LOWE Environmental Impact

Utilising LIDAR in Farm Plans

Millie Taylor

LINZ Topo50 maps

LINZ Topo50 maps

- 20m contours
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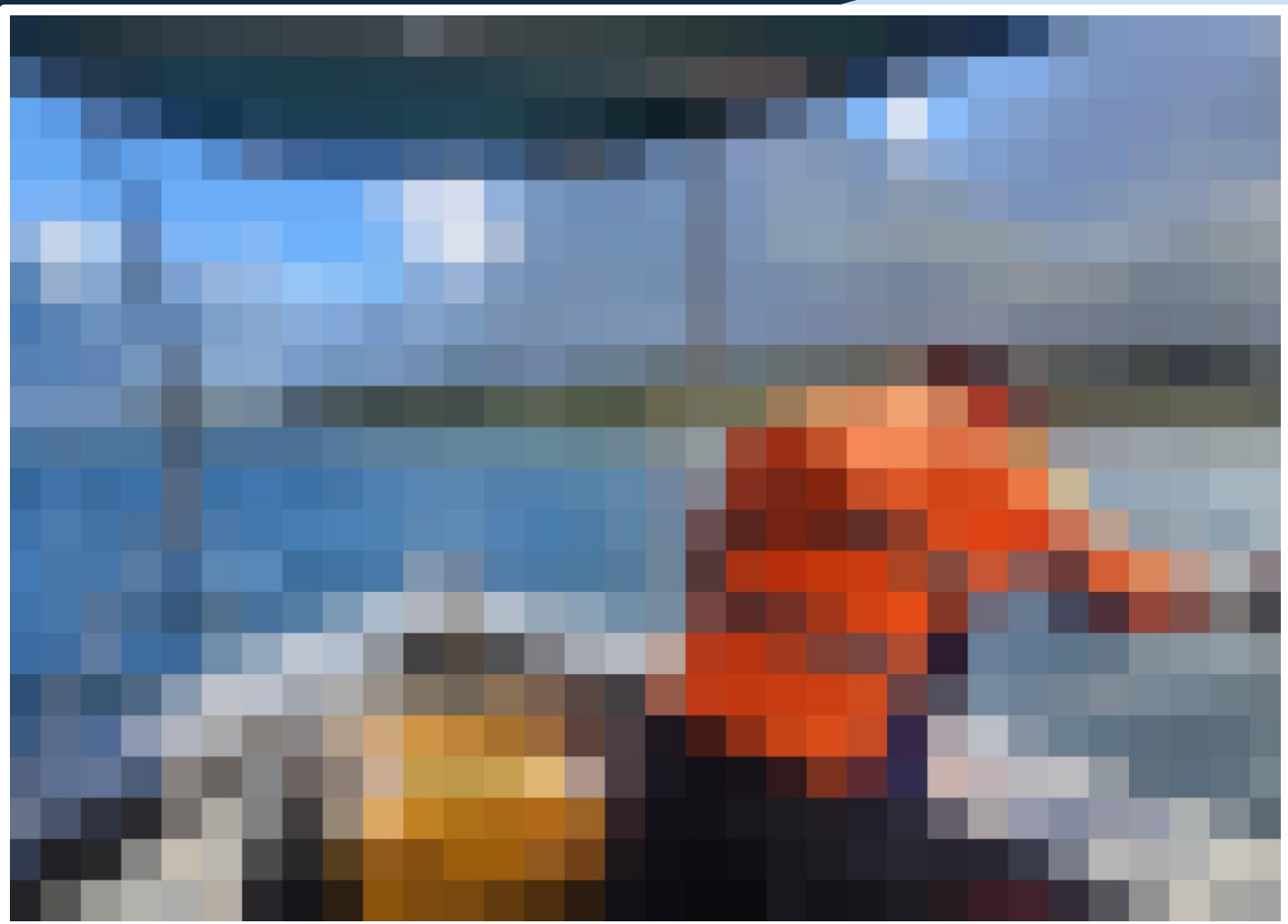
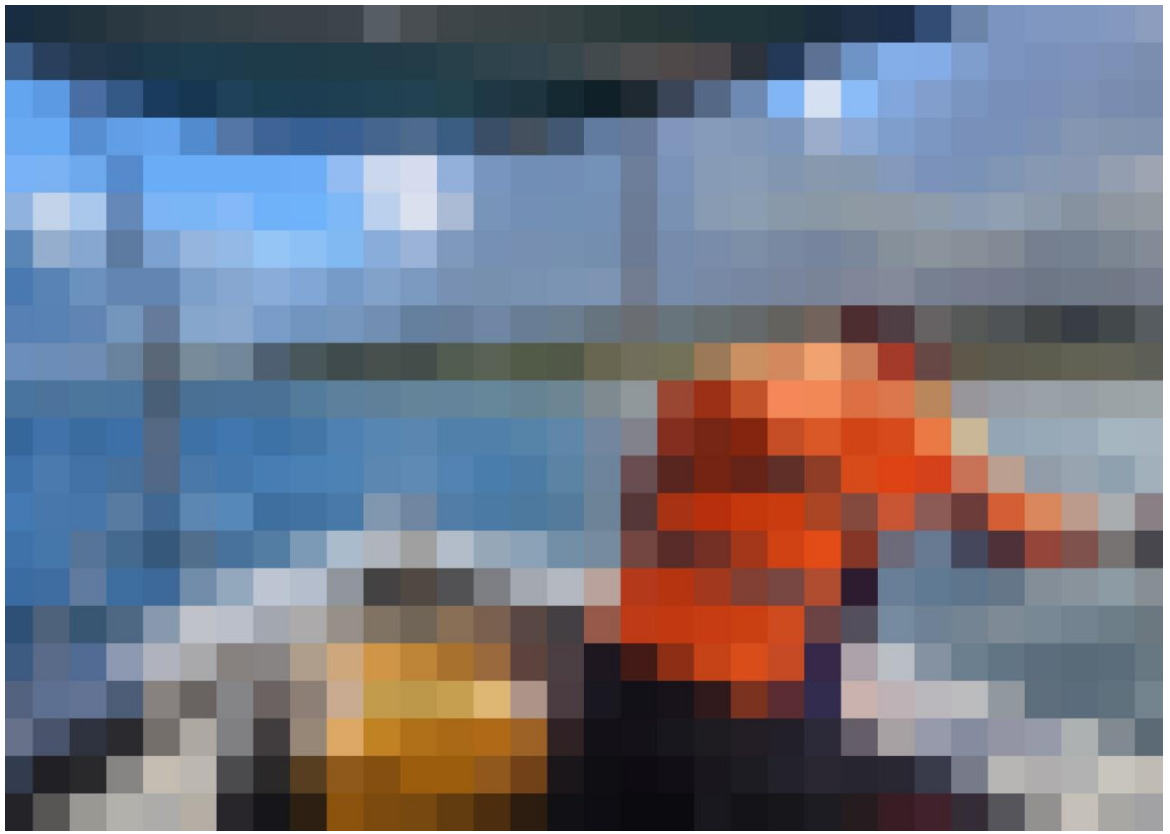
LINZ Topo50 maps

