

April 2020



EXPANSION OF ANFIELD ROAD STAND, ANFIELD

G1/1 - Phase I Geo-Environmental Desk Study

JACOBS

Pre-amble

This Phase I Geo-Environmental Desk Study is one of a suite of core documents prepared in support of the application submitted on behalf of Liverpool Football Club and Athletic Grounds Limited (“Liverpool FC” or “the Club”) for full planning permission to expand the Anfield Road Stand to accommodate an additional c.7,000 spectators with associated hospitality and spectator facilities, new public realm, and the realignment of Anfield Road.

This development forms part of the phased regeneration of the Anfield stadium and follows successful delivery of the Main Stand redevelopment and associated public realm (96 Avenue and Paisley Square) and a new free-standing LFC retail store and cafe.

It also reflects the wider regeneration of the Anfield area (The Anfield Project) that includes new and improved homes and regeneration of the Walton Breck Road high street, fuelled by the Club’s significant investment in the redevelopment of Anfield Stadium.

The following documents comprise the application:

- A1/1 Summary Guide to the Planning Application
- B1/3 Planning Statement
- B2/3 Appendices to Planning Statement
- B3/3 Draft S106 Agreement
- C1/2 Application Drawings
- C2/2 Design and Access Statement
- D1/3 Environmental Statement, Volume 1: ES Chapters and Figures
- D2/3 Environmental Statement, Volume 2: Technical Appendices
- D3/3 Environmental Statement, Volume 3: Non-Technical Summary
- E1/3 Transport Assessment
- E2/3 Transport Strategy
- E3/3 Staff Travel Plan
- F1/1 Air Quality Assessment
- G1/1 Phase 1 Geo-Environmental Desk Study
- H1/1 Flood Risk Assessment
- I1/1 Heritage Assessment
- J1/1 Socio-Economic Statement

K1/1 Health and Wellbeing Statement

L1/1 Lighting Impact Assessment

M1/1 Statement of Community Engagement

N1/1 Sustainability Statement

This statement, prepared by Jacobs, was originally submitted as part the hybrid application for the expansion of the Main Stand (full application) and Anfield Road Stand (outline application), which was subsequently approved by LCC in 2014 (LPA ref: 14F/1262). The statement has been re-submitted to support the current application.

ANFIELD STADIUM EXPANSION, LIVERPOOL



PHASE 1 GEO-ENVIRONMENTAL DESK STUDY REPORT

- Final
- December 2013



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- Final
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Contents

Executive Summary	1
1. Introduction	3
2. Report Scope	4
2.1. Sources of information	4
2.2. Available Borehole Information	4
3. Site Profile	7
3.1. Summary of Site Setting	7
3.2. Site History	8
3.3. Environmental Setting	12
3.4. Regulatory Data	13
4. Preliminary Risk Assessment	14
4.1. Regulatory Context	14
4.2. Conceptual Site Model	14
4.3. Preliminary Risk Assessment for the Anfield site	17
5. Preliminary Ground Conditions Review	18
5.1. Geology	18
5.2. Ground Conditions	18
6. Preliminary Geotechnical Assessment	19
6.1. Summary of Geotechnical Hazards	19
6.2. Foundations	20
6.3. Floor Slabs	21
6.4. Buried Structures and Services	21
6.5. Excavations and Groundwater Control	21
6.6. Retaining Walls and Slopes	21
6.7. UXO	22
6.8. Permeability	22
7. Implications for Development	23
7.1. Conclusions	23
7.2. Recommendations	23
8. References	25

Appendices

Appendix A Proposed Development Plans



Appendix B	Envirocheck Report
Appendix C	Borehole Records
Appendix D	Classification of Sensitivity
Appendix E	Risk Assessment Classification



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Executive Summary

Background	<p>SKM has been commissioned to undertake a Phase I Geo-environmental Desk Study for the land at Anfield Football Stadium, Liverpool, Merseyside.</p> <p>It is understood that the desk study is required to support proposals relating to the redevelopment of the site, which is to comprise expansion of the existing stadium and likely provision of new landscaping and car parking. The detailed scheme design has yet to be finalised.</p>	
Study	<p>The study has comprised:</p> <ul style="list-style-type: none"> ■ A desk study to identify the site history and site's environmental setting, ■ A preliminary desk based risk assessment. <p>This information has been developed into a conceptual model of environmental risk. Where the model indicates that insufficient information is available to assess the potential risk, recommendations for further investigation have been proposed.</p> <p>A desk top geotechnical assessment has also been undertaken as part of this commission in order to identify any significant potential geotechnical constraints and provide preliminary geotechnical design recommendations.</p>	
Potential contaminated land risks	Identified Source-Pathway-Receptor Linkages	Potential Environmental Risks (moderate or greater)
	<p>Sources: Made Ground from historical residential development of the site, fuel stations (off site) and potential infilled former quarries (off-site).</p> <p>Receptors: future site users, construction workers, controlled waters, and buildings.</p>	<p>There is considered to be a low to moderate risk to human health and controlled waters receptors with respect to potential soil and / or groundwater contamination associated with historical land uses at and adjacent to the site.</p>
Preliminary Geotechnical Review	<p>The generalised stratigraphy anticipated is surface materials i.e. topsoil or tarmacadam and/or Made Ground overlying Sand and/or Sherwood Sandstone.</p> <p>Obstructions including basements and foundations are anticipated in the locality of the terrace houses which will be demolished to make way for the expansion of Anfield Stadium.</p> <p>Light, medium and some heavily loaded structures may be founded at shallow depths where competent sandstone is encountered in keeping with the current stand foundations. For more substantially loaded structures deeper foundation solutions such as piles or anchors may be required.</p>	



Recommendations

Recommendations have been made with respect to:

- **Site Investigation.** In order to quantify the risks highlighted above associated with soil and groundwater contamination and ground gas, an appropriate site investigation should be undertaken. This should include sampling and chemical testing of soils and groundwater and monitoring of ground gases. The site investigation should also be designed to obtain the necessary data required for geotechnical design including foundation design. It is recommended that this site investigation is designed and put out to competitive tender at the earliest opportunity once access to the development site can be achieved (e.g. following demolition of remaining residential properties)

1. Introduction

Aspect	Description
Background	SKM has been commissioned to undertake a Phase I Geo-Environmental Desk Study for land at Anfield Stadium, Liverpool, Merseyside (see Figure 1). It is understood that the desk study is required to support the proposed redevelopment of the stadium complex.
Development	Indicative development proposals for the site available at the time of writing comprise the redevelopment of the existing stadium to facilitate increased seating capacity. The current proposals include addition to the existing Main Stand with a new seven storey three tier stand. Future options may also include the expansion of the Anfield Road stand. It is envisaged that the remaining site areas will be developed with a mixture of hard and soft landscaping and car parking however the scheme design has yet to be finalised.
Objectives	To characterise the environmental setting of the site, determine likely sensitive receptors and assess the potential current and historical sources of both on and off site contamination. To provide a preliminary assessment of the significance of environmental risks (if any). To identify any significant potential geotechnical constraints and provide preliminary geotechnical design recommendations. To provide recommendations with respect to intrusive site investigation.

■ **Figure 1 - Site Location Plan**



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UN12544fin-rep_Phase I

2. Report Scope

2.1. Sources of information

The sources of information used to inform this report are summarised in Table 2-1 below.

■ **Table 2-1 Summary of Sources of Information**

Source	Use
BGS 1:63,360 Series Geological Map (Sheet 96 – Liverpool)	General geological description of site.
Site visit undertaken on 20 th November 2013	Enable visual identification of topographical arrangement of area surrounding the proposed expansion. Enable identification of surrounding land use and possible geo-environmental constraints.
Landmark Envirocheck Report	Historical Information. Full Envirocheck Report is provided in Appendix B, SKM Enviro, 2012.
New Liverpool Stadium, Anfield, Detailed Human Health Risk Assessment and Remediation Method Statement, SKM, 2007.	General site and environmental information for the adjacent Stanley Park site.
Liverpool Football Club Stadium, Stage E Engineering Report – Geotechnical, SKM, March 2007	General site and geotechnical information for the adjacent Stanley Park site.
Anfield Stadium Expansion, Design Proposals Presentation, Liverpool Football Club, 2012.	General understanding of the proposed expansion works and Master Plan.

2.2. Available Borehole Information

The Borehole Record Viewer on the BGS website allows users to access the National Geoscience Data Centre Collection of onshore scanned borehole records

From SKMs interrogation of the Borehole Record Viewer, 5 No. records were marked as being restricted within the Masterplan area, these are identified as Liverpool Football Ground (KOP stand) SJ39SE164, SJ39E165, SJ39E166, SJ39E167 and SJ39E168; it would be of benefit to obtain these records from Liverpool Football Club.

Extensive site investigation has been undertaken on the adjacent Stanley Park site between 2003 and 2007. A list of the available borehole records are detailed below in Table 2-2 and exploratory hole logs are provided in **Appendix C**.

■ **Table 2-2 List of Borehole Records from the adjacent Stanley Park Site**

Exploratory Hole Number	Company Name	Year	Depth (mbgl)
RH01	Soil Mechanics/SKM	2007	30.0
RH02	Soil Mechanics/SKM	2007	30.1

SKM



RH03	Soil Mechanics/SKM	2007	30.0
RH04	Soil Mechanics/SKM	2007	30.0
BH1	Soil Mechanics/SKM	2007	1.13
BH2	Soil Mechanics/SKM	2007	1.5
BH3	Soil Mechanics/SKM	2007	0.85
BH4	Soil Mechanics/SKM	2007	1.03
TP1	Soil Mechanics/SKM	2007	1.6
TP2	Soil Mechanics/SKM	2007	1.7
TP3	Soil Mechanics/SKM	2007	2.5
TP4	Soil Mechanics/SKM	2007	1.0
TP5	Soil Mechanics/SKM	2007	1.0
TP6	Soil Mechanics/SKM	2007	1.5
TP7	Soil Mechanics/SKM	2007	1.4
TP8	Soil Mechanics/SKM	2007	2.5
HP1	Soil Mechanics/SKM	2007	1.2
HP2	Soil Mechanics/SKM	2007	0.53
HP3	Soil Mechanics/SKM	2007	1.15
BH1	Soil Mechanics/Ove Arup & Partners Ltd.	2003	38.9
BH2	Soil Mechanics/Ove Arup & Partners Ltd.	2003	38.35
BH3	Soil Mechanics/Ove Arup & Partners Ltd.	2003	22.0
BH4	Soil Mechanics/Ove Arup & Partners Ltd.	2003	23.85
BH5	Soil Mechanics/Ove Arup & Partners Ltd.	2003	12.7
BH6	Soil Mechanics/Ove Arup & Partners Ltd.	2003	13.5
BH7	Soil Mechanics/Ove Arup & Partners Ltd.	2003	12.95
BH8	Soil Mechanics/Ove Arup & Partners Ltd.	2003	12.45
BH9	Soil Mechanics/Ove Arup & Partners Ltd.	2003	12.8
BH10	Soil Mechanics/Ove Arup & Partners Ltd.	2003	12.95
BH11	Soil Mechanics/Ove Arup & Partners Ltd.	2003	12.6
BH12	Soil Mechanics/Ove Arup & Partners Ltd.	2003	12.6
TP1	Soil Mechanics/Ove Arup & Partners Ltd.	2003	1.2
TP2	Soil Mechanics/Ove Arup & Partners Ltd.	2003	2.6

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	Partners Ltd.		
TP3	Soil Mechanics/Ove Arup & Partners Ltd.	2003	1.2
TP4	Soil Mechanics/Ove Arup & Partners Ltd.	2003	1.6
TP5	Soil Mechanics/Ove Arup & Partners Ltd.	2003	1.3
TP6	Soil Mechanics/Ove Arup & Partners Ltd.	2003	1.2
WSDP2	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.35
WSDP3	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.75
WSDP4	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.75
WSDP5	Soil Mechanics/Ove Arup & Partners Ltd.	2003	1.4
WSDP9	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.75
WSDP10	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.45
WSDP11	Soil Mechanics/Ove Arup & Partners Ltd.	2003	1.0
WSDP12	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.6
WSDP13	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.6
WSDP14	Soil Mechanics/Ove Arup & Partners Ltd.	2003	1.6
WSDP15	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.4
WSDP16	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.35
WSDP17	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.75
WSDP18	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.47
WSDP19	Soil Mechanics/Ove Arup & Partners Ltd.	2003	0.66

3. Site Profile

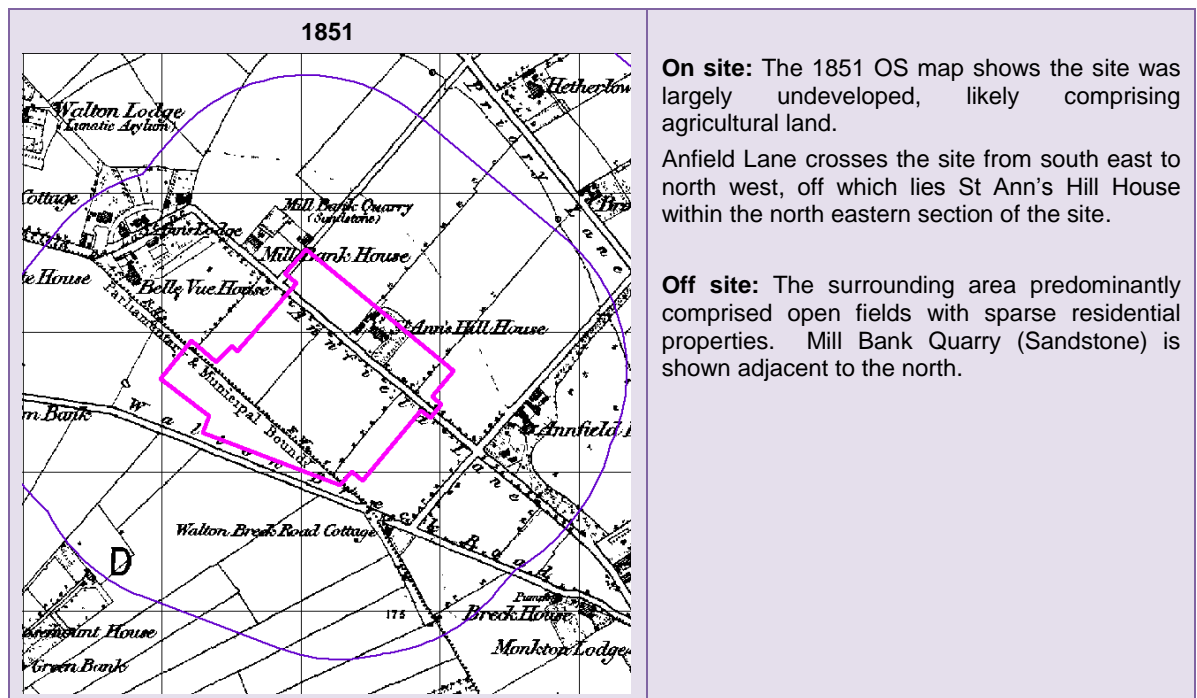
3.1. Summary of Site Setting

Aspect	Description
Site Location	Land at / adjacent to Anfield Stadium Anfield Liverpool Merseyside
Grid Ref	336210, 393140
Site Area	7.27 ha
Site Description	<p>The site comprises Anfield football stadium and the adjacent areas of land lying to the west, north and northeast. The existing site layout is shown in Appendix A.</p> <p>The existing stadium complex is orientated northeast–southwest and comprises four stands, with a total seating capacity of 45,522. The Anfield Road and Centenary Stands which lie to the northeast and southeast respectively are two-tiered structures, while the Spion Kop (southwest) and Main Stands (northwest) are both single tiered.</p> <p>The areas immediately adjacent to the Centenary and Main Stands comprise secure club car parking. Further areas of hard standing are present off the southernmost corner of the stadium and the area between the Kop Stand, Walton Breck Road and Lake Street. A public house lies adjacent to this area. A substation is located at the corner of the Kop Stand and Centenary Stand.</p> <p>The western and northern parts of the site lying adjacent to the stadium comprise a number of residential streets predominantly occupied with two to three storey terraced housing, encompassing either all or sections of the following roads:</p> <ul style="list-style-type: none"> ■ Lake Street ■ Tinsley Street ■ Gilman Street ■ Baltic Street ■ Bagnall Street ■ Rockfield Road ■ Back Rockfield Road ■ Alroy Road ■ Lothair Road ■ Anfield Road <p>The housing associated with the eastern side of Lake Street, Tinsley Street and Gilman Street has recently been demolished and this area now comprises soft landscaping.</p> <p>With respect to the remaining streets, the vast majority of properties have been boarded up and several appeared to be a considerable state of disrepair. At the time of the site walkover, no access was available to the northern part of Baltic Street.</p> <p>To the north of Anfield Road is a large area of hardstanding, serving as match day car parking and a food park. This area was surrounded by hoarding at the time of the site walkover.</p>

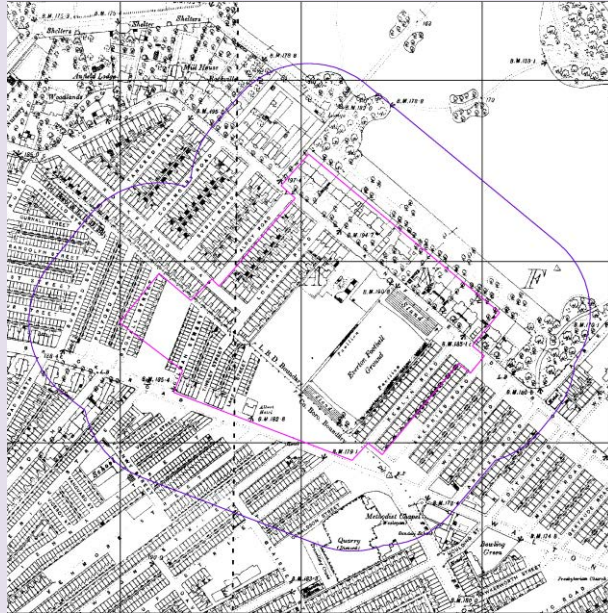
Aspect	Description
Surrounding Land Uses	<p>The site is surrounded by:</p> <p>North: Residential properties, Stanley Park (recreational) and car parking.</p> <p>East: Residential properties, car parking.</p> <p>South: Walton Breck Road, beyond which lie predominantly retail properties, a public house and a church.</p> <p>West: Residential properties.</p>

3.2. Site History

The following section presents a review of the historical Ordnance Survey maps available for the site. Full copies of the maps can be found in the Envirocheck report included in **Appendix B**.



1894



On Site: The 1894 OS map shows Everton Football Ground, comprising a pitch, two stands and pavilions as partly occupying the footprint of the current stadium. Residential properties had been developed in the west, north and east of the site, associated with Lake Street, Tinsley Street, Gilman Street, Bagnall Street, Rockfield Road, Alroy Road, Lothair Road, Anfield Road and Kemlyn Road. A hotel is also shown in the south of the site.

Off-site: The surrounding area had been predominantly developed with rows of residential property. Stanley Park is shown to the northeast. A disused quarry is shown approximately 40m south of the site.

1908



On Site: The 1908 OS map shows further residential properties had been developed in the west of the site, associated with Baltic Street. The stadium is now denoted as Liverpool Football Ground.

Off-site: The quarry to the south is no longer shown.

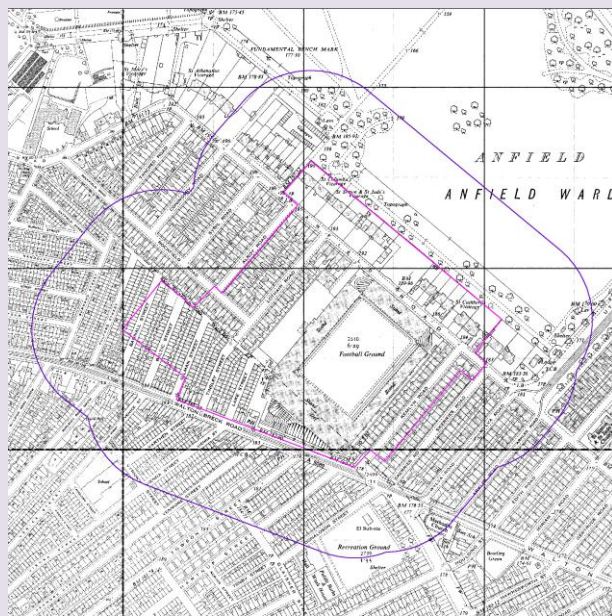
1927



On site: The 1927 OS map shows that new stands had been constructed associated with the football ground. An embankment is now indicated to the southwest of the stadium, this being used in the construction of the kop stand

Off Site: No significant changes noted.

1951-55

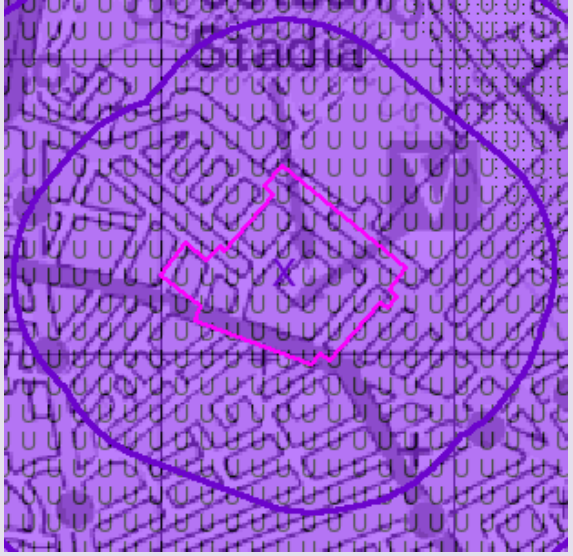


On site: No significant changes.

Off site: No significant changes noted.



3.3. Environmental Setting

Methodology		The classification given for the sensitivity is derived from R&D 66 published by the NHBC, EA, and CIEH (Ref. 1) (see Appendix D).	
Geology	Unit	Composition	Aquifer Status
	Made Ground	No information available although a thickness of Made Ground is considered likely given historical development of the site.	n/a
	Drift	BGS mapping (Ref. 2) indicates drift deposits are absent beneath the site.	n/a
	Solid	Bunter Pebble Beds Formation - Sandstone, Pebbly (gravelly). This formation is described by the BGS (Ref. 2) as "Sandstone, fine- to coarse-grained, commonly pebbly, with conglomerates and sporadic siltstones".	Principal Aquifer
	Radon	According to BRE211 (2007), the site does not lie within an area which requires Radon protective measures for new buildings (Ref. 6).	
Hydrogeology		<p>The Bunter Pebble Beds Formation is classified as a Principal; Aquifer (Ref. 3) with a high vulnerability soil classification.</p> <p>There is one licensed groundwater abstraction listed within 1km of the site. The abstraction is for recreational purposes associated with Stanley Park Lake and operated by Liverpool City Council.</p> <p>The site does not lie within any designated groundwater Source Protection Zones (SPZ).</p>	<p>Bedrock Aquifer Designation</p>  <p>Geological Classes</p> <p>Major Aquifer (Highly Permeable)</p> <p>Soil Classes</p> <p>High (H) 1, 2, 3, U Intermediate (I) 1, 2 Low</p>
		<p>Low Sensitivity (M1). Reasons: Principle Aquifer – moderate vulnerability. The site does not lie within an SPZ and no sensitive groundwater abstractions are located within 1km.</p>	



Hydrology & Flood Risk	The nearest surface water features are ornamental ponds located 446m to the north in Stanley Park. There are no watercourses within 1km of the site.
	The site does not lie within a designated EA floodplain or area benefiting from flood defences.
	Very Low Sensitivity (L2). Reasons: There are no surface watercourses mapped within 1km of the site.

3.4. Regulatory Data

Third party database information was sourced from Landmark as part of the study. A review of the regulatory data contained within the Landmark Envirocheck report (refer to **Appendix B**) has highlighted the following pertinent information:

- *Local Authority Pollution Prevention and Controls (LAPPC)* - One currently permitted LAPPC is located within 250m of the site, positioned approximately 119m to the southeast and relates to petrol station operations.
- *Pollution incidents to Controlled Waters* – The nearest recorded pollution incident impacting Controlled Waters occurred 260m to the west of the site in 1995, involving the release of inert suspended solids including asbestos fibre and was classed as a Minor Incident.
- *Waste* – There are no landfill sites located within 500m or waste management facilities located within 250m of the site.
- *Fuel Stations* – One operational fuel station is located within 500m of the site, which lies approximately 409m to the southeast. Two non-operational fuel stations are also recorded, positioned approximately 59m to the southwest and 354m to the northeast. An LAPPC permit is also in operation for a fuel station located 119m to the southeast as described above.
- *Contemporary Trade* – Within 250m of the site, other potentially contaminative land uses include printers, a garage (inactive) and commercial cleaning services.

4. Preliminary Risk Assessment

4.1. Regulatory Context

National Planning Policy Framework states that where development is proposed, the developer is responsible for ensuring that development is safe and suitable for use for the purpose for which it is intended (Ref. 4). The developer is responsible for determining whether land is suitable for a particular development or can be made so by remedial action; whether the land in question is already affected by contamination through source–pathway–receptor (S-P-R) pollutant linkages and how those linkages are represented in a conceptual model.

Set within the context of the Environment Agency's 'Model Procedures for the Management of Land Contamination' (CLR11) (Ref. 5), the requirement of this preliminary risk assessment report is to identify S-P-R pollutant linkages and to assess if they pose an unacceptable risk.

For land contamination risk to be realised, a 'contaminant linkage' must exist (Ref. 5). A contaminant linkage requires the presence of:

- a source of contamination;
- a receptor capable of being harmed; and
- a pathway capable of exposing a receptor to the contaminant.

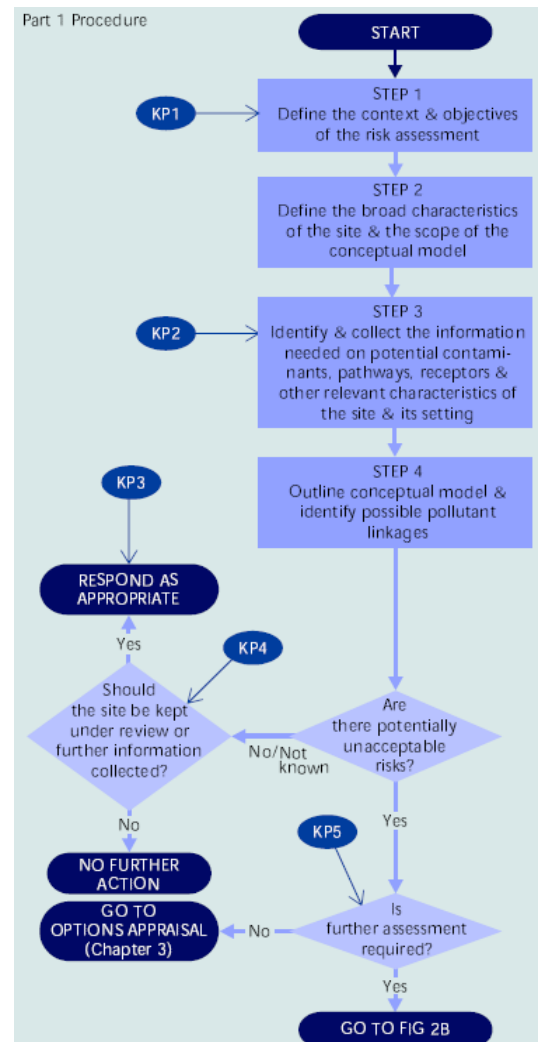
Should S-P-R linkages be identified, then there is a requirement to determine whether they pose a potentially unacceptable risk. If they do, there is a requirement to undertake a Generic Quantitative Risk Assessment (GQRA) and gather further information by undertaking a site investigation.

4.2. Conceptual Site Model

The conceptual site model (CSM) and plausible pollutant linkages are defined below based on the desk study information collated in the previous sections. The CSM is based on a proposed commercial end use.

The CSM and preliminary risk assessment assess the potential risks prior to any mitigation measures.

Phase 1 Preliminary Risk Assessment Flowchart



Extracted from CLR11, Environment Agency, 2004

4.2.1. Potential Sources

	Potential source	Potential contaminants	Source to be considered further? Reasons
On Site	Made Ground	Various potential contaminants including metals, hydrocarbons, PAHs, asbestos, sulphate, pH, ground gas	Yes – Potential for presence of contaminants associated with historical demolition of buildings and general site development.
	Substation	PCB's	No – Any transformers unlikely to contain PCB's as substation was constructed post 1990's.
Off Site	Former quarries	Hazardous ground gases	Yes – Although contaminative potential of source is considered to be relatively low given the size and distance of the features, a limited potential remains for ground gas migration associated with unknown fill materials from this source.
	Fuel stations and former garage	Hydrocarbons, PAHs	Yes – Although contaminative potential of source is considered to be very low given distance to potential source.
	Printers	Metals, cyanide, solvents, dyes	Yes – Although contaminative potential of source is considered to be relatively low, a limited potential remains for contaminant migration from this source.

4.2.2. Potential Receptors and Pathways for Proposed Development

Receptor		Direct Pathway	Is pathway capable of exposing a receptor to the contaminant	Indirect pathway	Is pathway capable of exposing a receptor to the contaminant
People	Future site users	Direct contact	No	Inhalation of dust/vapours	No
		Dermal absorption	No	Ingestion of home grown produce	No
		Soil ingestion	No	Migration of hazardous gases via permeable strata	Yes
	Construction workers	Direct contact	Yes	Inhalation of dust/vapours	Yes
		Dermal absorption	Yes	Ingestion of home grown produce	No
		Soil ingestion	No	Migration of hazardous gases via permeable strata	Yes
Controlled waters Groundwater – Principle Aquifer		Spillage/run off/loss direct to aquifer	Yes	Migration via permeable strata	Yes
				Run off via drainage /sewers	No
Controlled waters Surface water		Spillage/run off/loss direct to receiving waters	No	Migration via permeable strata	No
				Run off via drainage /sewers	No
Buildings and services		Direct contact with contaminated soils	Yes	Migration of hazardous gases/vapours via permeable strata	Yes



4.3. Preliminary Risk Assessment for the Anfield site

The Risk Assessment Classification framework is included in **Appendix E**.

Sources	Potential Pollutants	Receptors	Pathways to Receptor	Likelihood of Occurrence	Potential Risk
Made Ground Infilled quarries (off-site) Fuel Stations & disused garage (off-site) Printers (off-site)	Various potential contaminants including metals, hydrocarbons, PAHs, solvents, dyes, asbestos, sulphate, pH, ground gas	Future site users and construction workers	Direct contact Dermal absorption Inhalation Migration of ground gases through permeable strata	Low likelihood Once the development is complete there are likely to be limited exposure pathways to receptors as the development will mostly comprise of buildings and hardstanding. However, some areas of soft landscaping may be incorporated in the final scheme. Risks to construction works can be mitigated through the appropriate management and use of PPE.	Moderate / Low
		Groundwater – Principle Aquifer	Spillage/run off/loss direct to receiving waters Migration via permeable strata	Moderate likelihood Given the likely absence of drift deposits, there may be a direct pathway between any shallow groundwater contamination and the underlying aquifer.	Moderate
		Buildings and Services	Direct contact Migration of ground gases through permeable strata	Low likelihood Limited potential sources of ground gas have been identified, including potential Made Ground deposits and infilled quarries off-site.	Low

5. Preliminary Ground Conditions Review

5.1. Geology

According to BGS 1:63,360 Series Geological Map (Sheet 91 – Liverpool), the site is underlain in its entirety by the Bunter Pebble Beds, which are now classified as part of the Sherwood Sandstone Group.

5.2. Ground Conditions

A summary of the ground conditions encountered at the adjacent Stanley Park site during the previous 2003 and 2007 site investigations is summarised in Table 5-1 below. This general stratigraphic sequence is anticipated at the land at/adjacent to Anfield Stadium. Full copies of the exploratory borehole logs are presented in **Appendix C**.

■ **Table 5-1 Summary of Ground Conditions at the Adjacent Stanley Park Site**

Strata		Recorded Depth (m bgl)		Thickness Range (m)		Characteristics
		From	To	Min	Max	
Surface Materials		0	1.5	0.1	1.5	Topsoil, Tarmaccadam and /or Hardcore.
Made Ground	Granular	0	1.5	0.23	1.5	Dark grey brown slightly clayey gravelly fine to medium SAND or dark grey brown clayey sandy Gravel. Gravel is angular to subrounded fine to coarse of sandstone, brick, concrete, slag and glass with occasional rootlets.
Sand (Weathered Bedrock)		0.2	2.2	0.1	1.0	Orangish brown slightly clayey, slightly gravelly fine to medium SAND. Gravel is angular to subrounded fine to medium of various lithologies with occasional roots.
Bedrock		0.4	38.9	Unproven		Weak to moderately weak SHERWOOD SANDSTONE <i>becoming</i> moderately weak to moderately strong very thinly bedded red brown medium grained SHERWOOD SANDSTONE <i>becoming</i> moderately strong thinly to medium bedded red brown medium grained SHERWOOD SANDSTONE.

6. Preliminary Geotechnical Assessment

6.1. Summary of Geotechnical Hazards

Table 6-1 below summarises the anticipated geotechnical hazards associated with the development. The table provides an assessment of whether the site may be affected by the hazard and the possible consequences and engineering considerations, based on the desk study and the site investigation results from the adjacent Stanley Park site.

■ **Table 6-1 Preliminary Geotechnical Hazard Assessment**

Hazard Description	Is hazard likely to be present / affect the site? (H / M / L / N / ?)	Possible engineering requirements
Sudden lateral / vertical changes in ground conditions	M	Generally consistent ground conditions were encountered across the area of the investigation at the adjacent Stanley Park site with typically <1.0m Made Ground recorded and a thin layer of up to 1m of sand. Shallow ground bearing structures where adopted may require some localised excavation and re-engineering to ensure a consistent formation layer, overcoming any potential differential settlement.
Shrinkable clay soils	L	BGS mapping indicates that no cohesive deposits are anticipated at the Anfield site.
Highly compressible / low bearing capacity soils, (including peat and soft clay)	L	The presence of highly compressible/low bearing capacity soils were not encountered during the site investigation at the adjacent Stanley Park site.
Dissolution features (including Chalk swallow holes)	N	The site geology is not consistent with this hazard.
Slope stability issues	L	There are no natural / man-made slopes likely to affect the works, other than temporary slopes created during excavation works.
High groundwater table (including waterlogged ground)	L	Groundwater was encountered during the site investigation at very low levels within the bedrock at 27.5m bgl. Perched groundwater table is likely to be present within the Made Ground deposits.
Filled and Made Ground (including embankments)	M	Made Ground up to depths of 1.5m were encountered at the adjacent Stanley Park site. Given the previous development of the site It is likely Made Ground is also present at the land at/adjacent to Anfield Stadium. The Made Ground is expected to be variable and is likely to include concrete, bricks, glass and other anthropogenic materials.

Hazard Description	Is hazard likely to be present / affect the site? (H / M / L / N / ?)	Possible engineering requirements
Obstructions (including foundations, basements, tunnels and adjacent sub-structures)	H	<p>Given the previous development of the site, below ground obstructions and relic structures are likely to be encountered. Obstructions including basements and foundations are anticipated in the locality of the terrace houses which will be demolished to make way for the expansion of Anfield Stadium.</p> <p>Where encountered obstructions and relic structures will require excavation and replacement with suitable engineered fill. Services may also require locally re-routing.</p> <p>The Williamson's Tunnels are located approximately 4km south of the Anfield site and are therefore not considered to be a constraint.</p>
Underground mining	M	<p>Historical plans of the area show several small quarries located close to the site (>40m) in the late 1800's early 1900's. The quarries do not appear on the historical maps after 1908. Although none are shown on the site there remains a possibility that quarries may have existed prior to the earliest published map in 1894.</p> <p>Coal mining records have not been obtained for the site. However, shallow coal working issues are not envisaged; the geological map (1:50,000) cross section indicates thickness of at least 300m of sandstone in these parts of Liverpool.</p>
Adverse chemical conditions (i.e. SO ₄ , pH, hydrocarbons etc).	-	No chemical testing at the Anfield stadium site is available. Chemical testing will be required to determine the appropriate concrete classification.
Elevated radon levels	N	The site is not in an area where Radon Protective measures are required for new dwellings and extensions.
Unexploded Ordnances (UXO)	H	The site is in an area indicated to be at high risk from the presence of unexploded ordnance. An UXO survey needs to be undertaken and/or specialist advice sought prior to undertaking any work.
Seismicity	L	The 475 year return period hazard map in Eurocode 8, EN1998-1 (Ref. 7) indicates peak ground accelerations at the site of between 0.00 and 0.02g, which is considered very low.

6.2. Foundations

Made Ground and sand deposits are not considered to be suitable as a founding stratum due to the unacceptable risk of total and differential settlement under the high anticipated structural loadings.

Shallow foundations are likely to be viable where bedrock is encountered at shallow depths; the variability in rock strength may require variable excavation depths to achieve a uniform bearing stratum.



If shallow foundations are not considered of sufficient capacity to support the structure, an end bearing piled solution could be adopted to transmit the loads to the competent bedrock below. An alternative option was considered feasible for the proposed new stadium at Stanley Park which may also be feasible at the Anfield Stadium site to deal specifically with high tensile forces. This consists of a system of steel cables and mast elements in which the cable system will be anchored to the ground through a series of backstay anchor blocks and the cable tension forces are transmitted through the anchor blocks into a series of ground anchors extending down into the competent rock.

A full detailed foundation design should be undertaken in accordance with the requirements of Eurocode 7 once final ground profile and detailed structural loadings become available to give the most economical solution.

6.3. Floor Slabs

Made Ground was recorded to be generally less than 1.0m in thickness across the area of the proposed extension, and therefore would indicate ground bearing slabs may be achievable if founded directly onto the Sherwood Sandstone, or an engineered layer of granular material placed directly above the bedrock. It is recommended that a consistent formation level is achieved under geotechnical supervision prior to casting the floor slab.

6.4. Buried Structures and Services

Any buried structures such as relic foundations, cellars or concrete slabs, encountered during the enabling works for the new development should be broken out and removed prior to the placement of the new foundations. It is anticipated that buried services at the locality will also require re-routing. The Williamson's Tunnels are located approximately 4km south of the Anfield site and are therefore not considered to present a constraint to development.

Following the removal of any buried structures, the resultant excavation should be backfilled with suitably compacted granular fill material in order to reduce the likelihood of subsequent ground settlement at the locality. Any concrete/demolition materials excavated during the site preparation works should be assessed for re-use as granular fill, as it may be suitable following simple crushing, sorting and processing.

