

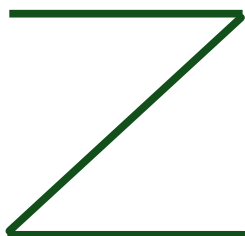


REPORT NO: ZZ25045-1
DATE: FEBRUARY 2025

LAND OFF
WELLINGTON STREET, BURY

PRELIMINARY RISK ASSESSMENT

PREPARED FOR
RTK GRAB HIRE LTD



ZIG ZAG
ENVIRONMENTAL

SUITE 10
RAILWAY HOUSE
RAILWAY ROAD
CHORLEY
PR6 0HW
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PROJECT DETAILS

SITE/PROJECT	LAND OFF WELLINGTON STREET, BURY PRELIMINARY RISK ASSESSMENT	
CLIENT	RTK GRAB HIRE LTD	
JOB NO	ZZ25045	
REPORT NO	ZZ25045-1	
STATUS	DRAFT	
REVISION		
ISSUE DATE	28 FEBRUARY 2025	
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REVISION HISTORY

REVISION REF	DATE	NATURE OF REVISION

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1. INTRODUCTION

Zig Zag Environmental Ltd (ZZE) has been instructed by RT Grab Hire Ltd to prepare a Preliminary Risk Assessment (PRA) for proposed warehouse development at Wellington Street, Bury, BL8 2BD.

The site is located to the west of Wellington Street, some 1.2 km to the south-west of Bury town centre. It comprises part of an existing yard and some temporary offices.

A planning application has been submitted to Bury MBC to construct a new building with steel portal frame, concrete blockwork and steel-clad walls and roof for B8 usage providing a single storey warehouse from existing service yard use (Application No 71528). The application has not been registered by the Council and The Development Management Team has requested some additional supporting information including '*a desktop study for contaminated land*'¹.

This PRA comprises a site walkover and assessment of the environmental setting and historical development of the site based on available records, production of a preliminary conceptual site model to identify potential pollutant linkages with respect to the proposed development, in accordance with appropriate planning policy and guidance.

The conclusions and recommendations presented in this report are the result of our professional interpretation of the information obtained. ZZE reserves the right to amend the conclusions and recommendations if further information becomes available.

2. SITE DESCRIPTION

2.1 SITE LOCATION

The site is located to the west of Wellington Street, some 1.2 km to the south-west of Bury town centre. The site is shown on Oakbay Design Drawing No Z344.000 - Location Plan at Appendix H.

The approximate National Grid Reference for the site is 379300, 409990.

2.2 SITE DESCRIPTION

The existing site layout is shown on Oakbay Design Drawing No Z344.005 at Appendix H.

The site comprises an irregular shaped parcel of land located between Wellington Street (to the east) a car park and temporary buildings used for training (to the north) and an existing storage building (to the west).

¹ Bury MBC letter dated 31 January 2025 (Ref 71528)

The site occupies approximately 0.3 Ha.

The site has most recently been used as a service yard and vehicle parking with temporary buildings, adjacent to Wellington Street, housing the waste recycling centre booking in/office.

An engineer from ZZE visited the site on 4 February 2025 for a walkover/inspection. Conditions during the visit were overcast and cold following earlier rain. A series of photographs from the site inspection are presented at Appendix A.

The site comprises an area of land between the land occupied by Maker/Rakem Ltd to the west and Wellington Street to the east. Both boundaries are defined by green weldmesh fencing.

The site is generally flat and featureless, and is used for vehicle parking (see Photograph Nos 1, 2 & 3)

A series of temporary porta-cabin offices occupy the eastern part of the site (Photograph No 4). These are used by RTK Grab Hire Ltd.

There are two site entrances, off Wellington Street, immediately to the north-east and south-east of the site. These entrances will provide access to and egress from the new development. The northern entrance is also used by Maker/Rakem Ltd for access to its site to the west.

The Engineer did not observe any potential sources of contamination at the site nor was there any evidence of existing ground contamination at the site.

2.3 SURROUNDING LAND USE

The land around the development is described as follows:

North	A series of temporary buildings used for training. Other commercial/industrial premises further north.
East	Wellington Street with the restored former Hinds Mill/Waterside Mill site beyond and extending to the south-east.
South	Soil and aggregate recycling facility also operated by RTK Grab Hire Ltd.
West	Commercial buildings used by Maker/Rakem Ltd as offices and a storage warehouse. Once constructed the new warehouse building will be leased to Maker Ltd for storage.

These neighbours can be seen on the Ordnance Survey maps and Google Earth images presented at Appendices B & C.

2.4 TOPOGRAPHY

The site is relatively flat and level with the surrounding land.
A topographic survey has been commissioned but is not yet available.

2.5 PROPOSED DEVELOPMENT

Planning permission is being sought to construct a new building with steel portal frame, concrete blockwork and steel-clad walls and roof for B8 usage providing a single storey warehouse from existing service yard use (Application No 71528).

The proposed development is illustrated on Oakbay Design drawings presented at Appendix H and elsewhere in the planning application.

It can be seen, from these drawings that:

- The proposed industrial style building will have the approximate dimensions 50.6 m long by 19.7 m wide and a maximum height of 10.5 m.
- It will have a concrete surfaced access and turning/servicing areas. It is proposed that Junction 1 will be used for access and Junction 2 for exiting the site.
- The positioning of the new building allows for a wide service area between the new building and the existing warehouse and offices to the west and between Junctions 1 and 2 and good access into the warehouse via the roller shuttered doors.
- The area to the east of the new building will be surfaced with concrete and will be used for secure parking accessed from a gated entrance off Junction 2.
- The concrete and bitmac surfacing to the entrances, service areas and car parking areas within the site will be laid to match the existing levels of surfacing.

Any excavation arisings generated during the proposed development will be taken to the nearby recycling centre for processing and recovery as secondary aggregate in accordance with RTK Grab Hire Ltd's aggregate processing permit.

3. SITE HISTORY

Copies of historic Ordnance Survey (OS) maps for the period 1850 to 2024, obtained from Landmark have been reviewed (Appendix B). In addition, internet searches and historical aerial photograph imagery, between 2000 and 2023 from Google Earth have also been reviewed (Appendix C).

The site is undeveloped in 1850. A building marked as 'Old Engine' is located approximately 160 m to the south-south-west of the site and Daisy Field Mills (Cotton & Fustian) is located some 70 m to the north and includes a gasometer.

The Manchester, Bolton & Bury Canal located approximately 15 m to the east at its closest point, with the River Irwell beyond.

By 1894 the mill development has progressed towards the northern boundary of the current development plot. A small track also passes through the site from north to south and was probably used to transport coal from Hinds Colliery, located to the south.

A hospital is also shown on this edition map, approximately 150 m to the west-south-west. This is later identified as the Florence Nightingale Hospital for infectious diseases. Other mills are located to the east and south-east, between the river and the canal.

The 1938 map shows an electricity pylon located adjacent to the southern boundary of the development plot with the cables running in a north-easterly direction across the site.

The site remains undeveloped with the exception of the track. By 1965 the mill to the north has been partially demolished and cleared and Main Street has been extended through the development site as an upgrade of the former track.

The 1974 map shows the realignment of the overhead cables, including the removal of the pylon on the southern site boundary. The cables now cross the site.

By 1980 the section of canal to the east of the site has been infilled and the former Daisy Field Mill site, to the north has been largely cleared. On the 1986 edition map an embankment is shown on the land to the south-east of the site, where the canal had previously been.

Wellington Street is first shown on the 1999 edition map, although at that time the road stopped short of the development site, although Hinds Lane located to the east extends past the site and appears to follow the line of the infilled canal. Two new buildings are shown to the north of the site, marking the start of the redevelopment of the former Daisy Field Mill site.

The 2001 aerial photograph shows a large reclamation activity on the former Hinds Mill/Waterside Mill site to the south-east of the development plot. At its closest point this is approximately 46 m from the site. The 2006 edition 1:10000 scale map shows the mill still being present in 2006. On the 2024 map it is shown as an area of woodland

By 2024 Wellington Street has been extended and the site is part of a larger Recycling Site.

