LAStools is set of programs for processing lidar data. To prepare lidar files for importing into COLDNet Profile, we use the program las2txt.exe which is part of LASTools. This program converts the binary .las or .laz files to a text file which is the format that COLDNet Profile reads in lidar data.

The .laz format is a compressed lossless form of a .las file.

LASTools can be downloaded from http://lastools.org

1. To convert a .laz file to a .txt file, navigate to the folder where las2txt is on your computer and double click on las2txt to run. A form will be displayed a shown below.

Ias2txt - turns LiDAR into human-readable, easy-to-parse ASCII	
c browse + p	1 job on 12 cores +     selected file only     process all files     merge files into one     output +     verbose     VIEW sample points: 5000000
4 <u>filter + þ</u>	
transform + b	▼ (y) ▼ (2)
c overlays + b	iv (2) □ (i)ntensity
I AS version: 1 x	(n)eturn number
source ID: created:	□ (c)lassification □ scan (a)ngle
	(u)ser data
# points: point type: point size:	GPS (t)ime
X V	with(h)old flag
Z:	☐ (o)verlap flag ☐ scanner channe(l)
Lumpression.	☐ (RGB) color ☐ (w)ave packet index
global_encoding:	□ (W)ave packet
header size: offset: # of 1st returns:	attributes +
# of 2nd returns: # of 3rd returns:	parse string: xyz
# of 4th returns: # of 5th software	separator: space
offset x y z:	comment: pound
scale x y z:	add extra string
no projection	extra.string:
	re file
e open license = U V V disable lower left y: 0 upper right y: 0 tile size: 1	1000
by Martin Isenburg Reset Rotate Move Zoom selected file:	

#### 2. Select Browse as shown below

🔳 las2txt - turns LiDAR into human-readable	e, easy-to-parse ASCII	- 🗆 X
E       browse       +         C       filter       +         C       filter       +         C       transform       +         C       projection       +         C       projection       +         C       overlays       +         LAS version: 1 x       source ID:       created:         # points:       point size:       x:         y:       z:       y:         z:       y:       z:		<ul> <li>1 job on 12 cores + 1</li> <li>r selected file only</li> <li>process all files</li> <li>merge files into one</li> <li>output + 1</li> <li>verbose</li> <li>VIEW</li> <li>sample points: 5000000</li> <li>♥ (x)</li> <li>♥</li></ul>
<pre># VLRs: global_encoding: header size: offset: # of 1st returns: # of 2nd returns: # of 2nd returns: # of 4th returns: # of 5th returns: offset xy z: scale x y z: no projection</pre>		(RGB) color         (W)ave packet         (W)ave packet         wa(V)e form         attributes + parse string:         parse string:         separator:         sparator:         add extra string:         RUN
LICENSE LAStools (c) 2020 = open license = by Martin Isenburg (version 201207)	Image: Selected file:         Clip input         Iower left x: 0         upper right x: 0           Move         Zoom         Iower left y: 0         upper right y: 0	0 use square tile 0 tile size: 1000

3. The left hand side of the form will now look like this

🔳 las2txt - turns LiDAR into human-re
browse
L. Vasliberate \serf
-
wildcard: *.laz add
directory: E:\ go
🔽 .las 🔽 .laz 🗖 .ply
🗖 .asc 🗖 .bil 🗖 .dtm
ASCII files +
c_filter + D
transform +
projection +
overlays +
LAS version: 1.× source ID: created:

4. To navigate to a different drive enter the drive letter into the textbox as shown below. You must include the ":\" characters in the string you enter. Press the **go** button

📧 las2txt - turns LiDAR into human-re
browse
KECYCLE.BIN     COLDNetProfileDeploy     CountiesPowerData     LAStools     VPowerCoData     System Volume Informati     ✓
wildcard: *.laz add
directory: X:\go ☑ .las ☑ .laz □ .ply
□.asc □.bil □.dtm □_ASCII files +
filter + þ
transform +
projection +
- ovenays + P

5. You can then click on a line in the displayed list area to move to that folder as shown below

📧 las2txt - turns LiDAR into human-re
browse
\\$RECYCLE.BIN \COLDNetProfileDeploy <u>\CountiesPowerData</u> \LAStools \PowerCoData \System Volume Informati
wildcard: *.laz add
directory: X:\go
□ asc □ bil □ dtm
ASCII files +
⊑_filter + Þ
transform +
projection +
overlays +

Use this list to find the file that you wish to convert.
 Notes Any line that start with a "\" means that it is a folder.