6.5. Excavations and Groundwater Control

The potential for perched groundwater within the Made Ground exists and it would be prudent to make allowance for groundwater control measures during construction. It is likely that "sump and pump" methods would generally be adequate to deal with any local groundwater ingress.

Instability of excavations within the Made Ground and granular soils should be expected, especially during periods of adverse weather conditions and an allowance for support for all excavations should be made. All excavations should be carried out in accordance with CIRIA Report 97, 'Trenching Practice'. All excavations, especially those for the foundation construction, should be protected from the effects of adverse weather at all times.

The risk from unrecorded borrow pits need to be considered during the design of the intrusive site investigation.

6.6. Retaining Walls and Slopes

No significant retention structures are envisaged as part of the works.



No natural/man-made slopes are likely to affect the works, other than temporary slopes created during the excavation works which may include stockpiling of site won materials being considered for re-use.

6.7. UXO

It would be prudent to undertake a UXO survey and specialist advice sought prior to undertaking any intrusive investigation works at the site.

6.8. Permeability

Falling head permeability tests were carried out in two boreholes in the 2002/3 and one in the 2006/7 Stanley Park site investigations. The recorded ground permeability was 4×10^{-7} and 2×10^{-8} m/s respectively, i.e. moderately low permeability.



7. Implications for Development

7.1. Conclusions

Our overall conclusions in relation to this site are as follows:

- 1) **Identification of contamination sources.** A limited number of potential contamination sources have been identified on and surrounding the site relating to historical land use, although the contaminative potential is considered to be low.
- 2) **Contaminant linkages.** There are considered to be potentially viable S-P-R linkages at the site with respect to contaminated land associated with historical development. Potential low to moderate risks to both human and controlled water receptors have been identified associated with the site and surrounding historical land uses.
- 3) **Ground profile.** The generalised stratigraphy anticipated is surface materials i.e. topsoil or tarmacadam and/or Made Ground overlying Sand and/or Sherwood Sandstone.
- 4) **Geotechnical Considerations.** Instability of excavations within the Made Ground and granular soils should be expected, especially during periods of adverse weather conditions and an allowance for support for all excavations and groundwater control should be made
- 5) **Foundation Design.** Light, medium and some heavily loaded structures may be founded at shallow depths where competent sandstone is encountered in keeping with the existent stand foundations. Further analysis and investigation of the extent of weathering and strength of the Sherwood Sandstone should be carried out. Where competent sandstone is not encountered at shallow depth and if more substantially loaded structures are present then deeper foundation solutions such as piles or an anchored solution are likely to be required and may prove more economical.

7.2. Recommendations

An intrusive investigation is required to establish the ground profile at the site and characterise the contaminative status of the shallow soils, groundwater and ground gas regime beneath the site. This will enable a more accurate assessment of the potential environmental liabilities associated with the site and identify the requirement for remedial works if required. The intrusive investigation will also be designed to obtain the necessary data required for geotechnical design including foundation design.

It is recommended that this site investigation is designed and put out to competitive tender at the earliest opportunity once access to the development site can be achieved (e.g. following demolition of remaining residential properties).

The site investigation should incorporate the following key elements:

- 1) Completion of a comprehensive UXO survey;
- 2) Exploratory boreholes should be drilled at suitable spaced intervals in order to allow necessary soil sampling and insitu testing to be undertaken;



- 3) Rotary drilling should be carried out in a number of boreholes in order to prove depth to competent bedrock, core samples should be obtained for description and geotechnical testing purposes;
- 4) The boreholes should be complemented by trial pits to enable further characterisation of the shallow (<4.0m) deposits including ease of excavation of the weathered rock if encountered, environmental sampling and trial pitting would provide a better opportunity of uncovering any former unrecorded borrow pits;
- 5) Trial pits would also allow soakaway testing to be carried out which would inform the future site drainage;
- 6) Trial pits will also be required to expose the existing stadium foundations to determine size, position and depth and allow an assessment of whether modified loads arising from the new development can be accommodated on existing foundations;
- 7) Where access is difficult it may be necessary to carry out window sampling or hand excavations to allow appropriate sampling and analysis
- 8) Selected boreholes should be installed with monitoring standpipes to allow collection of groundwater samples and gas monitoring;
- 9) Selected soil samples should be scheduled for chemical testing of an appropriate analytical suite based upon identified potential contaminants;
- 10) In-situ and laboratory based testing should be carried out to yield geotechnical information to facilitate geotechnical design;
- 11) An interpretive geo-environmental report should be completed to assess the risks and make recommendations as necessary.



8. References

- 1) NHBC, CIEH and Environment Agency 2008. Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D 66
- 2) www.bgs.ac.uk (Accessed November 2013)
- 3) Environment Agency, 2013
- 4) Department for Communities and Local Government, National Planning Policy Framework, March 2012
- 5) Model Procedures for the Management of Land Contamination, Contaminated Land Report 11, Environment Agency & DEFRA, 2004
- 6) BRE211 (2007) Radon: Protective measures for new dwellings
- 7) EN1998-1: General rules, seismic actions and rules for buildings, CEN, 2004.



Appendices



Appendix A Site Layout Plan



Appendix B Envirocheck Report

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

42580690_1_1

Customer Reference:

UNP3220

National Grid Reference:

336210, 393140

Slice:

A

Site Area (Ha):

7.27

Search Buffer (m):

1000

Site Details:

Liverpool Football Club Plc
Anfield Road
LIVERPOOL
L4 0TH

Client Details:

Mr A Hales
SKM Enviros
Unit 5, Meadow Court
Milshaw
Leeds
W Yorks
LS11 8LZ

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	4
Hazardous Substances	-
Geological	5
Industrial Land Use	11
Sensitive Land Use	21
Data Currency	22
Data Suppliers	26
Useful Contacts	27

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.

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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					
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 1		1	2	2
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 1			Yes	
Pollution Incidents to Controlled Waters	pg 1			1	2
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 2				1 (*3)
Water Industry Act Referrals	pg 3				2
Groundwater Vulnerability	pg 3	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				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					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 4			1	1
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites	pg 4				1
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)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 5	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 5	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 8		1	1	8
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			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 10	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 10	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards				n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards				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 11		12	19	79
Fuel Station Entries	pg 20		1	2	3

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					
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 21		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	Local Authority Pollution Prevention and Controls Name: Total Fina Elf Uk Ltd Location: Oakfield Road, Anfield, LIVERPOOL, Merseyside, L4 0UE Authority: Liverpool City Council, Liverpool Environmental Health & Trading Standards Division Permit Reference: PPC 1440/1/06 Dated: 16th March 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	119	1	336344 392882
2	Local Authority Pollution Prevention and Controls Name: Priory Garage Location: 232 Priory Road, Anfield, Liverpool, Merseyside, L4 2SL Authority: Liverpool City Council, Liverpool Environmental Health & Trading Standards Division Permit Reference: PPC 1451/1/00 Dated: 12th May 2000 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Automatically positioned to the address	A14NW (NE)	354	1	336573 393476
3	Local Authority Pollution Prevention and Controls Name: Anfield Crematorium Location: Priory Road, LIVERPOOL, Merseyside, L4 2SL Authority: Liverpool City Council, Liverpool Environmental Health & Trading Standards Division Permit Reference: PPC/40/05 (EP/Var/01/2010) Dated: 25th February 1992 Process Type: Local Authority Air Pollution Control Description: PG5/2 Crematoria Status: Authorised Positional Accuracy: Automatically positioned to the address	A18SE (NE)	393	1	336466 393615
4	Local Authority Pollution Prevention and Controls Name: Elf Oil Uk Ltd Location: Belmont Road, Anfield, LIVERPOOL, Merseyside, L6 5LD Authority: Liverpool City Council, Liverpool Environmental Health & Trading Standards Division Permit Reference: EP 1439 Dated: 16th March 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the address or location	A9SW (SE)	870	1	336810 392291
5	Local Authority Pollution Prevention and Controls Name: Malthurst Location: 21 Barlow Lane, Kirkdale, LIVERPOOL, Merseyside, L4 3QP Authority: Liverpool City Council, Liverpool Environmental Health & Trading Standards Division Permit Reference: PPC 1447/1/99 Dated: 6th September 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Automatically positioned to the address	A17NW (NW)	977	1	335360 393885
	Nearest Surface Water Feature	A18SW (N)	446	-	336022 393723
6	Pollution Incidents to Controlled Waters Property Type: Spillage; Accident In Transit Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Asbestos Fibre Incident Date: 13th April 1995 Incident Reference: 95740830 Catchment Area: Mersey - Tidal Receiving Water: Not Given Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (W)	260	2	335800 393300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Unknown Note: Stanley Park Lake Incident Date: 29th July 1992 Incident Reference: 92440110 Catchment Area: Mersey - Tidal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	525	2	336000 393800
8	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Merseyside Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Involved; Petrol To Drains Incident Date: 8th June 1996 Incident Reference: 96741242 Catchment Area: Mersey - Tidal 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	A9NW (SE)	637	2	336700 392500
9	Water Abstractions Operator: Liverpool City Council Licence Number: 2569030067 Permit Version: 1 Location: Stanley Park Lake Liverpool Authority: Environment Agency, North West Region Abstraction: Amenity: Make-Up Or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Stanley Park Liverpool Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 14th December 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	541	2	335910 393769
	Water Abstractions Operator: British Waterways Board Licence Number: 2569030052 Permit Version: Not Supplied Location: Leeds & Liverpool Canal, 37 Bankhall Street, LIVERPOOL Authority: Environment Agency, North West Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 109 Yearly Rate (m3): 28412 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)	1919	2	334200 393800
	Water Abstractions Operator: Liverpool City Council Licence Number: 2569031139 Permit Version: 1 Location: Underground Strata: Permo-Triassic Sandstone At Liverpool Authority: Environment Agency, North West Region Abstraction: Municipal Grounds: Make-Up or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Underground Strata: Permo-Triassic Sandstone At Liverpool Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th October 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(N)	1922	2	336600 395200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Liverpool City Council Licence Number: 2569031132 Permit Version: 1 Location: Borehole At Larkhill Gardens Authority: Environment Agency, North West Region Abstraction: Municipal Grounds: Make-Up or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Lake At Larkhill Gardens Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th October 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(E)	1930	2	338340 393330
10	Water Industry Act Referrals Name: Cwf (Metal Treatments) Ltd Location: 2 Luton Grove, Kirkdale, LIVERPOOL, L4 4LG Authority: Environment Agency, North West Region Permit Reference: BH8420 Dated: 1st February 2000 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations Status: Application received by the EA but is not yet authorisedNot Yet Authorised Positional Accuracy: Automatically positioned to the address	A17SW (NW)	616	2	335521 393521
10	Water Industry Act Referrals Name: Cwf (Metal Treatments) Ltd Location: 2 Luton Grove, Kirkdale, LIVERPOOL, Merseyside, L4 4LG Authority: Environment Agency, North West Region Permit Reference: AU3910 Dated: 22nd December 1995 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations Status: Application received by the EA but is not yet authorisedNot Yet Authorised Positional Accuracy: Automatically positioned to the address	A17SW (NW)	616	2	335521 393521
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	A13SE (NW)	0	2	336212 393140
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Desination: Principal Aquifer	A13SE (NW)	0	3	336212 393140
	Superficial Aquifer Designations No Data Available				
	Extreme Flooding from Rivers or Sea without Defences None				
	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
11	Licensed Waste Management Facilities (Locations) Licence Number: 54253 Location: Off Lower Breck Road, Liverpool, Merseyside, L6 4DW Operator Name: Liverpool City Council Operator Location: Not Supplied Authority: Environment Agency - North West Region, North Area Site Category: Household, Commercial And Industrial Transfer Stations Licence Status: Surrendered Issued: 10th October 1991 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 12th October 2000 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	423	2	336600 392700
12	Licensed Waste Management Facilities (Locations) Licence Number: 53887 Location: Land/premises At, St Domingo Road, Liverpool, Merseyside, L5 Operator Name: City Engineering Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Transfer Stations Taking Non-biodegradable Wastes Licence Status: Issued Issued: 23rd August 1991 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12SW (W)	551	2	335500 392900
	Local Authority Landfill Coverage Name: Merseyside Waste Disposal Authority - Has supplied landfill data		0	6	336212 393140
	Local Authority Landfill Coverage Name: Liverpool City Council - Has no landfill data to supply		0	1	336212 393140
13	Registered Waste Transfer Sites Licence Holder: Liverpool City Council Licence Reference: 30350 (350/02) Site Location: St Domingo Road, Liverpool, Merseyside Operator Location: Borax Street, Off Rathbone Road, Liverpool, Merseyside, L13 1el Authority: Environment Agency - North West Region, South Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: Waste produced/controlled by licence holder Restrictions: Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 23rd August 1991 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Supplied Authorised Waste: Max.Storage Max.Waste Permitted By Licence Non-Haz. Construction Ind. Wastes Non-Haz. Excavation Wastes Waste With < 10% Vol/Load Bonded Asb. Prohibited Waste: Asbestos Fibres Or Dust Clinical Wastes Liquid/Sludge Wastes Malodorous Waste Special Wastes	A12SW (W)	517	2	335500 393000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian and Triassic sandstones, undifferentiated, including Bunter and Keuper	A13SE (NW)	0	3	336212 393140
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: <15 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SW (W)	0	4	336000 393140
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: <15 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SE (NW)	0	4	336212 393140
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: <15 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SE (S)	0	4	336212 393000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: <15 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SW (SW)	82	4	336000 393000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13NE (NE)	214	4	336534 393365
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A14SW (E)	358	4	336747 393000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (NW)	379	4	336000 393634
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NW (W)	577	4	335468 393357
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	581	4	337000 393140
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	598	4	337000 393000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18NE (N)	682	4	336212 394000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18NW (N)	713	4	336000 394000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18NE (N)	747	4	336385 394044
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17NE (NW)	769	4	335853 394000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NE (SE)	781	4	337000 392593
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A11SE (W)	842	4	335179 392941
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A11SE (W)	843	4	335167 393000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 120 - 180 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A11NE (W)	964	4	335090 393452

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A3NE (S)	981	4	336212 392000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A11SE (W)	999	4	335000 393140
14	BGS Recorded Mineral Sites Site Name: Millbank Location: Stanley Park, Anfield, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 15578 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13NW (N)	67	3	336161 393366
15	BGS Recorded Mineral Sites Site Name: Corporation Yard Location: St Domingo Road, Everton, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 14608 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12SE (W)	439	3	335590 392975
16	BGS Recorded Mineral Sites Site Name: Globe Street Location: St Domingo Road, Everton, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 14609 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12NW (W)	555	3	335445 393165
17	BGS Recorded Mineral Sites Site Name: Hetherby Location: Stanley Park, Anfield, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 15579 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NE (NE)	570	3	336895 393457

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	BGS Recorded Mineral Sites Site Name: Walton Road Location: Walton Road, Kirkdale, Walton, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 9352 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	578	3	335585 393540
19	BGS Recorded Mineral Sites Site Name: St Domingo Road Location: Everton Valley, Everton, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 9897 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12NW (W)	617	3	335385 393185
20	BGS Recorded Mineral Sites Site Name: Mark Street Location: Mark Street, Everton, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 9751 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12SW (W)	672	3	335340 393005
21	BGS Recorded Mineral Sites Site Name: Breck Road Location: Breck Road, Everton, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 15580 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	749	3	336620 392315
22	BGS Recorded Mineral Sites Site Name: Breck Road Location: Breck Road, Everton, Liverpool Source: British Geological Survey, National Geoscience Information Service Reference: 15586 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Triassic Geology: Chester Pebble Beds Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	751	3	336885 392515
23	BGS Recorded Mineral Sites Site Name: Clubmoor Brick Field Location: , Clubmoor, Liverpool, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95159 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	928	3	337170 393689

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	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	A13SE (NW)	0	3	336212 393140
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	3	336212 393140
	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	A13SE (NW)	0	3	336212 393140
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	3	336212 393140
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	3	336212 393140
	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	A13SE (NW)	0	3	336212 393140
	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	A13SE (NW)	0	3	336212 393140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	Contemporary Trade Directory Entries Name: Alliance Print Location: 174, Walton Breck Road, Liverpool, L4 0RG Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address	A13SW (SW)	21	-	336115 393013
25	Contemporary Trade Directory Entries Name: Rgm Media Location: 5, Liverpool, Merseyside, L69 4PL Classification: Printers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A13SE (E)	31	-	336450 393142
26	Contemporary Trade Directory Entries Name: Auto Electrics Location: 1, Wylva Road, Liverpool, L4 0TS Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	48	-	336337 392970
27	Contemporary Trade Directory Entries Name: Snowcrest Location: 60, Venice Street, Liverpool, L5 1TZ Classification: Ice Cream Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (SW)	49	-	336018 393029
28	Contemporary Trade Directory Entries Name: Heffey'S Printers Location: 117, Walton Breck Road, Liverpool, L4 0RD Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (W)	79	-	335923 393115
28	Contemporary Trade Directory Entries Name: Pennance Location: 117, Walton Breck Road, Liverpool, L4 0RD Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (W)	79	-	335923 393115
29	Contemporary Trade Directory Entries Name: Altons Cleaning Services Location: 169, Oakfield Road, Walton, Liverpool, L4 0UF Classification: Cleaning Services - Commercial Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	117	-	336328 392877
29	Contemporary Trade Directory Entries Name: Essential Blinds Location: 161 Oakfield Rd, Walton, Liverpool, Merseyside, L4 0UF Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Manually positioned within the geographical locality	A13SE (SE)	127	-	336332 392868
29	Contemporary Trade Directory Entries Name: Total Location: Oakfield Rd, Walton, Liverpool, L4 0UH Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	142	-	336356 392862
29	Contemporary Trade Directory Entries Name: Total Location: Oakfield Rd, Walton, Liverpool, L4 0UE Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	142	-	336356 392862
29	Contemporary Trade Directory Entries Name: Essential Blinds Location: 161 Oakfield Rd, Walton, Liverpool, Merseyside, L4 0UF Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	150	-	336343 392847
30	Contemporary Trade Directory Entries Name: Taylorglass Ltd Location: 97-99, Anfield Road, Liverpool, L4 0TL Classification: Window Tinting Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (SE)	215	-	336575 392969

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	Contemporary Trade Directory Entries Name: Jmc Removals Location: 8, Harrow Road, Liverpool, L4 2TJ Classification: Rubbish Clearance Status: Active Positional Accuracy: Automatically positioned to the address	A14SW (SE)	262	-	336623 392956
32	Contemporary Trade Directory Entries Name: Divine Blinds Location: 134, Oakfield Road, Walton, Liverpool, L4 0UQ Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address	A8NE (SE)	282	-	336440 392750
33	Contemporary Trade Directory Entries Name: The Cleaners Location: 4, Towson Street, Liverpool, L5 1TP Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (SW)	291	-	335914 392804
34	Contemporary Trade Directory Entries Name: Anfield Mot & Service Ltd Location: 232, Priory Road, Liverpool, L4 2SL Classification: Mot Testing Centres Status: Active Positional Accuracy: Automatically positioned to the address	A14NW (NE)	354	-	336573 393476
34	Contemporary Trade Directory Entries Name: Priory Garage Location: 232, Priory Road, Liverpool, L4 2SL Classification: Petrol Filling Stations Status: Active Positional Accuracy: Automatically positioned to the address	A14NW (NE)	354	-	336573 393476
34	Contemporary Trade Directory Entries Name: Priory Tyre Services Location: 232, Priory Road, Liverpool, L4 2SL Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (NE)	354	-	336573 393476
34	Contemporary Trade Directory Entries Name: Priory Autocare Ltd Location: 232, Priory Road, Liverpool, L4 2SL Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (NE)	354	-	336573 393476
34	Contemporary Trade Directory Entries Name: Priory Tyre Services Location: 232, Priory Road, Liverpool, L4 2SL Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A14NW (NE)	354	-	336573 393476
35	Contemporary Trade Directory Entries Name: Bynon Location: 276, Walton Breck Road, Liverpool, Merseyside, L4 0SZ Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	379	-	336639 392794
36	Contemporary Trade Directory Entries Name: Anfield Cemetery & Crematorium Location: 236, Priory Road, Liverpool, L4 2SL Classification: Cemeteries & Crematoria Status: Active Positional Accuracy: Automatically positioned to the address	A18SE (NE)	393	-	336466 393615
36	Contemporary Trade Directory Entries Name: Anfield Cemetery & Crematorium Location: 236, Priory Road, Liverpool, L4 2SL Classification: Cemeteries & Crematoria Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	393	-	336466 393615
36	Contemporary Trade Directory Entries Name: Anfield Cemetery & Crematorium Location: 236, Priory Road, Liverpool, L4 2SL Classification: Cemeteries & Crematoria Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	393	-	336466 393615

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	Contemporary Trade Directory Entries Name: Andrew Lee Location: 78, Clapham Road, Liverpool, L4 2TQ Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (E)	406	-	336808 393026
37	Contemporary Trade Directory Entries Name: Priory Cleaners Ltd Location: 59, Priory Road, Liverpool, L4 2SE Classification: Dry Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (E)	449	-	336854 393030
38	Contemporary Trade Directory Entries Name: Grampian Engineering Ltd Location: 71-79, Oakfield Road, Walton, Liverpool, L4 0UE Classification: Mot Testing Centres Status: Active Positional Accuracy: Automatically positioned to the address	A8NE (SE)	409	-	336475 392623
39	Contemporary Trade Directory Entries Name: Relay Components Location: 79, Windermere Street, Liverpool, L5 6RA Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NE (S)	452	-	336418 392554
40	Contemporary Trade Directory Entries Name: Liverpool Brick & Block Location: 49, Heyes Street, Liverpool, Merseyside, L5 6SE Classification: Builders' Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NE (S)	460	-	336246 392522
41	Contemporary Trade Directory Entries Name: Excalibur Location: 51, Oakfield Road, Walton, Liverpool, L4 0UE Classification: Leaded Lights & Windows Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NE (SE)	472	-	336507 392568
42	Contemporary Trade Directory Entries Name: B R Woods Location: 407, Walton Breck Road, Liverpool, L4 2RN Classification: French Polishing Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	490	-	336774 392777
43	Contemporary Trade Directory Entries Name: Dave Alan Location: 78, Mere Lane, Liverpool, L5 0QW Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A8NW (SW)	516	-	335881 392572
44	Contemporary Trade Directory Entries Name: M & L Cars Location: 46, Priory Road, Liverpool, L4 2RZ Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	553	-	336931 392933
45	Contemporary Trade Directory Entries Name: Cain & Shaw Location: 25-29, Westcott Road, Liverpool, L4 2RE Classification: Cleaning Services - Commercial Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	590	-	336717 392582
46	Contemporary Trade Directory Entries Name: Walton Motors Ltd Location: 255, Walton Lane, Liverpool, L4 5RH Classification: Commercial Vehicle Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A18NW (N)	603	-	336022 393892
47	Contemporary Trade Directory Entries Name: Meare Solutions Location: 62, Pinehurst Road, Liverpool, L4 2TZ Classification: Filter Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NE (E)	612	-	336999 393337

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	Contemporary Trade Directory Entries Name: C W F Metal Treatments Ltd Location: 2, Luton Grove, Liverpool, L4 4LG Classification: Metal Finishing Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	616	-	335521 393521
48	Contemporary Trade Directory Entries Name: Matco Motor Factors Ltd Location: 138, Walton Road, Liverpool, L4 4AY Classification: Paint Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	643	-	335495 393532
49	Contemporary Trade Directory Entries Name: Charlie Mac'S Location: 85, Walton Road, Liverpool, L4 4AF Classification: Car Breakers & Dismantlers Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	618	-	335418 393342
50	Contemporary Trade Directory Entries Name: Georgesons Cars Location: 2-18, Breck Road, Anfield, Liverpool, Merseyside, L4 2RA Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	626	-	336931 392761
51	Contemporary Trade Directory Entries Name: Aintree Horsebox Accessories Location: 87, Langham Street, Liverpool, Merseyside, L4 4DA Classification: Horse Boxes & Transporting Status: Inactive Positional Accuracy: Automatically positioned to the address	A17NE (NW)	658	-	335794 393829
52	Contemporary Trade Directory Entries Name: Catertech Location: 1A Windermere St, Liverpool, Merseyside, L5 6RA Classification: Catering Equipment - Servicing & Repairs Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A9SW (SE)	661	-	336550 392380
53	Contemporary Trade Directory Entries Name: Vj Superstore Location: 7, Townsend Lane, Anfield, Liverpool, Merseyside, L6 0AX Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	662	-	337008 392829
54	Contemporary Trade Directory Entries Name: Rosewood French Polishers Location: 106, Breck Road, Anfield, Liverpool, L4 2RD Classification: French Polishing Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	674	-	336702 392454
54	Contemporary Trade Directory Entries Name: Koz Electro Signals Location: 147, Breck Road, Anfield, Liverpool, Merseyside, L4 2QZ Classification: Electrical Appliance Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	704	-	336705 392419
54	Contemporary Trade Directory Entries Name: Regent Wrought Iron Location: 152, Belmont Road, Liverpool, L6 5BJ Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	715	-	336699 392401
54	Contemporary Trade Directory Entries Name: Ainfield Tyres Location: 150a, Belmont Road, Liverpool, Merseyside, L6 5BJ Classification: Tyre Dealers Status: Active Positional Accuracy: Manually positioned to the address or location	A9SW (SE)	720	-	336707 392401
55	Contemporary Trade Directory Entries Name: B H Autocare Ltd Location: 2, Taplow Street, Liverpool, L6 0AB Classification: Mot Testing Centres Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	676	-	336906 392644

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	Contemporary Trade Directory Entries Name: Jason Lafferty Location: 10, Rossmore Gardens, Liverpool, L4 7TF Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NE (NE)	679	-	337009 393482
57	Contemporary Trade Directory Entries Name: Chemdry Location: Breck Rd, Anfield, Liverpool, Merseyside, L4 2RB Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A9NW (SE)	679	-	336785 392524
57	Contemporary Trade Directory Entries Name: Phoenix Puppys & Kittens Location: 117-119, Breck Road, Anfield, Liverpool, L4 2QX Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	697	-	336770 392483
58	Contemporary Trade Directory Entries Name: Jades Location: 22, Pinehurst Road, Liverpool, L4 2TY Classification: Carpet, Curtain & Upholstery Cleaners Status: Active Positional Accuracy: Automatically positioned to the address	A14NE (E)	679	-	337097 393177
59	Contemporary Trade Directory Entries Name: Valley Fire Surrounds Location: 37-41, Walton Road, Liverpool, Merseyside, L4 4AD Classification: Plaster Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	694	-	335308 393197
60	Contemporary Trade Directory Entries Name: Home Bargains Location: 281, Breck Road, Everton, Liverpool, L5 6PU Classification: Toiletries Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	695	-	336514 392329
61	Contemporary Trade Directory Entries Name: Quality Fireplaces Location: 129-135, Breck Road, Anfield, Liverpool, L4 2QZ Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	701	-	336737 392449
61	Contemporary Trade Directory Entries Name: Newcombe Motors Location: 1, Newcombe Street, Liverpool, L6 5AN Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	722	-	336781 392458
61	Contemporary Trade Directory Entries Name: Photoart By Valerie Sky Location: 17, Newcombe Street, Liverpool, Merseyside, L6 5AN Classification: Photo & Digital Imaging Bureaus Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	757	-	336812 392439
62	Contemporary Trade Directory Entries Name: Harwood Electrical Systems Location: 296-298, Breck Road, Everton, Liverpool, L5 6QB Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	706	-	336655 392383
63	Contemporary Trade Directory Entries Name: Nationwide Furniture Services Ltd Location: 40, Breckfield Road North, Liverpool, L5 4NH Classification: Furniture - Repairing & Restoring Status: Active Positional Accuracy: Automatically positioned to the address	A8SE (S)	715	-	336229 392266
64	Contemporary Trade Directory Entries Name: Langham Street Autos Location: Unit B2, Langham St, Liverpool, Merseyside, L4 4DA Classification: Mot Testing Centres Status: Active Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	738	-	335660 393818

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	Contemporary Trade Directory Entries Name: Fudge Cosmetics Location: Tetlow Way, Langham St, Liverpool, Merseyside, L4 4DA Classification: Print Finishers Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A17NE (NW)	775	-	335642 393850
65	Contemporary Trade Directory Entries Name: Contrast Blinds & Flooring Location: 227, Breck Road, Everton, Liverpool, L5 6PT Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address	A8SE (S)	754	-	336354 392233
66	Contemporary Trade Directory Entries Name: P & W Services Ltd Location: 230a, Springfield Square, Liverpool, L4 4BJ Classification: Mot Testing Centres Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	767	-	335572 393791
66	Contemporary Trade Directory Entries Name: P & W Autos Location: Springfield Sq, Liverpool, L4 4BJ Classification: Mot Testing Centres Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	788	-	335554 393804
66	Contemporary Trade Directory Entries Name: Fireworld Location: 230 Walton Rd, Liverpool, Merseyside, L4 4BB Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	795	-	335540 393802
66	Contemporary Trade Directory Entries Name: Fireworld Location: 230 Walton Rd, Liverpool, Merseyside, L4 4BB Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	795	-	335540 393802
66	Contemporary Trade Directory Entries Name: Fireworld Location: 230 Walton Rd, Liverpool, Merseyside, L4 4BB Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	796	-	335540 393803
66	Contemporary Trade Directory Entries Name: Merseyside Domestic Appliances Location: 234, Walton Road, Liverpool, L4 4BE Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	805	-	335548 393822
66	Contemporary Trade Directory Entries Name: South Liverpool Domestic Location: 234, Walton Road, Liverpool, L4 4BE Classification: Washing Machines - Servicing & Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	805	-	335548 393822
66	Contemporary Trade Directory Entries Name: Lancashire Domestic Location: 234, Walton Road, Liverpool, L4 4BE Classification: Vacuum Cleaners - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	805	-	335548 393822
66	Contemporary Trade Directory Entries Name: Prestige Paneling Location: 219, Walton Road, Liverpool, L4 4AJ Classification: Cladding Suppliers & Installers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	824	-	335505 393811
66	Contemporary Trade Directory Entries Name: Colourtrade Location: Decorating Centre, 221-225, Walton Road, Liverpool, L4 4AJ Classification: Wallpapers & Wall Coverings Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	831	-	335506 393820

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
67	Contemporary Trade Directory Entries Name: Carl Gelling Location: 177-187, Walton Road, Liverpool, L4 4AJ Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	767	-	335464 393690
67	Contemporary Trade Directory Entries Name: A & V Fashions Location: 177-187, Walton Road, Liverpool, L4 4AJ Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	767	-	335464 393690
67	Contemporary Trade Directory Entries Name: Classic Garments Location: 189-191, Walton Road, Liverpool, L4 4AJ Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	774	-	335478 393715
67	Contemporary Trade Directory Entries Name: Off The Wall Location: 189-191, Walton Road, Liverpool, Merseyside, L4 4AJ Classification: T-Shirts Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	774	-	335478 393715
68	Contemporary Trade Directory Entries Name: Aquarius Carpet Care Location: 38, Bishop Road, Liverpool, L6 0BJ Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	768	-	337179 393032
69	Contemporary Trade Directory Entries Name: Pure Transfer Location: Station House, Bradewell St, Liverpool, Merseyside, L4 4ND Classification: Pharmaceutical Manufacturers & Distributors Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A17SW (NW)	780	-	335419 393656
70	Contemporary Trade Directory Entries Name: Hoban Location: 3 The Mall, Breck Rd, Everton, Liverpool, Merseyside, L5 6SP Classification: Printers Status: Active Positional Accuracy: Manually positioned within the geographical locality	A8SE (S)	784	-	336444 392219
71	Contemporary Trade Directory Entries Name: Everton Glass Works Ltd Location: 60-64, Townsend Lane, Anfield, Liverpool, L6 0BA Classification: Wallpapers & Wall Coverings Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	789	-	337161 392876
72	Contemporary Trade Directory Entries Name: Easy Clean Location: 211, Breck Road, Everton, Liverpool, L5 6PT Classification: Dry Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	791	-	336303 392191
72	Contemporary Trade Directory Entries Name: Breck Home Decor Location: 176-178, Breck Road, Everton, Liverpool, L5 6PX Classification: Wallpapers & Wall Coverings Status: Active Positional Accuracy: Automatically positioned to the address	A8SE (S)	825	-	336328 392160
73	Contemporary Trade Directory Entries Name: Minuteman Press Location: 205, Walton Road, Liverpool, L4 4AJ Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	801	-	335490 393766
74	Contemporary Trade Directory Entries Name: Ashtons Wrought Iron Location: Unit C4, Langham Street, Liverpool, L4 4DA Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Automatically positioned to the address	A17NE (NW)	818	-	335600 393874

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	Contemporary Trade Directory Entries Name: Ashtons Wrought Iron Location: Unit C4, Langham Street, Liverpool, Merseyside, L4 4DA Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Automatically positioned to the address	A17NE (NW)	818	-	335600 393874
74	Contemporary Trade Directory Entries Name: Keith Hulse Location: Unit C3, Langham St, Liverpool, Merseyside, L4 4DA Classification: Tyre Dealers Status: Active Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	826	-	335601 393884
74	Contemporary Trade Directory Entries Name: Jag Auto Services Location: Unit C1, Langham Street, Liverpool, L4 4DA Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17NE (NW)	830	-	335623 393907
74	Contemporary Trade Directory Entries Name: Oaklands Joinery Location: Unit C2, Langham Street, Liverpool, Merseyside, L4 4DA Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	838	-	335613 393909
75	Contemporary Trade Directory Entries Name: Competent Cleaners Ltd Location: Ince Avenue, Anfield, Liverpool, Merseyside, L4 5JT Classification: Carpet, Curtain & Upholstery Cleaners Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A19NW (NE)	854	-	336859 393888
76	Contemporary Trade Directory Entries Name: Classic Colour Centres Location: 245-247 Walton Rd, Liverpool, Merseyside, L4 4AR Classification: Wallpapers & Wall Coverings Status: Active Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	880	-	335539 393908
77	Contemporary Trade Directory Entries Name: Goodison Park Autos Location: 6, City Road, Liverpool, L4 5TE Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A17NE (N)	884	-	335855 394129
78	Contemporary Trade Directory Entries Name: Headington Auto Centre Ltd Location: Unit 6, Castor Street, Liverpool, L6 5AT Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	908	-	336812 392245
78	Contemporary Trade Directory Entries Name: Padworth Building Supply Co Location: Unit 6-8, Castor Street, Liverpool, L6 5AT Classification: Builders' Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	908	-	336812 392245
78	Contemporary Trade Directory Entries Name: R & T Joinery Location: Unit 8, Castor Street, Liverpool, Merseyside, L6 5AT Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	911	-	336824 392250
78	Contemporary Trade Directory Entries Name: Laminate Flooring Direct Location: Castor St, Liverpool, L6 5AT Classification: Lamination & Encapsulation Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A9SW (SE)	942	-	336856 392235
79	Contemporary Trade Directory Entries Name: Stoneycroft Diesels Ltd Location: 9, Empress Road, Anfield, Liverpool, L6 0BX Classification: Fuel Injection Services Status: Active Positional Accuracy: Automatically positioned to the address	A15SW (E)	914	-	337287 392856

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	Contemporary Trade Directory Entries Name: Solo Cars Location: Unit 3a-3c, Larch Lea, Liverpool, Merseyside, L6 5BN Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the address or location	A9SW (SE)	914	-	336779 392216
80	Contemporary Trade Directory Entries Name: Solo Cars Location: Unit 3a-3c, Larch Lea, Liverpool, Merseyside, L6 5BN Classification: Car Dealers - Used Status: Active Positional Accuracy: Manually positioned to the address or location	A9SW (SE)	914	-	336779 392216
80	Contemporary Trade Directory Entries Name: Flexicon Uk Ltd Location: Larch Lea, Liverpool, Merseyside, L6 5BN Classification: Seal & Joint Manufacturers Status: Active Positional Accuracy: Manually positioned within the geographical locality	A9SW (SE)	947	-	336801 392190
81	Contemporary Trade Directory Entries Name: Shell Location: Barlow La, Liverpool, Merseyside, L4 3QP Classification: Petrol Filling Stations Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A17NW (NW)	937	-	335378 393846
81	Contemporary Trade Directory Entries Name: Malthurst Retail Location: 21, Barlow Lane, Liverpool, L4 3QP Classification: Petrol Filling Stations - 24 Hour Status: Active Positional Accuracy: Automatically positioned to the address	A17NW (NW)	977	-	335360 393885
81	Contemporary Trade Directory Entries Name: Gulf Service Station Ltd Location: 21, Barlow Lane, Liverpool, L4 3QP Classification: Petrol Filling Stations - 24 Hour Status: Inactive Positional Accuracy: Automatically positioned to the address	A17NW (NW)	977	-	335360 393885
82	Contemporary Trade Directory Entries Name: Pro-Print Location: 59, Trouville Road, Liverpool, L4 7UB Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address	A15NW (E)	941	-	337316 393430
83	Contemporary Trade Directory Entries Name: Tawd Street Garage Location: 6-8, Tawd Street, Liverpool, L4 4PD Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	952	-	335292 393771
83	Contemporary Trade Directory Entries Name: Bootle Printing Co Location: 4b, Tawd Street, Liverpool, L4 4PD Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	954	-	335306 393791
84	Contemporary Trade Directory Entries Name: A R G Automatic'S Location: Unit 15, Castor Street, Liverpool, L6 5AT Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SE (SE)	960	-	336893 392241
84	Contemporary Trade Directory Entries Name: A R G Automatic'S Location: Unit 15, Castor Street, Liverpool, L6 5AT Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SE (SE)	960	-	336893 392241
85	Contemporary Trade Directory Entries Name: Elm Tree Garage Location: 201, Westminster Road, Liverpool, L4 4LR Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	961	-	335323 393823

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	Contemporary Trade Directory Entries Name: B R T Motors Location: 2, Espin Street, Liverpool, L4 5XE Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A22SE (N)	970	-	335843 394217
87	Contemporary Trade Directory Entries Name: Anco Location: 1, Sherwyn Road, Liverpool, Merseyside, L4 7TP Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A20SW (E)	981	-	337334 393499
88	Fuel Station Entries Name: Anfield Car Centre Location: 140-142, Walton Breck Road, Burleigh Road South, Anfield,, LIVERPOOL, Merseyside, L4 0RQ Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A13SW (SW)	59	-	336001 393045
89	Fuel Station Entries Name: Priory Garage Location: 232, Priory Road, Liverpool, L4 2SL Brand: Texaco Premises Type: Petrol Station Status: Closed Positional Accuracy: Automatically positioned to the address	A14NW (NE)	354	-	336573 393476
90	Fuel Station Entries Name: Anfield Service Station Location: 57a, Oakfield Road, Walton, Liverpool, L4 0UE Brand: Total Premises Type: Petrol Station Status: Open Positional Accuracy: Manually positioned to the address or location	A8NE (SE)	409	-	336475 392623
91	Fuel Station Entries Name: Walton Hall Garage Location: 2-10 Breck Road, Anfield, LIVERPOOL, Merseyside, L4 2RA Brand: OBSOLETE Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Approximate location provided by supplier	A9NE (SE)	669	-	336896 392644
92	Fuel Station Entries Name: Belmont Road Service Station Location: Belmont Road, LIVERPOOL, Merseyside, L6 5BG Brand: Total Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A9SW (SE)	868	-	336810 392292
93	Fuel Station Entries Name: Mrh Grand National Location: 21, Barlow Lane, Liverpool, L4 3QP Brand: Texaco Premises Type: Petrol Station Status: Open Positional Accuracy: Automatically positioned to the address	A17NW (NW)	977	-	335360 393885

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	Nitrate Vulnerable Zones Name: Not Supplied Description: NVZ Area Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A13SE (SE)	49	5	336381 392995













Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Sefton Metropolitan Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council - Department of Planning and Development Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Wirral Borough Council - Environmental Health Division	July 2012 March 2012 November 2011 November 2011	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - North West Region	October 2012	Quarterly
Enforcement and Prohibition Notices Environment Agency - North West Region	September 2012	Quarterly
Integrated Pollution Controls Environment Agency - North West Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - North West Region	October 2012	Quarterly
Local Authority Integrated Pollution Prevention And Control Sefton Metropolitan Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council - Environmental Health and Consumer Protection Division Wirral Borough Council - Environmental Health Division Liverpool City Council - Liverpool Environmental Health & Trading Standards Division	August 2012 June 2012 November 2012 November 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Monthly
Local Authority Pollution Prevention and Controls Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Sefton Metropolitan Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council - Environmental Health and Consumer Protection Division Wirral Borough Council - Environmental Health Division	August 2012 February 2011 June 2012 November 2011	Monthly Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Sefton Metropolitan Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council - Environmental Health and Consumer Protection Division Wirral Borough Council - Environmental Health Division Liverpool City Council - Liverpool Environmental Health & Trading Standards Division	August 2012 June 2012 November 2012 November 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Monthly
Nearest Surface Water Feature Ordnance Survey	July 2012	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 2012	Monthly
Prosecutions Relating to Controlled Waters Environment Agency - North West Region	September 2012	Monthly
Registered Radioactive Substances Environment Agency - North West Region	October 2012	Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - North West Region - South Area	October 2012	Quarterly
Water Abstractions Environment Agency - North West Region	July 2012	Quarterly
Water Industry Act Referrals Environment Agency - North West Region	October 2012	Quarterly

Agency & Hydrological	Version	Update Cycle
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
Source Protection Zones Environment Agency - Head Office	July 2012	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	October 2012	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	October 2012	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	October 2012	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	October 2012	Quarterly
Flood Defences Environment Agency - Head Office	October 2012	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 2012	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 2012	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North West Region - North Area Environment Agency - North West Region - South Area	October 2012 October 2012	Quarterly Quarterly
Local Authority Landfill Coverage Knowsley Metropolitan Borough Council Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Merseyside Waste Disposal Authority Sefton Metropolitan Borough Council - Environmental Health Department Wirral Borough Council	May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Knowsley Metropolitan Borough Council Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Merseyside Waste Disposal Authority Sefton Metropolitan Borough Council - Environmental Health Department Wirral Borough Council	May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable 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	October 2012	Bi-Annually
Explosive Sites Health and Safety Executive	June 2012	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Sefton Metropolitan Borough Council Wirral Borough Council Liverpool City Council Knowsley Metropolitan Borough Council	April 2012 December 2011 January 2012 July 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Sefton Metropolitan Borough Council Wirral Borough Council Liverpool City Council Knowsley Metropolitan Borough Council	April 2012 December 2011 January 2012 July 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	January 2010	Variable
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2012	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	January 2012	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 2012	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2012	Quarterly
Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt Knowsley Metropolitan Borough Council Liverpool City Council Sefton Metropolitan Borough Council Wirral Borough Council	August 2012 August 2012 August 2012 August 2012	As notified As notified As notified As notified
Areas of Unadopted Green Belt Knowsley Metropolitan Borough Council Liverpool City Council Sefton Metropolitan Borough Council Wirral Borough Council	August 2012 August 2012 August 2012 August 2012	As notified As notified As notified As notified
Areas of Outstanding Natural Beauty Natural England	July 2012	Bi-Annually
Environmentally Sensitive Areas Natural England	February 2012	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	February 2012	Bi-Annually
Marine Nature Reserves Natural England	August 2012	Bi-Annually
National Nature Reserves Natural England	February 2012	Bi-Annually
National Parks Natural England	August 2012	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Annually
Ramsar Sites Natural England	August 2012	Bi-Annually
Sites of Special Scientific Interest Natural England	August 2012	Bi-Annually
Special Areas of Conservation Natural England	August 2012	Bi-Annually
Special Protection Areas Natural England	August 2012	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	Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Millenium House, 60 Victoria Street, Liverpool, Merseyside, L1 6LD	Telephone: 0151 233 3000 Email: environmental.health@liverpool.gov.uk Website: www.liverpool.gov.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.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	Landmark Information Group Limited 5 - 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Telephone: 01392 441761 Fax: 01392 441709 Email: cssupport@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk
5	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
6	Merseyside Waste Disposal Authority 2nd Floor, North House, 17 North John Street, Liverpool, Merseyside, L2 5QY	Telephone: 0151 2551444 Fax: 0151 2271848 Email: enquiries@merseysidewda.gov.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.



