

Phase 1 Site Investigation
& Preliminary Risk
Assessment

Client: Lidl Great Britain
Ltd

Commercial Street, Risca

Report No: 1357.01.02

February 2025





Executive Summary

Remada Ltd was commissioned by Lidl Great Britain Ltd ('the client') to undertake a Phase 1 Preliminary Risk Assessment for the proposed redevelopment of an existing store at Commercial Street, Risca NP11 6AW. The objectives of this assessment were to present a preliminary conceptual site model to identify plausible pollutant linkages as a preliminary risk assessment and to provide recommendations for subsequent investigation work.

Site Setting

The site occupies an irregular plot to the south-west of B4591 Commercial Street. The site can be divided into two distinct plots, comprising an existing Lidl store and associated car park in the western and northern areas respectively, and scrubland / woodland occupying the southern and eastern areas. The site is divided into two by a metal palisade fence.

Site History

The earliest available historical mapping of 1883 indicates the site to be occupied by a series of fields, with a surface water feature bisecting the site in an approximate north to south-east orientation. Between 1886 and 1901, the northern half of the site had been developed as educational premises and would remain so until circa 1999. The watercourse is no longer shown by 1901. Some changes to the overall layout of these buildings are noted, with the site being labelled as an 'infant school', 'secondary school' and latterly as 'Crosskeys College'. Satellite imagery from 2000 captured the present-day Lidl store under construction.

Geology / Hydrogeology

Published geological maps record that the site is underlain by superficial Alluvium deposits, a Secondary (A) Aquifer and St Maughans Formation bedrock, also designated as a Secondary (A) Aquifer. The site is not located within a groundwater Source Protection Zone.

Mining

The Coal Authority Consultants Mining Reports states that probable unrecorded shallow mining as 'none', with no past underground mining recorded and no mine entries within 100m of the site boundary.

Radon

The site is located in both a Lower Probability Radon Area and an Intermediate Probability Radon Area. However, in both cases, no radon protection measures are necessary in the construction of new dwellings or extensions on-site.

Recommendations

Environmental

The desk study has identified a number of on-site and off-site potential sources of contamination that would require further investigation. The following is recommended:

- Investigation of the lateral and vertical extent of made ground/fill beneath the proposed residential development.
- Collection of soil and groundwater samples from the areas identified above for contaminants of concern; and
- Ground gas monitoring.

Geotechnical

It is recommended that a ground investigation is undertaken to enable preliminary foundation design.

Given the records in the Coal Authority's Consultants Mining Report, it is not recommended that a Coal Mining Risk Assessment (CMRA) be required for the site. No further action is considered necessary at this stage relating to coal mining at and beneath the site.



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





Table 1 Preliminary Conceptual Site Model

FIGURES

Figure 1 Site Location Plan
Figure 2 Existing Site Layout
Figure 3 Proposed Indicative Site Layout

APPENDICES

Appendix A Historical Mapping
Appendix B Envirocheck Mapping
Appendix C Envirocheck Datasheet
Appendix D Coal Authority Consultants Coal Mining Report
Appendix E UXO Risk Assessment

Issue No	Date	Prepared By	Technical Review	Authorised
01	09.01.2025	P Dickinson 	G Jones 	G Jones 
02 Revised proposed site layout	18.02.2025	P Dickinson 	G Jones 	G Jones 



1. INTRODUCTION

Remada Ltd was commissioned by Lidl Great Britain Ltd ('the client') to undertake a Phase 1 Preliminary Risk Assessment for the proposed redevelopment of an existing store at Commercial Street, Risca NP11 6AW, at the location indicated in **Figure 1**.

1.1. Objectives

The objectives of this assessment are as follows:

- to develop a preliminary conceptual model of the site to identify plausible pollutant linkages; and
- to provide recommendations for subsequent investigation work.

1.2. Scope of Work

The scope of work comprised a:

- review of local geological, hydrogeological, ground stability, and environmental data and historical mapping pertaining to the site and surrounding area; and
- identification of potential sources, pathways, and receptors, and development of a preliminary conceptual site model.

The scope of work did not include a site reconnaissance visit.

Due to the study site's positioning within Wales, the scope was also designed in line with the Welsh Land Contamination Working Group's Development of Land Affected by Contamination: A Guide for Developers version 3: May 2017. This guidance represents the culmination of a co-operative effort involving the Welsh Local Government Association (WLGA) and Natural Resources Wales (NRW). For the purpose of this report, any references to the Environment Agency (EA) should be seen as interchangeable with NRW.

1.3. Previous Reports

It is not known if historic reports are available for review.

1.4. Limitations

The comments given in this report and the opinions expressed are based on the information reviewed and observations during site work. However, there may be conditions pertaining to the site that have not been disclosed by this assessment and therefore could not be taken into account.



2. DESK STUDY

2.1. Description of Site

Site Description The site occupies an irregular plot to the south-west of B4591 Commercial Street, as indicated in **Figure 2**. The site can be divided into two distinct plots, comprising an existing Lidl store and associated car park in the western and northern areas respectively, and scrubland / woodland occupying the southern and eastern areas. The site is divided into two by a metal palisade fence.

The Lidl retail store is of single-storey construction, with an overall pitched roof and evidence of a small extension (likely bakery) on the north-eastern façade. The store's delivery ramp is located along the south-eastern façade, whilst the remainder of the northern area is occupied by an asphalt-surfaced car park.

Area of Site Circa 11000 m².

Site Elevation The finished floor level of the existing Lidl store is 45.57m AOD. The topography of the southern half of the site ranges between circa 43.7m AOD along the south-eastern boundary and circa 45.5m AOD flanking onto the store car park in the centre of the site.

National Grid Co-ordinates 323940, (E), 190180 (N)

2.2. Site Setting

The site is situated in a mixed commercial and residential area.

North: Risca Rugby Sports Complex and Bethany Baptist Church bound the site to the north, with mixed commercial, residential and recreational land uses beyond.

East: The B4591 Commercial Street bounds the site to the north-east, with predominantly residential properties beyond. In the eastern area of the site, residential properties directly bound the site to the east, fronting onto Commercial Street.

South: A Telephone Exchange is present immediately to the south of the site, with the River Ebbw beyond.

West: The River Ebbw is present adjacent to the western boundary, with the A467 and Danycraig Cemetery beyond.

2.3. Site History

A summary of the historical land use of the site and surrounding area follows.

Map Date	Description of on-site activities
1883	The earliest available mapping of 1883 indicates the site to be predominantly occupied by agricultural / open land and is devoid of structures. The Afon Ebwy / River Ebbw is indicated to encroach along the south-western boundary. A surface water feature is indicated to bisect the site in an approximately north to south-east orientation.



1886	Similar to above.
1901	There has been significant development of the northern area of the site, with several irregular shaped buildings now labelled as 'Schools'. The former watercourse bisecting the southern area of the is no longer shown.
1902	Similar to above.
1920	Two of the previously shown buildings fronting onto Commercial Street are no longer shown; likely demolished. One building has been retained in the north of the site and is now labelled as 'Infant School', whilst a second (unlabelled) building is present in the northern corner.
1922	Similar to above.
1938	The 1:10,560 scale mapping indicates a second, larger School building has been constructed, fronting onto Commercial Street in the north-eastern area of the site.
1953	Similar to above.
1965	The 1:2500 scale mapping records the northern area of the site as 'Pontymister Secondary School (Upper School)', comprising the two large aforementioned buildings along with associated outbuildings and yards / playing areas. A small, rectangular, unlabelled building is present in the south-eastern area of the site.
1971	Similar to above.
1982	The education premises occupying the northern area of the site is now labelled as 'Crosskeys College (Annexe)' although the layout appears unchanged to the previous mapping.
1986	Similar to above.
1993	Similar to above.
1994	Similar to above.
1999	Similar to above.
2000	The satellite imagery of 2000 shows the northern half of the site to be in the process of redevelopment, with the existing Lidl retail store building in-situ and the associated car park in the process of being constructed. All previous College buildings present on-site have been demolished as part of the redevelopment. Likewise, the unlabelled building in the south-eastern area of the site is also no longer shown.

Map Date

Description of off-site activities

1883	The earliest available historic mapping shows a road following the same alignment as the present-day Commercial Street to be present immediately to the east of the site, with the River Ebbw located immediately to the west, flowing towards the south-east. Residential terraced properties associated with the
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community of Pont-y-mister are present from circa 20m north and 40m east at their nearest points. Bethany Chapel (a Baptist place of worship) is present immediately to the north of the site.

