| Record ID	Record
Metadata Filename	22496201_MMG_Tasmania
Metadata Language	English
Metadata Character Set	ASCII (utf8)
Metadata Point of Contact	Tony McDade [Project Manager] Fugro Spatial Solutions Pty Ltd Level 1, Brandl Street, Eight Mile Plains Qld 4113 Telephone: +61738413433 T.McDade@fugro.com
Metadata Date Stamp	26/02/2014
Dataset Title and Graphic Overview	MMG ALS ADS Tasmania
Dataset Reference Date	Feb-2014
Dataset Description Abstract	MMG LiDAR derived products
Dataset Language	English
Dataset Character Set	ASCII
Dataset Topic Category	ALS DEM and Contours
Geographic Location Description	Rosebery, Tasmania, Australia
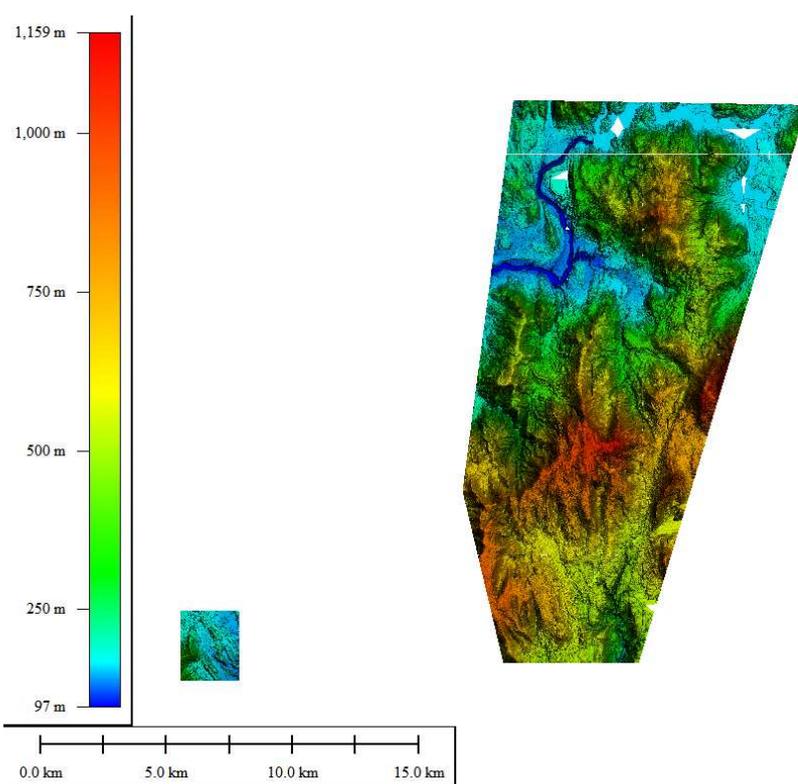
Geographic Bounding Box	`WEST LONGITUDE=145° 19' 55" E`
	`NORTH LATITUDE=41° 43' 6" S`
	`EAST LONGITUDE=145° 38' 8" E`
	`SOUTH LATITUDE=41° 55' 52" S`

Acquisition Start Date	09/01/2014 [UTC]
Acquisition End Date	12/01/2014 [UTC]
Sensor Type Name	Leica ALS50-2
Flying Height (AGL) metres	1051-2067m
INS / IMU Used	IPAS10
Number of Runs	52

Swath Width (metres)	990
Flight Direction	Non-Cardinal
Side Overlap (%)	23
Output Data Format	- Lidar Ground points in ASCII XYZ format - Lidar Tops of trees/veg. in ASCII XYZ format - Contours 0.5m in DXF and DGN formats - Ground gridded DEM 2m & 1m tiles in ASCII XYZ format and overall ESRI ASCII Grid - Intensity Images are in Geotiff tiles and Overall ECW format - Lidar Classified data in LAS format - LiDAR Ground Model Key Points in ASCII XYZ format
Horizontal Datum	GDA94
Vertical Datum	AHD
Map Projection	MGA Zone 55
Number of control points	27 inside the survey area