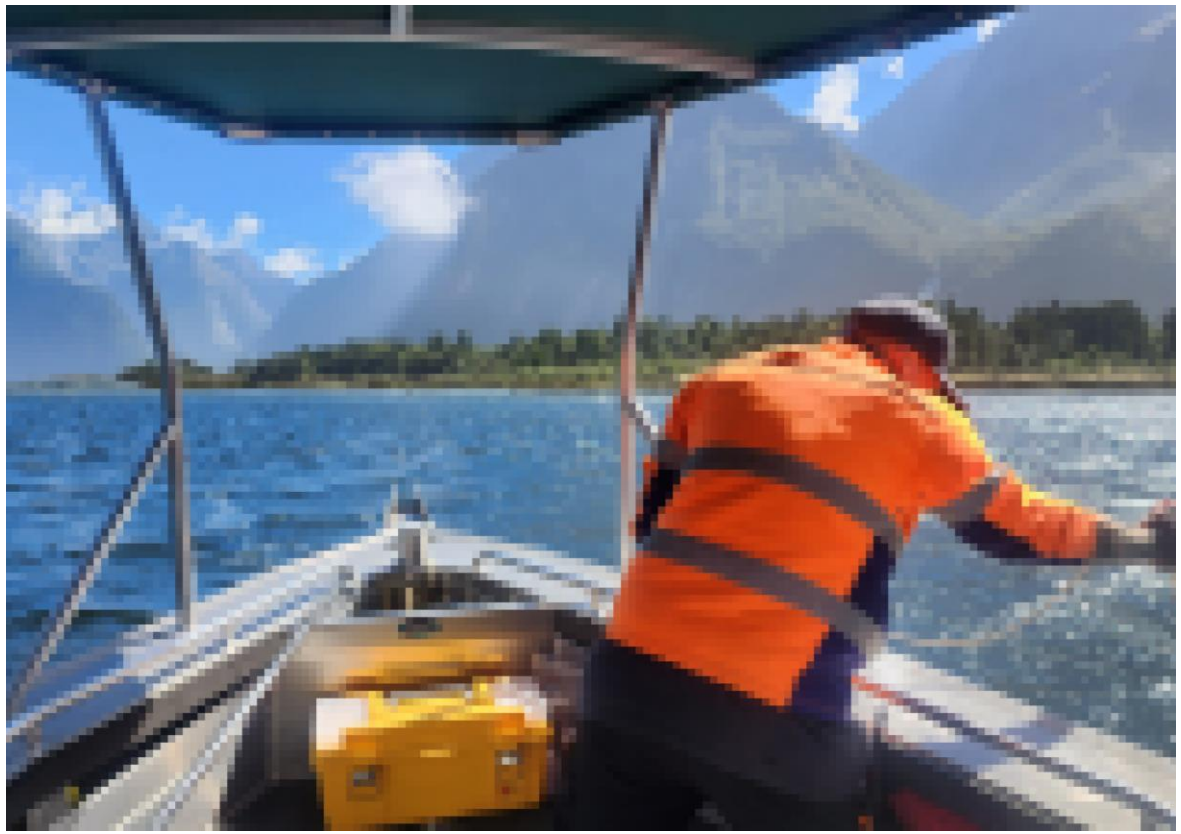
- 20m contours
- 1:50,000 scale



1:50,000 scale pixel equivalent



1:50,000 scale pixel equivalent



1:10,000 scale pixel equivalent

LiDAR data

