OASIS Geophysics fields

Geophysics													
Solid geology													
Drift geology													
Techniques	Magnetometry	Magnetic susceptibility	Resistivity - area	Resistivity - profile	Ground penetrating radar	Electromagnetic	Seismic	Microgravity	Marine - side scan sonar	Marine - singlebeam echosounder	Marine - multibeam echosounder	Marine - sub-bottom profiler	Marine - magnetometry
Instrumentation	y	y	y	y	y	y	y	y	y	y	y	y	y
Size of survey area	y	y	y	y	y	y	y	y	y	y	y	y	y
Traverse separation	y	y	y	y	y	y	y	y	y	y	y	y	y
Reading interval	y	y	y	y	y	y	y	y	y	y	y	y	y
Notes	y	y	y	y	y	y	y	y	y	y	y	y	y
Instrument type	y												y
Instrument set-up	y												
Resolution	y												
Sensor type		y											y
Type of measurement		y											
Frequency		y				y			y	y	y	y	
Electrode configuration			y	y									
Electrode separation			y	y									
Electrode separation qualifier			y	y									
Centre frequency of antennae					y								
Time window					y								
Average subsurface velocity					y							y	
Method of velocity estimation					y					y	y	y	
Individual/parallel profile					y								
Technique						y	y						
Coil separation						y							

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Phase						y							
Other technique													
Range									y				
Average water velocity										y	y		
Beam width nadir											y		

Below is the current guidance on using the geophysics section of the OASIS form with comments on things that we are already thinking of changing in the new system. Please use the comments section at the bottom of the blog/page to give us your opinions.

Geophysical Survey

Geology - introduction

The existing pick-lists are drawn from terms used in the English Heritage Geophysical Survey Database and/or published on the British Geological Survey 1:625,000 solid and drift geology maps. Neither list is comprehensive and users may add additional terms.

SOLID GEOLOGY

Please refer to the British Geological Survey 1:625, 000 Solid Geology maps of the United Kingdom (North and South sheets) (preferably 2002 edition) (available through http://www.bgs.ac.uk/catalogue/docs/ssgm.pdf) for guidance. If you do not know the solid geology underlying the survey area, please choose 'unknown' from the pick-list.

In the new system - this could be generated automatically using the project location to bring the correct geology from BGS WMS.

This field is mandatory

DRIFT GEOLOGY

The Drift geology is based upon the 1:625000 Quaternary map of the United Kingdom 1st Edition 1977(North and South Sheets) published by the British Geological Survey (http://www.bgs.ac.uk/catalogue/docs/ssgm.pdf). If you do not know the solid geology underlying the survey area, please choose 'unknown' from the pick-list.

In the new system - this could be generated automatically using the project location to bring the correct geology from BGS WMS.

This field is mandatory

TECHNIQUES

Select the technique used on the Geophysical Survey from the drop-down menu. If the technique does not appear on the drop-down list, please select 'Other'. On selecting a technique the user will be taken to a new screen to record details about the methodology employed. More than one can be entered.

The list of techniques in the table above.

This field is mandatory

OASIS Geophysics fields

INSTRUMENTATION

The drop-down lists for Instrumentation is filtered to present equipment relevant to the specific survey technique. The list is not comprehensive and if the Instrument you used does not appear on the list, add your own text in the 'other' box.

See Appendix 1: list of instruments by techniques at the end of the document

This field is mandatory

INSTRUMENT TYPE

Please select the instrument type used to conduct the magnetometry survey. If the type you are looking for does not appear in the drop-down list, add your own text in the 'other' box.

- Magnetometry: Fluxgate, Alkali Vapour, Proton
- Marine magnetometry: Total field, Vertical gradiometer, Horizontal gradiometer

This field is mandatory

SIZE OF SURVEY AREA

Please enter the size of the survey grid. For Ground Penetrating Radar please express this value in hectares, other type use square meters or hectares. Numbers may be entered with up to two decimal places. Please only enter numeric data in this field - do not include letters or punctuation.
This field is mandatory

INSTRUMENT SET-UP

Please select the set-up relevant to the instrumentation used from the drop-down list.

