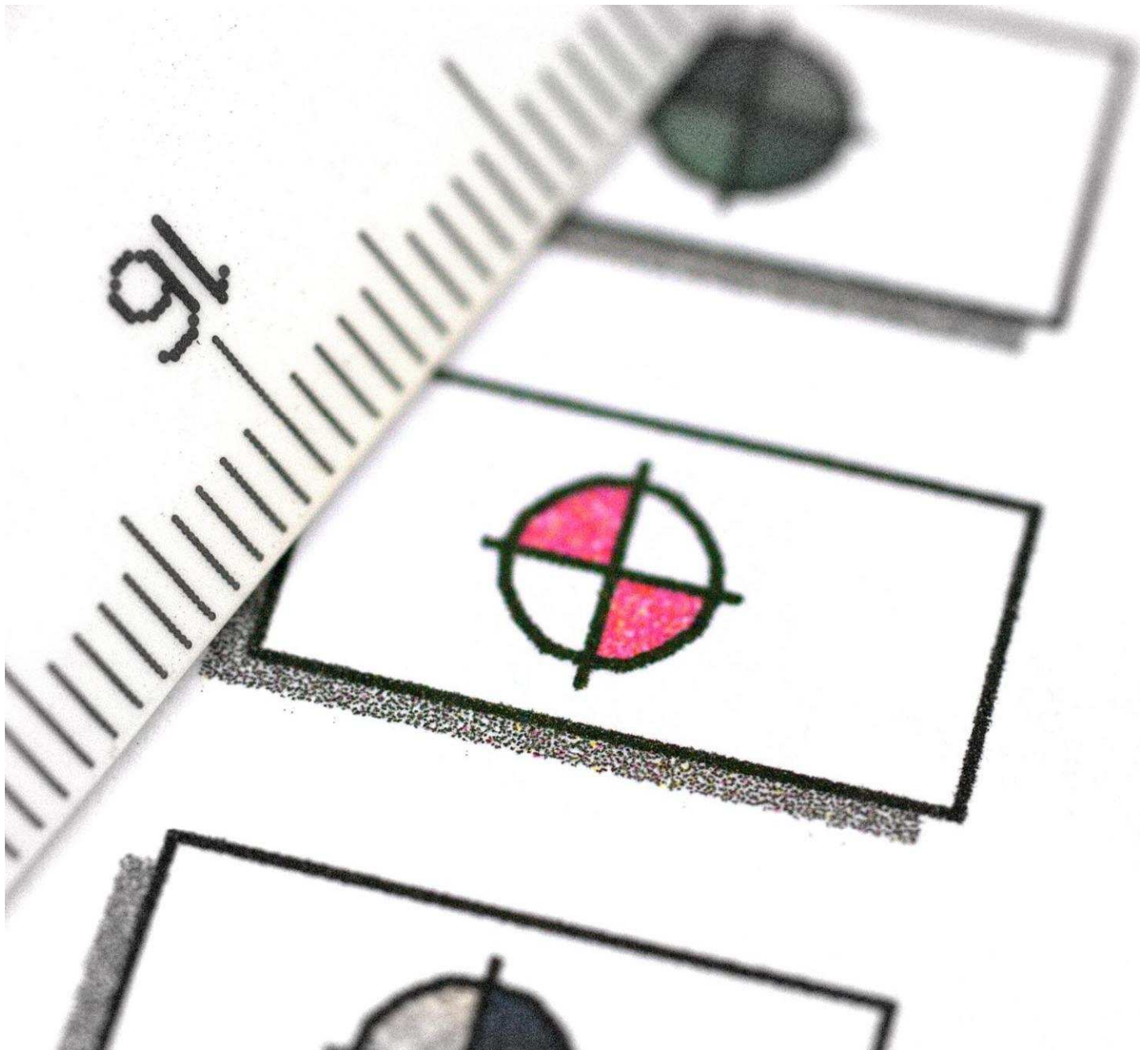




UNITED
BY OUR
DIFFERENCE



Broad Lane, Rochdale
Preliminary Environmental Risk Assessment
Taylor Wimpey UK Limited

May 2012

QUALITY MANAGEMENT

Issue/revision	Issue 1	Issue 2
Remarks	Final	Final – For Outline Planning
Date	February 2012	May 2012
Prepared by	Rebecca Colvin	Rebecca Colvin
Signature		
Checked by	R Lawless	R Lawless
Signature		
Authorised by	A. Moore	A. Moore
Signature		
Project number	20649/001	20649/001
File reference	9594(1)	9594(1)

WSP Environmental UK
The Victoria
150 – 182 The Quays
Salford
Greater Manchester
M50 3SP

Tel: +44 (0)161 886 2400
Fax: +44 (0)161 886 2402
<http://www.wspgroup.com>

Reg. No: 1152322

CONTENTS

1	Site information	1
2	Environmental Setting and Historical Land Uses	2
3	Regulatory Information and Consultations	4
4	Preliminary Conceptual Site Model & Risk Assessment	6
5	Conclusions and Recommendations	8

Appendix A	Figures
Appendix B	Photographs
Appendix C	Selected Historical Plans
Appendix D	Envirocheck Datasheets
Appendix E	C552 reference Tables
Appendix F	Qualitative Risk Assessment
Appendix G	Limitations

1 Site information

Site name	Ginnell Farm	Location	Broad Lane Burnedge Rochdale Lancashire OL16 4PU
NGR	391100, 410820	Approximate Site Area	7.86ha
Brief	On the instruction of Taylor Wimpey UK Ltd, a Preliminary Environmental Risk Assessment has been undertaken by WSP Environmental Limited (WSPE) for the site on Broad Lane, Burnedge, Rochdale. The Preliminary Risk Assessment has been completed using information compiled from the following sources: • A site walkover completed by WSPE on 8 December 2011. • An Envirocheck Report centred on the site, dated 11 November 2011. • Maps and pertinent information available online. • Published environmental records. The principal aim of this assessment is to support a Master Plan for planning submission, in order to progress towards a future residential development. Limitations of the study are presented in Appendix F.		
Site Location	The site is located approximately 3km southeast of Rochdale town centre, just north of the M62 on the southern edge of a residential area. Vehicle access is from Broad Lane to the east. A site location plan is presented as Figure 1 in Appendix A,		
Site Description and Topography	A site plan is presented as Figure 2 in Appendix A and site photographs are presented in Appendix B. The site is roughly rectangular and at the time of the walkover the majority of the area comprised rough grassed tree-lined fields. There are areas of trees/vegetation around the site and farm buildings (a house and several sheds) in the south eastern corner. An electrical sub-station is located approximately half way along the eastern boundary. Topography is indicated to vary between 170m aOD (above Ordnance Datum) on the southern boundary to 160m aOD on the northern boundary. The ground level is locally undulating with a lower area in the centre of the eastern half of the site. The topography of the surrounding area falls from southeast to northwest.		
Surrounding Area	The land uses in the surrounding areas are as follows: • To the north: Residential housing with gardens. • To the east: Broad Lane with residential properties and open land beyond. • To the south: The M62 motorway with open agricultural land beyond. • To the west: Farm land with residential properties beyond.		
Proposed use	It is understood that the subject site is proposed for a development of new residential properties.		

2 Environmental Setting and Historical Land Uses

		Sensitivity
Geology	Data from the British Geological Survey (BGS) online resource (Geology of Britain Viewer) indicates that the site is underlain by Glaciofluvial deposits of sand and gravel (Devensian). The solid geology comprises Pennine Lower Coal Measures comprising mudstone, siltstone and sandstone. Three historical borehole logs are available on the BGS website in the vicinity of the site (250m west). These indicate up to 6.9m of Made Ground over clay or sand and gravel. These boreholes were positioned over the location of a former mill/reservoirs and are unlikely to be representative of Made Ground thicknesses in the immediate area.	N/A
Hydrogeology	Information within the Envirocheck Report and the Environment Agency (EA) website indicates that the Glaciofluvial deposits underlying the site and underlying Pennine Coal Measures are both classified as Secondary A Aquifers.	Medium
	The Envirocheck Report and the EA website indicate that site does not lie within a Groundwater Source Protection Zone (SPZ). The closest SPZ is over 1km to the east.	Low
	The Envirocheck Report lists four licensed groundwater abstractions located within 1km of the site. The closest is located 538m east of the site, operated by S. Croston and utilised for general agricultural use. The other abstractions are located 573m to the north east (agricultural use), 671m to the north (farming and domestic use) and 884m to east (agricultural use).	Medium
Hydrology	Maps show that within the site, approximately 100m from the central northern site boundary, there is a small stretch of surface water with associated 'issues' and 'sinks' running parallel to the northern site boundary for 100m, and is likely to be a drain. Beyond the site boundary the closest watercourse is Sudden Brook, situated (at its closest point) 100m from the western boundary. A small reservoir/pond is apparent 200m north west of the site. Beyond this feature is the Rochdale Canal located approximately 1.5km north east. According to the Envirocheck Report Sudden Brook was given a River Quality Biology GQA Grade D – fair in 2009 (at a point 400m to the west of the site), and a River Quality Biology GQA Grade B in 2000 (344m to north west of the site).	Medium
	The Envirocheck Report and the Environment Agency website indicate that the site itself is not prone to flooding. An area 239m to the west is sensitive to flooding.	Low
Sensitive Land Uses	The area directly south of the M62 is an Area of Adopted Greenbelt (to about 1km south of the site).	Low

Site History	<u>The Site</u> Historical maps indicate that the site has remained as agricultural land since the earliest map (1857). The map of 1894 indicates a building in the south-eastern corner ('Ginnell'), which was extended into what appears to be a small-holding or farm with a sub-station on the eastern site boundary between 1956 and 1967, It is expected that these are the current Ginnell Farm site buildings. Electricity posts and transmission lines are shown crossing the western half of the site on the map of 1955, however these are not shown on the subsequent map (1976). <u>Surrounding Area</u> The earliest maps indicate the surrounding area to be farmland. Two mills and associated reservoirs are indicated on the map of 1894 approximately 300m west of the site. The southern mill remained until circa 1979 and the northern mill until circa 2006. The M62 motorway along the southern site boundary is shown on maps from 1979. Residential development is indicated to the north and west of the site on maps from 1967, with development encroaching on the site boundary to the north and northwest by 1999. A selection of historical map extracts are included in Appendix C and the Envirocheck Report is included as Appendix D.	Low
--------------	--	-----

3 Regulatory Information and Consultations

Pollution Incidents to Controlled Waters	According to the Envirocheck Report there have been six Pollution Incidents to Controlled Waters within 1km of the site. The closest incident occurred in 1999, and was located 367m to the north of the site; classified as Category 3: Minor Incident. In 1992, 555m to the north east of the site there was a Category 1: Major incident involving industrial effluent, however no further information is given. The potential for residual contamination to be present onsite by lateral migration is considered to be low.
Discharge Consents	The Envirocheck Report lists four discharge consents within 1km of the site. The closest located 49m to the south west of the site, discharging final treated sewage effluent into Sudden Brook. The remaining consents were located 165m to the west, 268m to the west, and at 613m to the south east. All discharge consents were granted by the EA.
Potentially Contaminative Land Uses	There is one fuel station entry within 1km of the site, for Dean Service Station, 250m south west of the site. The closest Contemporary Trade Directory entry is listed as 18m north of the site at 8 Waddington Fold (plastic product manufacture), however this appears to be a residential property. There are a further two sites with entries registered to them within 250m of the site; 23m east (breakdown recovery, inactive) and 250m south-west (garage services, active).
Waste Management / Landfills	According to the Envirocheck Report the closest historical landfill site is located 595m to the south east of the site, and was open from 1984-1986 depositing mainly inert waste. There are two registered landfill sites within 1km of the site; One located 616m south east of the site with a maximum input rate of medium (inert waste), and the second located 823m to the east of the site and of a very large size, however the nature is unknown. The Envirocheck Report also lists an installation set up by British Vita PLC (Vitaluxan) that handles hazardous substances 836m north east of the site.
Coal Authority	A Coal Authority report has been obtained for the study area. The Coal Authority Report indicates that the site is not in a zone of likely physical influence from past or present workings. However, reserves of coal do exist in the locality that could be worked at some time in the future subject to feasibility, licenses and planning consents. There are no records of the site having been affected by subsidence or instability due to faulting, no known mine entries within, or within 20m of, the boundary of the site, and the property is not located within the geographical boundary of an opencast site from which coal has been extracted by opencast methods. The property does not lie within 200m of a geographical boundary of an opencast site within which coal is being extracted by opencast methods, or within 800m of an opencast site for which a license to extract coal by opencast methods is awaiting determination or has been granted.
Radon	The Envirocheck Report indicates that the site is not located within a radon affected area as less than 1% of homes in the area are above the action level. Therefore, radon protective measures are not required for developments in this area.

