



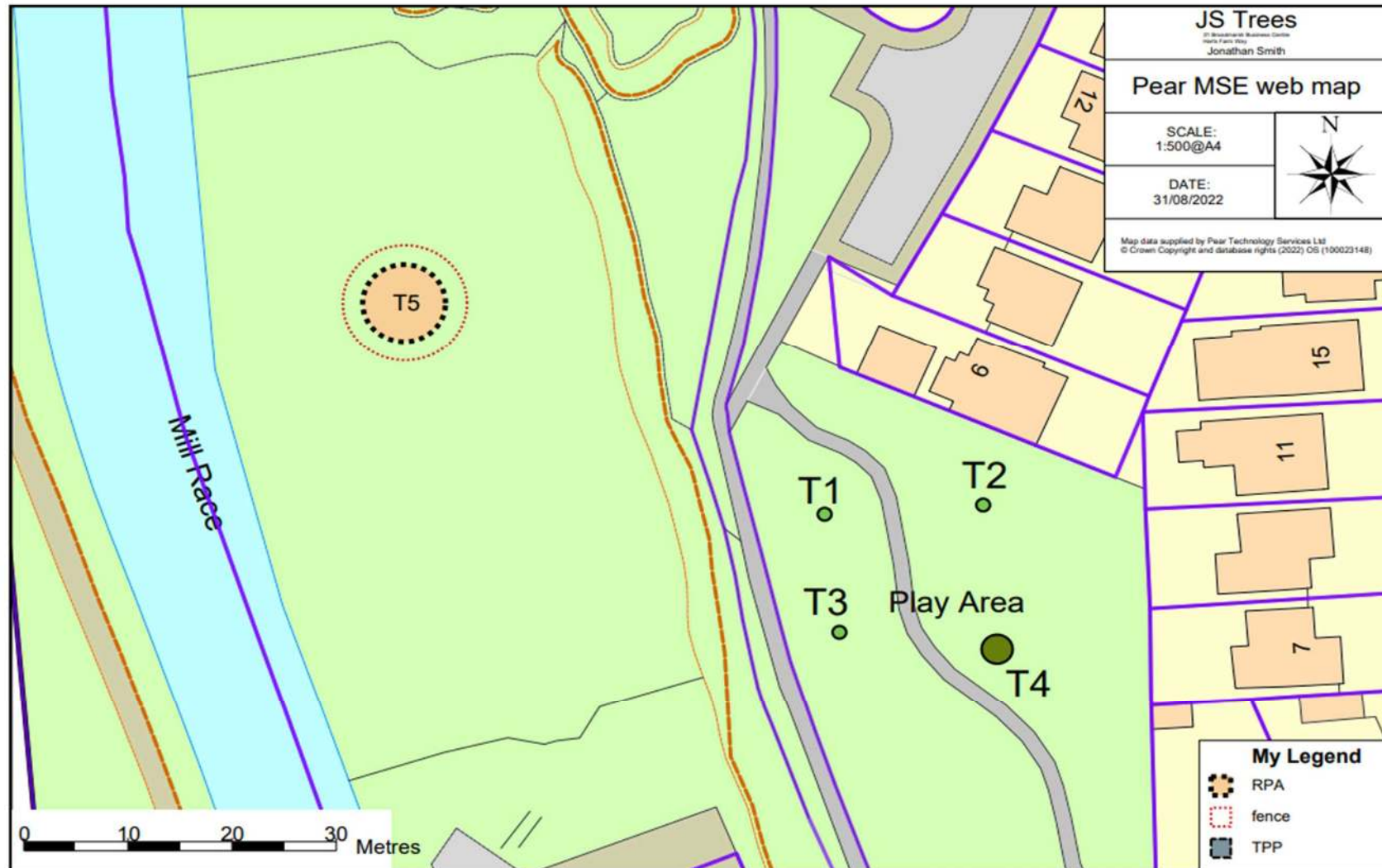
Pear Technology for
Arboriculture, Forestry and Ecology
Mapping, Surveys and Management

Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

Software and services Note: Training quoted is online, but is also available at Pear Technology offices or on site. The pricing below is indicative and Pear Technology will produce a quotation based upon your own requirements. Prices are plus VAT. Hardware incurs £20 delivery/insurance charge. Leasing may be available to limited companies, upon request.			
Usage and Output		Requirements	Costs
1. Web mapping	Pear MapShop Editor	Browser based	Free with PearMapShop
2. Basic producing BS 5837 maps from recording/marketing up maps for individual properties in the field and updating PT Mapper Pro. No hand held device for data capture/surveys in the field This is insufficient to lease	PT Mapper Pro – Uses Ordnance Survey Master Map or VML data, “topo” maps, CAD drawings, scanned paper maps: Import/export .mpd, .dxf, .shp, .mif, .kml (Google Earth), raster (.jpg, .bmp) Edit map – Add trees to BS 5837, or icon or as groups of trees Measure distances, areas. Add lines, shapes, text, additional map layers . Produce map of just area required, add title box and legend Print to pdf or paper	PT Mapper Pro Minimum 1.5 hours online training Annual technical support/software updates	£895 £135 150pa Total £1,180
3. Field Data Capture - using own Android device (phone or tablet)	As above, plus performance of field data surveys for BS5837, General Survey, VTA, Assets, lines and areas plus free option to modify/create surveys Android and Pocket GIS Windows 10 versions available	As above, plus Pocket GIS , technical support and training. This assumes you are using your own Android/Windows 10 device. Pear Technology can supply hardware – see below.	As above plus PGIS £600 Tech Supp £115pa Trg £135 Total 2,030
4. As above plus analysis, reporting and themed map production	As above, plus tree management and reporting facility using TreeMinder. TreeMinder analyses the data collected during survey and produces reports according to criteria selected. MapLink enables “theming” of the map eg immediately shows by colour, trees requiring urgent work or forestry areas coloured to show felling year, species, grants etc	As above, plus MapLink and TreeMinder, training technical support	As above plus £800 £90 £170pa Total £3,090
5. Subscriptions	PearGIS plus Pocket GIS		£120/mth £625pa