Site Sensitivity Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4
0TH



Site Sensitivity Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4
0TH



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Groundwater Vulnerability

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

Major Aquifer (Highly Permeable)

Minor Aquifer (Variably Permeable)

Non Aquifer (Negligibly Permeable)

Water or Sea

Drift Deposit

Soil Classes

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

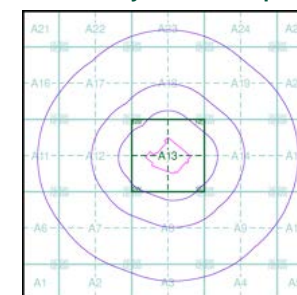
Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 42580690_1_1
 Customer Ref: UNP3220
 National Grid Reference: 336210, 393140
 Slice: A
 Site Area (Ha): 7.27
 Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



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



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0 1 km



Bedrock Aquifer Designation

General

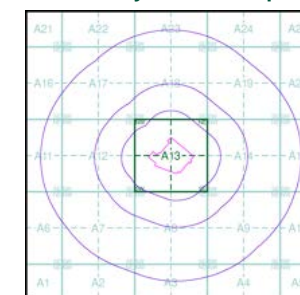
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 42580690_1_1
 Customer Ref: UNP3220
 National Grid Reference: 336210, 393140
 Slice: A
 Site Area (Ha): 7.27
 Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



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Superficial Aquifer Designation

General

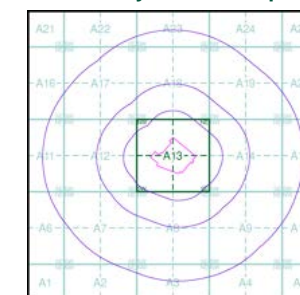
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- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



Order Details

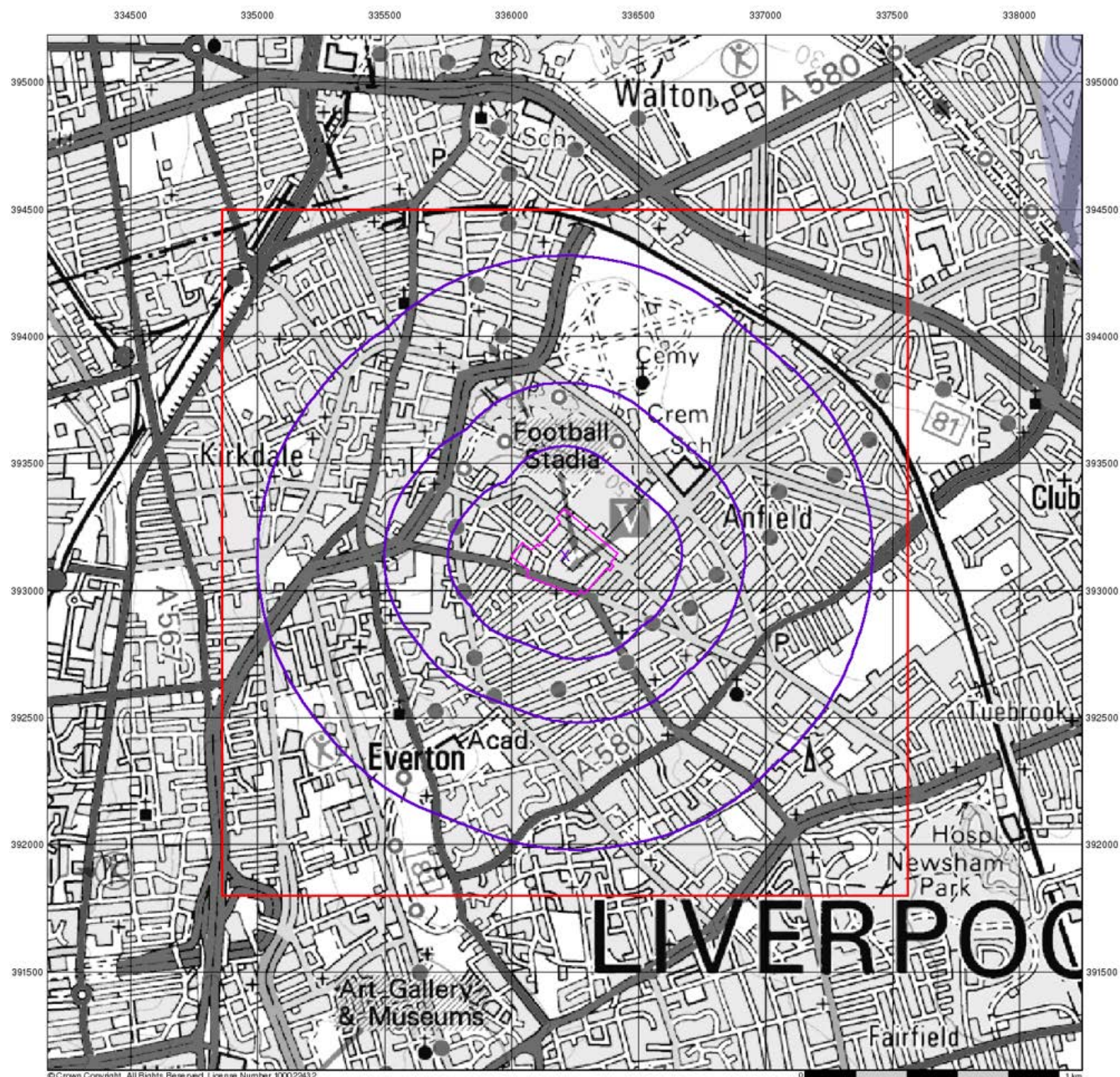
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 Customer Ref: UNP3220
 National Grid Reference: 336210, 393140
 Slice: A
 Site Area (Ha): 7.27
 Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



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Source Protection Zones

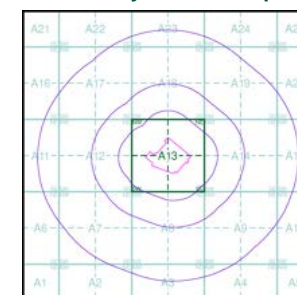
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



Order Details

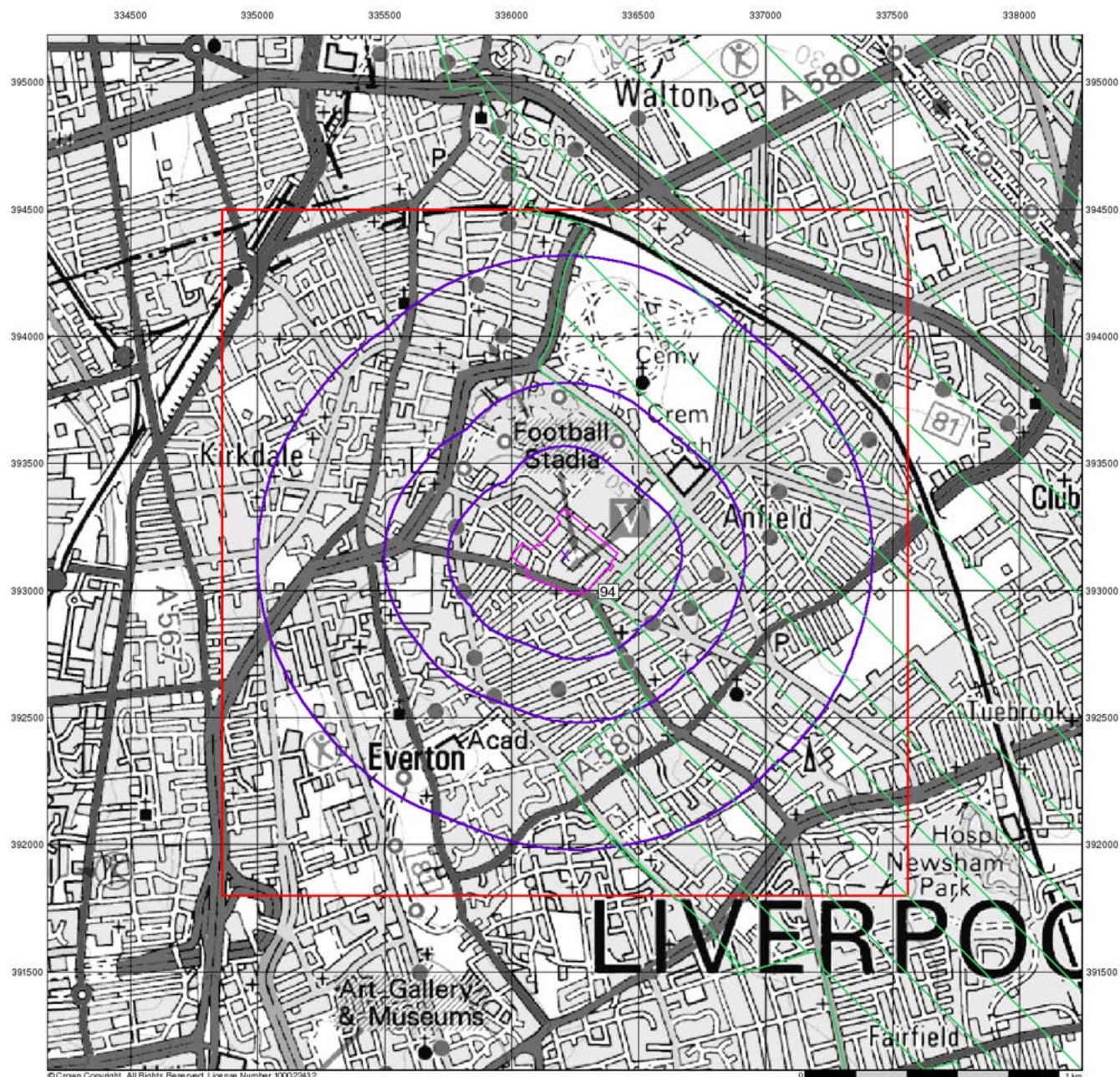
Order Number: 42580690_1_1
 Customer Ref: UNP3220
 National Grid Reference: 336210, 393140
 Slice: A
 Site Area (Ha): 7.27
 Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



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Sensitive Land Uses

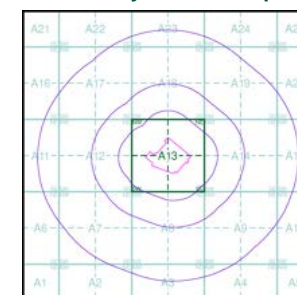
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Sensitive Land Uses

- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area

Site Sensitivity Context Map - Slice A



Order Details

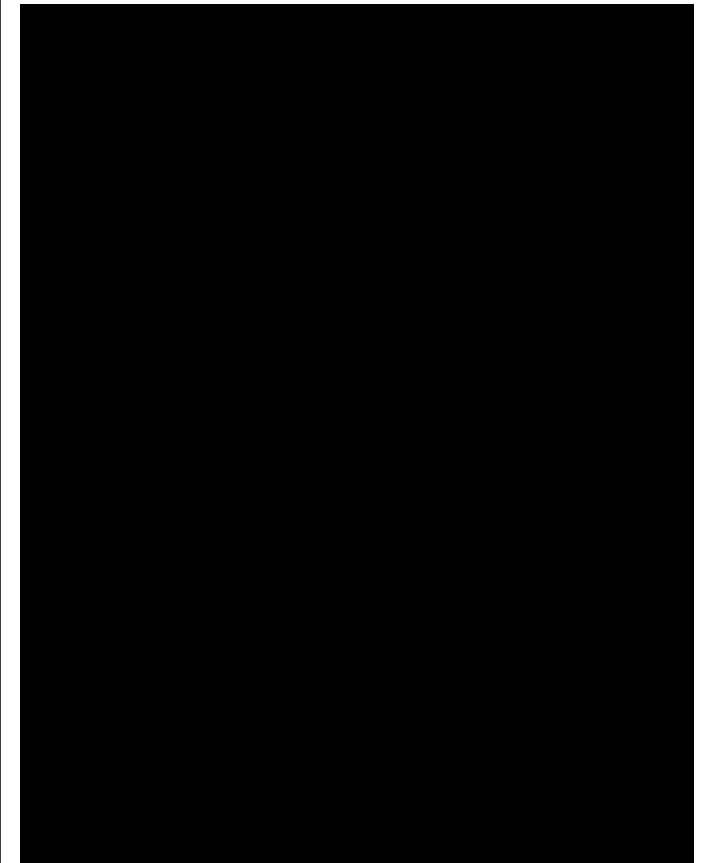
Order Number: 42580690_1_1
 Customer Ref: UNP3220
 National Grid Reference: 336210, 393140
 Slice: A
 Site Area (Ha): 7.27
 Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



Tel: 0844 844 9952
 Fax: 0844 844 9951
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Flood Map - Slice A

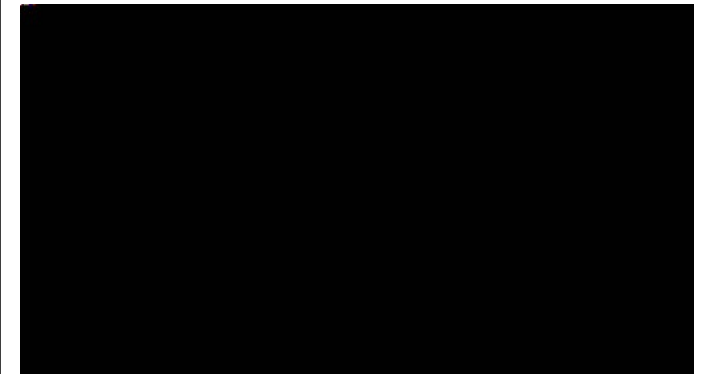


Order Details

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Customer Ref: UNP3220
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Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

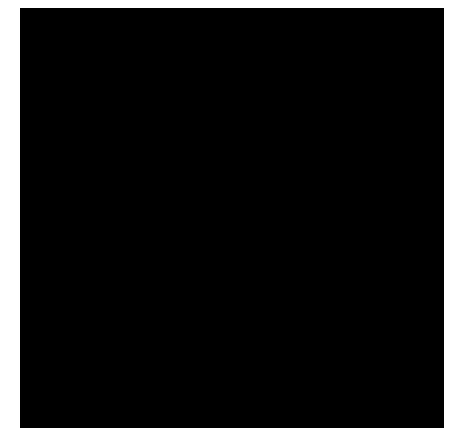
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4
0TH



For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



Flood Map - Slice A

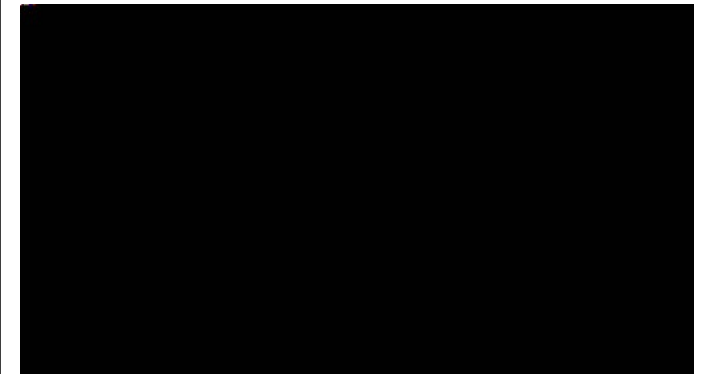


Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

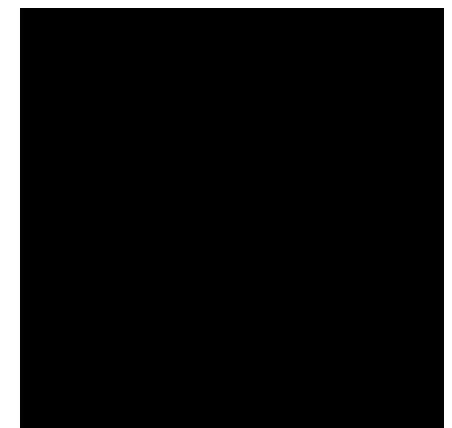
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4
0TH



For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

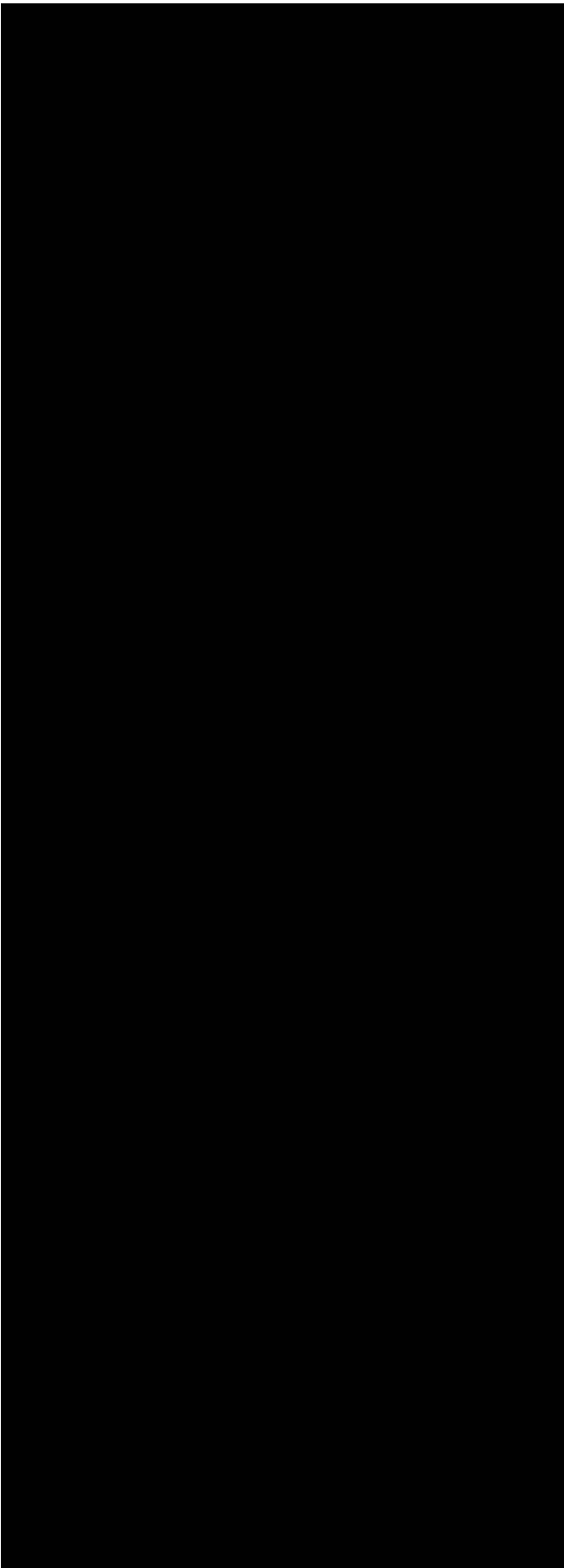
Order Number: 42580690_1_1
Customer Ref: UNP3220
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Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

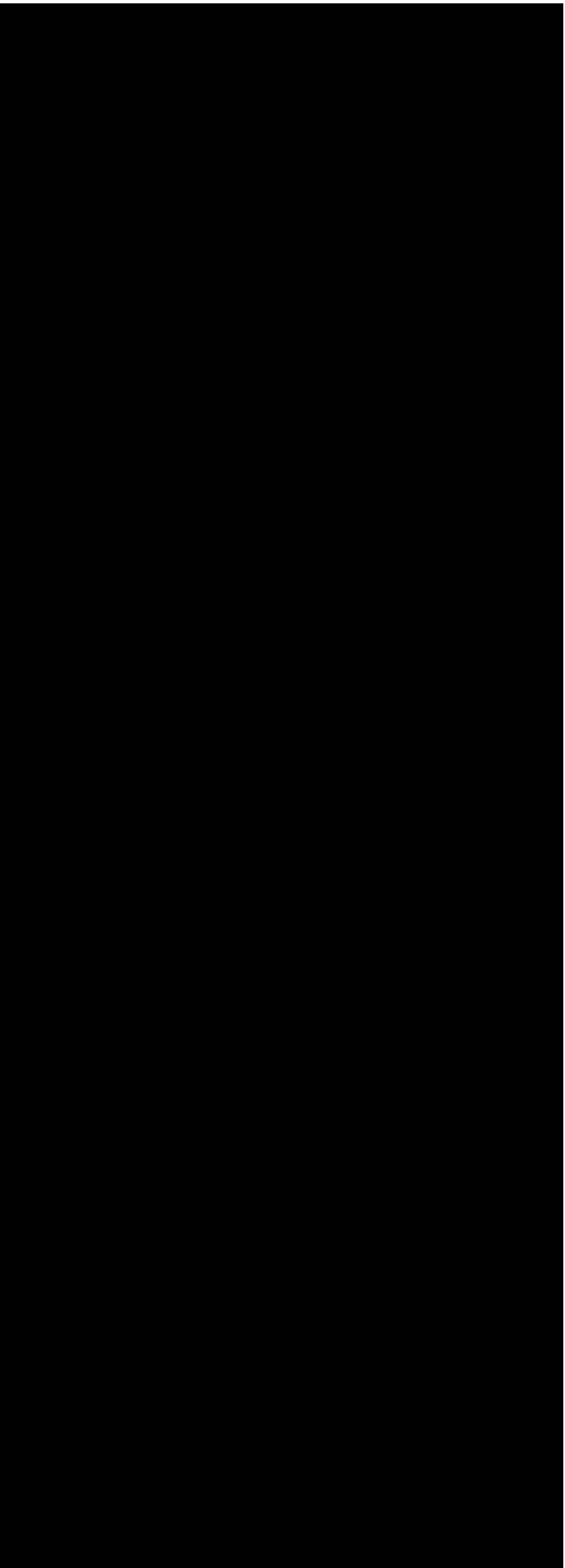
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH

Historical Mapping Legends

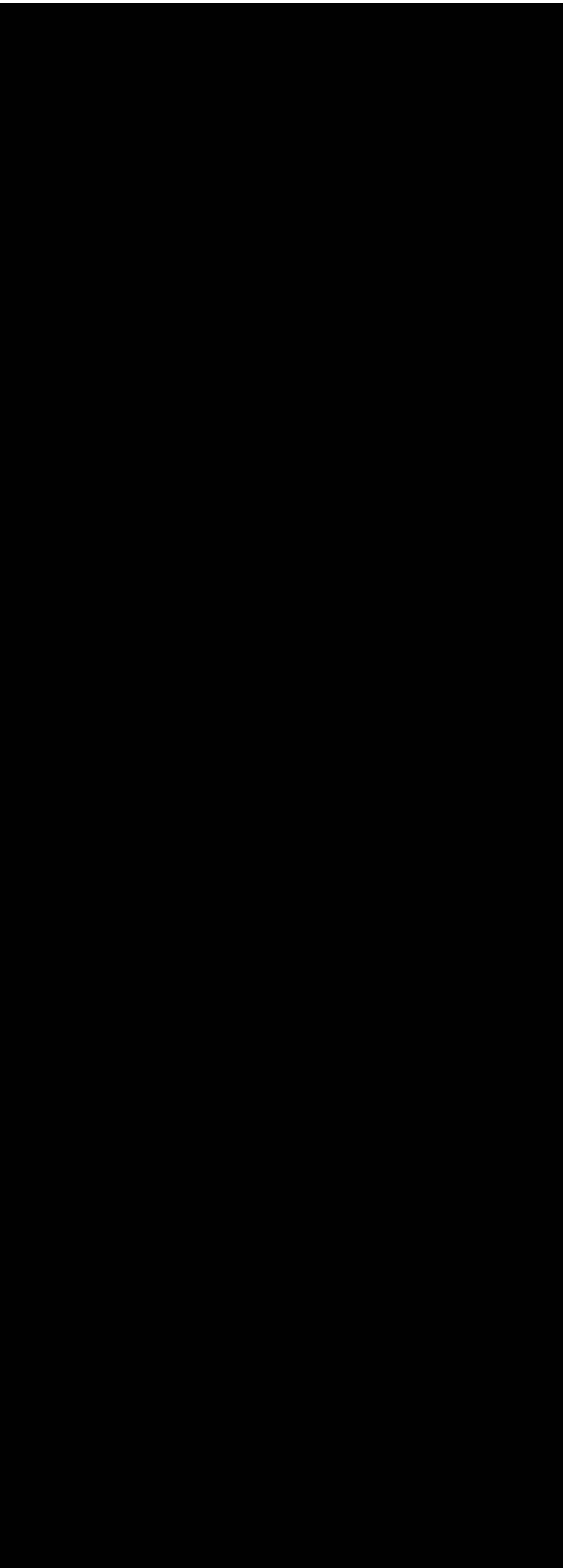
Ordnance Survey County Series 1:10,560



Ordnance Survey Plan 1:10,000



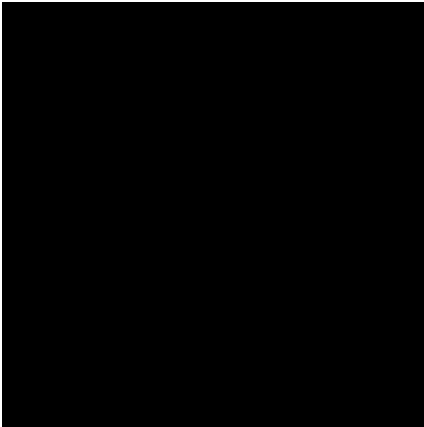
1:10,000 Raster Mapping



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1851	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894	5
Cheshire	1:10,560	1899 - 1900	6
Lancashire And Furness	1:10,560	1909 - 1910	7
Cheshire	1:10,560	1913	8
Cheshire	1:10,560	1927 - 1928	9
Lancashire And Furness	1:10,560	1928	10
Lancashire And Furness	1:10,560	1928	11
Cheshire	1:10,560	1938	12
Lancashire And Furness	1:10,560	1938	13
Ordnance Survey Plan	1:10,000	1956 - 1957	14
Ordnance Survey Plan	1:10,000	1967 - 1968	15
Ordnance Survey Plan	1:10,000	1973 - 1977	16
Liverpool	1:10,000	1974	17
Ordnance Survey Plan	1:10,000	1984	18
Ordnance Survey Plan	1:10,000	1990 - 1991	19
10K Raster Mapping	1:10,000	2006	20
10K Raster Mapping	1:10,000	2012	21

Historical Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

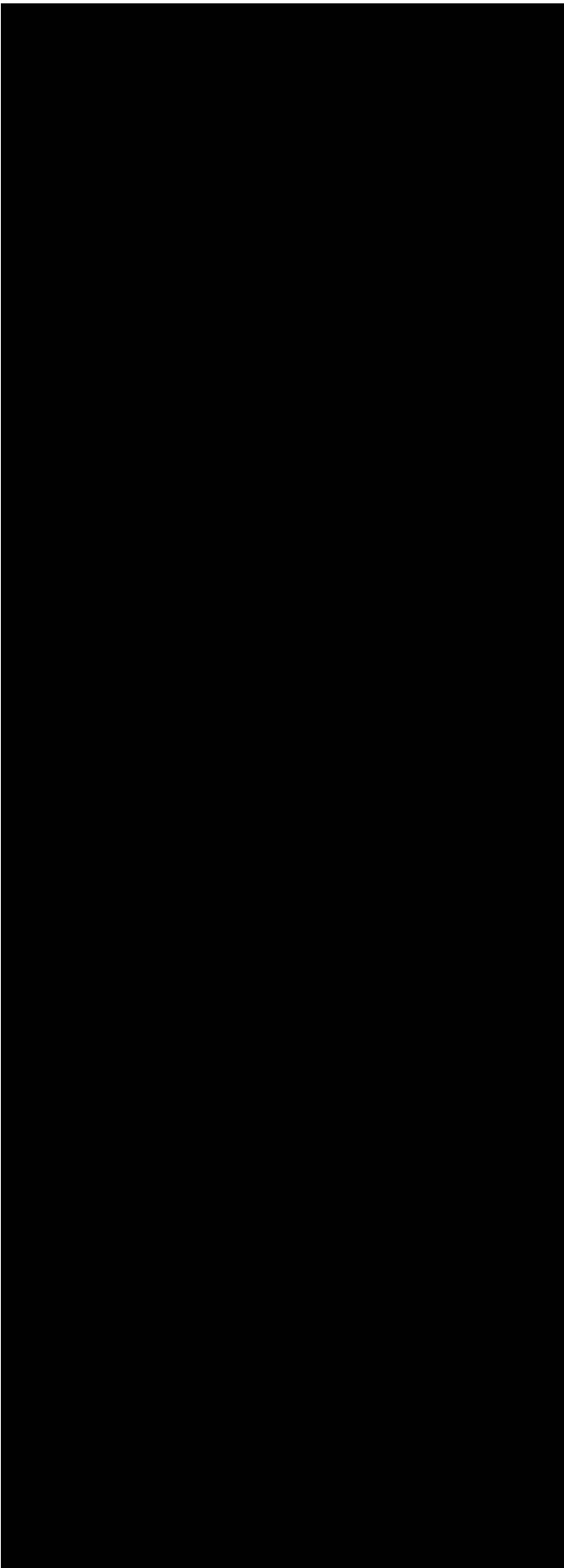
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



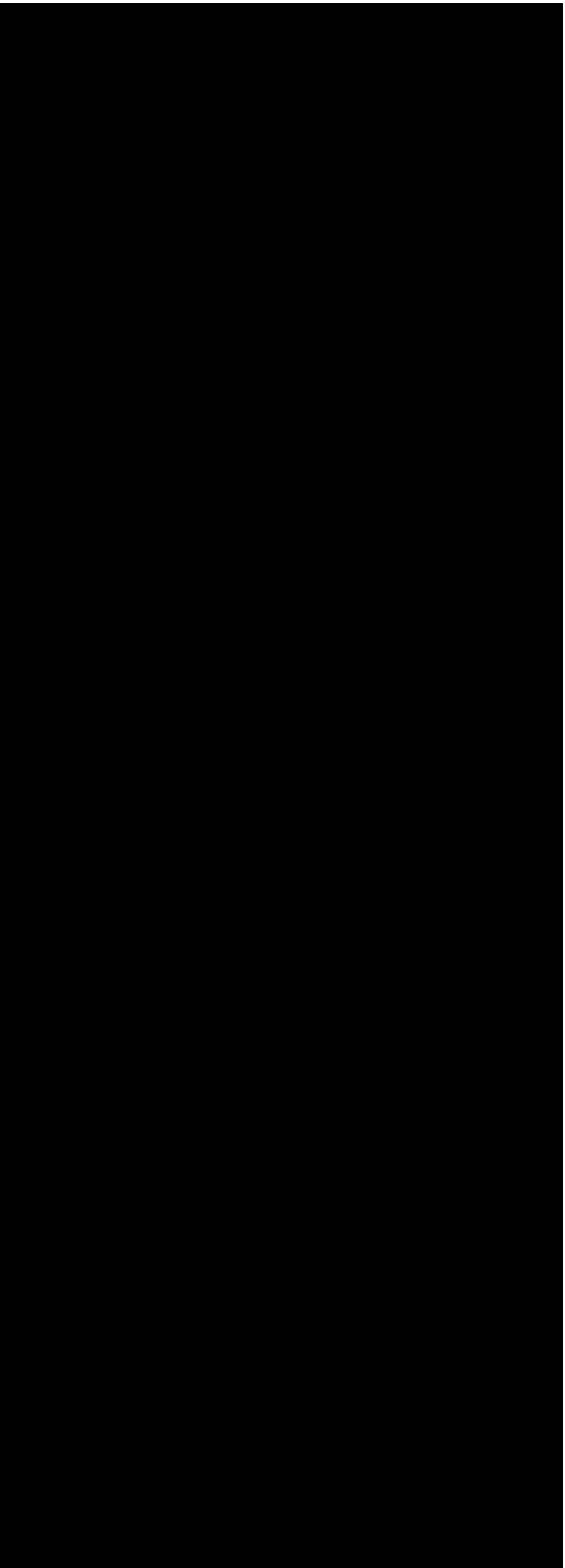
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Russian Military Mapping Legends

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



1:25,000 mapping



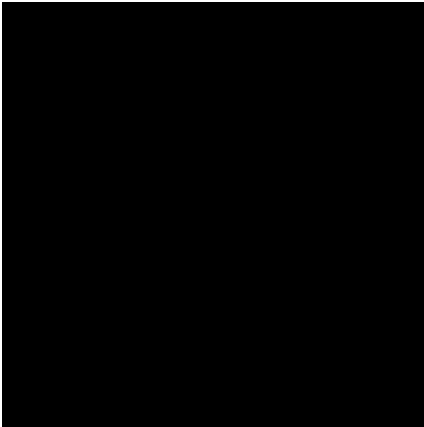
Key to Numbers on Mapping



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1851	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894	5
Cheshire	1:10,560	1899 - 1900	6
Lancashire And Furness	1:10,560	1909 - 1910	7
Cheshire	1:10,560	1913	8
Cheshire	1:10,560	1927 - 1928	9
Lancashire And Furness	1:10,560	1928	10
Lancashire And Furness	1:10,560	1928	11
Cheshire	1:10,560	1938	12
Lancashire And Furness	1:10,560	1938	13
Ordnance Survey Plan	1:10,000	1956 - 1957	14
Ordnance Survey Plan	1:10,000	1967 - 1968	15
Ordnance Survey Plan	1:10,000	1973 - 1977	16
Liverpool	1:10,000	1974	17
Ordnance Survey Plan	1:10,000	1984	18
Ordnance Survey Plan	1:10,000	1990 - 1991	19
10K Raster Mapping	1:10,000	2006	20
10K Raster Mapping	1:10,000	2012	21