Environment Agency	No significant issues have been identified that warrant consultation with the EA.
Petroleum Officer (PLO)	No significant issues have been identified that warrant consultation with the Petroleum Officer.
Rochdale Metropolitan Borough Council Building Control Department	No significant issues have been identified that warrant consultation with the building Control Department of the local authority.
Rochdale Metropolitan Borough Council Contaminated Land Officer	No significant issues have been identified that warrant consultation with the Contaminated Land Officer of the local authority.
Animal Health and Veterinary Laboratories Agency (AHVLA)	The AHVLA have no records of any burial sites within the site boundary.

4 Preliminary Conceptual Site Model & Risk Assessment

Potential Contaminant Sources	Given the site history, the current use of the site and that of the surrounding area, the areas of potential concern are considered to be as follows: • Possible diesel and other fuels or chemicals, including pesticides and fertilisers, stored at the farm. • Transformer oils (possibly containing PCBs) associated with the sub-station on the eastern boundary. • Possible asbestos containing materials within existing farm buildings. • Potential contaminants and landfill gas associated within possible areas of filled ground (no evidence of presence). It is possible that there are areas of Made Ground in the south of the site associated with the construction of the M62.
Potential Receptors	Assuming a future residential end use the potential receptors include: • Construction workers involved in the redevelopment. • Neighbouring site users during redevelopment. • Future residents and maintenance workers. • Underlying Secondary A Aquifers. • Surface waters (e.g. Sudden Brook).
Potential Contaminant Pathways	Potential Contaminant Pathways include: Human Receptors • Direct contact with contaminated soils. • Ingestion of soil dust. • Ingestion of vegetables grown in contaminated soils. • Ingestion of drinking water from compromised supply pipes. • Accumulation of ground gas or vapours within buildings followed by inhalation. Controlled Waters • Leaching of contaminants from soils to shallow groundwater. • Migration of contaminated shallow groundwater into the underlying aquifer. • Migration of contaminated groundwater into nearby surface waters. Buildings • Accumulation of ground gas within buildings, generating an explosive atmosphere.

Pollutant Linkage Assessment	Based on the Pollutant Linkage Assessment for the site, the following overall risk classifications have been determined: ■ Given the historical and current uses of the site, it is considered unlikely that there are widespread levels of contamination or ground gas that would represent a risk to human health or water supply pipes. ■ Given the presence of a number of farm buildings and a sub-station in the south-eastern part of the site, it is possible that localised hot spots of contamination are present in this area, which could represent potential risks to construction workers, future users of the site and the underlying aquifer. ■ There is potential for Made Ground to be present at the site (however no evidence for such has been identified), which if present could represent a source of hazardous ground gases and these in turn could pose a risk to future occupiers without appropriate assessment/mitigation (considered unlikely). ■ Due to the current and historical land uses of the site, as well as the geology/hydrology, it is considered unlikely that there are levels of contamination present at the site that would represent a risk to controlled waters. The terms describing Probability and Consequence are referenced from the CIRIA 552 document. Table 6.3, 6.4 and 6.5 from this report are provided for reference in Appendix E. ■ With respect to Human Health issues and Buildings and Services, the site is classified as Low Risk. ■ With respect to risks to Controlled Waters the site is classified Low Risk.
Asbestos Containing Materials (ACM's)	Given that there are historical buildings present at the site, it is likely that Asbestos Containing Materials (ACM) may be present within and surrounding the existing structures.

5 Conclusions and Recommendations

Development Constraints	Based on the information described above it is considered that standard strip footings bearing on the Glaciofluvial deposits may provide sufficient support for traditional 2/3 storey housing. However due to the possible presence of a spring and sink on the site associated with the watercourse there is a potential for a localised high groundwater table which may have an implication on foundation depth and construction. Given the underlying ground conditions the use of ground bearing floor slabs may be considered suitable for the site. An allowance for suspending floor slabs may be considered in areas of previous construction. As with foundation construction the potential presence of high groundwater level may have an impact on other below ground works. Below ground obstructions are not considered to pose significant risk below the majority of the site, however, obstructions may be present below previous and existing structures. Based on granular material being encountered at formation level it is considered that a California Bearing Ratio (CBR) in excess of 5% may be achievable. If clay soils are encountered the CBR value will be less. It is considered unlikely that a concrete classification in excess of DS-3 would be required.
Conclusions	Based on the findings of the Preliminary Environmental Risk Assessment, it is considered that, assuming a future residential end use, the site poses a low risk of statutory environmental liability. With respect to risks to Human Health and Buildings and Services, the site is classified as a Low Risk. With respect to risks to controlled waters the site is classified as a Low Risk.
Recommendations	A site investigation is recommended to determine soil, groundwater and ground gas conditions at the site. The investigation can also be utilised to provide engineering and geotechnical design data to inform the design of foundations and requirement for ground improvement.

Appendix A

Figures



TITLE

GINNELL FARM

FIGURE No

FIGURE 2: SITE LAYOUT
PLAN

Appendix B

Site Photographs

SITE PHOTOGRAPHS – GINNELL FARM, ROCHDALE

The following photographs were taken during a site walkover, undertaken in December 2011.



Photo 1: Electrical sub-station located along eastern site boundary.



Photo 2: Eastern part of the site.



Photo 3: North-eastern part of the site.



Photo 4: Southern part of the site (motorway in distance).



Photo 5: Ginnell Farm buildings in south-eastern part of the site.



Photo 6: Broad Lane, beyond the eastern site boundary.

Appendix C

Selected Historical Plans

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		
	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
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	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
	Civil Parish		
	Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

1:10,000 Raster Mapping

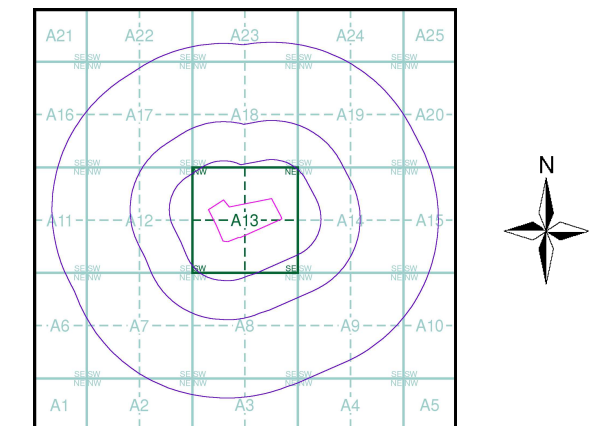
	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil, 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
	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	Pg
Lancashire And Furness	1:10,560	1851	3
Yorkshire	1:10,560	1854	4
Lancashire And Furness	1:10,560	1894	5
Lancashire And Furness	1:10,560	1910	6
Lancashire And Furness	1:10,560	1931	7
Lancashire And Furness	1:10,560	1938	8
Ordnance Survey Plan	1:10,000	1956	9
Ordnance Survey Plan	1:10,000	1965 - 1968	10
Ordnance Survey Plan	1:10,000	1975 - 1979	11
Manchester	1:25,000	1975	12
Ordnance Survey Plan	1:10,000	1983 - 1988	13
Ordnance Survey Plan	1:10,000	1990 - 1993	14
10K Raster Mapping	1:10,000	1999	15
10K Raster Mapping	1:10,000	2006	16
10K Raster Mapping	1:10,000	2011	17

Historical Map - Slice A



Order Details

Order Number: 36680050_1_1
 Customer Ref: Ginnell Farm
 National Grid Reference: 391100, 410820
 Slice: A
 Site Area (Ha): 7.86
 Search Buffer (m): 1000

Site Details

Ginnell Farm, Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4PU



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

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings Military and Industrial Buildings

Military and Communication Areas Subway Entrance

Fireproof Building Prominent Fireproof Building

Non-fireproof Building Non-fireproof Building (non-dwelling)

Factory, mill, and flour mill, with chimneys Factory, mill, and flour mill, without chimneys

Power Station, drawn to scale Hydroelectric Power Station

Radio Station, drawn to scale Telephone Station, drawn to scale

Abandoned Open-pit Mine or Quarry Open-pit Salt Mine

Pit Oil Deposit or Well Oil Seepage

Tailings Pile Fuel Storage Tanks Natural Gas Tank

Bench Mark Drill Hole Burial Mound Triangulation Point on Burial Mound

Single-track Railroad Double-track Railroad and Station Building

Coniferous Forest Deciduous Forest Mixed Forest

Lawns Citrus Orchard Wet Ground Scattered Vegetation

243.8 Values for prominent elevations

186.0 Numbers for spot elevations, depth soundings, contour lines, etc.

0.2 Velocity of the current, width of river bed, depth of river

180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	Ъ (-)
Д д (D)	Л л (L)	У у (U)	Ы (Y)
Е е (E)	М м (M)	Ф ф (F)	Ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings Military and Industrial Buildings

Military and Communication Areas Subway Entrance

Partly Demolished Buildings Demolished Buildings

Built-Up Area with Fireproof Buildings Predominant Built-Up Area with Non-Fireproof Buildings Predominant

Individual Fireproof Building Prominent Industrial Building

Individual Dwelling, Fireproof Ruins of an Individual Dwelling

Factory or Mill Chimney Factory or Mill with Chimney Factory or Mill without Chimney Mine or Open Pit Mine

Operating Shaft or Mine Non-Operating Shaft or Mine Salt Mine Tailings Pile

Pit Stone Quarry Gas Pump or Service Station Fuel Storage or Natural Gas Tank

Oil or Natural Gas Derrick Small Hydroelectric Power Station Power Station Transformer Station

Cemetery Burial Mound (height in metres) Triangulation Point on Burial Mound Triangulation Point

Bench Mark Bench Mark (monumented) Telegraph Office Telephone Station

Radio Station Radio Tower Airfield or Seaplane Base Landing Strip

Telegraph/Telephone Lines Main Highway Highway under Construction Improved Dirt Road (former truck road)

Double-track Railroad with First Class Station Dismantled Railroad Railroad Under Construction

Shore Embankment River or Ditch with Embankment Direction and velocity of current Water Gauge

Well Water Reservoir or Rain Water Pit Spring Isobath with value

Heavy (Index) Contour Line Contour Line and Value Half Contour Line Spot Elevation Value

