



## 1: HERITAGE.

### 1.01 Architectural Structures and Buildings.

- 1.01.01 **Ancient** refers to a period before modern history and generally more than 200 years ago.
- 1.01.02 **Old** refers to a period more recent than Ancient but unlikely to be within living memory.
- 1.01.03 **Modern** refers to a period usually within living memory and probably post second world war.
- 1.01.04 **Post-holes etc** refers to evidence of excavations for the placement of wooden posts that may no longer be present.

### 1.02 Flooring Evidence.

- 1.02.01 **Wooden** refers to evidence of wooden floor construction. This may be actual wood or evidence of the previous existence of wooden items that have rotted away leaving a marker(s).
- 1.02.02 **Stone** refers to evidence of a floor or part-floor that was constructed in (usually) stone slabs.
- 1.02.03 **Earth Compact** refers to evidence of compacted man-made compacted earth floors. This evidence can also suggest compactions by animals as in a stable or byre.
- 1.02.04 **Concrete** refers to flooring made partly or entirely of a man-made mixture of geo-conglomerates usually containing a limestone derivative as a binder.

### 1.03 Hoards / Value.

- 1.03.01 **Trove/Treasure** - This completed Report-box indicates evidential likelihood of the presence of Heritage (see above) of significant importance and/or value and meriting recommendation for prompt involvement with S4P's expert partner firm **MERLIN BURROWS Ltd** - who can help and advise, having expertise with the incidence and operation of 'The Portable Antiquities Scheme', its overriding 'Treasure Act 1996', and that Act's related 'Code of Practice'.
- 1.03.02 **Crimes** refers to evidence that may indicate that a crime has possibly been committed.  
**NOTE that appropriate, considered, independent advice MUST be obtained as to the next actions and steps to be taken.**
- 1.03.03 **Other** refers to items of special interest or of unusual character meriting additional attention.

## 2: SUB-STRATA.

### 2.01 Natural Presence.

- 2.01.01 **Sink Holes** are cavities in the ground that form when water erodes an underlying rock layer. Two types of sinkholes exist ... type a) forms when the roof of a cave collapses and exposes the underground cavern ... type b) forms when water dissolves the rock beneath soil and creates an underground chasm - without rock to support it the soil layer collapses and creates a hole on the surface. The sink hole may be apparent on the surface or may be partially or fully refilled.

## SURVEY DEFINITIONS & GLOSSARY.



- 2.01.02 **Caves/Caverns** are as above but usually without collapse.
- 2.01.03 **Fractures** refers to geological anomalies which may also relate to sink holes or caves or caverns.
- 2.01.04 **Compactions** occur where adjoining soil and/or strata masses have interacted. See also 1.02.03.

### 2.02 Glacial / Deposits.

- 2.02.01 **Boulders** refers to sub-surface evidence of significant glacial deposits left behind when glaciers receded at the end of an ice age event - often referred to as glacial erratics.
- 2.02.02 **Rocks + Shale** as 2.02.01 but may include infill of smaller boulders and shales.
- 2.02.03 **Minerals** are materials meeting five requirements. They are 1) naturally occurring, 2) inorganic, 3) solids, 4) of a definite chemical composition, and 5) have an ordered internal structure.

### 2.03 Contaminations. *Note – Indication only !*

*For certainty & analysis, separate independent ground investigations will be required.*

- 2.03.01 **Liquids** present refers to liquid substances that may detectably be lying in situ; or be in an observable intermediate stage in a process of being absorbed into the ground or into nearby water, thereby potentially contaminating the neighbouring soil structure.
- 2.03.02 **Solids/Other** presence refers to powders or small solids (eg.sands) or other contaminants that are detectably in situ and are/may observably be in the process of being absorbed into the ground or into nearby water, thereby potentially contaminating the neighbouring soil structure.

