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Geotechnical & Geoenvironmental Specialists

Intrusive Coal Mining Risk Assessment

Site: Elwyn Drive

Prepared For: Mr Jason Cox

Issue Date: May 2023

Job No: 13319A

REPORT TITLE : Intrusive Coal Mining Risk Assessment:
Proposed Residential Development, Elwyn
Drive, Merthyr Tydfil

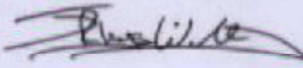
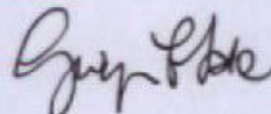
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Issue Number	Date	Revision Details
1	31/05/2023	Draft

	Name	Signature
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Executive Summary

<i>Site Location and Proposed Development</i>	The site is situated off Elwyn Drive, Merthyr Tydfil, CF47 0NJ. Presently the site is occupied by an office/storage building and yard. The proposed development will comprise a pair of semi-detached houses.
<i>Site History</i>	The site remained as rough grassland/field land until the construction of the current site building between 1957 and 1973.
<i>Geology and Ground Conditions</i>	Glacial till deposits are recorded on site, overlying rocks of the Lower Coal Measures. The Garw coal seam and underlying ironstones are indicated on the geological map to pass beneath the site at shallow depth. The site investigation identified the Garw coal seam at 7.6 – 8.8m depth, measuring 0.2 - 0.3m in thickness, with ironstone bands featuring below. Made ground comprising colliery spoil was present in one of the three boreholes drilled on site to 1.2m depth.
<i>Coal Mining Risk Assessment</i>	The Coal Authority inform that the site is not within the zone of likely influence on the surface from past underground workings. However, the site lies within an area where the Coal Authority believe there is coal at or close to the surface that may have been worked at some time in the past. This refers to the Garw coal seam. There are no known coal mine shaft entries upon, or within 20 metres of, the boundary of the property. No evidence of any coal or ironstone mining was identified in the exploratory holes, such as voids, or backfilled workings. It may therefore be concluded that there are no mining related ground instability risks to the proposed houses at the site.

TABLE OF CONTENTS

SECTION 1 Introduction and Proposed Development	1
1.1 Introduction	1
1.2 Limitations and Exceptions of Investigation	1
1.3 Quality Assurance	1
SECTION 2 Review of Existing Data	2
2.1 Physical Setting and Current Site Use	2
2.2 Site History	3
2.3 Geological Setting	4
2.3.1 Geology	4
2.3.2 Mining	5
SECTION 3 Field Investigation	6
3.1 Site Works	6
3.2 Ground Conditions	7
3.3 Groundwater	7
SECTION 4 Coal Mining Risk Assessment	8
Tables	
Table 2.1 Historical Development from Map Information	3
Table 2.2 Detailed Stratigraphical Information	4
Table 3.1 Summary of Ground Conditions	7
Figures	
Figure 2.1 Site Location	2
Figure 2.2 Site Layout	2
Figure 2.3 Extract from Geological Map	4
Figure 3.1 Borehole Locations	6
Figure 4.1 Geology and Strata	8
Annexes	
ANNEX A Historical Maps	
ANNEX B Coal Authority Report & Permit	
ANNEX C Borehole Logs	

SECTION 1 Introduction and Proposed Development

1.1 Introduction

Mr Jason Cox is proposing the construction of a pair of semi-detached houses on a plot of land off Elwyn Drive, Merthyr Tydfil.

TFW Group Limited has been commissioned by the Client to undertake a geotechnical investigation of the site.

The main objectives of the mining site investigation are to investigate the risk, if any, from historical shallow underground mining features

In order to achieve the above objectives, TFW Group Limited carried out an assessment programme including a site walkover, a review of existing data, followed by a field investigation to collect geotechnical data from selected locations.

1.2 Limitations and Exceptions of Investigation

The Client has requested that a Intrusive Coal Mining Risk Assessment be performed to enable the outlined main objectives.

The assessment was conducted, and this report has been prepared for the sole internal reliance of the Client and his design and construction team. This report shall not be relied upon or transferred to any other parties without the express written authorisation of TFW Group Limited. If an unauthorised third party comes into possession of this report, they rely on it at their peril and the authors owe them no duty of care and skill. The report represents the findings and opinions of experienced geoenvironmental and geotechnical consultants. TFW Group Limited does not provide legal advice and the advice of lawyers may be required.

The subsurface geological profiles, are generalised by necessity and have been based on the information found at the locations of the exploratory holes and depths sampled and tested.

1.3 Quality Assurance

The quality and environmental aspects of the assessment comply with TFW Group Limited business management system which is UKAS Accredited to ISO 9001:2015 and ISO 14001:2015 standards.

SECTION 2 Review of Existing Data

2.1 Physical Setting and Current Site Use

The site is situated off Elwyn Drive, Merthyr Tydfil, CF47 0NJ, at an approximate National Grid Reference of 305595 20590, as illustrated in Figure 2.1.

