



# Land Information New Zealand – New Zealand Regional Elevation Data Proposal

## Purpose

At the RED Ministers meeting 2nd July 2018 the Ministers considered Land Information New Zealand’s proposal for up to \$ <sup>Commercial Information</sup> of Provincial Growth Fund (PGF) funding for the coordinated capture of regional elevation data (in 3D). A total of three options were proposed, with PDU officials recommending a preferred option of \$19m funding from the PGF. At that meeting Ministers requested the following information before agreeing to fund the proposal:

- Further consultation with regional councils and TAs confirming support for the proposal;
- Clarification of cost-savings and benefits accruing to business, and
- Assessment of the counterfactual to the proposal.

This paper summarises the contents of the original briefing [ref: 3869 17-18] and outlines the additional information that ministers requested.

## Recommendation

Project description & benefits	Risks	Total cost of project	Appropriation and amount to be approved	Recommendation
Five year option	Data uptake by regions. Lack of access by business	\$ <sup>Commercial In</sup>	\$19m	Approve

## Summary of original advice

94. The proposal sought funding for the coordinated capture of regional elevation data to support regional growth and resilience for use by regional businesses and Government for a range of high-value activities.
95. Land Information New Zealand (LINZ) would administer and coordinate the initiative over a three or five-year period, working with surge and other regions prioritised by opportunity and regional engagement. The data would be accessible to all who wish to use it, for any purpose at no cost.
96. LINZ is seeking approval for one of two options. Officials have added a third option.
97. The three options are:
- regional elevation data proposal
- a. **A three year option** – would <sup>Commercial Information</sup> surge regions and regions ready to enter into co-funding partner <sup>Commercial Information</sup> from the PGF.
  - b. **A five year option** – would <sup>Commercial Information</sup> nearly all of provincial New Zealand – seeking \$ <sup>Commercial Information</sup> from the <sup>Commercial Information</sup>
  - c. **A five year option** – would fund coverage over nearly all of provincial New Zealand – requiring **\$19 million from the PGF** and \$ <sup>Commercial Information</sup> of extra co-funding from <sup>Commercial In</sup> and <sup>Commercial Information</sup> (a work around option).



98. A cost breakdown of each option is below:

<b>Funding Sought</b>	<b>Option 1 3 Years \$m</b>	<b>Option 2 5 Years \$m</b>	<b>Option 3 5 years \$m</b>
<b>Project Costs:</b>			
Capital Expenditure	Commercial	Commercial	Commercial
Operating Expenditure	-	-	-
Total			
<b>Co-funding - Councils</b>			
- LINZ	-	-	-
Total			
<b>PGF - Capital Funding</b>	Commercial	Commercial	Commercial
- Operational	-	-	-
Funding Total	Commercial	Commercial	19.0

99. The PDU considers Option 3 as the preferred option.

## Response to Ministers

### Further consultation with regional councils and TAs confirming support for the proposal

100. In support of the proposal, LINZ has undertaken a further assessment of the demand and readiness of individual councils to participate in the proposed coordinated roll out the project.

101. The table below provides specific details for five councils which LINZ has had discussions with and have indicated a readiness to participate. In summary, the expected regional demand on the PGF LiDAR funding will be greater than \$ Commercial and could approach the upper bound of \$ Commercial as proposed in the 5 Year option. It is worth noting that even prior to a programme announcement, it is predicted that the 3-year option will be oversubscribed.

<b>Councils that have indicated a readiness to participate, beginning this year.</b>						
<b>Lead council</b>	<b>Proposed area, approximate land area</b>	<b>Proposed council co-funding (3 years)</b>	<b>Commencing</b>	<b>Total cost estimate base quality data</b>	<b>Indicative PGF co-funding level</b>	<b>Indicative PGF funding sought</b>
Commercial Information	Entire region 14,000 sqkm	\$ Commercial Inform	2018/19	Commercial Information	Comit % (standard)	\$ Commercial Informatio
Commercial Information	Entire remaining region 12,000 sqkm	\$ Commercial Inform	2018/19	\$ Commercial Informatio	Comit % Commercial Information	\$ Commercial Informatio



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Commercial Information	Continued in-fill, ~8300 sqkm	\$ Commercial Inform	2018/19	\$ Commercial Informatio	Comit % (standard)	\$ Commercial Inform
Commercial Information	Entire region 34,500 sqkm	\$ Commercial Informatio	2018/19	\$ Commercial Informatio	Comit %	\$ Commercial Informatio
Commercial Information	TBD, ~6500 sqkm	\$ Commercial Inform	2018/19	\$ Commercial Informatio	Comit % Commercial Information	\$ Commercial Inform
* Draft application has been received by the PGF					<b>Total</b>	\$ Commercial Informatio