Number of control points: 27 inside the survey area

DZ Validation

East

Number	Easting	Northing	Known Z	Laser Z	Dz
XP04B	382828.700	5373526.730	479.970	480.070	+0.100
PID02SQUARE	382522.610	5365465.610	853.030	852.960	-0.070
PID01NAIL	376001.560	5365064.490	932.490	932.430	-0.060
XP15B	385443.600	5380962.520	187.370	187.420	+0.050
XP03B	375412.520	5372941.980	154.680	154.730	+0.050
XP16C	379643.330	5362477.160	525.170	525.210	+0.040
XP03	375408.700	5372952.310	153.980	154.020	+0.040
XP06C	376001.710	5365066.830	932.520	932.480	-0.040
XP19B	385009.530	5375187.510	174.740	174.770	+0.030
PID01B	376003.380	5365066.520	932.590	932.560	-0.030
XP06B	378982.190	5366465.760	1118.190	1118.160	-0.030
XP16D	379646.430	5362477.230	525.170	525.190	+0.020
XP04	382828.780	5373522.450	479.950	479.970	+0.020
XP02B	378882.340	5374046.060	185.360	185.340	-0.020
XP14B	377747.930	5378928.750	163.990	163.970	-0.020
XP14	377746.840	5378933.100	164.040	164.020	-0.020
XP15	385415.630	5381027.370	190.860	190.880	+0.020
PID02CROSS	382516.340	5365461.630	851.520	851.510	-0.010
XP06A	378966.900	5366432.710	1119.190	1119.200	+0.010
XP19	384989.910	5375184.040	174.890	174.880	-0.010
XP06D	376055.440	5365138.090	939.310	939.300	-0.010
XP02	378886.020	5374045.000	185.420	185.420	+0.000

```
Average dz          +0.003
Minimum dz          -0.070
Maximum dz          +0.100
Average magnitude    0.032
Root mean square     0.039
Std deviation        0.040
```

West

Number	Easting	Northing	Known Z	Laser Z	Dz
XP1_2014	364173.812	5356846.024	139.017	138.990	-0.027
XP2_2014	361739.403	5357174.379	390.814	390.810	-0.004
XP2A_2014	362387.894	5357616.455	191.391	191.400	+0.009
XP3_2014	361837.498	5360004.146	210.648	210.680	+0.032
XP4_2014	363920.881	5361533.324	163.460	163.440	-0.020

```
Average dz          -0.002
Minimum dz          -0.027
Maximum dz          +0.032
Average magnitude    0.018
Root mean square     0.021
Std deviation        0.024
```

Spatial Accuracy (Hz) metres	0.4m at 1SD
Spatial Accuracy (Vt) metres	0.20m at 1SD
Surface Type	Various
Data Tile size (km²)	1km2
Processing / Derivation Lineage	**Ground Classifications** Fugro Spatial Solutions Pty Ltd aim is to select those points that are part of a clean ground surface, which might not be 100% of the ground hits. This results in a cleaner dataset, without compromising on terrain detail and accuracy. Ground filtering algorithms, tailored for this project, data type and terrain type, are applied to the full dataset. The ground filtered dataset is then visually checked by an operator, and incorrectly classified data is corrected or the ground filtering algorithm is adjusted and then visually checked. For the verification of the ground classifications, intensity imagery is used as a backdrop image. **Ground Surface DEM** This dataset consists of every point that is part of the classified ground surface. **Gridded Ground DEM** A 2m gridded DEM is generated from the ground surface. The height for each grid point is by triangulation between the three nearest DEM ground points. **Model Keypoints** A resampled ground dataset, consisting of only those points that actually contribute to the shape of the terrain (+/- 15cm), with a minimum point density of 1 point every 10 m. **Contours** Triangles are built from the model keypoint DEM. Height points at the required interval are interpolated on the triangle lines and these heights points connected with smooth splines. The splines for each height are then merged to become final contours. The tiled data has been cut into **1km** tiles, where the file name prefix corresponds with the **Lower Left** coordinate of the block.
Limitations of Data	All data achieved specification
Conditions of Supply	1. This Metadata file is always to be stored with the unaltered data contained in this volume. 2. Any supplied data is to be used only for the purpose for which it was commissioned and in accordance with the terms of engagement. 3. Use of any supplied data for purposes other than those stated is entirely at the risk of the Client.