The Google Earth photographs show similar conditions at the site and surrounding area for the period 2000 to 2024. The following is noted from the aerial photographs:

2000 The site is shown to be a green field with commercial/industrial units to the north, the hospital to the west and the reclamation site (former Hinds Mill/Waterside Mill) to the south-east

- 2003 As above with redevelopment of the hospital site evident.
- 2005 As above.
- 2013 Wellington Street has been extended and development works have commenced at the wider aggregate recycling site. A series of small buildings are shown on the land immediately to the north of the development plot. The reclamation site is complete and has been landscaped.
- 2017 A new building has been constructed to the west of the development plot which appears to be occupied by some small temporary buildings and an open yard between two entrances off Wellington Street. Aggregate processing is evident to the south-west of the site.
- 2018 As above.
- 2019 A small building has been constructed immediately to the west, but otherwise the site and surrounding area remains the same.
- 2020-23 As above.

ZZE is advised that RTK Grab Hire Ltd prepared this area of the site in around 2006 by removing the topsoil layer and placing a layer of hardcore/asphalt planings to allow the area to be used for general materials storage, and vehicle parking.

4. GEOLOGY

The geological conditions at the site have been determined from data supplied by Landmark and presented on the British Geological Survey on-line GeoIndex. The following is noted:

- There is no artificial ground or mass movement deposits at the site.
- Superficial soils comprise river terrace deposits (sand & gravel) associated with the nearby River Irwell overlying glacial soils (glacial till/clay & glaciofluvial deposits/sand & gravel).
- The bedrock comprises southerly dipping undifferentiated Pennine Lower Coal Measures rocks including mudstone, siltstone and sandstone.

There are three borehole records in the general vicinity of the site the closest is beneath the existing office building to the west of the site (BGS Ref SD70NE354). The general stratigraphy encountered at this borehole is as follows:

0 – 0.3 m Topsoil
0.3 – 3.8 m Gravelly & clayey sand
3.8 – >8.0 m Gravelly clay

Copies of the geological records are presented at Appendix D.

An Envirocheck Report has been obtained from Landmark (Appendix E). According to Landmark the estimated soil chemistry designations are as follows:

Arsenic	15 - 25 mg/kg
Cadmium	<1.8 mg/kg
Chromium	60 - 90 mg/kg
Lead	200 - 300 mg/kg
Nickel	15 - 30 mg/kg (30 – 45 mg/kg in the north-eastern corner of the site)

These concentrations would not represent a significant potential human health risk to the proposed commercial/industrial development.

5. MINING & GROUND STABILITY

There are no BGS recorded mineral sites within 1 km of the site

According to Landmark the site is *'in an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority'*.

A Coal Mining Report was obtained as part of a previous study of the site including the land to the north, west and south. A copy is presented at Appendix F. The Coal Authority reported that:

- *'The site is not within the likely zone of influence on the surface from past underground coal workings'.*
- Records in TCA's possession do not disclose any damage or claim having been made with regard to subsidence.
- They have *'no knowledge of mine entries within, or within 20 m of, the boundary of the property'*.

ZZE has not obtained a new coal mining report but has reviewed the Coal Authority interactive map, available via the BGS. It can be seen, from the information presented (see Appendix F) that:

- The site is located within a coal mining reporting area.
- The site is not classified as development high risk, although Development High Risk areas are evident to the north and south of the site. These are not within influencing distance of the site or the proposed warehouse building.

- There are no mine entries in the immediate vicinity of the site although there are shafts in the general area. Potential zones of influence around the shafts are limited and do not extend onto the development site.
- There are no fissures and breaklines in the vicinity of the site.
- There is no past or current surface mining in the immediate vicinity of the site.
- There are no known past shallow coal mine workings beneath the site or within the immediate vicinity.
- There are no coal outcrops in the immediate vicinity of the site. Two east-south-easterly trending coal seam outcrops are shown to the north and these seams dip in a southerly directly beneath the site.
- There are no probable shallow coal mine workings beneath the site. The zones of probable shallow workings associated with the two coal seams outcropping to the north do not extend onto the development site.

On the basis of the information presented above ZZE concludes that the proposed storage warehouse will not be affected by shallow coal/coal mine workings and therefore no specific investigation or mitigation measures are required.

The Envirocheck Report (Appendix E) also contains information on ground stability, as summarised below:

Collapsible Ground	Very Low
Compressible Ground	No Hazard
Ground Dissolution	No Hazard
Landslide	Very Low
Running Sand	Very Low
Shrinking or Swelling Clay	No Hazard

6. HYDROGEOLOGY

The Envirocheck Report contains information on the environmental setting of the site and the groundwater information has been sourced from the EA Groundwater Vulnerability Maps.

The underlying river terrace deposits and Coal Measures strata are both classified by the EA as 'Secondary A Aquifers'. Secondary Aquifers are described as '*permeable layers capable of supporting water supplies at local rather than strategic scale (often with limited yields), and in some cases forming an important source of base flow to rivers*'.

The site is not within a currently defined groundwater source protection zone.

There is one groundwater abstraction within 500 m of the site, as follows:

- JR Crompton plc, borehole some 289 m to the north of the site. Abstracted water is used for manufacturing.

According to Landmark there is '*potential for groundwater flooding to occur*' at the site.

7. HYDROLOGY

The site is located within the River Irwell surface water drainage catchment.

The River Irwell is located approximately 70 m to the east of the site and flows in a southerly direction towards Manchester. There appears to be a legacy of old goits and associated channels taking water from the River Irwell through the old mills.

According to Landmark, the closest surface water feature is approximately 47 m to the north-west of the site. It can be seen from the OS Water Network map supplied by Landmark (Appendix E) that this is an unnamed, southerly flowing stream located between the industrial estate and the nearby hospital. It is partially culverted and discharges into the River Irwell some 270 m to the south-south-east of the site.

Elton Reservoir is located some 325 m to the south-south-west of the site.

The site is within Flood Zone 1 with a low potential for flooding.

There are two surface water abstractions within 500 m of the development site, as follows:

- JB Skips & Services Ltd abstracts water from the River Irwell, some 183 m south-east of the development site. Abstracted water is used for dust suppression.
- JR Crompton abstracts water from a reservoir fed by surface drainage some 269 m to the north of the development site. Abstracted water is used for manufacturing.

There is one recorded pollution incident to controlled waters within 250 m of the site, as follows:

Date:	15 June 1995
Location:	Elton Brook, 171 m north-east of the development site
Pollutant:	Chemicals – paints/dyes
Severity:	Category 3 - minor incident

There is one current consented discharge to controlled waters within 250 m of the site, as follows:

Operator:	United Utilities
-----------	------------------

Location: Buckley Wells CSO, approximately 208 m to the south-east of the site
Discharge Type: Public sewage – storm sewage overflow
Receiving water: River Irwell

8. LANDFILL SITES & CONTAMINATED LAND

Information provided in the Envirocheck Report indicates there is one historical landfill site within 250 m of the site.

It is reported that Strong & Fisher operated a licenced landfill at Hinds Lane, some 208 m to the south of the development site, for the disposal of inert, industrial, commercial & special wastes. Records indicate that the site operated between 1942 and 1992.

Landmark also reports on the possible presence of potentially infilled land. One area of potentially infilled land (non water) and three areas of potentially infilled land (water) have been identified within 250 m of the development site, as follows:

Unknown filled ground (pit, quarry etc)

91 m south-west (1992 mapping) This appears to be a small pond and area of marsh which is clearly still present on the far side of the recycling centre. It is not clear what non water feature Landmark is referring to.

Unknown filled ground (pond, marsh, river, stream, dock etc)

122 m south-east (1894 mapping) This is the former Logwood Mill/Waterside Mill goit which took water from the River Irwell upstream and diverted it through the mills before returning it to the main river.

135 m north-east (1931 mapping) This appears to be an area of land between the River Irwell and the former Manchester, Bolton & Bury Canal.

160 m north (1931 mapping) This appears to be the former Manchester, Bolton & Bury Canal, which actually passes within approximately 15 & 40 m of the eastern site boundary.

There is one licensed waste management facility within 250 m. This is an aggregates recycling centre also operated by RTK Grab Hire Ltd (the developer of this plot), some 19 m to the north-east of the site. In actual fact the aggregate processing area is to the south-south-west. Inert construction, demolition & excavation wastes are crushed and screened to produce secondary aggregates.

There are no records of historical prosecutions within 250 m of the development site.

