

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Knowsley Metropolitan Borough Council - Department of Planning and Development Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Halton Borough Council - Environmental Health Department Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Environmental Health Department Wirral Borough Council - Environmental Health Division Cheshire West and Chester Council - Environmental Health Department	April 2013 February 2013 January 2013 March 2008 November 2012 September 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Not Applicable Annual Rolling Update Annually
Discharge Consents Environment Agency - North West Region	January 2013	Quarterly
Enforcement and Prohibition Notices Environment Agency - North West Region	March 2013	Quarterly
Integrated Pollution Controls Environment Agency - North West Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - North West Region	January 2013	Quarterly
Local Authority Integrated Pollution Prevention And Control Cheshire West and Chester Council - Environmental Health Department Halton Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council - Environmental Health and Consumer Protection Division Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Environmental Health Department Wirral Borough Council - Environmental Health Division	August 2012 February 2013 June 2012 March 2013 May 2009 November 2012	Annually Annual Rolling Update Annual Rolling Update Monthly Not Applicable Annual Rolling Update
Local Authority Pollution Prevention and Controls Cheshire West and Chester Council - Environmental Health Department Halton Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council - Environmental Health and Consumer Protection Division Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Environmental Health Department Wirral Borough Council - Environmental Health Division	August 2012 February 2013 June 2012 March 2013 May 2009 November 2012	Annually Annual Rolling Update Annual Rolling Update Monthly Not Applicable Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Cheshire West and Chester Council - Environmental Health Department Halton Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council - Environmental Health and Consumer Protection Division Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Environmental Health Department Wirral Borough Council - Environmental Health Division	August 2012 February 2013 June 2012 March 2013 May 2009 November 2012	Annually Annual Rolling Update Annual Rolling Update Monthly Not Applicable Annual Rolling Update
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	March 2013	Monthly
Prosecutions Relating to Controlled Waters Environment Agency - North West Region	March 2013	Monthly
Registered Radioactive Substances Environment Agency - North West Region	January 2013	Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable

Agency & Hydrological	Version	Update Cycle
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	January 2013	Quarterly
Water Abstractions Environment Agency - North West Region	January 2013	Quarterly
Water Industry Act Referrals Environment Agency - North West Region	January 2013	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	January 2011	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2012	Annually
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2012	Annually
Source Protection Zones Environment Agency - Head Office	January 2013	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	January 2013	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	January 2013	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	January 2013	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	January 2013	Quarterly
Flood Defences Environment Agency - Head Office	January 2013	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	January 2013	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	January 2013	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North West Region - South Area	January 2013	Quarterly
Local Authority Landfill Coverage Cheshire County Council (now part of Cheshire East Council) - Environmental Planning Department Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Planning Department Halton Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Merseyside Waste Disposal Authority Wirral Borough Council	May 2000 May 2000 May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Cheshire County Council (now part of Cheshire East Council) - Environmental Planning Department Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Planning Department Halton Borough Council - Environmental Health Department Knowsley Metropolitan Borough Council Liverpool City Council - Liverpool Environmental Health & Trading Standards Division Merseyside Waste Disposal Authority Wirral Borough Council	February 2005 May 2000 May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable 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	March 2013	Bi-Annually
Explosive Sites Health and Safety Executive	March 2013	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Planning Department Liverpool City Council Cheshire County Council (now part of Cheshire East Council) - Planning Department Halton Borough Council Knowsley Metropolitan Borough Council Wirral Borough Council Cheshire West and Chester Council - Planning Department	December 2008 December 2012 July 2008 July 2012 July 2012 November 2012 October 2012	Not Applicable Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annually
Planning Hazardous Substance Consents Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Planning Department Liverpool City Council Cheshire County Council (now part of Cheshire East Council) - Planning Department Halton Borough Council Knowsley Metropolitan Borough Council Wirral Borough Council Cheshire West and Chester Council - Planning Department	December 2008 December 2012 July 2008 July 2012 July 2012 November 2012 October 2012	Not Applicable Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annually