Russian Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



Tel: 0844 844 9952
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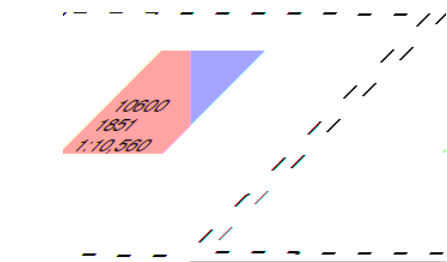
Lancashire And Furness

Published 1851

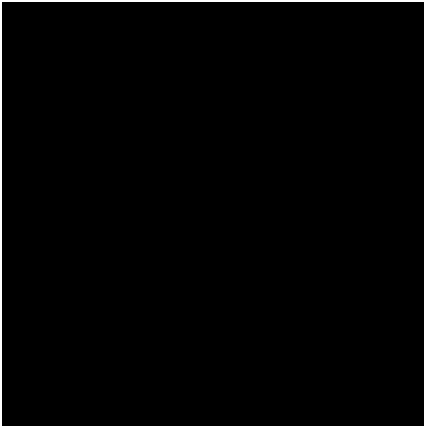
Source map scale - 1:10,560

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: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



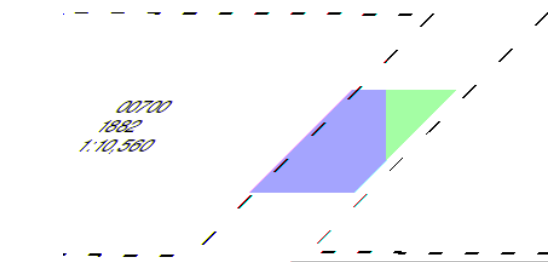
Cheshire

Published 1882

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: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



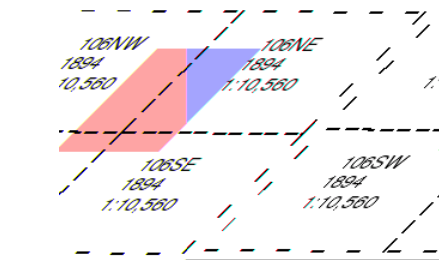
Lancashire And Furness

Published 1894

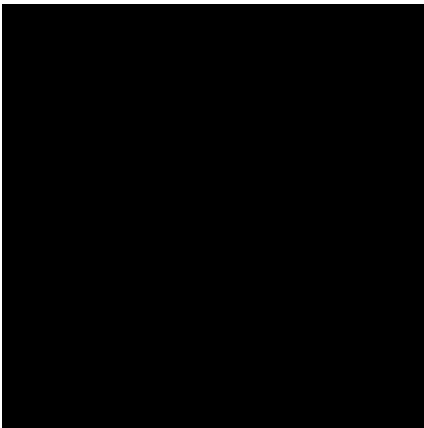
Source map scale - 1:10,560

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: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



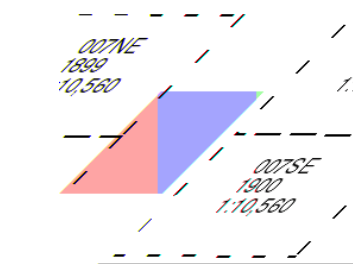
Cheshire

Published 1899 - 1900

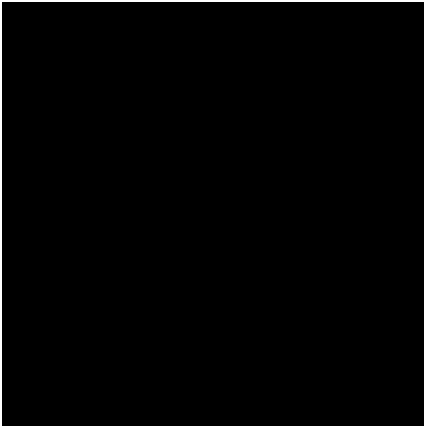
Source map scale - 1:10,560

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: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



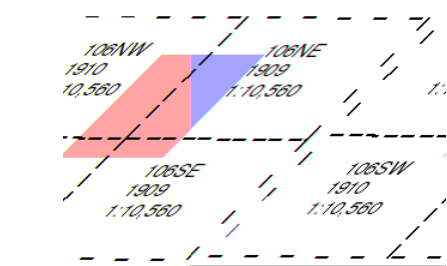
Lancashire And Furness

Published 1909 - 1910

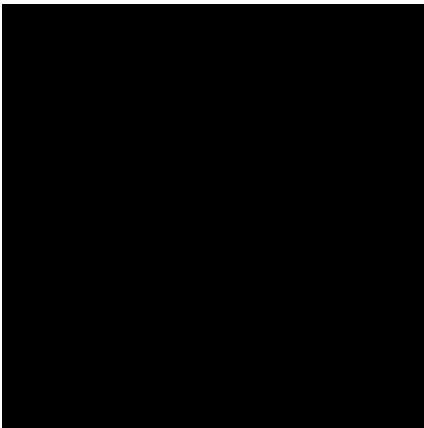
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



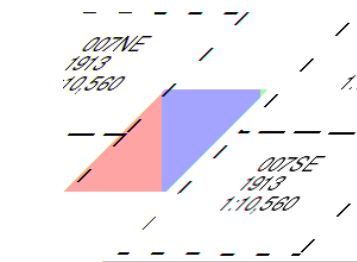
Cheshire

Published 1913

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: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
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Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



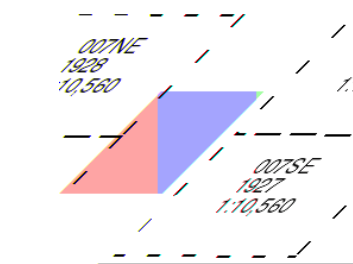
Cheshire

Published 1927 - 1928

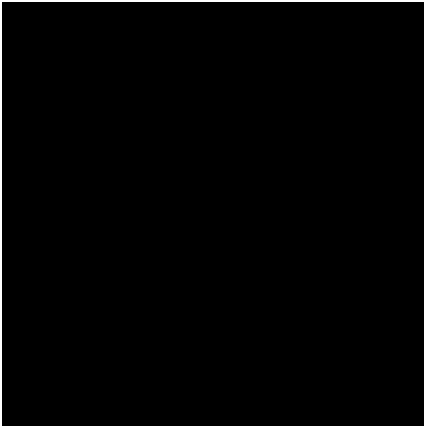
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
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Site Details

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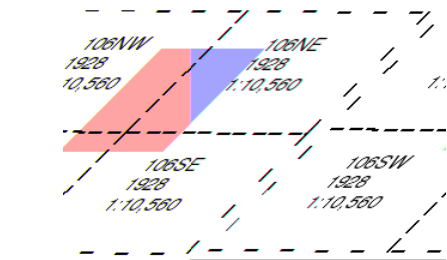
Lancashire And Furness

Published 1928

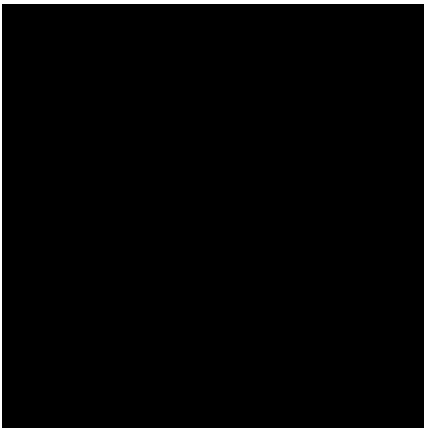
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps.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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



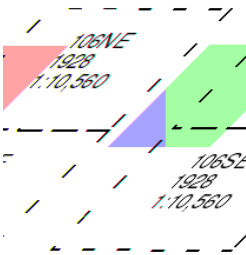
Lancashire And Furness

Published 1928

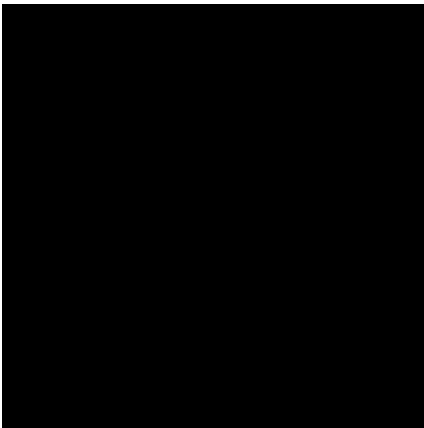
Source map scale - 1:10,560

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: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



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



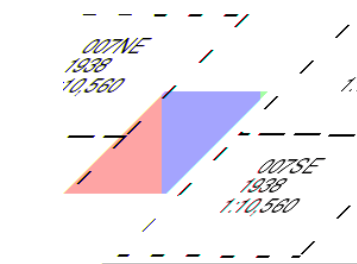
Cheshire

Published 1938

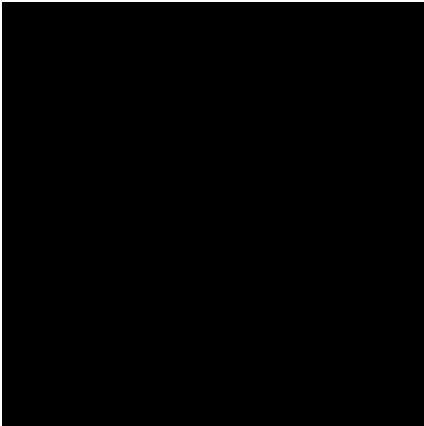
Source map scale - 1:10,560

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.

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Site Details

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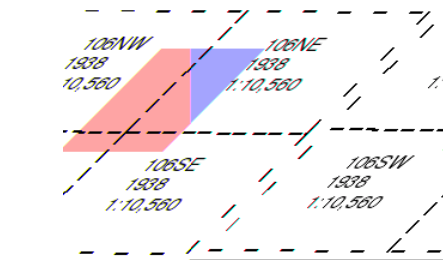
Lancashire And Furness

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.

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Site Details

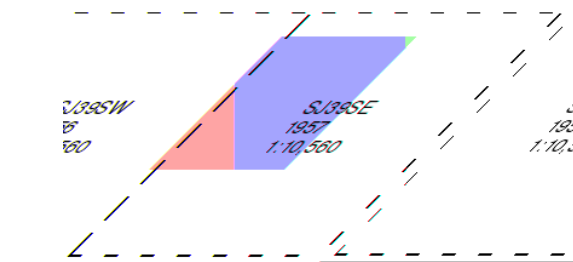
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



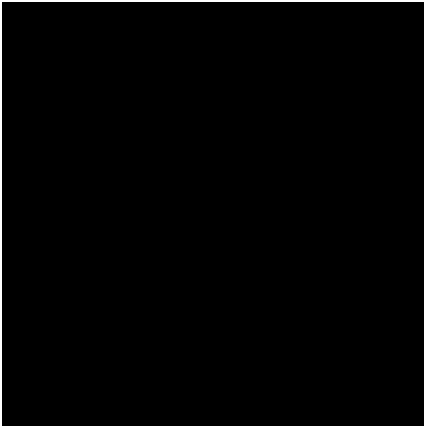
Ordnance Survey Plan
Published 1956 - 1957
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details
Order Number: 42580690_1_1
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National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

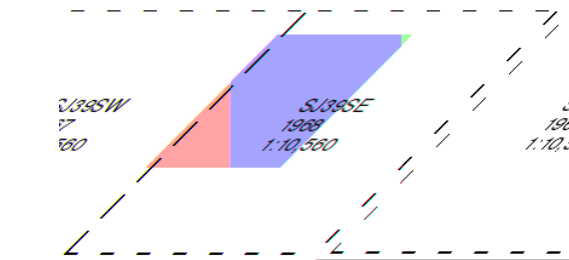
Site Details
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



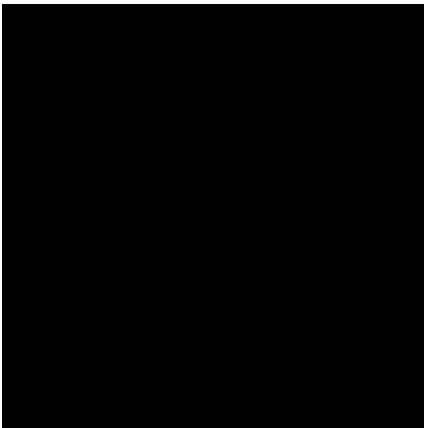
Ordnance Survey Plan
Published 1967 - 1968
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

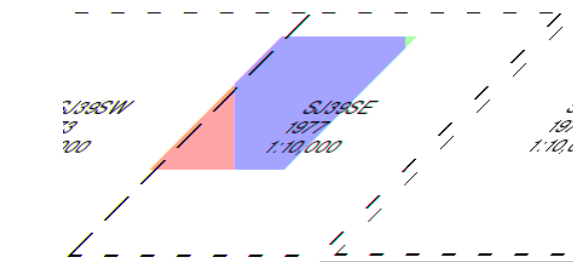
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



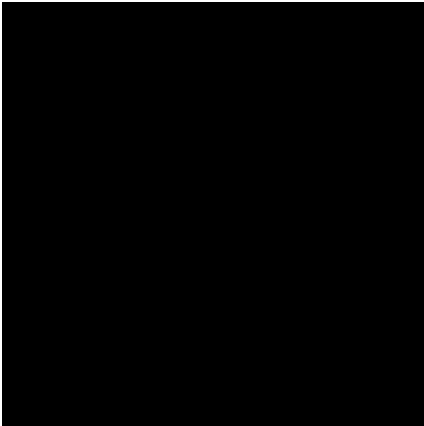
Ordnance Survey Plan
Published 1973 - 1977
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



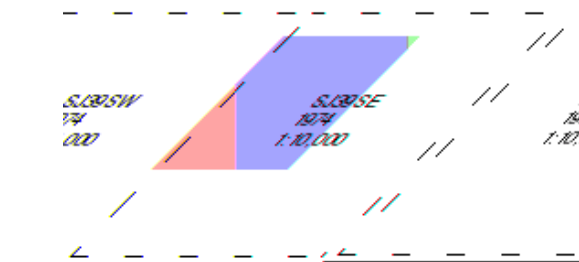
Liverpool

Published 1974

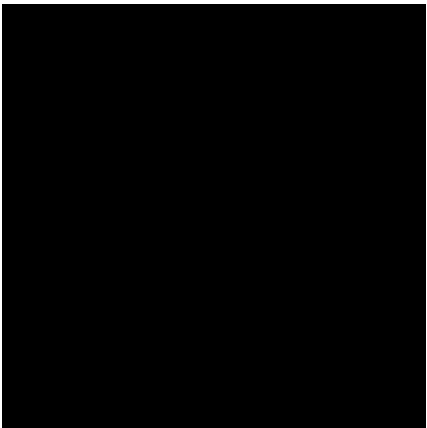
Source map scale - 1:10,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use. They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

Site Details

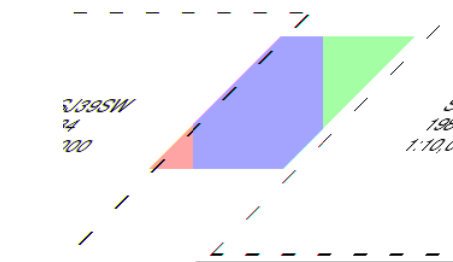
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



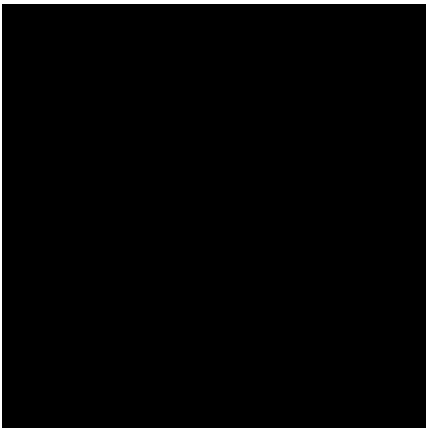
Ordnance Survey Plan
Published 1984
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details
Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 1000

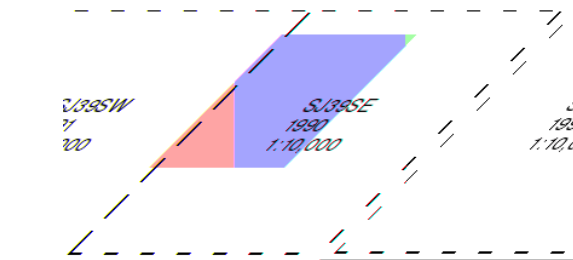
Site Details
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



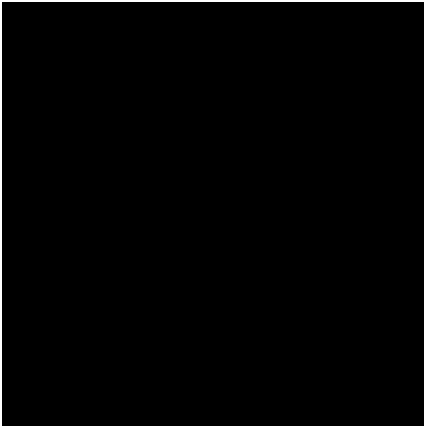
Ordnance Survey Plan
Published 1990 - 1991
Source map scale - 1:10,000

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.

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Historical Map - Slice A



Order Details
Order Number: 42580690_1_1
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Slice: A
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Site Details
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



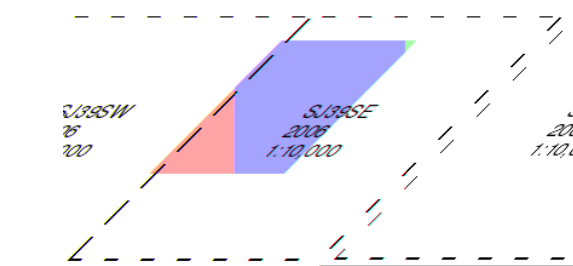
10k Raster Mapping

Published 2006

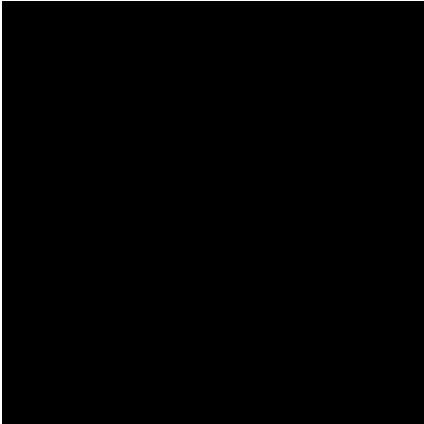
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
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Site Details

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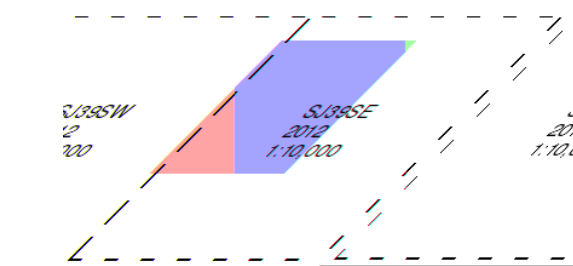
10k Raster Mapping

Published 2012

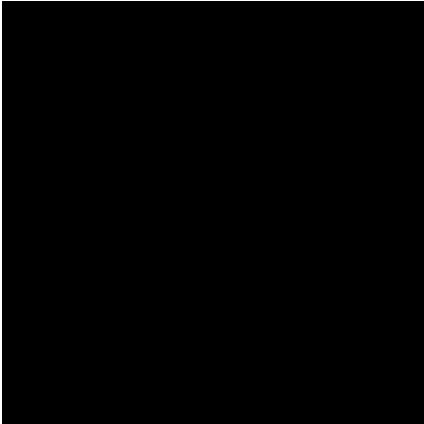
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

Order Number: 42580690_1_1
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Site Details

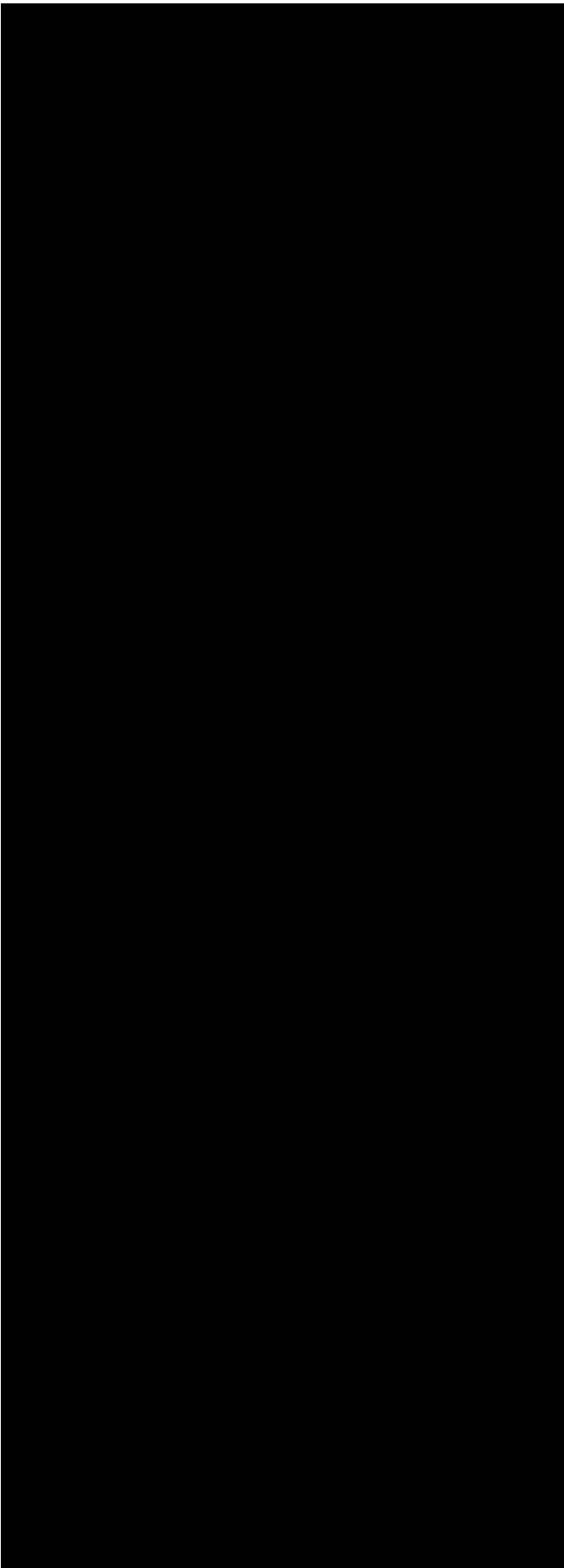
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



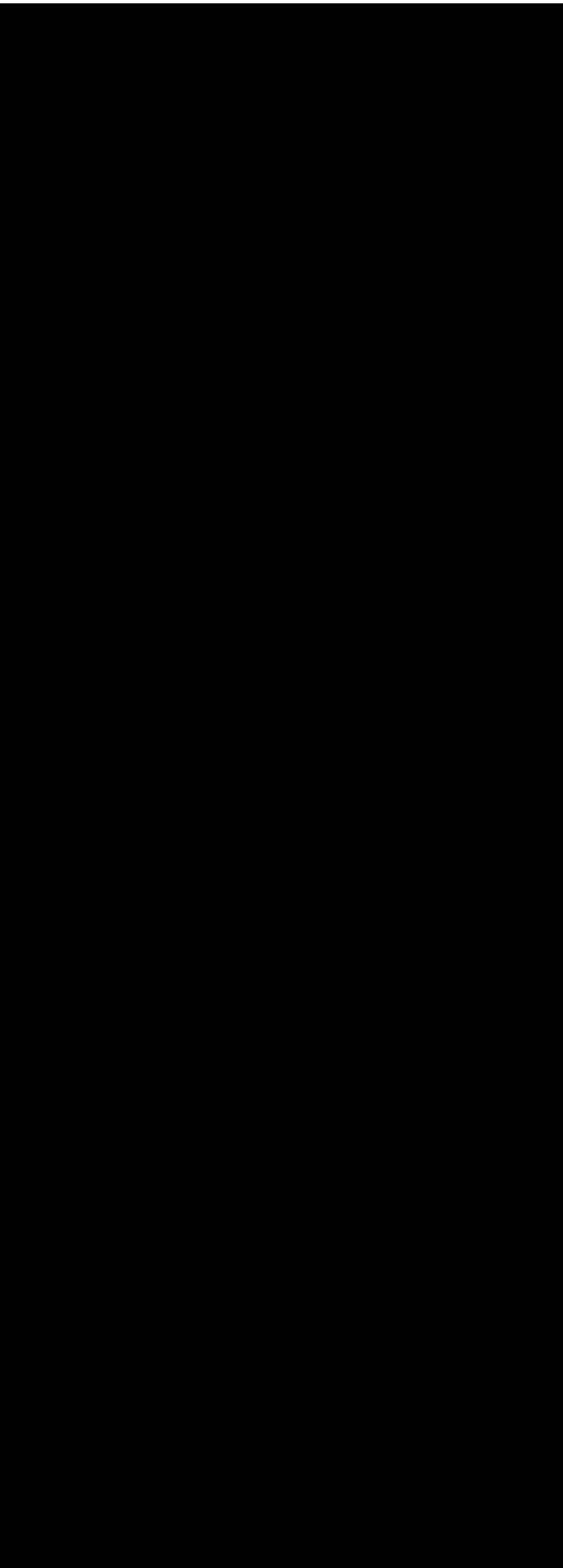
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Historical Mapping Legends

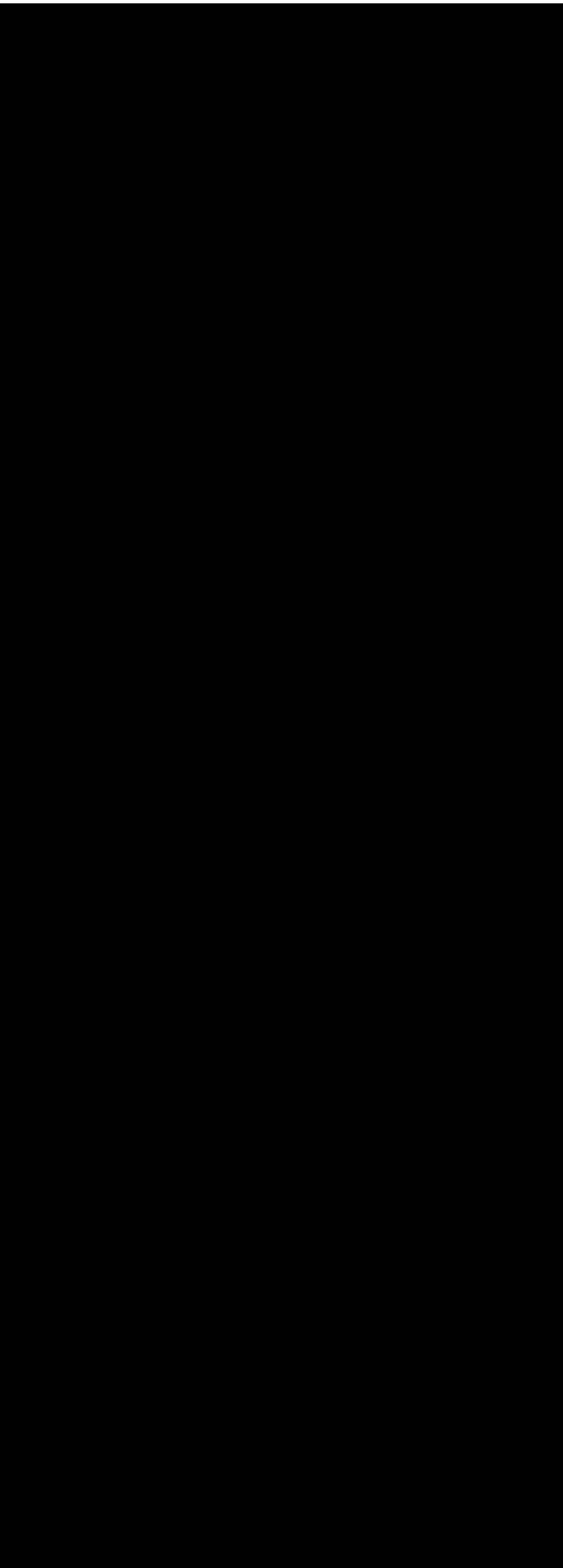
Ordnance Survey County Series and
Ordnance Survey Plan 1:2,500



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



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



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1890 - 1893	2
Lancashire And Furness	1:2,500	1908	3
Lancashire And Furness	1:2,500	1927	4
Ordnance Survey Plan	1:1,250	1949 - 1954	5
Ordnance Survey Plan	1:2,500	1951 - 1955	6
Ordnance Survey Plan	1:1,250	1955 - 1974	7
Additional SIMs	1:1,250	1955 - 1985	8
Ordnance Survey Plan	1:2,500	1960 - 1970	9
Supply of Unpublished Survey Information	1:1,250	1975	10
Ordnance Survey Plan	1:1,250	1977 - 1980	11
Additional SIMs	1:1,250	1984 - 1985	12
Ordnance Survey Plan	1:1,250	1986 - 1988	13
Large-Scale National Grid Data	1:1,250	1993	14
Large-Scale National Grid Data	1:1,250	1993 - 1996	15
Large-Scale National Grid Data	1:1,250	1996	16

Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
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Site Details

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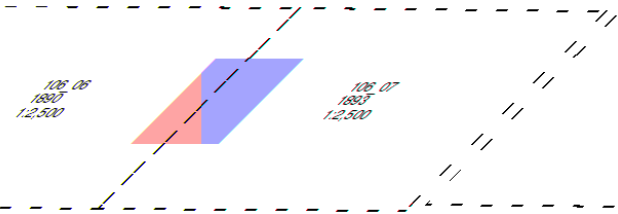
Lancashire And Furness

Published 1890 - 1893

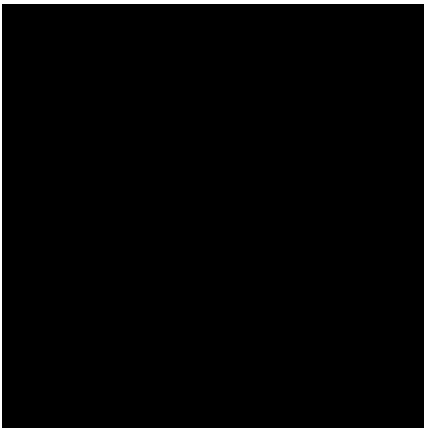
Source map scale - 1:2,500

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

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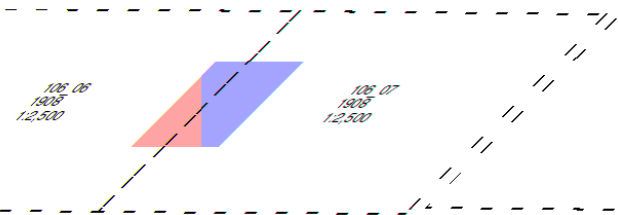
Lancashire And Furness

Published 1908

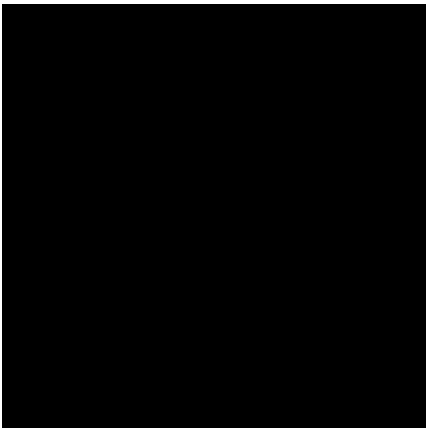
Source map scale - 1:2,500

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.

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Site Details

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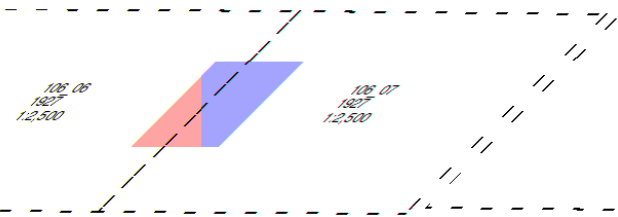
Lancashire And Furness

Published 1927

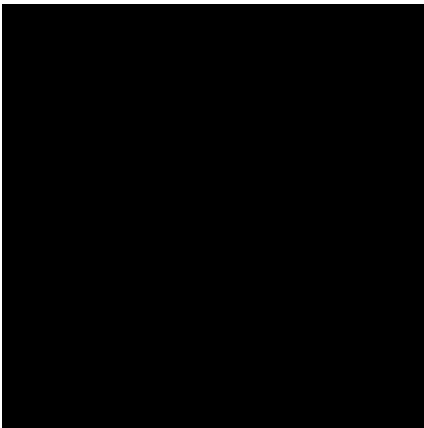
Source map scale - 1:2,500

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

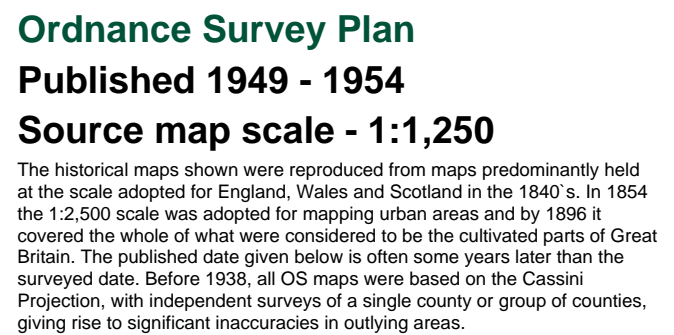


Order Details

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Customer Ref: UNP3220
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Site Details

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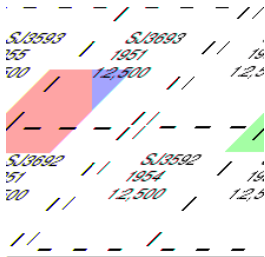
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4
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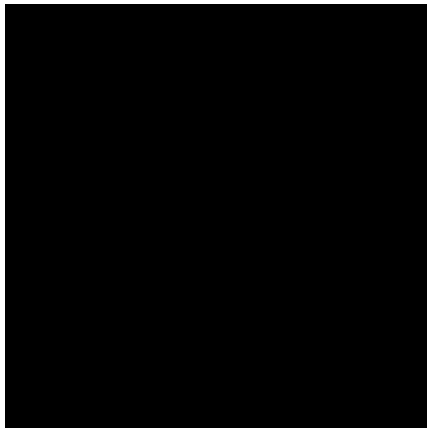
Ordnance Survey Plan
Published 1951 - 1955
Source map scale - 1:2,500

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.

