

GIS data confidence ratings for use in mapping exercises (Oct 2019)

Specific dataset	Dataset Metadata	Data Type	Ground truthed (TRUE/FALSE)	Survey System	Source/Origin	Data type (Raster or Vector)	Desirability /50	Reliability /50	Confidence /100 (Desirability X Reliability)	Pros/cons/limitations (if any)	Pros	Cons	Limitations for use	Comments
										The best and most desirable data in terms of accuracy and quality, forms the best possible evidence base or ground truthed by experienced surveyors. If required in a short timeframe, requires experienced field surveyors to gather data	Accuracy Up-to-date in terms of habitats. Ground Truthed by experienced surveyors. Uses desirable habitat classification system. Vector data - can be rasterised if required for analysis.	Time consuming to gather data if needed. Incomplete coverage for the country.		in habitat composite
	Ground truthed survey by known experienced surveyors Data less than 5 years old	Habitat	TRUE	Phase 1, NVC	General Phase 1 surveys, Local Wildlife Site surveys, Nature Reserve surveys, landscape surveys etc.	Vector	10	10	100		Accuracy Up-to-date in terms of habitats. Ground Truthed by experienced surveyors. Uses desirable habitat classification system. Vector data - can be rasterised if required for analysis.	Time consuming to find and process. Unknown surveyor - could be inexperienced individual, wrong time of year etc. leading to potentially inaccurate survey information. Incomplete coverage for the country.		in habitat composite
	Ground truthed survey by unknown surveyor (consultancy etc.) Data less than 5 years old	Habitat	TRUE	Phase 1, NVC	General Phase 1 surveys, Local Wildlife Site surveys, landscape surveys etc.	Vector	9	8	72	Ground truthed but unknown how accurate the data is given that we have no knowledge of the surveyors capability or control over the time of year of the survey etc. May end up with data that is totally incorrect.	Accuracy Up-to-date in terms of habitats. Ground Truthed. Normally uses desirable habitat classification system. Vector data - can be rasterised if required for analysis.	Time consuming to gather data if required in a short timeframe, requires experienced field surveyors to gather data	Other data may not reflect the actual current habitat on the ground. Time consuming to re-assess or carry out new surveys. Incomplete coverage for the country.	in habitat composite
	Ground truthed survey by known experienced surveyor, data more than 5 years old	Habitat	TRUE	Phase 1, NVC	General Phase 1 surveys, Local Wildlife Site surveys, Nature Reserve surveys, landscape surveys etc.	Vector	9	7	63	Time consuming to gather data if required in a short timeframe, requires experienced field surveyors to gather data	Accuracy to the time survey was carried out. Ground truthed by experienced surveyors. Uses desirable habitat classification system. Vector data - can be rasterised if required for analysis.	Other data may not reflect the actual current habitat on the ground. Time consuming to re-assess or carry out new surveys. Incomplete coverage for the country.		in habitat composite
	Ground truthed survey by unknown surveyor (consultancy etc.), data more than 5 years old	Habitat	TRUE	Phase 1, NVC	General Phase 1 surveys, Local Wildlife Site surveys, landscape surveys etc.	Vector	8	6	48	Ground truthed but unknown how accurate the data is given that we have no knowledge of the surveyors capability or control over the time of year of the survey etc. May end up with data that is totally incorrect which is arguably worse than no data at all. Age of data decreases confidence further.	Accuracy to the time survey was carried out. Ground truthed by experienced surveyors. Uses desirable habitat classification system. Vector data - can be rasterised if required for analysis.	Other data may not reflect the actual current habitat on the ground. Time consuming to re-assess or carry out new surveys. Unknown surveyor - could be inexperienced individual, wrong time of year etc. leading to potentially inaccurate survey information. Incomplete coverage for the country.		in habitat composite
	data less than 5 years old	Habitat	FALSE	Usually Broad Habitat Type, Phase 1 in some cases where possible	Aerial Photography Interpretation	Vector	7	6	42	Quick to build up large areas of data, desk based survey, not as accurate as ground truthed data	In most cases uses desirable habitat classification system. Quick to assess large areas of land. Vector data - can be rasterised if required for analysis.	Not ground truthed - may not reflect the actual habitat present less accurate than anything ground truthed. Incomplete coverage for the country.		in habitat composite