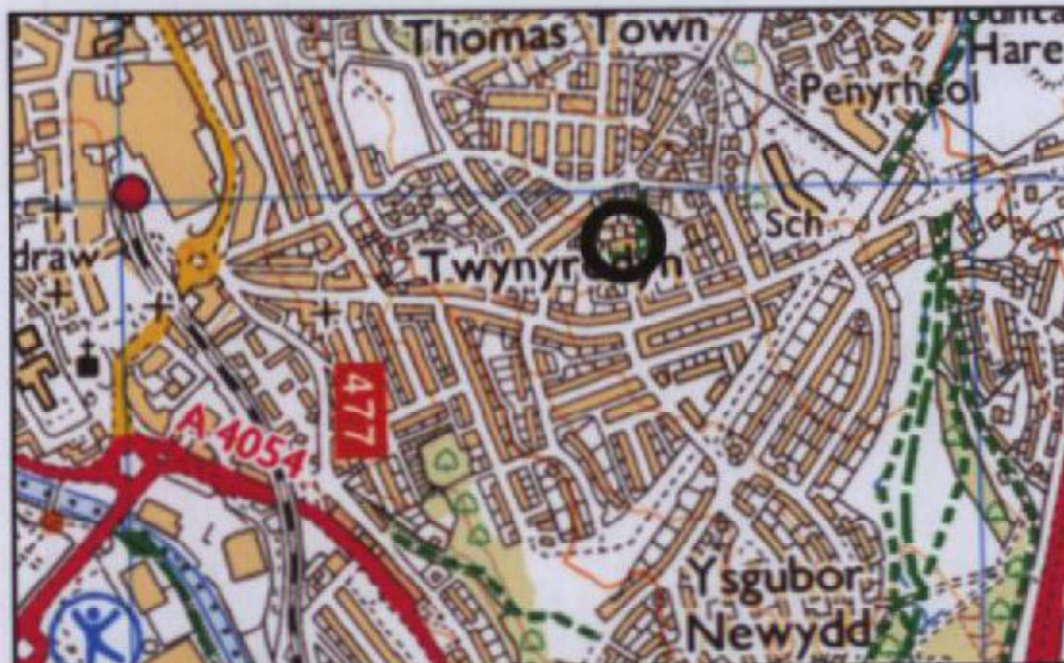


Figure 2.1 Site Location

The site currently comprises a storage yard for the adjacent development site, also owned by the Client. A storage office stands in the north of the site. This building is two storeys high with a large garage area.

The surrounding area is comprised mostly of residential housing.

The site layout and outline of the proposed structure is shown in Figure 2.2.

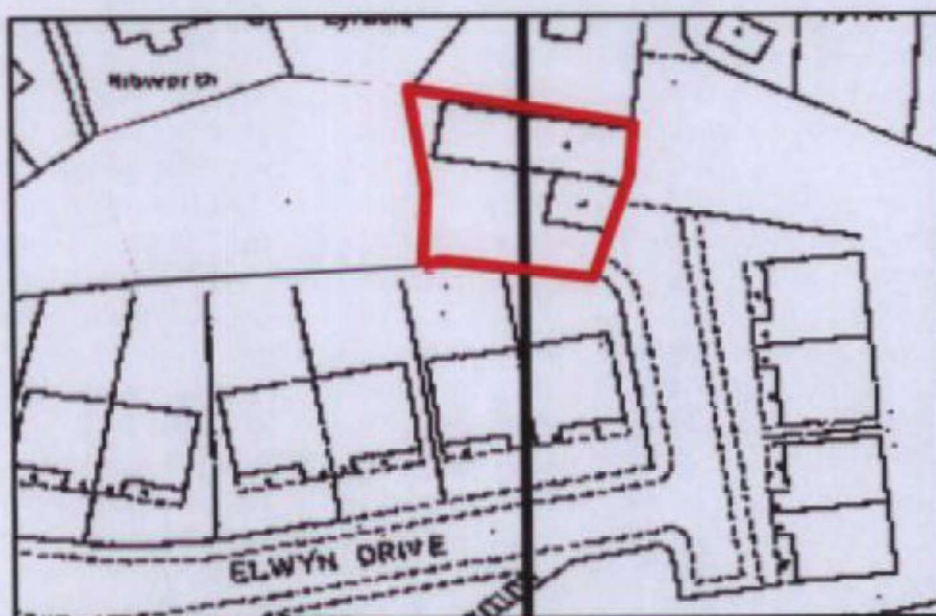


Figure 2.2 Site Layout

2.2 Site History

Historical maps of the site have been obtained from Landmark Information Group. The history plans are supplied in **Annex A** of this report, and the most relevant editions are summarised in **Table 2.1**. Please note that the site boundary shown on the plans refers to a site directly west of the current site, and not the current study site. Distances where quoted are approximate, and any changes in-between map editions may not be recorded.

Table 2.1 Historical Development from Map Information

Map Edition & Scale	Key Features on Site	Key Features off Site
1876 1:2500	The site is seen to situate within an area of rough grassland, with some demarcation of ground excavation and/or deposition of spoil.	A tramline runs west to northeast 30m north of the site, servicing a brickworks 260m to the west. Twynyrhodyn village, largely comprising terraced housing along Twynyrhodyn Road, lies to the south. Evidence of former mining activity at ground level, related to working of coal and ironstone, is illustrated on land extending from around the tramline to beyond 1km to the northeast.
1900 1:2500	The site is now shown to comprise the southern half of a field.	The surrounding area, north and south of the tram line, has now been divided into individual fields. A coal level (Garw Pit) is denoted 400m to the northeast.
1919 1:2500	The site remains unchanged.	Residential development within Twynyrhodyn now sees housing on land directly west of the site, and north of the tram line. The coal level to the north is now absent.
1938 1:10,560	The site remains unchanged.	There have been no notable changes to the surrounding area.
1951 1:20,560	The site remains unchanged.	The brick works has closed and the connecting tramline dismantled. St Tydfis Avenue now follows the route of the former tram line.
1957 1:1250	The site remains unchanged.	A building has been built on land directly southwest of the site.
1973 1:1250	The 'L'-shaped building that occupies the site today has now been constructed on site.	Detached properties have been building on land directly north of the site. The building to the southwest has been demolished.
1993 1:1250	The site remains unchanged.	No notable changes to the surrounding area are recorded.
1994 1:1250	The site remains unchanged.	Housing along Elwyn Drive has been established south of the site.
2015 1:10,000	The site remains unchanged.	No notable changes to the surrounding area are recorded.
2022	The site remains occupied by the vacant office and storage building.	The Client has in more recent years built two properties on the site directly west of the site.