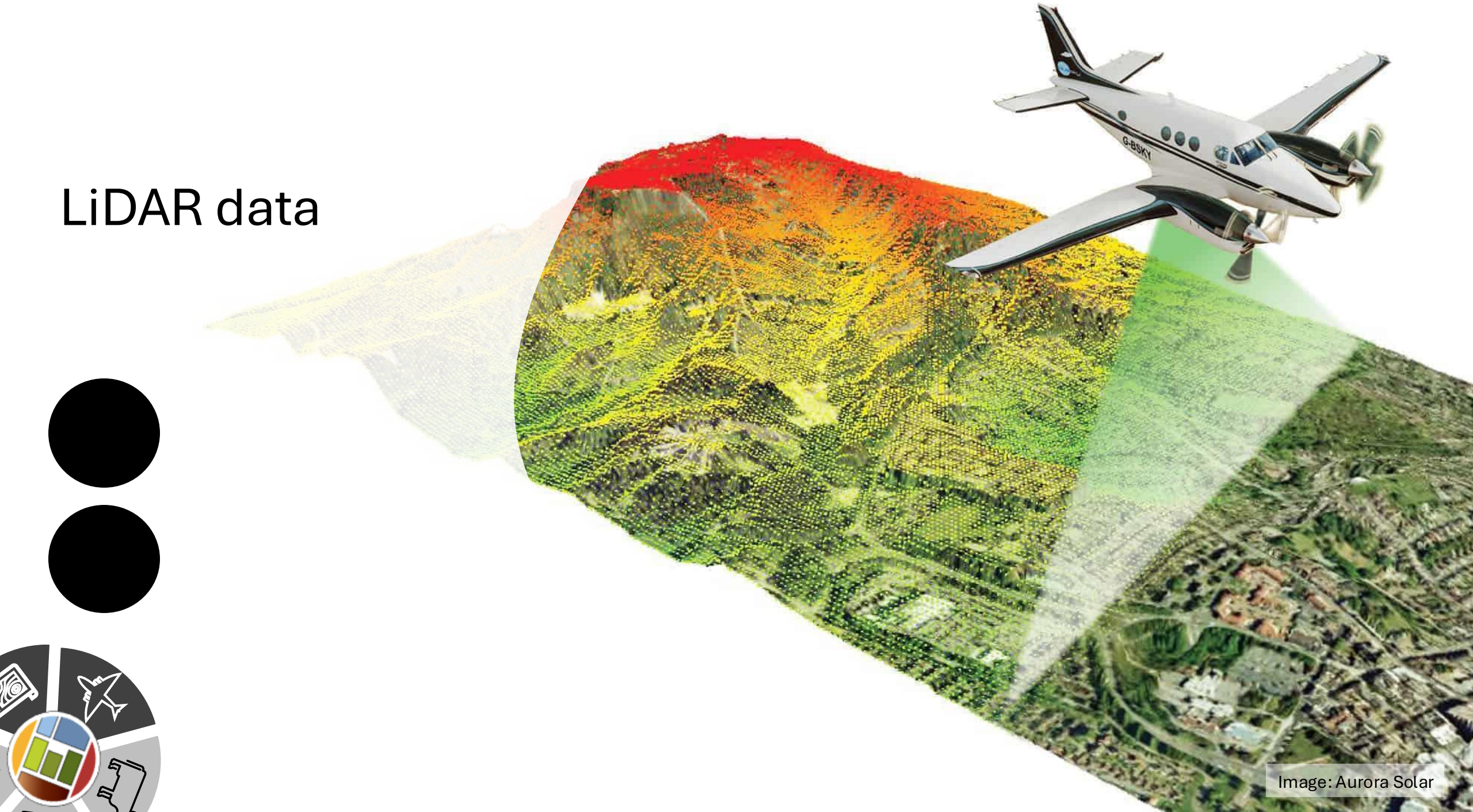


Image: Aurora Solar

LiDAR data

- Laser sensors

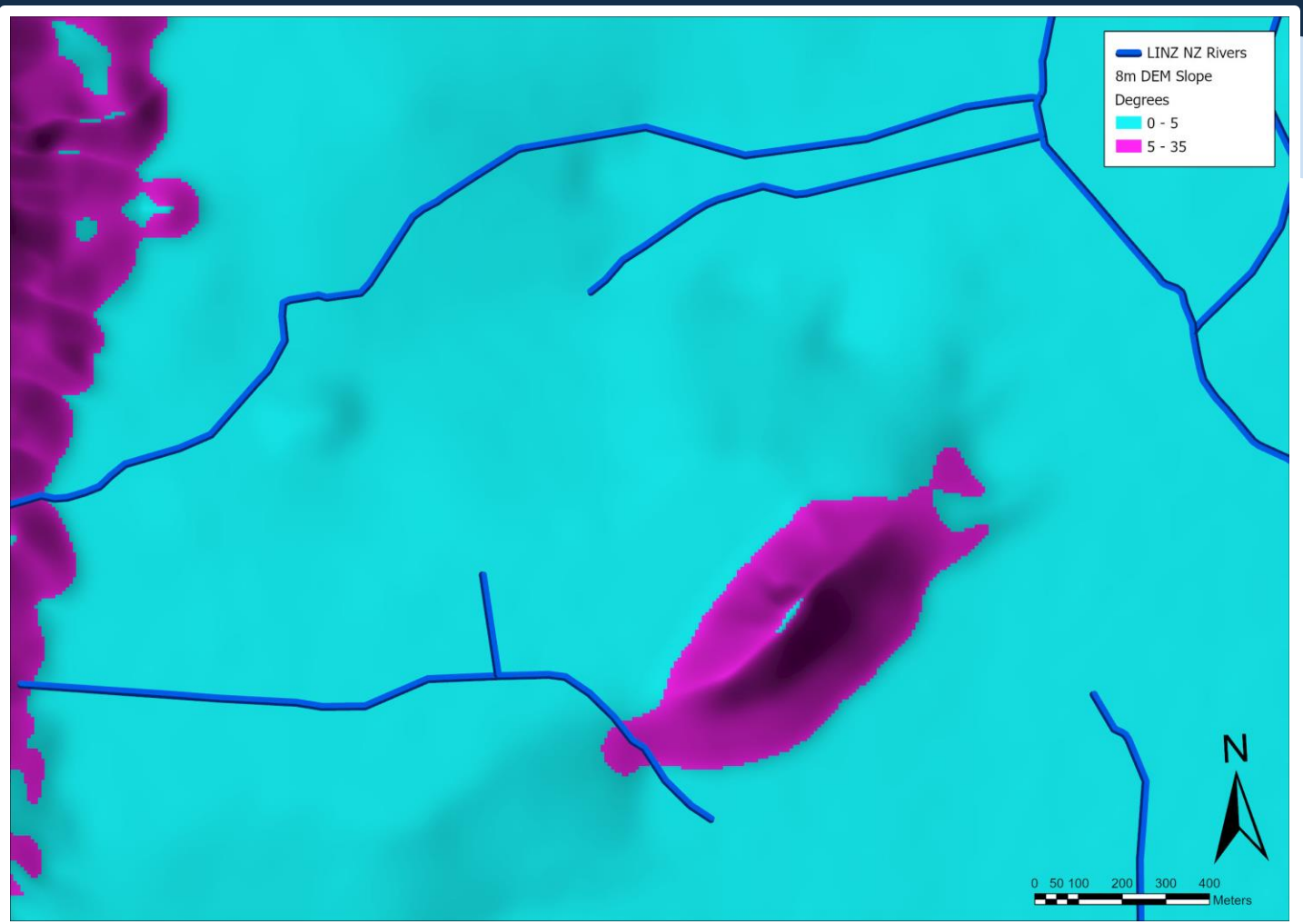
Image: Aurora Solar

LiDAR data