1886	Similar to above.
1901	Further expansion of Pont-y-mister has taken place, with residential properties now fronting onto Commercial Street adjacent to the site's eastern boundary. A Drill Hall has been established from circa 60m east, whilst a Police Station has been erected circa 40m north.
1920	Similar to above, although the former Drill Hall to the east is now labelled as a Church.
1938	Similar to above.
1953	Similar to above.
1965	A Rugby Football Ground has been established from 20m north of the study site, whilst a commercial Garage is now present from 60m east of the site.
1971	Similar to above.
1982	A small 'Works' has been established from 40m north of the site, whilst a Telephone Exchange has been established on land to the south of the study site, bounded by the River Ebbw to the south and west. An Electricity Sub-Station has been installed circa 5m south of the site's southern boundary, whilst a 'Workshop' is present circa 30m south. The garage formerly labelled to the east of the site is no longer shown.
1986	Similar to above.
1993	Similar to above.
1994	Similar to above.
2000	The satellite imagery of 2000 shows the erection of a large rectangular building between the Rugby Footbal Ground's pitch and the site's northern boundary. No significant further changes are recorded on subsequent mapping.

2.4. Proposed Site Use

It is understood that the proposed site use for the existing Lidl store area will be for predominantly residential end-use with associated parking and access road. A retail unit is indicated to be present in the north of the site, fronting onto Commercial Street, with residential properties above. A proposed indicative site layout plan is presented as **Figure 3**. The southern half of the site remains unchanged.

2.5. Environmental Setting

2.5.1. Made Ground and Superficial Geology

Information from the environmental report and the British Geological Survey (BGS) 1:50,000 scale map Sheet 249 (Newport) does not indicate any artificial ground either on, or in the immediate vicinity of, the study site. Artificial Ground is a term used by the BGS for those areas where the ground surface has been significantly modified by human activity, and includes made ground, worked ground, infilled ground, landscaped ground and disturbed ground. It is not expected to be encountered according to



the mapping; however, taking consideration of the site's historic use and satellite imagery it is likely that made ground will be encountered underlying the site.

The superficial deposits underlying the site are indicated to comprise Alluvium. The BGS describe these as typically comprising '*normally soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel. A stronger, desiccated surface zone may be present.*'

The superficial deposits are designated as Secondary A Aquifer (ref Envirocheck **Appendix B**).

2.5.2. Bedrock Geology

The bedrock directly underlying the site is formed of the St Maughans Formation. The BGS describe this lithology as typically comprising '*interbedded purple, brown and green sandstones and red mudstones with intraformational conglomerates containing calcrete clasts.*'

The bedrock is also designated as a Secondary A Aquifer (ref Envirocheck **Appendix B**).

2.5.3. Historic BGS Borehole Records

There are no pertinent historic BGS borehole records within a relevant distance of the site.

2.5.4. Groundwater Abstractions

There are two (2 No.) groundwater abstraction points within 2km of the study site. The nearest is located 348m south and pertains to the abstraction from a borehole at Pontymister Steelworks for the purpose of evaporative cooling. The other abstraction record pertains to dewatering at Machen Quarry, located 862m to the south-west (ref Envirocheck **Appendix C**).

2.5.5. Source Protection Zones

The site is not located within a groundwater Source Protection Zone (ref Envirocheck **Appendix B**).

2.5.6. Surface Water Features and Abstractions

The nearest surface water feature is indicated to be the River Ebbw, located 3m to the south-west of the study site at its nearest point. However the Envirocheck mapping also records a surface watercourse bisecting the central area of the site orientated approximately NE - SW (ref Envirocheck **Appendix B**).

There is one (1 No.) surface water abstraction point located within 2km of the study site. This is located 1991m to the east and pertains to the direct potable water supply by Dwr Cymru Cyfyngedig in Rogerstone, Newport (ref Envirocheck **Appendix C**).

2.5.7. Flooding Vulnerability

The site is located in an area benefitting from flood defences and is located with a Zone 3 are of Flooding from Rivers or Sea without Defences. The site is also recorded to be located in an area with the potential for groundwater flooding to occur at the surface (ref Envirocheck **Appendix B**).

2.5.8. Ground Stability

The Envirocheck Report (**Appendix C**) provides the following information regarding ground stability.

Collapsible Deposits	There is a 'no' hazard rating from collapsible rocks.
Compressible Ground	There is a 'moderate' rating from compressible ground.
Rock Solubility / Dissolution	There is a 'no hazard' rating from rock solubility at the site.
Landslides	There is a 'very low' hazard rating from landslides.



Running Sand	There is a 'low' hazard rating for running sands.
Shrinking / Swelling of Clay	There is a 'very low' hazard rating for shrinkage / swelling of clay.

2.5.9. Radon

The site is located in both a Lower Probability Radon Area (less than 1% of dwellings are at or above the Action Level) and an Intermediate Probability Radon Area (1% to 3% of dwellings are at or above the Action Level). However, in both cases, no radon protection measures are necessary in the construction of new dwellings or extensions on-site (ref Envirocheck **Appendix C**).

2.5.10. Environmentally Sensitive Site Designations

The nearest sensitive land use is recorded as an area of Ancient and Semi-Natural Woodland, located 394m west of the site at its nearest point (ref Envirocheck **Appendix C**).

2.6. Industrial Land Use

There are nineteen (19 No.) contemporary trade directory entries locations within 250m of the site. The nearest include car breakers & dismantlers (from 8m NE), car body repairers (28m SE), joiners and furniture repairers, road haulage services (113m SE) and a laundrette (inactive) located 175m SE (ref Envirocheck **Appendix B**).

There is one fuel station entry within 250m of the study site. This is located 68m to the south on Newport Road and is recorded as being open (ref Envirocheck **Appendix B**).

2.7. Environmental Permits, Incidents & Registers

There are two (2 No.) permitted process entry within 250m of the study site. The nearest is a Local Authority Pollution Prevention and Controls (LAPPC) located 1m north-east for Glynwood Brickhouse and permitted Iron, steel and non-ferrous metal foundry processes, although the authorisation has been revoked. This record is considered potentially erroneous, based on the historical mapping detailed in **Section 2.3**. The other LAPPC pertains to Tesco Petrol Station, 70m south of the site (ref Envirocheck **Appendix C**).

There is one (1 No.) recorded pollution incident entry located on-site. This incident occurred at Risca C and P Mechanical, where an unknown pollutant was discharged on 28th September 1991, although the receiving water is not recorded. The incident was recorded as being a Category 3 (Minor Incident) (ref Envirocheck **Appendix C**).

2.8. Landfill & Waste Sites

The Envirocheck search has included a check on the Local Authority's landfill coverage at the site. Caerphilly County Borough Council has supplied landfill data, although Newport County Borough Council has no data to supply.

There is one (1 No.) historical landfill site located within 500m of the study site. This is located 87m south, with the deposited waste including inert, industrial, commercial, household and special waste types. The input dates are not provided (ref Envirocheck **Appendix C**).

There are three (3 No.) licenced waste management facilities recorded within 500m of the study site. The nearest is located 260m south-east and pertains to the processing of end of life vehicles, with the permit becoming effective in 2018 (ref Envirocheck **Appendix C**).



2.9. Mining

The site is located in a Mining Remediation Authority (formerly Coal Authority) Reporting Area, and the Envirocheck report indicates it is located in 'an area which may be affected by coal mining' activity' (ref Envirocheck **Appendix C**).

Consequently, a Consultants Coal Mining Report (ref: 51003470868001) has been obtained from the Mining Remediation Authority and is included as **Appendix D**. The pertinent findings of this Report are reproduced below:

Past Underground Mining

No past mining recorded.

Probable Unrecorded Shallow Mining

None

Spine Roadways at Shallow Depth

No spine roadway recorded at shallow depth.

Mine Entries (refer to plan within Coal Authority Report)

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

None available.

Outcrops

No outcrops recorded

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast Mines

None recorded within 500m of the enquiry boundary

Coal Authority Managed Tips

None recorded within 500m of the enquiry boundary

Mine Gas

None recorded within 500m of the enquiry boundary

2.10. Unexploded Ordnance (UXO) Risk

A non-specialist UXO screening exercise was initially carried out for the site by considering (a) any evidence of UK defence activities on or near the site evident from the gathered desk study information and (b) the unexploded aerial-delivered ordnance (UXO) regional risk mapping produced by Zetica.

There is no indication of former military use from the desk study.

Furthermore, the freely available Zetica UXO risk mapping (presented in **Appendix E**) indicates the site to be located within an area where the bomb risk is 'Low'. This is defined by Zetica as an area having an indicated bombing density of 15 bombs per 1000 acres or less during the Second World War.