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	November 2012	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2013	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Planning Department Halton Borough Council Knowsley Metropolitan Borough Council Liverpool City Council Wirral Borough Council	February 2013 February 2013 February 2013 February 2013 February 2013	As notified As notified As notified As notified As notified
Areas of Unadopted Green Belt Ellesmere Port And Neston Borough Council (now part of Cheshire West and Chester Council) - Planning Department Halton Borough Council Knowsley Metropolitan Borough Council Liverpool City Council Wirral Borough Council	February 2013 February 2013 February 2013 February 2013 February 2013	As notified As notified As notified As notified As notified
Areas of Outstanding Natural Beauty Natural England	March 2013	Bi-Annually
Environmentally Sensitive Areas Natural England	February 2013	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	November 2012	Bi-Annually
Marine Nature Reserves Natural England	August 2012	Bi-Annually
National Nature Reserves Natural England	February 2013	Bi-Annually
National Parks Natural England	February 2013	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 2013	Annually
Ramsar Sites Natural England	February 2013	Bi-Annually
Sites of Special Scientific Interest Natural England	February 2013	Bi-Annually
Special Areas of Conservation Natural England	February 2013	Bi-Annually
Special Protection Areas Natural England	February 2013	Bi-Annually

A selection of organisations who provide data within this report

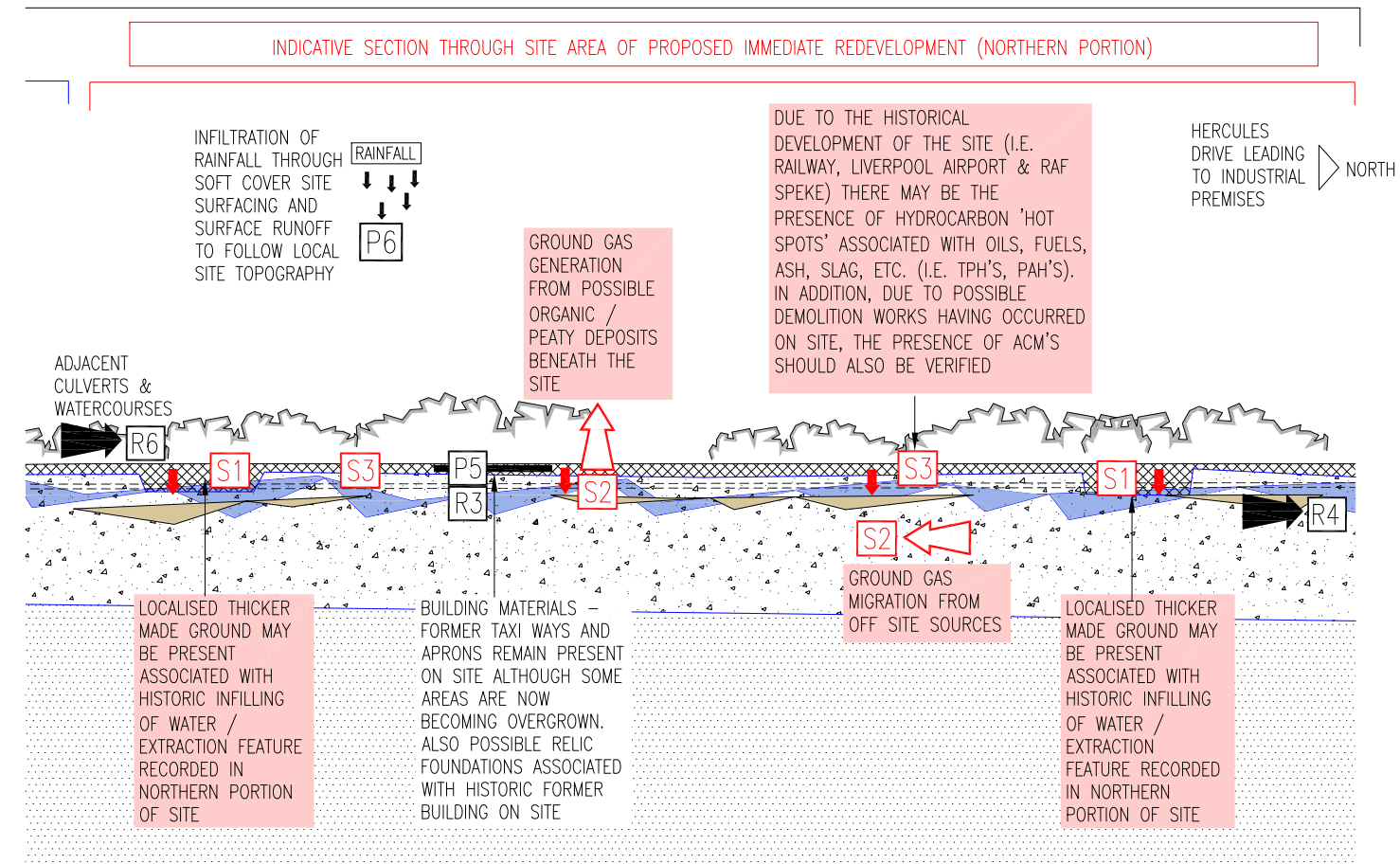
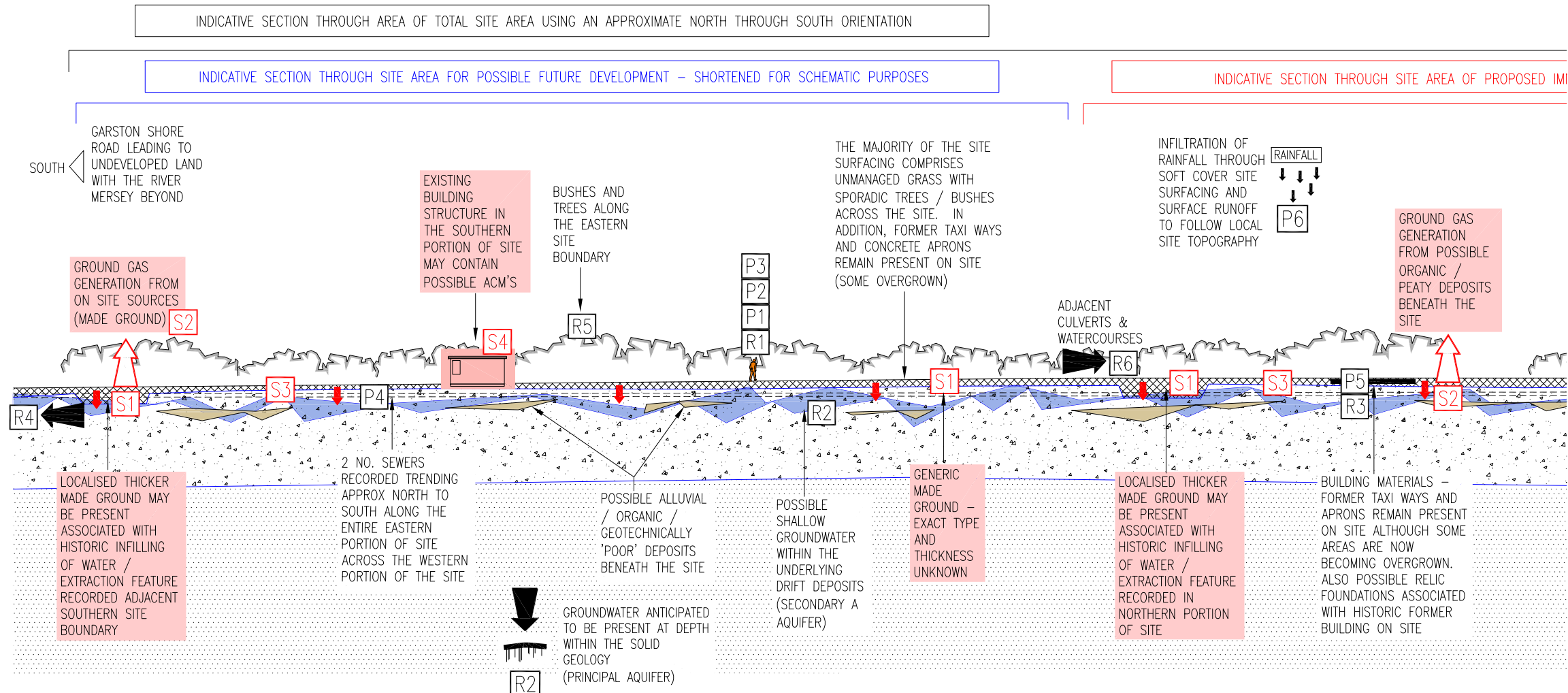
Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Health Protection Agency	
Ove Arup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