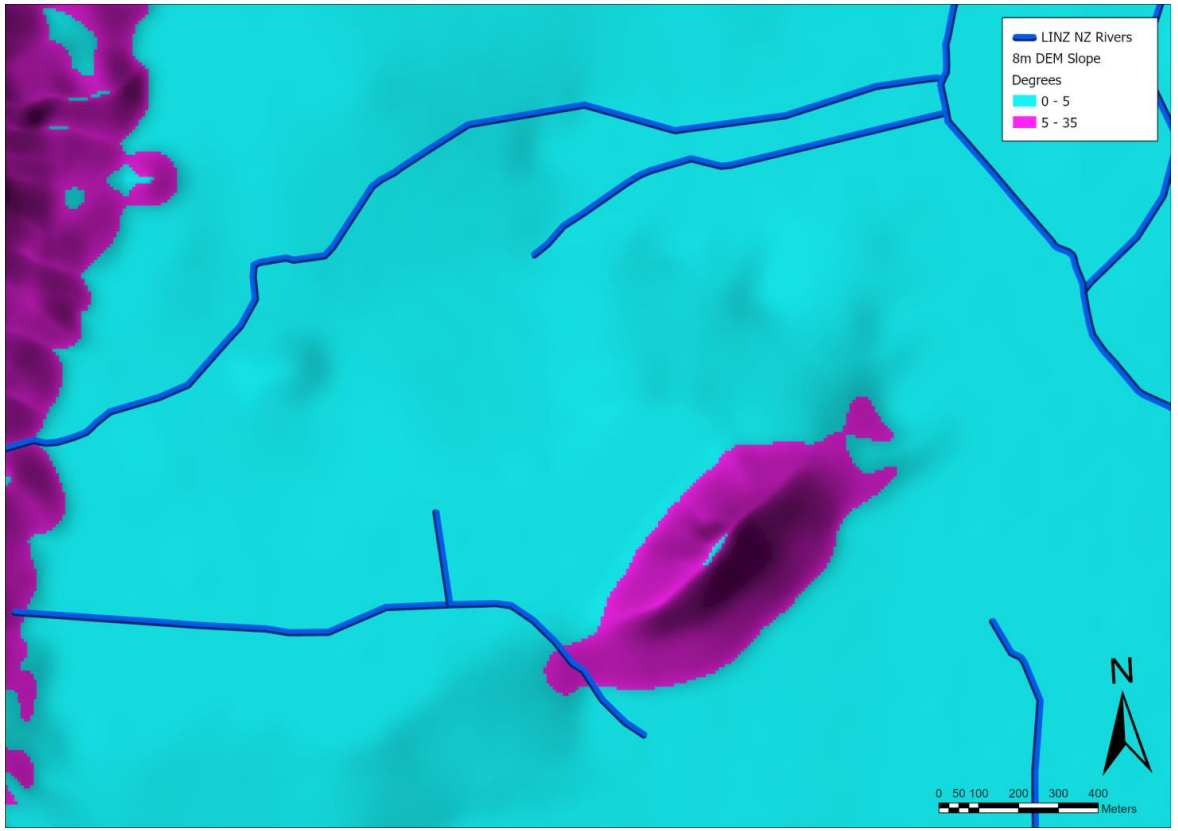
- Laser sensors
- 1:1,000 scale

Image: Aurora Solar

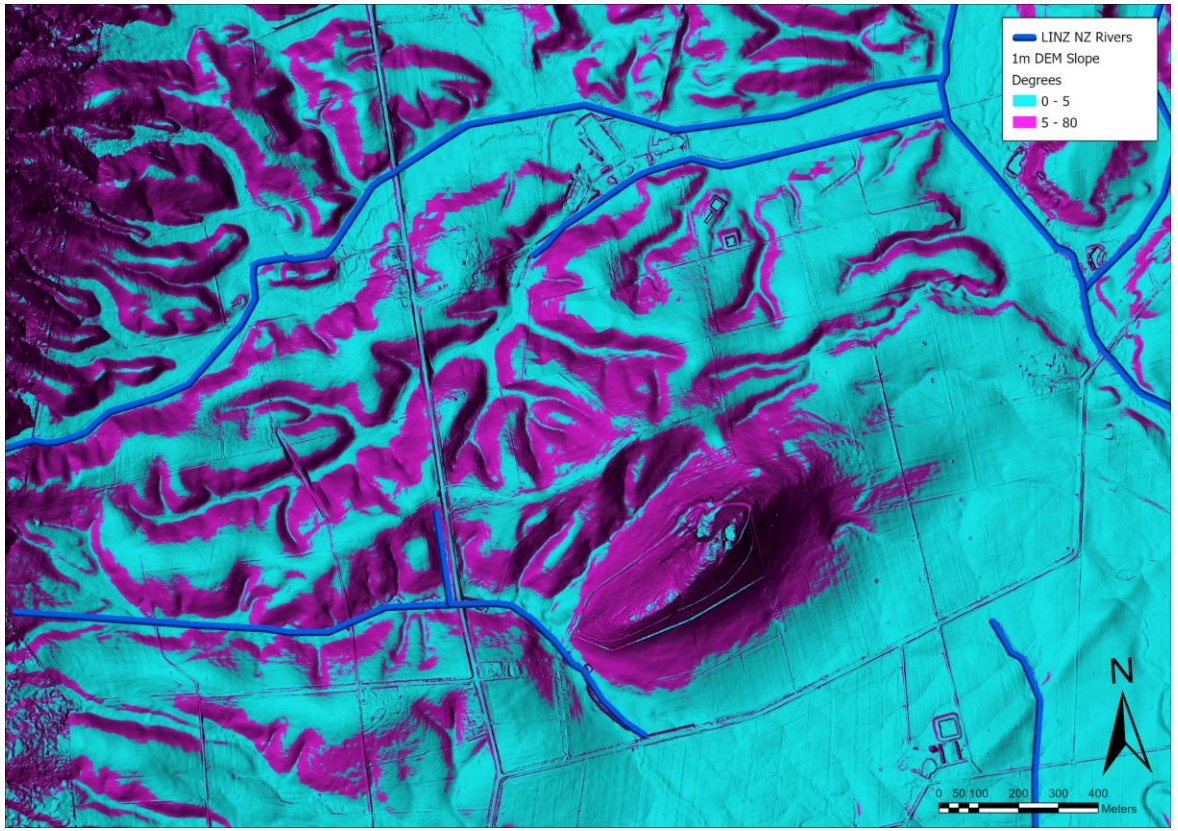
40% of New Zealand does not currently have LiDAR available



