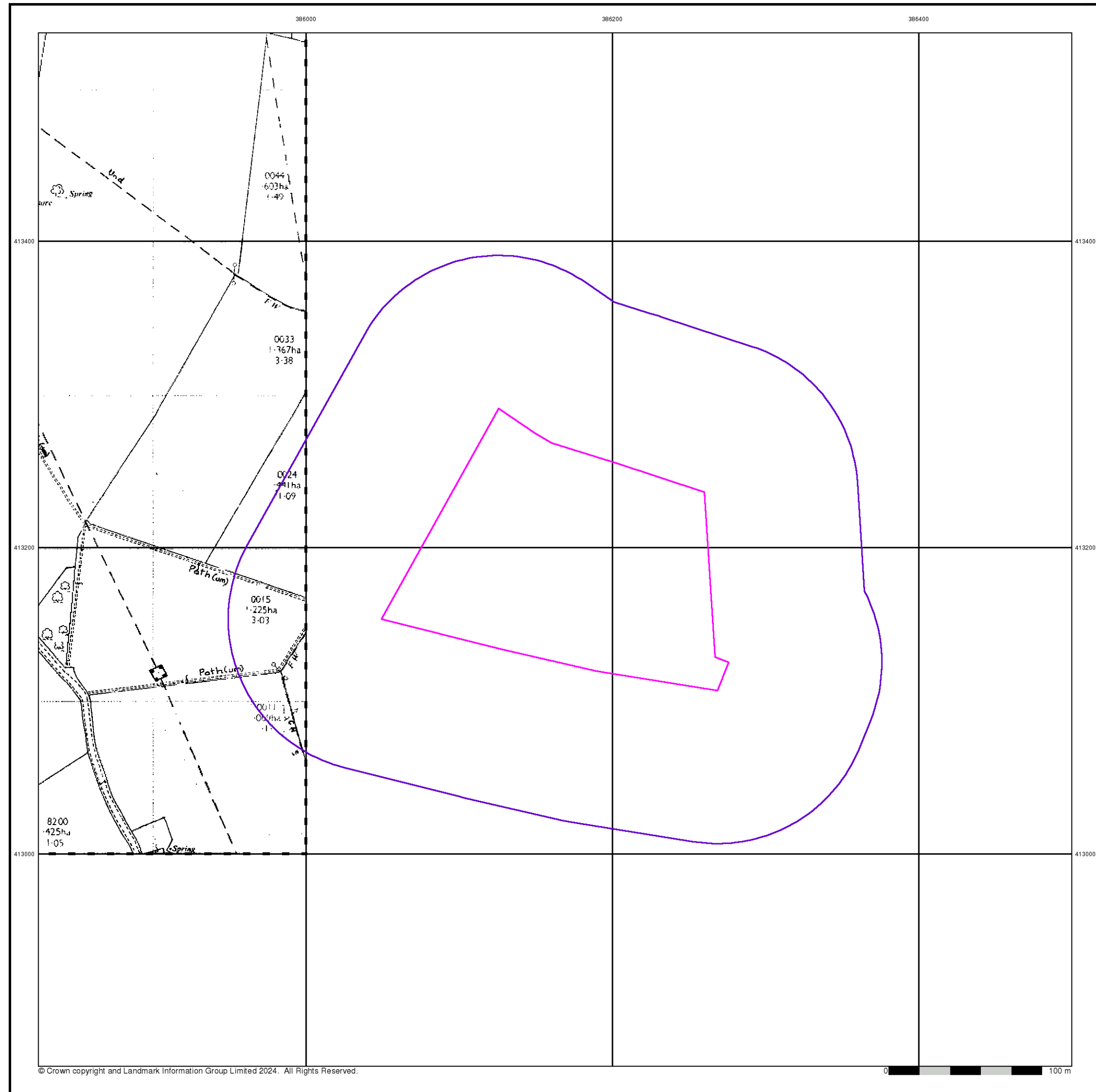
Order Number: 355152863_1_1
Customer Ref: 10/2529
National Grid Reference: 386170, 413190
Slice: A
Site Area (Ha): 2.54
Search Buffer (m): 100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark®
● INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