	data more than 5 years old	Habitat	FALSE	Usually Broad Habitat Type, Phase 1 in some cases where possible	Aerial Photography Interpretation	Vector	6	5	30	Quick to build up large areas of data, desk based survey, not as accurate as ground truthed data, can only identify certain habitat types with any degree of accuracy e.g. whether a site is generally grassland, arable or woodland.	In most cases uses desirable habitat classification system. Quick to assess large areas of land. Vector data - can be rasterised if required for analysis.	Not ground truthed - may not reflect the actual habitat present less accurate than anything ground truthed. Other data/data derived from older aerial photographs less likely to reflect actual habitat present. Incomplete coverage for the country.		in habitat composite
		land use	FALSE	Land Use Classification	Satellite data	Vector	8	5	40	Have 100% cover for whole country, only land use data - no habitats, quite coarse data, no indication of ecological quality of land	100% coverage for the whole country - can be useful for analysis.	Not habitat' data so less useful, also incompatible with existing habitat data. Coarser data - broadly groups large areas, limited accuracy and detail.		
		Habitat	FALSE	Priority habitat type	NE surveys, satellite data	Vector	6	3	18	Potentially fills gaps in other habitat data, very poor digitisation quality, often polygons do not match any ground features, questionable whether areas designated as priority habitat match the designation criteria for that habitat type, not all of the dataset is ground truthed	Fills gaps in existing habitat data. Uses desirable habitat classification system.	Not ground truthed? Very poor digitisation and data quality - often polygons do not match any features on the ground.		
		Habitat	FALSE	Phase 1	Satellite data?	Vector	6	6	36	Fills gaps where there is no other habitat data, easy to identify where there is woodland therefore digitisation is accurate, not easy to identify woodland type to be based on satellite data so a lot of generic 'woodland' with some polygons being mixed (e.g. mixed, coniferous or broadleaved).	Fills gaps in existing habitat data. Uses desirable habitat classification system.	Not ground truthed Mixed data quality - often does not identify specific habitat type only confirming that an area is woodland.		in habitat composite
		Site boundary	TRUE	LWS survey - Site boundary	LWS site surveys	Vector	10	9	90	Only gives details of the area of a site designation but not habitat data captured across. Useful for highlighting areas of higher quality habitat within a landscape which may be habitat data but not necessarily reflect. Not all site boundaries are as up to date as they could be	Highlights areas of habitat which are of a high quality. In most cases there is also associated habitat survey data using a desirable habitat classification system.	Not habitat' data - only provides details of a sites designation. Some sites have not been surveyed in over 5 years and possibly too changed since last survey, however the designation is still valid.		
		Site boundary	TRUE	Site boundary	NE Surveys, Nature Reserve surveys	Vector	10	10	100	Useful for highlighting sites of nature conservation importance, some 100% may not have habitat data available for them so	Highlights areas of habitat which are of a high quality. Most 100% sites have habitat data associated to them.	Not habitat' data - only provides details of a sites designation.		
		Site boundary	TRUE	Site boundary	NE Surveys	Vector	10	9	90	Almost a cross between habitat and site data, many AONUs also have other designations and most have habitat data associated with them. Useful in highlighting areas of importance	Highlights areas of habitat which are of a high quality, most 100% sites have habitat data associated to them.	Not habitat' data - only provides details of a sites designation.		
		Site boundary	TRUE	Site boundary	NE Surveys	Vector	10	10	100	Useful for highlighting sites of nature conservation importance, all SACs are also 100%, we may not hold much habitat data for these sites.	Highlights areas of habitat which are of a high quality.	Not habitat' data - only provides details of a sites designation.		
		Site boundary	TRUE	Site boundary	NE Surveys	Vector	10	10	100	Useful for highlighting sites of nature conservation importance, all RAMSARs are also 100%, we may not hold much habitat data for these sites.	Highlights areas of habitat which are of a high quality.	Not habitat' data - only provides details of a sites designation.		
