

## Importing Survey Data from Excel, Notepad etc

This example uses a typical small tree survey. My survey is shown in Excel below. I start by selecting the columns and rows I wish to import and then right click and select Copy.

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1	Tag	Name	Dia (mm)	Stems	Height (m)	L/Hgt (m	) Age	North (m	South (m)	East (m)	West (m)	Exp	Cond	i Cat	
2	T1	Sycamore	100,70	2	7	2.5	Y	3	1.5	2	1.5	40+	F	U	
3	Т2	Ash	200	1	8.5	1	м	4	4	6	4	10+	F	U	
4	тз	Apple	260	1	5.5	2	м	2.5	2	2	2.5	20+	G	C1	
5	т4	Hawthorn	330	1	4.5	0	м	1	1	1 1		<10	D	U	
6	Т5	Sycamore	350	1	11	1.5	SM	5.5	5	5.5	5	40+	G	B1	
7	Т6	Sycamore	170	1	11	2.5	Y	5	1	2.5	1	20+	F	C1	
8	Т7	Sycamore	190,200,260	3	11	1	SM	5	5	5	5	20+	F	C1	
9	Т8	Elder	290	6	7.5	1	OM	6	5	5	5	10+	F	U	
10	Т9	Hawthorn	210,150,150	3	6	0	SM	3.5	3.5	3.5	3.5	20+	G	C1	
11															12
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Now go to ArborShadow R4 and click on the I/O icon top left. Select the Import tab and click on Import Text. The Import window opens; probably with an example filter in place.

Click the 'Actions' button and select Add 'New filter' as below. When prompted add the name for the filter. I have called mine Myfilter !

TEXT INPUT Source Size: 0 Rows: 0 Columns:	1				– 🗆 X
Select Filter Dem	no_filter		~ Acti	Add N	Jew
Import Text Data	?	Define Trans	sfer Links	Renar	ne
	~	1 2 3 4 5 6	tag name height crown_he category north_canopy		e Filter ? e All Filters Start Row num 1 Merge into existing ?
		7 8 9	east_canopy south_canopy west_canopy	> >	Rows using Field Match Select Field to match
<	>		Match Link	Count	canopy dimension then load into any canopy field and use the copy column function on List screen.
Import File Paste Data Field Separa	ation Character TA	Delete Add 1	Match Link to Column (		Convert and Exit



Ensure you have copied the selected data from Excel and click on the Paste button (below). The text will appear in the source window. Excel uses Tabs to separate column data and these are always shown as a ~ symbol within ArborShadow.

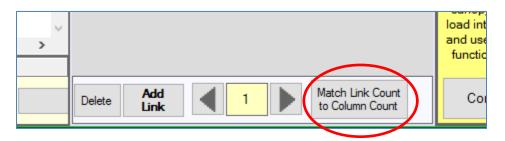
TEXT INPUT Source Size: 425 Rows: 10 Columns: 1				-		×
Select Filter Myfilter		✓ Actions				
Import Text Data	?	Define Transfer Links	?	Convers	ion Setti	ings
T1~Sycamore~100,70~2~7~2.5~Y~3~1.5~2~1.5~40+~F~ T2~Ash~200~1~8.5~1~M~4~4~6~4~10+~F~U T3~Apple~260~1~5.5~2~M~2.5~2~2~2.5~20+~G~C1 T4~Hawthorn~330~1~4.5~0~M~1~1~1~1~1~<10~D~U					new Datał new Row Database	s to
T5~Sycamore~350~1~11~1.5~SM~5.5~5~5.5~5~40+~G~ T6~Sycamore~170~1~11~2.5~Y~5~1~2.5~1~20+~F~C1 T7~Sycamore~190,200,260~3~11~1~SM~5~5~5~5~5~20+~ T8~Elder~290~6~7.5~1~OM~6~5~5~5~10+~F~U T9~Hawthorn~210,150,150~3~6~0~SM~3.5~3.5~3.5~3.5~3.5~3.5~3.5~3.5~3.5~3.5	F			Merge int Rows Start Row n	_	?
				Rows usi	to existing ng Field M iìeld to mat	latch
< T1~Sycamore~100,70~2~7~2.5~Y~3~1.5~2~1.5~40+~F~U	>			If you are u canopy dii load into a and use the function o	mension ny canop e copy co	then by field blumn
Import File Paste Data Field Separation Character		Delete Add I Match Link Count to Column Count		Conve	ert and E	ixit

I must now tell the program which character is used to separate the text. So I select TAB from the drop list (below).