2.3 Geological Setting

2.3.1 Geology

The 1:10,560 Geological Map (SO 00 NE) and online Coal Authority Interactive Map were consulted for geology underlying the site. Detailed stratigraphical information is provided in Table 2.2.

Table 2.2 Detailed Stratigraphical Information

Period	Group	Formation
Quaternary	Boulder Clay (Till)	Terrigenous unsorted to poorly sorted unstratified and over consolidated collection of clay, silt, sand, gravel and boulders. Gravels and boulders are often suspended in a clay or sandy matrix.
Carboniferous	Lower Coal Measures	Grey productive coal bearing mudstones and siltstones, with occasional seatearths and minor sandstones.

The Garw coal seam is recorded by the verticalized geological section as lying approximately 94m below the Gellideg coal seam. The Coal Authority Interactive Map shows the outcrop of the Garw coal approximately 75m west of the proposed development.



Figure 2.3 Extract from Geological Map

The Rosser Ironstone veins feature below the Garw coal seam.

The dip of the strata is unknown, but the Garw coal and ironstones may underlie the site at shallow depth.

TFW Group Limited (trading as Terra Firma (Wales) Limited) previously undertook investigative works on the site directly to the west. Boreholes drilled as part of this investigation identified a single coal seam at depths of between 9.3-9.6m, measuring 0.6-0.8m in thickness.

Made ground may be present in the form of spoil from previous local industry, related to mining or the former nearby brick works.

2.3.2 Mining

A Coal Authority Consultants Coal Mining Report was obtained for the adjacent site to the west. A copy of the report may be found in **Annex B**.

It informs that the site is not within the zone of likely influence on the surface from past underground workings. However, the site lies within an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past.

Referring to the stratigraphy described in **Section 2.3.1**, it is concluded that this relates to the Garw coal seam.

There are no known coal mine shaft entries upon, or within 20 metres of, the boundary of the property. However the Coal Authority note that records may be incomplete and that there may exist in the local area mine entries of which there is no knowledge.

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

SECTION 3 Field Investigation

3.1 Site Works

A geotechnical site investigation comprising three rotary boreholes was undertaken in March 2023.

Boreholes reference BH1 to BH3 were formed using a track mounted rotary drilling rig. The boreholes were advanced from the surface using a tri-cone bit/ downhole hammer with water as the flushing medium.

Rotary borehole logs may be found in **Annex C**. Borehole locations are illustrated in **Figure 3.1**.