There is one substantiated pollution incident register record within 250 m of the site, as follows:

24 Nov 2014 – 62 m east of the site (pollutant not identified)

Water Impact: Category 2 – Significant Impact

Air Impact: Category 4 – No Impact

Land Impact: Category 4 – No Impact

There is also a record of a prosecution under the Environmental Permitting (England & Wales) Regulations 2010 Regulation 38(1)(a). This related to an incident in August 2015 some 29 m to the north-west of the site. No further details are provided.

There are no hazardous substances sites within 250 m of the development site eg IPC, IPPC, LA IPC, COMAH or NIHHS activities.

There are six active Contemporary Trade Directory Entries within 250 m of the site as follows:

- Vactech Precision Engineering Ltd (Precision Engineers), 32 m north
- The Rakem Group (Chemical Manufacturers), 63 m north
- Airmatic Compressors Ltd (Air Compressors), 103 m north
- Wellington Street Car Sales (Car Dealers), 200 m north-east
- Rota Engineering Ltd (Electronic Component Manufacturers & Distributors), 248 m north
- Athol Paints Ltd (Painting & Decorating Supplies), 248 m north

There are no active fuel filling stations within 250 m of the site. The closest fuel filling station (Bury Express) is located approximately 396 m to the north-west of the site.

9. RADON

According to Landmark the site is '*in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level)*' and consequently '*no radon protection measures are necessary in the construction of new dwellings or extensions*'.

The same conclusions apply to the proposed commercial/industrial building.

10. SENSITIVE LAND USES

There are no potentially sensitive land uses within 1 km of the site.

11. PREVIOUS INVESTIGATION

In 2005 The Arley Consulting Company Ltd undertook an investigation at the site for the development of the recycling facility. The investigation covered the current development plot as well as land to the north, west and south, known as Daisyfield.

The investigation findings were also used to support the office building located to the west in 2015, now occupied by Rakem.

The investigation comprised the following:

- 7 boreholes across the wider Daisyfield site.
- Soil sampling and chemical analysis.
- Gas monitoring.

It can be seen, from Arley Consulting Drawing No 05314/03 - Borehole Location Plan presented at Appendix G, that one of the investigation boreholes (BH7) was drilled within the current development plot and a further 2 were located close to the northern (BH10) and southern boundaries (BH5) of the area currently being assessed.

Copies of these records are presented at Appendix G.

The boreholes proved the following stratigraphic sequence:

Topsoil (slightly peaty clay)	0.1 – 0.7 m thick
Silty gravelly clay	0.3 – 0.7 m thick
Gravelly sand	>1.3 m thick

At Borehole No 10, close to the northern site boundary the topsoil layer is reported to be thickest and also to contain ash and red shale. This is possibly associated with the former track that used to cross the site.

The following samples from these three boreholes were analysed for a generic range of potential contaminants as part of the Arley Consulting investigation:

Borehole No 1, 0.2 m (topsoil)

Borehole No 7, 0.15 m (topsoil)

Borehole No 10, 0.40 m (topsoil/made ground)

The analyses are presented at Appendix G. No contamination was identified in these or any of the other samples analysed as part of the Arley Consulting investigation.

Gas monitoring probes were installed in 3 of the 7 boreholes drilled as part of the Arley Consulting investigation (BHs 1, 6 & 10). As stated previously Borehole No 10 is located close to the northern boundary of the area currently being assessed. Borehole Nos 1 & 6 were located approximately 100 m to the south & 40 m to the west.

Ten rounds of gas monitoring were undertaken between December 2005 and March 2006. The results are summarised at Table 11.1.

Borehole No	Gas Concentration (%)			Borehole Flow (l/hr)
	Methane	Carbon Dioxide	Oxygen	
1	0	0	20.1 - 20.7	0
6	0	0	20.1 - 20.7	0
10	0	4.1 - 5.3	16.2 - 20.7	0

Table 11.1 - Gas Monitoring Results

Since the investigation RTK Grab Hire Ltd has removed the topsoil and placed a layer of hardcore/asphalt planings across this part of the site in accordance with the approved planning permission for the site, to enable the area to house the temporary office buildings and to provide an area for material storage and vehicle parking.

12. PRELIMINARY CONCEPTUAL MODEL

The Environment Act 1995 makes provision for a risk-based framework for the identification, assessment and management of potentially contaminated land through the assessment of risk.

The process of risk assessment is an evaluation of the probability of harm, and comprises the identification of sources of contamination, receptors that may be affected by the contamination and pathways by which the receptors may be harmed.

In this section of the report ZZE provides a qualitative assessment of risks based on potential contamination, plausible pathways and all significant receptors.

The risk assessment assumes that the site will be developed by the construction of a single, large open storage warehouse, as proposed. Should the nature of the development change or the activities undertaken on the site alter in the future the environmental assessment should be reviewed and updated accordingly.

On-Site Potential Contaminative Sources

There are no significant potential sources of on-site contamination.

Historic OS maps indicate that the site has no significant development history. It was a field lying to the south of Daisy Field Mill. A track was present across the site.

The site was developed from a field, in around 2006 and investigations undertaken in 2005/06 identified predominantly natural soils (topsoil, clay and gravelly sand) in this part of the wider Daisyfield site. A small amount of ash and red shale, possibly associated with the former track, was found mixed in with the topsoil layer at BH10, but chemical analysis proved it to be uncontaminated.

Since 2005 the development plot has housed temporary offices and been used as a yard for material storage and vehicle parking. No visual evidence of fuel or oil spills or other evidence of contamination were observed during the walkover inspection.

Off-Site Potential Contaminative Sources

The neighbouring land comprises a car park and training centre (to the north), offices and storage buildings (to the west), Wellington Street (to the east) and a permitted aggregates processing/ recycling centre (to the south) which produces secondary aggregates from inert construction, demolition & excavation waste.

There are no hazardous substances sites in the vicinity of the site and the Contemporary Trade Directory activities identified are unlikely to affect the ground conditions at the site.

Historically there were cotton mills in this part of the River Irwell valley, with old OS maps showing mills to the north, east and south-east of the site. A gasometer was also present within Daisy Field Mill, some 80 north of the development plot.

These activities offer limited opportunities for potential contamination and no contamination was identified during the 2005/06 Arley Consulting investigation.

Landmark has identified one historical landfill site within 250 m of the site. Strong & Fisher operated a licenced landfill at Hinds Lane, some 208 m to the south of the development site, for the disposal of inert, industrial, commercial & special wastes. Records indicate that the site operated between 1942 and 1992.

Landmark has also identified some small areas of potentially infilled ground within 250 m of the site, including the former Manchester, Bolton & Bury Canal which is located some 15 to 40 m to the east of the development site.

Gas monitoring undertaken in 2005/06 did not identify significantly elevated hazardous ground gases, at that time. Despite the time since the investigation and monitoring it is unlikely that conditions have changed.

Conclusions

Based on the available information reviewed as part of this assessment, the potential for significant contamination to be present at the site is considered to be **Low**.

Potential Contaminative Pathways

The proposed development comprises the construction of a large storage building with a concrete floor slab. External areas will be surfaced with concrete or asphalt.

Based on the proposed development, the following potential contamination pathways are assessed:

- (i) Ingestion of contaminated soil
- (ii) Inhalation of contaminative dust/fibres/vapours
- (iii) Physical contact
- (iv) Build-up of hazardous gases (eg carbon dioxide & methane) under the building leading to migration into the new building
- (v) Dissolution or suspension (leaching) of contaminants from site soils into groundwater
- (vi) Lateral migration of contaminants in shallow groundwater (dissolved and immiscible phases) providing base flow to surface waters

Potential Receptors

The potential receptors that may be affected by contamination or hazardous gas at the site are as follows:

- 1. Future Site Users
- 2. Buildings and Structures
- 3. Controlled Waters
- 4. Adjacent Properties
- 5. Construction Workers

There are no sensitive ecological sites or habitats in the vicinity of the site, consequently potential risks to these receptors have not been considered further.

Risk Assessment

The assessment of risk is based on the concept of the source – pathway - receptor linkage.

Risks posed to each of the identified potential receptors are discussed separately below in accordance with CIRIA Guidance Document: Contaminated Land Risk Assessment – A Guide to Good Practice.

An environmental risk rating of Negligible, Very Low, Low, Moderate or High has been assigned to each identified receptor.