3. PRELIMINARY RISK ASSESSMENT

3.1. Introduction

A Preliminary Risk Assessment (PRA) has been completed for the site. This PRA identifies the potential sources, pathways, and receptors for the site, in order to assess the potential risks posed by identified potential sources to human health and / or controlled waters receptors. When required, the viability of the Source-Pathway-Receptor pollutant linkage must be evaluated further to determine whether an actual risk is present.

3.2. Potential Sources

On-site Historical

- General Made Ground associated with historic development
- Infilled watercourse
- Schools Complex and associated outbuildings & yards.

On-site Current

- Operational Lidl store and associated car parking

Off-site Historical

- Residential properties and associated outbuildings
- Garage
- Works and Workshops
- Laundrette.

Off-site Current

- Residential properties and associated outbuildings
- Telephone Exchange
- Electricity Sub-station
- Rugby Football Club
- Fuel Filling Station.

3.3. Potential Contaminants of Concern (PCOCs)

- Metals
- Asbestos (associated with demolition and redevelopment of the existing site).
- Total petroleum hydrocarbons (TPH)
- Polycyclic aromatic hydrocarbons (PAH).
- Ground gases (carbon dioxide and methane)
- Polychlorinated Biphenyls (PCBs)
- Radon gas

3.4. Potential Receptors

Human Health

- On-site residents.
- On-site store staff.
- Construction workers.



- On-site general public and visiting staff (such as contractors, including those conducting excavation works).
- Neighbouring residents

Controlled Waters

- Secondary (A) Aquifer in Superficial Deposits
- Secondary (A) Aquifer in bedrock;
- River Ebbw.

3.5. Preliminary Conceptual Model

The Preliminary Conceptual Site Model of the site has been prepared and illustrates the potentially active pollutant linkages. A pollutant linkage is present only when a source, pathway and receptor exist together.

- A **source** is a substance that has potential to cause harm or adversely affect human health, water resources or the wider environment.
- A **pathway** is the route or means by which a source of contamination can migrate resulting in exposure to a receptor.
- A **receptor** is something that could be adversely affected by a contaminant such as human health, an ecological system, animals or crops, buildings or controlled waters.

The Preliminary Conceptual Site Model is presented in **Table 1**.



Potential Source Areas	Potential Contaminant of Concern	Pathways	Potential Receptor	Exposure Route (Human unless otherwise stated)	Potential Identified Linkage (unmitigated)	Findings of Ground investigation	Risk (Unmitigated)	Proposed Remediation (Mitigation) Measures	Residual Risk Estimation				
<u>On-site Sources</u>				<ul style="list-style-type: none"> Direct Soil Ingestion 	<ul style="list-style-type: none"> Yes 	To be assessed (TBA)	Potential risk	(To be assessed (TBA)	(To be assessed (TBA)				
General Made Ground	Asbestos / Metals As, Be, Cd, Cu, Cr (VI), Cr (III), Hg, Ni, Se, Va, Zn, Boron, TPH /PAH, PCBs	Disturbance due to construction plant causing direct contact, dusts, vapours.	Occupants of the development / building fabric	<ul style="list-style-type: none"> Indoor Dust ingestion 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA				
Infilled watercourse				<ul style="list-style-type: none"> Skin Contact with Soils 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA				
Schools complex				<ul style="list-style-type: none"> Skin Contact with Dust 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA				
Lidl store and associated car park.				<ul style="list-style-type: none"> Inhalation of Outdoor Dust 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA				
<u>Off-site Sources</u>		Direct Contact with occupants of the proposed development	Inhalation of fibres / vapours / gases by occupants of proposed development	Adjacent residents during construction	<ul style="list-style-type: none"> Ingestion of home grown produce 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA			
Residential housing					<ul style="list-style-type: none"> Inhalation of Outdoor Vapours 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA			
Garage					<ul style="list-style-type: none"> Inhalation of Indoor Vapours 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA			
Works & Workshops					<ul style="list-style-type: none"> Inhalation of ground gas 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA			
Laundrette					<ul style="list-style-type: none"> Inhalation of radon gas 	<ul style="list-style-type: none"> Yes 	Lower & Intermediate Probability Areas	Negligible	None	Negligible			
Telephone Exchange					<ul style="list-style-type: none"> Ingestion via permeated water supply pipework 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA			
Electricity Sub Station					<ul style="list-style-type: none"> Direct contact with Secondary (A) Aquifer in Superficial Deposits 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA			
Rugby Football Club					Leachate		Secondary Aquifers	<ul style="list-style-type: none"> In-direct contact with Secondary (A) Aquifer in bedrock 	<ul style="list-style-type: none"> Yes 	As above	Potential risk	TBA	TBA
Fuel Filling Station								River Ebbw					

Table 1: Preliminary Conceptual Site Model

Direct contact with subsurface soil and/or groundwater during redevelopment works are not assessed as part of the CSM. It is considered that risks to workers will be managed as part of any the redevelopment works at the site through the application of health and safety procedures, where required.



4. CONCLUSIONS & RECOMMENDATIONS

4.1. Conclusions

The site occupies an irregular plot to the south-west of B4591 Commercial Street. The site can be divided into two distinct plots as presented in **Figure 2**, comprising an existing Lidl store and associated car park in the western and northern areas respectively, and scrubland / woodland occupying the southern and eastern areas. The site is divided into two by a metal palisade fence.

It is understood that the proposed site use for the existing Lidl store area will be for predominantly residential end-use with associated parking and access road. A retail unit is indicated to be present in the north of the site, fronting onto Commercial Street, with residential properties above. A proposed indicative site layout plan is presented as **Figure 3**. The southern half of the site remains unchanged.

The earliest available historical mapping of 1883 indicates the site to be occupied by a series of fields, with a surface water feature bisecting the site in an approximate north to south-east orientation. Between 1886 and 1901, the northern half of the site had been developed as educational premises and would remain so until circa 1999. The watercourse is no longer shown by 1901. Some changes to the overall layout of these buildings are noted, with the site being labelled as an 'infant school', 'secondary school' and latterly as 'Crosskeys College'. Satellite imagery from 2000 captured the present-day Lidl store under construction.

Published geological maps record that the site is underlain by superficial Alluvium deposits, a Secondary (A) Aquifer and St Maughans Formation bedrock, also designated as a Secondary (A) Aquifer. The site is not located within a groundwater Source Protection Zone.

The Coal Authority Consultants Mining Reports states that probable unrecorded shallow mining as 'none', with no past underground mining recorded and no mine entries within 100m of the site boundary.

The site is located in both a Lower Probability Radon Area (less than 1% of dwellings are at or above the Action Level) and an Intermediate Probability Radon Area (1% to 3% of dwellings are at or above the Action Level). However, in both cases, no radon protection measures are necessary in the construction of new dwellings or extensions on-site.

4.2. Recommendations

Environmental

The desk study has identified a number of on-site and off-site potential sources of contamination that would require further investigation. The following is recommended:

- Investigation of the lateral and vertical extent of made ground/fill beneath the proposed residential development.
- Collection of soil and groundwater samples from the areas identified above for contaminants of concern; and
- Ground gas monitoring.

In accordance with CIRIA C665 the monitoring period should comprise not less than six visits for a proposed residential development and should cover the "worst case" scenario which would occur during falling atmospheric pressure and, in particular, weather conditions such as rainfall and frost.



Geotechnical

It is recommended that a ground investigation is undertaken to enable preliminary foundation design. Given the records in the Coal Authority's Consultants Mining Report, it is not recommended that a Coal Mining Risk Assessment (CMRA) be required for the site. No further action is considered necessary at this stage relating to coal mining at and beneath the site.



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STUDY LIMITATIONS

IMPORTANT. This section should be read before reliance is placed on any of the information, opinions, advice, recommendations or conclusions contained in this report.

1. This report has been prepared by Remada, Ltd with all reasonable skill, care and diligence within the terms of the Appointment and with the resources and manpower agreed with (the 'Client'). Remada does not accept responsibility for any matters outside the agreed scope.

2. This report has been prepared for the sole benefit of the Client unless agreed otherwise in writing.

3. Unless stated otherwise, no consultations with authorities or funders or other interested third parties have been carried out. Remada is unable to give categorical assurance that the findings will be accepted by these third parties as such bodies may have published, more stringent objectives. Further work may be required by these parties.