Contact	Name and Address	Contact Details
1	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	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
3	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
4	Health and Safety Executive Explosives Inspectorate, 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
5	Liverpool City Council 5th Floor, Millennium House, 60 Victoria Street, Liverpool, Merseyside, L1 6JF	Telephone: 0151 233 5619 Fax: 0151 233 5672 Website: www.liverpool.gov.uk
6	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmark.co.uk Website: www.landmarkinfo.co.uk
7	Liverpool City Council 5th floor, Steers House, Canning Place, Liverpool, Merseyside, L1 8JA	Telephone: 0151 227 3911 Fax: 0151 709 1481 Website: www.liverpool.gov.uk
8	Natural England Northminster House, Northminster Road, Peterborough, Cambridgeshire, PE1 1UA	Telephone: 0845 600 3078 Fax: 01733 455103 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
9	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 Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

APPENDIX V

Preliminary Conceptual Site Model (CSM)



STRATA DETAILS



MADE GROUND:
PUBLISHED BGS DATA INDICATES THERE IS NO RECORDED EVIDENCE OF SIGNIFICANT MADE GROUND MATERIALS ON OR WITHIN CLOSE PROXIMITY TO THE SITE. HOWEVER, TAKING IN TO ACCOUNT THE SITES PREVIOUS DEVELOPMENT WITH THE CONSTRUCTION OF TAXI WAYS AND ASSOCIATED BUILDINGS IT IS LIKELY THAT THERE WILL BE AREAS OF MADE GROUND PRESENT ON SITE. IN ADDITION, SINCE THERE HAVE BEEN 3 NO. EXTRACTION/WATER FEATURES HISTORICALLY RECORDED ON SITE (SEE HISTORICAL PLANS IN APPENDIX IV) THERE MAY BE DEEPER AREAS OF MADE GROUND DUE TO THE INFILLING OF THESE FEATURES. THERE IS ALSO AN ADDITIONAL EXTRACTION / WATER FEATURE WHICH STRADDLES THE NORTH-WESTERN BOUNDARY OF THE SITE, BUT WHICH IS ONLY RECORDED ON THE EARLIEST HISTORICAL PLAN, C.1849 – C.1850. THE HISTORICAL TRIAL PIT & BOREHOLE RECORD SHEETS COMPLETED BY SOIL MECHANICS HAVE IDENTIFIED MADE GROUND TO DEPTHS OF BETWEEN C.0.10M UP TO C.1.70M BELOW GROUND LEVELS (BGL'S) WHICH INITIALLY COMPRISED SANDY SILTY TOPSOIL TO DEPTHS OF C.0.10M UP TO C.0.60M BGL'S.



DRIFT DEPOSITS:
BGS DATA INDICATES THE SITE IS INITIALLY UNDERLAIN BY BLOWN SAND (SHIRDOLEY HILL SAND) WHICH IN TURN OVERLIES BOULDER CLAY DEPOSITS. DUE TO THE PRESENCE OF THE HISTORICALLY RECORDED EXTRACTION / WATER FEATURES PRESENT ON SITE AS WELL AS THE DRAIN / WATERCOURSE RECORDED ADJACENT TO THE EASTERN BOUNDARY OF THE SITE, SOME LOCALISED "GEOTECHNICALLY POOR" NATURAL DRIFT DEPOSITS MAY ALSO BE PRESENT. THESE DEPOSITS MAY COMPRISE SOFT TO FIRM SILTY CLAY, SILT, SAND, GRAVEL AND ALSO PEAT. FOLLOWING A REVIEW OF THE AVAILABLE TRIAL PIT AND BOREHOLE DATA ATTACHED IN APPENDIX III, THE SITE IS SHOWN TO BE UNDERLAIN BY LOOSE SILTY SAND TO DEPTHS OF BETWEEN C.0.55M UP TO C.1.70M BGL'S BEFORE ENCOUNTERING THE INITIALLY FIRM BECOMING STIFF SANDY CLAY WITH OCCASIONAL LENSES OF SAND AND OCCASIONAL GRAVEL. WITHIN REPORT 1000, THE DRIFT DEPOSITS COMPRISED SAND AND CLAY DEPOSITS TO A MAXIMUM DEPTH OF C.6.00M BGL'S.