Future Site Users

It is unlikely that any personnel will be permanently located or working within the proposed storage building.

The entire site area will be surfaced with either the building's concrete floor slab or external concrete/asphalt surfacing. These materials will provide a physical barrier between any possible ground contamination and future site users.

The identified landfill site and small areas of potentially filled ground do not represent a significant potential gas risk. Furthermore, the proposed development comprises a large storage building which will be well ventilated and will not have confined spaces.

The potential risks to future site users, associated with possible ground contamination, is considered to be Very Low.

Risks associated with hazardous ground gas are considered to be Low.

Buildings and Structures

A site investigation undertaken in 2005/06 did not identify any ground contamination.

Since that time the topsoil/made ground layer has been stripped and removed and a hardcore layer placed to allow the yard to be used for vehicle parking. There are no specific signs of instability resulting from aggressive ground conditions.

It is not proposed to provide a potable water supply to the new building.

Potential risk to buildings and structures due to contaminated ground or hazardous gas at the development site is considered to be Very Low.

Controlled Waters

The site is reported to be underlain by river terrace deposits (sand & gravel) associated with the nearby River Irwell overlying glacial soils (glacial till/clay & glaciofluvial deposits/sand & gravel) and undifferentiated Pennine Lower Coal Measures rocks including mudstone, siltstone and sandstone.

The 2005 investigation proved the near surface stratigraphy to comprise a layer of clay overlying gravelly sand (likely to be the river terrace deposits) extending to at least 2.5 m bgl.

These strata are classified as secondary aquifers although the potential for potable or abstractable groundwater is considered to be low.

The site is not located in a groundwater source protection zone.

There is one groundwater abstractions within 500 m of the site, JR Crompton plc abstracts water from a borehole some 289 m to the north of the site for manufacturing use. This borehole is likely to be upgradient of the site.

The nearest surface water features are the River Irwell, some 70 m to the east and an unnamed tributary of the river, some 47 m to the west.

There are two surface water abstractions within 500 m of the development site. JB Skips & Services Ltd abstracts water from the River Irwell, some 183 m south-east for dust suppression and JR Crompton abstracts water from a reservoir fed by surface drainage some 269 m to the north of the development site for manufacturing.

The potential risk to controlled waters due to contaminated ground beneath the site is considered to be Very Low.

Adjacent Properties

There are commercial and industrial properties to the north and west of the site. The training centre, to the north utilises temporary Porta-cabin offices and classrooms which have no foundations.

The potential risk to the existing neighbouring property and people is considered to be Very Low.

Construction Workers

In the event that contaminated made ground is present at shallow depth beneath the site, construction workers exposure to potential contaminants of concern would be very limited (during the short lifetime of the development works).

Notwithstanding the above, construction workers should adopt standard health & safety precautions including appropriate personal protective equipment (PPE).

The potential risk to the construction workers is considered to be Very Low.

13. CONCLUSIONS & RECOMMENDATIONS

Zig Zag Environmental has been instructed by RT Grab Hire Ltd to prepare a Preliminary Risk Assessment (PRA) for proposed warehouse development at Wellington Street, Bury (BL8 2BD)

This PRA has been produced to meet the requirements of Bury Metropolitan Borough Council as detailed in its letter dated 31 January 2025 (Ref 71528).

The site and surrounding area do not have a history of potentially contaminating land use and therefore the potential for contamination to be present is very limited.

A site investigation undertaken at the wider Daisyfield site in 2005/06 by Arley Consulting did not identify any significant contamination or hazardous ground gas although slightly elevated carbon dioxide was reported in one of the monitoring boreholes (4.1 – 5.3 %). There was no gas flow.

It is acknowledged that the investigation findings are almost 20 years old.

Zig Zag Environmental makes the following conclusions:

- The floor slab of the existing office and the existing hard surfaced external areas will provide a physical barrier between any shallow ground contamination and future site users.
- No radon protection measures are required.
- The proposed development is not affected by shallow coal/coal mine workings and no specific investigation or mitigation measures are required.
- There are a number of small areas of filled ground within 250 m of the site and an old landfill site approximately 208 m to the south of the site. However, potential ground gas risks are considered to be low.

Zig Zag Environmental has assessed the degree of ground contamination risk posed by the site and surrounding land and conclude that the potential risks to identified receptors are very low to low.

ZZE does not consider that further Phase 2 intrusive investigation is required but the developer and any appointed contractors shall maintain a watching brief, particularly during any preparatory groundworks and should contamination be encountered unexpectedly during redevelopment of the site, professional advice should be sought and the Local Planning Authority informed.

ZZE is advised that any excavation arisings generated during the proposed development will be taken to the nearby recycling centre for processing and recovery as secondary aggregate in accordance with RTK Grab Hire Ltd's aggregate processing permit.



APPENDIX A
PHOTOGRAPHS

**Land to the West of Wellington Street, Bury
Photographs - February 2025**



Photograph No 1 - View Across the Site from the North-West Corner



Photograph No 2 - View Across the Site from the South-West Corner

**Land to the West of Wellington Street, Bury
Photographs – February 2025**



Photograph No 3 - View Across the Site from the North-East Corner



Photograph No 4 - Temporary Buildings on Eastern Part of the Site

**Land to the West of Wellington Street, Bury
Photographs – February 2025**



Photograph No 5 – Car Park and Training Centre to the North



APPENDIX B

HISTORICAL OS MAPS

Ordnance Survey County Series 1:10,560

Ordnance Survey Plan 1:10,000

1:10,000 Raster Mapping

		
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	Site of Antiquities	Trigonometrical Station
		
Pump, Guide Post, Signal Post		Bench Mark
		
Surface Level		Well, Spring, Boundary Post
285		
		
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		

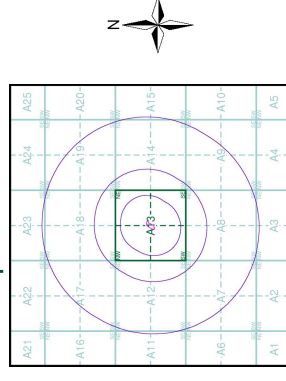
Geographical Features		Man-made Structures		Vegetation		Water Features		Other Features	
	Chalk Pit or Quarry		Clay Pit or Quarry		Gravel Pit		Disused Pit or Quarry		Lake, Loch or Pond
	Sand Pit		Refuse or Slag Heap		Dunes		Boulders		Non-Confirous Trees
	Coniferous Trees		Orchard		Scrub		Heath		Reeds
	Bracken		Marsh		Building		Glasshouse		Sloping Masonry
	Pylon		Electricity Transmission Line		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, Borough or District Council		Borough, Burgh or County Constituency
	Civil Parish		Boundary Post or Stone		Police Station		Post Office		Public Convenience
	Signal Box		Spring		Telephone Call Box		Telephone Call Post		Well

Natural Features		Man-made Features	
	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		Consistency 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
	Mean high water (springs)		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

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Page
Lancashire and Furness	1:10,560	1850 - 1851	3
Lancashire and Furness	1:10,560	1884	4
Lancashire and Furness	1:10,560	1910 - 1911	5
Lancashire and Furness	1:10,560	1931	6
Lancashire and Furness	1:10,560	1938 - 1939	7
Ordnance Survey Plan	1:10,000	1955 - 1956	8
Ordnance Survey Plan	1:10,000	1965 - 1969	9
Ordnance Survey Plan	1:10,000	1974	10
Manchester	1:23,000	1975	11
Ordnance Survey Plan	1:10,000	1980 - 1984	12
Ordnance Survey Plan	1:10,000	1989	13
Ordnance Survey Plan	1:10,000	1992	14
10K Raster Mapping	1:10,000	1999	15
10K Raster Mapping	1:10,000	2006	16
VectorMap Local	1:10,000	2024	17

Historical Map - Slice A



Order Details

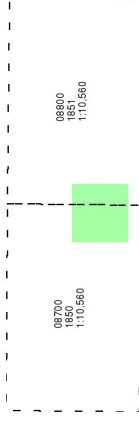
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Site Details