8m DEM – not much detail can be assessed



8m



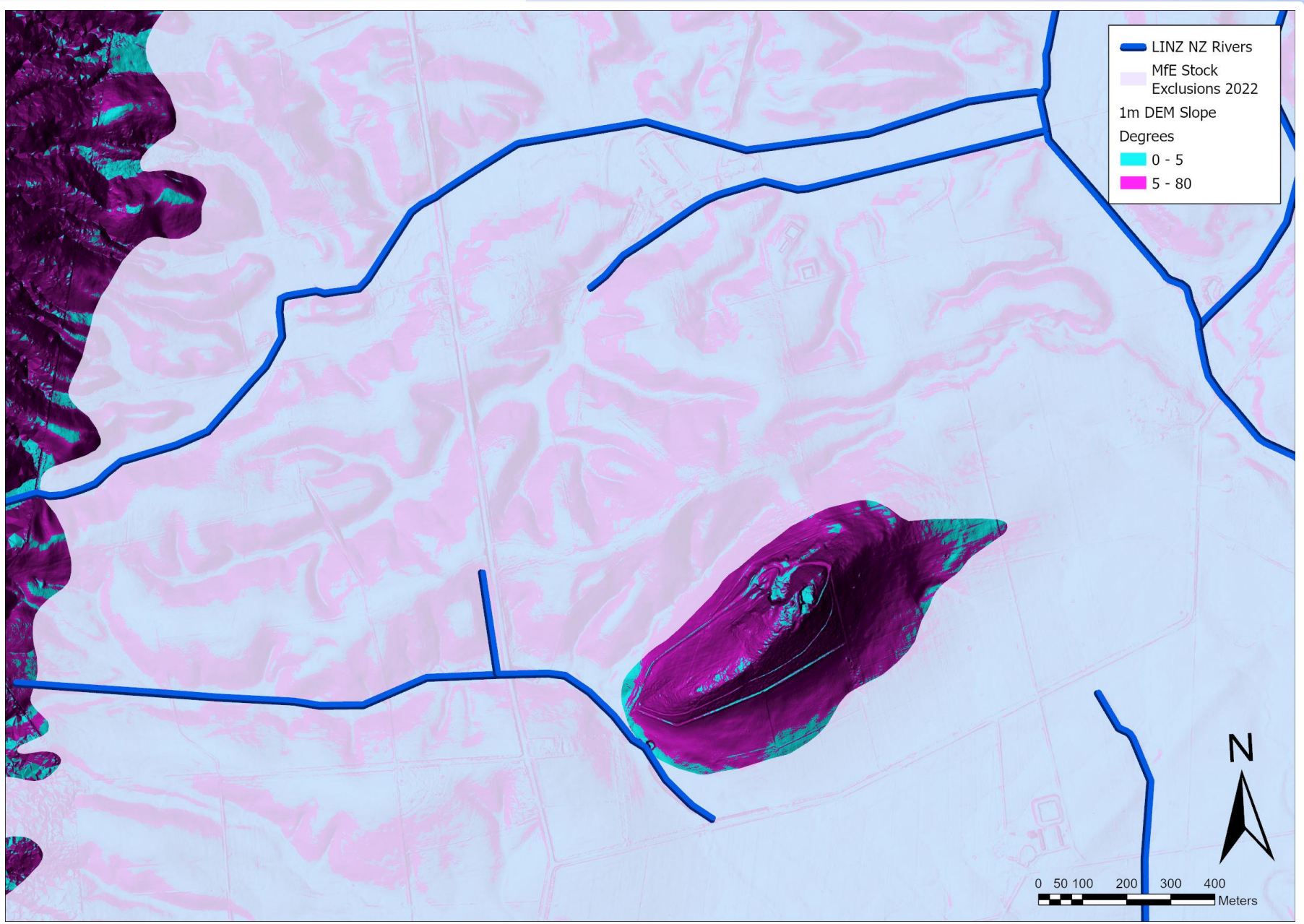
1m

1m DEM allows finer resolution mapping for a farm scale assessment

MfE Stock Exclusion