SOLID GEOLOGY:
THE SOLID GEOLOGY UNDERLYING THE SITE IS SHOWN TO COMPRISE THAT OF THE TRIASSIC PEBBLE BEDS WHICH ARE CONTAINED WITHIN THE SHERWOOD SANDSTONE DEPOSITED DURING THE PERIOD OF THE EARTH'S HISTORY KNOWN AS THE TRIASSIC. THE SOLID DEPOSITS HAVE PREVIOUSLY BEEN RECORDED DURING THE FIELDWORKS COMPLETED ON THE SITE ADJACENT TO THE NORTHERN BOUNDARY, AND ENCOUNTERED AT A DEPTH OF C.17M



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The contractor shall check all dimensions on site before commencement of any works. No dimensions to be scaled off this drawing.
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CRITICAL POLLUTANT LINKAGES	
SOURCE	<ol style="list-style-type: none">MADE GROUND ASSOCIATED WITH THE HISTORICAL DEVELOPMENT OF THE SITEPOSSIBLE HAZARDOUS GROUND GAS PRODUCTION / MIGRATION FROM BOTH ON SITE AND OFF SITE SOURCES (I.E. MADE GROUND & INFILLED EXTRACTION / WATER FEATURES), AS WELL AS THE PRESENCE OF ORGANIC ALLUVIAL DEPOSITSDUE TO THE HISTORICAL DEVELOPMENT OF THE SITE (I.E. RAILWAY, LIVERPOOL AIRPORT & RAF SPEKE) THERE MAY BE THE PRESENCE OF HYDROCARBON 'HOT SPOTS' ASSOCIATED WITH OILS, FUELS, ASH, SLAG, ETC. (I.E. TPH'S, PAH'S). IN ADDITION, DUE TO POSSIBLE DEMOLITION WORKS HAVING OCCURRED ON SITE, THE PRESENCE OF ACM'S SHOULD ALSO BE VERIFIEDDURING THE SITE WALKOVER, IT WAS IDENTIFIED AN EXISTING BUILDING STRUCTURE MAY CONTAIN POSSIBLE ACM'S.
PATHWAY	<ol style="list-style-type: none">INGESTIONINHALATION OF INDOOR / OUTDOOR AIRDERMAL CONTACTMIGRATION THROUGH EXISTING SERVICESDIRECT CONTACT WITH BUILDING MATERIALSSURFACE RUN OFF
RECEPTOR	<ol style="list-style-type: none">HUMAN HEALTH (END USERS AND CONSTRUCTION WORKFORCE)GROUNDWATER (SECONDARY A AQUIFER & PRINCIPAL AQUIFER)BUILDING MATERIALS*ADJACENT SITESFLORA AND FAUNA*NEARBY CULVERTS AND WATERCOURSES <p>* = Not included in the Human Health & Controlled Waters Risk Assessment</p>

rev.	date	amendments	drawn	chckd

Client:
ADEPT CONSULTING ENGINEERS LTD

Project Title:
Proposed Commercial Development
Hercules Drive
Speke, Liverpool, L24 8AD

Drawing Title:
Conceptual Site Model

Scale at A3: NTS @ A3	Date: 09.05.13	Drawn by: P.D	Approved by: A.J.H
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Job Ref: 13-249	Drg no: —	Rev: —
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