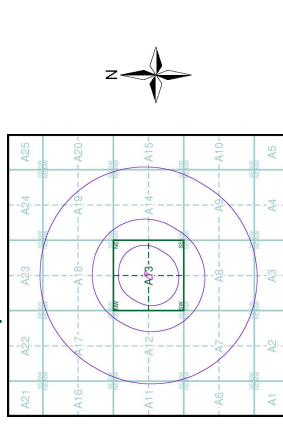
Wellington Street, Bury, BL8 2BD

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey archives. The first edition of the 1:10,560 scale map 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 overlaid with the National Grid. In 1970, the first 1:10,560 maps were produced using the Transverse Mercator Projection. The maps were revised and updated recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A

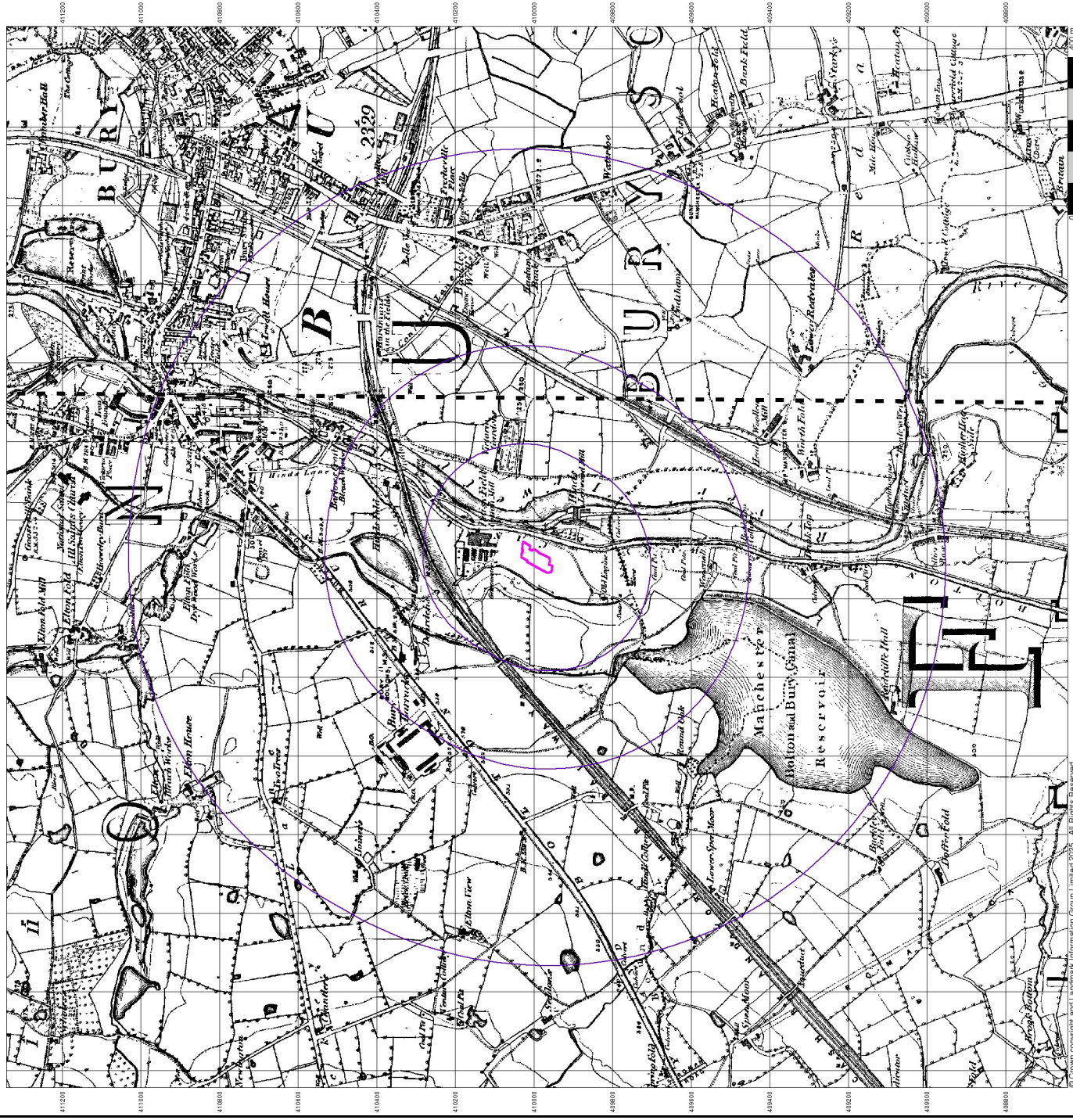


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Site Details

Wellington Street, Bury, BL8 2BD

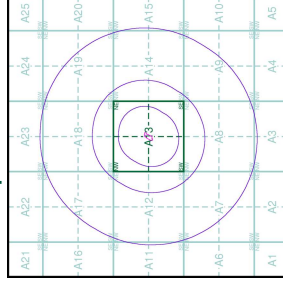


The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Southampton, in 1954. The 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys 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 overlaid with the National Grid. In 1970, the first 1:63,000 maps were produced using the Transverse Mercator Projection. The resulting maps were issued in 1971, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

087NE 1894 1:10,560	088NW 1894 1:10,560
087SE 1894 1:10,560	088SW 1894 1:10,560

Historical Map - Slice A

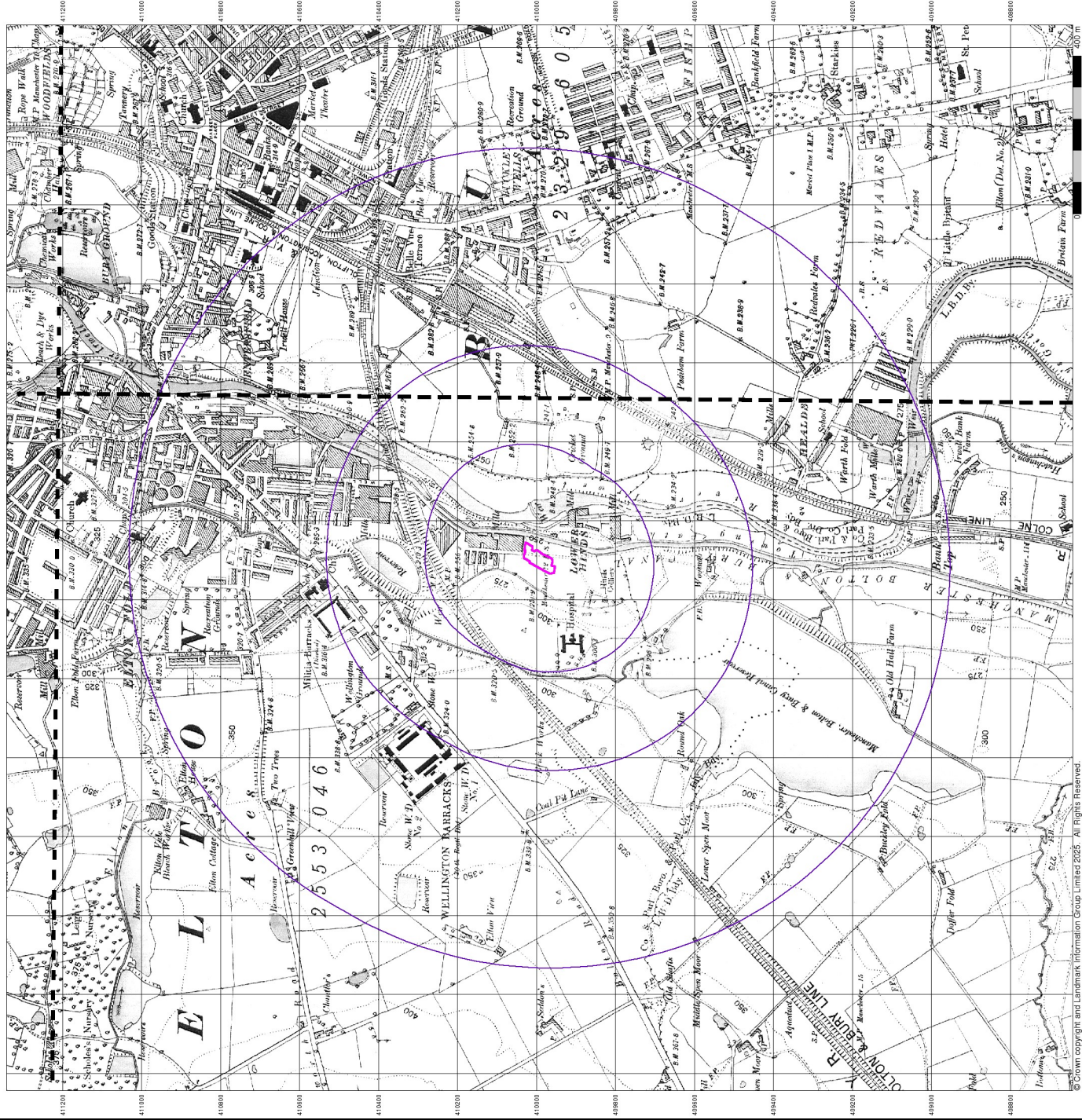


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Search Buffer (m): 1000

Site Details

Wellington Street, Bury, BL8 2BD



Lancashire And Furness

Published 1910 - 1911

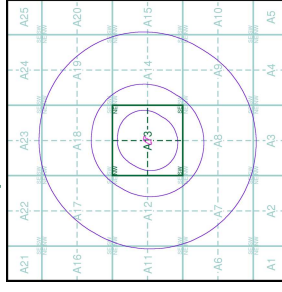
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey archives in Southampton. Between 1854 and 1911, the 1:10,560 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 overlaid with the National Grid. In 1970, the first revision of the maps was produced using the Transverse Mercator Projection. The maps were revised and updated recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