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Historical Map - Segment A13



Order Details
Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



Published 1955 - 1974

Source map scale - 1:1,250

The historical maps shown were reproduced from maps predom-





Order Number: 42580690_1_1
Customer Ref: LNP3220

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL
L6 9TH

1131 2012 25 1131



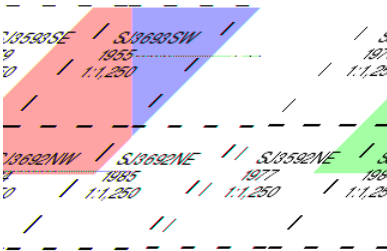
Additional SIMs

Published 1955 - 1985

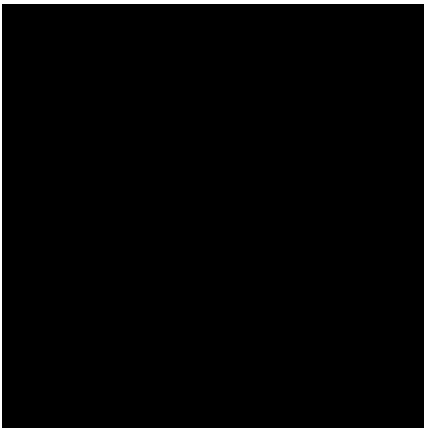
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
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Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



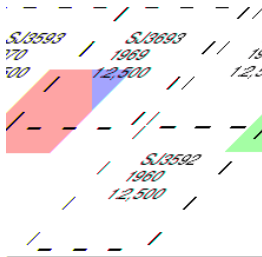
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Ordnance Survey Plan
Published 1960 - 1970
Source map scale - 1:2,500

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: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



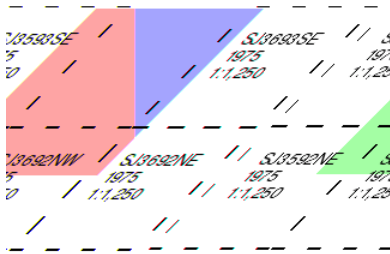
Supply of Unpublished Survey Information

Published 1975

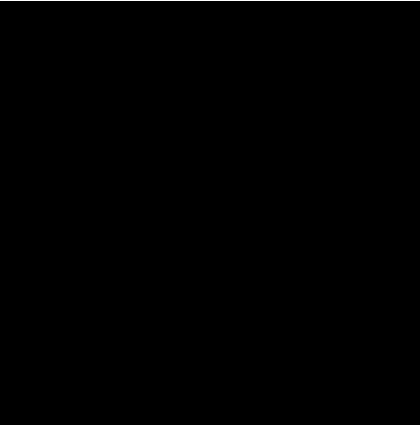
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details

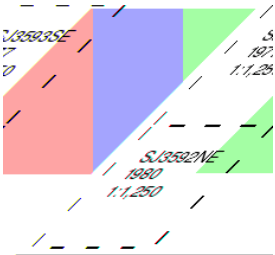
Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



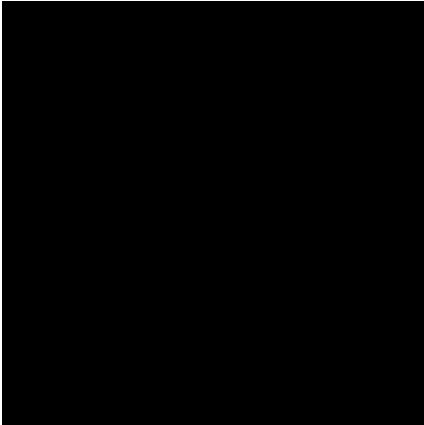
Ordnance Survey Plan
Published 1977 - 1980
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



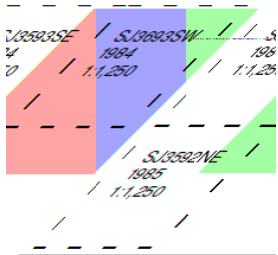
Additional SIMs

Published 1984 - 1985

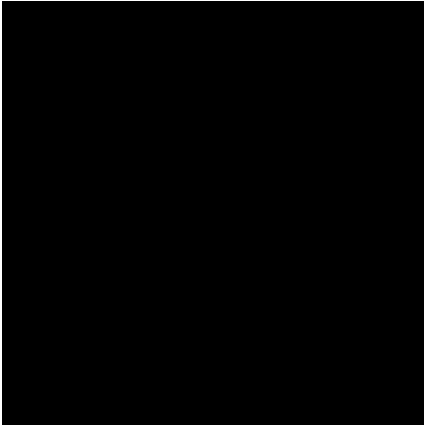
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The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



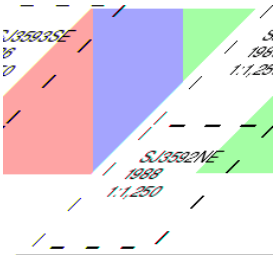
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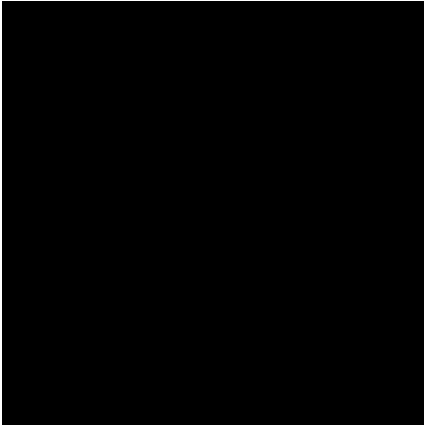
Ordnance Survey Plan
Published 1986 - 1988
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



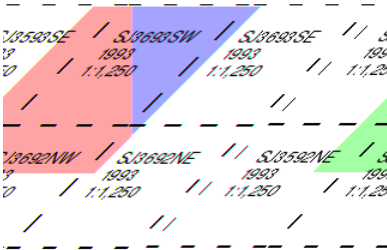
Large-Scale National Grid Data

Published 1993

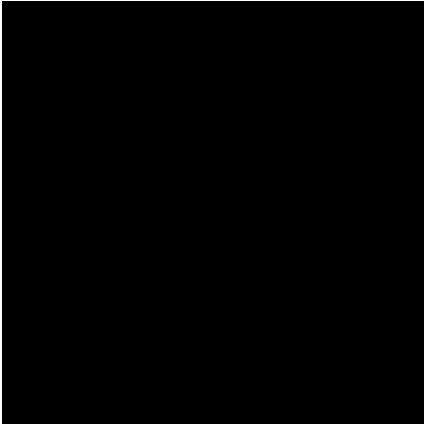
Source map scale - 1:1,250

'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)



Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details

Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



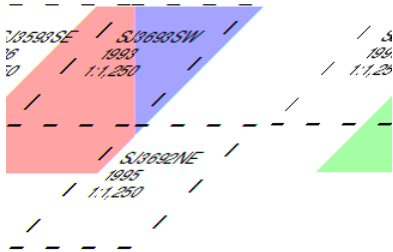
Large-Scale National Grid Data

Published 1993 - 1996

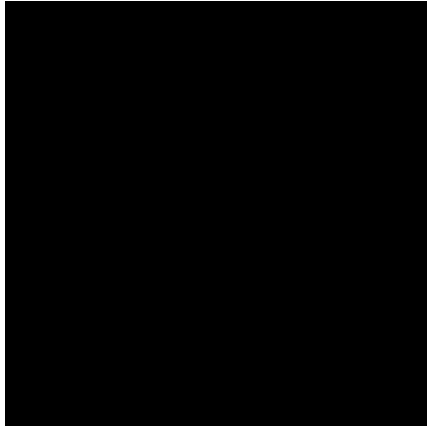
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'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information 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)



Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
Search Buffer (m): 100

Site Details

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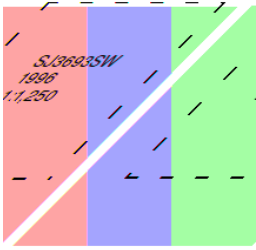
Large-Scale National Grid Data

Published 1996

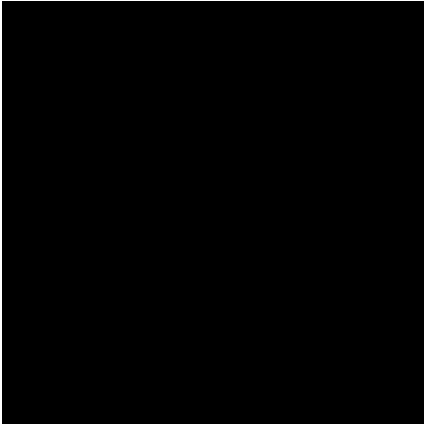
Source map scale - 1:1,250

'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)



Historical Map - Segment A13



Order Details

Order Number: 42580690_1_1
Customer Ref: UNP3220
National Grid Reference: 336210, 393140
Slice: A
Site Area (Ha): 7.27
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Liverpool Football Club Plc, Anfield Road, LIVERPOOL, L4 0TH



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Appendix C Borehole Records



ENCLOSURE A
EXPLORATORY HOLE RECORDS

Key to Exploratory Hole Records

Borehole Logs

Trial Pit Logs

Window Sampler Hole Logs

Dynamic Probe Logs

Discontinuity Survey

Key

BH1 to 12

TP1 to 6

WSDP2 to 5, 9 to 19

DP2 to 5, 9 to 19

A1

Key to Exploratory Hole Records

SAMPLES

Undisturbed

U	Driven tube sample	} nominally 100 mm diameter and full recovery unless otherwise stated
TW	Pushed thin wall tube sample	
P	Pushed piston sample	
L	Liner sample (from Windowless or similar sampler), full recovery unless otherwise stated	
CBR	CBR mould sample	
BLK	Block sample	
CS	Core sample (from rotary core) taken for laboratory testing	

Disturbed

D	Small sample
B	Bulk sample

Other

W	Water sample
G	Gas sample

	Environmental chemistry samples (in more than one container where appropriate)
ES	Soil sample
EW	Water sample

TESTS

SPT S or SPT C	Standard Penetration Test, open shoe (S) or solid cone (C)
----------------	--

The Standard Penetration Test is defined in BS 1377 : Part 9 (1990). The incremental blow counts are given in the Field Records column; each increment is 75 mm unless stated otherwise and any penetration under self weight in mm (SW) is noted. Where the full 300 mm test drive is achieved the total number of blows for the test drive is presented as N = ** in the Test column. Where the test drive blows reach 50 (either in total or for a single increment) the total blow count beyond the seating drive is given (without the N = prefix).

IV	In situ vane test, peak (p) and remoulded (r)
HV	Hand vane test, peak (p) and remoulded (r)
PP	Pocket penetrometer test, strength value
KFH, KRH, KPI	Variable head permeability tests (KFH = falling head test, KRH = rising head test, KPI = packer test), permeability value

Test results provided in Field Records column

DRILLING RECORDS

The mechanical indices (TCR/SCR/RQD & If) are defined in BS 5930 (1999)

TCR	Total Core Recovery, %
SCR	Solid Core Recovery, %
RQD	Rock Quality Designation, %
If	Fracture spacing, mm. Minimum, typical and maximum spacings are presented. The term non-intact (NI) is used where the core is fragmented.

Flush returns, estimated percentage with colour where relevant, are given in the Records column

CRF	Core recovered (length in m) in the following run
AZCL	Assessed zone of core loss

GROUNDWATER

▼	Groundwater strike
▽	Groundwater level after standing period

INSTALLATION

Standpipe/ piezometer Details of standpipe/piezometer installations are given on the Record. Legend column shows installed instrument depths including slotted pipe section or tip depth, response zone filter material type and layers of backfill.

	The types of instrument installed is indicated by a code in the Legend column at the depth of the response zone:
SP	Standpipe
SPIE	Standpipe piezometer
PPIE	Pneumatic piezometer
EPIE	Electronic piezometer







Notes:

Project	NEW ANFIELD - SITE INVESTIGATION PHASE 1
Project No	A2207
Carried out for	Liverpool F.C.

Key

Sheet 1 of 2

Key to Exploratory Hole Records

INSTALLATION LEGENDS		A legend describing the installation is shown in the rightmost column. Legends additional to BS5930 are used to describe the backfill materials as indicated below.					
		Arisings	Concrete	Grout	Bentonite	Sand	Gravel
							
NOTES							
1		Strata legends are in accordance with BS 5930 (1999).					
2		Water level observations of discernible events during the advancing of the exploratory hole are given at the foot of the log and in the Legend column. The term "none observed" is used where no discrete entries are identified although this does not necessarily indicate that the hole has not been advanced below groundwater level. Under certain conditions groundwater cannot be observed, for instance, drilling with water flush or overwater, or boring at a rate much faster than water can make its way into the borehole (ref BS5930 : 1999, Clause 47.2.7). In addition, where appropriate, water levels in the hole at the time of recovering individual samples or carrying out in situ tests and at shift changes are given in the Records column.					
3		Evidence of the occurrence of very coarse particles (cobbles and boulders) is presented on the logs, however, because of their size in relation to the exploratory hole these records may not be fully representative of their size and frequency in the ground mass.					
4		The borehole logs present the results of Standard Penetration Tests recorded in the field without correction or interpretation. However, in certain ground conditions (eg high hydraulic head or where very coarse particles are present) some judgement may be necessary in considering whether the results are representative of in situ mass conditions.					
5		The declination of bedding and joints is given with respect to the normal to the core axis. Thus in a vertical borehole this will be the dip.					
6		The assessment of SCR, RQD and Fracture Spacing excludes artificial fractures					
REFERENCES							
BS 1377 : 1990 : British Standard Methods of test for soils for civil engineering purposes. British Standards Institution							
BS 5930 : 1999 : Code of Practice for site investigations. British Standards Institution							
Notes:		Project NEW ANFIELD - SITE INVESTIGATION PHASE 1				Key Sheet 2 of 2	
		Project No A2207					
		Carried out for Liverpool F.C.					

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 07/01/2003 End 10/01/2003		Equipment, Methods and Remarks Rotary coring, TNW and PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. 50mm gas standpipe installed on completion. Mechanical core information based on TNW and PWF core.		Depth from 0.00m to 38.90m Diameter 121mm Casing Depth 1.60m		Ground Level Coordinates National Grid		+57.69 mOD E 336278.45 N 393307.43					
Samples and Tests						Strata									
Depth		Type & No		Records		Date Casing Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments	
1.20-1.50		SPT C		50 (7,11/27,23)				TOPSOIL with brown sand. (Foreman's description)		(1.20)					
1.20-4.10 m		47 46 14		HPD test pocket				Moderately strong, thinly to medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, closely becoming medium spaced, planar, rough. Occasional black mottling. Rare subrounded fine to medium gravel of predominantly quartz and limestone. (SHERWOOD SANDSTONE)		1.20 +56.49					
4.10-4.29				SPT C 50 (7,18/50 for 35mm)				1.20-2.74 m AZCL.							
4.10-6.20 m		71 68 14		HPD test pocket				3.30-3.80 m brown coarse grained.							
6.20-6.31				SPT C 50 (25/50 for 30mm)		07/01/2003 1800 1.60 dry		4.10-4.70 m AZCL.							
6.20-8.20 m		70 60 33		HPD test pocket		08/01/2003 0800 1.60 dry		4.76-4.90 m brown coarse, grained.							
8.20-8.38				SPT C 50 (11,24/50 for 30mm)				6.20-6.80 m AZCL.							
8.20-10.30 m		60 38 30		HPD test pocket				6.90-7.03 m light grey brown fine to medium grained.							
								8.20-9.03 m AZCL.							
								Stratum continued next sheet							
Depth		TSC ROD		If		Records/Samples		Date Casing Time Water							
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)						Depth sealed (m)		Depth Related Remarks From to (m) 0.00 1.20 Hand dug inspection pit.				Chiselling Depths (m)			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.						Borehole 1 Sheet 1 of 4			
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:33:57															

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 07/01/2003 End 10/01/2003		Equipment, Methods and Remarks			Depth from 0.00m to 38.90m Diameter 121mm Casing Depth 1.60m		Ground Level Coordinates National Grid		+57.69 mOD E 336278.45 N 393307.43	
Samples and Tests							Strata					
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
10.30-12.30 m		100 98 68		Flush: 1.20-20.00 air mist, 100 % HPD test pocket	08/01/2003 1.60	1800 dry	Moderately strong, thinly to medium bedded red brown medium grained SANDSTONE.					
					09/01/2003 1.60	0800 dry	Fractures are subhorizontal, closely becoming medium spaced, planar, rough. Occasional black mottling. Rare subrounded fine to medium gravel of predominantly quartz and limestone. (SHERWOOD SANDSTONE)					
							10.90-11.03 m light grey brown fine to medium grained.					
							12.10-12.17 m light grey brown fine to medium grained. 12.30-12.65 m NI. Recovered as gravel size fragments (HPD test pocket)					
							12.75-12.95 m light brown.					
12.30-15.20 m		100 86 66										
							14.80-14.95 m light brown.					
15.20-15.38				SPT C 50 (8,17/50 for 30mm)								
15.20-17.10 m		100 100 28		HPD test pocket	09/01/2003 1.60	1800 dry						
					10/01/2003 1.60	0800 dry						
							17.80-17.85 m NI.					
17.10-20.00 m		100 99 79										
							Stratum continued next sheet					
Depth		TCR ROD	If	Records/Samples	Date Casing	Time Water						
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project Project No. Carried out for		NEW ANFIELD - SITE INVESTIGATION PHASE 1 A2207 Liverpool F.C.		Borehole 1 Sheet 2 of 4			
Scale 1:50					(c) MESG HBIII (281), 16/06/2003 13:34:03		AGS					

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH			Start 07/01/2003 End 10/01/2003			Equipment, Methods and Remarks			Depth from 0.00m to 38.90m Diameter 121mm Casing Depth 1.60m			Ground Level Coordinates National Grid			+57.69 mOD E 336278.45 N 393307.43		
Samples and Tests									Strata								
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description				Depth, Level/ (Thickness)		Legend		Backfill/ Instruments		
20.00-20.10				SPT C 50 (25/50 for 20mm)			Moderately strong, thinly to medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, closely becoming medium spaced, planar, rough. Occasional black mottling. Rare subrounded fine to medium gravel of predominantly quartz and limestone. (SHERWOOD SANDSTONE) 21.02-21.20 m light grey brown. Occasional carbonaceous laminae. 23.45-23.75 m coarse grained, locally NI. 25.00-25.15 m light brown. 25.70-25.93 m light brown. 28.00-28.10 m NI. 28.35-28.38 m NI, weak. Stratum continued next sheet				(37.70)						
20.00-23.05 m		100 98 88															
23.05-26.10 m		100 95 65	NI 220 610														
26.10-26.21				SPT C 50 (25/50 for 30mm)													
26.10-29.00 m		100 91 63															
				Flush: 20.00-38.90 air mist, 100 %													
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water											
Groundwater Entries					Depth sealed (m)		Depth Related Remarks				Chiselling Depths (m)						
No. Struck Post strike behaviour							From to (m)										
None observed (see Key Sheet)																	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.							Project NEW ANFIELD - SITE INVESTIGATION PHASE 1					Borehole					
Scale 1:50							Project No. A2207					1					
(c) MESG HBIII (281), 16/06/2003 13:34:11							Carried out for Liverpool F.C.					Sheet 3 of 4					

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH			Start 07/01/2003 End 10/01/2003			Equipment, Methods and Remarks			Depth from 0.00m to 38.90m Diameter 121mm Casing Depth 1.60m			Ground Level Coordinates National Grid			+57.69 mOD E 336278.45 N 393307.43								
Samples and Tests									Strata														
Depth			TCR SCR ROD	If	Records/Samples		Date Casing	Time Water	Description				Depth, Level/ (Thickness)		Legend		Backfill/ Instruments						
29.00-32.00 m			98 93 71		SPT C 50 (8,17/50)				Moderately strong, thinly to medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, closely becoming medium spaced, planar, rough. Occasional black mottling. Rare subrounded fine to medium gravel of predominantly quartz and limestone. (SHERWOOD SANDSTONE) 30.33-33.10 m fine to medium grained. 32.85-33.30m, subvertical fracture, planar, rough, very open.														
32.00-32.23																							
32.00-33.10 m			100 65 45																				
33.10-35.90 m			96 89 59	NI 220 610					34.26-34.31 m NI, weak.														
35.90-38.90 m			100 91 73						36.70-37.00 m NI.														
38.90-39.00					SPT C 50 (25/50 for 25mm)		10/01/2003 1.60	1800 dry	38.24-38.32 m light brown.														
									EXPLORATORY HOLE ENDS AT 38.90 m									38.90 +18.79				SP	
Depth			TCR SCR ROD	If	Records/Samples		Date Casing	Time Water															
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)									Depth sealed (m)			Depth Related Remarks From to (m)						Chiselling Depths (m)					
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.									Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.									Borehole 1 Sheet 4 of 4					
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:34:17																							

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 17/12/2002 End 20/12/2002		Equipment, Methods and Remarks Rotary coring, TNW and PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. 50mm gas standpipe installed on completion. Mechanical core information based on TNW and PWF core.		Depth from 0.90m to 38.35m Diameter 121mm Casing Depth 5.00m		Ground Level +48.37 mOD Coordinates E 336558.74 National Grid N 393295.74 Chainage											
Samples and Tests					Strata														
Depth		Type & No		Records		Date Casing		Time Water		Description		Depth, Level (Thickness)		Legend		Backfill/ Instruments			
0.90-1.28		SPT C		51 (5.7/11,21,19)						Tarmac, stone fill, soil, red sand. (Foreman's description) (MADE GROUND)		(0.90)							
0.90-3.10 m		45 9 0		HPD test pocket						Moderately strong thinly becoming medium bedded, red brown medium grained SANDSTONE. Predominantly NI. Fractures are closely to medium spaced, planar, rough. (SHERWOOD SANDSTONE) Below 11.00m, moderately strong to strong. Occasional subrounded to rounded gravel of predominantly quartz.		0.90 +47.47							
3.10-3.20				SPT C 50 (25/50 for 25mm)		17/12/2002 1800 0.90 dry				3.10-4.00 m AZCL.									
3.10-5.00 m		53 0 0		HPD test pocket															
5.00-5.12				SPT C 50 (25/50 for 40mm)						5.00-5.50 m AZCL.									
5.00-7.00 m		75 60 12		NI 80 160 HPD test pocket						6.00-6.45 m NI. Recovered as gravel sized fragments (HPD test pocket)									
7.00-7.10				SPT C 50 (25/50 for 25mm)						7.00-7.35 m AZCL.									
7.00-8.80 m		81 67 32		HPD test pocket						7.85-9.95 m medium to coarse grained.									
8.80-8.89				SPT C 50 (25/50 for 15mm)		18/12/2002 1800 5.00 dry 19/12/2002 0800 5.00 dry				8.80-9.25 m AZCL.									
Stratum continued next sheet																			
Depth		TSC ROD		If		Records/Samples		Date Casing		Time Water									
Groundwater Entries No. Struck Post strike behaviour 1 29.50 No rise												Depth sealed (m) -		Depth Related Remarks From to (m) 0.00 0.90 Hand dug inspection pit.				Chiselling Depths (m)	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.												Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.				Borehole 2 Sheet 1 of 4			
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:35:52																			

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 17/12/2002 End 20/12/2002		Equipment, Methods and Remarks			Depth from 0.90m to 38.35m Diameter 121mm Casing Depth 5.00m		Ground Level +48.37 mOD Coordinates E 336558.74 National Grid N 393295.74 Chainage		
Samples and Tests						Strata					
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
8.80-11.20 m		77 67 32		SPT C 50 (25,-/50 for 45mm)			Moderately strong thinly becoming medium bedded, red brown medium grained SANDSTONE. Fractures are closely to medium spaced, planar, rough. (SHERWOOD SANDSTONE) Below 11.00m, moderately strong to strong. Occasional subrounded to rounded gravel of predominantly quartz.				
11.20-11.40											
11.20-13.90 m		97 84 81		HPD test pocket			11.00-11.28 m grey fine to medium grained. 1 No. subvertical fracture, planar, rough, tight.				
13.90-15.70 m		28 8 0	NI 170 500								
15.70-15.87				SPT C 50 (11,15/50 for 20mm)			13.90-15.20 m AZCL.				
15.70-18.30 m		100 78 56									
15.70-15.87				SPT C 50 (11,15/50 for 20mm)			15.70-15.92 m NI. Recovered as fine to medium gravel (SPT effect). 15.92-16.11 m light grey brown, locally very weak. Reduced to clayey fine to medium sand.				
15.70-18.30 m		100 78 56									
15.70-18.30 m				SPT C 50 (11,15/50 for 20mm)			17.83-17.94 m NI.				
15.70-18.30 m											
18.30-21.00 m		100 97 77	NI 260 480	Flush: 0.00-38.35 air mist, 100 %					(37.45)		
18.30-21.00 m							Stratum continued next sheet				
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water					
Groundwater Entries					Depth sealed (m)			Depth Related Remarks		Chiselling Depths (m)	
No.	Struck (m)	Post strike behaviour						From to (m)			
1	29.50	No rise									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project			NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole	
Scale 1:50					Project No.			A2207		2	
(c) MESG HBIII (281), 16/06/2003 13:35:58					Carried out for			Liverpool F.C.		Sheet 2 of 4	

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 17/12/2002 End 20/12/2002		Equipment, Methods and Remarks			Depth from 0.90m to 38.35m Diameter 121mm Casing Depth 5.00m		Ground Level +48.37 mOD Coordinates E 336558.74 National Grid N 393295.74 Chainage		
Samples and Tests						Strata					
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
21.00-21.13				SPT C 50 (25/50 for 55mm)	19/12/2002 5.00	1800 dry	Moderately strong thinly becoming medium bedded, red brown medium grained SANDSTONE. 18-20.25 m NI. [] Fractures are closely to medium spaced, planar, rough. 20.58-20.62 m NI. [] (SHERWOOD SANDSTONE) Very weak. Reduced to gravelly sand. 20.80-20.95 m brown layering. [] Below 11.00m, moderately strong to strong. Occasional subrounded to rounded gravel of predominantly quartz.				
21.00-23.35 m		100 90 79			20/12/2002 5.00	0800 dry	22.10-22.30 m light brown. [] 23.14-23.18 m NI, locally weak. [] 24.60-24.75 m brown, micaceous. [] 27.33-27.46 m light brown, fine grained. [] 28.60-28.90 m 2 No. 70-80 deg fracture, closely spaced, planar, rough, tight, clean. [] 29.40-29.62 m frequent subrounded to rounded gravel of various lithologies. 29.45-29.62m, NI. []				
23.35-26.40 m		100 98 66	NI 260 480				Stratum continued next sheet				
26.40-29.40 m		100 97 69									
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water					
Groundwater Entries				Depth sealed (m)		Depth Related Remarks		Chiselling Depths (m)			
No. Struck (m)		Post strike behaviour				From to (m)					
1 29.50		No rise									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole			
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:36:05						Project No. A2207 Carried out for Liverpool F.C.		2 Sheet 3 of 4			

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH			Start 17/12/2002 End 20/12/2002			Equipment, Methods and Remarks			Depth from 0.90m to 38.35m Diameter 121mm Casing Depth 5.00m			Ground Level +48.37 mOD Coordinates E 336558.74 National Grid N 393295.74 Chainage		
Samples and Tests						Strata								
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description			Depth, Level/ (Thickness)		Legend	Backfill/ Instruments	
29.40-32.35 m		100 92 58					Moderately strong thinly becoming medium bedded, red brown medium grained SANDSTONE. Fractures are closely to medium spaced, planar, rough. (SHERWOOD SANDSTONE) Below 11.00m, moderately strong to strong. Occasional subrounded to rounded gravel of predominantly quartz. 30.77-30.94 m weak light greenish grey marl. 30.87-30.94m, frequent extremely closely spaced carbonaceous laminae. 31.40-31.47 m 30 deg fracture, planar, rough, tight. 32.61-32.70 m subvertical fracture, planar, rough, tight.							
32.35-35.35 m		100 97 84	NI 260 480											
35.35-38.35 m		100 96 88					36.39-36.48 m light brown. 36.41-36.47m, subvertical fracture, planar, rough, tight. 36.64-36.73 m light brown. 36.90-36.96 m light brown. 37.20-37.24 m NI. 37.35-37.38 m NI, locally weak.							
					20/12/2002 5.00	1800 29.50	EXPLORATORY HOLE ENDS AT 38.35 m			38.35 +10.02			SP	
Depth		TCR ROD	If	Records/Samples	Date Casing	Time Water								
Groundwater Entries						Depth Related Remarks			Chiselling					
No.	Struck (m)	Post strike behaviour			Depth sealed (m)		From to (m)			Depths (m)				
1	29.50	No rise			-									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1			Borehole					
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:36:12						Project No. A2207 Carried out for Liverpool F.C.			2 Sheet 4 of 4					

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 03/12/2002 End 04/12/2002		Equipment, Methods and Remarks Rotary coring PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. Borehole grouted up on completion.		Depth from 0.00m to 22.00m Diameter 121mm Casing Depth 1.50m		Ground Level Coordinates National Grid +49.00 mOD E 336392.14 N 393443.00								
Samples and Tests					Strata											
Depth		Type & No		Records		Date Casing Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments		
0.70-2.20 m		98 63 0 NI 40 60						Brown TOPSOIL. (Foreman's description)		(0.70)						
2.20-4.05 m		100 77 52						Moderately weak to moderately strong, very thinly bedded red brown medium grained SANDSTONE, locally micaceous. Fractures: very closely spaced, subhorizontal, planar, rough, clean. (SHERWOOD SANDSTONE) 1.25-1.29 m Very weak. Recovered as sandy gravel. 1.51-1.60 m Very weak to weak. NI, sandy matrix. 1.67-1.71 m Very weak to weak. NI, sandy matrix. 1.94-2.03 m NI, weak. 2.20-2.34 m NI, locally weak with sandy matrix.		0.70 +48.30 (1.75)						
4.05-6.08 m		100 95 92 NI 180 430						Moderately strong medium, locally thickly bedded red brown medium grained SANDSTONE, locally micaceous. Fractures: medium, locally closely spaced, subhorizontal, planar, rough, clean. Rare black mottling on bedding planes. Rare to occasional subangular to rounded fine to medium gravel of predominantly quartz. (SHERWOOD SANDSTONE) 3.01-3.05 m NI, clayey. 3.12-3.25 m 70-80 deg, planar, rough, tight fracture. 3.25-3.30 m Weak, NI. 3.30-3.58 m Fine grained. Occasional very closely spaced thin beds of light greenish brown sandstone. 5.22-5.35 m 60 deg, planar, rough, open fracture. Occasional black speckling. 5.35-5.40 m Locally weak, NI.		2.45 +46.55						
6.08-6.25				SPT C 50 (12,13/50 for 15mm)				6.08-6.14 m NI.								
6.08-9.10 m		100 96 79 NI 350 640						6.63-6.68 m NI. 7.63-7.78 m Light greyish brown fine to medium grained sandstone. Occasional very closely spaced laminae. 8.90-8.93 m 20-30 deg, planar, rough, open fracture. Occasional black mottling.								
					Stratum continued next sheet											
Depth		TSC ROD		If		Records/Samples		Date Casing Time Water								
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks From to (m) 0.00 0.70 Inspection pit.					Chiselling Depths (m)				
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.					Borehole 3 Sheet 1 of 3						
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:36:38																

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 03/12/2002 End 04/12/2002		Equipment, Methods and Remarks		Depth from 0.00m to 22.00m Diameter 121mm Casing Depth 1.50m		Ground Level Coordinates National Grid		+49.00 mOD E 336392.14 N 393443.00	
Samples and Tests						Strata					
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
9.10-11.95 m				Flush: 0.00-22.00 air mist, 100 %			Moderately strong medium, locally thickly bedded red brown medium grained SANDSTONE, locally micaceous. Fractures: medium, locally closely spaced, subhorizontal, planar, rough, clean. Rare black mottling on bedding planes. Rare to occasional subangular to rounded fine to medium gravel of predominantly quartz. (SHERWOOD SANDSTONE)				
11.95-12.19				SPT C 50 (25/30,20 for 10mm)			10.75-10.84 m NI. 10.84-10.93 m 2 No. very closely spaced subvertical fractures, planar, rough, open. 10.93-10.96 m NI. 10.96-11.22 m Subvertical fracture, undulating, rough, open, locally NI. 11.51-11.57 m 45 deg fracture, planar, rough, very open. Slight clay smearing. 11.57-11.63 m NI, locally weak. 12.46-12.51 m NI, frequent rounded gravel of quartz. 12.85-13.00 m Subvertical fracture, planar, rough, open. Heavy dark grey discolouration. 13.00-13.13 m NI, locally weak. 13.13-13.70 m Subvertical fracture, planar, rough, open. 13.88-14.00 m Interlaminated with orange brown and grey sandstone. 14.00-14.05 m NI, weak. 14.23-14.25 m NI.		(19.55)		
11.95-14.95 m			NI 110 370		03/12/2002 1.50	1800 dry					
14.95-17.00 m					04/12/2002 1.50	dry					
17.00-17.07				SPT C 50 (25 for 30mm/50 for 40mm)			15.85-15.91 m Orange brown. 16.36-16.65 m Subvertical fracture, planar, rough, very open. 16.65-16.80 m Occasional very closely spaced light brown laminations. 17.00-17.23 m AZCL.				
17.00-20.00 m			NI 170 410				19.20-19.40 m Light brown fine to medium grained. 19.45-19.52 m 2 No. very closely spaced 30 deg fracture, planar, rough, up to 50mm				
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Stratum continued next sheet				
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)						Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole 3 Sheet 2 of 3			
Project No. A2207 Carried out for Liverpool F.C.											
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:36:45											

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH			Start 03/12/2002 End 04/12/2002			Equipment, Methods and Remarks			Depth from 0.00m to 22.00m Diameter 121mm Casing Depth 1.50m			Ground Level Coordinates National Grid			+49.00 mOD E 336392.14 N 393443.00		
Samples and Tests									Strata								
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description						Depth, Level/ (Thickness)		Legend	Backfill/ Instruments	
20.00-22.00 m		90 85 70	NI 170 410		04/12/2002 1.50	1800 dry	Moderately strong medium, locally thickly bedded red brown medium grained SANDSTONE locally micaceous. Fractures: medium, locally closely spaced, subhorizontal, planar, rough, clean. Rare black mottling on bedding planes. Rare to occasional subangular to rounded fine to medium gravel of predominantly quartz. (SHERWOOD SANDSTONE) 20.27-20.33 m NI. [] 20.54-20.63 m [] Light brown. 21.40-21.54 m [] Light brown, locally NI. EXPLORATORY HOLE ENDS AT 22.00 m						22.00 +27.00				
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water											
Groundwater Entries					Depth sealed (m)		Depth Related Remarks						Chiselling Depths (m)				
No. Struck Post strike behaviour							From to (m)										
None observed (see Key Sheet)																	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.							Project NEW ANFIELD - SITE INVESTIGATION PHASE 1						Borehole				
Scale 1:50							Project No. A2207						3				
(c) MESG HBIII (281), 16/06/2003 13:36:53							Carried out for Liverpool F.C.						Sheet 3 of 3				

Φ [illegible]

Borehole Log



Soil Mechanics

Drilled by IM/LT Logged by MJS Checked by PH		Start 10/12/2002 End 11/12/2002		Equipment, Methods and Remarks Rotary coring PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. 50mm gas standpipe installed on completion.		Depth from 0.00m to 23.85m Diameter 121mm Casing Depth 1.50m		Ground Level +53.80 mOD Coordinates E 336449.87 National Grid N 393170.21	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
1.50-1.72	SPT C	50 (8,17/50 for 70mm)			Tarmac, hardcore brick, red sand. (Foreman's description) (MADE GROUND)		(1.50)		
1.50-4.40 m	88 70 38				Moderately strong, thinly to medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, closely to medium spaced, planar, rough. Rare subrounded to rounded fine to medium gravel of predominantly quartz. (SHERWOOD SANDSTONE)		1.50 +52.30		
4.40-4.58	NI 120 460	SPT C 50 (3,22/50 for 25mm)			1.50-1.85 m AZCL. 1.85-2.35 m occasional orange brown banding.				
4.40-7.10 m	93 59 49				3.00-3.08 m light brown. 3.03-3.08m, NI, weak. 3.44-3.49 m NI. 3.63-3.68 m NI. 3.80-3.92 m NI.				
7.10-7.27		SPT C 50 (5,20/50 for 20mm)			4.22-4.35 m 70-80 deg fracture, rough, open. 4.40-4.60 m AZCL. 4.80-5.20 m subvertical fracture, planar, rough, very open, clean.				
7.10-10.15 m	100 89 70				6.66-6.73 m NI, weak. 7.30-7.80 m occasional to frequent subrounded to rounded gravel of quartz, locally coarse grained.				
					9.15-9.20 m light brown.				
					Stratum continued next sheet				
Depth	SCR ROD	If	Records/Samples	Date Casing	Time Water				
Groundwater Entries					Depth Related Remarks		Chiselling Depths (m)		
No. Struck		Post strike behaviour		Depth sealed (m)		From to (m)			
None observed (see Key Sheet)						0.00 1.50 Hand dug inspection pit.			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole <div style="text-align: center;">4</div> Sheet 1 of 3		
Scale 1:50 <small>(c) MESG HBIII (281), 16/06/2003 13:37:21</small>									

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 10/12/2002 End 11/12/2002		Equipment, Methods and Remarks			Depth from 0.00m to 23.85m Diameter 121mm Casing Depth 1.50m		Ground Level +53.80 mOD Coordinates E 336449.87 National Grid N 393170.21					
Samples and Tests						Strata								
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments			
10.15-13.10 m		95 79 63	NI 300 500	Flush: 0.00-23.85 air mist, 100 %			Moderately strong, thinly to medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, closely to medium spaced, planar, rough. Rare subrounded to rounded fine to medium gravel of predominantly quartz. (SHERWOOD SANDSTONE) 10.03-10.06 m very weak. Recovered as fine to medium sand. 10.33-10.42m, NI. 10.54-10.64m, subvertical fracture, planar, rough, open. 10.65-10.91 m orange brown.		(22.35)					
13.10-13.28				SPT C 50 (4,14/50 for 25mm)			11.73-11.87 m NI.							
13.10-16.15 m		94 90 54					12.16-12.20 m NI, weak. 13.62-13.76 m light brown. 13.68-13.76m, 45 deg fracture, planar, rough, tight. 13.86-14.04 m 70-80 deg fracture, planar, rough, tight.							
16.15-19.15 m		90 86 27	NI 90 170				16.74-17.60 m fine to medium grained. 17.60-18.33 m brown laminated fine to medium grained, micaceous. Occasional black carbonaceous material.							
						Stratum continued next sheet								
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water								
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)						Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)				
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project Project No. A2207 Carried out for Liverpool F.C.		NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole 4 Sheet 2 of 3				
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:37:27														

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 10/12/2002 End 11/12/2002		Equipment, Methods and Remarks			Depth from 0.00m to 23.85m Diameter 121mm Casing Depth 1.50m		Ground Level +53.80 mOD Coordinates E 336449.87 National Grid N 393170.21		
Samples and Tests						Strata					
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
19.15-22.15 m		93 69 43					Moderately strong, thinly to medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, closely to medium spaced, planar, rough. Rare subrounded to rounded fine to medium gravel of predominantly quartz. (SHERWOOD SANDSTONE) <div>21.38-21.42 m NI 21.43-21.54 m light brown. 21.48-21.51m, NI.</div>				
22.15-23.85 m		100 92 50									
23.85-24.02				SPT C 50 (7,18/50 for 15mm)			EXPLORARY HOLE ENDS AT 23.85 m		23.85 +29.95		SP
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water					
Groundwater Entries						Depth Related Remarks		Chiselling			
No. Struck (m)		Post strike behaviour		Depth sealed (m)		From to (m)		Depths (m)			
None observed (see Key Sheet)											
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole			
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:37:34						Project No. A2207 Carried out for Liverpool F.C.		4 Sheet 3 of 3			

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks Rotary coring PWf size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. Borehole grouted up on completion.		Depth from 0.00m to 12.70m Diameter 121mm Casing Depth 1.50m		Ground Level Coordinates National Grid		+53.19 mOD E 336322.26 N 393379.64					
Samples and Tests						Strata									
Depth		Type & No		Records		Date Casing Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments	
0.50-0.79		SPT S		60 (5,7/10,50 for 60mm)				TOPSOIL over brown clay. (Foreman's description)		(0.50)					
0.70-2.20 m		100 50 0						Moderately weak to moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures: very closely spaced, subhorizontal, planar, rough, clean. (SHERWOOD SANDSTONE)		0.50 +52.69					
2.20-2.29		NI 40 70		SPT C 50 (25 for 30mm/50 for 60mm)				0.70-1.03 m Recovered as sandy angular to subangular gravel. 1.24-1.34 m Weak. Reduced to sandy gravel. 1.38-1.48 m Weak. NI, clayey matrix. 1.48-1.78 m Weak to moderately weak. Numerous subhorizontal fractures. 2.20-2.94 m AZCL.		(2.70)					
2.20-5.20 m		73 67 57						2.94-2.97 m 1 No. subrounded cobble of quartz.		3.20 +49.99					
5.20-5.36				SPT C 50 (15,10 for 25mm/ 50 for 60mm)				Moderately strong medium bedded, locally closely bedded red brown medium grained SANDSTONE. Fractures: closely to medium spaced, subhorizontal, planar, rough. Rare to occasional black mottling. Occasional subrounded to rounded fine to medium gravel of quartz and chert. (SHERWOOD SANDSTONE)							
5.20-8.20 m		98 93 85		Flush: 0.00-12.70 air mist, 100 %				3.87-3.93 m NI. 3.93-3.96 m Light brown. 4.83-4.98 m Light brown, locally weak.							
8.20-11.20 m		20 200 600						6.92-7.00 m Subvertical fracture, planar, rough, tight. 7.69-7.74 m 30-40 deg fracture, planar, rough, open. Heavy black staining.		(9.50)					
Depth		TCR ROD		If		Records/Samples		Date Casing Time Water							
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)						Depth sealed (m)		Depth Related Remarks From to (m) 0.00 0.50 Inspection pit.				Chiselling Depths (m)			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.						Borehole 5 Sheet 1 of 2			
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:37:53															