Coniferous Deciduous Mixed Scrub

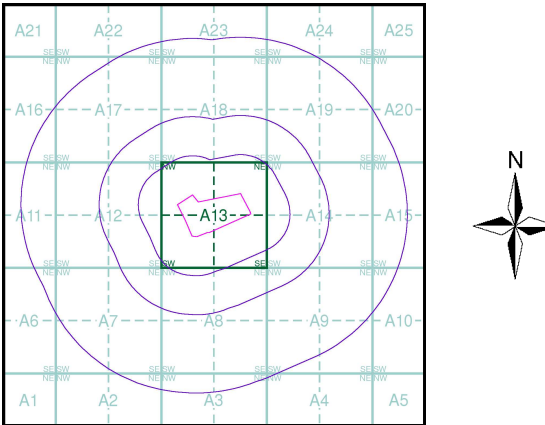
Key to Numbers on Mapping



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1851	3
Yorkshire	1:10,560	1854	4
Lancashire And Furness	1:10,560	1894	5
Lancashire And Furness	1:10,560	1910	6
Lancashire And Furness	1:10,560	1931	7
Lancashire And Furness	1:10,560	1938	8
Ordnance Survey Plan	1:10,000	1956	9
Ordnance Survey Plan	1:10,000	1965 - 1968	10
Ordnance Survey Plan	1:10,000	1975 - 1979	11
Manchester	1:25,000	1975	12
Ordnance Survey Plan	1:10,000	1983 - 1988	13
Ordnance Survey Plan	1:10,000	1990 - 1993	14
10K Raster Mapping	1:10,000	1999	15
10K Raster Mapping	1:10,000	2006	16
10K Raster Mapping	1:10,000	2011	17

Russian Map - Slice A



Order Details

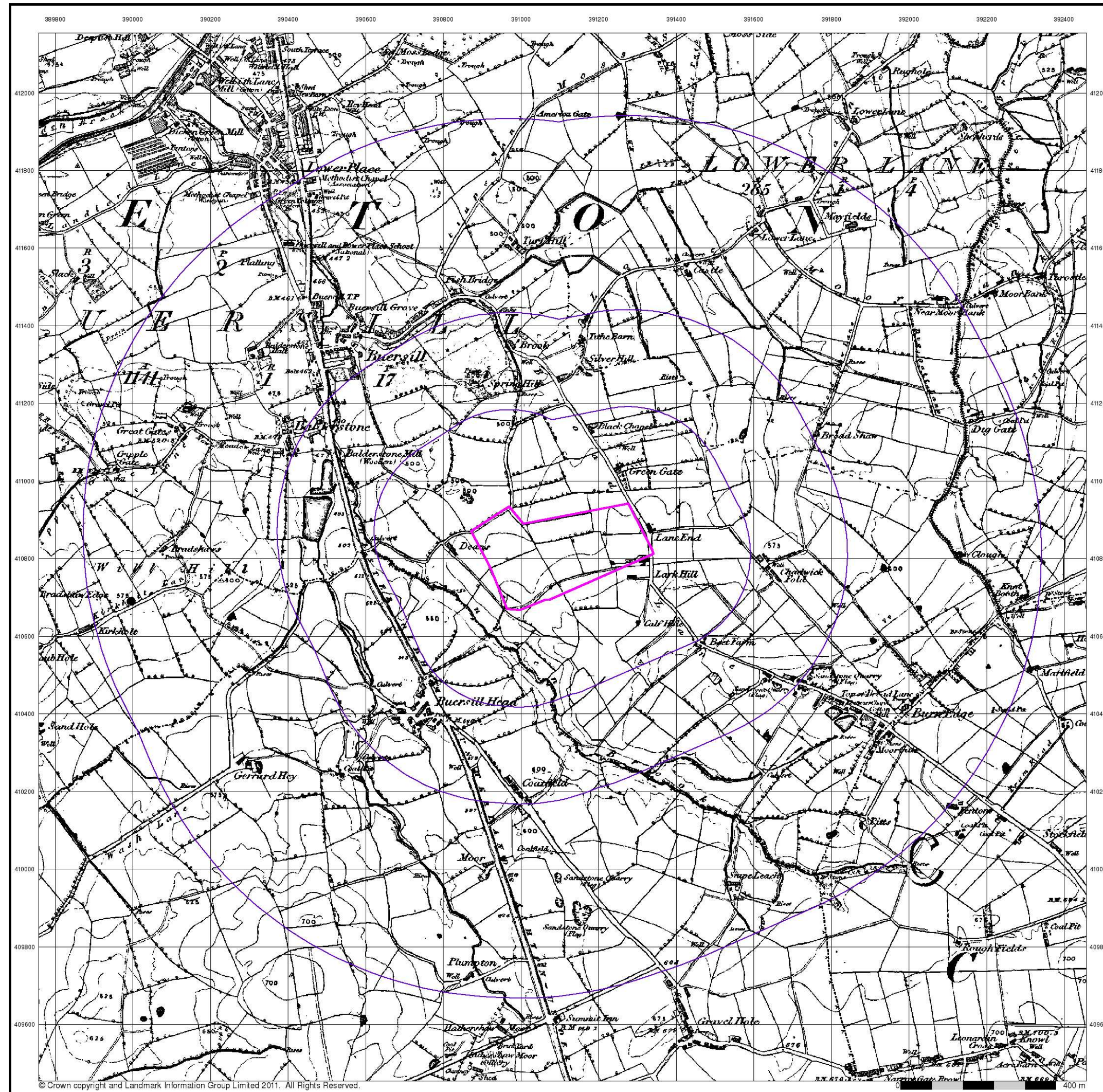
Order Number: 36680050_1_1
Customer Ref: Ginnell Farm
National Grid Reference: 391100, 410820
Slice: A
Site Area (Ha): 7.86
Search Buffer (m): 1000

Site Details

Ginnell Farm, Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4PU



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



© Crown copyright and Landmark Information Group Limited 2011. All Rights Reserved.



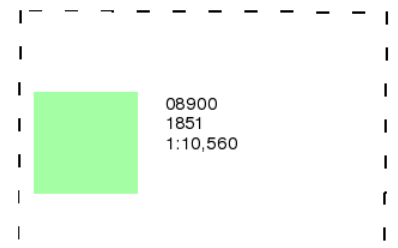
Lancashire And Furness

Published 1851

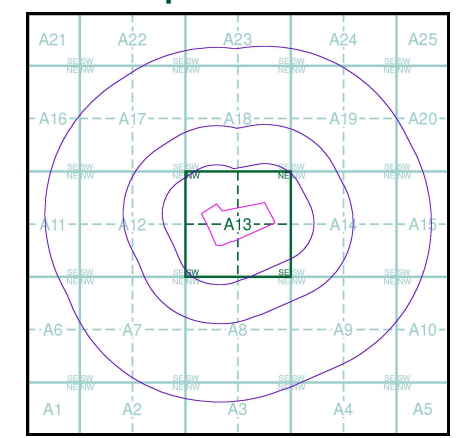
Source map scale - 1:10,560

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



Order Details

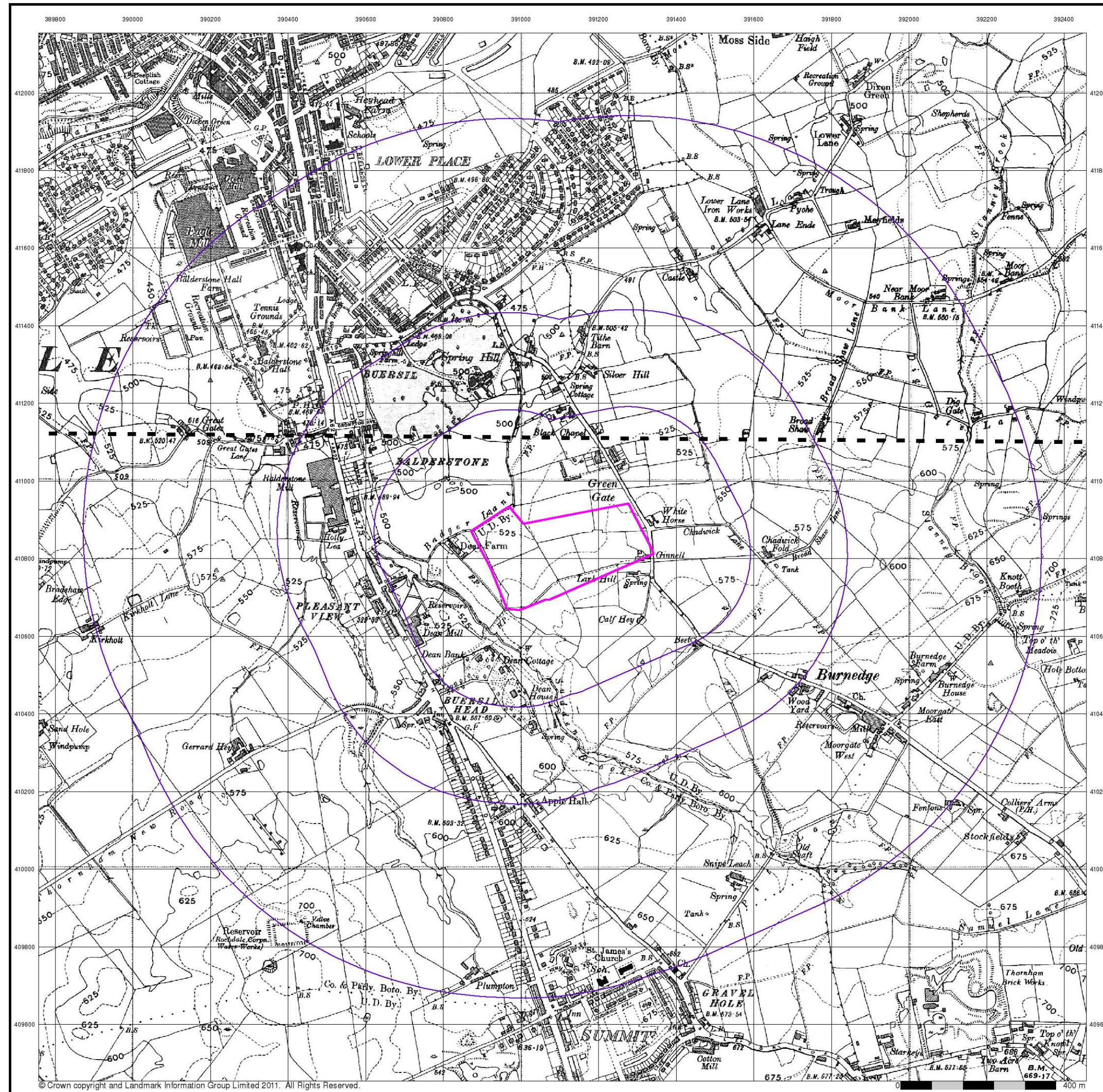
Order Number: 36680050_1_1
Customer Ref: Ginnell Farm
National Grid Reference: 391100, 410820
Slice: A
Site Area (Ha): 7.86
Search Buffer (m): 1000