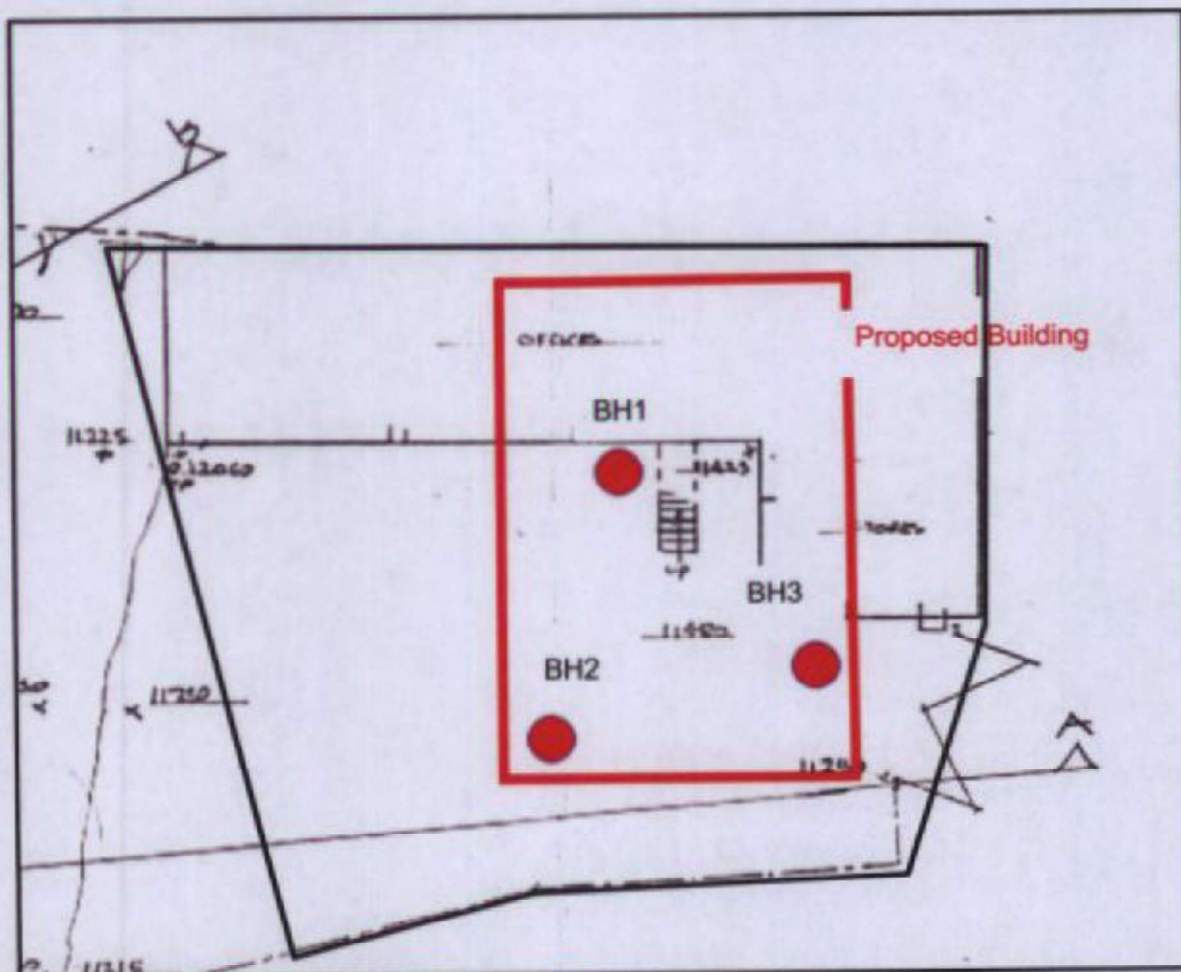


Figure 3.1 Borehole Locations

Upon completion boreholes were backfilled with bentonite and the surface was reinstated.

3.2 Ground Conditions

The ground conditions encountered by the exploratory holes can in general be summarised as shown in **Table 3.1**.

Table 3.1 Summary of Ground Conditions

Depth (m)			Thickness (m)	Stratum
0.0	-	0.1	0.1	TARMACADAM
0.0	-	1.2	1.2	MADE GROUND: Colliery Spoil (BH1 only)
0.1	-	6.4/7.4	5.4/7.3	Brown sandy silty GRAVEL and COBBLE (TILL)
6.4/7.4	-	7.6/8.7	0.2/2.2	MUDSTONE
7.6/8.7	-	7.8/8.9	0.2/0.3	COAL (GARW)
7.8/8.9	-	35	-	MUDSTONE with sandstone bands and/or ironstone bands

3.3 Groundwater

No groundwater was encountered in the exploratory holes.

SECTION 4 Coal Mining Risk Assessment

Based upon site investigation data, the stratigraphical sequence within 35m of the ground surface of the site is illustrated in **Figure 4.1**.

Recent	Made Ground (BH1 only)	1.2m
	Superficial Soils (TILL)	6.4/7.4m
	Coal Bearing MUDSTONE with sandstone bands	
	GARW COAL SEAM (0.2/0.3m thick)	7.6/8.7m – 7.8/8.9m
Holocene	Coal Bearing MUDSTONE with sandstone bands and ironstone bands	
		35m

Figure 4.1 Geology and Strata

No evidence of any coal or ironstone mining was identified, such as voids, or backfilled workings.

The Garw Coal was identified, being only 0.2 - 0.3m thick.

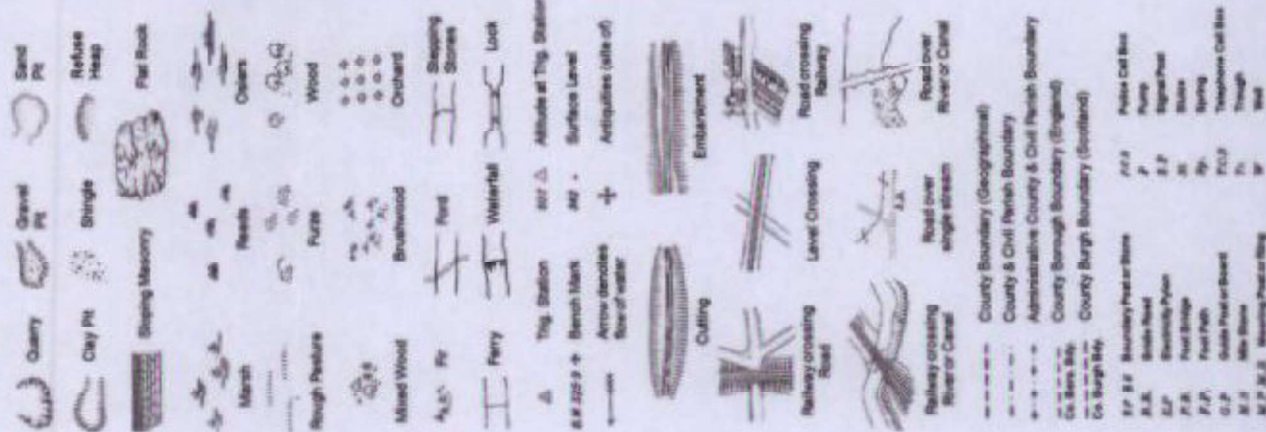
The history plans show no mining features in proximity to the site that could have been used to work the shallow ground beneath the site.

It may therefore be concluded that there are no mining related ground instability risks to the proposed housing at the site.

