Resource Sheet 7 – Digitising Site Plans & GIS

Once you have drawn your site plan you will probably want to get it into a GIS or drawing program. This note aims to explain one method of doing this.

Your site drawings will probably be on A4 or A3 sheets of drafting film. In the old days these would have been traced onto a master site plan. What is more likely these days is that you will want to import them into a computer program such as 3H Site Recorder , ESRI ArcView or AutoCAD. This brings considerable long term benefits in allowing different views of the same plan, ease of updating and electronic reproduction. But how do you get the drawings from the site sheets to the program?

The first stage is to scan the original site drawings. This will produce a raster file, probably a JPEG. Flatbed scanners are relatively cheap and easy to buy. Consider getting an A3 scanner, which will deal with both A4 and A3 plans and cost less than £200. One such scanner which has been used with success on a number of CISMAS projects is the Mustek ScanExpress. You do not need a high resolution scanner for this job – 300 dpi is more than enough.

Once you have the raster (JPEG) file this can be imported into the program you are using – you need to scale the raster so that it is 'life size' in the GIS. This means that 1m on the ground is equal to 1m in the GIS, and all the above mentioned programs have a means for achieving this. You will then have to position the raster so that it is in the right place – you use the control points (coordinates x,y and z) to do this – thus allowing you to position or georeference the raster. Once you have the raster at the correct scale (1:1) and in the right position you can then use the drawing tools in your chosen package to reproduce the drawing. This is the tedious bit – you simply trace over the lines of the raster, producing a vector drawing which can easily be manipulated. You should place the different elements of the drawing onto separate layers when drawing (all the programs have this facility). One useful separation is to have timber, iron, copper, lead etc on separate layers. On a complex site it is often useful to further subdivide the timber into separate layers for the different structural elements: frames, inner planking, outer planking, knees etc. These can then be easily colour coded to clearly show the different functions of the structural elements of the vessel. If this all sounds a little daunting, ask around within your team – you will almost certainly find someone who is 'computerate' who will know how to go about the job.

See also note on digitising for Site Recorder at:

http://www.3hconsulting.com/Downloads/SRTN02_AddingPicturesToChart.pdf
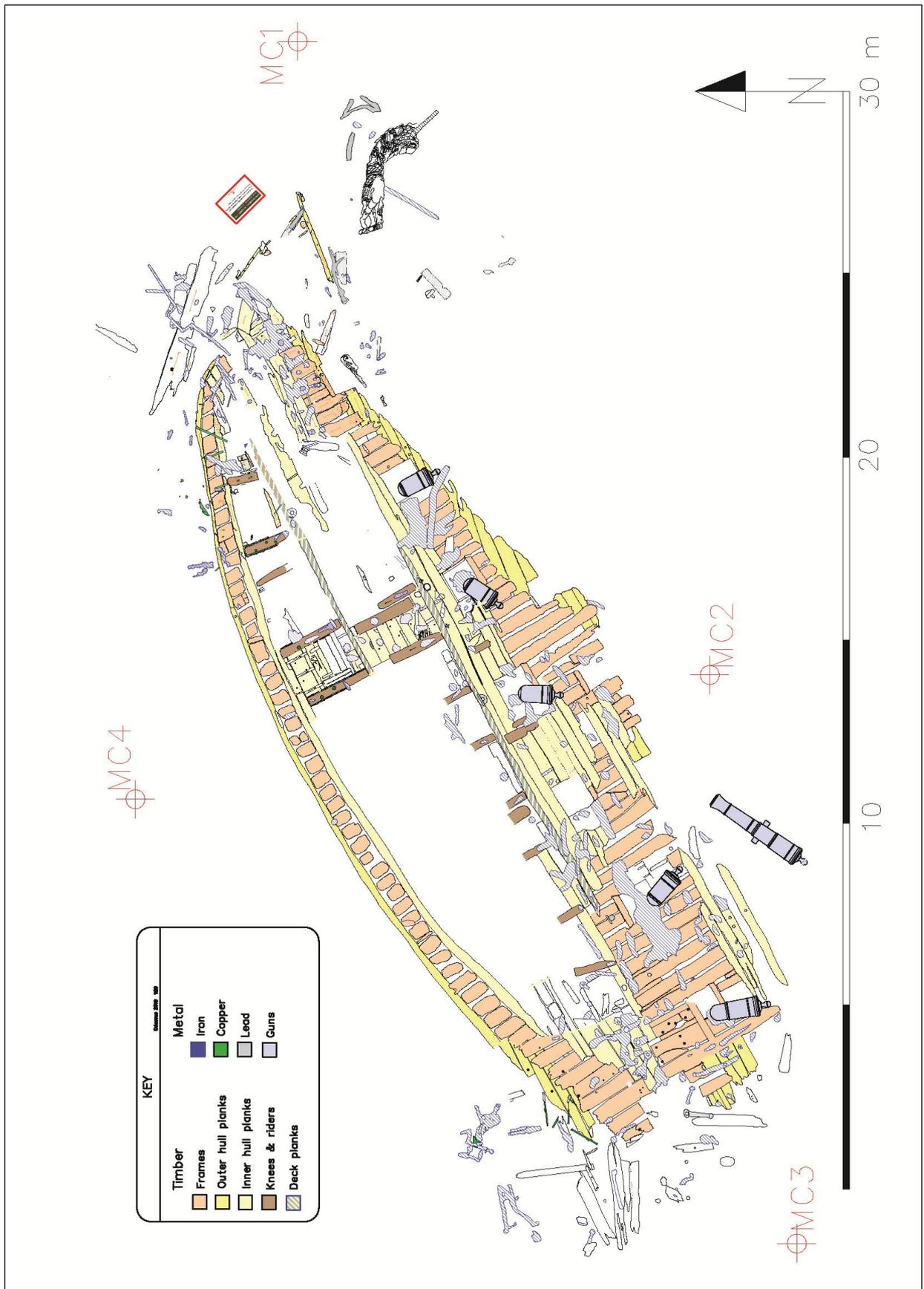
An example of a digitised site plan where each type of material has been differentially coloured.