Site Details

Ginnell Farm, Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4PU



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



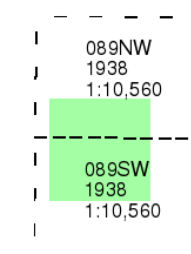
Lancashire And Furness

Published 1938

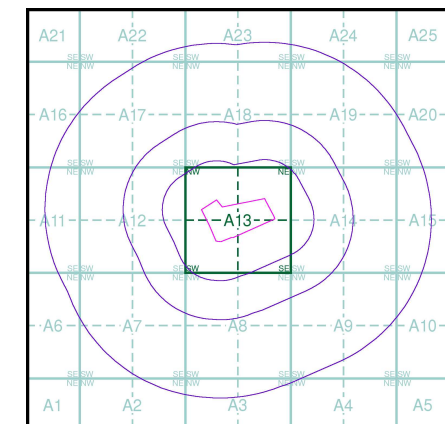
Source map scale - 1:10,560

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



Order Details

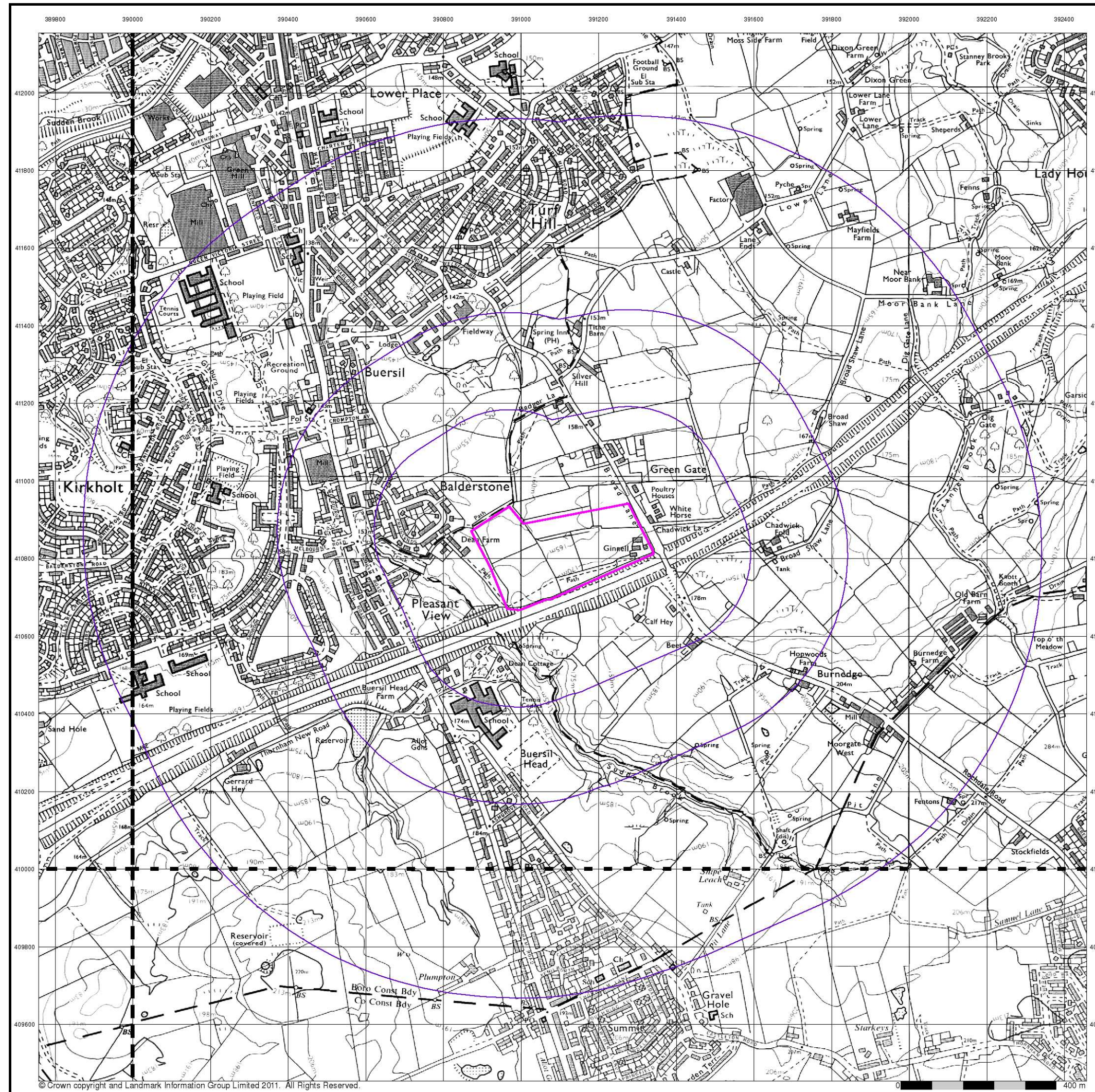
Order Number: 36680050_1_1
Customer Ref: Ginnell Farm
National Grid Reference: 391100, 410820
Slice: A
Site Area (Ha): 7.86
Search Buffer (m): 1000

Site Details

Ginnell Farm, Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4PU



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



© Crown copyright and Landmark Information Group Limited 2011. All Rights Reserved.



Ordnance Survey Plan

Published 1975 - 1979

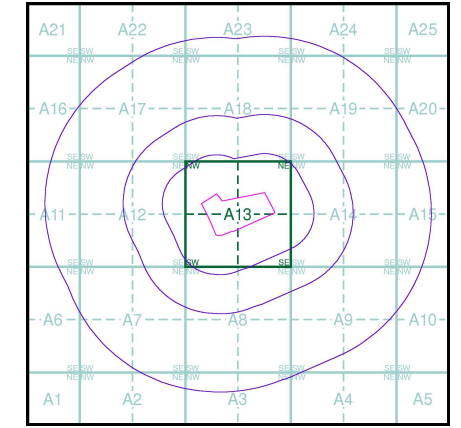
Source map scale - 1:10,000

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)

SD81SE	SD91SW
1977	1979
1:10,000	1:10,000
SD80NE	SD90NW
1977	1975
1:10,000	1:10,000

Historical Map - Slice A



Order Details

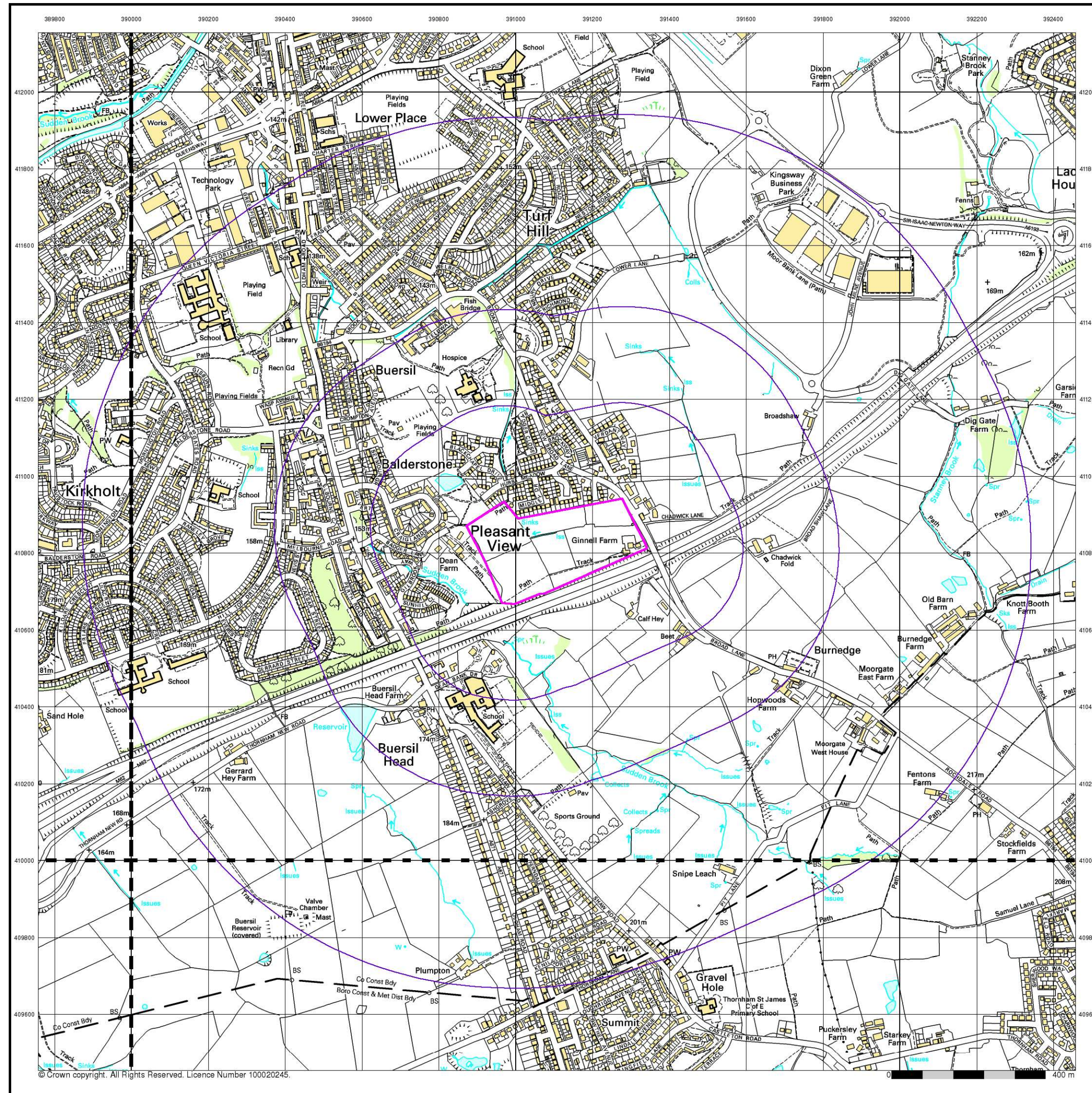
Order Number: 36680050_1_1
Customer Ref: Ginnell Farm
National Grid Reference: 391100, 410820
Slice: A
Site Area (Ha): 7.86
Search Buffer (m): 1000

Site Details

Ginnell Farm, Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4PU



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



10k Raster Mapping

Published 2011

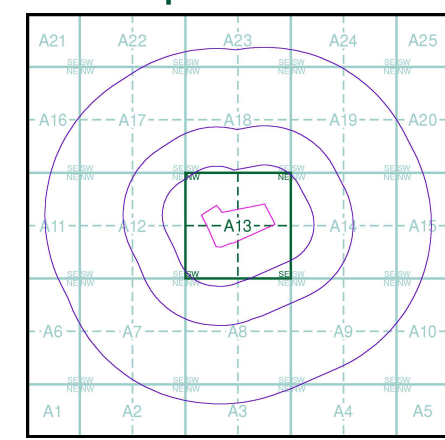
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SD81SE	SD91SW
2011	2011
1:10,000	1:10,000
SD80NE	SD90NW
2011	2011
1:10,000	1:10,000

Historical Map - Slice A



Order Details

Order Number: 36680050_1_1
Customer Ref: Ginnell Farm
National Grid Reference: 391100, 410820
Slice: A
Site Area (Ha): 7.86
Search Buffer (m): 1000

Site Details

Ginnell Farm, Broad Lane, Burnage, ROCHDALE, Lancashire, OL16 4PU



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



Lancashire And Furness

Published 1910

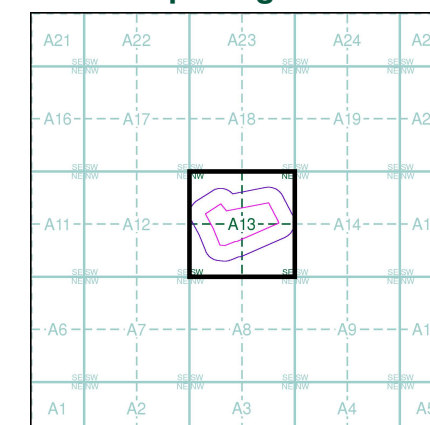
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