4. All work carried out in preparing this report has used, and is based on, Remada's professional knowledge and understanding of current relevant legislation. Changes in legislation or regulatory guidance may cause the opinion or advice contained in this report to become inappropriate or incorrect. In giving opinions and advice pending changes in legislation, of which Remada is aware, have been considered. Following delivery of the report Remada has no obligation to advise the Client or any other party of such changes or their repercussions.

5. This report is only valid when used in its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report.

6. Whilst this report and the opinions made are to the best of Remada's belief, Remada cannot guarantee the accuracy or completeness of any information provided by third parties.

7. This report has been prepared based on the information reasonably available during the project programme. All information relevant to the scope may not have received.

8. This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of changes in the condition of the site since the time of the investigation.

9. The content of this report represents the professional opinion of experienced environmental consultants. Remada does not provide specialist legal or other professional advice. The advice of other professionals may be required.

10. Where intrusive investigation techniques have been employed they have been designed to provide a reasonable level of assurance on the conditions. Given the discrete nature of sampling, no investigation technique is capable of identifying all conditions present in all areas. In some cases the investigation is further limited by site operations, underground obstructions and above ground structures. Unless otherwise stated, areas beyond the boundary of the site have not been investigated.

11. If below ground intrusive investigations have been conducted as part of the scope, service tracing for safe location of exploratory holes has been carried out. The location of underground services shown on any drawing in this report has been determined by visual observations and electromagnetic techniques. No guarantee can be given that all services have been identified. Additional services, structures or other below ground obstructions, not indicated on the drawing, may be present on site.

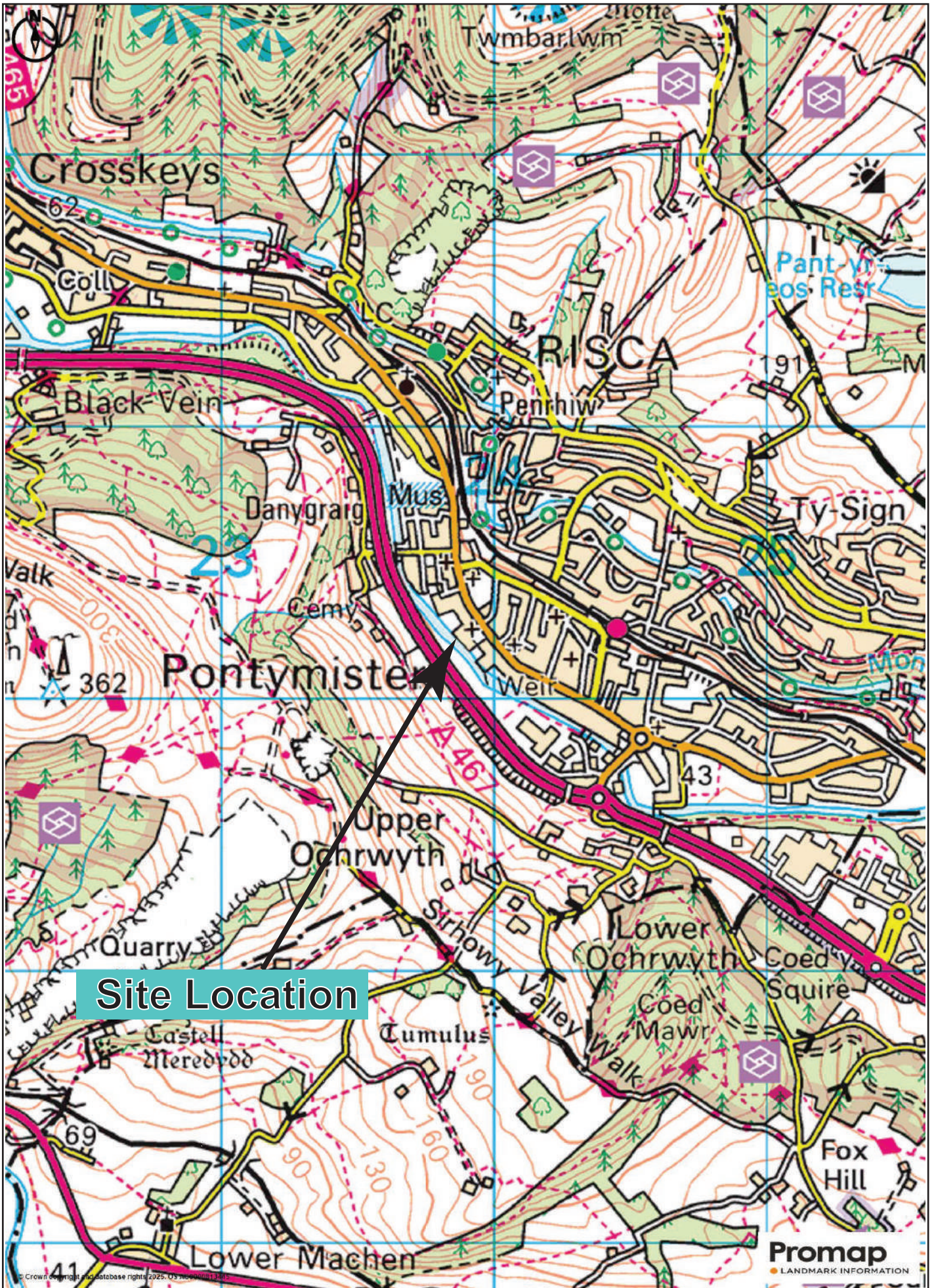
12. Unless otherwise stated the report provides no comment on the nature of building materials, operational integrity of the facility or on any regulatory compliance issues.

13. Unless otherwise stated, samples from the site (soil, groundwater, building fabric or other samples) have NOT been analysed or assessed for waste classification purposes.





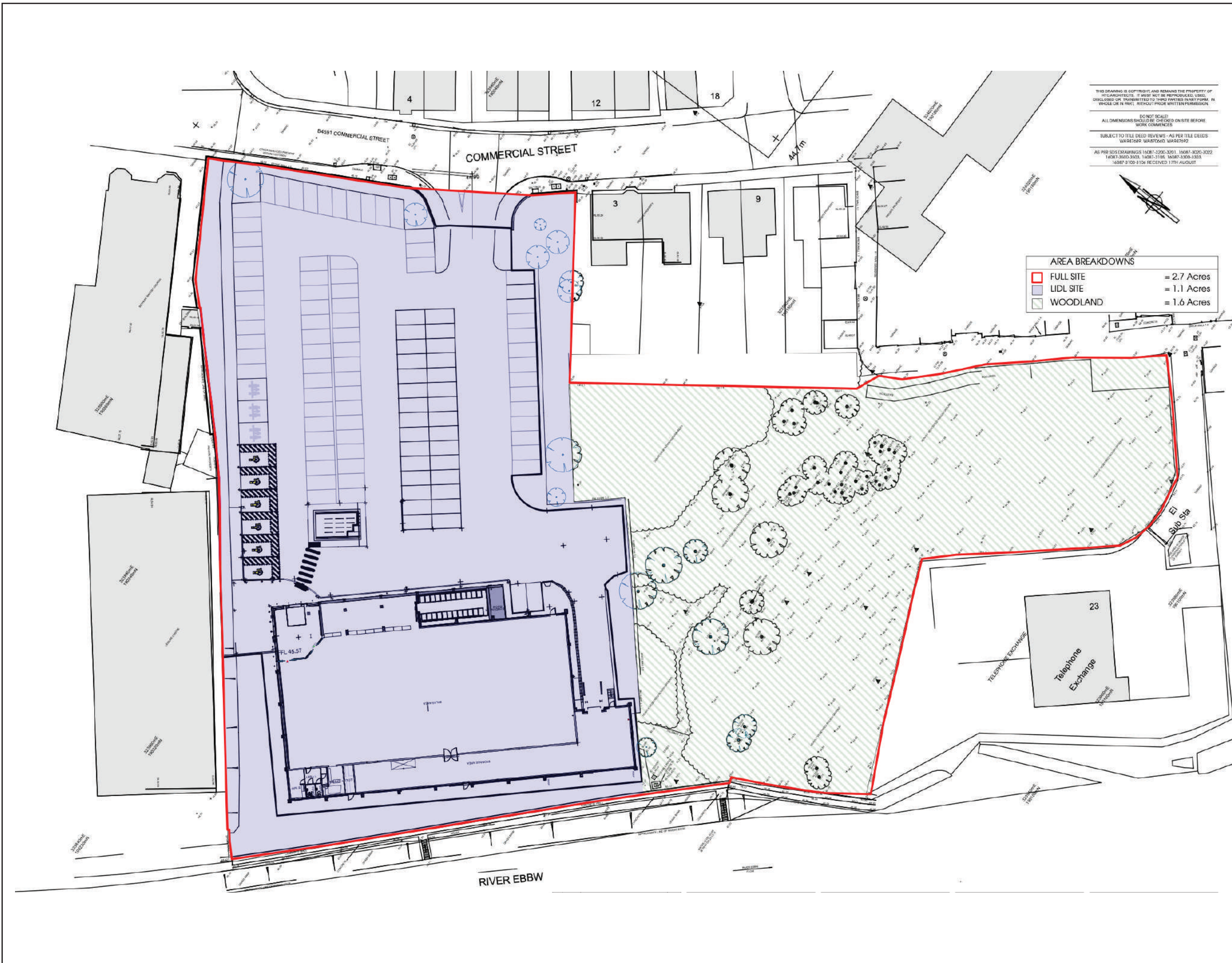
FIGURES

- | | |
|----------|---------------------------------|
| Figure 1 | Site Location Plan |
| Figure 2 | Existing Site Layout |
| Figure 3 | Proposed Indicative Site Layout |