7. The image below shows a typical view of folder

🔳 las2txt - turns LiDAR into human-r
_ browse
BoamesWorld - LazExtra
RoamesWorld – LazExtra
-
wildcard: Alaz add
directory: XA go
directory: X:\ go
directory: X:\ go
directory: X:\ go ✓ .las ✓ .laz □ .ply □ .asc □ .bil □ .dtm □ ASCII files + □
directory:     X:\     go       Isa     Isa     .laz     .ply       .asc     .bil     .dtm       ASCII files     + p
directory:     X:\     go       directory:     X:\     go       Isa     Isa     .laz       .asc     .bil     .dtm       ASCII files     +1       filter     +1       transform     +1
windedid.       indedid.       indedid.         directory:       X:A       go         Isas       Jaz       .ply         .asc       .bil       .dtm         ASCII files       +j         filter       +j         transform       +j         projection       +j

The line "\.." Means move to the previous level folder on the drive.

#### NOTE: The window is quite small so you cannot see long file names.

8. Double click on the files you wish to process so that they are written into the top area as shown below.

Ias2txt - turns LiDAR into human-re
CP.laz
browse
L. L. Vounties Power COLDN CP.laz RoamesWorld - LazExtra RoamesWorld - LazExtra
wildcard: *.laz add
directory: D:\go
🔽 .las 🔽 .laz 🗖 .ply
□.asc □.bil □.dtm □ASCII files +
filter + þ
transform +
⊆ projection + Þ
overlays +
LAS version: 1.2 source ID: 0 created: 70/2021 'OTHER' 'ROAMES GeoRepository'
# of points: 104742 point type: 3 point size: 34 × 315463.5409 315619.3584 v: 5884652 826 5884747 894

9. On the right hand side of the window make sure you have the fields ticked as shown below.

These fields are (x), (y), (z) and (c)lassification. Also ensure that you have selected **comma** as the separator. Then press **RUN**.



10. You will then see a new form displayed which will look something like this. Press the **Start** button.

RUN	-	×
las2bt -i "D:\DATA\COLDNetProfile\CountiesPower\CP.laz" -parse xyzc -sep comma.		
START		
CANCEL		

The window will disappear, and your file will have been created in the same directory as the source file that was specified with the file extension .txt

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The output file will look something like this

CP.txt - Notepad
File Edit Format View Help
315547.576,5884709.811,50.535,5
315538.883,5884709.444,47.980,5
315534.382,5884709.254,47.354,5
315579.701,5884711.167,33.964,3
315549.649,5884721.452,40.412,4
315549.699,5884721.133,39.433,4
315549.741,5884720.857,42.846,4
315549.744,5884720.844,42.093,4
315549.748,5884720.811,40.060,4
315549.750,5884720.800,39.406,4
315549.788,5884720.555,43.587,4
315549.838,5884720.240,44.840,4
315549.840,5884720.220,43.675,4
315549.842,5884720.203,42.687,4
315549.849,5884720.153,39.816,4
315549.881,5884719.960,46.021,5
315549.884,5884719.936,44.671,4
315549.890,5884719.895,42.365,4
315549.896,5884719.848,39.687,4
315549.938,5884719.593,44.338,4
315549.975,5884719.356,47.189,5
315549.978,5884719.337,46.149,5
315549.979,5884719.326,45.541,4

The file is now ready for importing into COLDNet Profile