Additional SIMs

Published 1991

Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SD8513
1991
1:2,500

Historical Map - Segment A13

A21	A22	A23	A24	A25
SE SW	SE SW	SE SW	SE SW	SE SW
NE NW	NE NW	NE NW	NE NW	NE NW

A16	A17	A18	A19	A20
SE SW	SE SW	SE SW	SE SW	SE SW
NE NW	NE NW	NE NW	NE NW	NE NW

A11	A12	A13	A14	A15
SE SW	SE SW	SE SW	SE SW	SE SW
NE NW	NE NW	NE NW	NE NW	NE NW

A6	A7	A8	A9	A10
SE SW	SE SW	SE SW	SE SW	SE SW
NE NW	NE NW	NE NW	NE NW	NE NW

A1	A2	A3	A4	A5
SE SW	SE SW	SE SW	SE SW	SE SW
NE NW	NE NW	NE NW	NE NW	NE NW

Order Details

Order Number:	355152863_1_1
Customer Ref:	10/2529
National Grid Reference:	386170, 413190
Slice:	A
Site Area (Ha):	2.54
Search Buffer (m):	100

Site Details

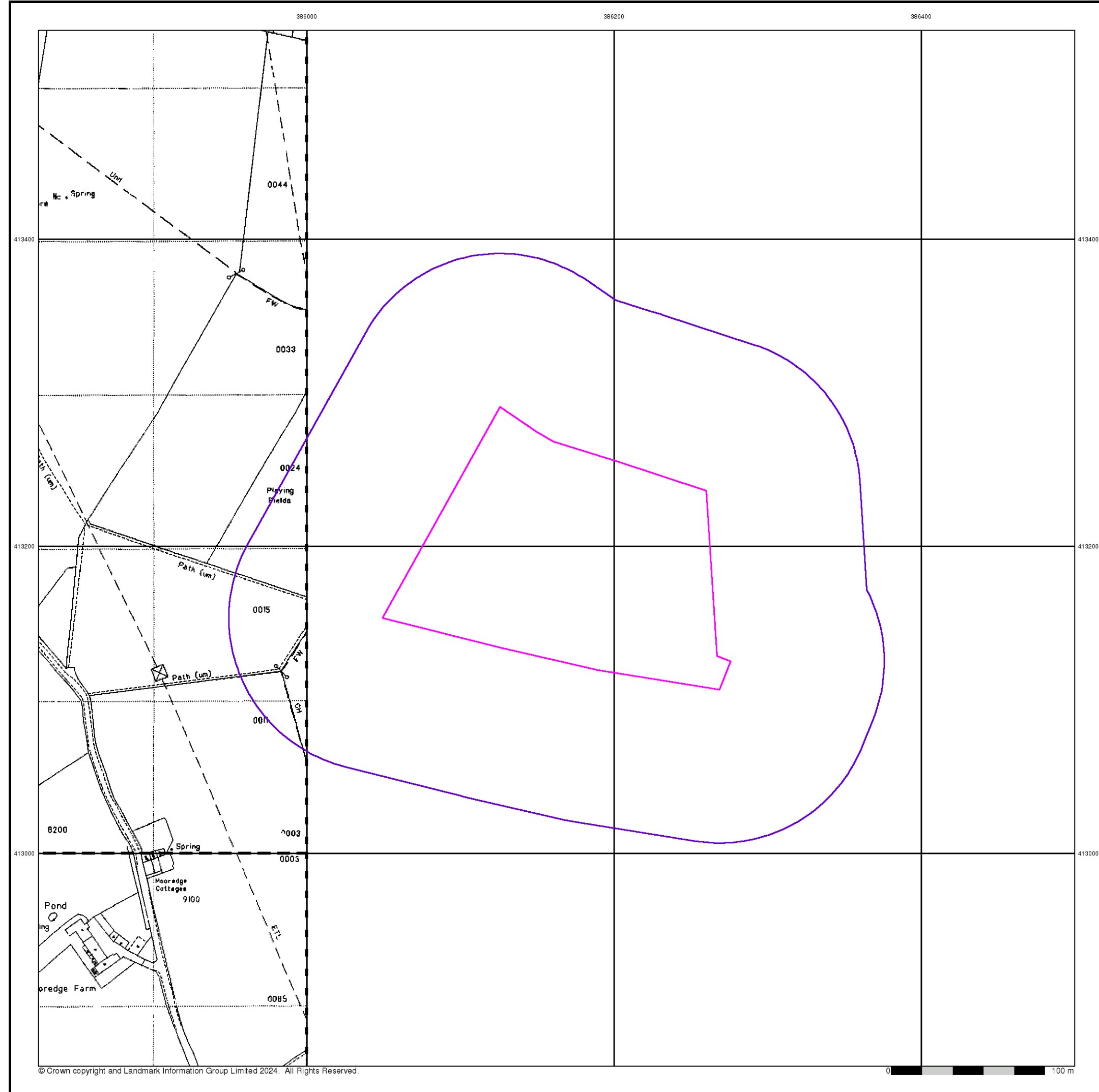
Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark®