## 3: MAN-MADE.

### 3.01 Mining / Quarrying.

- 3.01.01 **Bell Mines** or 'Bell Pit Mines' are a primitive form of mining usually with a narrow surface entrance that then opens up as the substances to be mined are encountered. They have been in existence since Neolithic times but tended to fall out of use by the early 1800s.
- 3.01.02 **Deep Mining** means evidence of the exploitation of coal or mineral deposits by underground mining methods. 'Deep' is often interpreted as meaning with evidence of operations leading to or consisting of workings descending even to 5,000 ft (1.5 km) or more.
- 3.01.03 **Quarries** typically refers to a large, deep pit, from which stone or other materials are or have been extracted.
- 3.01.04 **Other Excavation** refers to the site of excavation that may be a part of other operations in section 3; and/or may be incomplete or unfinished building operations.



### 3.02 Trenching.

- 3.02.01 **Utilities** refer to evidence of trenching for utilities. Usually S4P can detail which utility is in place but NOTE - the **SATSCAN**® process cannot specify, when 'plastic' piping is used.
- 3.02.02 **Watercourses** refers to existing and former rivers and streams above ground - but can also refer to routes of underground passages of water that can be present for all or part of any year. The water may be fresh or be run-off from other non-precipitation sources. Please also see Section 6: **WATERCOURSES**.

### 3.03 Liquids Tanks.

- 3.03.01 **Lined** are usually an underground void, man-made, with an internal presence of a lining to protect contents or surrounding ground conditions. See also 6.01.05 **Sumps**.
- 3.03.02 **Unlined** refers to a man-made enclosed void that does not have a lining material, originally intended for storage of a substance (usually liquid) - usage may have changed over time.

### 3.04 Other Engineering.

- 3.04.01 **Pylon bases**. These are most usually for structures placed to carry electrical cables above ground but which may occasionally be purposed for other utility tasks.
- 3.04.02 **Poles/Posts**. This can mean the sites of physical poles or posts but may also indicate an historical excavation of a site that previously contained a post or pole no longer present.
- 3.04.03 **Foundations**. Refers usually to sub-surface man-made deposits of load bearing substances.

## 4: ORGANIC / BIOLOGICAL.

### 4.01 Human Remains.

- 4.01.01 **Ancient/Old** here refers to a period likely to be before modern history / living memory.
- 4.01.02 **Modern** refers to a period usually within living memory and probably post-second world war.
- 4.01.03 **Single** refers to the probable site of a single human burial. See also 1.03.02 **Crimes** above.
- 4.01.04 **Multiple** refers to the probable site of more than one human burial but see 4.01.05 below.
- 4.01.05 **Cemeteries** will usually suggest the site of multiple organised burials often in conjunction or proximity with the site of a current or previous place of worship.

### 4.02 Animal / Veterinary.

- 4.02.01 **Remains** generally suggests the site of sub-surface animal remains that may have been intentionally buried; or may simply be the site at which the animal died.
- 4.02.02 **Pits** refer to man-made sites of mass animal burial including as a result of purposeful slaughter.



- 4.02.03 **Probable Habitats** usually suggests evidence of an underground longer-term habitat of animal species including but not limited to badgers or rabbits.

#### 4.03 Plantings / Growth.

- 4.03.01 **Tree Bole(s)** indicates the presence of the stem(s) or trunk(s) of a tree(s) – and may include the transition area from root to trunk.
- 4.03.02 **Trunks/Limbs** refers to those parts of a tree apparent above ground whilst the tree is alive but which may have become sub-surface through collapse or felling.
- 4.03.03 **Hedge removals** will indicate evidence of a pre-existing hedge that is no longer in-situ.

### 5: MILITARY.

#### 5.01 Mines.

- 5.01.01 **Individual Items** refers to an individual device originally designed or deployed to cause injury or death. **NOTE that Expert Advice MUST be independently sought before interfering with same.**
- 5.01.02 **Minefields** refers to a site(s) of multiple individual items as described at 5.01.01 above.