- Single, Dual, Multiple

This field is mandatory

RESOLUTION

Please select the appropriate value for the resolution from the drop-down list. All values are expressed in nanoTesla (nT).

- 1, 0.1, 0.01, 0.001, 0.0001, 0.00001, 0.000001

This field is mandatory

TRAVERSE SEPARATION

Please enter the traverse separation value expressed in metres. Numbers may be entered with up to two decimal places.
This field is mandatory

READING INTERVALS

Please enter the reading interval expressed in metres. Numbers may be entered with up to two decimal places.
This field is mandatory

SENSOR TYPE

Select the relevant sensor type from the drop-down list.

- Marine - magnetometry: Proton, Caesium
- Magnetic susceptibility: Loop, Probe, Bench
-

This field is mandatory

TYPE OF MEASUREMENT

If 'Loop' Sensor type is selected please choose 'Volume Specific Susceptibility'. Otherwise the user must choose either 'Mass Specific Susceptibility' or 'Volume Specific Susceptibility' from the drop-down list.

- Mass specific susceptibility, Volume specific susceptibility

This field is mandatory

FREQUENCY

Enter the frequency of the equipment used, expressed in kilohertz (kHz). More than one can be entered.

This field is mandatory

ELECTRODE CONFIGURATION

Select appropriate electrode configuration from the drop-down menu. If the electrode configuration you are looking for does not appear in the drop-down list, add the configuration in the 'other' box.

- Twin-electrode, Wenner, Dipole-dipole, Square, Schlumberge

This field is mandatory

ELECTRODE SEPARATION

Enter the value, expressed in metres for the electrode separation. Numbers may be entered with up to two decimal places. Use the ELECTRODE SEPARATION QUALIFIER box to choose either Constant Separation or Expanded Separation.
This field is mandatory

ELECTRODE SEPARATION QUALIFIER

Please choose either Constant Separation or Expanded Separation.

- Constant separation, Expanded separation

This field is mandatory

CENTRE FREQUENCY OF ANTENNAE

Please enter the centre frequency of antennae value expressed in MHz (megahertz).
This field is mandatory

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TIME WINDOW

Enter value for time window expressed in nano-seconds (ns).
This field is mandatory

AVERAGE SUB-SURFACE VELOCITY

Enter the value for the Average sub-surface velocity expressed in metres per nano-second (m/ns)
This field is mandatory

METHOD OF VELOCITY ESTIMATION

Select the method used to estimate velocity from the drop-down list. If the method you are looking for does not appear in the drop-down list, please add in the 'other' box.

- Marine: Bar check, Sound Velocity Probe (SVP)
- GPR: Common Mid Point analysis, Measurement to a known depth target, Analysis of hyperbolic response

This field is mandatory

INDIVIDUAL / PARALLEL PROFILE

Please select either individual or parallel profile from the drop-down menu.

- Individual profile, Parallel profile

This field is mandatory

TECHNIQUE

Please select the technique used from the drop-down list.

- Electromagnetic: Continuous sinusoidal transmission (Slingram), Pulsed Induction
- Seismic: Reflection, Refraction

This field is mandatory

COIL SEPARATION

Please enter the value for the Coil Separation expressed in metres.

PHASE

Select value from the drop-down menu.

- In-phase, Quadrature, In-phase and Quadrature

SIDE SCAN SONAR RANGE

Please enter the sidescan sonar slant range value expressed in metres. More than one can be entered.

This field is mandatory

AVERAGE WATER VELOCITY

Please enter the average water velocity value, expressed in metres per second (m/s), used when acquiring depth soundings.

BEAM WIDTH NADIR

Please enter the beam width nadir value, expressed in degrees, used for acquisition of multibeam bathymetry.

NOTES

The notes field provides an opportunity to record any other details relevant to the technique used or factors affecting the results of the survey.