087NE	088NW
1911	1911
1:10,560	1:10,560
087SE	088SW
1911	1911
1:10,560	1:10,560

Historical Map - Slice A

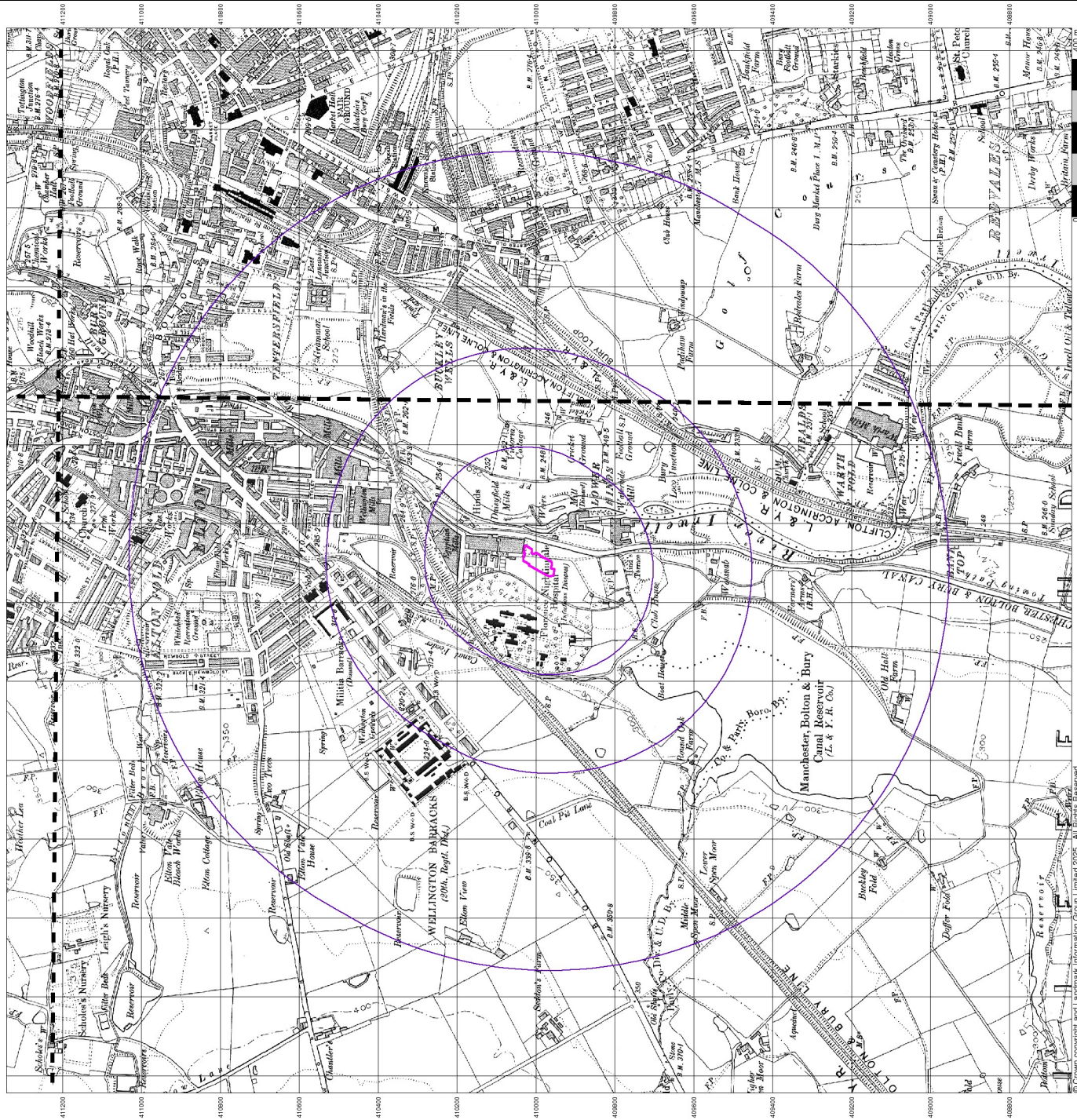


Order Details

Order Number: 369146726_1_1
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Site Details

Wellington Street, Bury, BL8 2BD



Lancashire And Furness Published 1931

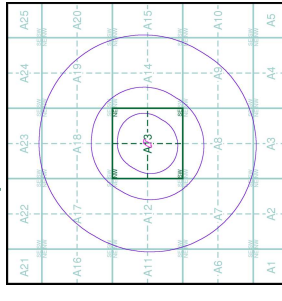
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Southampton, in 1954. 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 overlaid with the National Grid. In 1970, the first 1:63,000 maps were produced using the Transverse Mercator Projection. The revised edition was published recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

087NE	088NW
1931	1931
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087SE	088SW
1931	1931
1:10,560	1:10,560