T8~Elder~290~6	5~7.5~1~OM~6	11~1~SM~5~5~5~5~5~20+^ ~5~5~5~10+~F~U ~0~SM~3.5~3.5~3.5~3.5~3					
<			>				
T1~Sycamore~100,7	0~2~7~2.5~Y~3~	1.5~2~1.5~40+~F~U		_			
Import File	Paste Data	Field Separation Character	~		Delete	Add Link	
		(	TAB ~ Space , # * /				



The program now knows how many columns there will be per row so I can use the Match Fields button (see below) to install the same number of Transfer Links.



The transfer links appear with the text input divided up into columns. It's now a case of selecting the ArborShadow target field data for each text item. Do this by selecting from each link drop down menu (see below). I have already selected tag, name and height. Some items of data will not be required so just leave the item blank.

TEXT INPUT Source Size: 425 Rows: 10 Columns: 14						– 🗆 X
Select Filter Myfilter		~	Actions			
Import Text Data	?		Define Trans	fer Links	?	Conversion Settings
T1~Sycamore~100.70~2~7~2.5~Y~3~1.5~2~1.5~40+~F~U T2~Ash~200~1~8.5~1~M~4~4~6~4~10+~F~U	^	1	T1	tag 🗸 🗸		Create new Database
T3^Apple~260~1^5.5~2^M~2.5~22~2~25~20+~G~C1 T4~Hawthom~330~1~4.5~0^M~1~1~1~1~2~10~D~U		2	Sycamore	name ~		Add as new Rows to existing Database
T5~Sycamore~350~1~11~1.5~SM~5.5~5~5.5~5~40+~G~B1 T6~Sycamore~170~1~11~2.5~Y~5~1~2.5~1~20+~F~C1		3	100,70	~		Merge into existing
T7~Sycamore~190,200,260~3~11~1~SM~5~5~5~5~20+~F~C1		4	2	~		Rows
T8~Elder~290~6~7.5~1~OM~6~5~5~5~10+~F~U T9~Hawthorr~210,150,150~3~6~0~SM~3.5~3.5~3.5~3.5~20+~G~C1		5	7	height 🗸		Start Row num 1
		6	2.5	X-Map-Value Y-Map-Value		Merge into existing ? Rows using Field Match
		7	Y	Z-Map-Value		2
		8	3	tag		Select Field to match
		9	1.5	name height ultimate_height		
		10	2	crown beight category		
		11	1.5	north_canopy east_canopy south canopy		
		12	40+	west_canopy ultimate north		If you are using a Single
	$\sim$	13	F	ultimate_east ultimate_south		canopy dimension then load into any canopy field
< T1~Sycamore~100,70~2~7~2.5~Y~3~1.5~2~1.5~40+~F~U	_	14	U	ultimate_west uc_percent		and use the copy column function on List screen.
Import File Paste Data Field Separation Character TAB ~ ~		Delete	Add Link 1	Match Link Count to Column Count		Convert and Exit

Do this for all links. Obviously your own data will probably appear in a different order. Refer back to the Excel sheet to ensure the canopy NSEW dimensions are in the correct order.

If you are only using a single canopy dimension then just assign this to any canopy field (such as north) and once the data is imported you will need to copy the column of data to the remaining canopy columns.

You should end up as the following.