INFORMATION GROUP

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

A Landmark Information Group Service v50.0 08-Aug-2024 Page 18 of 22



Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Large-Scale National Grid Data

Published 1992

Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SD8513	1992	1:2,500
SD8512	1992	1:2,500

Historical Map - Segment A13

A grid map showing segments A1 to A25. Segment A13 is highlighted with a black border and a pink outline. A north arrow is located to the right of the grid.

Order Details

Order Number:	355152863_1_1
Customer Ref:	10/2529
National Grid Reference:	386170, 413190
Slice:	A
Site Area (Ha):	2.54
Search Buffer (m):	100

Site Details

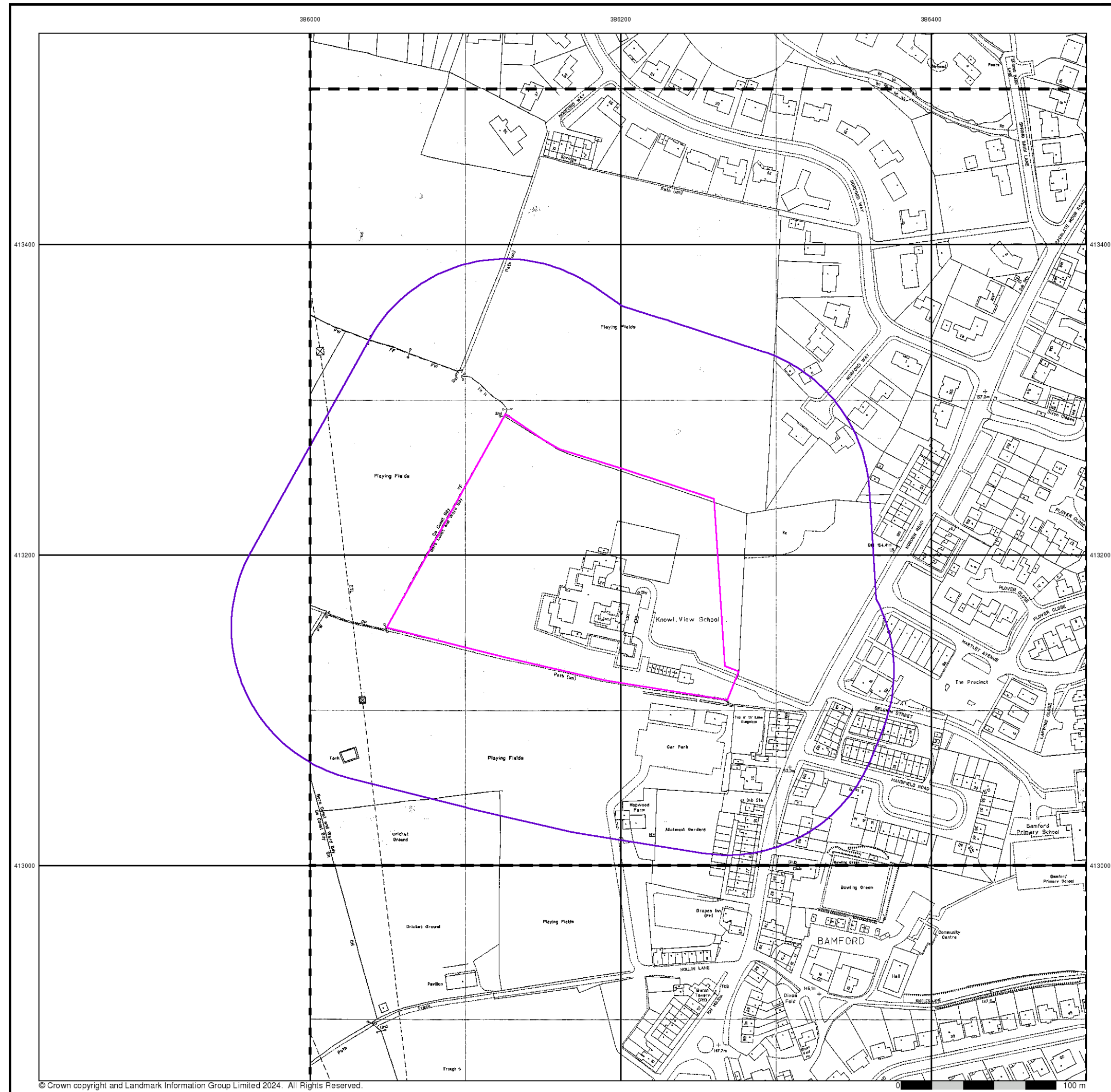
Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark[®]

INFORMATION GROUP

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

A Landmark Information Group Service v50.0 08-Aug-2024 Page 19 of 22



Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Large-Scale National Grid Data

Published 1992

Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SD8613NW	SD8613NE
1992	1992
1:1,250	1:1,250
SD8613SW	SD8613SE
1992	1992
1:1,250	1:1,250
SD8612NW	SD8612NE
1992	1992
1:1,250	1:1,250

Historical Map - Segment A13

Order Details

Order Number:	355152863_1_1
Customer Ref:	10/2529
National Grid Reference:	386170, 413190
Slice:	A
Site Area (Ha):	2.54
Search Buffer (m):	100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