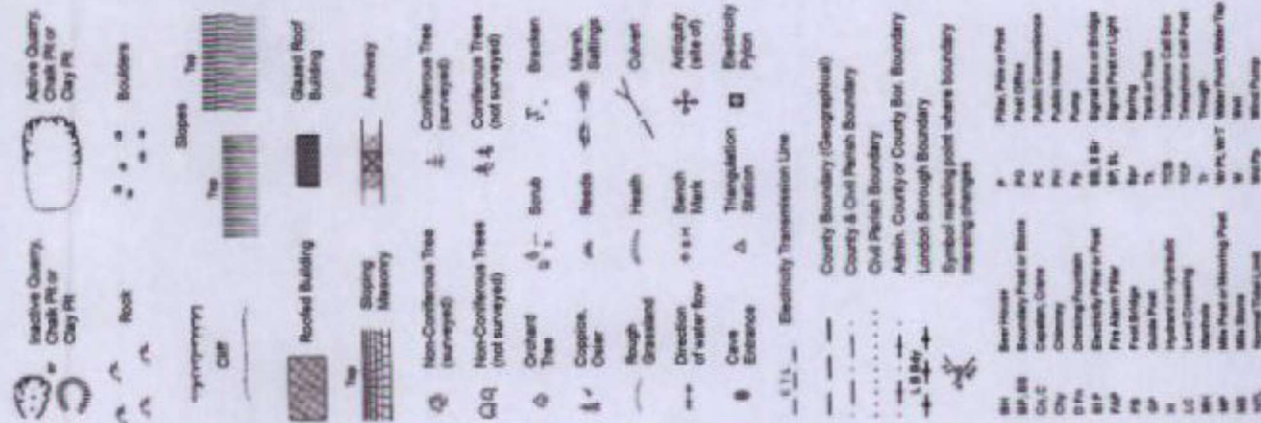
ANNEX A
Historical Maps

Historical Mapping Legends

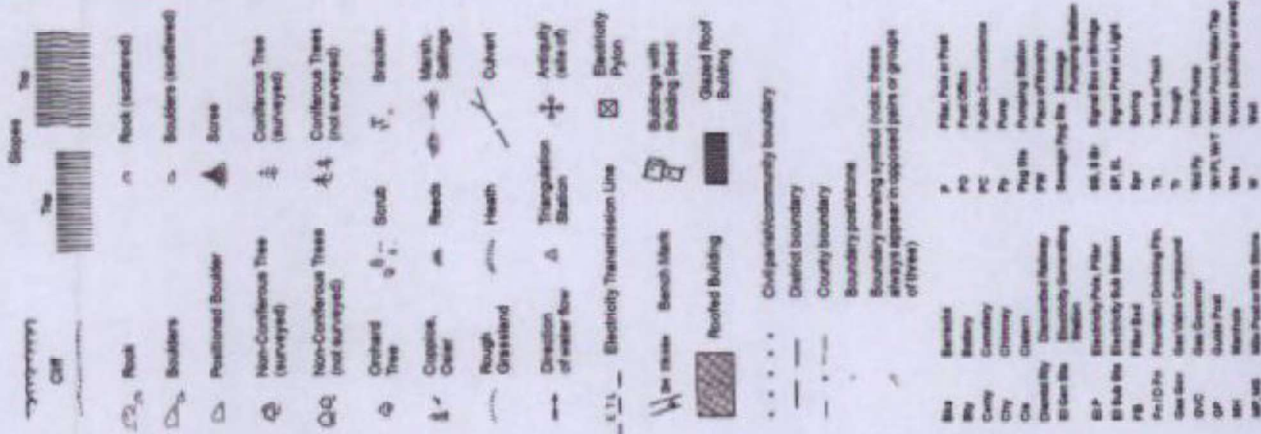
Ordinance Survey County Series and
Ordinance Survey Plan 1:2,500



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



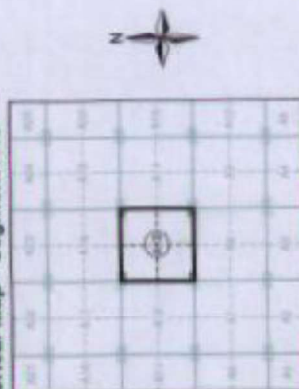
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
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Generalizability	1:1,200	1954	4
Generalizability	1:1,200	1915	8
Generalizability	1:1,200	1919	8
Generalizability	1:1,200	1927	9
Generalizability	1:1,200	1956	9
Generalizability	1:1,200	1980 - 1977	9
Generalizability	1:1,200	1980 - 1977	10
Generalizability	1:1,200	1984 - 1989	11
Generalizability	1:1,200	1989	12
Generalizability	1:1,200	1983	13
Generalizability	1:1,200	1984 - 1988	14
Generalizability	1:1,200	1991	15
Generalizability	1:1,200	1996	16
Generalizability	1:1,200	1994	17

Historical Map - Segment A13



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National Grid Reference: 305580, 205960
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Search Buffer (m):

Site Details

Builders Yard, Elwyn Drive, Manthorpe Tydfil, CF47 0NJ

[illegible]



Glamorganshire

Published 1875 - 1876

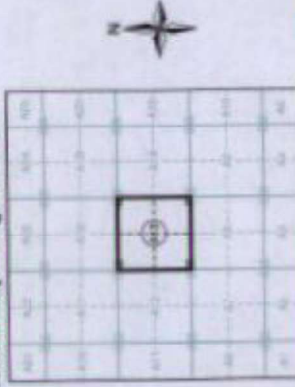
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the state archives for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1898 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published data given below is often some years later than the surveyed data. Before 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 surveying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 70805697_1_1
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National Grid Reference: 308580, 208980
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Site Area (Hq): 0.06
Search Buffer (m): 100