Site Location

Notes	Revision	Approved	Date	Project Title	Scale	Drawn	Size
				Existing Lidl Risca store	as shown	PD	A4
				Drawing Title	Date	Job No.	Figure No.
				Site Location Plan	02.01.25	1357	01
			Client	 			
			Lidl Great Britain Ltd				



Notes

Existing site layout reproduced from client's supplied HTC Architects' Existing Site Plan with Title Deeds drawing, ref: 2966_F411 Rev B dated August 2023.

Revision	Approved	Date

Project Title
Commercial Street, Risca

Drawing Title
Figure 2: Existing Site Layout Plan

Client
Lidl Great Britain Ltd 

Scale	Drawn	Size
as shown	PD	A4
Date	Job No.	Figure No.
02.01.25	1357	02





Notes

Proposed site layout reproduced from client's supplied HTC Architects' GA Illustrative Site Layout, drawing ref: 2966_P411 Rev B, dated August 2024.

The proposed site layout plan presented here is indicative only and may be subject to change following publication of Remada's Phase 1 report.

Revision	Approved	Date

Project Title
Commercial Street, Risca

Drawing Title
Figure 3: Proposed Indicative Site Layout Plan

Client
Lidl Great Britain Ltd 

Scale	Drawn	Size
as shown	PD	A4
Date	Job No.	Figure No.
18.02.25	1357	03



APPENDIX A

1:2500 & 1:10000 Scale Historical Mapping

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

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

1:10,000 Raster Mapping

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

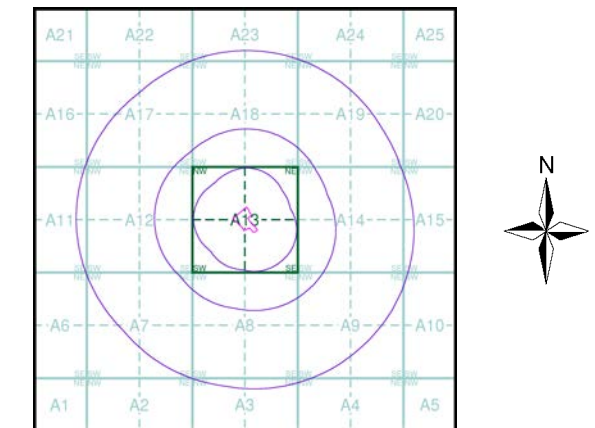
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Monmouthshire	1:10,560	1886	2
Monmouthshire	1:10,560	1902	3
Monmouthshire	1:10,560	1922	4
Monmouthshire	1:10,560	1938	5
Monmouthshire	1:10,560	1948 - 1953	6
Ordnance Survey Plan	1:10,000	1964 - 1965	7
Ordnance Survey Plan	1:10,000	1969	8
Ordnance Survey Plan	1:10,000	1971 - 1972	9
Ordnance Survey Plan	1:10,000	1982 - 1984	10
Ordnance Survey Plan	1:10,000	1991 - 1993	11
10K Raster Mapping	1:10,000	1999	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2024	14

Historical Map - Slice A



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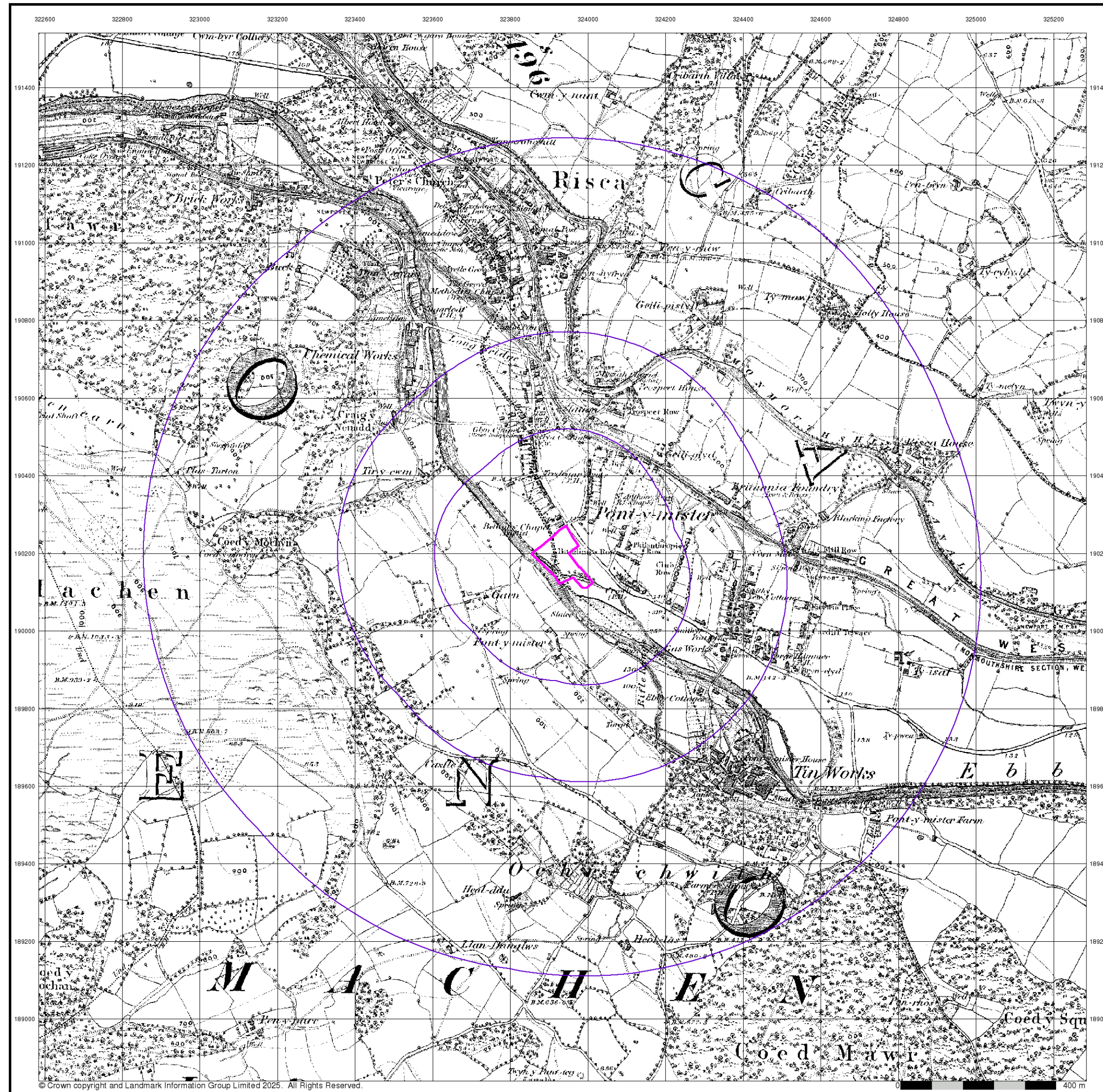
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 Slice: A
 Site Area (Ha): 1.12
 Search Buffer (m): 1000