#### 5.02 Munitions & Weapons.

- 5.02.01 **Bombs/Ammo** refers to bombs usually deployed from the air and ammunition that may be buried or come from the result of active war engagement.
- 5.02.02 **Weapons** usually refers to military armaments but may also mean items of civilian origin. **NOTE - there may be a statutory or local need for independent notification to appropriate authorities, which action is encouraged in any case.** See also 1.03.02 Crimes above.
- 5.02.03 **Dumps** are often associated with periods of military conflict or civil unrest when substantial amounts of weaponry have been purposefully secreted.
- 5.02.04 **Aircraft/Equipment.** This item will likely refer to the site of a crashed aircraft but on occasion may refer to purposefully-secreted artefacts that have been buried with the intention of preventing an enemy or civilians from discovering same.
- 5.02.05 **Vehicles** refers to all manner of wheeled and tracked (and usually motorised) modes of transportation. Occasionally these can be civilian rather than military.

#### 5.03 Structural.

- 5.03.01 **Bunkers** refer to man-made storage facility for retention of munitions or to facilitate defensive measures. (Example – WWII ‘Pill-box’).
- 5.03.02 **Complexes** refer to multiple occurrences of item defined in section 5.03.01 and may include accommodation structures designed for personnel and/or parking of transport. These may be ancient or modern (for age see other notes).



## 6: WATERCOURSES.

### 6.01 Type / Presence:

- 6.01.01 **Streams, Canals** refers to rivers and streams above ground but can also refer to routes of underground passage of water that can be present for all or part of any year. The water may be fresh or be run-off from other non-precipitation sources.
- 6.01.02 **Reservoirs** are usually man-made but occasionally will be areas of water retention that occur naturally and are now or have been in the past used as a water source.
- 6.01.03 **Drainage** refers to liquid drainage, in the form of laid pipes or of open drains or as ditches or culverts. Types are a) *Waste*: Waste refers to foul-water drainage managed by pipework, including any such provision for sewage. b) *Storm Drains*: refers to storm water drainage, in the form of laid pipes or of open drains such as ditches or culverts.
- 6.01.04 **Ditches** refers to man-made longitudinally-dug depressions (usually) made to facilitate drainage of some sort or to deter animals from crossing from one area to another.
- 6.01.05 **Sumps** are usually areas constructed to hold (often undesirable) liquids. In cave formations a sump can be an area that holds water between two dry sections and is seen as being similar to a 'U bend' in plumbing.

### 6.02 Condition.

- 6.02.01 **Flow** refers to a water course that flows during part or all of any year, whereas:
- 6.02.02 **Bog** refers to an area of land that tends to retain water for all or most of any year and usually does not have an exit point.
- 6.02.03 **Dry** refers to a previously wet watercourse that existed in the past.

## 7: USAGE & ACCESS CHANGES.

- 7.01.01 **Usage** refers to discernible usage information for example part of a field previously used as an orchard.
- 7.01.02 **Access** refers to available access information for example a cart-way that is now cut off by a planted hedge.

## 8: APPARENT SITE DESIGNATION.

- 8.01 **Greenfield** - a site free of any surface evidence of previous development
- 8.02 **Brownfield** – a site comprising land previously developed



## SURVEY DEFINITIONS & GLOSSARY.

- 8.03            **Under Water** – a site fully or partially covered in open water
- 8.04            **Residential / Commercial / Industrial** – indicates the preponderance of structure-types present.

### 10: SCAN CONFIRMATION.

- 10.01           **SATSCAN**<sup>®</sup> is the trademarked system of data collection and analysis that is exclusively licensed to Scanning4Planning.
- 10.02           **LIDAR** is an acronym for *Light Detection And Ranging*. It is a complementary detection system that works on the principle of radar, but uses light from a laser.
- 10.03           **INFRARED** is electromagnetic radiation (EMR) with longer wavelengths than those of visible light, and is therefore generally invisible to the human eye It is used to complement the data analysis proprietary to the **SATSCAN**<sup>™</sup> process of analysis.

### COMMENTS / RECOMMENDATIONS:

This section will inform the S4P client of pertinent information and may assist the noted indications in the Report by referring to an indicative, overlaid, approximate **grid**-format reference-system, as follows:.

**GRID** refers to an assumed grid overlay covering the site that is divided into nine sections of a rectangular area ... numbered left to right on the top row as 1, 2 and 3; on the second row beneath likewise as 4, 5 and 6; and then on the bottom row as 7, 8 and 9.

Thus:

1	2	3
4	5	6
7	8	9