Low Slope Land 2022

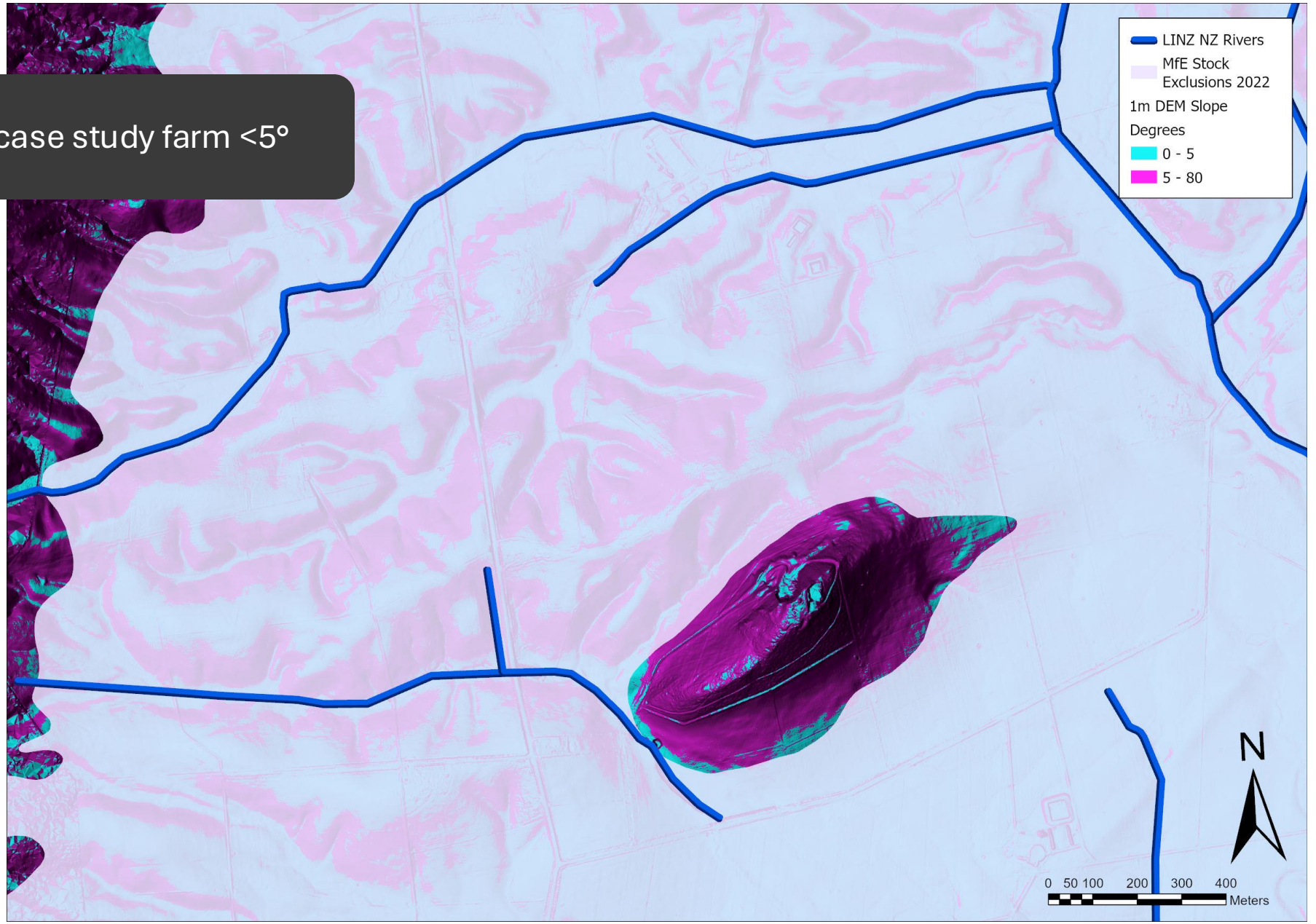
MfE

1m LiDAR


LINZ NZ Rivers
MfE Stock Exclusions 2022
1m DEM Slope
Degrees
0 - 5
5 - 80
N
0 50 100 200 300 400
Meters