Site Details

Builders Yard, Ewlyn Drive, Merthyr Tydfil, CF47 0NU



Tel: 0844 544 5852
Fax: 0844 544 5851
Web: www.landmark.co.uk



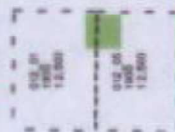
Glamorganshire

Published 1900

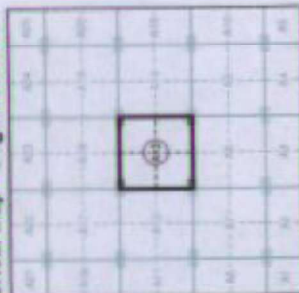
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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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National Grid Reference: 305550, 205560
Scale: A
Site Area (Ha): 0.05
Search Buffer (m): 100

Site Details

Bullers Yard, Ewlyn Drive, Merthyr Tydfil, CF47 0NU



Tel: 0844 844 8822
Fax: 0844 844 8881
Web: www.earthlink.co.uk



Brecknockshire

Published 1904

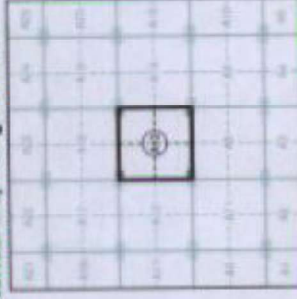
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Map Name(s) and Date(s)



Historical Map - Segment A13



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Site: A
Site Area (Ha): 0.06
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Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NU



OSGB 360 002
OSGB 360 001
www.terrafirma.co.uk

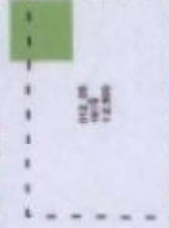


Glamorganshire
Published 1919

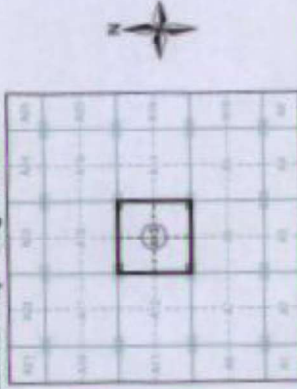
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Map Name(s) and Date(s)



Historical Map - Segment A13



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Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Butlers Yard, Ewain Drive, Morrhay Tydell, CF47 0NU



Tel: 0844 544 5802
Fax: 0844 544 5801
Web: www.landmark.co.uk



Brecknockshire

Published 1919

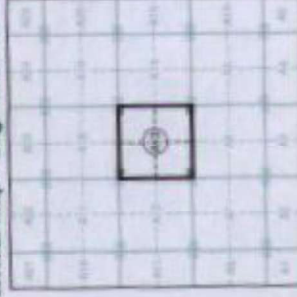
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Map Name(s) and Date(s)

OS 1:2500
1:2,500

Historical Map - Segment A13



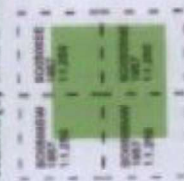


Ordnance Survey Plan
Published 1957

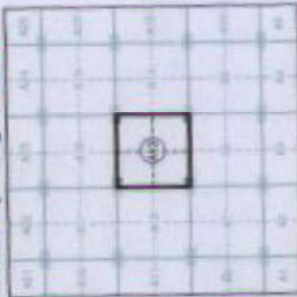
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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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Customer Ref: 13319
National Grid Reference: 205580, 205660
Site: A
Site Area (m²): 0.06
Search Buffer (m): 100

Site Details

Buildings Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NU



Tel: 0844 344 0002
Fax: 0844 344 0001
Web: www.landmark.co.uk



Ordnance Survey Plan
Published 1958

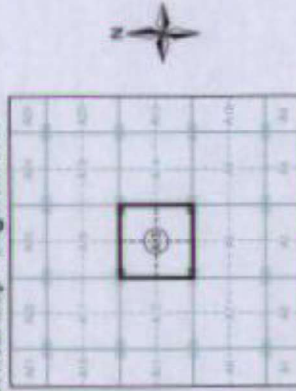
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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National Grid Reference: 505550, 205900
Slice: A
Site Area (Ha): 0.06
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Site Details

Buildings Yard, Elwyn Drive, Merthyr Tydfil, CF47 9NU



TEL: 0844 644 6000
FAX: 0844 644 6001
WWW: LANDMARK.CO.UK

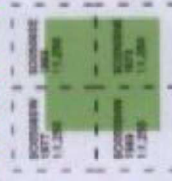


Ordnance Survey Plan Published 1969 - 1977

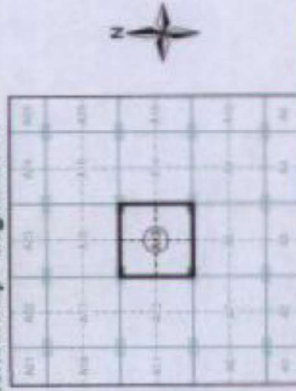
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1964 the 1:1,250 scale was adopted for mapping urban areas and by 1986 it covered the whole of what was considered to be the cultivated parts of Great Britain. The published data given below is often some years later than the surveyed data. Before 1950, 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 surveying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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Customer Ref: 13319
National Grid Reference: 305050, 205960
Site: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Buildings Yant, Elwyn Drive, Merthyr Tydfil, CF47 0NU