Historical Map - Slice A

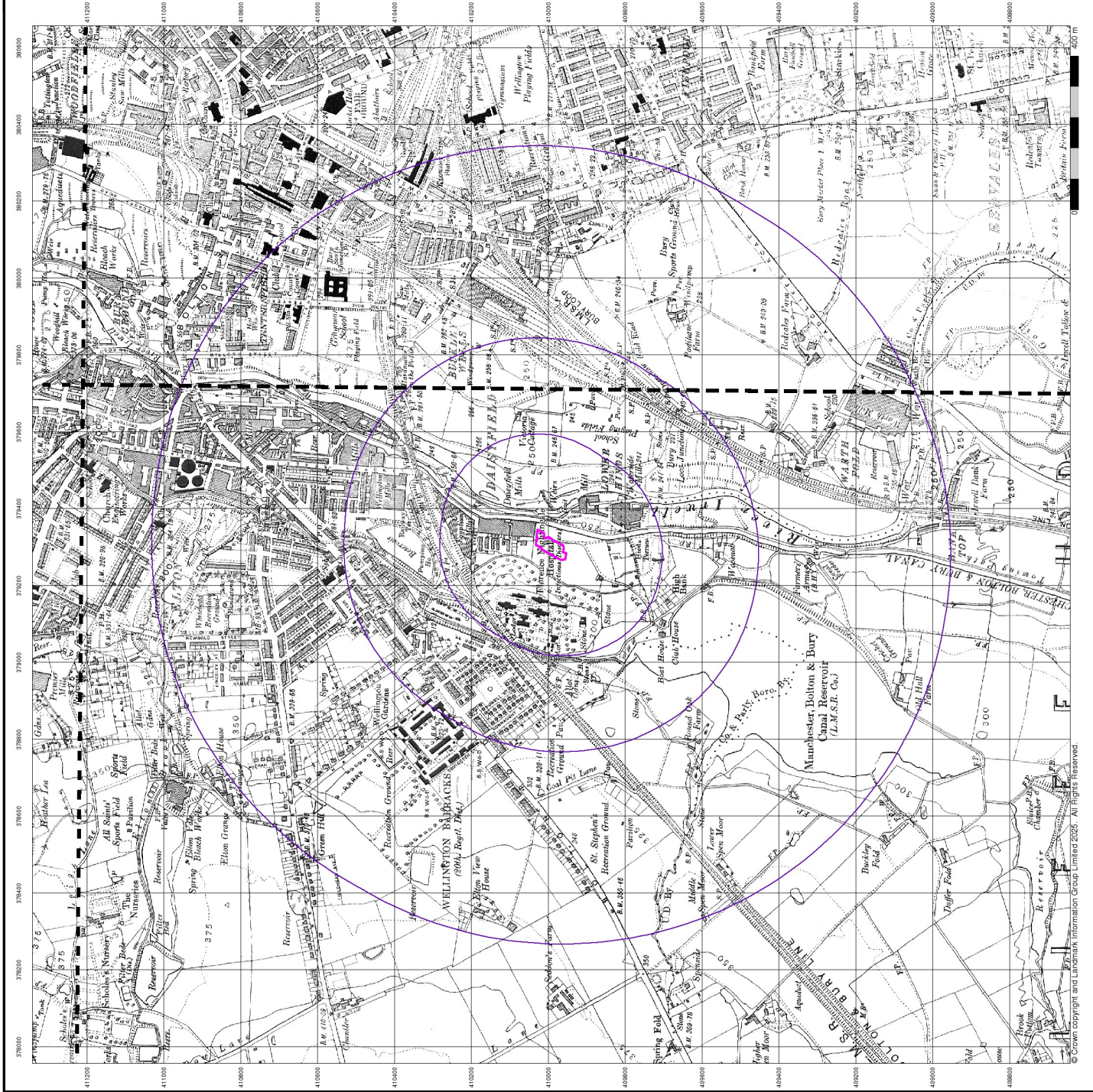


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Site Details

Wellington Street, Bury, BL8 2BD



Lancashire And Furness

Published 1938 - 1939

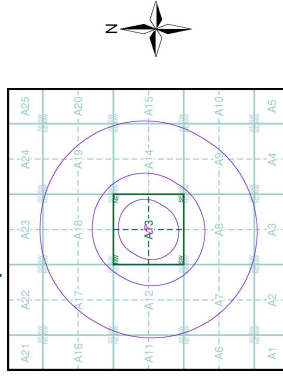
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Southampton, in 1954. 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 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 overlaid with the National Grid. In 1970, the first 1:62,500 maps were produced using the Transverse Mercator Projection. The revised edition was published recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

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1938	1938
1:10,560	1:10,560
087SE	088SW
1938	1938
1:10,560	1:10,560

Historical Map - Slice A

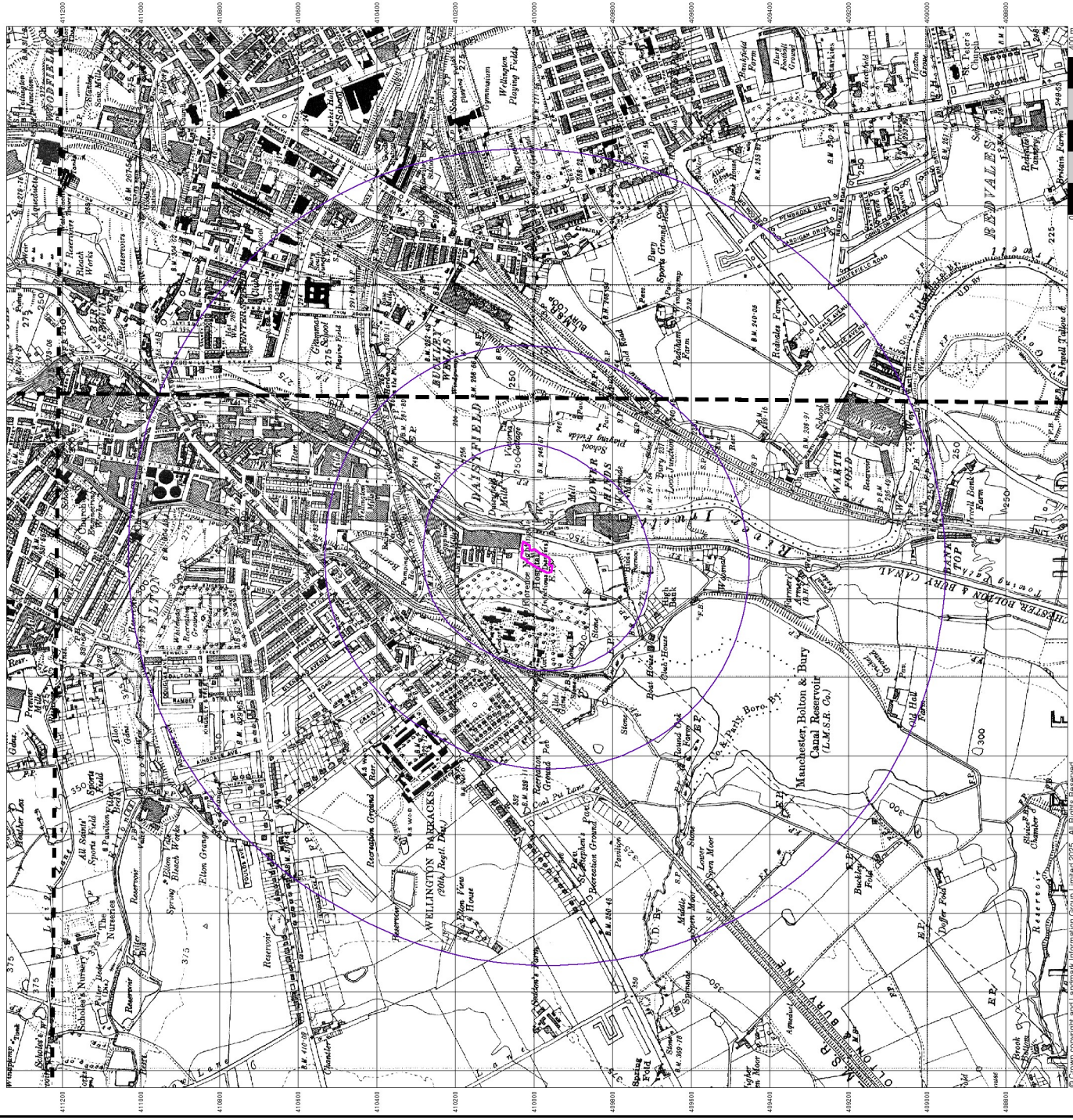


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Site Details

Wellington Street, Bury, BL8 2BD



Ordinance Survey Plan Published 1955 - 1956

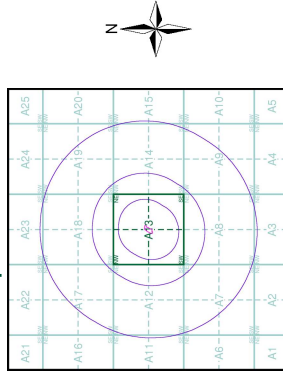
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey archives. The first edition of the OS maps, the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,000 maps. The published date given therefore is often 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 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overlaid with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revised edition was published recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD7ISE	SD8ISW	1956	1:10,560
SD7ONE	SD8ONW	1955	1:10,560