Pear MapShop Editor

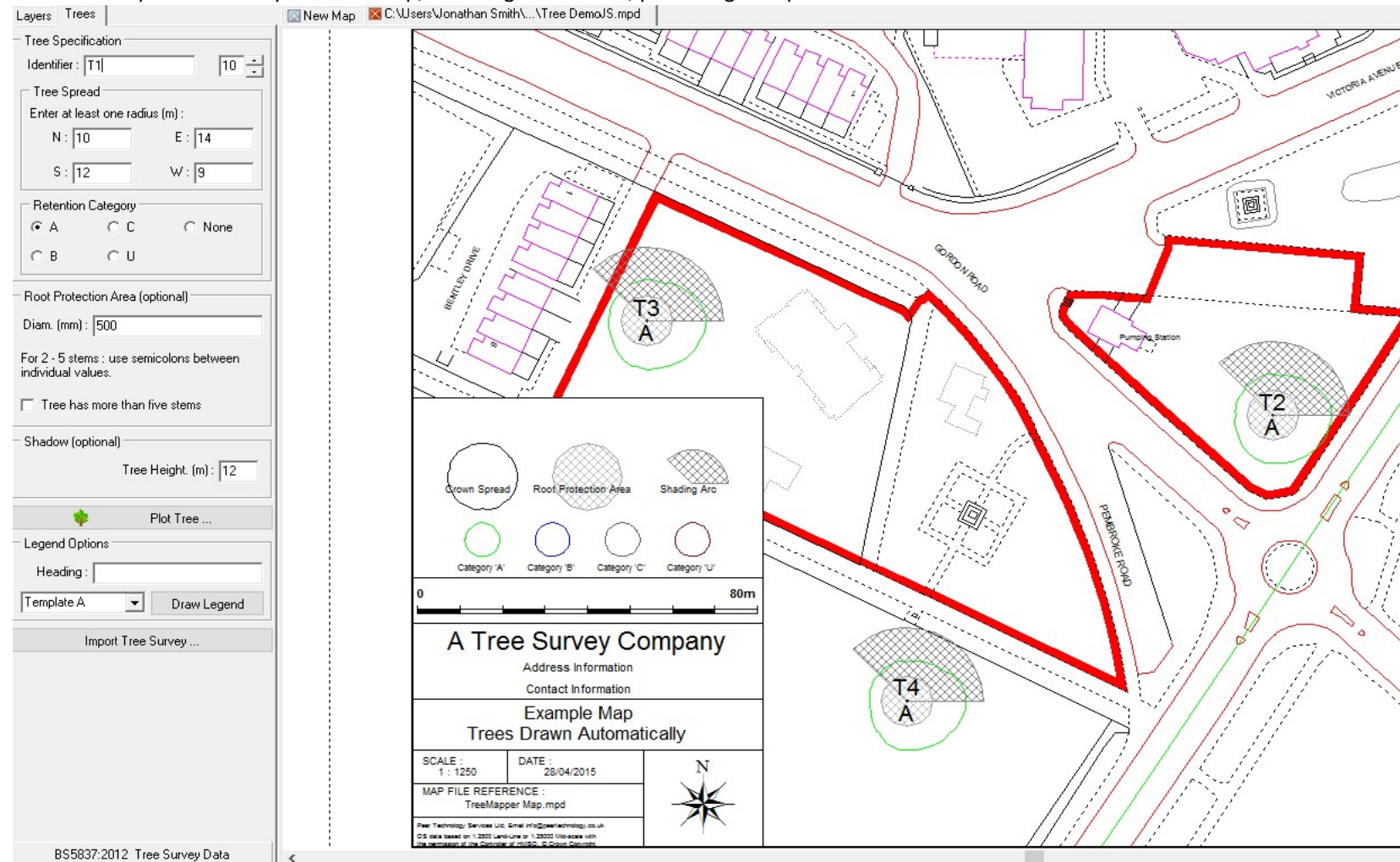
Simple web based mapping. Uses Ordnance Survey MasterMap data, to which text, points, lines and polygons can be added.



Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

1. Basic – PT Mapper Pro only. £1,180

Trees can be plotted directly onto the map, including dimensions, producing a map such as that below.



PT Mapper Pro does much more than this - see <http://www.peartechology.co.uk/products/ptmapper/>