089_05
1910
1:2,500
089_09
1910
1:2,500

Historical Map - Segment A13



Order Details

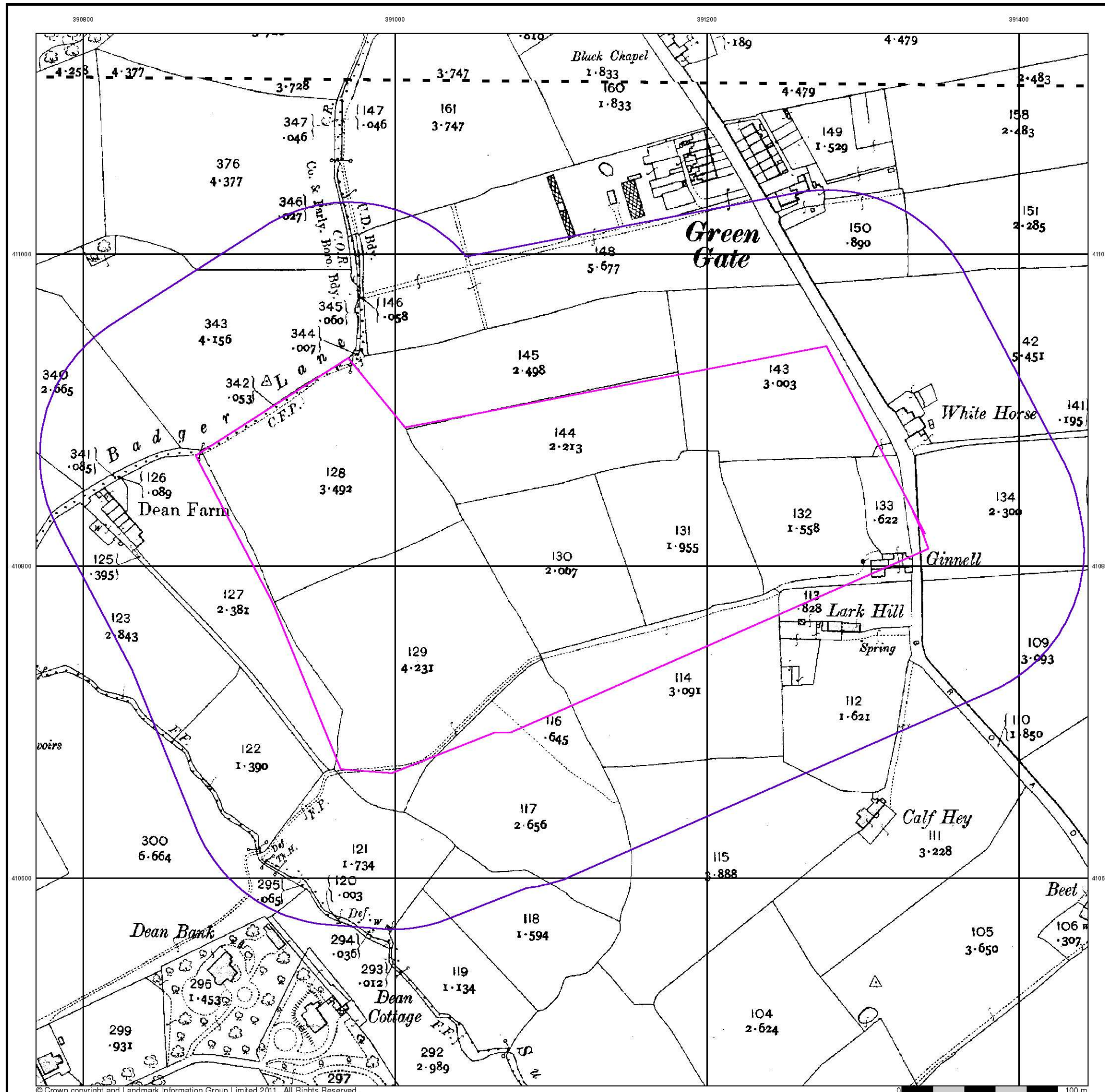
Order Number: 36680050_1_1
Customer Ref: Ginnell Farm
National Grid Reference: 391100, 410820
Slice: A
Site Area (Ha): 7.86
Search Buffer (m): 100

Site Details

Ginnell Farm, Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4PU



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





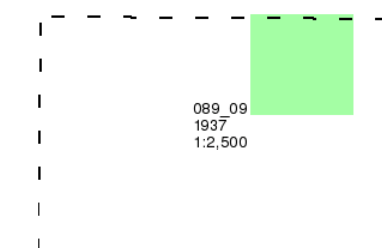
Lancashire And Furness

Published 1937

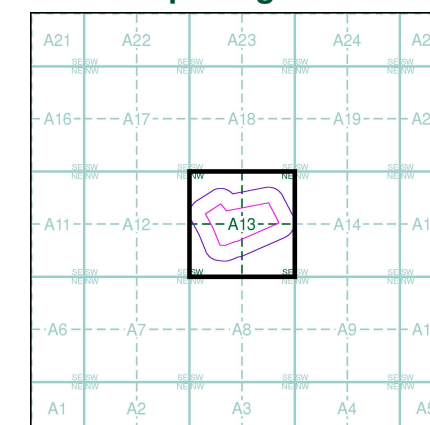
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

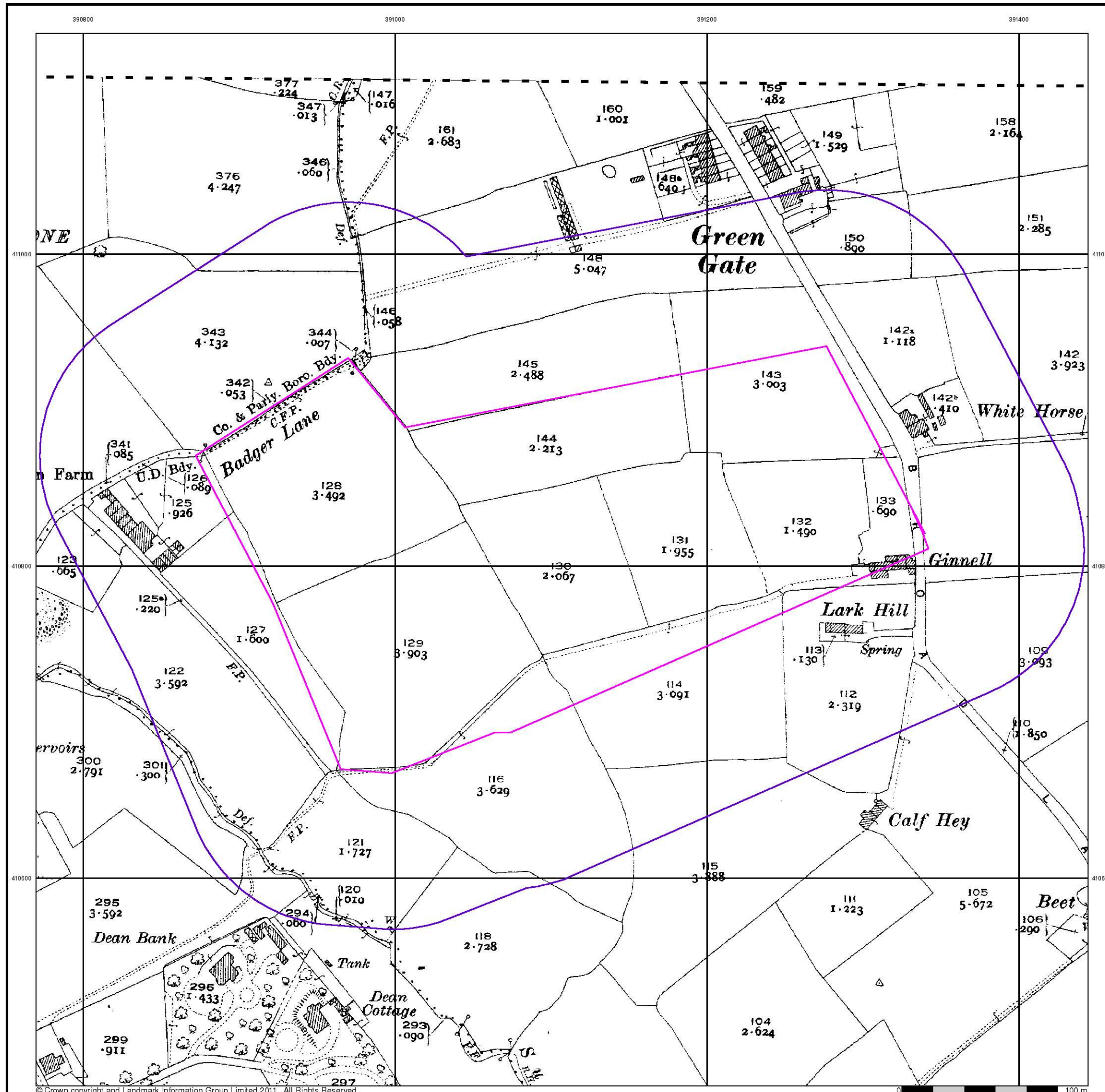
Order Number: 36680050_1_1
Customer Ref: Ginnell Farm
National Grid Reference: 391100, 410820
Slice: A
Site Area (Ha): 7.86
Search Buffer (m): 100

Site Details

Ginnell Farm, Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4PU



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





Large-Scale National Grid Data

Published 1993 - 1996

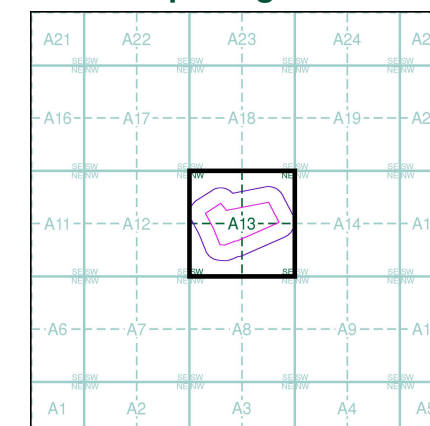
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SD9111SW	1993	1:1,250
SD9010NE	1996	1:1,250
SD9110NW	1994	1:1,250

Historical Map - Segment A13



Order Details

Order Number: 36680050_1_1
Customer Ref: Ginnell Farm
National Grid Reference: 391100, 410820
Slice: A
Site Area (Ha): 7.86
Search Buffer (m): 100

Site Details

Ginnell Farm, Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4PU



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



Appendix D

Envirocheck Report

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

36680050_1_1

Customer Reference:

Ginnell Farm

National Grid Reference:

391100, 410820

Slice:

A

Site Area (Ha):

7.86

Search Buffer (m):

1000

Site Details:

Ginnell Farm, Broad Lane

Burnedge

ROCHDALE

Lancashire

OL16 4PU

Client Details:

Ms R Colvin

WSP Environmental

The Victoria

150-182 The Quays

Salford

Manchester

M50 3SP

Prepared For:

Ginnell Farm,

Broad Lane,

Rochdale

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	11
Hazardous Substances	12
Geological	13
Industrial Land Use	15
Sensitive Land Use	18
Data Currency	19
Data Suppliers	23
Useful Contacts	24

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Copyright Notice

© Landmark Information Group Limited 2011. The Copyright on the information and data and its format as contained in this Envirocheck® Report ("Report") is the property of Landmark Information Group Limited ("Landmark") and several other Data Providers, including (but not limited to) Ordnance Survey, British Geological Survey, the Environment Agency and Natural England, and must not be reproduced in whole or in part by photocopying or any other method. The Report is supplied under Landmark's Terms and Conditions accepted by the Customer. A copy of Landmark's Terms and Conditions can be found with the Index Map for this report. Additional copies of the Report may be obtained from Landmark, subject to Landmark's charges in force from time to time. The Copyright, design rights and any other intellectual rights shall remain the exclusive property of Landmark and /or other Data providers, whose Copyright material has been included in this Report.

Natural England Copyright Notice

Site of Special Scientific Interest, National Nature Reserve, Ramsar, Special Protection Area, Special Conservation Area, Marine Nature Reserve data (derived from Ordnance Survey 1:10000 raster) is provided by, and used with the permission of, Natural England who retain the copyright and Intellectual Property Rights for the data.