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH			Start 09/12/2002 End 09/12/2002			Equipment, Methods and Remarks			Depth from 0.00m to 12.70m Diameter 121mm Casing Depth 1.50m			Ground Level +53.19 mOD Coordinates E 336322.26 National Grid N 393379.64			
Samples and Tests							Strata								
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description					Depth, Level/ (Thickness)		Legend	Backfill/ Instruments
11.20-11.37		20 200 600	SPT	C 50 (8,17 for 60mm/50 for 35mm)	09/12/2002 1.50	dry	Moderately strong medium bedded, locally closely bedded red brown medium grained SANDSTONE. Fractures: closely to medium spaced, subhorizontal, planar, rough. Rare to occasional black mottling. Occasional subrounded to rounded fine to medium gravel of quartz and chert. (SHERWOOD SANDSTONE) 10.20-10.50 m Light brown frequent very closely spaced coarse grained bands (5mm thick). Frequent subrounded fine to medium gravel.					12.70	+40.49		
11.20-12.70 m															
12.70-12.86															
EXPLORARY HOLE ENDS AT 12.70 m															
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water									
Groundwater Entries No. Struck Post strike behaviour (m)					Depth sealed (m)		Depth Related Remarks From to (m)					Chiselling Depths (m)			
None observed (see Key Sheet)															
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.							Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.					Borehole 5 Sheet 2 of 2			
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:38:00															

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks Rotary coring PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. 50mm gas standpipe installed on completion.		Depth from 0.00m to 13.50m Diameter 121mm Casing Depth 1.50m		Ground Level Coordinates National Grid		+50.76 mOD E 336468.44 N 393359.96					
Samples and Tests						Strata									
Depth		Type & No		Records		Date Casing Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments	
1.50-1.73		SPT S		50 (11,13/35,15 for 5mm)				TOPSOIL over black soil. (Foreman's description)		(1.50)					
1.50-3.50 m		63 26 6 NI 40 110						Moderately weak to moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures: very closely spaced, subhorizontal, planar, rough, clean. (SHERWOOD SANDSTONE)		1.50 +49.26					
3.50-3.68				SPT C 50 (5,16/50 for 30mm)				2.52-2.85 m NI, locally weak with sand matrix. Rare subrounded fine gravel of quartz and chert. 2.92-3.10 m NI, locally weak with occasional rounded fine to medium gravel of quartz and quartzite. 3.27-3.35 m NI.		(2.10)					
3.50-5.50 m		97 89 46 NI 70 320						Moderately strong, thinly to medium bedded red brown medium, locally coarse grained SANDSTONE. Fractures: closely to medium spaced, subhorizontal, planar, rough. Rare black mottling. Occasional subangular to rounded fine to medium gravel of quartz, quartzite and chert. (SHERWOOD SANDSTONE)		3.60 +47.16					
5.00				KFH k=4.1E-7 m/s											
5.50-5.70				SPT C 50 (7,19/50 for 50mm)											
5.50-7.50 m		98 93 66 NI 200 700		Flush: 0.00-13.50 air mist, 100 %				6.85-7.05 m Locally strong light brown. 7.36-7.48 m Orange brown.		(9.90)				SP	
7.50-9.50 m		100 95 88													
Stratum continued next sheet															
Depth		TCR ROD		If		Records/Samples		Date Casing Time Water							
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)						Depth sealed (m)		Depth Related Remarks From to (m) 0.00 1.20 Inspection pit.				Chiselling Depths (m)			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.				Borehole 6 Sheet 1 of 2					
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:38:16															

Borehole Log



Soil Mechanics

Drilled by IM/LT Logged by MJS Checked by PH		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks			Depth from 0.00m to 13.50m Diameter 121mm Casing Depth 1.50m		Ground Level +50.76 mOD Coordinates E 336468.44 National Grid N 393359.96		
Samples and Tests						Strata					
Depth	TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
9.50-11.50 m	100 100 63					Moderately strong, thinly to medium bedded red brown medium, locally coarse grained SANDSTONE. Fractures: closely to medium spaced, subhorizontal, planar, rough. Rare black mottling. Occasional subangular to rounded fine to medium gravel of quartz, quartzite and chert. (SHERWOOD SANDSTONE)					
11.50-11.67		NI 150 420	SPT C 50 (8,13/50 for 20mm)			10.10-10.13 m NI. <input type="checkbox"/> Recovered as subrounded fine to coarse gravel of quartz and limestone. 11.50-11.57 m NI. <input type="checkbox"/> 11.74-11.80 m NI. <input type="checkbox"/> Occasional subrounded to rounded fine to medium gravel of various lithologies. 11.95-12.95 m Fine to medium grained. 12.85-12.95 m Very closely spaced green grey banding, up to 10mm thick. 12.95-13.50 m 10mm clay band:					
11.50-13.50 m	100 91 59			09/12/2002 1.50	dry	EXPLORATORY HOLE ENDS AT 13.50 m		13.50	+37.26		
Depth	TCR SCR ROD	If	Records/Samples	Date Casing	Time Water						
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)						Depth Related Remarks From to (m)		Chiselling Depths (m)			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole 6 Sheet 2 of 2			
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:38:23											

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 11/12/2002 End 11/12/2002		Equipment, Methods and Remarks Rotary coring PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. Borehole grouted up on completion.		Depth from 0.00m to 12.95m Diameter 121mm Casing Depth 1.50m		Ground Level Coordinates National Grid +51.28 mOD E 336512.13 N 393218.37	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
0.80-1.01	SPT C	50 (17,8/50 for 55mm)			Tarmac, hardcore and red sand. (Foreman's description) (MADE GROUND)		0.80 +50.48		
0.80-2.30 m	93 59 0				Moderately weak to moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, very closely spaced, planar, rough, clean. (SHERWOOD SANDSTONE)		(2.10)		
2.30-4.50 m	100 80 35				Moderately strong, locally strong medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, closely to medium spaced, planar, rough, clean. Rare subangular to subrounded gravel of quartz. (SHERWOOD SANDSTONE)		2.90 +48.38		
4.51-4.68		SPT C 50 (7,18/50 for 20mm)			4.64-4.73 m NI.				
4.50-7.35 m	100 88 70				5.39-5.50 m 70 deg fracture, planar, rough, tight.				
7.35-7.45		Flush: 0.00-12.95 air mist, 100 %			6.90-7.05 m light brown.				
7.35-8.80 m	100 88 83	SPT C 50 (24/50 for 25mm)			7.30-7.45 m light grey brown, micaceous.		(10.05)		
					9.04-9.12 m light brown. 9.04-9.06m, clay band.				
					Stratum continued next sheet				
Depth	SCR ROD	If	Records/Samples	Date Casing	Time Water				
Groundwater Entries					Depth Related Remarks		Chiselling Depths (m)		
No.	Struck (m)	Post strike behaviour	Depth sealed (m)			From 0.00 to (m) 0.80 Hand dug inspection pit.			
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole 7 Sheet 1 of 2		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:38:39									

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 11/12/2002 End 11/12/2002		Equipment, Methods and Remarks			Depth from 0.00m to 12.95m Diameter 121mm Casing Depth 1.50m		Ground Level +51.28 mOD Coordinates E 336512.13 National Grid N 393218.37		
Samples and Tests						Strata					
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
8.80-11.45 m		98 95 52					Moderately strong, locally strong medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, closely to medium spaced, planar, rough, clean. Rare subangular to subrounded gravel of quartz. (SHERWOOD SANDSTONE) 10.46-10.48 m light brown. 10.55-10.61 m 45 deg fracture, planar, rough, tight. 10.95-12.22 m locally coarse grained. 12.12-12.22m, 70 deg fracture, planar, rough, open.				
11.45-12.95 m		100 93 75	NI 300 500								
12.95-13.02				SPT C 50 (25 for 45mm/50 for 20mm)			12.80-12.95 m occasional light brown banding.		12.95 +38.33		
						EXPLORATORY HOLE ENDS AT 12.95 m					
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.				Borehole 7 Sheet 2 of 2	
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:38:46											

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 05/12/2002 End 06/12/2002		Equipment, Methods and Remarks Rotary coring PWF size with coreline using air mist flush. Downhole geophysical testing carried out on completion of coring. 50mm gas standpipe installed on completion.		Depth from 0.00m to 12.45m Diameter 121mm Casing Depth 1.50m		Ground Level +56.40 mOD Coordinates E 336366.46 National Grid N 393238.97										
Samples and Tests					Strata													
Depth		Type & No		Records		Date Casing		Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments		
0.70-0.97		SPT S		50 (8,12/30,20 for 45mm)						Brown soil. (Foreman's description) (TOPSOIL)		(0.70)						
0.70-2.70 m		78 39 0		NI 40 70						Moderately weak to moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures: very closely spaced, subhorizontal, planar, rough, clean. (SHERWOOD SANDSTONE)		0.70-1.15 m AZCL. 1.26-1.33 m NI. 1.37-1.77 m Very weak to weak. Recovered as sandy angular to subangular gravel. 2.05-2.18 m Very weak to weak. Partially reduced to sand. 2.18-2.85 m Light brown, locally strong.		0.70 +55.70 (2.00)				
2.70-3.20 m		96 78 68								Moderately strong, medium locally closely bedded red brown medium grained SANDSTONE. Fractures: closely to medium spaced, subhorizontal, planar, rough. Occasional subangular to subrounded gravel of predominantly quartz. Rare black mottling locally micaceous. (SHERWOOD SANDSTONE)		2.70 +53.70						
3.20-3.43				SPT C 50 (5,19/50)														
3.20-4.20 m		100 100 81																
5.00 5.00 4.20-6.20 m		88 88 67		KFH k=1.4E-8 m/s KFH k=2.4E-8 m/s														
6.20-6.37		NI 150 530		SPT C 50 (13,12/50 for 18mm)								6.20-6.55 m Light brown.						
6.20-8.20 m		100 98 56		Flush: 0.70-12.45 air mist, 100 %								6.81-6.83 m NI.						
8.20-10.25 m		100 100 84										7.80-7.90 m Light brown.		(9.75)				
Stratum continued next sheet																		
Depth		SCR ROD		If		Records/Samples		Date Casing		Time Water								
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)										Depth sealed (m)		Depth Related Remarks From to (m) 0.00 0.70 Inspection pit.					Chiselling Depths (m)	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.										Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.					Borehole 8 Sheet 1 of 2			
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:39:01																		

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 05/12/2002 End 06/12/2002		Equipment, Methods and Remarks			Depth from 0.00m to 12.45m Diameter 121mm Casing Depth 1.50m		Ground Level +56.40 mOD Coordinates E 336366.46 National Grid N 393238.97		
Samples and Tests						Strata					
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
10.25-12.45 m		95 82 74	NI 150 530	SPT C 50 (3,22/50 for 25mm)	06/12/2002 1.50	dry	Moderately strong, medium locally closely bedded red brown medium grained SANDSTONE. Fractures: closely to medium spaced, subhorizontal, planar, rough. Occasional subangular to subrounded gravel of predominantly quartz. Rare black mottling locally micaceous. (SHERWOOD SANDSTONE)		10.15-10.30 m [Light brown, locally strong.		
12.30-12.48							10.84-10.92 m [Partially NI.				
							11.85-12.02 m [Locally weak, partially reduced to clay. 12.02-12.30 m [Fine to medium grained,				
							EXPLORARY HOLE ENDS AT 12.45 m		12.45 +43.95		
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour (m)					Depth sealed (m)		Depth Related Remarks From to (m)			Chiselling Depths (m)	
None observed (see Key Sheet)											
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.			Borehole 8 Sheet 2 of 2		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:39:08											

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Rotary coring PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. Borehole grouted up on completion.		Depth from 0.00m to 12.80m Diameter 121mm Casing Depth 1.50m		Ground Level +54.80 mOD Coordinates E 336354.86 National Grid N 393307.21		
Samples and Tests					Strata					
Depth	Type & No	Records	Date Casing	Time Water	Description			Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
0.80-1.16	SPT C	60 (4,8/10,50 for 60mm)			TOPSOIL over brown clay. (Foreman's description)			(0.60)		
0.80-2.30 m	70 18 0				Moderately weak, locally moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, very closely spaced, planar, rough, clean. Rare black mottling. (SHERWOOD SANDSTONE)			0.60 +54.20		
2.30-2.51	NI 30 70	SPT C 50 (9,16/50 for 60mm)			0.80-1.25 m AZCL. 1.25-1.95 m locally very weak to weak. Reduced to sandy gravel.			(2.58)		
2.30-5.30 m	100 92 62				2.85-3.20 m light brown. 3.16-3.20m, NI. Moderately strong to strong, medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, medium spaced, planar, rough, clean. Occasional subrounded to rounded fine to medium gravel of quartz. (SHERWOOD SANDSTONE)			3.18 +51.62		
5.30-5.50		SPT C 50 (15,10/50 for 50mm)			3.57-3.60 m clay.					
5.30-8.30 m	100 98 88	NI 300 1000			6.05-6.20 m occasional light brown banding (20mm thick). 7.00-7.30 m light grey brown.			(9.62)		
8.30-11.30 m	100 96 84				9.15-9.25 m light grey brown, micaceous, locally moderately weak.					
					Stratum continued next sheet					
Depth	TCR ROD	If	Records/Samples	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks From to (m) 0.00 0.80 Hand dug inspection pit.		Chiselling Depths (m)	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project Project No. A2207 Carried out for Liverpool F.C.		NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole 9 Sheet 1 of 2	
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:39:23										

Borehole Log



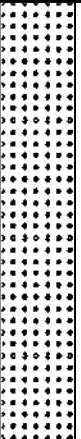
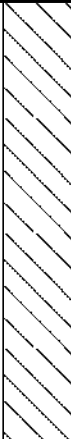

Drilled by IM/LT Logged by MJS Checked by PH			Start 10/12/2002 End 10/12/2002			Equipment, Methods and Remarks			Depth from 0.00m to 12.80m Diameter 121mm Casing Depth 1.50m			Ground Level +54.80 mOD Coordinates E 336354.86 National Grid N 393307.21		
Samples and Tests						Strata								
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description			Depth, Level/ (Thickness)		Legend	Backfill/ Instruments	
11.30-11.43		100 97 84	NI 300 1000	SPT C 50 (25/50 for 55mm)			Moderately strong to strong, medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, medium spaced, planar, rough, clean. Occasional subrounded to rounded fine to medium gravel of quartz. (SHERWOOD SANDSTONE)			10.00-10.33 m light grey brown, micaceous. Occasional thin carbonaceous laminae.				
11.30-12.80 m							11.57-11.67 m light brown, locally NI.							
12.80-12.94				SPT C 50 (25/50 for 60mm)			EXPLORATORY HOLE ENDS AT 12.80 m			12.80 +42.00				
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water								
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks From to (m)			Chiselling Depths (m)				
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.						Borehole 9 Sheet 2 of 2		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:39:30														

Borehole Log



Drilled by IM/LT Logged by MJS Checked by PH		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Rotary coring PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. Borehole grouted up on completion.		Depth from 0.00m to 12.95m Diameter 121mm Casing Depth 1.50m		Ground Level +52.14 mOD Coordinates E 336399.33 National Grid N 393359.57		
Samples and Tests					Strata					
Depth	Type & No	Records	Date Casing	Time Water	Description			Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
0.70-0.84	SPT S	50 (25/50 for 65mm)			Brown TOPSOIL over sand. (Foreman's description)			(0.70)		
0.70-2.70 m	68 25 0	NI 30 50			Moderately weak, locally weak very thinly bedded red brown medium grained SANDSTONE. Fractures: very closely spaced, subhorizontal, planar, rough, clean. Below 2.70m, moderately weak to moderately strong. (SHERWOOD SANDSTONE)			0.70 +51.44		
2.70-2.92		SPT C 50 (3,17/50 for 70mm)			1.35-1.95 m Predominantly NI.			(2.30)		
2.70-4.70 m	93 73 21	NI 80 170			1.95-2.50 m Locally very weak. Reduced to weakly cemented sand.					
4.70-4.88		SPT C 50 (12,13/50 for 25mm)			Moderately strong, thin to medium bedded red brown medium grained SANDSTONE. Fractures: closely to medium spaced, subhorizontal, planar, rough. Occasional subangular to subrounded fine to medium gravel of quartz. Occasional black mottling. (SHERWOOD SANDSTONE)			3.00 +49.14		
4.70-6.70 m	93 91 70				3.88-3.97 m Subvertical fracture, planar, rough, tight.					
6.70-6.82		SPT C 50 (25/50 for 45mm)			6.30-6.33 m Occasional lenses (<60mm) of marl. 6.35-6.62 m Light grey/brown fine grained sandstone. 6.35-6.40m, clay band (<5mm). 6.62-6.66 m Coarse grained. 6.70-7.75 m AZCL.			(9.95)		
6.70-8.70 m	48 45 35	NI 170 500			8.77-8.87 m Light brown, coarse grained.					
					Stratum continued next sheet					
Depth	SCR ROD	If	Records/Samples	Date Casing	Time Water					
Groundwater Entries					Depth Related Remarks			Chiselling Depths (m)		
No.	Struck (m)	Post strike behaviour		Depth sealed (m)		From	to (m)			
None observed (see Key Sheet)						0.00	0.70	Inspection pit.		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1			Borehole		
Scale 1:50					Project No. A2207			10		
(c) MESG HBIII (281), 16/06/2003 13:34:45					Carried out for Liverpool F.C.			Sheet 1 of 2		

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Drilled by IM/LT Logged by MJS Checked by PH		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks		Depth from 0.00m to 12.95m Diameter 121mm Casing Depth 1.50m		Ground Level +52.14 mOD Coordinates E 336399.33 National Grid N 393359.57				
Samples and Tests					Strata							
Depth		TCR SCR RQD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instrument	
8.70-11.40 m		96 96 74	NI 170 500	SPT C 50 (25/50 for 60mm)	10/12/2002 1.50	dry	Moderately strong, thin to medium bedded red brown medium grained SANDSTONE. Fractures: closely to medium spaced, subhorizontal, planar, rough. Occasional subangular to subrounded fine to medium gravel of quartz. Occasional black mottling. (SHERWOOD SANDSTONE)		12.95	+39.19		
11.40-12.95 m		100 97 97	NI 220 500				11.64-11.70 m NI. C 1 No. subangular coarse grained gravel of chert.					
12.95-13.09							EXPLORARY HOLE ENDS AT 12.95 m					
Depth		TCR SCR RQD	If	Records/Samples	Date Casing	Time Water						
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project Project No. Carried out for		NEW ANFIELD - SITE INVESTIGATION PHASE 1 A2207 Liverpool F.C.		Borehole 10 Sheet 2 of 2			
Scale 1:50 												

Borehole Log



Soil Mechanics

Drilled by IM/LT Logged by MJS Checked by PH		Start 11/12/2002 End 11/12/2002		Equipment, Methods and Remarks Rotary open boring to 0.60m. Rotary coring PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. Borehole grouted up on completion.		Depth from 0.00m to 12.60m Diameter 121mm Casing Depth 1.50m		Ground Level +53.40 mOD Coordinates E 336435.37 National Grid N 393239.89	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
0.60-0.82	SPT C	50 (7,15/50 for 65mm)			Tarmac over clay brick fill. (Foreman's description) (MADE GROUND)		(0.60)		
0.60-2.10 m	57 31 8				Moderately weak, locally moderately strong, very thinly bedded red brown medium grained SANDSTONE, locally micaceous. Fractures are subhorizontal, very closely spaced, planar, rough, clean. (SHERWOOD SANDSTONE)		0.60 +52.80		
2.10-2.31	NI 30 120	SPT C 50 (15,10/50 for 60mm)			0.60-1.25 m AZCL. 1.25-1.50 m very weak. Recovered as gravelly sand.		(2.35)		
2.10-5.10 m	97 93 60				Moderately strong to strong, medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, medium spaced, planar, rough. Rare subrounded fine to medium gravel of quartz and limestone. Rare black mottling. (SHERWOOD SANDSTONE)		2.95 +50.45		
5.10-5.27		SPT C 50 (3,10/50 for 15mm)			4.50-4.75 m light brown. 4.57-4.63m, NI.				
5.10-8.10 m	100 95 79	NI 350 690			Flush: 0.00-12.60 air mist, 100 %				
8.10-11.10 m	100 88 81				7.42-7.45 m light brown. 7.87-7.97 m weak marl, locally reduced to clay. 8.55-9.00 m fine to medium grained. 8.59-8.64m, light brown. 8.67-8.88m, 80 deg to subvertical fracture, curved, rough, tight. 8.92-9.00m, very weak to weak, micaceous, locally NI.		(9.65)		
					Stratum continued next sheet				
Depth	SCR ROD	If	Records/Samples	Date Casing	Time Water				
Groundwater Entries					Depth Related Remarks		Chiselling Depths (m)		
No. Struck (m)		Post strike behaviour		Depth sealed (m)		From to (m)			
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole 11 Sheet 1 of 2		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:35:08									

Borehole Log



Soil Mechanics

Drilled by IM/LT Logged by MJS Checked by PH		Start 11/12/2002 End 11/12/2002		Equipment, Methods and Remarks			Depth from 0.00m to 12.60m Diameter 121mm Casing Depth 1.50m		Ground Level +53.40 mOD Coordinates E 336435.37 National Grid N 393239.89		
Samples and Tests						Strata					
Depth	TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
11.10-11.24			SPT C 50 (25/50 for 60mm)			Moderately strong to strong, medium bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, medium spaced, planar, rough. Rare subrounded fine to medium gravel of quartz and limestone. Rare black mottling. (SHERWOOD SANDSTONE)					
11.10-12.60 m	100 100 87	NI 350 690									
12.60-12.71			SPT C 50 (25/50 for 30mm)			11.10-11.27 m brown medium to coarse grained, frequent subangular to subrounded gravel of quartz, chert and sandstone. 11.70-12.05 m frequent subrounded to rounded gravel of quartz and limestone.		12.60	+40.80		
						EXPLORATORY HOLE ENDS AT 12.60 m					
Depth	TCR SCR ROD	If	Records/Samples	Date Casing	Time Water						
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)				Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole 11 Sheet 2 of 2			

Scale 1:50

(c) MESG HBIII (281), 16/06/2003 13:35:14



Soil Mechanics

Drilled by IM/LT Logged by MJS Checked by PH		Start 11/12/2002 End 11/12/2002		Equipment, Methods and Remarks Rotary open hole to 0.60m. Rotary coring PWF size with coreline using air mist flush. Downhole geophysical logging carried out on completion of coring. Borehole grouted up on completion.			Depth from 0.00m to 12.60m Diameter 121mm Casing Depth 1.50m		Ground Level +51.41 mOD Coordinates E 336478.54 National Grid N 393291.27												
Samples and Tests						Strata															
Depth		Type & No		Records		Date Casing		Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instrument					
0.60-0.82		SPT C		50 (7,15/50 for 65mm)						Tarmac over topsoil and brick fill. (Foreman's description) (MADE GROUND)		(0.60)									
0.60-2.10 m		67 43 0 NI 30 90								Moderately weak, locally moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures are subhorizontal, planar, rough, very closely spaced. (SHERWOOD SANDSTONE)		0.60-1.10 m AZCL. 1.10-1.40 m very weak to weak. Recovered as sandy gravel.		0.60 +50.81							
3.10-3.22				SPT C 50 (25/50 for 45mm)						Moderately strong, locally strong medium bedded red brown medium grained SANDSTONE		2.52 +48.89									
2.10-5.10 m		100 87 57								Fractures are subhorizontal, medium spaced, planar, rough. Occasional subrounded fine to medium gravel of quartz. (SHERWOOD SANDSTONE)											
5.10-5.22				SPT C 50 (25/50 for 45mm)						4.78-4.86 m 30 deg fracture, planar, rough, tight. 4.90-5.08 m subvertical fracture, planar, rough, open. 5.40-5.48 m light brown. 5.42-5.48m, NI. 5.63-5.68 m light brown. 6.00-6.17 m 70-80 deg fracture, curved, rough, open.											
5.10-8.10 m		100 93 75		NI 300 570 Flush: 0.00-12.60 air mist, 100 %						7.85-7.95 m light grey brown occasional black mottling.											
8.10-11.10 m		100 97 77								8.82-8.88 m weak. NI.											
										Stratum continued next sheet		9.85-9.95 m NI.									
Depth		ICR SCD RQD		If		Records/Samples		Date Casing		Time Water											
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)												Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)					
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.												Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Project No. A2207		Carried out for Liverpool F.C.		Borehole 12		Sheet 1 of 2	
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:35:30																					

Borehole Log

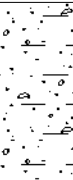
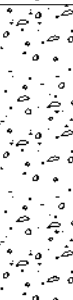
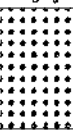


Drilled by IM/LT Logged by MJS Checked by PH			Start 11/12/2002 End 11/12/2002			Equipment, Methods and Remarks			Depth from 0.00m to 12.60m Diameter 121mm Casing Depth 1.50m			Ground Level +51.41 mOD Coordinates E 336478.54 National Grid N 393291.27		
Samples and Tests						Strata								
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water	Description			Depth, Level/ (Thickness)		Legend	Backfill/ Instruments	
11.10-11.23				SPT C 50 (25/50 for 55mm)			Moderately strong, locally strong medium bedded red brown medium grained SANDSTONE. occasional black mottling. Fractures are subhorizontal, medium spaced, planar, rough. Occasional subrounded fine to medium gravel of quartz. (SHERWOOD SANDSTONE) 9.95-10.10 m 10.50-10.65 m light brown. 11.60-11.85 m light brown.							
11.10-12.60 m		NI 300 570												
12.60-12.73		100 100 95	SPT C 50 (25/50 for 55mm)	EXPLORARY HOLE ENDS AT 12.60 m										12.60 +38.81
Depth		TCR SCR ROD	If	Records/Samples	Date Casing	Time Water								
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks From to (m)			Chiselling Depths (m)				
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.						Borehole 12 Sheet 2 of 2		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:35:36														

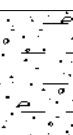

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Logged by MJS Checked by PH		Start 08/01/2003 End 08/01/2003	Equipment and Methods Machine dug trial pit.	Dimensions and Orientation Width 0.80 m Length 3.80 m <div><div>A D B C</div><div>➔ 228 (Deg)</div></div>		Ground Level +58.64 mOD Coordinates E 336269.22 National Grid N 393296.69
Samples and Tests			Strata			
Depth	Type & No.	Date Records	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
0.00-0.20 0.00-0.20 0.20-0.90	D 1 B 2 B 3		1 TOPSOIL. Frequent rootlets.	0.20 +58.44		
			2 Reddish brown GRAVEL and COBBLES of moderately weak sandstone. (MADE GROUND)	(0.40)		
			3 Dark brown clayey fine to medium SAND. Occasional angular gravel of sandstone, rare glass and ceramic. Occasional rootlets. (MADE GROUND)	0.60 +58.04 (0.50)		
0.90-1.20	B 4		4 Moderately strong red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)	1.10 +57.54 1.20 +57.44		
			EXPLORATORY HOLE ENDS AT 1.20 m			
Depth	Type & No.	Records Date				
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Remarks Ease of excavation: Easy to 0.20m, moderate to 1.10m, then very difficult.	Stability Stable Shoring None Weather Cold, frosty		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Scale 1:25			Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.	Trial Pit TP1 Sheet 1 of 1		

Φ

Logged by MJS Checked by MJS		Start 19/12/2002 End 19/12/2002	Equipment and Methods Machine dug trial pit.		Dimensions and Orientation Width 1.00 m Length 4.40 m <div><div>A D B C</div><div>➔ 318 (Deg)</div></div>		Ground Level Coordinates National Grid		+47.45 mOD E 336587.50 N 393299.44	
Samples and Tests			Strata							
Depth	Type & No.	Date Records	Description				Depth, Level (Thickness)	Legend	Backfill/ Instruments	
0.00-0.60 0.00-0.60	D 1 B 2		1 Brown TOPSOIL. Frequent rootlets.				(0.60)			
0.60-1.20	B 3		2 Orangish brown slightly clayey, slightly gravelly fine to medium SAND. Gravel is angular to subrounded fine to medium of various lithologies. Occasional roots.				0.60 +46.85 (0.60)			
1.20-2.00	B 4		2 Red brown sandy GRAVEL. Gravel is angular, tabular of sandstone. Frequent cobbles. (Weathered SHERWOOD SANDSTONE)				1.20 +46.25 (1.00)			
2.20-2.60	B 5		3 Moderately weak very thinly bedded red brown medium grained SANDSTONE. Fractures are planar, rough, very closely spaced. Recovered as angular gravel and cobble sized fragments. (SHERWOOD SANDSTONE)				2.20 +45.25 (0.40)			
			----- EXPLORATORY HOLE ENDS AT 2.60 m				2.60 +44.85			
Depth	Type & No.	Records Date								
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Remarks Ease of excavation: Easy to 1.20m, moderate to 2.20m, then very difficult.				Stability Stable Shoring Trench sheeting Weather Cold, cloudy			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Scale 1:25			Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.				Trial Pit TP2 Sheet 1 of 1			

Φ

Logged by MJS Checked by MJS		Start 08/01/2003 End 08/01/2003	Equipment and Methods Machine dug trial pit.		Dimensions and Orientation Width 0.80 m Length 3.70 m <div><div>A D B C</div><div>➔ 126 (Deg)</div></div>		Ground Level +48.84 mOD Coordinates E 336389.05 National Grid N 393452.05	
Samples and Tests			Strata					
Depth	Type & No.	Date Records	Description			Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
0.00-0.25 0.00-0.25	D 1 B 2		1 Brown TOPSOIL. Occasional rootlets.					
0.25-0.70	B 3		2 Brown slightly clayey, slightly gravelly fine to medium SAND. Gravel is angular to subrounded of various lithologies. Rare rootlets.			0.25 +48.59 (0.45)		
0.70-0.95	B 4		3 Moderately weak to moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures are very closely spaced, planar, rough. (SHERWOOD SANDSTONE)			0.70 +48.14 (0.50)		
			EXPLORATORY HOLE ENDS AT 1.20 m			1.20 +47.64		
Depth	Type & No.	Records Date						
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Remarks Ease of excavation: Difficult to 0.70m (ground frozen), very difficult to 1.20m.			Stability Stable Shoring None Weather Cold, frost.		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Scale 1:25			Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.			Trial Pit TP3 Sheet 1 of 1		

Trial Pit Log



Soil Mechanics

Logged by MJS Checked by MJS		Start 18/12/2002 End 18/12/2002		Equipment and Methods Machine dug trial pit.		Dimensions and Orientation Width 1.00 m Length 3.60 m <div><div>A B C</div><div>228 (Deg)</div></div>		Ground Level +54.62 mOD Coordinates E 336456.08 National Grid N 393144.26	
Samples and Tests			Strata						
Depth	Type & No.	Date Records	Description				Depth, Level (Thickness)	Legend	Backfill/ Instruments
0.00-0.40 0.00-0.40	D 1 B 2		1 Brown TOPSOIL. Frequent rootlets and tree roots.				(0.40)		
0.40-0.70	B 3		2 Moderately weak, locally weak very thinly bedded yellow brown fine to medium grained SANDSTONE. Recovered as sandy angular fine to coarse gravel. Fractures are very closely spaced, subhorizontal, planar, rough. (SHERWOOD SANDSTONE)				0.40 +54.22 (0.30)		
0.70-1.30	B 4		3 Moderately weak to moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures are very closely spaced, subhorizontal, planar, rough. Recovered as angular to subangular gravel and cobbles. (SHERWOOD SANDSTONE)				0.70 +53.92 (0.90)		
			EXPLORATORY HOLE ENDS AT 1.60 m				1.60 +53.02		
Depth	Type & No.	Records Date							
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Remarks Trial pit terminated at 1.60m due to no penetration. Unable to excavate below 1.60m.				Stability Stable Shoring Trench sheeting Weather Cold, clear.		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.				Trial Pit TP4 Sheet 1 of 1		

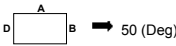
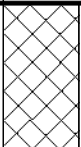
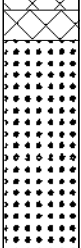
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(c) MESG HBIII (281), 16/06/2003 13:41:51

Trial Pit Log



Soil Mechanics

Logged by MJS Checked by MJS		Start 19/12/2002 End 19/12/2002	Equipment and Methods Machine dug trial pit.	Dimensions and Orientation Width 1.00 m Length 4.40 m 		Ground Level +59.79 mOD Coordinates E 336253.19 National Grid N 393249.54		
Samples and Tests			Strata					
Depth	Type & No.	Date Records	Description			Depth, Level (Thickness)	Legend	Backfill/ Instruments
0.00-0.50 0.00-0.50	D 1 B 2		1 Grey brown slightly clayey sandy GRAVEL. Gravel is angular to subangular of brick, ash, slag, concrete, glass and ceramics. Occasional cobble of brick. (MADE GROUND)			(0.50)		
0.60-1.30	B 3		2 Firm dark grey gravelly CLAY. Gravel is angular of brick and slag. (MADE GROUND) 3 Moderately weak to moderately strong, very thinly bedded red brown medium grained SANDSTONE. Fractures are very closely spaced, planar, rough. Recovered as gravel and cobble sized fragments. (SHERWOOD SANDSTONE)			0.50 +59.29 0.60 +59.19 (0.70)		
			EXPLORATORY HOLE ENDS AT 1.30 m			1.30 +58.49		
Depth	Type & No.	Records Date						
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Remarks Ease of excavation: Easy to 0.60m, difficult to 1.10m, then very difficult.			Stability Stable Shoring None Weather Cold, clear		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.			Trial Pit TP5 Sheet 1 of 1		



Trial Pit Log



Soil Mechanics

Logged by MJS Checked by MJS		Start 19/12/2002 End 19/12/2002		Equipment and Methods Machine dug trial pit.		Dimensions and Orientation Width 1.00 m Length 4.00 m <div><div>A B C</div><div>46 (Deg)</div></div>		Ground Level +46.67 mOD Coordinates E 336537.33 National Grid N 393402.20 Chainage 0	
Samples and Tests			Strata						
Depth	Type & No.	Date Records	Description			Depth, Level (Thickness)	Legend	Backfill/ Instruments	
0.00-0.70 0.00-0.70	D 1 B 2		1 Dark brown TOPSOIL. Frequent rootlets and tree roots.			(0.70)			
0.70-1.20	B 3		2 Moderately weak, very thinly bedded red brown medium grained SANDSTONE. Recovered as cobble sized fragments. Below 1.00m, locally moderately strong. Fractures are very closely spaced, planar, rough. (SHERWOOD SANDSTONE)			0.70 +45.97 (0.50)	<div></div>		
			EXPLORATORY HOLE ENDS AT 1.20 m			1.20 +45.47			
Depth	Type & No.	Records Date							
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Remarks Ease of excavation: Easy to 0.70m, difficult to 1.00m, then very difficult.			Stability Stable Shoring None Weather Cold, clear.			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.			Trial Pit TP6 Sheet 1 of 1			

Scale 1:25

(c) MESG HBIII (281), 16/06/2003 13:42:10

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.35m Diameter 100mm Casing Depth		Ground Level +50.83 mOD Coordinates E 336321.19 National Grid N 393439.38	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.30	D 1				TOPSOIL.	(0.30)			
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)	0.30 +50.53 0.35 +50.48			
					EXPLORATORY HOLE ENDS AT 0.35 m				
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour (m)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole WSDP2 Sheet 1 of 1		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:43:46									

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling		Depth from 0.00m to 0.75m Diameter 100mm Casing Depth		Ground Level +46.12 mOD Coordinates E 336436.21 National Grid N 393537.31 Chainage	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.30	D 1				TOPSOIL.	(0.30)			
0.50-0.70	D 2				Dark brown slightly clayey fine to medium SAND. Occasional rootlets.	0.30 +45.82 (0.40)			
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)	0.70 +45.42 0.75 +45.37			
					EXPLORATORY HOLE ENDS AT 0.75 m				
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries			Depth sealed (m)		Depth Related Remarks		Chiselling Depths (m)		
No.	Struck (m)	Post strike behaviour			From to (m)				
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:43:54					Project No. A2207 Carried out for Liverpool F.C.		WSDP3 Sheet 1 of 1		

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.75m Diameter 100mm Casing Depth		Ground Level +46.61 mOD Coordinates E 336508.86 National Grid N 393442.72	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.30	D 1				TOPSOIL.	(0.30)			
0.50	D 2				Dark brown slightly clayey slightly gravelly fine to medium SAND. Gravel is angular to subangular of sandstone.	0.30 +46.31 (0.40)			
0.70	D 3				Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 0.75 m	0.70 +45.91 0.75 +45.86			
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries					Depth Related Remarks		Chiselling		
No.	Struck	Post strike behaviour	Depth sealed (m)		From to (m)	Depths (m)			
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:44:03					Project No. A2207 Carried out for Liverpool F.C.		WSDP4 Sheet 1 of 1		

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 1.00m 1.00m to 1.40m		Diameter 100mm 80mm		Casing Depth		Ground Level +45.40 mOD Coordinates E 336614.26 National Grid N 393355.39					
Samples and Tests						Strata											
Depth		Type & No		Records		Date Casing		Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments	
0.00-0.15 0.20-0.40		D 1 D 2								TOPSOIL. Brown silty fine to medium SAND. Occasional rootlets.		0.15 +45.25 (0.35) 0.50 +44.90					
1.00-1.30		D 3								Red brown silty fine to medium SAND. Occasional angular gravel of sandstone. (Weathered SHERWOOD SANDSTONE)		(0.90)					
										EXPLORATORY HOLE ENDS AT 1.40 m		1.40 +44.00					
Depth		Type & No		Records		Date Casing		Time Water									
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)						Depth sealed (m)		Depth Related Remarks From to (m)				Chiselling Depths (m)					
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.						Borehole WSDP5 Sheet 1 of 1					
Scale 1:50						(c) MESG HBIII (281), 16/06/2003 13:44:12											

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.75m Diameter 100mm Casing Depth		Ground Level +55.54 mOD Coordinates E 336314.88 National Grid N 393331.93	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.30	D 1				TOPSOIL	(0.30)			
0.30-0.60	D 2				Dark brown slightly clayey, gravelly fine to medium SAND. Gravel is angular to subangular of sandstone.	0.30 +55.24 (0.35)			
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)	0.65 +54.89 0.75 +54.79			
					EXPLORATORY HOLE ENDS AT 0.75 m				
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries					Depth Related Remarks		Chiselling		
No.	Struck	Post strike behaviour	Depth sealed (m)		From to (m)		Depths (m)		
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:44:20					Project No. A2207		WSDP9		
Carried out for					Liverpool F.C.		Sheet 1 of 1		

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.45m Diameter 100mm Casing Depth		Ground Level +51.47 mOD Coordinates E 336367.65 National Grid N 393397.55	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.20	D 1				TOPSOIL	0.20 +51.27			
0.30-0.45	D 2				Reddish brown slightly silty fine to medium SAND. Occasional angular gravel of sandstone. (SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 0.45 m	0.45 +51.02			
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries					Depth Related Remarks		Chiselling		
No. Struck		Post strike behaviour		Depth sealed (m)	From to (m)		Depths (m)		
		None observed (see Key Sheet)							
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:42:18					Project No. A2207 Carried out for Liverpool F.C.		WSDP10 Sheet 1 of 1		