TEL: 0800 045 0007
FAX: 0800 045 0007
WWW: www.landmark.co.uk

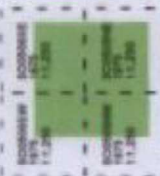


**Supply of Unpublished Survey
Information
Published 1975**

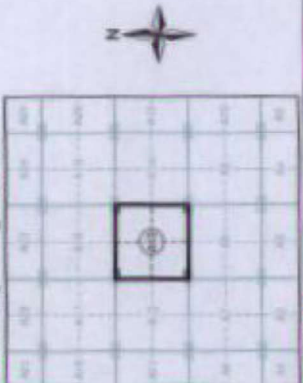
Source map scale - 1:1,250

51.61 maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were made as 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 instant 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

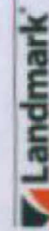


Order Details

Order Number: 70505887_1_1
Customer Ref: 13319
National Grid Reference: 305550, 205960
Site: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NU





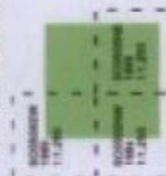
Additional SIMs

Published 1984 - 1989

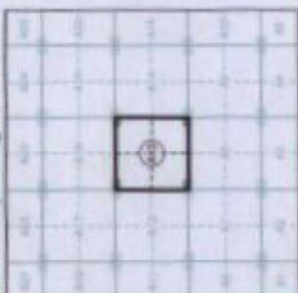
Source map scale - 1:1,250

The SIM series (Ordinance Survey's 'Survey of Information on Monuments') 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: 70905897_1_1
Customer Ref: 13319
National Grid Reference: 305550, 205960
Site: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Buddens Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NU



For:
0800 344 000
0800 344 000
www.landmark.co.uk



Additional SIMs
Published 1989

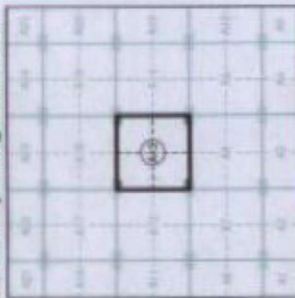
Source map scale - 1:1,250

The SIMs (Copies of the Survey of Information on Minerals) 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 1984, and contain detailed information on buildings, roads and land-uses. 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: 70906697_1_1
Customer Ref: 13319
National Grid Reference: 3055580, 200960
Site: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NU



100% AIR 2002
100% AIR 2001
100% AIR 2000

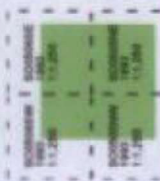


Large-Scale National Grid Data Published 1993

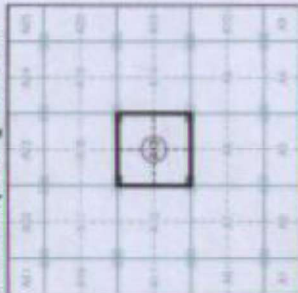
Source map scale - 1:1,250

Large Scale National Grid Data Superimposed 800m Grids (Ordnance Survey's Survey of Information on Microfilm) in 1992, and continued to be produced until 1995. These maps were the forerunners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:1,250 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 70905897_A13
Customer Ref: 13318
National Grid Reference: 500580, 200990
Site: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Buildings Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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Fax: 0844 844 897
Web: www.landmark.co.uk



Large-Scale National Grid Data

Published 1994 - 1995

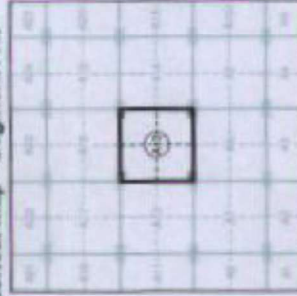
Source map scale - 1:1,250

Large Scale National Grid Data is published (BM cards (Ordnance Survey's Survey of Information on Microfilm) in 1990, and continued to be produced until 1995. These maps were the forerunners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 70505887_1.1
Customer Ref: 13319
National Grid Reference: 305960, 205960
Site: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Budenn Yerd, Elwyn Drive, Merthyr Tydfil, CF47 0NU



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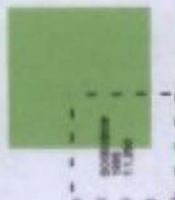


Large-Scale National Grid Data
Published 1995

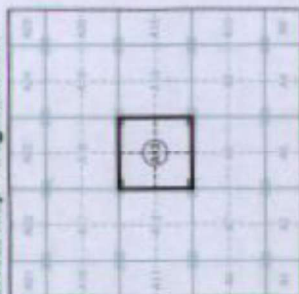
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: P0005697 - 1.1
Customer Ref: 13319
National Grid Reference: 205560, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Builders Yard, Elwyn Drive, Marthyr Tydyl, CF47 9NJ



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Large-Scale National Grid Data

Published 1996

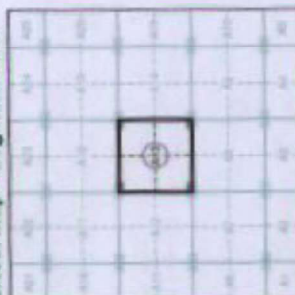
Source map scale - 1:1,250

Large Scale National Grid Data superseded Ordnance Survey's 'Series of Information on Microfilm' (1982) and continued to be produced until 1999. These maps were the first series 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 1:1,250 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 70006697_1_1
Customer Ref: 13310
National Grid Reference: 305550, 205000
Site: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Buildings Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NU



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**Large-Scale National Grid Data
Published 1996**

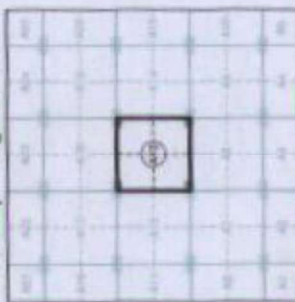
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 70905697_1.1
Customer Ref: 13319
National Grid Reference: 305550, 205960
Site: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Budders Yard, Elyan Drive, Merthyr Tydfil, CF47 0NU