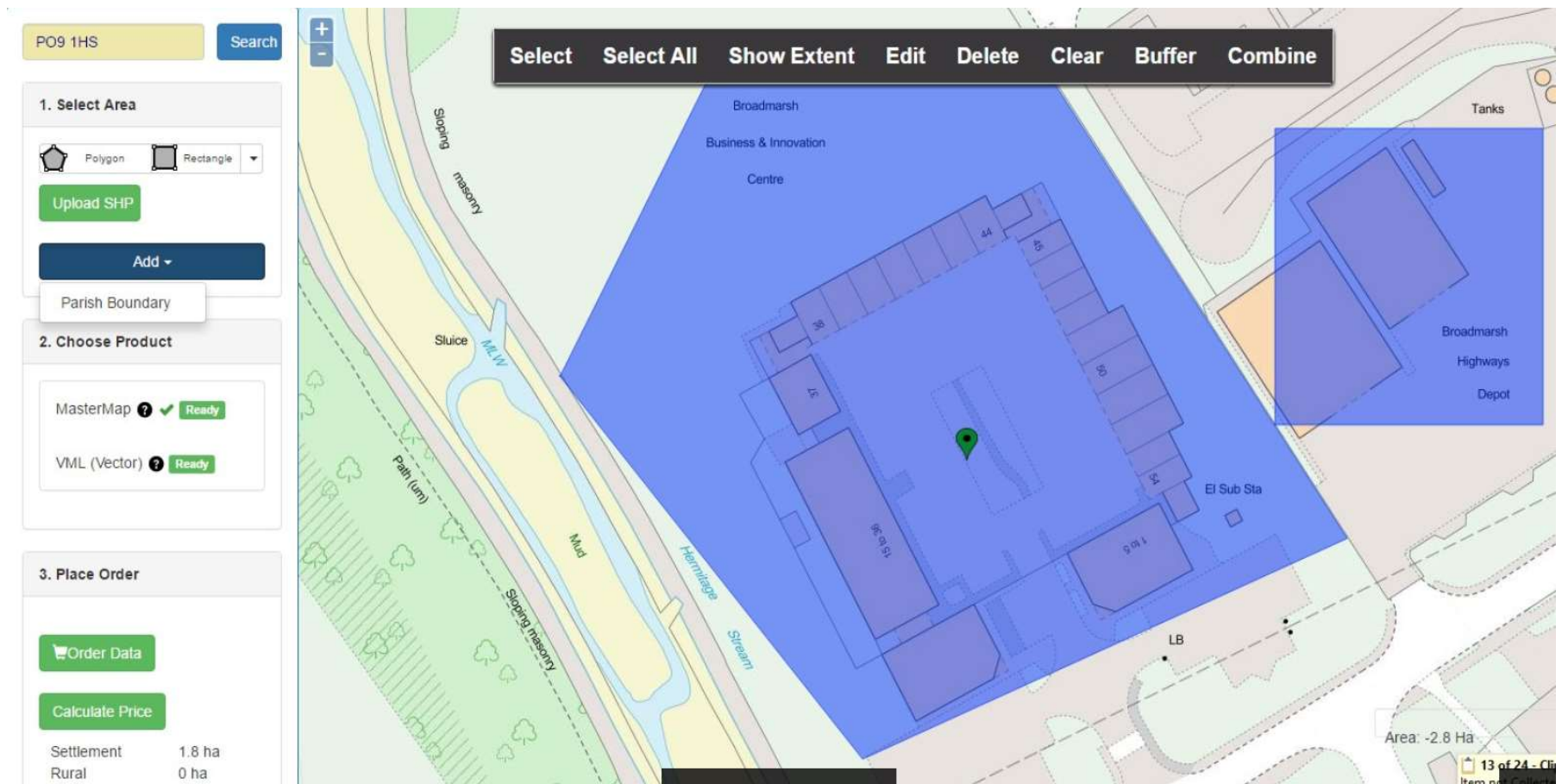
Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

Pear MapShop – OS data purchase (if required) and web mapping option.

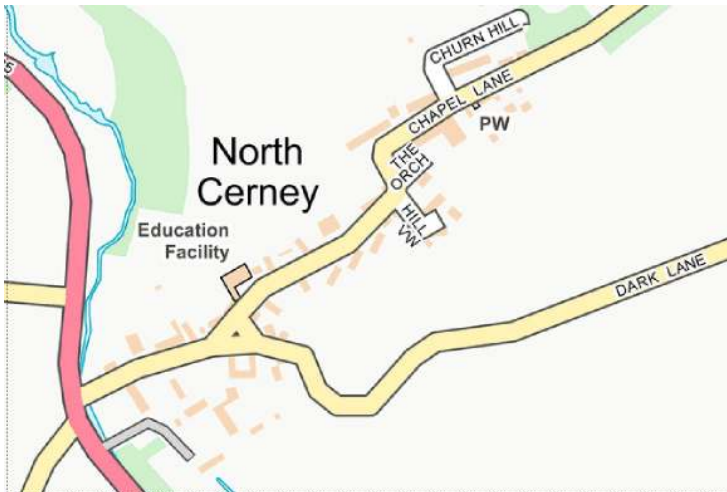
Pear Technology is an Ordnance Survey partner, and as such can supply OS maps as required, or PT Mapper Pro can import “topos” (.dxf) from CAD.

Select your required map, using Pear Technology MapShop. This enables you to outline an area, get a quote, order, download and open in PT Mapper Pro. See screenshot below.

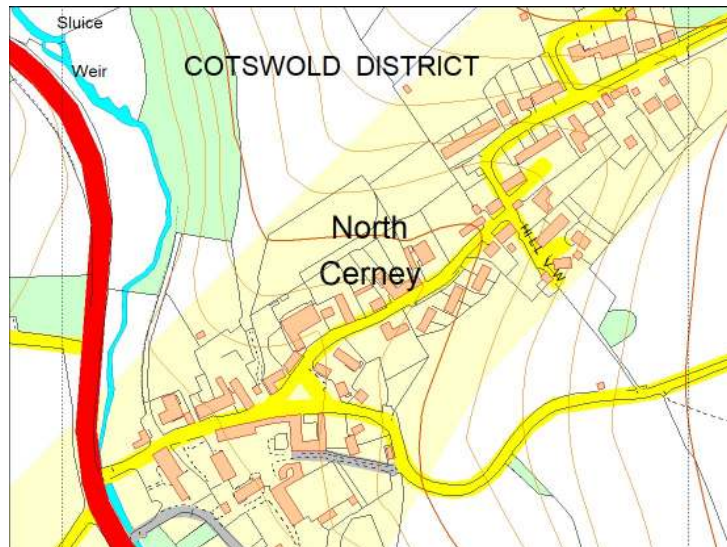
The first hectare of MasterMap data costs £19.40, subsequent hectares c. £8. For larger sites, OS VML (Vector Map Local) may be suitable and costs £29.90 for 100 hectares. Pear MapShop also includes free use of MapShop Editor for simple, web based mapping requirements.



Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management



Free OS map



OS VML



Ordnance Survey MasterMap

Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

You can also import a variety of other map data, for use with the map, including :

Land Registry, SSSI, flood areas, ancient woodland and National Tree Map from Bluesky (www.bluesky-world.com), see below



The NTM data gives you the position, height and crown spread for every tree over 3metres high. That data can be imported into a survey template, so that **before you even get to site, the survey is partly done!**

2. Field Data Capture – Using PocketGIS software £2,025

Export map from PC to mobile device. Use GPS to locate position of tree. Tap position of tree on map to open survey and follow survey instructions. Most fields are drop down or numerical entry, for speed and accuracy.

The result created is a .csv or spreadsheet file. This can then be imported to create a map like that above, but with accurately plotted trees.

The spreadsheet created can be used as the basis or appendix of reports.

Surveys

Existing, free surveys include BS5837, General Survey, Risk Assessment Survey, lines and areas, assets. Additional free surveys include: VTA; THREATS, TEMPO; W-TEMPO; Ash; Mortgage; bracken; reptiles; bats. The surveys can include photographs, can use voice to text and also voice recording.

You can also revise these or create your own survey.

BS5837 Survey V111 ✓

--- BS 5837 Survey --- --- Species --- --- Measurements --- --- Stem Diameter --- ---- Stem Diameter ---- --- Crown Spread --- --- Canop

Tree ID *

Tag Number

TPO No

In Conservation Area

☐ Yes ☐ No ☒ Unknown

Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

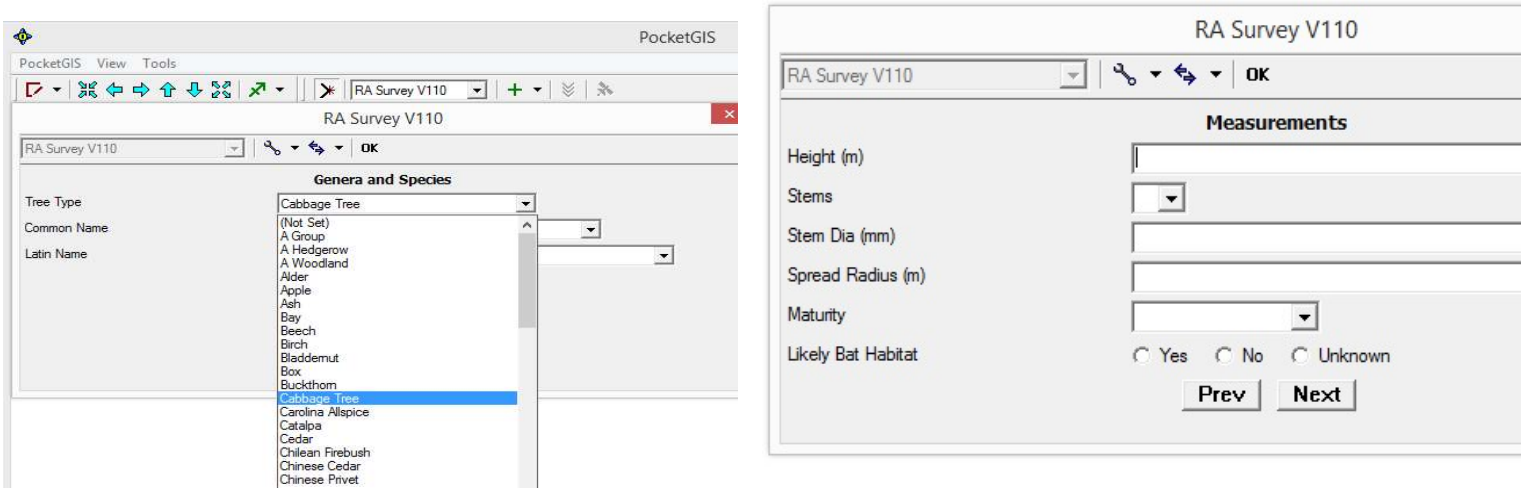
BS5837 Survey V111 ✓

/ Height --- --- Structure/Form --- --- Retention Category --- --- Physiological Condition --- --- Recommendation 1 --- --- Recommendation 2 -

Phys Condition

Build Stage

Risk Assessment Survey - Sample Screenshots



Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

RA Survey V110

RA Survey V110

OK

Recommendation 1

Work Category 1

Work Item 1

Time 1

Relating to (1)

(Not Set)
Cable brace
Coppice
Cut back growth
End weight reduction
Fell
Formative prune
Further inspection
Ivy
No action
Pollard
Protection
Prune
Raise low canopy
Reduce crown(s)
Reduce faulted limbs/stems

The result of the survey is a spreadsheet, example below.

	I	J	K	L	M	N	O	(K R S T	U	V W	X	Y Z A F A C A D A J A I	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR				
1	Common	Latin Nam	Height	Stems	Stem Dia	(Spread	Ra	Maturity		B C D E	Consequences	F G H	Vigour	J L I M N	CP	Work	Category	Work Item 1	Time 1	Relating to	Work Cate	Work Item	Time 2	Relating to	Work Cate	Work Item	Time 3	Relating to
2	Grey Alder	Alnus Inc	8	1	500		8	Mature		B A A A	Minimal		A A A	Good		E A A A	C A Cable brace	Check and/o	01:00	A Purpose of Inspection and Assessment								
3																												

3.TreeMinder and MapLink £3,085

TreeMinder allows the user to focus on the data collected from the survey and produce a range of reports.