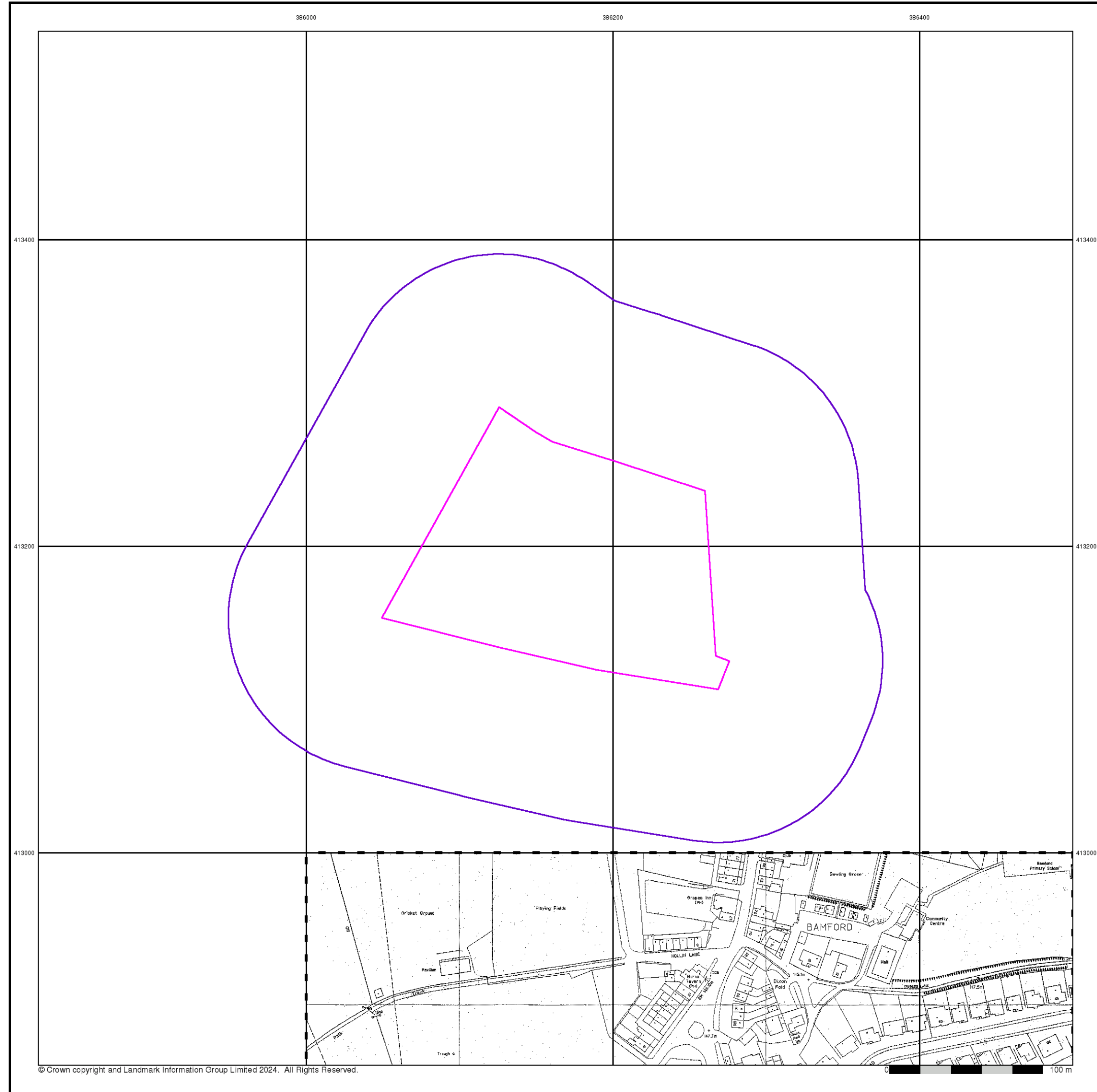
Landmark[®]

INFORMATION GROUP

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

© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

A Landmark Information Group Service v50.0 08-Aug-2024 Page 20 of 22



Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

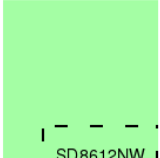
Large-Scale National Grid Data

Published 1994

Source map scale - 1:1,250

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

Map Name(s) and Date(s)



SD8612NW
1994
1:1,250

Historical Map - Segment A13

A21	A22	A23	A24	A25
A16	A17	A18	A19	A20
A11	A12	A13	A14	A15
A6	A7	A8	A9	A10
A1	A2	A3	A4	A5



Order Details

Order Number:	355152863_1_1
Customer Ref:	10/2529
National Grid Reference:	386170, 413190
Slice:	A
Site Area (Ha):	2.54
Search Buffer (m):	100

Site Details

Bamford Mews, Norden Road, ROCHDALE, OL11 5NX

Landmark[®]

INFORMATION GROUP

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

A Landmark Information Group Service v50.0 08-Aug-2024 Page 21 of 22