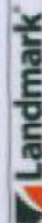
Tel: 0144 644 0000
Fax: 0144 644 0001
Email: info@landmark.co.uk

Mapping Type	Scale	Date	Fig.
Brecks/lowlands	1:10,000	1985	2
Glacio/peatlands	1:10,000	1985	3
Glacio/peatlands	1:10,000	1991	4
Brecks/lowlands	1:10,000	1995	5
Brecks/lowlands	1:10,000	1997	6
Brecks/lowlands	1:10,000	1998	7
National Aerial Photography			
Brecks/lowlands	1:10,000	1991	8
Ordinance Survey Plan	1:10,000	1965 - 1969	9
Ordinance Survey Plan	1:10,000	1969	10
Ordinance Survey Plan	1:10,000	1975 - 1979	11
Ordinance Survey Plan	1:10,000	1980 - 1989	12
Ordinance Survey Plan	1:10,000	1990 - 1993	13
1981 Raster Mapping	1:10,000	2000	14
1981 Raster Mapping	1:10,000	2011	15

Mapping Type	Scale	Date	Fig.
Brecks/lowlands	1:10,000	1985	2
Glacio/peatlands	1:10,000	1985	3
Glacio/peatlands	1:10,000	1991	4
Brecks/lowlands	1:10,000	1995	5
Brecks/lowlands	1:10,000	1997	6
Brecks/lowlands	1:10,000	1998	7
National Aerial Photography			
Brecks/lowlands	1:10,000	1991	8
Ordinance Survey Plan	1:10,000	1965 - 1969	9
Ordinance Survey Plan	1:10,000	1969	10
Ordinance Survey Plan	1:10,000	1975 - 1979	11
Ordinance Survey Plan	1:10,000	1980 - 1989	12
Ordinance Survey Plan	1:10,000	1990 - 1993	13
1981 Raster Mapping	1:10,000	2000	14
1981 Raster Mapping	1:10,000	2011	15

Order Number: 70905697-1.1
Customer Ref: 13319
National Grid Reference: 3088AQ, 205960
Size: A
Size Area (Ha): 0.06
Search Buffer (m): 1000

Builders Yard, Elexyn Drive, Merthyr Tydfil, CF47 0NJ

[illegible]

A Landmark Information Group Service #47 0 05-Aug-2019 Page 1 of 18

Ordnance Survey Plan 1:10,000

1:10,000 Raster Mapping

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

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Oysters

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Deciduous

Brushwood

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Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

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Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Marsh

Shingle

Orchard

Other Pits

Gravel Pit

Sand Pit

Quarry

Oysters

Mixed Wood

Pir

Deciduous

Brushwood

Gravel Pit	Rock	Boulders	Shingle	Sand	Slopes	General detail	Overhead detail	Multi-track railway	County boundary (England only)	District, Unitary, Metropolitan, London Borough boundary	Non-contiguous trees	Configuous trees (scattered)	Configuous trees (scattered)	Orchard	Rough Grassland	Scrub	Water feature	Mean high water (spring)	Telephone line (where shown)	Bench mark (where shown)	Point feature (e.g. Guide Post or Mile Stone)	Site of antiquity	General building
Gravel Pit	Rock	Boulders	Shingle	Sand	Slopes	General detail	Overhead detail	Multi-track railway	County boundary (England only)	District, Unitary, Metropolitan, London Borough boundary	Non-contiguous trees	Configuous trees (scattered)	Configuous trees (scattered)	Orchard	Rough Grassland	Scrub	Water feature	Mean high water (spring)	Telephone line (where shown)	Bench mark (where shown)	Point feature (e.g. Guide Post or Mile Stone)	Site of antiquity	General building



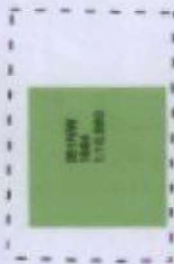
Brecknockshire

Published 1884

Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the time compiled 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 data given therefore is often some years later than the surveyed data. Before 1858, 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 adjoining areas. In the late 1840's A Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unaltered - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1975, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 70908897 _1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Buildens Yard, Ewlyn Drive, Merthyr Tydfil, CF47 0NU



Tel: 0844 644 6002
Fax: 0844 644 6003
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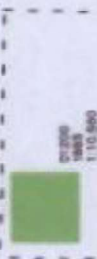


Glamorganshire
Published 1885

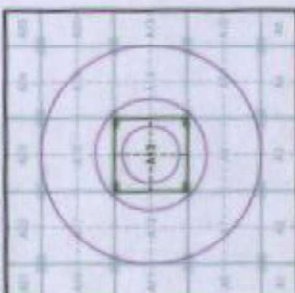
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the time produced for England, Wales and Scotland in the 1840's. In 1854 the 1:10,560 scale was adopted for mapping urban areas. These maps were used to update the 1:10,560 maps. The published data sheet therefore is often some years later than the surveyed data. Before 1858, 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 1840's a Provisional Edition was produced, which utilised the 1:10,560 mapping from a number of sources. The maps appear unframed - with all military symbols and other strategic lines removed. These maps were initially overprinted with the national grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 70905697_1.1
Customer Ref: 13319
National Grid Reference: 305580, 206960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builten Yard, Elwyn Drive, Merthyr Tydfil, CF47 9NU



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Email: sales@landmark.co.uk