Site Details

Lidl Great Britain Ltd, 1, Commercial Street, Risca, NEWPORT, NP11 6AW

Landmark
 INFORMATION GROUP

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



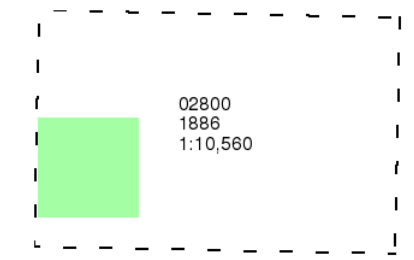
Monmouthshire

Published 1886

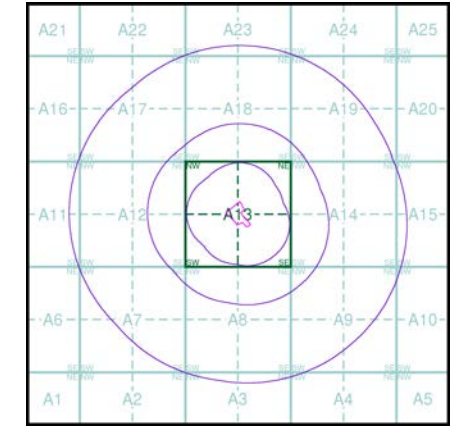
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps.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

Map Name(s) and Date(s)



Historical Map - Slice A

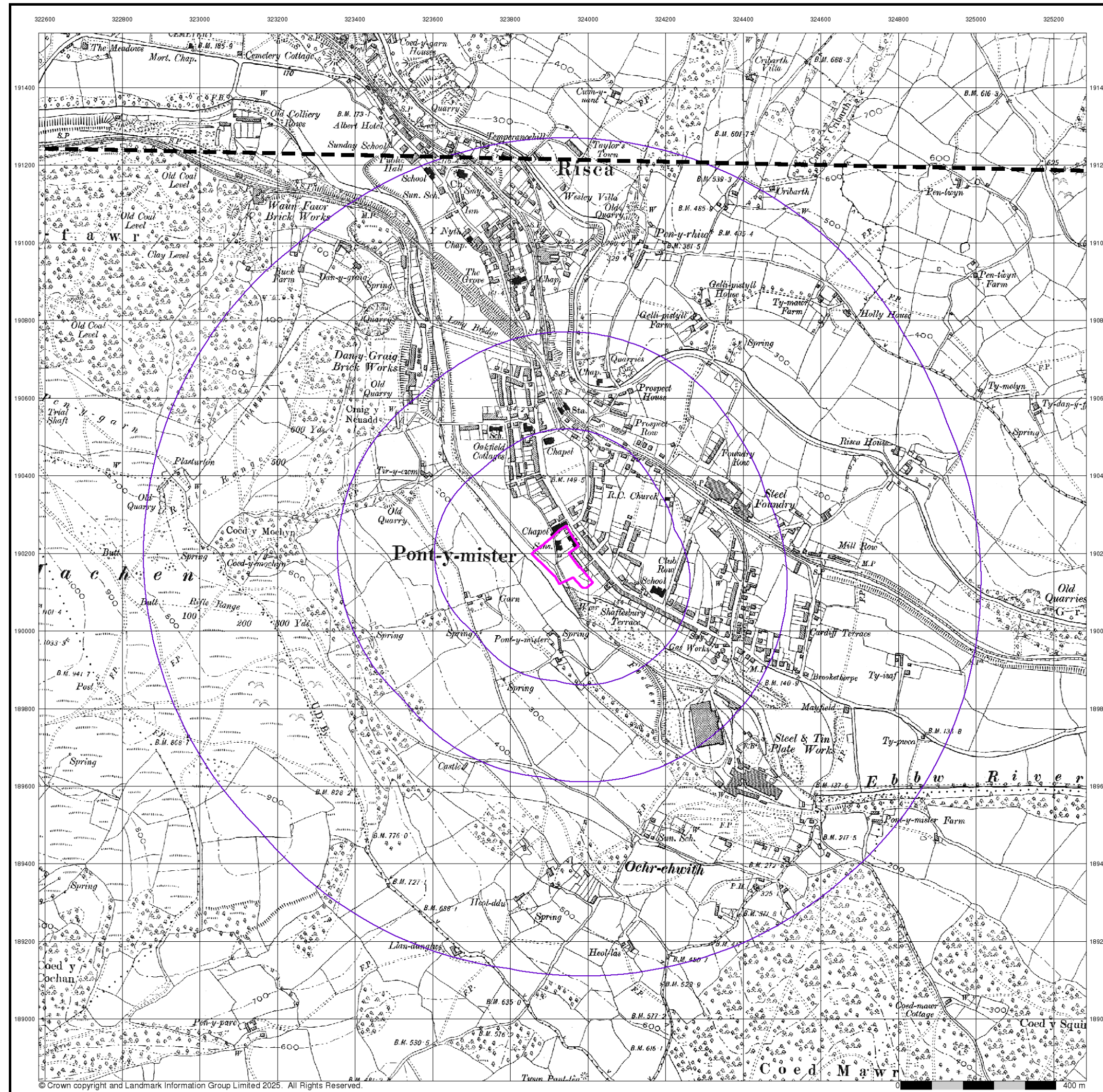


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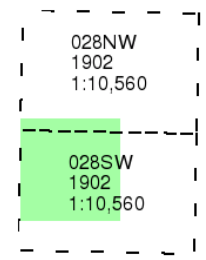
Lidl Great Britain Ltd, 1, Commercial Street, Risca, NEWPORT, NP11 6AW



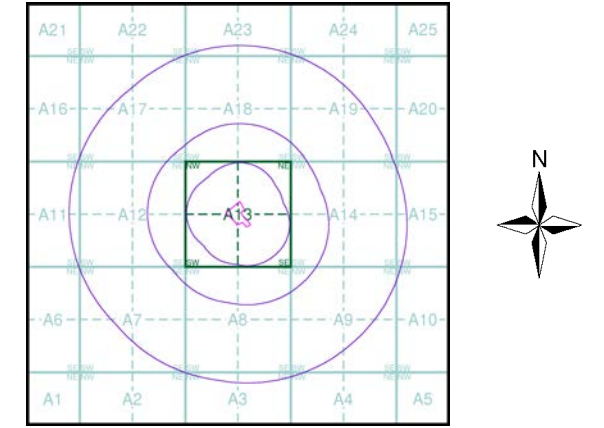
Monmouthshire
Published 1902
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



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Site Details

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Monmouthshire

Published 1922

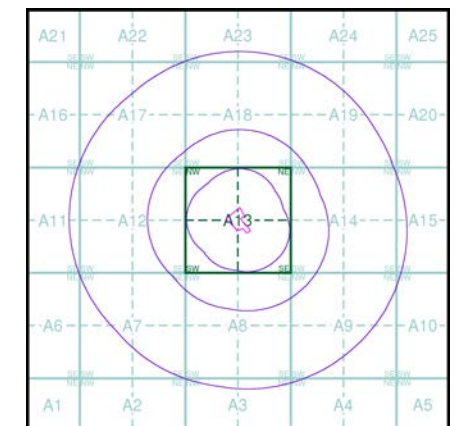
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Map Name(s) and Date(s)

