Appendix 4 – CDZ File specification

This is a file specification for .cdz files version 0.3.

In order to be read successfully by applications, .cdz files need to have a specific structure. A .cdz file should be encoded using ASCII or an alternative method which allows the file to be read and edited using a plain text editor. Opening a .cdz file with a plain text editor should display human-readable characters to the user. The image below shows the contents of a .cdz file once opened with a text editor.

```
<CDZ_header>
0.3
4420 bytes
Stirling
06/02/2018
None
<CDZ_data>
-524863480738.6112,-565250209978.7776,724848997302.272,678251002960.2816,-320602477323.87
-853818974876.4672,-143272349532.16,-723094544685.4656,288802381758.464,821938540773.376,
89960531519.0784,495453641008.7424,361433344350.6176,-860894231370.1376,125704385593.344,
-788521714240.7168,306548109947.6992,115082819482.4192,448156962861.8752,-288610956240.48
522221812029.8496,-101972636073.984,-95482479955.1488,283664746912.1536,-566398753439.744
-867718439475.6096,498448390003.0976,380737888557.4656,839502329282.56,533442717758.2592,
-176506638277.0176,529967114459.5456,288757481734.144,500877726685.5936,-591699009077.248
-838039397990.4,77121785430.016,-482364361592.0128,-644782747969.1263,-518927507521.536,-
209784078440.8576,597200688958.6688,-126558428934.9632,73309862703.9232,-763289755294.105
801537603403.776,689387083504.0256,-867279719052.0833,-32610642716.2624,-616405594957.414
-350494747158.1184,748329627130.2656,-374675468399.4112,-174639917144.4736,-227972215105.
-14540448622.1824,-764283812891.8528,-452971514245.9392,629336165266.2272,-66413968071.06
33983840229.7856,496819770700.5952,829350300824.3712,63506688770.048,686611697867.1616,-1
-427191145437.5936,-33924086497.28,-178959671518.8224,-895336520351.744,146756751222.3744
-842557806765.6704,61208077218.6112,403473670393.0368,303915240888.7296,855024090270.9248
566311042993.3568,771417139943.8336,-250700352402.2272,191696939778.048,752914125134.2336
509670673140.9408,-148931987321.6512,-270391160130.7648,479803436590.6944,529360668852.22
-86265300621.7216,695593835115.3152,470018851812.1472,687311382852.4032,-317568371916.8,-
-309833859753.5744,-788168349161.8816,759726271679.6927,791511878021.9392,335625221413.27
-680762422172.0576,-196267348276.0192,41335685906.432,13410519901.7984,816069753595.4944,
<CDZ_end>
```

Figure 16. Sample .cdz file

A .cdz file contains three tags, aside from the information itself. The file starts with a *<CDZ_header>* tag, denoting the start of the file and its header. The next tag appearing is the *<CDZ_data>* tag, which denotes the end of header and the start of the data stored in the file. Finally, the *<CDZ_end>* tag denotes the end of the data and the file itself.

The header of the file should contain the following information, in the following order:

1. File Version, in the format '0.3'

2. File Size, in the format 'X bytes', with X being an integer.

3. Location, denoting the location where the data was taken, in the format 'Y'. With Y being a single word.

4. Date, denoting the date when the data was recorded, in the format 'DD/MM/YYYY' with 'DD' the day, 'MM' the month, and 'YYYY' the year.

5. Measurement type, denoting the type of measurement the data represents, in the format 'Z' with Z being a single word.

The body of the file should contain the data as comma separated values. Values can be floating point numbers.
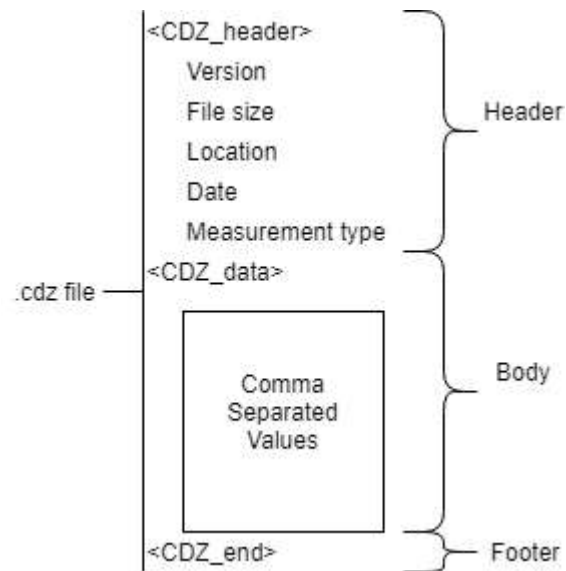
The diagram below gives an overall description of the file structure.

Figure 17. CDZ file structure description