		Site boundary	TRUE	Site boundary	NE Surveys	Vector	10	9	90	Useful for highlighting sites of nature conservation importance, all NNRs and also 100%, we may not hold much habitat data for these sites.	Highlights areas of habitat which are of a high quality.	Not habitat' data - only provides details of a sites designation.		
		Site boundary	TRUE	Site boundary	NE Surveys	Vector	10	8	80	Useful for highlighting sites of nature conservation importance, all SPAs are also 100%, we may not hold much habitat data for these sites.	Highlights areas of habitat which are of a high quality.	Not habitat' data - only provides details of a sites designation.		
		Habitat	FALSE	Broad Habitat Type	Satellite data with some areas ground truthed?	Raster	6	2	12	100% cover for the country. Raster data difficult to work with easily and integrate, very coarse 1:25m resolution, potentially not that accurate. 1:25m resolution means habitats are aggregated within that area.	Complete coverage for the whole country.	Coarse resolution 1km x 1km grid. Aggregate of multiple habitats within a square giving most dominant habitat.	Limitations to analysis which can be carried out on raster data.	
		Site	TRUE	Site boundary	SWT land ownership	Vector	10	10	100	Only SWT boundary information, some sites will have habitat data associated to them which is included above. Not necessarily indicator of any importance unless overlapping with LWS or 100% where those designations would be an overriding factor	Boundaries of land which is known to have 'appropriate conservation management'			
		Site	FALSE	Site boundary	SCC	Vector	10	5	50	Includes scale designation, not indicator of any habitat, has habitat data associated and other overlapping designations which take priority, 100% SAC etc., immediate of designation from an ecological point of view				
		Soil data	FALSE	Remote sensing, geological	Web Map Service	Vector and Raster	8	3	24			Data not 'sovereign' by us. As data is from a WMS there is no ability to analyse or integrate the data. License restrictions for derived data?		
		Species record locations	TRUE	Species recording	Multiple sources - data held by Staffordshire Ecological Record	Vector (point)	10	10	100		Complete coverage for the whole country.			
		Land use/habitat	FALSE	Land Use Classification	Ordnance Survey	Vector	10	5	50		100% coverage for area of interest of vector data Some 'habitat' data held within the dataset itself	No real 'habitat' info in respect of polygons Only required for the spatial information not the contents of the polygons.	OS license restrictions, do not have access to a full dataset.	Real value lies in being able to use polygons to quickly identify areas through aerial photography analysis or survey without having to hand digitise each polygon individually. Vastly superior from the point of view.
		LIDAR data	FALSE	LiDAR image detection/radar	Environment Agency	Raster	5	8	40		Identification of 'uncertain/traditional' features. etc.	Raster data difficult to work with No habitat information. Supplied in 2km tiles.		
		Land use/habitat	FALSE	Mixture of ground truthing and remote sensing	Environment Agency	Vector and Raster		0	0		Potential identification of barriers to species movements.			
		species	TRUE	Species recording	Staffordshire Wildlife Trust, Survey volunteers	Raster (once disseminated from database)	9	9	81	Species data, not delivered to site level, carried out at Terrestrial level (2kmx2km)	Complete coverage for whole country Ground Truthed by experienced surveyors Asophyte analysis can be used to determine habitat type	Only to Terrestrial level, not site level	Would require a level of dissemination and analysis to generate derived data of a finer scale.	
		Vector land classes	FALSE	Natural England	Natural England	Vector	8	5	40	Would require a good license to get access (over £2k for Staffordshire for 1 year), cost prohibitive unless explicitly outlined within project costs.	Complete coverage of habitat data for the country Does provide some 'habitat' data.	Only remote sensed - not entirely accurate Only to broad habitat classification - no Phase 1		
		Habitat	FALSE	Centre for Ecology and Hydrology	Centre for Ecology and Hydrology	Vector	10	7	70		Complete coverage of habitat data for the country Does provide some 'habitat' data.	Only remote sensed - not entirely accurate Only to broad habitat classification - no Phase 1		