028NW	1922	1:10,560
028SW	1922	1:10,560

Historical Map - Slice A

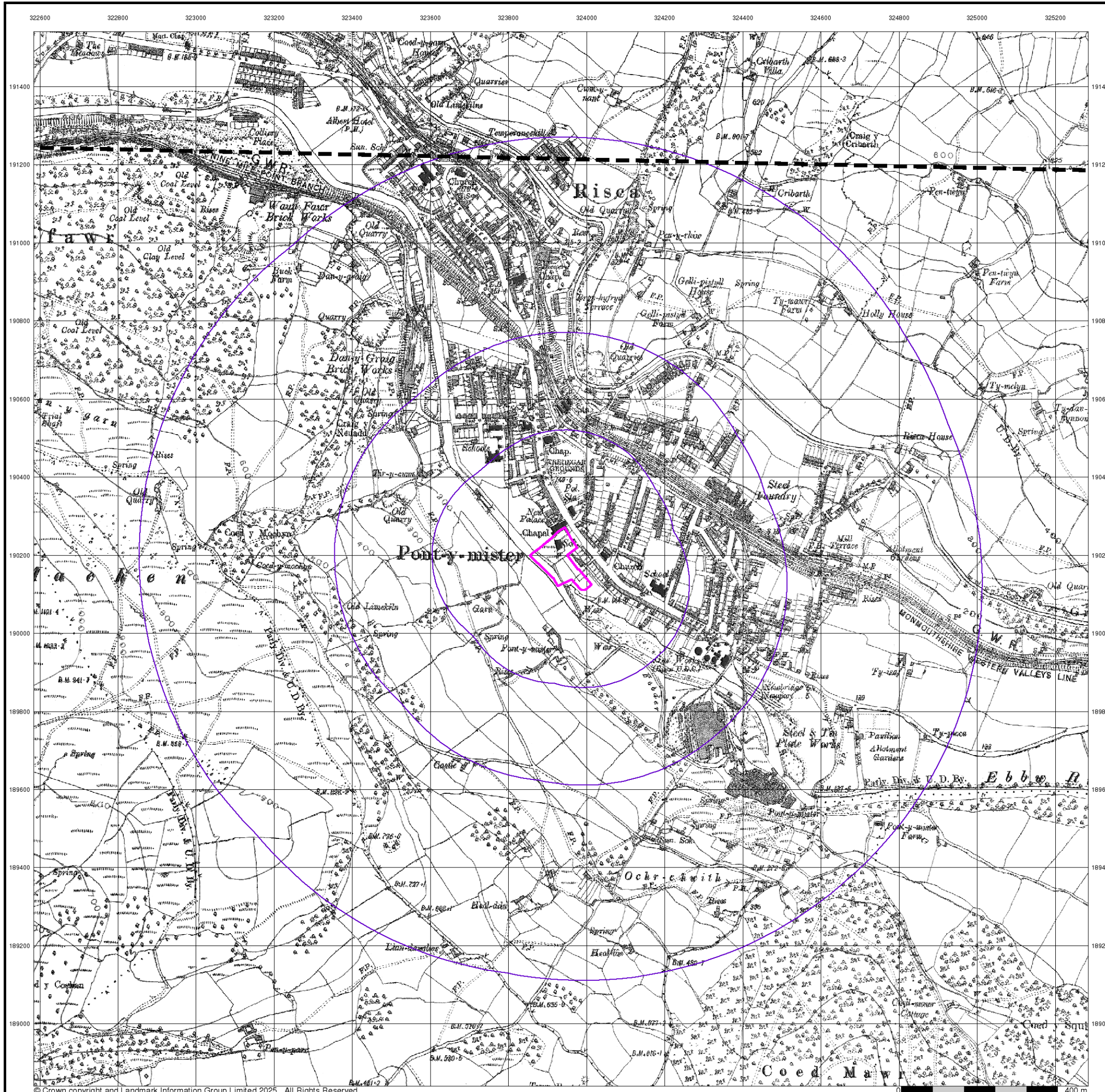


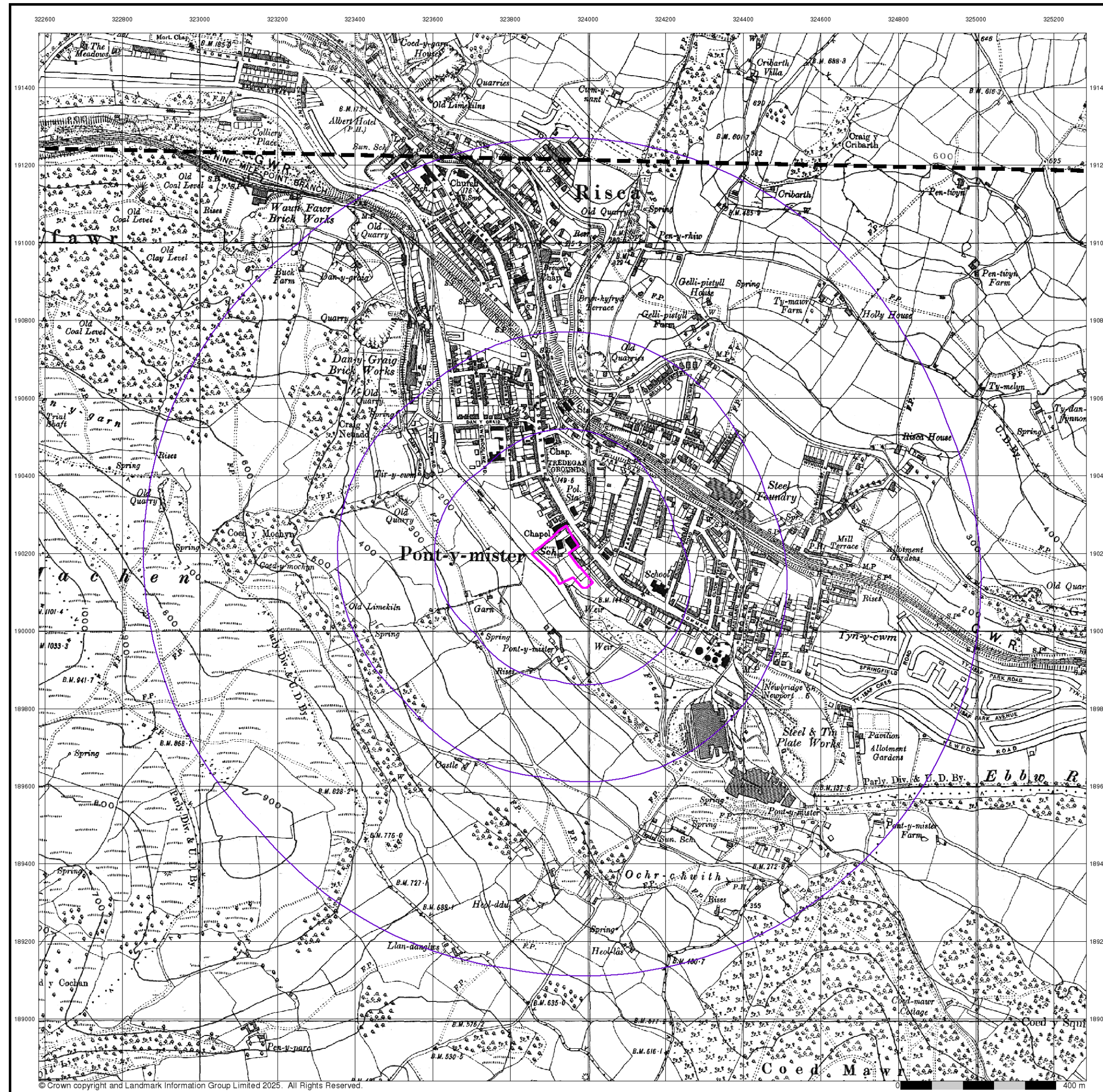
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Site Details

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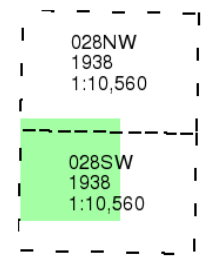




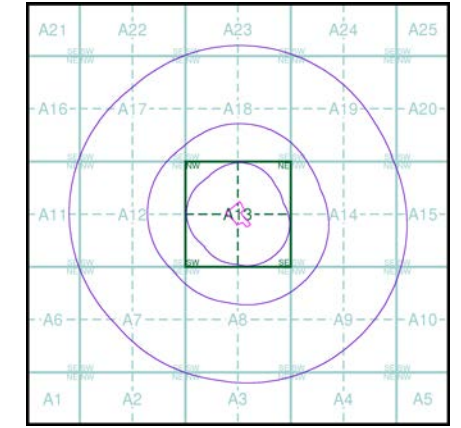
Monmouthshire
Published 1938
Source map scale - 1:10,560

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Map Name(s) and Date(s)