Appendix 1: List of instruments by techniques

TYPE OF TECHNIQUE	INSTRUMENT
ELECTROMAGNETIC	GEONICS EM31
ELECTROMAGNETIC	GEONICS EM38
ELECTROMAGNETIC	GEONICS EM38B
ELECTROMAGNETIC	DECCO
ELECTROMAGNETIC	Littlemore
ELECTROMAGNETIC	PIM
ELECTROMAGNETIC	GEONICS EM38DD
GROUND PENETRATING RADAR	SENSORS AND SOFTWARE NOGGIN 250
GROUND PENETRATING RADAR	UTSI ELECTRONICS GROUNDVUE 3
GROUND PENETRATING RADAR	UTSI ELECTRONICS GROUNDVUE 4
GROUND PENETRATING RADAR	GSSI
GROUND PENETRATING RADAR	GSSI SI3000
GROUND PENETRATING RADAR	GSSI SIR10
GROUND PENETRATING RADAR	GSSI SIR2
GROUND PENETRATING RADAR	GSSI SIR2000
GROUND PENETRATING RADAR	GSSI SIR3
GROUND PENETRATING RADAR	MALA RAMAC
GROUND PENETRATING RADAR	PULSE EKKO 100
GROUND PENETRATING RADAR	PULSE EKKO 1000
GROUND PENETRATING RADAR	PULSE EKKO 4

OASIS Geophysics fields

GROUND PENETRATING RADAR	SENSORS AND SOFTWARE NOGGIN 500
GROUND PENETRATING RADAR	SENSORS AND SOFTWARE PULSE EKKO
GROUND PENETRATING RADAR	UTSI ELECTRONICS GROUNDVUE 1
GROUND PENETRATING RADAR	UTSI ELECTRONICS GROUNDVUE 2
MAGNETIC SUSCEPTIBILITY	BARTINGTON
MAGNETIC SUSCEPTIBILITY	BARTINGTON MS1
MAGNETIC SUSCEPTIBILITY	BARTINGTON MS2
MAGNETIC SUSCEPTIBILITY	RANDALL MS METER
MAGNETIC SUSCEPTIBILITY	TR SYSTEMS MS METER
MAGNETOMETRY	BARTINGTON
MAGNETOMETRY	BARTINGTON GRAD601
MAGNETOMETRY	BARTINGTON GRAD601-2
MAGNETOMETRY	ELSEC 592H
MAGNETOMETRY	FEREX 4-021
MAGNETOMETRY	GEM-GSM19TG
MAGNETOMETRY	GEOMETRICS G858
MAGNETOMETRY	GEOSCAN FM18
MAGNETOMETRY	GEOSCAN FM256
MAGNETOMETRY	GEOSCAN FM36
MAGNETOMETRY	GEOSCAN RM15
MAGNETOMETRY	PHILPOT AM01
MAGNETOMETRY	SCINTREX CS-2
MAGNETOMETRY	SCINTREX SMARTMAG SM-4G
MAGNETOMETRY	SCINTREX SMARTMAG.
MAGNETOMETRY	SCINTREX IGS -2 MP4
MAGNETOMETRY	PLESSEY FLUXGATE
MAGNETOMETRY	LITTLEMORE FLUXGATE
MAGNETOMETRY	LITTLEMORE GRADIOMETER
MARINE - MAGNETOMETRY	GEOMETRICS 882

