

## Metadata form of *Silva Fennica* / ALS DATA

This form is designed for writing the elements of metadata, which are used in the description of research materials such as data and codes. The form is based on the work done in the Work Group “Description of research materials” under the Finnish Open Science Coordination.

| Item  | Description  | Responsible                  |
|---|--|------------------------------|
| <i>Name of the data / code</i>                  | Mathiesen Eidsvold Værk ALS – 2021   | Author                       |
| <i>Author &amp; ORCID</i>                       | Terratec AS  | Author                       |
| <i>Authors' affiliation(s)</i>                  |  | Author                       |
| <i>Owner of the material</i>                    | Mathiesen Eidsvold Værk ANS (MEV)  | Author                       |
| <i>Publisher</i>                                |  | Author                       |
| <i>Funder</i>                                   | MEV  | Author                       |
| <i>Description</i>                              | ALS data were collected on July 17 <sup>th</sup> , 2021, as part of the forest management planning inventory of the MEV property. A dual channel Riegl VQ 1560II sensor was flown at 3500 m above ground level, with a pulse repetition rate of 250 kHz per channel, a scan rate of 56 lines per second, and a 20% lateral overlap between lines. The resulting pulse density was 1.4 pulses m <sup>-2</sup> . The data is stored as 1507 individual tiles.  | Author                       |
| <i>Methods</i>                                  | The raw data was processed in accordance with the description given in the paper.<br>The point cloud was used to construct a canopy height model (CHM). The CHM was produced using the point-2-raster (p2r) algorithm in the lidR v. 4.1.2 package. The CHM was split into tiles, corresponding with the tiles created from aerial images (Metadata_Aerial-Images), and was added as a fifth channel, creating a five layer raster composite, effectively adding information on tree height and canopy structure to the aerial images. | Author                       |
| <i>Variables</i>                                | The data are stored on las format.   | Author                       |
| <i>Author keywords</i>                          |  | Author                       |
| <i>Vocabulary keywords (community standard)</i> |  | Author                       |
| <i>Discipline</i>                               | Forest inventory mapping   | Archive/Repository/Publisher |
| <i>Type of material</i>                         | Raw data - Point clouds from airborne laser scanning.  | Author                       |
| <i>Language</i>                                 | ENG  | Author                       |
| <i>Time range covered</i>                       | 2021-07-17   | Author                       |

|  |   |                              |
|--|---|------------------------------|
|  |   |                              |
| <i>Geographic region</i>   | [590000, 6680000],<br>[620000, 6680000],<br>[620000, 6715000],<br>[590000, 6715000],<br>[590000, 6680000] | Author                       |
| <i>Version</i>   |   | Author                       |
| <i>File format(s)</i>  | .las  | Author                       |
| <i>Availability of the materials (open, embargo, registration, limited, registration required)</i> | The data is owned by Mathiesen Eidsvold Værk ANS and is not accessible.                                   | Author                       |
| <i>Justification for access restrictions</i>   | Confidential business information.  | Author                       |
| <i>Licence</i>   |   | Author                       |
| <i>Connections with other research materials</i>   |   | Author                       |
| <i>Access to the connected research materials</i>  | See Metadata_Aerial-Images  | Author                       |
| <i>Codes only: hardware/software requirements for running the code</i>                             |   | Author                       |
| <i>Connections to other products of research</i>   |   | Author                       |
| <i>Personal data</i>   |   | Author                       |
| <i>Confidential or secret data</i>   |   | Author                       |
| <i>Publication date</i>  |   | Archive/Repository/Publisher |
| <i>Preservation policy</i>   |   | Author                       |
| <i>Permanent identifier (PID)</i>  |   | Archive/Repository/Publisher |