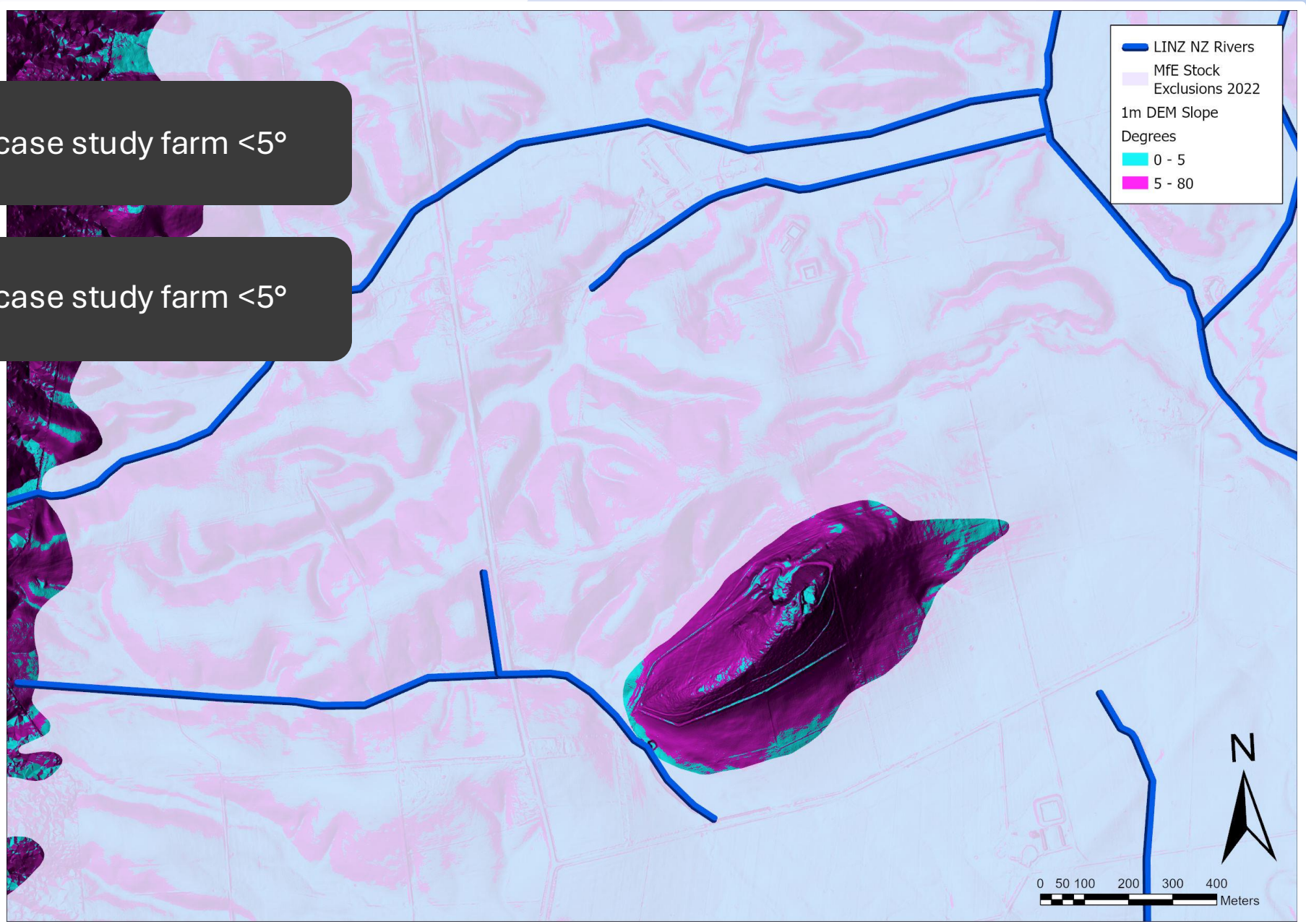
MfE 92% of case study farm <5°

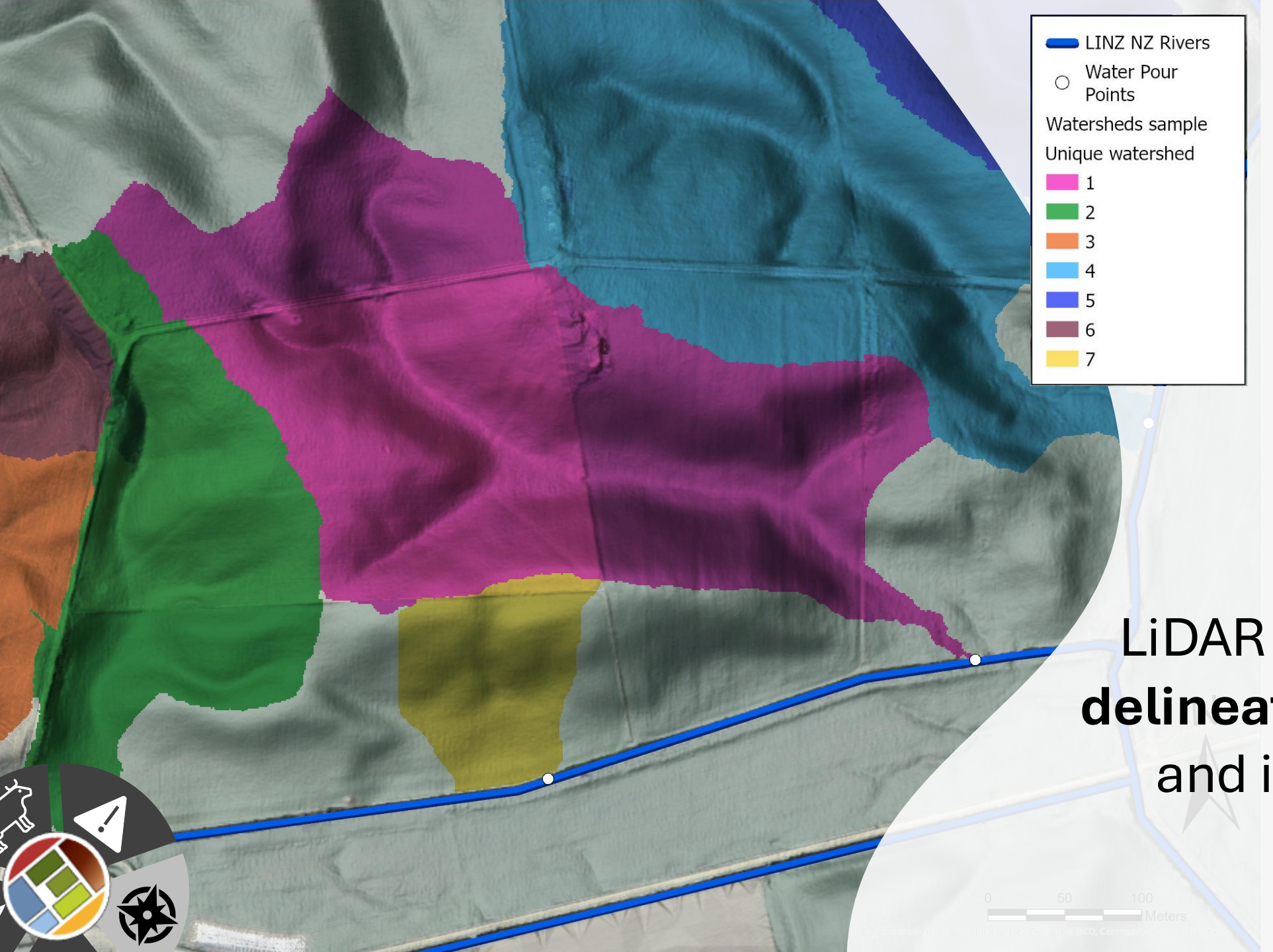
1m LiDAR



MfE 92% of case study farm <5°

1m LiDAR 59% of case study farm <5°





LiDAR can be used to **delineate watersheds** and identify **critical source areas**

Where to next?

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- Use existing LiDAR where available
-
-