Easting	Northing	Height	ID	G	Comment	Tag No	TPO No	E cm	In Con	N cm	Tree Type	Common Name	Latin Name	Stems	Height (m)	Stem Dia (mm)	Spread (m)	Maturity
363897.451	339167.123	101.65	93		Weak crown som	739		36389745	No	33916712	Prunus	Wild Cherry	Prunus avium	1	4	200	3	Semi-mature
363901.004	339171.517	113.45	94			741		36390100	No	33917151	Prunus	Wild Cherry	Prunus avium	1	8	290	2.6	Semi-mature
363903.059	339164.366	103.85	95			742		36390305	No	33916436	Prunus	Wild Cherry	Prunus avium	1	6	190	4	Semi-mature
363958.316	339135.988	104.15	96		Minor bark lift	743		36395831	No	33913598	Apple			1	6	190	2.5	Mature
363988.979	339181.651	103.85	97			744		36398897	No	33918165	Prunus	Wild Cherry	Prunus avium	1	7	230	3.6	Semi-mature
364001.586	339133.402	113.25	98		Canker in stem	745		36400158	No	33913340	Prunus	Wild Cherry	Prunus avium	1	7	270	4	Semi-mature
364000.449	339120.378	101.75	99		Some canker in s	746		36400044	No	33912037	Maple	Norway Maple	Acer platanoides	1	12	700	7	Semi-mature
364008.614	339072.209	105.35	100		No tag (nor on 74	747		36400861	No	33907220	Cupressus	Monterey Cypress	Cupressus macro	3	9.5	30	4	Semi-mature

JS

Any Street
Anytown
CVxx 1xx

Phone: 07593299752
Mobile: 07593299752
jsmith@peartechology.co.uk



Sample Company Name

Big Blue House
123 Any Road
Anytown
West Eastfordshire
AT34 2BB

Phone: 01234 909090
Mobile: N/A
N/A

Tree Survey Work Analysis Summary


Tree Summary

Common Name	Species	No of Trees of each Type
Common Beech	<i>Fagus sylvatica</i>	1
Common Lime	<i>Tilia europaea</i>	2
Common Oak	<i>Quercus robur</i>	3
Mountain Ash	<i>Sorbus aucuparia</i>	1
Red Oak	<i>Quercus rubra</i>	1
Scots Pine	<i>Pinus sylvestris</i>	1
Total Number of Trees		9

Work Summary

Work Description	Total Hours	No of Trees Requiring Work
Reduce crown(s)	04:00	1
Remove		
By 30%		1
Faulted branch/limbs		3
Major dead wood	12:00	2
Minor dead wood	06:00	1
Unspecified	01:00	1
See Comment	04:00	1
Unspecified		1
Total Hours		27:00

Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

BS5837:2012 Tree Survey											
Client: Sample Client								Sample Company Name			
Project: New BS5837								Big Blue House			
Survey Date: 16/08/2012 - 09/06/2014								123 Any Road			
Surveyor: Sample Surveyor								Anytown West Eastfordshire AT34 2BB Phone: 01234 909090			
Tree and Tag No	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
Species	No	Ø (mm)	Spread (m)	Clear (m)							
NewBS03 Tg002											
European White Elm <i>Ulmus laevis</i>	21	2	1345 (Eq)	N 6 E 6 S 6.4 W 6.1	4.1 3 3 4	M	A: 707 R: 15	Good	C: Good S: Ivy B: Good	Ivy :: Sever/remove ivy	A.1.2
NewBS02 Rm001											
Copper Beech <i>Fagus sylvatica 'Purpurea'</i>	12	1	123	N 3 E 3 S 3 W 3	5 5 5 5	OM	A: 6.8 R: 1.47	Dead	C: Poor S: Ivy B: Poor	Fell :: Fell and remove stump(s) Potentially unsafe	U n/a
NewBS01 Tg0012											
Qedar of Lebanon <i>Qedrus libani</i>	7.9	2	1256 (Eq)	N 7.1 E 6.3 S 6.8 W 6.9	8.1 8.1 7.9 7.9	SM	A: 707 R: 15		C: S: B:		

Age Classifications:	N Newly planted	EM Early Mature	Condition:	C Crown	Stems:	Ø Diameter
	Y Young	M Mature		S Stem		(Eq) Equivalent stem diameter using BS5837:2012 definition
	SM Semi-mature	OM Over Mature		B Basal area		

Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

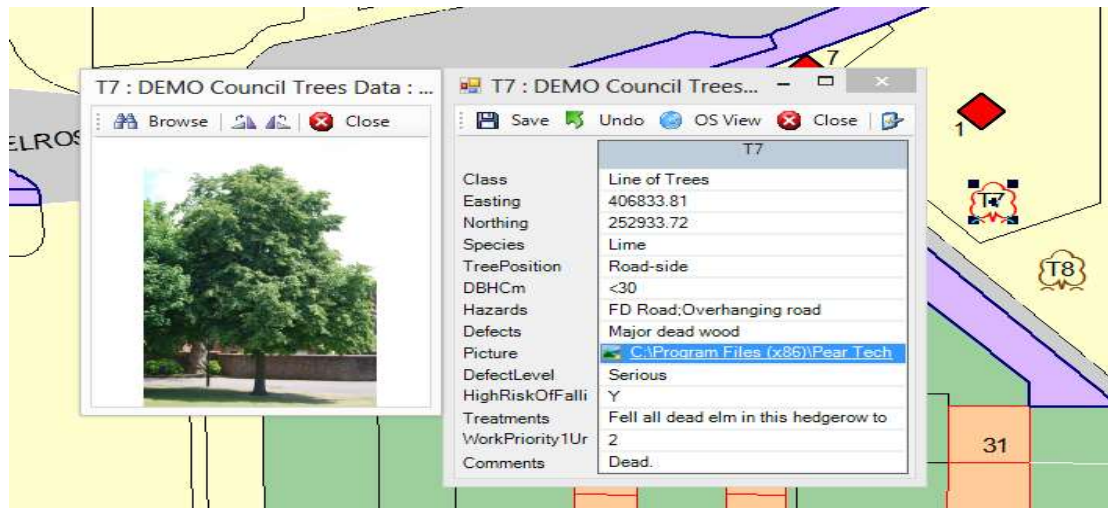
MapLink

MapLink links the underlying data (eg that gathered whilst surveying in the field) and represents that data on the map, thus visually highlighting the distribution of trees according to the criteria chosen eg