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 1.00m Diameter 100mm Casing Depth		Ground Level +49.66 mOD Coordinates E 336438.67 National Grid N 393393.90	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.30	D 1				TOPSOIL	(0.30)			
0.50	D 2				Brown clayey, gravelly fine to medium SAND. Gravel is angular to subangular of sandstone.	0.30 +49.36 (0.60)			
0.90-1.00	D 3				Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 1.00 m	0.90 +48.76 1.00 +48.66			
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole WSDP11 Sheet 1 of 1		



Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.60m Diameter 100mm Casing Depth		Ground Level +49.28 mOD Coordinates E 336510.01 National Grid N 393333.80	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.20-0.40	D 1				TARMAC.	0.18 +49.10			
0.50-0.60	D 2				Dark grey very clayey, gravelly fine to medium SAND. Gravel is angular to subangular of slag, brick, glass and sandstone. (MADE GROUND)	(0.32)			
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)	0.50 +48.78			
					EXPLORATORY HOLE ENDS AT 0.60 m	0.60 +48.68			
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.			Borehole WSDP12 Sheet 1 of 1	



Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.60m Diameter 100mm Casing Depth		Ground Level +50.41 mOD Coordinates E 336522.58 National Grid N 393265.16	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.20-0.40	D 1				TARMAC.	0.17 +50.24			
0.50-0.60	D 2				Reddish brown gravelly silty fine to medium SAND. Gravel is angular to subangular of sandstone. (Weathered SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 0.60 m	(0.43) 0.60 +49.87			
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour (m)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole WSDP13 Sheet 1 of 1		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:42:45									

Φ

Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 1.00m Diameter 100mm 80mm		Casing Depth	Ground Level +52.84 mOD Coordinates E 336467.70 National Grid N 393203.74		
Samples and Tests					Strata						
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level / (Thickness)	Legend	Backfill / Instrument			
0.20-0.40	D 1				TARMAC.	0.18 +52.66 (0.32)					
0.50-0.70	D 2				Dark grey brown clayey, gravelly fine to medium SAND. Gravel is angular to subangular of slag, tarmac, brick and sandstone. (MADE GROUND)	0.50 +52.34 (0.80)					
1.00-1.30	D 3				Reddish brown silty fine to medium SAND. (Weathered SHERWOOD SANDSTONE)	1.30 +51.54 (0.30)					
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 1.60 m	1.60 +51.24					
Depth	Type & No	Records	Date Casing	Time Water							
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole WSDP14 Sheet 1 of 1				

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 10/12/2002 End 10/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.40m Diameter 100mm Casing Depth		Ground Level +54.65 mOD Coordinates E 336412.09 National Grid N 393203.97	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.20-0.40	D 1				TARMAC.	0.15 +54.50			
					Dark grey brown sandy GRAVEL. Gravel is angular to subangular of brick, slag and sandstone. (MADE GROUND)	0.38 +54.27			
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)	0.40 +54.25			
					EXPLORATORY HOLE ENDS AT 0.40 m				
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole WSDP15 Sheet 1 of 1		



Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.35m Diameter 100mm Casing Depth		Ground Level +57.12 mOD Coordinates E 336334.54 National Grid N 393265.37	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.15 0.15-0.35	D 1 D 2				TOPSOIL. Reddish brown slightly gravelly fine to medium SAND. Gravel is angular to subangular of sandstone. (Weathered SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 0.35 m	0.15 +56.97 0.35 +56.77			
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour (m)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole WSDP16 Sheet 1 of 1		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:43:11									

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.75m Diameter 100mm Casing Depth		Ground Level +54.10 mOD Coordinates E 336395.20 National Grid N 393273.23	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.20	D 1				TOPSOIL	0.20 +53.90			
0.50	D 2				Dark brown clayey, gravelly fine to medium SAND. Gravel is angular to subangular of predominantly sandstone. Rare slag. (MADE GROUND)	(0.50)			
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)	0.70 +53.40 0.75 +53.35			
					EXPLORATORY HOLE ENDS AT 0.75 m				
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.		Borehole WSDP17 Sheet 1 of 1		



Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.47m Diameter 100mm Casing Depth		Ground Level +52.15 mOD Coordinates E 336439.09 National Grid N 393325.08	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.25	D 1				TOPSOIL	0.25 +51.90			
0.25-0.40	D 2				Reddish brown gravelly fine to medium SAND. Gravel is angular to subangular of sandstone.	0.45 +51.70 0.47 +51.68			
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)				
					EXPLORATORY HOLE ENDS AT 0.47 m				
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries			Depth sealed (m)		Depth Related Remarks	Chiselling Depths (m)			
No.	Struck	Post strike behaviour			From to (m)				
		None observed (see Key Sheet)							
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1		Borehole		
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:43:28					Project No. A2207 Carried out for Liverpool F.C.		WSDP18 Sheet 1 of 1		

Window Sampler Hole Log



Drilled by JH Logged by MJS Checked by MJS		Start 09/12/2002 End 09/12/2002		Equipment, Methods and Remarks Window sampling.		Depth from 0.00m to 0.66m Diameter 100mm Casing Depth		Ground Level +52.99 mOD Coordinates E 336417.18 National Grid N 393299.06	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
0.00-0.25	D 1				TOPSOIL	0.25 +52.74			
0.25-0.60	D 2				Dark brown slightly clayey fine to medium SAND. Gravel is angular to subangular of sandstone.	0.60 +52.39			
					Red brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)	0.66 +52.33			
					EXPLORATORY HOLE ENDS AT 0.66 m				
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m)		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project NEW ANFIELD - SITE INVESTIGATION PHASE 1 Project No. A2207 Carried out for Liverpool F.C.			Borehole WSDP19 Sheet 1 of 1	
Scale 1:50 (c) MESG HBIII (281), 16/06/2003 13:43:37									



ENCLOSURE A
EXPLORATORY HOLE RECORDS

Key to Exploratory Hole Records
Rotary Borehole Logs
Dynamic Sampler Hole Logs
Trial Pit Logs

Key
RH01 to RH04
BH1 to 4
TP1 to 8, HP1 to 4

Key to Exploratory Hole Records



Soil Mechanics

SAMPLES

Undisturbed

U	Driven tube sample	} nominally 100 mm diameter and full recovery unless otherwise stated
TW	Pushed thin wall tube sample	
P	Pushed piston sample	
L	Liner sample (from Windowless or similar sampler), full recovery unless otherwise stated	
CBR	CBR mould sample	
BLK	Block sample	
CS	Core sample (from rotary core) taken for laboratory testing	
AMAL	Amalgamated sample	

Disturbed

D	Small sample
B	Bulk sample

Other

W	Water sample
G	Gas sample

	Environmental chemistry samples (in more than one container where appropriate)
ES	Soil sample
EW	Water sample

Comments

Sample reference numbers are assigned to every sample taken. A sample reference of 'NR' indicates that attempt was made to take a tube sample, however, there was no recovery.

Monitoring samples taken after completion of hole construction are not shown on the exploratory hole logs.

TESTS

SPT S or SPT C	Standard Penetration Test, open shoe (S) or solid cone (C)
----------------	--

The Standard Penetration Test is defined in BS 1377 : Part 9 (1990). The incremental blow counts are given in the Field Records column; each increment is 75 mm unless stated otherwise and any penetration under self weight in mm (SW) is noted. Where the full 300 mm test drive is achieved the total number of blows for the test drive is presented as N = ** in the Test column. Where the test drive blows reach 50 (either in total or for a single increment) the total blow count beyond the seating drive is given (without the N = prefix).

IV	<i>in situ</i> Vane shear strength, peak (p) and remoulded (r)
HV	Hand vane shear strength, peak (p) and remoulded (r)
PP	Pocket penetrometer test, converted to shear strength
KFH, KRH, KPI	Variable head permeability tests (KFH = falling head test, KRH = rising head test, KPI = packer test), permeability value

Test results provided in Field Records column

DRILLING RECORDS

The mechanical indices (TCR/SCR/RQD & If) are defined in BS 5930 (1999)

TCR	Total Core Recovery, %
SCR	Solid Core Recovery, %
RQD	Rock Quality Designation, %
If	Fracture spacing, mm. Minimum, typical and maximum spacings are presented. The term non-intact (NI) is used where the core is fragmented.

Flush returns, estimated percentage with colour where relevant, are given in the Records column

CRF	Core recovered (length in m) in the following run
AZCL	Assessed zone of core loss
NR	Not recovered

GROUNDWATER



Groundwater strike



Groundwater level after standing period

Notes:

Project LIVERPOOL FC STADIUM
Project No. A6177
Carried out for Liverpool Football Club

Key

Sheet 1 of 2

Key to Exploratory Hole Records

INSTALLATION

Standpipe/ piezometer

Details of standpipe/piezometer installations are given on the Record. Legend column shows installed instrument depths including slotted pipe section or tip depth, response zone filter material type and layers of backfill.

SP
SPIE
PPIE
EPIE
GMP



The type of instrument installed is indicated by a code in the Legend column at the depth of the response zone:
Standpipe
Standpipe piezometer
Pneumatic piezometer
Electronic piezometer
Gas Monitoring Point

Inclinometer or Slip Indicator

The installation of vertical profiling instruments is indicated on the Record. The base of tubing is shown in the Legend column.

ICE
ICM
SLIP



The type of instrument installed is indicated by a code in the Legend column at the base of the tubing:
Biaxial inclinometer
Inclinometer tubing for use with probe
Slip indicator

Settlement Points or Pressure Cells

The installation of single point instruments is indicated on the Record. The location of the measuring device is shown in the Legend column.

ESET
ETM
EPCE
PPCE



The type of instrument installed is indicated by a code in the Legend column:
Electronic settlement cell/gauge
Magnetic extensometer settlement point
Electronic embedment pressure cell
Electronic push in pressure cell

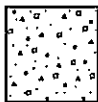
INSTALLATION LEGENDS

A legend describing the installation is shown in the rightmost column. Legends additional to BS5930 are used to describe the backfill materials as indicated below.

Arisings



Concrete



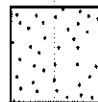
Grout



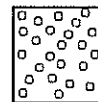
Bentonite



Sand



Gravel



Tarmac



NOTES

- 1 Strata legends are in accordance with BS 5930 (1999).
- 2 Water level observations of discernible entries during the advancing of the exploratory hole are given at the foot of the log and in the Legend column. The term "none observed" is used where no discrete entries are identified although this does not necessarily indicate that the hole has not been advanced below groundwater level. Under certain conditions groundwater cannot be observed, for instance, drilling with water flush or overwater, or boring at a rate much faster than water can make its way into the borehole (ref BS5930 : 1999, Clause 47.2.7). In addition, where appropriate, water levels in the hole at the time of recovering individual samples or carrying out in situ tests and at shift changes are given in the Records column.
- 3 Evidence of the occurrence of very coarse particles (cobbles and boulders) is presented on the logs, however, because of their size in relation to the exploratory hole these records may not be fully representative of their size and frequency in the ground mass.
- 4 The borehole logs present the results of Standard Penetration Tests recorded in the field without correction or interpretation. However, in certain ground conditions (eg high hydraulic head or where very coarse particles are present) some judgement may be necessary in considering whether the results are representative of in situ mass conditions.
- 5 The declination of bedding and joints is given with respect to the normal to the core axis. Thus in a vertical borehole this will be the dip.
- 6 The assessment of SCR, RQD and Fracture Spacing excludes artificial fractures

REFERENCES

BS 1377 : 1990 : British Standard Methods of test for soils for civil engineering purposes. British Standards Institution
BS 5930 : 1999 : Code of Practice for site investigations. British Standards Institution

Updated February 2007

Notes:

Project LIVERPOOL FC STADIUM
Project No. A6177
Carried out for Liverpool Football Club

Key

Sheet 2 of 2

Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked	Start 03/01/2007 End 10/01/2007	Equipment, Methods and Remarks Beretta T41 Rotary core drilling (TNW and PWF size) using water flush.		Depth from 0.00m to 30.00m	Diameter 121mm	Casing Depth 2.60m	Ground Level Coordinates National Grid Chainage	+46.97 mOD E 336576.48 N 393322.09	
Samples and Tests				Strata					
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
		0.00-1.20 m Hand dug Inspection pit			TARMAC (MADE GROUND)	0.15 +46.82			
					Black sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of tarmac and brick. (MADE GROUND)	0.30 +46.67 0.40 +46.57 (0.30)			
			03/01/2007 1.20		Red/brown sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of brick. Occasional cobbles. (MADE GROUND)	0.70 +46.27 0.80 +46.17			
			04/01/2007 1.20	0800	1.20-1.89 m AZCL				
1.20-2.00	14 0 0	N/A			Grey/black sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of slag, sandstone and occasional brick and clinker. (MADE GROUND)	1.89-2.00 m NI, recovered as subrounded medium gravel			
2.45 2.50					2.00-2.05 m NI, recovered as gravelly sand				
2.00-3.50	100 90 13	NI 50 100			2.05-2.74 m 90 deg planar smooth fracture				
3.07					2.26-2.38 m 80-90 deg undulose smooth fracture				
3.71					3.02-3.06 m 90 deg planar smooth fracture				
3.89 3.50-4.40 4.11	100 100 67	170 310 450			3.06-3.11 m NI, rounded gravel of quartzite				
4.31 4.36					3.12-3.24 m stained green/grey				
4.40-5.10 4.76	91 91 17	10 70 120			3.24-3.35 m 90 deg planar smooth fracture				
5.46 5.61					3.45-3.58 m multiple 90 deg planar to undulose smooth fractures				
5.10-6.60	97 97 61				3.57-4.19 m fractures are closely to medium spaced				
6.36		90 130 330			4.19-5.53 m fractures are closely spaced				
6.60-8.00	100 100 59	20 90 140			4.40-4.46 m AZCL				
8.00-9.50 8.75	100 100 100				4.68-4.84 m 90 deg undulose rough fracture				
		20 240 550			4.99-5.06 m extremely to very closely spaced fracture				
					5.43-5.48 m soft to firm light grey clay band				
					5.48-5.53 m AZCL				
					5.53-5.61 m orange/brown staining				
					6.30-6.39 m 80-90 deg undulose rough fracture				
					7.26-7.30 m weak thinly laminated red/brown marl band				
					9.16-9.23 m thin light grey bands <10mm thick				
					9.26-9.41 m occasional thin black carbonaceous lenses up to				
Depth 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80 6.00 6.20 6.40 6.60 6.80 7.00 7.20 7.40 7.60 7.80 8.00 8.20 8.40 8.60 8.80 9.00 9.20 9.40 9.60 9.80 10.00					Stratum continues to 24.35 m				
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)				Depth sealed (m)	Depth Related Remarks * From to (m)	Chiselling Depths (m)	Time	Tools used	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.				Project LIVERPOOL FC STADIUM	Project No. A6177	Borehole RH01			
Scale 1:50				Carried out for Liverpool Football Club	Sheet 1 of 3				

Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked	Start 03/01/2007 End 10/01/2007	Equipment, Methods and Remarks Baratta T41 Rotary core drilling (TNW and PWF size) using water flush.			Depth from 0.00m to 30.00m	Diameter 121mm	Casing Depth 2.50m	Ground Level +46.97 mOD Coordinates E 336576.48 National Grid N 393322.09 Chainage		
Samples and Tests					Strata					
Depth	TOR SCR RED	If	Records/Samples	Date Casing	Time Water	Description (Continued from Sheet 1)		Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
10.00	100		CS 24			Moderately weak to locally moderately strong, locally thickly laminated, red/brown medium to coarse grained SANDSTONE. Occasional rounded quartz pebbles up to 30mm in diameter. Fractures are 0-10 deg closely to medium spaced, planar, smooth to rough. (SHERWOOD SANDSTONE)				
9.50-11.00	100 100 92					:: 9.25m - 20mm in length				
10.50			CS 10			10.63-10.65 m yellow/brown staining on fractures				
	100 120 140					10.80-10.83 m yellow/brown band				
						11.00-12.70 m AZCL, failed HPD pocket				
11.00-12.70	0 0 0		HPD Test Pocket							
				04/01/2007 2.10						
12.70			CS 11	08/01/2007 2.10	0800 2.60	12.70-12.79 m AZCL				
13.27 13.33			CS 12 CS 21							
12.70-14.70	95 96 27	80 140 210	HPD Test Pocket							
13.86			CS 13			14.00-14.17 m multiple 60-70 deg undulose rough fractures				
						14.70-14.74 m light grey band				
14.70			CS 25			14.90-14.98 m light grey band		(18.82)		
14.70-15.50 15.22	100 100 91	30 120 320	CS 14			15.43-15.47 m light grey band				
						15.50-16.36 m AZCL				
15.93			CS 15							
15.50-17.50	57 57 19	20 60 160	HPD Test Pocket							
16.88 17.00			CS 16 CS 26							
				08/01/2007 2.10						
17.50			CS 17	09/01/2007 2.10	0800 4.70	17.50-17.57 m AZCL				
17.93			CS 22			17.87-18.04 m light brown band				
17.50-19.00	95 95 69	60 110 220				18.95-19.00 m 50 deg planar smooth fracture				
						19.00-19.72 m AZCL				
Depth	TOR SCR RED	If	Records/Samples	Date Casing	Time Water	Stratum continues to 24.35 m				
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)					Depth sealed (m)		Depth Related Remarks * From to (m)		Chiselling Depths (m) Time Tools used	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club		Borehole RH01 Sheet 2 of 3			



Scale 1:50

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Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked	Start 03/01/2007 End 10/01/2007	Equipment, Methods and Remarks Beretta T41 Rotary core drilling (TNW and PWF size) using water flush.		Depth from 0.00m to 30.00m Diameter 121mm Casing Depth 2.60m	Ground Level +46.97 mOD Coordinates E 336576.48 National Grid N 393322.09 Chainage
Samples and Tests				Strata	
Depth	TCR & CR RCD	IF	Records/Samples	Date Casing	Time Water
Description (Continued from Sheet 2)					
19.00-21.00	64 64 0	20 30 60	HPD Test Pocket	09/01/2007 2.60	3.20
21.00-22.50	89 89 89	20 150 270		10/01/2007 2.60	0800 4.50
22.50-24.00	93 93 84				
24.00-25.50	87 87 70				
25.50-27.00	97 97 72	30 100 240			
27.00-28.50	75 75 61				
28.50-30.00	99 99 65			10/01/2007 2.60	
EXPLORATORY HOLE ENDS AT 30.00 m					
Groundwater Entries No. Struck Post strike behaviour (m)				Depth sealed (m)	
None observed (see Key Sheet)					
Groundwater Entries No. Struck Post strike behaviour (m)				Depth Related Remarks * From to (m)	
None observed (see Key Sheet)					
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.				Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club	
Scale 1:50 (c) Soil Mechanics www.soil-mechanics.com 408.24 09/03/2007 10 01:03				Borehole RH01 Sheet 3 of 3	

Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked	Start 12/01/2007 End 17/01/2007	Equipment, Methods and Remarks Borella T41 Rotary core drilling (TNW and PWF size) using water flush.	Depth from 0.00m to 30.10m Diameter 121mm Casing Depth 9.85m	Ground Level +47.86 mOD Coordinates E 336449.86 National Grid N 393436.78 Chainage
Samples and Tests			Strata	
Depth	Type & No	Records	Date Casing	Time Water
0.00-0.50		Hand dug inspection pit		
0.50-1.70	80 59 33	N/A		
1.59	70 100 170	CS 1		
2.00		CS 2		
1.70-3.20	95 95 7			
2.90 3.00	30 70 120	CS 3 CS 4		
3.88 3.20-4.70	90 90 53	CS 5		
4.37		CS 14		
5.05 5.25 4.70-6.20 5.60	100 130 450	CS 6 CS 7 CS 12		
6.20-7.70	100 100 100			
7.70-8.80	100 100 89			
8.80-9.20	100 100 63		12/01/2007 1800 6.45	1800 4.10
9.85 9.20-10.70	100 100 80	CS 13	15/01/2007 0800 6.45	0800 7.00
Depth	IF	Records/Samples	Date Casing	Time Water
Stratum continues to 20.26 m				
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)			Depth sealed (m)	
Groundwater Entries			Depth Related Remarks *	
No. Struck Post strike behaviour (m)			From to (m)	
None observed (see Key Sheet)				
Chiselling Depths (m)			Time Tools used	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project LIVERPOOL FC STADIUM	
Scale 1:50			Project No. A6177	
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408.24 05/03/2007 10 01:23			Borehole RH02	
AGS			Sheet 1 of 4	

Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked	Start 12/01/2007 End 17/01/2007	Equipment, Methods and Remarks Beretta T41 Rotary core drilling (TNW and PWF size) using water flush.		Depth from 0.00m	to 30.10m	Diameter 121mm	Casing Depth 9.85m	Ground Level +47.86 mOD Coordinates E 336449.86 National Grid N 393436.78 Chainage
Samples and Tests				Strata				
Depth	TCR SCR RCD	If	Records/Samples	Date Casing	Time Water	Description (Continued from Sheet 1)		Depth, Level/ (Thickness)
		30 140 200				Moderately weak to moderately strong, locally thickly laminated red-pink/brown medium to coarse grained SANDSTONE. Occasional subrounded quartz pebbles, up to 30mm in size. Fractures are 0-10 deg closely to medium spaced, planar, smooth to rough. (SHERWOOD SANDSTONE)		
10.70-12.20	92 92 71		CS 15			orange/brown staining on fracture surface 10.70-10.82 m AZCL 10.93 m grey/brown marl on fracture surface 11.15-11.35 m light brown band 11.35-11.40 m 80 deg undulose rough fracture 11.79 m orange/brown staining on fracture surface		(13.69)
12.20-13.70	100 100 89	170 250 540				12.57 m light brown staining on fracture surface		
13.70-15.20	87 87 67	40 80 410				13.70-13.90 m AZCL		
14.99 15.10			CS 8 CS 9			14.92-14.97 m multiple 90 deg planar rough fractures 15.20-15.52 m AZCL		
15.20-17.20 16.38	84 84 5	20 50 100	HPD Test Pocket CS 10					
17.20			CS 11	15/01/2007 9.85	1800 10.40			
17.20-18.10	89 89 89	170 370 630		16/01/2007 9.85	0800 6.20	17.20-17.30 m AZCL		
18.10-19.60	97 97 65	60 150 300				18.10-18.14 m AZCL 18.56-18.62 m multiple 60-90 deg undulose rough fractures 19.17-19.28 m light brown/grey band 19.34-19.60 m occasional thin red marl bands <5mm in thickness		
Depth	TCR RCD	If	Records/Samples	Date Casing	Time Water	Stratum continues to 20.26 m		
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)				Depth sealed (m)		Depth Related Remarks * From to (m)		Chiselling Depths (m) Time Tools used
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.				Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club		Borehole RH02 Sheet 2 of 4		



Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked		Start 12/01/2007 End 17/01/2007		Equipment, Methods and Remarks Beretta T41 Rotary core drilling (TNW and PWF size) using water flush.		Depth from 0.00m to 30.10m		Diameter 121mm	Casing Depth 9.85m	Ground Level +47.86 mOD Coordinates E 336449.86 N 393436.78 Chainage	
Samples and Tests						Strata					
Depth	TCR SCR RCD	If	Records/Samples	Date Casing	Time Water	Description (Continued from Sheet 2)			Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
19.60-21.10	100 100 77					Moderately weak to moderately strong, locally thickly laminated red-pink/brown medium to coarse grained SANDSTONE. Occasional subrounded quartz pebbles, up to 30mm in size. Fractures are 0-10 deg closely to medium spaced, planar, smooth to rough. (SHERWOOD SANDSTONE)			20.26 +27.60		
21.10-22.60	93 93 63	60 110 220				Moderately weak to moderately strong, locally thickly laminated, red-pink/brown medium to coarse grained SANDSTONE. Occasional subrounded quartz pebbles up to 30mm in size. Fractures are 0-20 deg closely spaced, planar to undulose, rough. Below 21.65m, locally pink/red in colour. (SHERWOOD SANDSTONE)					
22.60-24.10	94 94 73					20.02-20.26 m thinly laminated brown/gray sandstone 20.45 m light gray band 21.10-21.20 m AZCL 21.45-21.50 m weak light brown band with frequent subrounded pebbles 21.54-21.65 m 80 deg undulose rough fracture 22.60-22.69 m AZCL 22.91-22.95 m yellow/brown staining around fracture with clay on surface					
24.10-25.60	98 98 92					24.04-24.07 m light brown band 24.10-24.13 m AZCL 24.13-24.26 m light brown band			(9.84)		
25.60-27.10	96 96 69	20 200 410				25.55-25.96 m light brown/gray band 25.60-25.66 m AZCL 25.94-26.02 m multiple 90 deg planar rough fractures 26.24-26.33 m light brown band 26.62-27.06 m 90 deg planar rough fracture 27.05-27.10 m light brown band 27.10-27.13 m AZCL					
27.10-28.60	98 98 79					27.76-27.77 m light brown band					
28.60-30.10	100 100 85					29.12-29.25 m 70 deg planar rough fracture with dark brown/gray staining					
16/01/2007 1800 9.85 7.00 17/01/2007 0800 9.85 7.80											
Depth	TCR RCD	If	Records/Samples	Date Casing	Time Water	Stratum continues to 30.10 m					
Groundwater Entries No. Struck Post strike behaviour None observed (see Key Sheet)						Depth sealed (m)			Chiselling Depths (m) Time Tools used		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club			Borehole RH02 Sheet 3 of 4		



Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked		Start 12/01/2007 End 17/01/2007		Equipment, Methods and Remarks Beretta T41 Rotary core drilling (TNW and PWF size) using water flush.		Depth from 0.00m to 30.10m Diameter 121mm Casing Depth 9.85m		Ground Level Coordinates National Grid Chainage		+47.86 mOD E 336449.86 N 393436.78											
Samples and Tests						Strata															
Depth		TCR SCR RSD		If		Records/Samples		Date Casing Time Water		Description (Continued from Sheet 3)		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments					
								9.85		Moderately weak to moderately strong, locally thickly laminated, red-pink/brown medium to coarse grained SANDSTONE. Occasional subrounded quartz pebbles up to 30mm in size. Fractures are 0-20 deg closely spaced, planar to undulose, rough. Below 21.65m, locally pink/red in colour. (SHERWOOD SANDSTONE)		30.01-30.10 m 70 deg planar rough fracture		30.10 +17.76							
										EXPLORATORY HOLE ENDS AT 30.10 m											
Depth		TCR SCR RSD		If		Records/Samples		Date Casing Time Water													
Groundwater Entries						Depth Related Remarks *						Chiselling									
No.		Struck		Post strike behaviour		Depth sealed		(m)		From		to (m)		Depths (m)		Time		Tools used			
None observed (see Key Sheet)																					
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.										Project Project No. Carried out for				LIVERPOOL FC STADIUM A6177 Liverpool Football Club				Borehole RH02 Sheet 4 of 4			
Scale 1:50 (c) Soil Mechanics www.soil-mechanics.com 426 24 05/03/2007 10:01:47										AGS											



Drilled MA Logged RC Checked		Start 18/01/2007 End 25/01/2007		Equipment, Methods and Remarks Beretta T41 Rotary core drilling (PWF size) using water flush.		Depth from 0.00m to 30.00m Diameter 121mm Casing Depth 4.30m		Ground Level Coordinates National Grid Chainage +48.96 mOD E 336349.04 N 393471.67	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments	
		0.00-1.20 m Hand dug inspection pit			TOPSOIL	(0.40)			
			18/01/2007		Red/brown gravelly SAND. Gravel is subangular fine to coarse of very weak red/brown medium grained sandstone.	0.40 +48.56			
						(0.80)			
1.20-1.60	100 65 0	IF NI/NI/NI	19/01/2007	0800	Very weak to weak, locally thinly to thickly laminated red/brown fine to medium grained SANDSTONE. Fractures are 0-10 deg, very closely spaced, planar, rough. (SHERWOOD SANDSTONE)	1.20 +47.76			
	30 40 80				1.20-1.34 m NI, recovered as gravelly sand				
1.60-3.10	98 96 10				1.60-1.66 m AZCL 1.68-1.74 m multiple 70-80 deg undulose rough fractures	(2.18)			
2.74			CS 1		2.10-2.13 m 80 deg planar rough fracture				
3.40					2.25-2.44 m 70 deg planar rough fracture				
3.10-4.00	100 100 67		CS 2			3.38 +45.58			
3.70			CS 10		Weak to moderately weak, locally thickly laminated red/brown fine to medium grained SANDSTONE. Fractures are 0-10 deg closely to medium spaced, planar, smooth. (SHERWOOD SANDSTONE)	(1.31)			
4.10			CS 5		3.57-3.74 m multiple 70 deg planar smooth fracture				
4.00-4.60	83 83 65				4.00-4.10 m AZCL				
4.60			CS 3		4.18-4.69 m weak to moderately weak yellow/brown medium grained sandstone band	4.69 +44.27			
4.69			CS 6		4.60-4.62 m AZCL				
4.60-5.70	98 98 74				5.04-5.45 m 70-90 deg undulose smooth fracture	(0.89)			
5.58			CS 4		5.49-5.54 m very weak brown/orange band	5.58 +43.38			
5.70-7.20	100 100 95				Moderately weak to moderately strong, locally thickly laminated, red-pink/brown medium to coarse grained SANDSTONE. Occasional subrounded quartz pebbles, up to 30mm in size. Fractures are 0-10 deg, closely to medium spaced, planar, smooth. (SHERWOOD SANDSTONE)				
7.75			CS 7		6.50-6.55 m subrounded quartz nodules up to 30mm in size				
7.20-8.70	100 100 100				6.69-6.99 m light grey coarse grained band				
8.70-10.20	100 100 77								
	20 90 200								
Depth	TEST RECORD	IF	Records/Samples	Date Casing	Time Water	Stratum continues to 23.13 m			
Groundwater Entries						Depth Related Remarks *			
No.	Struck (m)	Post strike behaviour	Depth sealed (m)		From	to (m)			
None observed (see Key Sheet)						Chiselling Depths (m) Time Tools used			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project LIVERPOOL FC STADIUM			
Scale 1:50						Project No. A6177			
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						Borehole RH03 Sheet 1 of 3			

Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked		Start 18/01/2007 End 25/01/2007		Equipment, Methods and Remarks Beretta T41 Rotary core drilling (PWF size) using water flush.		Depth from 0.00m to 30.00m Diameter 121mm Casing Depth 4.30m		Ground Level +48.96 mOD Coordinates E 336349.04 National Grid N 393471.67 Chainage	
Samples and Tests						Strata			
Depth	TCR SCR RQD	IF	Records/Samples	Date Casing	Time Water	Description (Continued from Sheet 1)		Depth, Level/ (Thickness)	Legend
10.20			CS 8			Moderately weak to moderately strong, locally thickly laminated, red-pink/brown medium to coarse grained SANDSTONE. Occasional subrounded quartz pebbles, up to 30mm in size. Fractures are 0-10 deg, closely to medium spaced, planar, smooth. (SHERWOOD SANDSTONE)			
10.20-11.70	100 100 94					brown band 10.20-10.28 m 70 deg planar rough fracture			
11.90			CS 11						
11.70-13.20	100 100 100					12.57-12.61 m light brown band			
13.20-14.70	100 100 69					13.74-13.89 m light brown/orange band			
14.70-14.90	50 150 350		TCR 100, SCR 100, RQD 100	19/01/2007 2.80	4.50	14.19-14.26 m 80 deg undulose rough fracture		(17.55)	
15.46			CS 9	24/01/2007 2.80	0800 4.20	14.90-14.97 m AZCL			
14.90-16.50	96 96 96					16.03-16.10 m light brown/pink in colour			
16.50-18.00	96 96 75					16.10-16.27 m pink/red in colour 16.37-16.64 m 70 deg planar rough fracture 16.50-16.56 m AZCL			
18.00-19.50	100 100 87					17.16-17.21 m light brown grey clayey sandstone band 17.40-17.45 m 90 deg undulose rough fracture 17.92-18.12 m 90 deg undulose rough fracture			
						18.76-18.90 m 70 deg planar smooth fracture			
						19.44-19.57 m light brown/orange band with 60 deg undulose rough			
Stratum continues to 23.13 m									
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)						Depth sealed (m)		Depth Related Remarks * From to (m)	
Chiselling Depths (m)						Time		Tools used	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club		Borehole RH03 Sheet 2 of 3	

Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked	Start 18/01/2007 End 25/01/2007	Equipment, Methods and Remarks Beretta T41 Rotary core drilling (PWF size) using water flush.	Depth from 0.00m to 30.00m Diameter 121mm Casing Depth 4.30m	Ground Level +48.95 mOD Coordinates E 336349.04 National Grid N 393471.57 Chainage					
Samples and Tests			Strata						
Depth	TCR SCR RSD	If	Records/Samples	Date Casing	Time Water	Description (Continued from Sheet 2)	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
19.50-21.00	100 100 74	10 150 290				Moderately weak to moderately strong, locally thickly laminated, red-pink/brown medium to coarse grained SANDSTONE. Occasional subrounded quartz pebbles, up to 30mm in size. Fractures are 0-10 deg, closely to medium spaced, planar, smooth. (SHERWOOD SANDSTONE)			
21.00-22.50	93 93 67					fracture 20.33-20.46 m light brown/orange band 20.78-20.83 m multiple 60-90 deg undulose rough fractures 21.00-21.11 m AZCL 21.55-21.70 m weak light brown fine grained sandstone with frequent subrounded quartz pebbles <30mm in size. 21.78-21.82 m 80-90 deg undulose rough fracture 21.94-21.99 m 80-90 deg undulose rough			
22.50-24.00	100 100 83					Moderately weak to moderately strong, locally thinly to thickly laminated, red-pink/brown, medium to locally coarse grained SANDSTONE. Fractures are 0-10 deg, closely spaced, planar, smooth to rough. Occasional subrounded quartz pebbles, up to 30mm in size. (SHERWOOD SANDSTONE)	23.13 +25.83		
24.00-25.50	100 100 53					fracture 22.50-22.74 m weak thinly laminated grey fine grained sandstone 22.74-23.12 m multiple 70-80 deg planar rough fractures 22.74-23.13 m weak light brown/orange medium grained sandstone 23.30-23.58 m 70-80 deg undulose rough fracture 24.34-24.41 m light brown band 24.51-24.62 m light brown/orange band 24.62-24.79 m multiple 70-80 deg undulose rough fractures 24.96-25.02 m 80-90 deg undulose smooth fracture 25.43-25.55 m multiple 90 deg planar rough fractures 25.61-25.62 m light brown band 25.67-26.08 m light brown/orange bands 25.68-25.92 m large rounded quartz pebble 26.57-26.60 m light brown band 27.00-27.26 m AZCL 27.48-27.50 m light brown/grey clayey sandstone band 28.27-28.30 m multiple 60-80 deg planar rough fractures 28.50-28.54 m AZCL 29.46-29.74 m dark grey bands <5mm thick parallel to laminations	(5.76)		
25.50-27.00	100 100 88	20 150 340		24/01/2007 4.30					
27.00-28.50	83 83 45			25/01/2007 4.30	0600				
28.50-30.00	97 97 83	60 140 280		25/01/2007 4.30			28.89 +20.07		
EXPLORATORY HOLE ENDS AT 30.00 m									
Groundwater Entries No. Struck Post strike behaviour (m)			Depth sealed (m)	Depth Related Remarks * From to (m)		Chiselling Depths (m)	Time	Tools used	
None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club		Borehole RH03 Sheet 3 of 3	

Scale 1:50

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Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked	Start 26/01/2007 End 30/01/2007	Equipment, Methods and Remarks Unimog T41 Rotary core drilling (PWF size) using water flush.	Depth from 0.00m to 30.00m Diameter 121mm Casing Depth 6.15m	Ground Level Coordinates National Grid Chainage +47.95 mOD E 335590.05 N 393255.02			
Samples and Tests			Strata				
Depth	Type & No	Records	Date Casing Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
		0.00-1.20 m Hand dug inspection pit.		TOPSOIL	(0.40)		
				Red/brown gravelly SAND. Gravel is subangular to subrounded fine to coarse of very weak red/brown sandstone.	0.40 +47.55		
				Very weak red/brown thinly laminated fine to medium grained SANDSTONE. (SHERWOOD SANDSTONE)	0.90 +47.05 (0.30)		
1.20-1.50		TCR 30, SCR 0, RQD 0 11 INIA	25/01/2007 1.20	1.20-1.44 m AZCL	1.20 +46.75		
			26/01/2007 1.20	Weak to locally moderately weak, locally thinly to thickly laminated, red/brown fine to medium grained SANDSTONE. Fractures are 0-10 deg. very closely to closely spaced planar to undulose smooth to rough. (SHERWOOD SANDSTONE)			
2.10	100	10		1.44-1.50 m NI recovered as subrounded medium gravel			
1.50-3.00	100	30		1.56-1.65 m 70 deg. undulose rough fracture			
	15	60		1.76-1.92 m multiple 70-90 deg. planar to undulose rough fractures			
2.78				2.36-2.46 m brown/orange band with multiple 80 deg. planar rough fractures	(3.10)		
3.15				2.46-2.76 m multiple 70-80 deg. planar rough fractures			
3.00-4.50	100	20		3.33-3.45 m multiple randomly orientated undulose fractures			
	100	60		3.53-3.83 m			
4.30				multiple 60-80 deg. planar smooth to rough fractures	4.30 +43.65		
4.76				3.92-4.30 m brown/orange band with multiple inclined to open 70-80 deg. planar to undulose rough fractures			
5.19	100			4.57-4.74 m			
4.50-6.00	100			multiple 70-80 deg. undulose rough fractures			
5.53	100						
5.63	85						
6.22							
6.00-7.50	100						
	100						
7.50				6.76-6.85 m orange/brown band, staining on laminations			
				6.85-7.02 m 80 deg. undulose rough fracture			
8.10				7.32-7.34 m 90 deg. undulose rough fracture			
7.50-9.00	71			7.72-7.82 m orange/brown band with staining on laminations			
	71			8.07-8.16 m 90 deg. planar rough fracture			
	55			8.35-8.40 m 80 deg undulose rough fracture			
9.26				8.38-8.45 m orange staining			
	30			8.45-8.49 m grey/brown sandstone with clay bands			
9.00-10.50	98			8.49-8.93 m AZCL			
	98			8.93-9.00 m 80-90 deg. undulose rough fracture			
	86			9.00-9.03 m AZCL			
Depth	TCR RQD	If	Records/Samples	Date Casing Time Water	Stratum continues to 30.00 m		
Groundwater Entries No. Struck Post strike behaviour (m) Depth sealed (m) None observed (see Key Sheet)					Depth Related Remarks * From to (m)		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club		
Scale 1:50					Borehole RH04 Sheet 1 of 3		