TEXT INPUT Source Size: 425 Rows: 10 Columns: 14					– 🗆 X
Select Filter Myfilter			~ Actions		
Import Text Data ?		Define Transfer Links	s	?	Conversion Settings
T1~Sycamore~100.70~2~7~2.5~Y~3~1.5~2~1.5~40+^ ^ T2~Ash~200~1~8.5~1~M~4~4~6~4~10+~F~U	1	T1	tag 🗸	(	Creale new Database
T3^Apple~260~1~5.5~2^M~2.5~2~2~2~2.5~20+~G~C1 T4~Hawthorn~330~1~4.5~0~M~1~1~1~1~2~10~D~U	2	Sycamore	name v		Add as new Rows to existing Database
T5~Sycamore~350~1~11~1.5~SM~5.5~5~5~5~5~40+^ T6~Sycamore~170~1~11~2.5~Y~5~1~2.5~1~20+~F~	3	100,70	~		Merge into existing ?
T7~Sycamore~190,200,260~3~11~1~SM~5~5~5~5~2	4	2	~		Rows
T8~Elder~290~6~7.5~1~OM~6~5~5~5~10+~F~U T9~Hawthom~210,150,150~3~6~0~SM~3.5~3.5~3.5~3	5	7	height v		Start Row num 1
	6	2.5	crown_height ~		Merge into existing ? Rows using Field Match
	7	Y	~		-
	8	3	north_canopy ~		Select Field to match
	9	1.5	south_canopy ~		
	10	2	east_canopy ~		
	11	1.5	west_canopy ~		
	12	40+	~		If you are using a Single
	13	F	~		canopy dimension then load into any canopy field
< >> T1~Sycamore~100,70~2~7~2.5~Y~3~1.5~2~1.5~40+~F~U	14	U	category 🗸		and use the copy column function on List screen.
Import File Paste Data Field Separation Character	Delet	e Add 1	Match Link Count to Column Count		Convert and Exit

I want to create a new database from the data so I have circled the tick box above. When ready click Convert. In the alert box, which follows, click Yes to keep your changes if you intend to use the filter again in the future. On returning to the ArborShadow List screen I have some errors!

	ArborSh	nadow R4	V1:05 L	icensed (expires: 08/02/2017) Instal	lation Nam	e: 123456												-		×
1/	0	¢		LIST		P L/Ma	•	12.00 :	21st Jun	e 2017			<b>144</b>	<mark> </mark> ↓†	<b>X</b>			NOTE	Мар	₿
	۲	•	+ -	+ Column Row	Fun	ctions														
		Туре	Tag	Name	Height	Ultm Hgt	Crow	Category	North	East	South	West	U-North	U-East	U-South	U-West	Map XYZ	Тор	o %	^
T1	EV		T1	Sycamore	7		2.5	U	3	2	1.5	1.5					S/Obj (0	)		
T2	EV		T2	Ash	8.5		1	U	4	6	4	4					S/Obj (0	)		
Т3	EV		Т3	Apple	5.5		2	C1	2.5	2	2	2.5					S/Obj (0	)		
T4	EV		T4	Hawthorn	4.5		0	U	1	1	1	1					S/Obj (0	)		
T5	EV		T5	Sycamore	11		1.5	B1	5.5	5.5	5	5					S/Obj (0	)		
Т6	EV		Т6	Sycamore	11		2.5	C1	5	2.5	1	1					S/Obj (0	)		
T7	EV		T7	Sycamore	11		1	C1	5	5	5	5					S/Obj (0	)		
Т8	EV		Т8	Elder	7.5		1	U	6	5	5	5					S/Obj (0	)		
Т9	EV		Т9	Hawthorn	6		0	C1	3.5	3.5	3.5	3.5					S/Obj (0	)		
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	1/9																	Snap C	DN Pw	vr:100%

Errors are automatically highlighted in Red. The Tag field expects a pure number without the T. The type (T) needs to be in the type field. Also the Top% field requires a value to determine the percentage of upper canopy to lower canopy.