Ove Arup Copyright Notice

The Data provided in this report was obtained on Licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The information and data supplied in the product are derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Peter Brett Associates Copyright Notice

The cavity data presented has been extracted from the PBA enhanced version of the original DEFRA national cavity databases. PBA/DEFRA retain the copyright & intellectual property rights in the data. Whilst all reasonable efforts are made to check that the information contained in the cavity databases is accurate we do not warrant that the data is complete or error free. The information is based upon our own researches and those collated from a number of external sources and is continually being augmented and updated by PBA. In no event shall PBA/DEFRA or Landmark be liable for any loss or damage including, without limitation, indirect or consequential loss or damage arising from the use of this data.

Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and the Health Protection Agency.

Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		2	3	1
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 2			1	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2	Yes			
Pollution Incidents to Controlled Waters	pg 2			2	4
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality	pg 3			1	
River Quality Biology Sampling Points	pg 4			1	
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 4				4 (*20)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 10	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 10		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 11				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 11				2
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 12				1
Planning Hazardous Substance Consents	pg 12				1
Planning Hazardous Substance Enforcements					
Geological					
BGS Recorded Mineral Sites	pg 13			1	4
BGS 1:625,000 Solid Geology	pg 13	Yes	n/a	n/a	n/a
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 13	Yes	n/a	n/a	n/a
Mining Instability	pg 13	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 14		Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 15		5	9	11
Fuel Station Entries	pg 17		1		

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Areas of Adopted Green Belt	pg 18		1	1	1
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 18				1
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: Orchid Pub Operations Limited Property Type: Sewage Disposal Works - Other Location: Fairview Inn, Burnedge, Rochdale, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016992272 Permit Version: 1 Effective Date: 10th June 1991 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Sudden Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	49	1	390900 410700
2	Discharge Consents Operator: Redrow Homes (North West) Limited Property Type: Sewage Disposal Works - Other Location: Oldham Road Ps, Off Oldham Rd, Rochdale, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016993132 Permit Version: 1 Effective Date: 17th July 1996 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Sudden Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A12SE (W)	165	1	390750 410750
3	Discharge Consents Operator: United Utilities Water Plc Property Type: Sewerage Network - Sewers - Water Company Location: Oldham Rd Combined Sewer Overflow, Rochdale, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01ROC0093 Permit Version: 2 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 22nd June 2004 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Sudden Brook Status: Consent revoked or revised: New Consent issued (Section 37(1)) Positional Accuracy: Located by supplier to within 100m	A12NE (W)	268	1	390610 410820
3	Discharge Consents Operator: United Utilities Water Plc Property Type: Sewerage Network - Sewers - Water Company Location: Oldham Rd Combined Sewer Overflow, Rochdale, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01roc0093 Permit Version: 1 Effective Date: 1st April 1991 Issued Date: Not Supplied Revocation Date: 31st December 1994 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Not Supplied Environment: Receiving Water: Not Supplied Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	A12NE (W)	268	1	390610 410820

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: United Utilities Water Plc Property Type: Sewerage Network - Sewers - Water Company Location: Oldham Rd Combined Sewer Overflow, Rochdale, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01roc0093 Permit Version: 3 Effective Date: 23rd June 2004 Issued Date: 23rd June 2004 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Culverted Section Of Sudden Br Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (W)	274	1	390600 410840
4	Discharge Consents Operator: Dr. J. Burt Property Type: Domestic Property (Single) Location: 19 Broad Lane, Burnedge, Rochdale, Lancashire, OL16 4qq Authority: Environment Agency, North West Region Catchment Area: Beal Reference: 0170/1207 Permit Version: 1 Effective Date: 10th April 1970 Issued Date: 10th April 1970 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Suddon Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	613	1	391823 410432
5	Local Authority Pollution Prevention and Controls Name: Dean Service Station Location: Oldham Road, Balderstone, ROCHDALE, Lancashire, OL16 4RH Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: 99/09 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Manually positioned to the address or location	A12SE (W)	325	2	390561 410778
	Nearest Surface Water Feature	A13NW (W)	0	-	391039 410839
6	Pollution Incidents to Controlled Waters Property Type: Agriculture: Below Ground Slurry Store Location: Silverhill Farm, Lower Lane, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Pollutant: General Biodegradable : Dilute Slurry / Dirty Water Note: Not Supplied Incident Date: 1st June 1999 Incident Reference: 26499 Catchment Area: Rochdale Stw Stream Receiving Water: River Stretch (Freshwater) Cause of Incident: Structural Failure : Pipe Failure (Above Ground) Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m	A18SE (N)	367	1	391200 411300
7	Pollution Incidents to Controlled Waters Property Type: Cattle (Dairy) Farming: Other Location: Lower Lane, River Rochdale Authority: Environment Agency, North West Region Pollutant: Cattle Yard Washings Note: Slurry Running Down Road Incident Date: 23rd April 1998 Incident Reference: SO981047 Catchment Area: Roch Receiving Water: Freshwater Stream/River Cause of Incident: Poor Operational Practice Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SE (N)	466	1	391200 411400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Industrial Effluent Note: Stanney Brook Incident Date: 26th November 1992 Incident Reference: 93620060 Catchment Area: Roch Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	555	1	391700 411300
9	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Rear Turf Hill Road , ROCHDALE Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Other Note: Abattoir Waste; Sudden Brook; Abattoir Waste Incident Date: 10th June 1997 Incident Reference: 97621040 Catchment Area: Roch Receiving Water: Freshwater Stream/River Cause of Incident: Blocked Sewer Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18NW (N)	582	1	391100 411500
10	Pollution Incidents to Controlled Waters Property Type: Textile industry Location: Washings From , Vitaluxan, Entering Watercourse Authority: Environment Agency, North West Region Pollutant: Chemicals - Other Organic Note: Sudden Brook; Pva Adhesive Incident Date: 15th October 1997 Incident Reference: 97621796 Catchment Area: Roch Receiving Water: Freshwater Stream/River Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	666	1	391400 411595
11	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Rubble/Litter Or Solids Note: Jackle Brook Incident Date: 25th October 1995 Incident Reference: 95622626 Catchment Area: Roch Receiving Water: Not Given Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NW (N)	668	1	391000 411600
	River Quality Name: Sudden Bk GQA Grade: River Quality B Reach: Qsl At Balderstone To Roch Estimated Distance (km): 4 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A12NE (NW)	344	1	390597 411085

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	River Quality Biology Sampling Points Name: Sudden Beck Reach: Qsl At Balderstone To Roch Estimated Distance: 4.00 Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Biology GQA Grade F - Bad Year: 1995 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2000 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2002 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2003 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2004 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2005 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2006 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2007 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2008 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 2009 GQA Grade: River Quality Biology GQA Grade D - Fair	A12SE (W)	410	1	390500 410700
13	Water Abstractions Operator: S Croston Licence Number: 2569002086 Permit Version: 100 Location: Well At Broadshaw Farm, Milnrow, Rochdale Authority: Environment Agency, North West Region Abstraction: General Agriculture; General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 2 Yearly Rate (m3): 830 Details: Broadshaw Farm, Milnrow Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 2nd February 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NE (E)	538	1	391800 411100
14	Water Abstractions Operator: H Sanderson Licence Number: 2569002060 Permit Version: 100 Location: Well At Castle Farm, Lower Lane, Milnrow Authority: Environment Agency, North West Region Abstraction: General Agriculture; General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 1 Yearly Rate (m3): 249 Details: Castle Farm, Lower Lane, Milnrow Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th February 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A18NE (NE)	573	1	391400 411500
15	Water Abstractions Operator: J Hartle Licence Number: 2569002159 Permit Version: 100 Location: Well At Farm Lower Lane Milnrow Rochdale Authority: Environment Agency, North West Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 32 Yearly Rate (m3): 5123 Details: Farm And Slaughter House, Lower Lane Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A18NE (N)	671	1	391400 411600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	Water Abstractions Operator: Mr R Cryer Licence Number: 2569002204 Permit Version: 100 Location: Borehole At Premises, Old Barn Farm, Burnedge, Rochdale Authority: Environment Agency, North West Region Abstraction: General Agriculture; General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 5 Yearly Rate (m3): 1659 Details: Premises At Old Barn Farm, Burnedge Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 24th April 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15SW (E)	884	1	392200 410600
	Water Abstractions Operator: Dunphy Combustion Ltd Licence Number: 2569002178 Permit Version: 101 Location: Catchpit Fed By Surface Drainage At Premises, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises, Queensway, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th February 1991 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17NW (NW)	1147	1	390200 411800
	Water Abstractions Operator: Dunphy Oil & Gas Burners Ltd Licence Number: 2569002178 Permit Version: 100 Location: Catchpit Fed By Surface Drainage At Premises, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 34 Yearly Rate (m3): 2318 Details: Premises, Queensway, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th March 1981 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17NW (NW)	1147	1	390200 411800
	Water Abstractions Operator: Sealocrete Pla Ltd Licence Number: 2569002107 Permit Version: 100 Location: Rochdale Canal At Queensway, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 45 Yearly Rate (m3): 10456 Details: Dicken Green Mill, Queensway Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A21SE (NW)	1353	1	390070 411960

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Sealocrete Pla Ltd Licence Number: 2569002107 Permit Version: 100 Location: Rochdale Canal At Queensway, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Dicken Green Mill, Queensway Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A21SE (NW)	1353	1	390070 411960
	Water Abstractions Operator: J & J Makin Ltd. Licence Number: 2569002097 Permit Version: Not Supplied Location: Rochdale Canal, Moss Bridge Road, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Boiler Feed Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 9 Yearly Rate (m3): 3410 Details: Licence Status: Lapsed Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A23NW (N)	1469	1	390900 412400
	Water Abstractions Operator: Riggs Ltd Licence Number: 2569002113 Permit Version: Not Supplied Location: Rochdale, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Boiler Feed Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 27 Yearly Rate (m3): 4319 Details: Rochdale Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A22NE (N)	1513	1	390600 412400
	Water Abstractions Operator: J & J Makin Convertors Ltd Licence Number: 2569002076 Permit Version: 100 Location: Rochdale Canal At Rochdale, Lancs Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 391 Yearly Rate (m3): 136380 Details: Premises At Norwich Street, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1993 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A22NW (NW)	1522	1	390300 412300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Rochdale Sheet Metal Co Ltd Licence Number: 2569002100 Permit Version: 100 Location: Jackwell Fed By Rochdale Canal@ Premises,Globe Machine Works Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 7 Yearly Rate (m3): 1023 Details: Premises At Globe Machine Works Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st August 1989 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(N)	1569	1	390900 412500
	Water Abstractions Operator: The Secretary Licence Number: 2569002064 Permit Version: 100 Location: R Beal At Newhey, Milnrow, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 2955 Yearly Rate (m3): 327312 Details: Bentgate Street, Newhey, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 21st June 1993 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1877	1	393000 411695
	Water Abstractions Operator: Ellenroad Trust Ltd Licence Number: 2569002064 Permit Version: 101 Location: R Beal At Newhey, Milnrow, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Bentgate Street, Newhey, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th September 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1879	1	393000 411700
	Water Abstractions Operator: Ellenroad Trust Ltd Licence Number: 2569002064 Permit Version: 102 Location: R Beal At Newhey, Milnrow, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 11th September 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1879	1	393000 411700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Sun Chemical Ltd Licence Number: 2569002233 Permit Version: 102 Location: R Beal At Milnrow Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ellenroad Ring Mill Site Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2005 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1879	1	393000 411700
	Water Abstractions Operator: Coates Lorilleux Licence Number: 2569002233 Permit Version: 101 Location: R Beal At Milnrow Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 182 Yearly Rate (m3): 66372 Details: Ellenroad Ring Mill Site Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 6th January 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1879	1	393000 411700
	Water Abstractions Operator: The Secretary Licence Number: 2569002064 Permit Version: 100 Location: R Beal At Newhey, Milnrow, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Bentgate Street, Newhey, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 21st June 1993 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1879	1	393000 411700
	Water Abstractions Operator: Mr M Gadhi And Mr A Raazaq Licence Number: 2569002074 Permit Version: Not Supplied Location: Rochdale Canal At Queensway, Castleton, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Boiler Feed Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 114 Yearly Rate (m3): 36368 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1901	1	389000 411200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: M S Gadhi & A Raazaq Licence Number: 2569002026 Permit Version: Not Supplied Location: Borehole, Crest Mill, Queensway, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Manufacturing Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 655 Yearly Rate (m3): 91829 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1916	1	389005 411300
	Water Abstractions Operator: J W Lees & Co Brewers Ltd Licence Number: 2569005021 Permit Version: 100 Location: Spring Fed Well At Tandle Hill Tavern, Thornham Fold, N Authority: Environment Agency, North West Region Abstraction: Hotels; Public Houses And Conference Centres: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 2 Yearly Rate (m3): 591 Details: The Tandle Hill Tavern, Middleton Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th February 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1955	1	389800 409100
	Water Abstractions Operator: H Dh Md And Mw Tetlow Licence Number: 2569005028 Permit Version: 100 Location: Spring Fed Well At Cinder Hill Farm, Slattocks, Middleton, M Authority: Environment Agency, North West Region Abstraction: General Agriculture; General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 5 Yearly Rate (m3): 1659 Details: Cinder Hill Farm, Slattocks Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 20th January 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1956	1	389805 409095
	Water Abstractions Operator: J W Lees & Co (Brewers) Ltd Licence Number: 2569005021 Permit Version: Not Supplied Location: Tandle Hill Tavern, Thornham Fold, MIDDLETON Authority: Environment Agency, North West Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Spring Daily Rate (m3): 5 Yearly Rate (m3): 1659 Details: Spring Fed Well Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1959	1	389800 409095