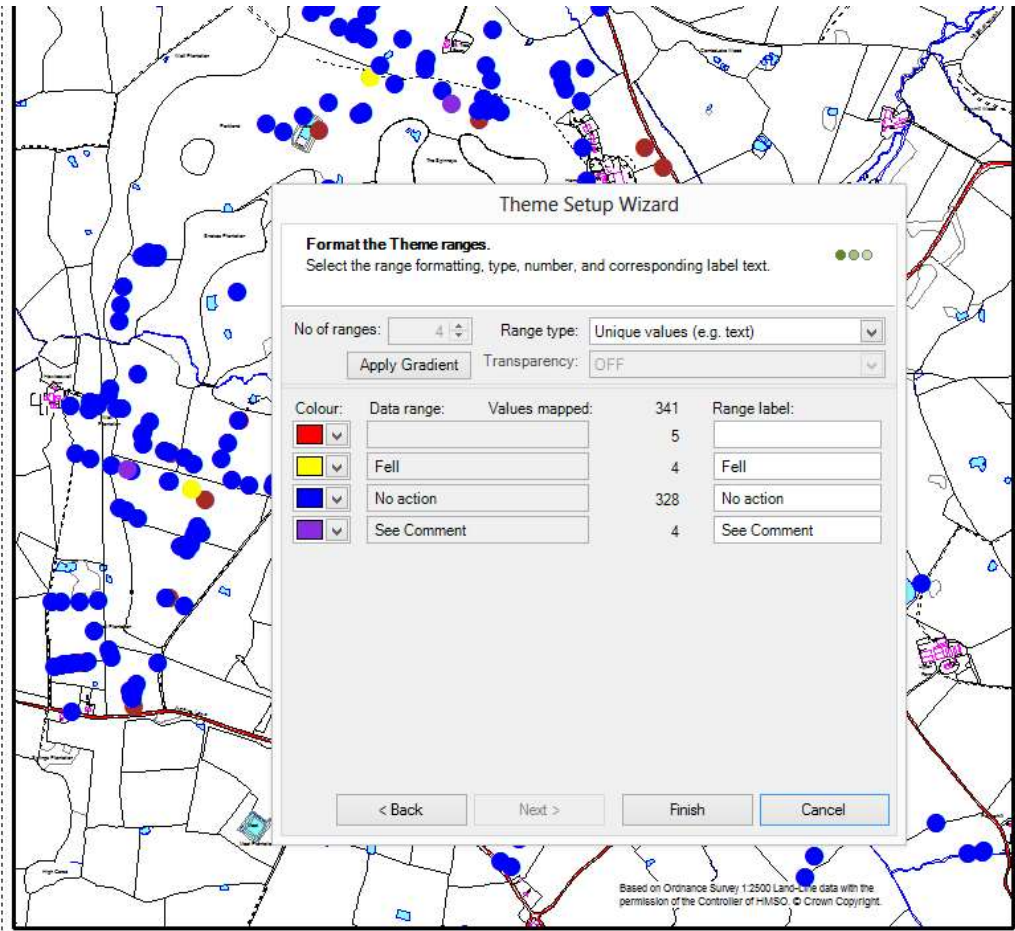
- Where are the trees requiring urgent attention
- Tree species distribution
- Tree disease distribution
- Planting date distribution
- Felling date distribution
- Bat habitat
- Height

You can also:

- click on an individual tree to pull up the data related to that tree
- Connect an image or document to that tree record



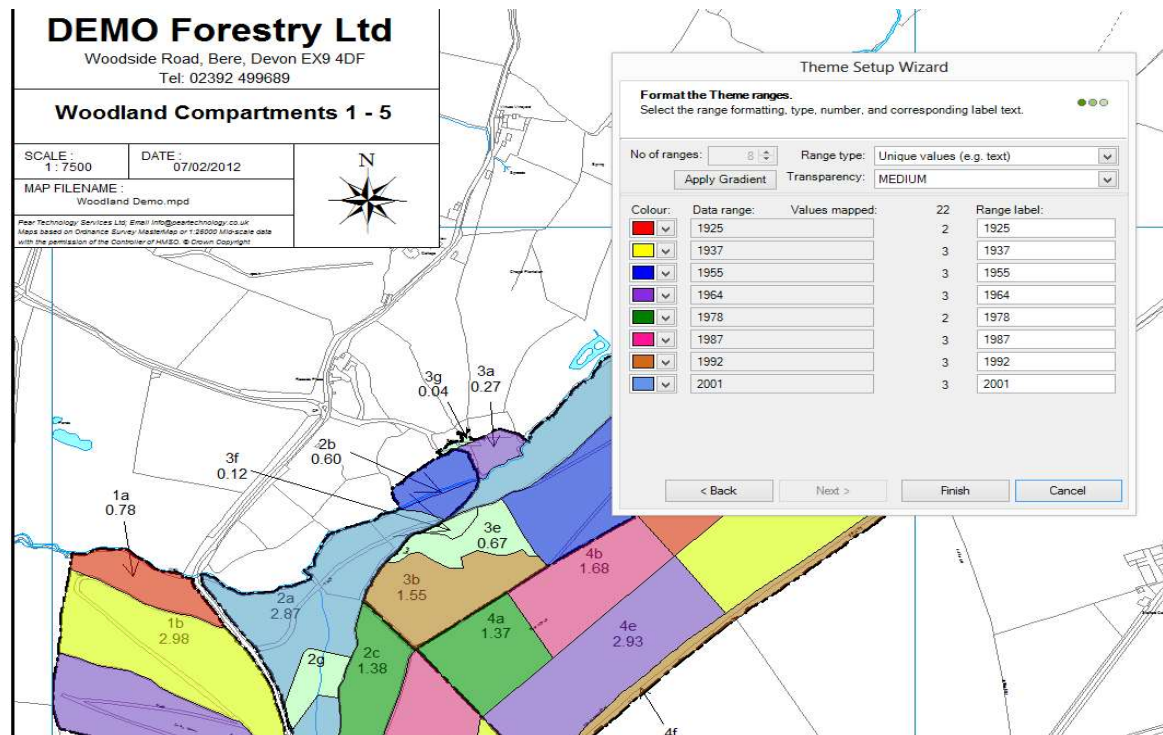
Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management



Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

Maplink is very useful for forestry requirements in showing compartments and sub compartments by eg

- Species
- Maturity
- Planting date
- Felling date
- Grants applied for/won
- Soil ph



Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

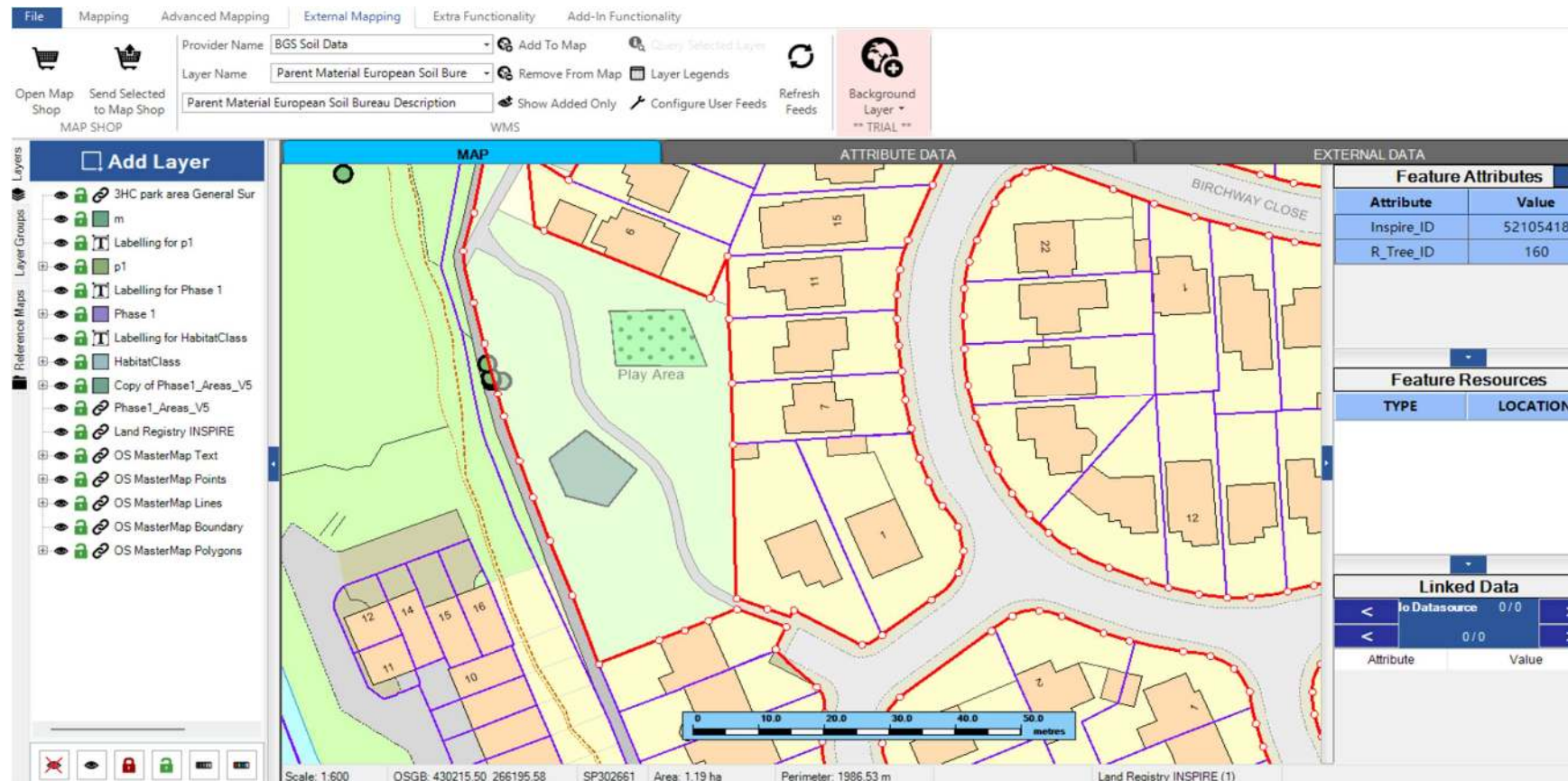
PearGIS

PearGIS is the latest software from Pear Technology. It is compatible for use with PT Mapper Pro, TreeMinder and all main GIS software.

PearGIS enables the linking of data attributes, external data sources and can incorporate WMS (web mapping service) map feeds, such as from British Geological Survey, DEFRA and other sources.

PearGIS also provides the facility for Phase 1 and UK Hab(coming soon) ecology surveys and mapping. There is a new, easy to use Survey Designer for use with PearGIS.

See <https://www.peartechology.co.uk/products/peargis/> and for mini videos, see <https://www.peartechology.co.uk/support/peargis/>.