Borehole Log

PRELIMINARY



Soil Mechanics

Drilled MA Logged RC Checked	Start 25/01/2007 End 30/01/2007	Equipment, Methods and Remarks Unimog T41 Rotary core drilling (PWF size) using water flush.		Depth from 0.00m to 30.00m Diameter 121mm Casing Depth 6.15m	Ground Level +47.95 mOD Coordinates E 336590.05 National Grid N 393255.02 Chainage
Samples and Tests				Strata	
Depth	TCR SCR RED	If	Records/Samples	Date Casing	Time Water
10.00			CS 10		
10.50-12.00	97 97 94			25/01/2007 6.15	
12.00-13.50	91 91 65			29/01/2007 6.15	0800 11.10
13.50			CS 16		
13.50-15.00	96 96 75				
15.25			CS 11		
15.00-16.50	98 98 42	30 80 240			
16.50-18.00 17.27	100 100 81		CS 12		
18.00-19.50	100 100 94	30 160 440			
Description (Continued from Sheet 1)					
Moderately weak to locally moderately strong, locally thickly laminated, red/brown fine to medium grained SANDSTONE. Fractures are 0-10 deg. closely to medium spaced planar smooth to rough. Below 20.20m occasional subrounded quartz and marl pebbles, up to 30mm in diameter. (SHERWOOD SANDSTONE)					
9.29-9.35 m 70 deg. planar rough fracture 10.33-10.38 m 70 deg. planar rough fracture 10.50-10.55 m AZCL 11.73-11.77 m multiple 80-90 deg. planar rough fractures 12.00-12.13 m AZCL 12.13-12.25 m multiple 70-80 deg. undulose rough fractures 12.25-12.29 m light brown band 12.67-13.26 m multiple 70-80 deg. undulose smooth fractures 13.36-13.44 m light brown/grey bands, thinly laminated 13.50-13.59 m AZCL 13.59-13.59 m light brown/orange band 14.06-14.07 m light brown/orange band 14.08-14.44 m multiple 70-80 deg. undulose rough fractures with light brown/orange bands 15.00-15.03 m AZCL 15.84-15.88 m light brown/orange band 16.06-16.28 m multiple 70-90 deg. undulose rough fractures 16.32-16.45 m 70-90 deg. undulose rough fracture 16.55-16.65 m light brown band 16.90-17.02 m multiple 70-80 deg. planar rough fractures 17.16-17.25 m 80 deg. undulose rough fracture 18.23-18.31 m 50 deg. planar rough fracture 18.48-18.57 m light brown/orange band 19.50-19.70 m AZCL					
Depth, Level/ (Thickness) Legend Backfill/ Instruments					
(25,70)					
Stratum continues to 30.00 m					
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)				Depth sealed (m) Depth Related Remarks * From to (m)	
Chiselling Depths (m) Time Tools used					
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.				Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club	
Borehole RH04 Sheet 2 of 3					

Borehole Log

PRELIMINARY



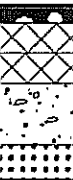
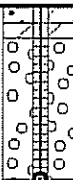
Soil Mechanics

Drilled MA Logged RC Checked	Start 25/01/2007 End 30/01/2007	Equipment, Methods and Remarks Unimog T41 Rotary core drilling (PWF size) using water flush.	Depth from 0.00m to 30.00m Diameter 121mm Casing Depth 6.15m	Ground Level +47.95 mOD Coordinates E 336590.05 National Grid N 393255.02 Chainage				
Samples and Tests			Strata					
Depth	TCR RCR RCD	If	Records/Samples	Date Casing Time Water	Description (Continued from Sheet 2)	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
19.50-21.00	87 87 59				Moderately weak to locally moderately strong, locally thickly laminated, red/brown fine to medium grained SANDSTONE. Fractures are 0-10 deg. closely to medium spaced planar smooth to rough. Below 20.20m occasional subrounded quartz and marl pebbles, up to 30mm in diameter. (SHERWOOD SANDSTONE)			
21.00-22.50	85 85 52	20 90 150			20.77-20.79 m light brown band 21.00-21.22 m AZCL			
22.50-24.00	91 91 64			29/01/2007 6.15 21.30 30/01/2007 0600 6.15	22.50-22.63 m AZCL 22.69-22.78 m light brown band 22.94-23.04 m multiple 80-90 deg. undulose rough fractures 23.42-23.45 m light brown/orange band			
24.00-25.50	100 100 96	20 110 330						
25.50-27.00	100 100 77				25.62-25.91 m multiple 60-80 deg. planar to undulose smooth fractures 26.18-26.20 m light brown/grey band 26.46-26.62 m in parts thinly laminated light brown stained orange band 26.79-26.86 m thinly laminated brown/grey band			
27.00-28.50	100 100 92	30 200 440			28.34-28.39 m 70 deg. undulose rough fracture 28.50-28.56 m AZCL			
28.50-30.00	96 96 80			30/01/2007 6.15	29.33-29.55 m light brown/grey band 29.66-30.00 m			
Depth	TCR RCR RCD	If	Records/Samples	Date Casing Time Water	EXPLORATORY HOLE ENDS AT 30.00 m			
Groundwater Entries No. Struck Post strike behaviour Depth sealed (m) None observed (see Key Sheet)					Depth Related Remarks * From to (m)		Chiselling Depths (m) Time Tools used	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club		Borehole RH04 Sheet 3 of 3	

Dynamic Sampler Hole Log



Soil Mechanics

Drilled AN Logged RC Checked	Start 11/12/2006 End 11/12/2006	Equipment, Methods and Remarks Terrier Rig Dynamic Sampling	Depth from 0.00m to 1.13m Diameter 67mm Casing Depth	Ground Level Coordinates National Grid Chainage	+49.47 mOD E 336516.02 N 393316.12		
Samples and Tests			Strata				
Depth Type & No Records Date Casing Time Water	Description		Depth, Level (Thickness)	Legend	Backfill/ Instruments		
0.20 0.20 0.30-0.50 0.40 0.40 0.50-0.90 0.70 0.70 0.90-1.13 0.90 1.13	ES 1 ES 2 B 7 ES 3 ES 4 B 8 ES 5 ES 6 SPTS D 9 KFH	0.00-0.60 m Hand dug inspection pit. 50 (13.12/40.2 for 5mm) k=5.2E-7 m/s	11/12/2006 dry	TARMAC (MADE GROUND) Black/brown slightly clayey gravelly SAND. Gravel is subangular to subrounded fine to medium of clinker, tarmac and occasional sandstone. (MADE GROUND) Brown/grey slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of clinker, slag and sandstone. (MADE GROUND) Red/brown gravelly SAND. Gravel is subangular fine to coarse of very weak red/brown sandstone. (Weathered SHERWOOD SANDSTONE) Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE. (SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 1.13 m	0.10 +49.37 0.30 +49.17 0.50 +48.97 (0.40) 0.90 +48.57 1.13 +48.34		
Depth Type & No Records Date Casing Time Water	Description		Depth, Level (Thickness)	Legend	Backfill/ Instruments		
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)			Depth sealed (m)	Depth Related Remarks * From to (m)			
Chiselling Depths (m) Time Tools used			Borehole BH1 Sheet 1 of 1				
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. (c) Soil Mechanics www.soil-mechanics.com 400.24 05/03/2007 10:06:30			Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club				

PRELIMINARY
Dynamic Sampler Hole Log



Drilled AN Logged RC Checked		Start 11/12/2006 End 11/12/2006		Equipment, Methods and Remarks Terrier Rig Dynamic Sampling		Depth from 0.00m to 1.60m Diameter 67mm Casing Depth		Ground Level Coordinates National Grid Chainage		+52.23 mOD E 336492.59 N 393176.65							
Samples and Tests						Strata											
Depth		Type & No		Records		Date Casing Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments			
0.15-0.40		B 3		0.06-1.10 m Hand dug inspection pit.				TARMAC over black/brown subrounded HARDCORE		0.15 +52.08							
0.30		ES 1								0.40 +51.83							
0.30		ES 2								(0.70)							
0.50-1.00		B 6						Red/brown gravelly SAND. Gravel is subangular to subrounded fine to coarse of brick and occasional clinker and tile. (MADE GROUND)		1.10 +51.13							
0.60		ES 4								(0.50)							
0.60		ES 5								1.60 +50.63							
1.10-1.47		SPT S		50 (3,10/15,20,15 for 70mm)				Red/brown gravelly SAND. Gravel is subangular to subrounded fine to coarse of very weak red/brown sandstone. (Weathered SHERWOOD SANDSTONE)									
1.10		D 7				11/12/2006											
1.10-1.60		B 8															
1.60		KFH		k=6.5E-7 m/s				Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)						GMP			
						EXPLORARY HOLE ENDS AT 1.60 m											
Depth		Type & No		Records		Date Casing Time Water											
Groundwater Entries								Depth Related Remarks *		Chiselling							
No.	Struck (m)	Post strike behaviour				Depth sealed (m)		From to (m)		Depths (m)		Time		Tools used			
1	0.15	-				-											
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.								Project LIVERPOOL FC STADIUM				Borehole					
								Project No. A6177				BH2					
								Carried out for Liverpool Football Club				Sheet 1 of 1					
Scale 1:50 (c) Soil Mechanics www.soil-mechanics.com 408 24 09/03/2007 10:08:30																	

PRELIMINARY Dynamic Sampler Hole Log



Drilled AN Logged RC Checked		Start 11/12/2006 End 11/12/2006		Equipment, Methods and Remarks Terrier Rig Dynamic Sampling		Depth from 0.00m to 0.86m Diameter 87mm Casing Depth		Ground Level +58.03 mOD Coordinates E 336331.13 National Grid N 393244.89 Chainage			
Samples and Tests					Strata						
Depth	Type & No	Records	Date Casing	Time Water	Description				Depth, Level (Thickness)	Legend	Backfill/ Instruments
0.20 0.20 0.40 0.40 0.50-0.86 0.50 0.50-0.60	ES 1 ES 2 ES 3 ES 4 SPT S D 5 D 6	0.00-0.50 m Hand dug inspection pit. 50 (9,11/11.7,32 for 80mm)	11/12/2006	dry	TOPSOIL Red/brown sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of very weak red/brown sandstone. (Weathered SHERWOOD SANDSTONE) Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE. (SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 0.86 m				(0.40) 0.40 +57.63 0.50 +57.53 (0.36) 0.86 +57.17	 	
Depth	Type & No	Records	Date Casing	Time Water							
Groundwater Entries No. Struck Post strike behaviour (m)			Depth sealed (m)	Depth Related Remarks * From to (m)				Ch/selling Depths (m) Time Tools used			
None observed (see Key Sheet)											
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Scale 1:50 (c) Soil Mechanics www.soil-mechanics.com 409.24 25/02/2007 13:28:41					Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club					Borehole BH3 Sheet 1 of 1	

PRELIMINARY
Dynamic Sampler Hole Log



Drilled AN Logged RC Checked		Start 11/12/2006 End 11/12/2006		Equipment, Methods and Remarks Terrier Rig Dynamic Sampling		Depth from 0.00m to 1.03m Diameter 67mm Casing Depth		Ground Level +54.26 mOD Coordinates E 336338.08 National Grid N 393340.97 Chainage							
Samples and Tests					Strata										
Depth		Type & No		Records		Date Casing Time Water		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments	
0.20 0.20 0.40-0.60		ES 1 ES 2 B 5		0.00-0.80 m Hand dug inspection pit.				TOPSOIL		(0.40)					
0.60 0.60 0.80-1.03 0.80 0.80-0.90		ES 3 ES 4 SPT S D 6 B 7		50 (11,14/50)		11/12/2006 dry		Brown/red, locally slightly clayey, gravelly SAND. Gravel is subangular to subrounded fine to coarse of very weak red/brown sandstone. (Weathered SHERWOOD SANDSTONE)		0.40 +53.86 (0.40) 0.80 +53.46 1.03 +53.23					
								Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE. (SHERWOOD SANDSTONE) EXPLORATORY HOLE ENDS AT 1.03 m						GMP	
Depth		Type & No		Records		Date Casing Time Water									
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)						Depth sealed (m)		Depth Related Remarks * From to (m)		Chiselling Depths (m) Time Tools used					
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.						Project LIVERPOOL FC STADIUM		Project No. A6177		Carried out for Liverpool Football Club		Borehole BH4 Sheet 1 of 1			

Trial Pit Log

PRELIMINARY



Soil Mechanics

Logged RC Checked		Start 12/12/2006 End 12/12/2006		Equipment, Methods and Remarks Volvo BL71 Machine excavated		Dimensions and Orientation Width 0.60 m Length 2.00 m 		Ground Level Coordinates National Grid Chainage +47.32 mOD E 336558.09 N 393332.99	
Samples and Tests				Strata					
Depth	Type & No.	Date Records	Description				Depth, Level (Thickness)	Legend	Backfill/ Instruments
			1 TARMAC (MADE GROUND)				0.10 +47.22		
0.30-0.60	B 3		2 Brown/black gravelly SAND. Gravel is subangular to subrounded fine to medium of clinker, sandstone and tarmac.				0.20 +47.12		
0.40	ES 1		(MADE GROUND)				0.30 +47.02		
0.40	ES 2		3 Brown subrounded to rounded fine to coarse sandstone GRAVEL.				(0.30)		
0.60-0.90	B 6		(MADE GROUND)				0.60 +46.72		
0.70	ES 4		4 Brown/black slightly clayey gravelly SAND. Gravel is angular to subrounded fine to coarse of sandstone, brick and clinker. Occasional cobbles. Strong hydrocarbon odour.				(0.30)		
0.70	ES 5		(MADE GROUND)				0.90 +46.42		
0.95	D 7		5 Red/brown slightly gravelly to gravelly SAND. Gravel is subangular fine to medium of very weak red/brown sandstone.				(0.40)		
1.00-1.30	B 8		(Weathered SHERWOOD SANDSTONE)				1.30 +46.02		
1.30-1.50	D 9		6 Very weak thinly to thickly laminated red/brown mottled yellow/brown medium grained SANDSTONE.				(0.30)		
		12/12/2006	dry				1.60 +45.72		
			7 Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE.						
			(SHERWOOD SANDSTONE)						
			EXPLORATORY HOLE ENDS AT 1.60 m						
Depth	Type & No.	Records Date							
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Depth Related Remarks * From to (m) 0.00 0.60 Excavation easy 0.60 1.30 Excavation moderate 1.30 1.60 Excavation difficult				Stability All faces stable Shoring None Weather Cold, overcast		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club				Trial Pit TP1 Sheet 1 of 1		

Soil Mechanics

Scale 1:25

Soil Mechanics

Scale 1:25

Trial Pit Log

PRELIMINARY



Soil Mechanics

Logged RC Checked		Start 12/12/2006 End 12/12/2006		Equipment, Methods and Remarks Volvo BL71 Machine excavated		Dimensions and Orientation Width 0.60 m Length 2.00 m 		Ground Level Coordinates National Grid Chainage +58.37 mOD E 336279.23 N 393291.85	
Samples and Tests			Strata						
Depth	Type & No.	Date Records	Description			Depth, Level (Thickness)	Legend	Backfill/ Instruments	
0.00-0.50	B 1	*	1 TOPSOIL			(0.50)			
0.30 0.30	ES 2 ES 3								
0.50-1.00	B 4	*	2 Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)			0.50 +57.87			
		*				(0.50)			
			EXPLORATORY HOLE ENDS AT 1.00 m			1.00 +57.37			
Depth	Type & No.	Records Data							
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Depth Related Remarks * From to (m) 0.00 0.50 Excavation easy 0.50 0.80 Excavation moderate 0.80 1.00 Excavation difficult			Stability All faces stable Shoring None Weather Cold, clear			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club			Trial Pit TP4 Sheet 1 of 1			



Trial Pit Log

PRELIMINARY



Soil Mechanics

Logged RC Checked		Start 12/12/2006 End 12/12/2006		Equipment, Methods and Remarks Volvo BL71 Machine excavated		Dimensions and Orientation Width 0.60 m Length 2.00 m <div><div>A B C</div><div>310 (Deg)</div></div>		Ground Level Coordinates National Grid Chainage		+57.20 mOD E 336372.95 N 393205.66			
Samples and Tests			Strata										
Depth		Type & No.		Date Records		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments	
0.00-0.40		B 3		.		1 TOPSOIL		(0.40)					
0.20 0.20		ES 1 ES 2		.									
0.50-1.00		B 4		.		2 Very weak to weak thinly to thickly laminated brown/yellow medium grained SANDSTONE. (SHERWOOD SANDSTONE)		0.40 +56.80					
				.				(0.60)					
						EXPLORATORY HOLE ENDS AT 1.00 m		1.00 +56.20					
Depth		Type & No.		Records Date									
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)						Depth Related Remarks * From to (m) 0.00 0.40 Excavation easy 0.40 0.60 Excavation moderate 0.60 1.00 Excavation difficult						Stability All faces stable Shoring None Weather Cold, clear	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Scale 1:25 (c) Soil Mechanics www.soil-mechanics.com 40024 27/12/2007 16.43.59						Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club						Trial Pit TP5 Sheet 1 of 1	



Trial Pit Log

PRELIMINARY



Soil Mechanics

Logged RC Checked		Start 12/12/2006 End 12/12/2006		Equipment, Methods and Remarks Volvo BL71 Machine excavated		Dimensions and Orientation Width 0.60 m Length 2.00 m 		Ground Level Coordinates National Grid Chainage +55.85 mOD E 336416.71 N 393152.54	
Samples and Tests			Strata						
Depth	Type & No.	Date Records	Description			Depth, Level (Thickness)	Legend	Backfill/ Instruments	
0.20-0.70	B 3	•	1 TOPSOIL			0.20 +55.75			
0.30	ES 1		2 Brown/orange gravelly SAND. Gravel is subangular to subrounded fine to coarse of very weak brown sandstone. (Weathered SHERWOOD SANDSTONE)			(0.50)			
0.30	ES 2								
0.70-0.90	B 4		3 Very weak thinly to thickly laminated brown/yellow medium grained SANDSTONE. (SHERWOOD SANDSTONE)			0.70 +55.25			
0.90-1.40	B 5	•	4 Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)			0.90 +55.05			
						(0.60)			
			EXPLORATORY HOLE ENDS AT 1.50 m			1.50 +54.45			
Depth	Type & No.	Records Date							
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Depth Related Remarks * From to (m) 0.00 0.70 Excavation easy 0.70 0.90 Excavation moderate 0.90 1.50 Excavation difficult			Stability All faces stable Shoring None Weather Cold, clear			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Scale 1:25			Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club			Trial Pit TP6 Sheet 1 of 1			

Trial Pit Log

PRELIMINARY



Soil Mechanics

Logged RC Checked		Start 13/12/2006 End 13/12/2006		Equipment, Methods and Remarks Volvo BL71 Machine excavated		Dimensions and Orientation Width 0.60 m Length 2.00 m <div><div><div>A</div><div>B</div><div>C</div></div><div>300 (Deg)</div></div>		Ground Level Coordinates National Grid Chalnage		+53.92 mOD E 336304.36 N 393374.75			
Samples and Tests				Strata									
Depth		Type & No.		Date Records		Description		Depth, Level/ (Thickness)		Legend		Backfill/ Instruments	
0.00-0.40		B 3		•		1 TOPSOIL		(0.40)					
0.20 0.20		ES 1 ES 2						0.40 +53.52					
0.50-1.00		B 6		•		2 Red/brown gravelly SAND. Gravel is subangular fine to coarse of very weak red/brown medium grained sandstone. (Weathered SHERWOOD SANDSTONE)		(0.60)					
0.60 0.60		ES 4 ES 5											
1.00-1.40		B 7		• •		3 Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)		1.00 +52.92 (0.40)					
						EXPLORATORY HOLE ENDS AT 1.40 m		1.40 +52.52					
Depth		Type & No.		Records Date									
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)						Depth Related Remarks * From to (m) 0.00 1.00 Excavation easy 1.00 1.20 Excavation moderate 1.20 1.40 Excavation difficult						Stability All faces stable Shoring None Weather Cold, clear	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. <div>(c) Soil Mechanics www.soil-mechanics.com 400.24 27/02/2007 10:44:14</div> <div>ABS</div>						Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club						Trial Pit TP7 Sheet 1 of 1	

Trial Pit Log

PRELIMINARY



Soil Mechanics

Logged RC Checked		Start 13/12/2006 End 13/12/2006	Equipment, Methods and Remarks Volvo BL71 Machine excavated		Dimensions and Orientation Width 0.60 m Length 2.50 m <div><div><div>A</div><div>B</div><div>C</div></div><div>005 (Deg)</div></div>		Ground Level Coordinates National Grid Chalnage		+47.99 mOD E 336584.38 N 393264.66	
Samples and Tests			Strata							
Depth	Type & No.	Date Records	Description			Depth, Level/ (Thickness)	Legend	Backfill/ Instruments		
			1 TOPSOIL			(0.70)				
			2 Red/brown gravelly SAND. Gravel is subangular to subrounded fine to medium of very weak red/brown medium grained sandstone. (Weathered SHERWOOD SANDSTONE)			0.70 +47.29 (0.50)				
			3 Very weak thinly to thickly laminated brown/red medium grained SANDSTONE. (SHERWOOD SANDSTONE)			1.20 +46.79 (0.60)				
			4 Very weak to weak thinly to thickly laminated red/brown medium grained SANDSTONE. (SHERWOOD SANDSTONE)			1.80 +46.19 (0.70)				
			EXPLORATORY HOLE ENDS AT 2.50 m			2.50 +45.49				
Depth	Type & No.	Records Date								
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Depth Related Remarks * From to (m) 0.00 1.20 Excavation easy 1.20 1.60 Excavation moderate 1.60 2.50 Excavation difficult			Stability All faces stable Shoring None Weather Cold, clear				
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club			Trial Pit TP8 Sheet 1 of 1				

Scale 1:25

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Trial Pit Log



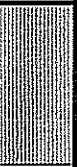

Logged NR Checked		Start 23/01/2007 End 23/01/2007	Equipment, Methods and Remarks Hand dug inspection pit		Dimensions and Orientation Width 0.62 m Length 0.64 m <div><div><div>A</div><div>B</div><div>C</div></div><div>064 (Deg)</div></div>		Ground Level +59.74 mOD Coordinates E 336296.73 National Grid N 393226.79 Chainage	
Samples and Tests			Strata					
Depth	Type & No.	Date Records	Description			Depth, Level (Thickness)	Legend	Backfill/ Instrument
0.15 0.15	ES 1 D 2	23/01/2007	1 Dark brown/black slightly clayey gravelly fine to medium SAND. Gravel is angular to subrounded fine to coarse of sandstone, brick, tile and wood. Occasional rootlets. (MADE GROUND)			(0.52)		
0.65 0.65	ES 3 D 4		2 Dark brown slightly clayey gravelly fine to medium SAND. Gravel is subangular to subrounded fine to coarse of very weak sandstone. Occasional rootlets. (MADE GROUND)			0.52 +59.22 (0.68)		
1.05 1.05	ES 5 D 6		0.70-0.80 m very gravelly band of subangular to subrounded medium to coarse very weak sandstone.			1.20 +58.54		
			EXPLORATORY HOLE ENDS AT 1.20 m					

Trial Pit Log

PRELIMINARY



Soil Mechanics

Logged NR Checked		Start 23/01/2007 End 23/01/2007		Equipment, Methods and Remarks Hand dug inspection pit		Dimensions and Orientation Width 0.61 m Length 0.56 m 		Ground Level Coordinates National Grid Chainage		+58.10 mOD E 336290.63 N 393194.44			
Samples and Tests			Strata										
Depth		Type & No.		Date Records		Description		Depth, Level (Thickness)		Legend		Backfill/ Instruments	
0.10 0.10		ES 1 D 2				1 Dark brown slightly gravelly clayey fine to medium SAND. Gravel is angular to subrounded fine to medium of sandstone, brick and glass. Frequent rootlets. (TOPSOIL)		0.22 +57.88					
0.40 0.40		ES 3 D 4		23/01/2007		2 Dark brown slightly clayey very gravelly fine to medium SAND. Gravel is subangular to subrounded fine to coarse of sandstone and brick. Occasional cobbles of subrounded very weak sandstone. (MADE GROUND)		0.45 +57.65 0.53 +57.57					
						3 Weak thinly to thickly laminated red/brown fine to medium grained SANDSTONE. (SHERWOOD SANDSTONE)							
						EXPLORATORY HOLE ENDS AT 0.53 m							
Depth		Type & No.		Records Date									
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)						Depth Related Remarks * From to (m)						Stability Good Shoring None Weather Sunny	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Scale 1:25						Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club						Trial Pit HP2 Sheet 1 of 1	

Trial Pit Log

PRELIMINARY



Soil Mechanics

Logged NR Checked		Start 23/01/2007 End 23/01/2007	Equipment, Methods and Remarks Hand dug inspection pit		Dimensions and Orientation Width 0.61 m Length 0.68 m 		Ground Level Coordinates National Grid Chainage +58.31 mOD E 336333.41 N 393203.69	
Samples and Tests			Strata					
Depth	Type & No.	Date Records	Description			Depth, Level (Thickness)	Legend	Backfill/ Instruments
0.15 0.15	ES 1 D 2	23/01/2007	1 Dark brown/black clayey gravelly fine to medium SAND. Gravel is subangular to subrounded fine to medium of sandstone, brick, concrete and tile. Frequent rootlets. (TOPSOIL)			0.25 +58.06		
0.45 0.45	ES 3 D 4		2 Dark brown slightly clayey gravelly fine to medium SAND. Gravel is angular to subrounded fine to coarse of sandstone, brick and concrete. Rare tree roots, up to 25 mm in diameter. (MADE GROUND)			(0.60)		
0.75 0.75	ES 5 D 6		3 Red/brown gravelly fine to medium SAND. Gravel is subangular to subrounded fine to medium of very weak sandstone. (Weathered SHERWOOD SANDSTONE)			0.85 +57.46		
0.90 0.90	ES 7 D 8					0.95 +57.36		
			4 Very weak to weak thinly to thickly laminated red/brown fine to medium grained SANDSTONE. (SHERWOOD SANDSTONE)			1.15 +57.16		
			EXPLORATORY HOLE ENDS AT 1.15 m					
Depth	Type & No.	Records Date						
Groundwater Entries No. Struck Post Strike Behaviour (m) None observed (see Key Sheet)			Depth Related Remarks * From to (m)			Stability Good Shoring None Weather Sunny		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project LIVERPOOL FC STADIUM Project No. A6177 Carried out for Liverpool Football Club			Trial Pit HP3 Sheet 1 of 1		



Appendix D Classification of Sensitivity

Table 8-1: Vulnerability of Proposed use to Contamination

Vulnerability of End Use	Proposed End Use
High Vulnerability	<ul style="list-style-type: none"> Residential development Allotments Schools Nurseries and crèches Playing fields Children's play area Mixed use development including vulnerable proposals
Low Vulnerability	<ul style="list-style-type: none"> Industrial Offices Shops Leisure facilities Mixed use development excluding vulnerable proposals

Table 8-2: Classification of site Sensitivity

Sensitivity assessment	Groundwater	Surface Water	Coastal Water
H1 (Very high)	<ul style="list-style-type: none"> Highly vulnerable aquifer, actively used in vicinity of site with short travel times to sources of supply or sensitive watercourses. Likely to be within an inner or outer groundwater protection zone (Zones I or II under EA protection policy). All contaminant releases to the ground environment of concern. 	<ul style="list-style-type: none"> High quality watercourse (GQA A or B) within close proximity (less than 250m) of site or with potential for rapid transmission of pollutants to that watercourse via a fissured aquifer; Or interconnected unclassified drain or stream. 	<ul style="list-style-type: none"> Within 100m of a sensitive coastal water, that is, a recognised bathing water, a "more sensitive area" (as defined under the Urban Wastewater Treatment Directive); Or a marine SSSI or at a greater distance but with a direct connection via a stream or a highly fissured aquifer to such a coastal water with the potential for rapid flow to that water.
H2 (High)	<ul style="list-style-type: none"> Principal or Secondary vulnerable aquifer with probable use nearby (either direct abstraction or baseflow to sensitive watercourses and springs). Likely to be within Outer or Source Catchment protection zones (Zones II or III). Most contaminant releases to the ground environment of concern. 	<ul style="list-style-type: none"> Site within catchment and reasonable proximity (less than 500m) of high quality watercourse (GQA A/B); Or with potential transmission of pollutants via baseflow from an aquifer with little subsurface attenuation; Or via an interconnected unclassified drain or stream. 	<ul style="list-style-type: none"> As above, within 250m or with a relatively rapid route of transmission or within 100m of a "less sensitive area".

Sensitivity assessment	Groundwater	Surface Water	Coastal Water
M1 (Moderately high)	<ul style="list-style-type: none"> Recognised Principal or Secondary aquifer, moderately vulnerable, with probable use (either direct or via baseflow to a sensitive watercourse). Within formal protection zone or catchment of authorised abstractions for potable or other high quality uses. Minor, short-term releases of contaminants may be tolerable. 	<ul style="list-style-type: none"> Site within catchment and reasonable proximity (less than 500m) of a moderate quality watercourse (GQA C/D) or 500-1000m of a high quality watercourse GQA A/B). Also where there is potential transmission of pollutants via baseflow with little subsurface attenuation or via an interconnected unclassified drain or stream. 	<ul style="list-style-type: none"> Within 500m of a bathing water or a defined sensitive area (see above); with possibility of diffuse flow via groundwater seepages at coastline; Or with connection via nearby watercourses.
M2 (Moderate)	<ul style="list-style-type: none"> Secondary aquifer, low to moderately vulnerable, but with possible uses in general area, particularly for domestic supplies. May provide pathway to surface water. 	<ul style="list-style-type: none"> Site within catchment of and relatively close (less than 1000m) to moderate or poor quality (GQA C to F) watercourse that may be subject to planned improvement by attainment of surface water quality objectives. May be potential for transmission of pollutants via baseflow from a highly permeable formation. 	<ul style="list-style-type: none"> Within 500m of a coastal water (undefined), with possibility of diffuse flow via groundwater seepages at coastline; Or with connection via nearby watercourses.
L1 (Low)	<ul style="list-style-type: none"> Permeable strata/Secondary aquifer near surface, but no apparent use and low vulnerability (may also be a significant aquifer but downgraded by longterm/ permanent degradation of water quality). May provide pathway to surface watercourse at distance. 	<ul style="list-style-type: none"> Within catchment of and over 250m from generally poor quality watercourse (GQA E or F) that is unlikely to improved by current or foreseeable surface water quality objectives; Or at distance (over 1000m) from a good quality watercourse with no interconnecting drains or baseflow from fissured strata. 	<ul style="list-style-type: none"> No coastline nearby (within 1km), but with possibility of diffuse groundwater seepages at coastline; Or connection via nearby watercourses.



Sensitivity assessment	Groundwater	Surface Water	Coastal Water
L2 (Very low)	<ul style="list-style-type: none"> Not a recognised aquifer, but strata beneath site may retain a small amount of contaminated liquid but there is likely to be limited vertical penetration. High potential for surface runoff or ponding. 	<ul style="list-style-type: none"> No surface water within general area of the site (at least 250m); Or closed drainage within site. Little or no potential for significant transmission via baseflow and no interconnecting drains. 	<ul style="list-style-type: none"> No coastline nearby (within 1km) and/or no direct connection via surface or ground water.



Appendix E Risk Assessment Classification



Qualitative Risk Assessment

CONTEXT

CIRIA RP599 Contaminated Land Risk Assessment Guide, provides a guide to good practice in assessing risks from contaminated land. This distinguishes between the processes of;

- **Risk estimation** – process of estimating risk that defined receptors will suffer harm
- **Risk evaluation** - process of evaluation need for risk management action, with regard to magnitude of risks the level of uncertainty and, if remedial action is needed the objectives and broad costs and benefits

At Phase 1 the **risk estimation** will take the form of a qualitative risk assessment, which will be entirely based on the conceptual model for each potential end-use of the site. Comments on level of uncertainty will also need to be included for each source-pathway-target linkage to allow the confidence in the assessed risks to be understood. The results of the qualitative risk assessment will allow the **risk evaluation** to be concisely described in the following chapters.

At Phase 2 (or later stages) the **risk estimation** will comprise a number of sequential steps all based on the conceptual model:

Interpretation of site investigation data with respect to relevant generic assessment criteria (Tier 1);

- 8) Interpretation of site investigation data with respect to site specific assessment criteria if appropriate (Tier 2), [see Quantitative Risk Assessment guidelines];
- 9) Site specific qualitative risk assessment including input from 1 and 2 [this procedure].

Comments on level of uncertainty will also be included for through the interpretation of site investigation data and the qualitative risk assessment. The results of the qualitative risk assessment will allow the **risk evaluation** to be concisely described in the following chapters.

INTRODUCTION

The following classification has been updated from the previous Envirospire Aspinwall in house procedure developed from DOE Guide to Risk Assessment and Risk Management for Environmental Protection and the Draft Statutory Guidance on Contaminated Land (DoE September 1996). The methodology differs from that presented in Contaminated Land Risk Assessment, A Guide to Good Practice (CIRIA C552, 2001), particularly in terms of the definitions of classification of consequence, which include a consideration of immediacy of hazards.

The key to the classification is that the designation of risk is based upon the consideration of both;

- a) **the magnitude of the potential consequence (i.e. severity).**
[takes into account both the potential severity of the hazard and the sensitivity of the receptor]
- b) **the magnitude of probability (i.e. likelihood)**
[takes into account both the presence of the hazard and receptor and the integrity of the pathway]



DEFINITIONS

Hazard:	A property or situation which in certain circumstances could lead to harm. [The properties of different hazards must be assessed in relation to their potential to affect the various different receptors (see Annex A).]
Risk:	A combination of the probability or frequency of the occurrences of a defined hazard <u>AND</u> the magnitude of the consequences of that occurrence.
Probability:	The mathematical expression of the chance of a particular event in a given period of time [e.g. probability of 0.2 is equivalent to 20% or a 1 in 5 chance].
Likelihood:	Probability; the state or fact of being likely.
Consequences:	The adverse effects (or harm) arising from a defined hazard which impairs the quality of the environment or human health in the short or longer term.
Pollution linkage	An identified pathway is capable of exposing a receptor to a contaminant and that contaminant is capable of harming the receptor

CLASSIFICATION OF CONSEQUENCE



Classification	Definition	Examples
Severe	<p>Highly elevated concentrations likely to result in “significant harm” to human health as defined by the EPA 1990, Part IIA, if exposure occurs.</p> <p>Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce.</p> <p>Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long term maintenance of the population.</p> <p>Catastrophic damage to crops, buildings or property.</p>	<p>Significant harm to humans is defined in circular 02/2000 as death, disease*, serious injury, genetic mutation, birth defects or the impairment of reproductive functions</p> <p>Major fish kill in surface water from large spillage of contaminants from site.</p> <p>Highly elevated concentrations of List I and II substances present in groundwater close to small potable abstraction (high sensitivity)</p> <p>Explosion, causing building collapse (can also equate to immediate human health risk if buildings are occupied)</p>
Medium	<p>Elevated concentrations which could result in “significant harm” to human health as defined by the EPA 1990, Part IIA if exposure occurs.</p> <p>Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce.</p> <p>Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long term maintenance of the population.</p> <p>Significant damage to crops, buildings or property.</p>	<p>Significant harm to humans is defined in circular 02/2000 as death, disease*, serious injury, genetic mutation, birth defects or the impairment of reproductive functions</p> <p>Damage to building rendering it unsafe to occupy e.g. foundation damage resulting in instability.</p> <p>Ingress of contaminants through plastic potable water pipes.</p>
Mild	<p>Exposure to human health unlikely to lead to “significant harm”.</p> <p>Equivalent to EA Category 3 pollution incident including minimal or short lived effect on water quality; marginal effect on amenity value, agriculture or commerce.</p> <p>Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long term maintenance of the population.</p> <p>Minor damage to crops, buildings or property.</p>	<p>Exposure could lead to slight short term effects (e.g. mild skin rash)</p> <p>Surface spalling of concrete</p>

* For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned



Minor	No measurable effect on humans. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects of damage to buildings, structures and services.	The loss of plants in a landscaping scheme. Discoloration of concrete
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CLASSIFICATION OF PROBABILITY

(only applies if there is a possibility of a pollutant linkage being present)

Category	Definition	Examples
High likelihood	There is pollution linkage and an event would appear very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.	<p>a) Elevated concentrations of toxic contaminants are present in soils in the top 0.5m in a residential garden.</p> <p>b) Ground/groundwater contamination could be present from chemical works, containing a number of USTs, having been in operation on the same site for over 50 years.</p>
Likely	There is pollution linkage and all the elements are present and in the right place which means that it is probable 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.	<p>a) Elevated concentrations of toxic contaminants are present in soils at depths of 0.5-1.0m in a residential garden, or the top 0.5m in public open space.</p> <p>b) Ground/ground water contamination could be present from an industrial site containing a UST present between 1970 and 1990. The tank is known to be single skin. There is no evidence of leakage although there are no records of integrity tests.</p>
Low likelihood	There is pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.	<p>a) Elevated concentrations of toxic contaminants are present in soils at depths >1m in a residential garden, or 0.5-1.0m in public open space.</p> <p>b) Ground/ ground water contamination could be present on a light industrial' unit constructed in the 1990s containing a UST in operation over the last 10 years - the tank is double skinned but there is no integrity testing or evidence of leakage.</p>
Unlikely	There is pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.	<p>a) Elevated concentrations of toxic contaminants are present below hardstanding</p> <p>b) Light industrial unit <10 yrs old containing a double-skinned UST with annual integrity testing results available.</p>

Note: A pollution linkage must first be established before probability is classified. If there is no pollution linkage then there is no potential risk. If there is no pollution linkage then there is no need to apply tests for probability and consequence.

For example if there is surface contamination and a major aquifer is present at depth, but this major aquifer is overlain by an aquiclude of significant thickness then there is no pollution linkage and the risks to the major aquifer are not assessed. The report should identify both the source and the receptor but state that because there is no linkage there are no potential risks.

THE CLASSIFICATION OF RISK

Probability (Likelihood)		Consequence			
		Severe	Medium	Mild	Minor
	High likelihood	Very high risk	High risk	Moderate risk	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

Very high risk

There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site *without remedial action*, OR there is evidence that severe-harm to a designated receptor is already occurring.

Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remedial works likely to follow in the short term.

High risk

Harm is likely to arise to a designated receptor from an identified hazard at the site without remedial action.

Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. 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, and if any harm were to occur it is more likely, that the harm would be relatively mild.

Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remedial works may be required in the longer term.



Low risk

It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild.

It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk.

Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remedial works are likely to be relatively limited.

Very Low risk

It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.

No potential risk

There is no potential risk if no pollution linkage has been established.