OASIS Geophysics fields

MARINE - MAGNETOMETRY	MARINE MAGNETICS EXPLORER
MARINE - MAGNETOMETRY	MARINE MAGNETICS 3000M SEASPY
MARINE - MAGNETOMETRY	MARINE MAGNETICS SEASPY
MARINE - MAGNETOMETRY	MARINE MAGNETICS GRADIOMETER
MARINE - MULTIBEAM ECHOSOUNDER	KONGSBERG EM3002
MARINE - MULTIBEAM ECHOSOUNDER	KONGSBERG EM3002-D
MARINE - MULTIBEAM ECHOSOUNDER	GEOACOUSTICS GEOSWATH SYSTEM
MARINE - MULTIBEAM ECHOSOUNDER	RESON SEABAT 8101
MARINE - MULTIBEAM ECHOSOUNDER	RESON SEABAT 8125
MARINE - MULTIBEAM ECHOSOUNDER	RESON SEABAT 7125
MARINE - SIDE SCAN SONAR	EDGETECH 4200-FS
MARINE - SIDE SCAN SONAR	EDGETECH 4100
MARINE - SIDE SCAN SONAR	EDGETECH 4125-P
MARINE - SIDE SCAN SONAR	EDGETECH 4300-MPX
MARINE - SIDE SCAN SONAR	EDGETECH/EG&G 272 TD
MARINE - SIDE SCAN SONAR	KLEIN 3000
MARINE - SIDE SCAN SONAR	KLEIN 3900
MARINE - SIDE SCAN SONAR	KLEIN 5000
MARINE - SIDE SCAN SONAR	GEOACOUSTICS 941/942
MARINE - SINGLEBEAM ECHOSOUNDER	KONGSBERG EA502
MARINE - SINGLEBEAM ECHOSOUNDER	KNUDSEN 320M
MARINE - SINGLEBEAM ECHOSOUNDER	KNUDSEN 320B
MARINE - SINGLEBEAM ECHOSOUNDER	VALEPORT MIDAS
MARINE - SINGLEBEAM ECHOSOUNDER	ATLAS DESO
MARINE - SUB-BOTTOM PROFILER	APPLIED ACOUSTIC ENGINEERING AA200
MARINE - SUB-BOTTOM PROFILER	EDGETECH 3100P CHIRP
MARINE - SUB-BOTTOM PROFILER	EDGETECH 240 SUB-TOW BOOMER
MARINE - SUB-BOTTOM PROFILER	GEOACOUSTICS GEOPULSE 5430A/136A
MARINE - SUB-BOTTOM PROFILER	GEOACOUSTICS SURFACE-TOW BOOMER

OASIS Geophysics fields

MARINE - SUB-BOTTOM PROFILER	KLEIN SYSTEM 3000 CHIRP
MARINE - SUB-BOTTOM PROFILER	SES PROBE 5000 PINGER
MICROGRAVITY	LACOSTE AND ROMBERG MODEL D
MICROGRAVITY	SCINTREX CG-5
RESISTIVITY - AREA	ABEM SAS-300
RESISTIVITY - AREA	ABEM TERRAMETER SAS300B
RESISTIVITY - AREA	AXSCAN MODEL NO. 1
RESISTIVITY - AREA	BRADPHYS MK3
RESISTIVITY - AREA	CAMPUS GEOPULSE
RESISTIVITY - AREA	CAMPUS GEOPULSE 50
RESISTIVITY - AREA	GEOSCAN RM15
RESISTIVITY - AREA	GEOSCAN RM4
RESISTIVITY - AREA	KIT FORM MODEL
RESISTIVITY - AREA	MARTIN CLARK
RESISTIVITY - AREA	RMCA 4
RESISTIVITY - AREA	TR SYSTEMS RESISTIVITY METER
RESISTIVITY - AREA	GEOSCAN RM15 with MPX15
RESISTIVITY - AREA	RK01
RESISTIVITY - PROFILE	ABEM SAS-300
RESISTIVITY - PROFILE	ABEM TERRAMETER SAS300B
RESISTIVITY - PROFILE	ADVANCED GEOSCIENCES STING/SWIFT SYSTEM
RESISTIVITY - PROFILE	CAMPUS GEOPULSE
RESISTIVITY - PROFILE	CAMPUS GEOPULSE 50
RESISTIVITY - PROFILE	CAMPUS TIGRE 64
RESISTIVITY - PROFILE	GEOSCAN RM15
RESISTIVITY - PROFILE	GEOSCAN RM4
RESISTIVITY - PROFILE	MEGGA EARTH TESTER
SEISMIC	TERRALOC MK6
TYPE	DESCR

OASIS Geophysics fields

ELECTROMAGNETIC	GEONICS EM31
ELECTROMAGNETIC	GEONICS EM38
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