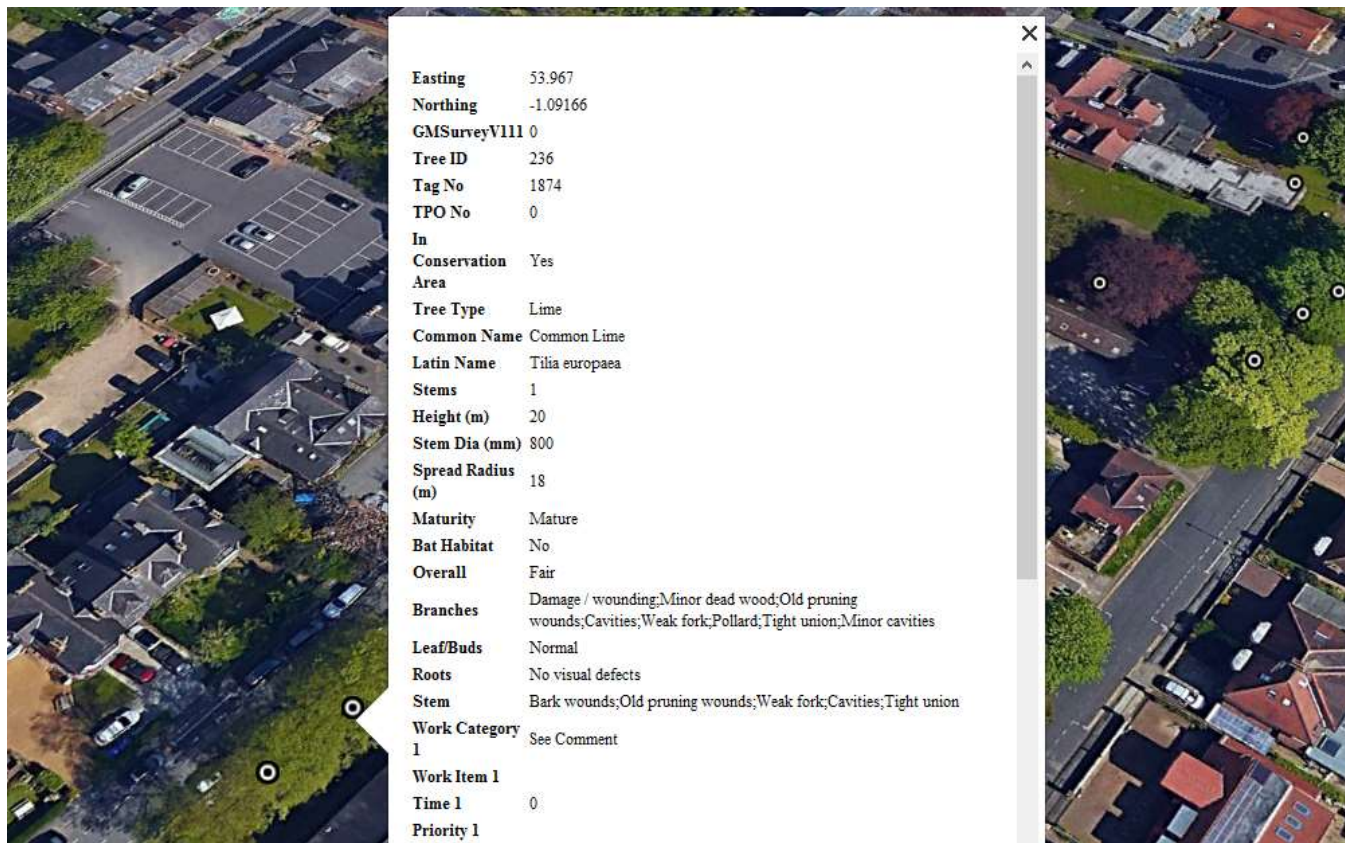
Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

Google Earth

If you select an item in PT Mapper Pro, then if you have an internet connection, you can click on the Google Earth (GE) icon in PTMP, which will open GE and zoom to your selection.

With Google Earth, you can draw around an area and copy that outline back across to PT Mapper Pro. This is helpful if feature are visible on GE, but not shown on the map. However, Ordnance Survey mapping is based on OS aerial imagery (which we can supply), so GE outlines are not guaranteed to line up.

You can also link your survey data to GE (subject to converting eastings and northings to latitude and longitude for interpretation by GE – call us if needed).



Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

5. Hardware

Hardware available from Pear Technology for use with the above for tree surveys and field based data capture. We may be able to provide a trial and can certainly advise, based on your requirements.

Hardware prices include setup and support under warranty.

Pocket GIS **Android** can also be run on other Android phones and tablets. Pocket GIS Windows 10, runs on **Windows 10** phones, tablets and computers.

We are able to provide a trial copy of Pocket GIS, for use on these devices. **Leasing** is an option for limited companies, subject to approval by Grenke Leasing. Prices are based on 3 year lease, 3 year warranty and are payable quarterly. There is an option to purchase for 5% of original price at end of contract.

Weekly hire of equipment is also a possible option. Prices are plus delivery and VAT. Hirer to pay return delivery. Hire hardware includes Pocket GIS.

Trimble TDC600 £175, Panasonic FZ-A3, Juniper Geode sub metre GPS **£175/week each**

PocketGIS software, required for performing surveys using hand held device, Windows or Android, **£ 600**

Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management



Trimble TDC600, 6" screen , Android 10, **1.5 metre GPS**, 13mp camera, IP67 (waterproof), 15 hour battery, 380g, 2 year warranty £1,525



Juniper CT8X2, 8" screen, Android 10, c. 2m GPS, 560g, 12 month warranty £965

Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management

Panasonic FZ-A3 10" Android 10 tablet, ruggedized, IP65, 1920 x 1200, camera, 2-4m GPS, twin battery, 980g. For use with Pocket GIS Android

3 year warranty

£ 1,395



Pear Technology for Arboriculture, Forestry and Ecology Mapping and Management



Geode GNS2



Geode GNS3

Juniper Geode

Sub metre possible under canopy and 30cm possible in open, with no ongoing cost.
price, including universal mounting bracket for hand held/tablet GNS2, limited stock, **£1777**

GNS3 model:

Base model single L1 frequency **£2,150**

Multi frequency capable, with upgrade **£2,450**

10cm GPS accuracy,

Multi frequency, L1,L2,L5

Capable of using Atlas correction service, **£4,150**

plus annual cost of 10cm Atlas service **£1,450**

Please contact Pear Technology for the latest details.

Optional accessories include lightweight, telescopic monopod and clamp and backpack with monopod and Geode.