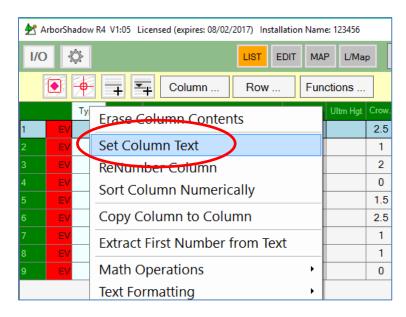
Let's deal with the Tag error first. ArborShadow has a function to extract a number from text so I will use this to get rid of the T. First click the tag column header so it turns white. Now right click and select 'Extract First Number from Text'.

Note the 'Copy Column to Column' function on the list. This is the one to use when copying a single canopy dimension to the remaining columns.

🛧 ArborShadow R4 V1:0	5 Licensed (expires: 08/02/2017) Installation Name: 123456			
I/O 🔅	LIST EDIT MAP L/M	ар	12.00 :	2
₽	Column Row Functions .			
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T3 EV T	ReNumber Column	2	C1	
T4 EV T	Sort Column Numerically	0	U	
T5 EV T		1.5	B1	
T6 EV T	Copy Column to Column	2.5	C1	
<b>T7 E</b> V 7	Extract First Number from Text		C1	
ViewViewColumnRowFunctionsTypeTaErase Column Contents2.5UT1EVTSet Column Text1UT3EVTReNumber Column2C1T4EVTSort Column Numerically0UT5EVTCopy Column to Column1.5B1T6EVTCopy Column to Column1C1T7EVTExtract First Number from Text1UT9EVTMath Operations0C1Text FormattingTText FormattingTT		U		
T9 EV T	Math Operations	0	C1	
I/O IIST EDIT MAP I/Map 12.0   I I I I I I/Map I/Map 12.0   I I I I I I/Map I/Map I/Map 12.0   I I I I I/Map </td <td></td> <td></td>				
<	Find/Replace Text			

The numbers will appear and errors will disappear!

I now want to put a T in every Type field. So right click on the Type column and select 'Set Column Text'.





Enter a T and the data will be written to all lines of Type.

Now for the Top % errors. Each tree requires a value between 1 and 100.

As an example, in the case of a broad tree canopy where the upper canopy (at the top of the tree) matches the extents of the lower canopy, its percentage value would be set to 100%. If the top of the tree is a point (so the tree has a conical shape) the percentage value would be set to 0%. Normally a typical tree would be set between 60-80%.

You can either set each value individually by clicking on the individual field cell or use the 'Set Column Text' to set them all in one go. I have set these to 75% for our example.

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[	۲	•	+ -	+ Column	Row	. Fu	nctions													
		Туре	Tag	Name		Height	Ultm Hgt	Crow	Category	North	East	South	West	U-North	U-East	U-South	U-West	Map XYZ	Top %	^
Г1	V	Т	1	Sycamo	re	7		2.5	U	3	2	1.5	1.5					S/Obj (0)	75	
Г2	V	Т	2	Ash		8.5		1	U	4	6	4	4					S/Obj (0)	75	
ГЗ	V	Т	3	Apple		5.5		2	C1	2.5	2	2	2.5					S/Obj (0)	75	
	V	Т	4	Hawtho	rn	4.5		0	U	1	1	1	1					S/Obj (0)	75	
r5	V	Т	5	Sycamo	re	11		1.5	B1	5.5	5.5	5	5					S/Obj (0)	75	
Г6	V	Т	6	Sycamo	re	11		2.5	C1	5	2.5	1	1					S/Obj (0)	75	
F7	V	Т	7	Sycamo	re	11		1	C1	5	5	5	5					S/Obj (0)	75	
Г8	v	Т	8	Elder		7.5		1	U	6	5	5	5					S/Obj (0)	75	
Г9	v	Т	9	Hawtho	rn	6		0	C1	3.5	3.5	3.5	3.5					S/Obj (0)	75	
<																				> _
	1/9																	S	nap ON P	wr:100%

## And it's finished.

The v at the start of each row is telling me that it has no vertices (XYZ map data). This is because they have not been plotted onto the map.

You would do this manually from the map screen. But if you happen to have the X/Y coordinates in the Excel sheet, these can also be automatically imported as well. Just assign the fields as before.