Historical Map - Slice A

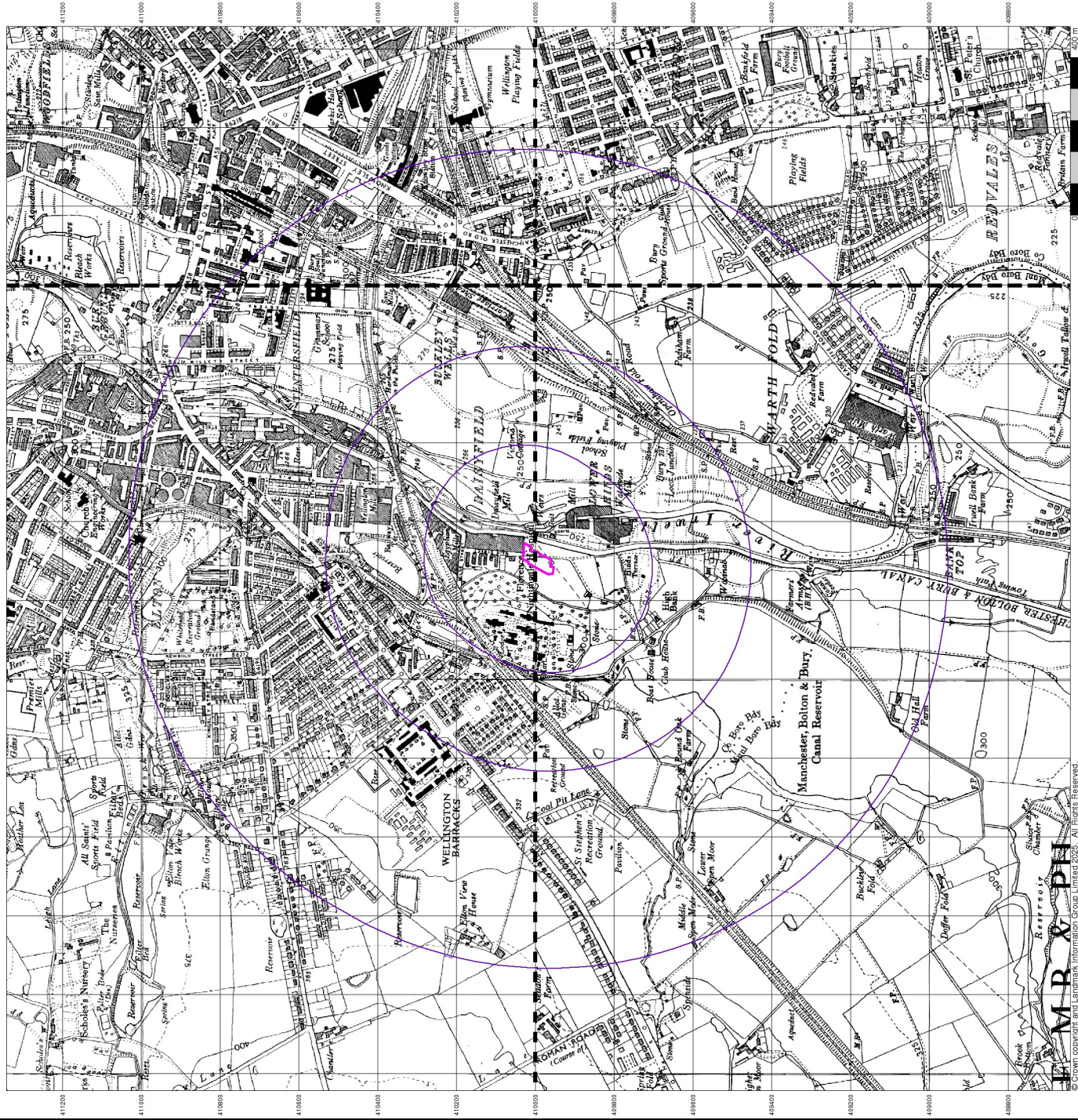


Order Details

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National Grid Reference: 379300, 409990
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 1000

Site Details

Wellington Street, Bury, BL8 2BD



Ordinance Survey Plan

Published 1965 - 1969

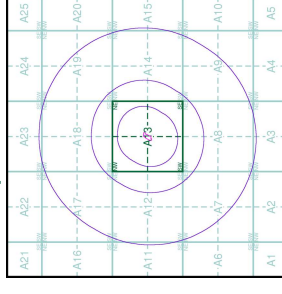
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey archives in Southampton. The first edition of the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,000 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 inaccuracies in outlying areas. In the late 1940s, a Provisional Edition was produced, which updated the 1:10,000 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 revised edition was published recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD7ISE	SD8ISW
1969	1967
1:10,560	1:10,560
SD7ONE	SD8ONW
1965	1965
1:10,560	1:10,560

Historical Map - Slice A

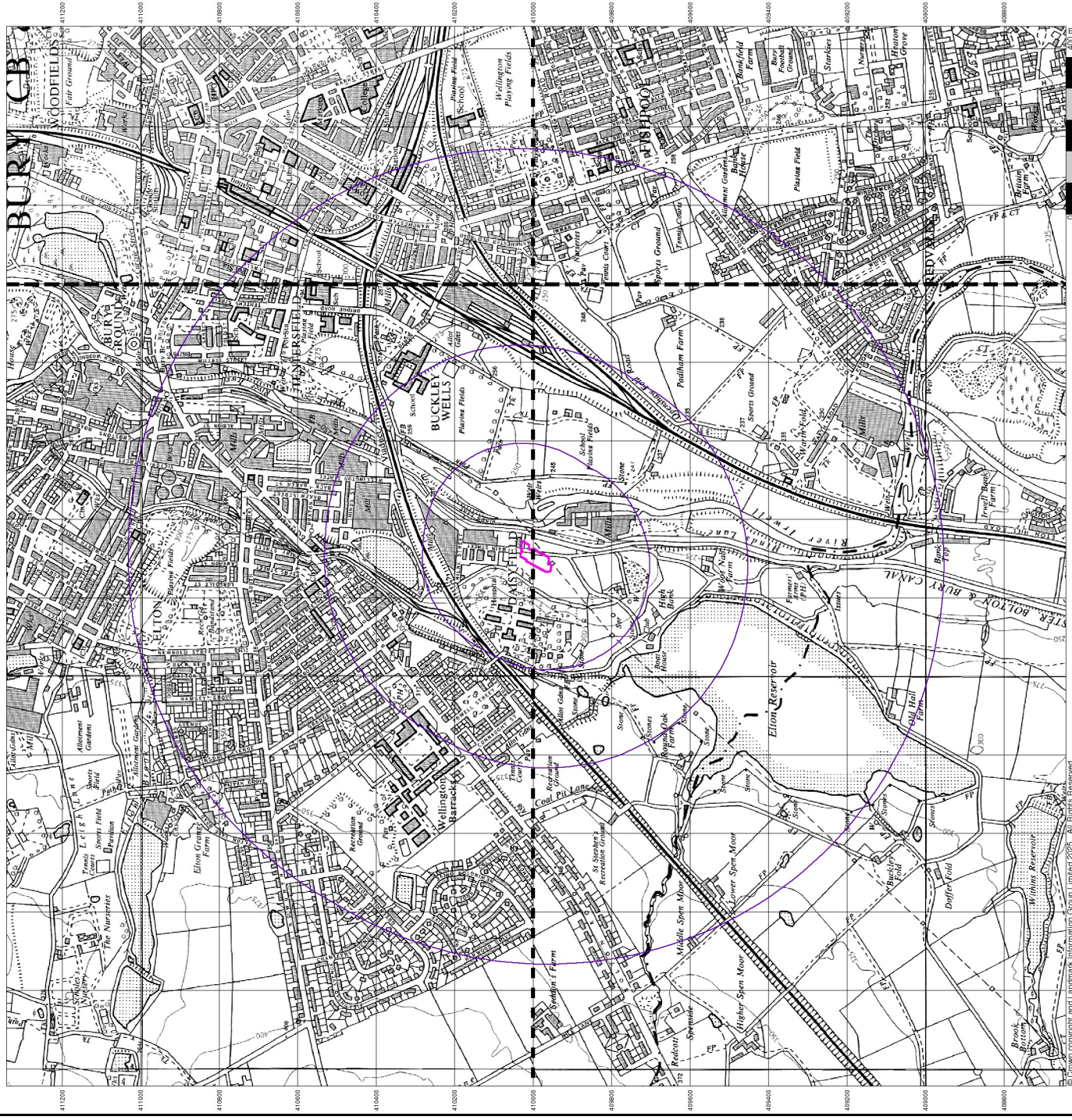


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Site Details

Wellington Street, Bury, BL8 2BD

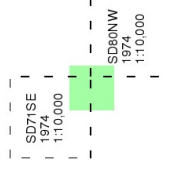


Ordinance Survey Plan Published 1974

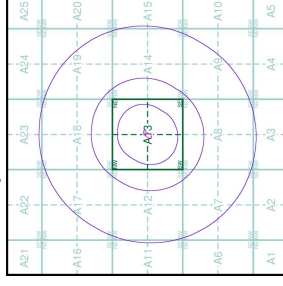
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The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey archives in Southampton. The first edition of the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The 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 revision of the maps was produced using the Transverse Mercator Projection. The revision was completed in 1974, 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: 369146726_1_1
Customer Ref: ZZ25045
National Grid Reference: 379300, 409990
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Site Area (Ha): 0.3
Search Buffer (m): 1000

Site Details

Wellington Street, Bury, BL8 2BD