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Ellenroad Ring Mill Ltd Licence Number: 2569002072 Permit Version: Not Supplied Location: Well At Bentgate Street, Newhey, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Manufacturing & Drinking; Cooking; Sanitary; Washing For Industrial Premises Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 45 Yearly Rate (m3): 2273 Details: Additional Purpose: Domestic - industrial; Licence Status: Lapsed Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1968	1	393100 411700
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (H2) - Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential Map Sheet: Sheet 11 South Pennines Scale: 1:100,000	A13NW (NW)	0	1	391101 410824
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Desination: Secondary Aquifer - A	A13NW (NW)	0	3	391101 410824
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (NW)	0	3	391101 410824
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A12NE (W)	239	1	390636 410840
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	Historical Landfill Sites Licence Holder: Richardson and Carroll Location: Rochdale Name: Burnedge Mill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15803 First Input Date: 1st May 1984 Last Input Date: 31st December 1986 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: Not Supplied Regis Ref: Not Supplied WRC Ref: 4200/9123 BGS Ref: Not Supplied Other Ref: D050, RD/LIC/303/83	A9NW (SE)	595	1	391770 410399
	Local Authority Landfill Coverage Name: Rochdale Metropolitan Borough Council - Has no landfill data to supply		0	2	391101 410824
	Local Authority Landfill Coverage Name: Oldham Metropolitan Borough Council - Has not been able to supply Landfill data		748	8	391889 410288
18	Registered Landfill Sites Licence Holder: K Richardson & J F I Carroll Licence Reference: 00303/83 Site Location: 17/19 Broad Lane, Burnedge, ROCHDALE, Lancashire, OL16 4QQ Licence Easting: 391800 Licence Northing: 410400 Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence revokedRevoked Dated: 3rd May 1984 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Brick, Stone, Slate, Tiles Constr'N/Demol. Inert/Non-Haz/Non-Tox Inert Waste Metal Scrap Soil, Clay Prohibited Waste: Biodegradable/Putrescible Waste Carcasses And Flesh Food Waste Sawdust/Bark Vegetable/Processing Waste Waste N.O.S Wood Waste/Timber	A9NE (SE)	616	1	391800 410400
19	Registered Landfill Sites Licence Holder: M Greenwood Licence Reference: 00449/86 Site Location: Dig Gate Farm, Dig Gate Lane, Milnrow, Rochdale, Lancashire Licence Easting: 392300 Licence Northing: 411300 Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: Waste produced/controlled by licence holder Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st September 1986 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Accuracy: Not Applicable Authorised Waste: Mat'L Excavated From M62 M'Way	A19SE (E)	823	1	392068 411206

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	Notification of Installations Handling Hazardous Substances (NIHHS) Name: British Vita PLC (Vitaluxan) Location: Lower Lane, Milnrow, ROCHDALE, Lancashire, OL16 4NP Status: Record Ceased To Be Supplied Under NIHHS Regulations (1982) Positional Accuracy: Automatically positioned to the address	A19NW (NE)	836	4	391579 411720
21	Planning Hazardous Substance Consents Name: Vitaluxan Location: Lower Lane, Milnrow, ROCHDALE, Lancashire, OL16 4NP Authority: Rochdale Metropolitan Borough Council Application Ref: D28756 Hazardous Substance: Flammable (flammable liquids with flash point $\geq 21^{\circ}\text{C}$ and $\leq 55^{\circ}\text{C}$ supporting combustion) Maximum Quantity: 60 Application date: 20th October 1992 Decision: Deemed Consent Granted Positional Accuracy: Automatically positioned to the address	A19NW (NE)	836	5	391579 411720

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	BGS Recorded Mineral Sites Site Name: Burn Edge Location: Shaw, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96621 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	461	3	391655 410473
23	BGS Recorded Mineral Sites Site Name: Burn Edge Location: Shaw, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96622 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	542	3	391777 410489
24	BGS Recorded Mineral Sites Site Name: Plumpton Location: Shaw, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96628 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8SW (S)	693	3	391091 409981
25	BGS Recorded Mineral Sites Site Name: Plumpton Location: Shaw, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96629 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8SE (S)	793	3	391147 409889
26	BGS Recorded Mineral Sites Site Name: Burn Edghe Sand Pit Location: Shaw, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96626 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A10NW (E)	961	3	392216 410412
	BGS 1:625,000 Solid Geology Description: Lower Westphalian (mainly Productive Coal Measures)	A13NW (NW)	0	3	391101 410824
	Coal Mining Affected Areas Description: 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. Contact details are included in the Useful Contacts section of this report.	A13NW (NW)	0	6	391101 410824
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (NW)	0	-	391101 410824

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	3	391101 410824
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	3	391101 410824
	Potential for Ground Dissolution Stability Hazards No Hazard				
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	3	391101 410824
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	3	391101 410824
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	3	391101 410824
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	66	3	390986 410594
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	3	391101 410824
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	3	391101 410824

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	Contemporary Trade Directory Entries Name: George Culley Location: 8, Waddington Fold, Rochdale, Lancashire, OL16 4QB Classification: Rubber & Plastic Products - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A13NE (NE)	18	-	391190 410942
28	Contemporary Trade Directory Entries Name: Billington Bros Location: Broad La, Burnedge, Rochdale, Lancashire, OL16 4QD Classification: Car Breakdown & Recovery Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13SE (E)	23	-	391362 410802
29	Contemporary Trade Directory Entries Name: A T J Motors Ltd Location: Oldham Road, Rochdale, Lancashire, OL11 2AT Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	250	-	390725 410598
29	Contemporary Trade Directory Entries Name: Dean Service Station Location: Oldham Road, Rochdale, Lancashire, OL16 4RH Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	250	-	390725 410598
29	Contemporary Trade Directory Entries Name: Dean Service Station Location: Oldham Road, Rochdale, Lancashire, OL16 4RH Classification: Petrol Filling Stations Status: Active Positional Accuracy: Automatically positioned to the address	A12SE (SW)	250	-	390725 410598
29	Contemporary Trade Directory Entries Name: G T Motor Location: Oldham Rd, Rochdale, Lancashire, OL11 2AT Classification: Car Dealers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12SE (SW)	278	-	390691 410606
30	Contemporary Trade Directory Entries Name: G T R Ltd Location: Buersil Post Office, 741, Oldham Road, Rochdale, Lancashire, OL16 4RH Classification: Distribution Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	270	-	390636 410739
30	Contemporary Trade Directory Entries Name: Da Wash Location: Oldham Rd, Rochdale, Lancashire, OL16 4RH Classification: Garage Services Status: Active Positional Accuracy: Manually positioned within the geographical locality	A12SE (W)	271	-	390636 410739
30	Contemporary Trade Directory Entries Name: V W Auto'S Location: Oldham Rd, Rochdale, Lancashire, OL11 2AT Classification: Garage Services Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A12SE (W)	285	-	390614 410751
31	Contemporary Trade Directory Entries Name: Burnedge Mill Animal Feeds Location: Burnedge Mill, Broad Lane, Burnedge, Rochdale, Lancashire, OL16 4PU Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SW (N)	271	-	391088 411180
32	Contemporary Trade Directory Entries Name: B A Motors Location: Oldham Rd, Rochdale, Lancashire, OL11 2AT Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12SE (SW)	281	-	390678 410630
33	Contemporary Trade Directory Entries Name: K & N Car Sales Location: Oldham Rd, Rochdale, Lancashire, OL11 2AT Classification: Car Dealers Status: Active Positional Accuracy: Manually positioned within the geographical locality	A12SE (W)	300	-	390639 410670

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	Contemporary Trade Directory Entries Name: Kiyas Ltd Location: 119-121, Broad Lane, Burnedge, Rochdale, Lancashire, OL16 4QQ Classification: Textile Manufacturing Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (SE)	421	-	391616 410492
35	Contemporary Trade Directory Entries Name: Oswald & Duncan Ltd Location: Balderstone Mill, Oldham Road, Rochdale, Lancashire, OL11 2AA Classification: Textile Manufacturing Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	431	-	390474 411034
36	Contemporary Trade Directory Entries Name: D F S Freight Location: 145, Broad Lane, Rochdale, Lancashire, OL16 4PP Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SW (N)	511	-	390951 411443
37	Contemporary Trade Directory Entries Name: British Millerrain Co Ltd Location: Broad Shaw Farm, Broad Shaw Lane, Milnrow, Rochdale, Lancashire, OL16 4NR Classification: Waterproof Clothing & Rainwear Status: Active Positional Accuracy: Automatically positioned to the address	A19SW (NE)	532	-	391771 411144
38	Contemporary Trade Directory Entries Name: The Lighting Diffuser Co Location: 25, Cleveleys Avenue, Rochdale, Lancashire, OL16 4PD Classification: Lighting Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	534	-	390537 411286
39	Contemporary Trade Directory Entries Name: Rubbish Removed Location: 13, Turf Hill Road, Rochdale, Lancashire, OL16 4XH Classification: Waste Disposal Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NW (N)	630	-	390974 411563
40	Contemporary Trade Directory Entries Name: The Lancashire Oven Cleaning Co Location: 42, Weston Avenue, Rochdale, Lancashire, OL16 4PW Classification: Oven cleaning Status: Active Positional Accuracy: Automatically positioned to the address	A17NE (NW)	638	-	390745 411529
41	Contemporary Trade Directory Entries Name: Ainsworth Exhausts Location: 4, Exmouth Street, Rochdale, Lancashire, OL16 4SX Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	710	-	390495 411471
42	Contemporary Trade Directory Entries Name: Takeuchi Location: Unit E2b, John Boyd Dunlop Drive, Kingsway Business Park, Rochdale, Lancashire, OL16 4NG Classification: Plant & Machinery Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A19NW (NE)	814	-	391721 411623
43	Contemporary Trade Directory Entries Name: Vindon Scientific Ltd Location: Unit E2a1, John Boyd Dunlop Drive, Kingsway Business Park, Rochdale, Lancashire, OL16 4NG Classification: Medical Equipment Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A19NE (NE)	838	-	391856 411547
44	Contemporary Trade Directory Entries Name: Brighten Up Carpet & Upholstery Cleaning Location: 72, Turf Hill Road, Rochdale, Lancashire, OL16 4XG Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NE (N)	861	-	391127 411788