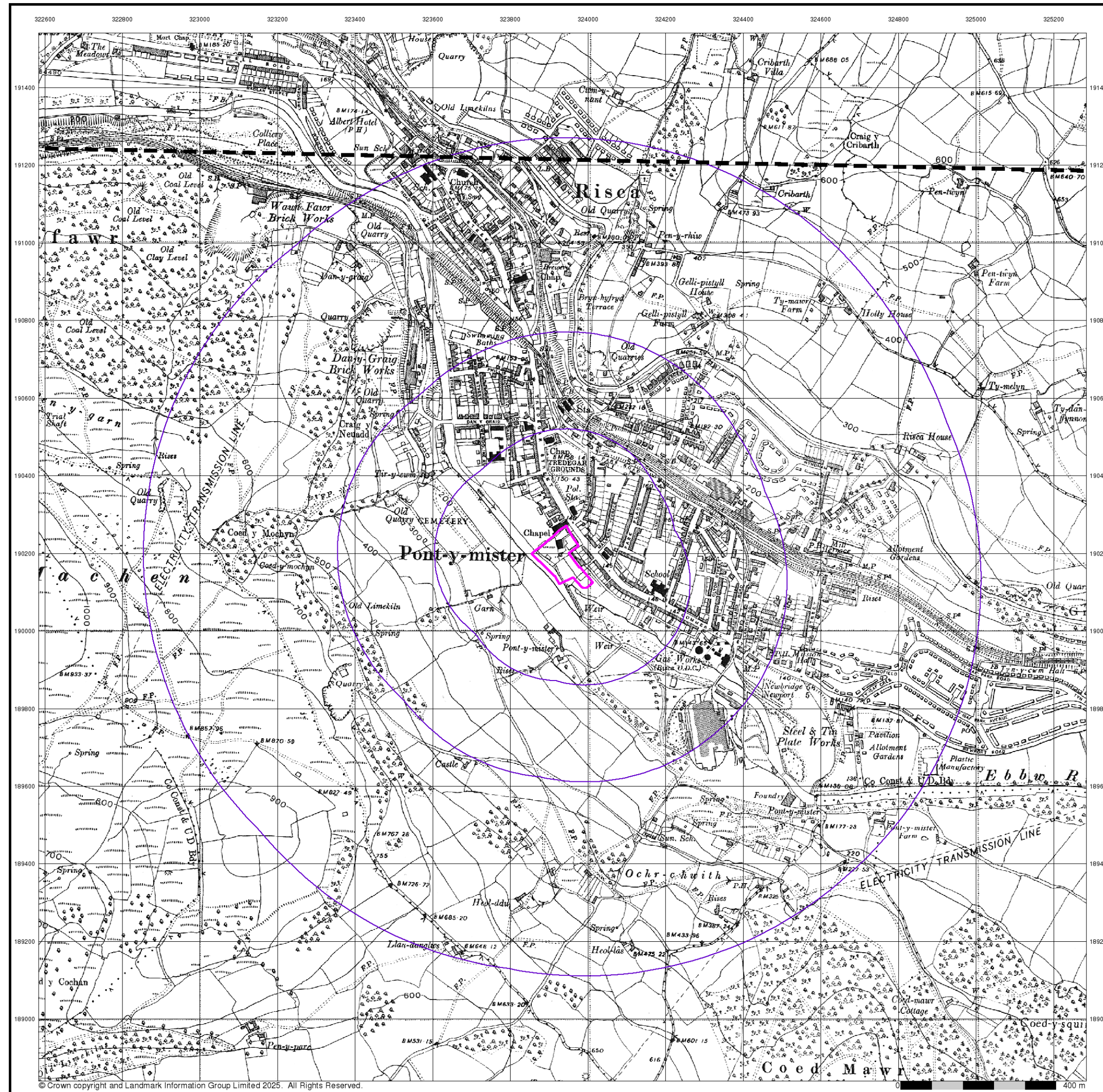


Historical Map - Slice A



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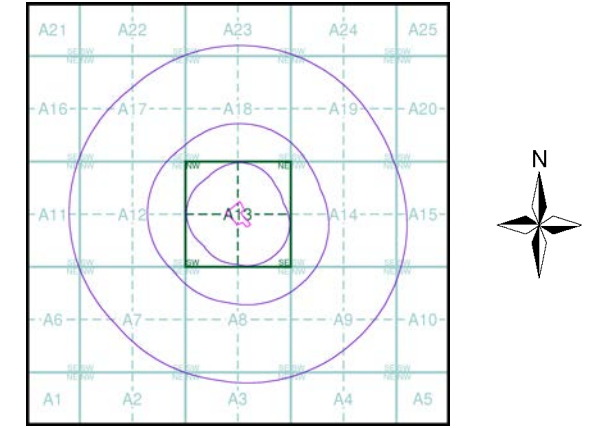
Monmouthshire
Published 1948 - 1953
Source map scale - 1:10,560

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Map Name(s) and Date(s)

028NW	1948	1:10,560
028SW	1953	1:10,560

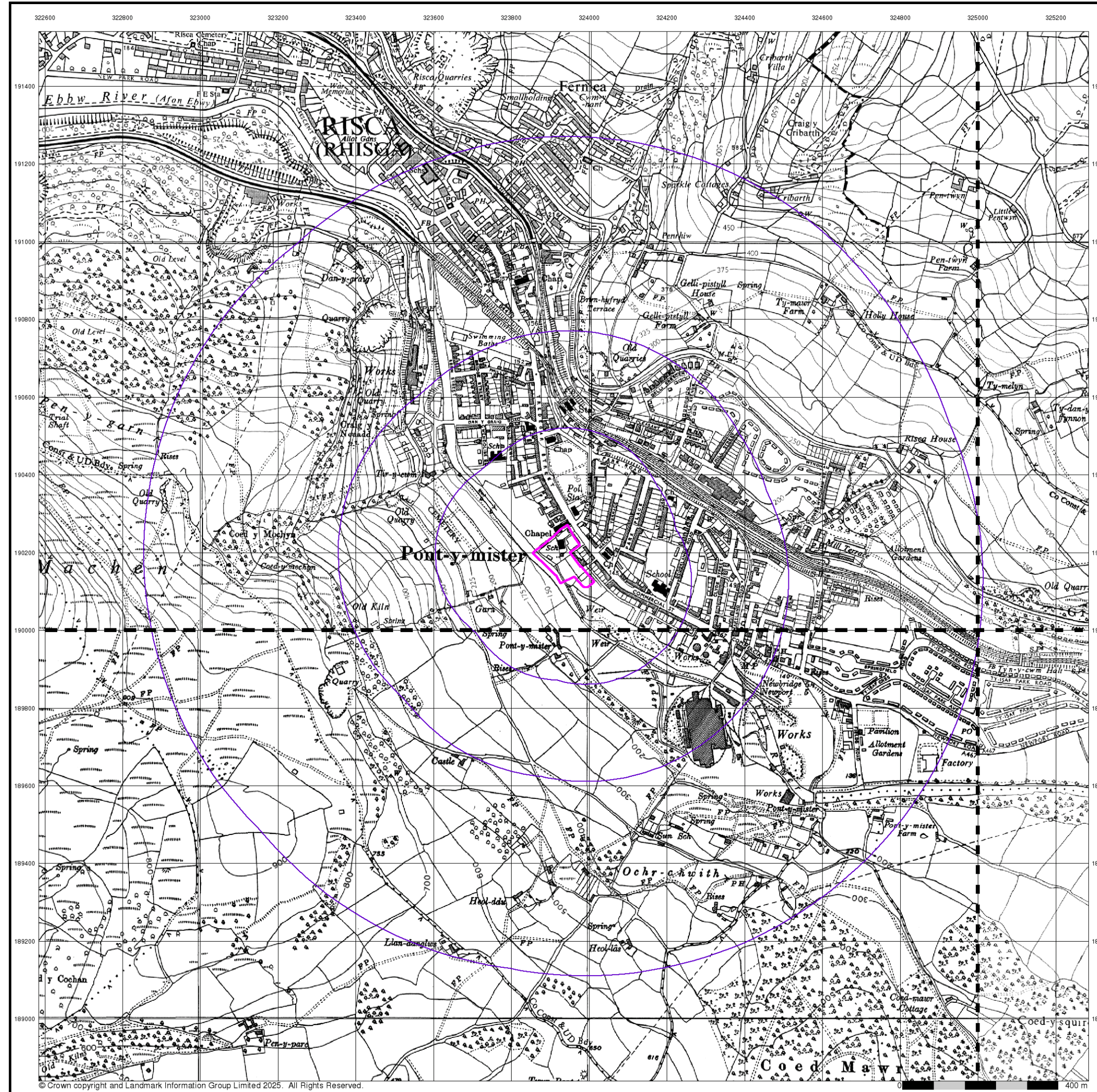
Historical Map - Slice A



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Search Buffer (m):	1000

Site Details
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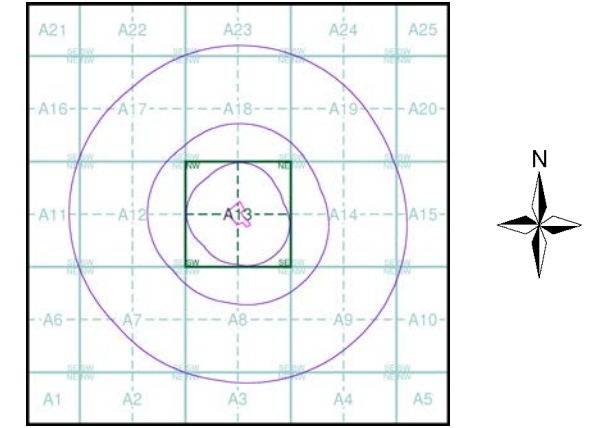
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Map Name(s) and Date(s)

ST29SW	1965	1:10,560	ST29SE	1964	1:10,560
ST28NW	1964	1:10,560	ST28NE	1964	1:10,560

Historical Map - Slice A



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