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- Commission farm LiDAR drone survey $40/ha (AgSmartUAV)

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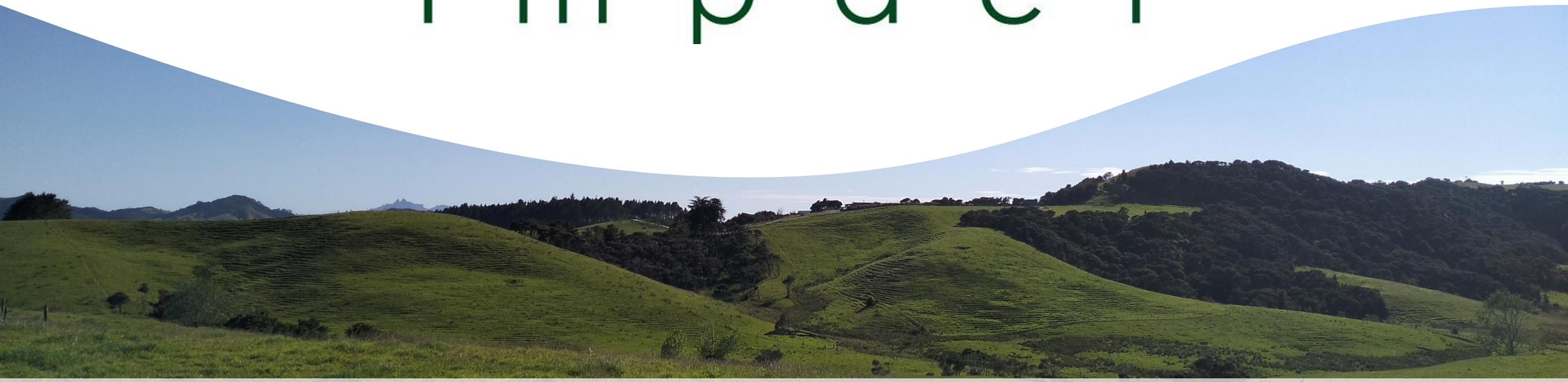
Future LiDAR uses

- Mitigation structure locations
- Renewable energy site selection
- Cut and fill calculations

LEI Environmental Impact



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