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	Contemporary Trade Directory Entries Name: Kings Communications Location: Oldham Rd, Rochdale, Lancashire, OL16 4SZ Classification: Mobile Phone Accessories and Car Kits Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A17NE (NW)	986	-	390434 411760
45	Contemporary Trade Directory Entries Name: Wandrus Location: 469, Oldham Road, Rochdale, Lancashire, OL16 4TD Classification: Hardware Status: Active Positional Accuracy: Automatically positioned to the address	A17NE (NW)	1000	-	390443 411783
46	Fuel Station Entries Name: Dean Service Station Location: Oldham Road, Rochdale, Lancashire, OL16 4RH Brand: Texaco Premises Type: Petrol Station Status: Open Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	250	-	390725 410598

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	Areas of Adopted Green Belt Authority: Rochdale Metropolitan Borough Council Plan Name: Rochdale Unitary Development Plan Status: Adopted Plan Date: 30th June 2006	A13SE (S)	56	7	391143 410649
48	Areas of Adopted Green Belt Authority: Rochdale Metropolitan Borough Council Plan Name: Rochdale Unitary Development Plan Status: Adopted Plan Date: 30th June 2006	A7NE (SW)	327	7	390726 410448
49	Areas of Adopted Green Belt Authority: Oldham Metropolitan Borough Council Plan Name: Oldham Metropolitan Borough Unitary Development Plan Status: Adopted Plan Date: 14th July 2006	A9NE (SE)	746	8	391891 410289
50	Nitrate Vulnerable Zones Name: Not Supplied Description: NVZ Area Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A7SE (SW)	782	9	390496 410045

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Oldham Metropolitan Borough Council - Environmental Health Department Rochdale Metropolitan Borough Council - Environmental Health Department	July 2011 September 2011	Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - North West Region	July 2011	Quarterly
Enforcement and Prohibition Notices Environment Agency - North West Region	September 2011	Quarterly
Integrated Pollution Controls Environment Agency - North West Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - North West Region	July 2011	Quarterly
Local Authority Integrated Pollution Prevention And Control Rochdale Metropolitan Borough Council - Environmental Health Department Oldham Metropolitan Borough Council - Environmental Health Department	April 2011 June 2011	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Controls Rochdale Metropolitan Borough Council - Environmental Health Department Oldham Metropolitan Borough Council - Environmental Health Department	April 2011 June 2011	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Rochdale Metropolitan Borough Council - Environmental Health Department Oldham Metropolitan Borough Council - Environmental Health Department	April 2011 June 2011	Annual Rolling Update Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	June 2011	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - North West Region	January 2000	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - North West Region	September 2011	Monthly
Prosecutions Relating to Controlled Waters Environment Agency - North West Region	September 2011	Monthly
Registered Radioactive Substances Environment Agency - North West Region	July 2011	Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	January 2011	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	January 2011	Annually
Substantiated Pollution Incident Register Environment Agency - North West Region - South Area	July 2011	Quarterly
Water Abstractions Environment Agency - North West Region	July 2011	Quarterly
Water Industry Act Referrals Environment Agency - North West Region	July 2011	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	January 2011	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	September 2011	Annually
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	September 2011	Annually

Agency & Hydrological	Version	Update Cycle
Source Protection Zones Environment Agency - Head Office	July 2011	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2011	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2011	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2011	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2011	Quarterly
Flood Defences Environment Agency - Head Office	August 2011	Quarterly
Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - North West Region - South Area	October 2011	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North West Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North West Region - South Area	October 2011	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North West Region - South Area	July 2011	Quarterly
Local Authority Landfill Coverage Oldham Metropolitan Borough Council Rochdale Metropolitan Borough Council - Environmental Health Department	May 2000 May 2000	Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Oldham Metropolitan Borough Council Rochdale Metropolitan Borough Council - Environmental Health Department	May 2000 May 2000	Not Applicable Not Applicable
Registered Landfill Sites Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - North West Region - South Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	July 2011	Bi-Annually
Explosive Sites Health and Safety Executive	January 2011	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Oldham Metropolitan Borough Council Rochdale Metropolitan Borough Council	August 2011 September 2011	Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Oldham Metropolitan Borough Council Rochdale Metropolitan Borough Council	August 2011 September 2011	Annual Rolling Update Annual Rolling Update

Geological	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2011	Bi-Annually
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	November 2002	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	August 2011	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	February 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	August 2011	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2011	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt Oldham Metropolitan Borough Council Rochdale Metropolitan Borough Council	May 2011 May 2011	As notified As notified
Areas of Unadopted Green Belt Oldham Metropolitan Borough Council Rochdale Metropolitan Borough Council	May 2011 May 2011	As notified As notified
Areas of Outstanding Natural Beauty Natural England	September 2011	Bi-Annually
Environmentally Sensitive Areas Natural England	September 2011	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	September 2011	Bi-Annually
Marine Nature Reserves Natural England	September 2011	Bi-Annually
National Nature Reserves Natural England	September 2011	Bi-Annually
National Parks Natural England	September 2011	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	March 2003	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2011	Annually
Ramsar Sites Natural England	September 2011	Bi-Annually
Sites of Special Scientific Interest Natural England	September 2011	Bi-Annually
Special Areas of Conservation Natural England	September 2011	Bi-Annually
Special Protection Areas Natural England	September 2011	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Health Protection Agency	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	Rochdale Metropolitan Borough Council - Environmental Health Department P O Box 32, Telegraph House, Ballie Street, Rochdale, Greater Manchester, OL16 1JH	Telephone: 01706 864139 Fax: 01706 864185 Website: www.rochdale.gov.uk
3	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
4	Health and Safety Executive Explosives Inspectorate, 1.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Telephone: 0151 951 3092 Fax: 0151 951 3891 Email: victoria.holloway@hse.gsi.gov.uk Website: www.hse.gov.uk
5	Rochdale Metropolitan Borough Council Municipal Offices, Smith Street, Rochdale, Greater Manchester, OL16 1XG	Telephone: 01706 647474 Fax: 01706 59475 Website: www.rochdale.gov.uk
6	The Coal Authority - Mining Report Service 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
7	Rochdale Metropolitan Borough Council PO Box 15, Town Hall, Rochdale, Greater Manchester, OL16 1AB	Telephone: 01706 647474 Fax: 01706 59475 Website: www.rochdale.gov.uk
8	Oldham Metropolitan Borough Council Civic Centre, P O Box 55, West Street, Oldham, Lancashire, OL1 1XN	Telephone: 0161 911 3000 Fax: 0161 678 4550 Website: www.oldham.gov.uk
9	Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	Telephone: 0113 2613333 Fax: 0113 230 0879
10	Natural England Northminster House, Northminster Road, Peterborough, Cambridgeshire, PE1 1UA	Telephone: 0845 600 3078 Fax: 01733 455103 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@hpa.org.uk Website: www.hpa.org.uk
-	Landmark Information Group Limited The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / SEPA have a charging policy in place for enquiries.

Appendix E

CIRA 552 Reference Tables

Classification of Consequence

Classification	Definition	Examples
Severe	Short-term (acute) risk to human health likely to result in “significant harm” as defined by the Environment Protection Act 1990, Part 11A. Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definitions of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse (can also equate to a short-term human health risk if buildings are occupied).
Medium	Chronic damage to Human Health (“significant harm” as defined in DETR, 2000). Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution). A significant change in a particular ecosystem, or organism forming part of such ecosystem (note: the definitions of ecological systems within Draft Circular on Contaminated Land, DETR, 2000).	Concentrations of a contaminant from site exceed the generic or site-specific assessment criteria. Leaching of contaminants from a site to a Principal or Secondary Aquifer. Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services (“significant harm” as defined in the Draft Circular on Contaminated Land, DETR, 2000). Damage to sensitive buildings/structures/services or the environment.	Pollution of non-classified groundwater. Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.) Easily reparable effects of damage to buildings, structures and services.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discoloration of concrete.

Classification of Probability

Classification	Definition
High Likelihood	There is a pollution linkage and an event that appears either very likely in the short term or almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probably that an event will occur Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is pollution linkage but circumstances are such that it is improbable that an event would occur even in the long term.

Comparison of Consequence against Probability

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/ low risk
	Likely	High risk	Moderate risk	Moderate/ low risk	Low risk
	Low likelihood	Moderate risk	Moderate/ low risk	Low risk	Very low risk
	Unlikely	Moderate/ low risk	Low risk	Very low risk	Very low risk

Description of the classified risks and likely action required

Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.

Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

D J Rutland et. al., CIRIA Report C552, Contaminated Land Risk Assessment, A Guide to Good Practice, London 2001.

Appendix F

Qualitative Risk Assessment for Potential Development Hazards

Qualitative Assessment of Ground Related Development Hazards

Hazard	Consequence	Risk*
Poor Ground Conditions associated with deep Made Ground	Deep or specialist foundation solution required	2
Significant below ground obstructions associated with former land use.	Reworking of ground to remove obstructions to facilitate installation of foundations / deep services.	2
Subsidence / ground collapse associated with coal workings / mine shafts	Capping of shafts and grouting of workings, sterilization of no build areas around shafts	1
Ground gas conditions require increased gas protection above NHBC Amber 1	Cost of upgrading gas protection measures	2
Gross Contamination of Soils	- Specialist remediation in excess of a cover system is required. - Contamination limits reuse of soils within the development (e.g. level changes, reuse of foundation arisings)	2
Gross Contamination of Groundwater	Specialist groundwater remediation required	1
Gross Contamination of Soils and / or Groundwater	Specialist treatment to services required over and above clean trenches / upgraded water supply pipes.	2

* Risk 1 – Low Risk – unlikely that issue will arise as a development cost

Risk 5 – High Risk – likely that issue will arise as a development cost.

Appendix G

Limitations

General

WSP Environmental Limited has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from WSP Environmental Limited; a charge may be levied against such approval.

WSP Environmental Limited accepts no responsibility or liability for:

- a) the consequences of this document being used for any purpose or project other than for which it was commissioned, and
- b) This document to any third party with whom an agreement has not been executed.

Phase I Environmental Audits

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, WSP Environmental Limited reserves the right to review such information and, if warranted, to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase II Environmental Audits

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made. The objectives of the investigation have been limited to establishing the risks associated with potential human targets, building materials, the environment (including adjacent land), and to surface and groundwater.

The amount of exploratory work and chemical testing undertaken has necessarily been restricted by the short timescale available, and the locations of exploratory holes have been restricted to the areas unoccupied by the building(s) on the site and by buried services. A more comprehensive investigation may be required if the site is to be redeveloped as, in addition to risk assessment, a number of important engineering and environmental issues may need to be resolved.

For these reasons if costs have been included in relation to site remediation these must be considered as tentative only and must, in any event, be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site can only provide a general indication of site conditions. The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination where concentrations may be significantly higher than those actually encountered.

The risk assessment and opinions provided, inter alia, take in to consideration currently available guidance values relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

Geo-environmental Investigations

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions to provide a reasonable assessment of the environmental risks together with engineering and development implications.

If costs have been included in relation to site remediation these must be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site of each of the exploratory holes. There may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.

The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that groundwater levels will vary owing to seasonal, tidal and weather related effects.

The scope of the investigation was selected on the basis of the specific development proposed by the Client and may be inappropriate to another form of development or scheme.

The risk assessment and opinions provided, inter alia, take in to consideration currently available guidance values relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.