102. Other councils yet to confirm participation are:

Commercial Information	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]

**Clarification of cost-savings and benefits accruing to business**

103. In addition to the benefits summarised in the original application, four councils have provided an assessment of the benefits accruing for their regions:

Council	Uses and benefits for sectors in their regions
Hawke's Bay Regional Council	<ul style="list-style-type: none"> <li>Data assisting landowners to plan more effectively to reduce sediments and nutrient losses, helping the region to meet national targets for water quality, and save costs for businesses in compliance for environmental regulation.</li> <li>Data helping to improve the performance of the region's 25 drainage and flood risk management schemes, which protect private, public and Crown assets worth billions.</li> </ul>
Marlborough District Council (MDC)	<ul style="list-style-type: none"> <li>Enables MDC to create more up-to-date and accurate data models (soil, geology, land use capability units, land cover etc.) that local businesses can use for more productive land use decisions, and for the council to use in digitally assisted decision-making on resource management and regulation.</li> <li>Identifying opportunities for investments in plantation forestry, water harvesting, and more detailed soil mapping to improve farm nutrient management.</li> </ul>
West Coast Regional Council	<ul style="list-style-type: none"> <li>High-quality elevation data across the region will benefit multiple user applications including land and water management, agriculture, horticulture forestry, construction,</li> </ul>



Council	Uses and benefits for sectors in their regions
	<p>and transportation.</p> <ul style="list-style-type: none"> <li>In particular, forestry companies need accurate terrain models for planning new forests and forest harvest. Terrain models will also provide a vital input to assessments of the environmental impacts of forestry consents, including the management of logging slash.</li> </ul>
Southland District Council, Invercargill City Council, Gore District Council, Environmental Southland	<ul style="list-style-type: none"> <li>Can be combined with existing land and water information to support improved decisions on land use.</li> <li>Enable forestry investors to better plan and invest in planting operations.</li> <li>Greater diversification of land use within the capability and climate of the region.</li> <li>Improve natural resource management, improve resilience to natural hazards, and assist planning and managing short and long-term impacts of climate change.</li> </ul>

104. The participation of individual regional councils and the allocation of funding under this proposal would be subject to a structured selection process:

- a. LINZ and MBIE announce the programme for elevation data co-funding and terms for participation.
- b. Interested councils respond with streamlined applications to participate. These applications would include details about the area of interest, the projected benefits, the ability to co-fund and readiness to begin procurement.
- c. Applications are screened by LINZ, and co-funding level recommended by the governance group. The governance group would represent the PGF, MPI, and possibly other relevant national government priority programmes (e.g. climate change adaptation).
- d. At this stage PGF funding from the committed programme fund would be allocated to individual regional council projects.
- e. Individual regional data collection initiatives to be managed by the regional councils through a joint procurement model.

105. The overall project is to be managed by LINZ. This approach ensures:

- a. That all potential participants have an equal opportunity to put forward their interest in participation and their ability to contribute funding.
- b. That economic benefits are identified at a regional level, prior to the commitment of funding.



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- c. These proposals would then be collectively evaluated and Crown co-funding agreed to in a transparent and fair process.

## Assessment of the counterfactual to the proposal

106. If this application is not approved, there are no other means to co-fund regional-scale LiDAR procurements.

107. If the proposal is declined some individual councils with sufficient resources will apply to the PGF with elevation data proposals for just their region. The counterfactual depends on whether the PGF ultimately funds no elevation data, versus whether it declines this proposal, but funds some individual regions.

108. If the PGF does not fund any proposals for elevation data, then there will be limited new data capture for the foreseeable future (beyond procurements of regional data for Northland and Gisborne that are already in progress) and limited land coverage added to the national elevation data collection. Businesses in regions that have already collected the data (to a large extent more populous regions) will be able to access elevation data and continue to enjoy the benefits.

109. Commercial Information

[Redacted]

[Redacted]

110. If the PGF approves ad hoc elevation data proposals outside of this coordinated approach, then a significant increase in coverage will occur, but the benefits from a more coordinated approach will not be realised. Specifically:

- a. Reduced efficiencies due to a duplication of effort, failure to realise economies of scale, and competition between regions. This will increase costs and project timeframes, in part from the inability to procure collaboratively and send clear signals to current and potential future suppliers.
- b. Administrative burden to MBIE from the PGF perspective of assessing multiple applications.

## Assessment against the PGF criteria

Criteria	✓	Comment
Sustainable regional economic development	✓	LINZ estimates the benefits of a national dataset at \$ <sup>Commercial Information</sup> per annum in monetised benefits and significantly more in un-quantified benefits.



<b>Productivity and innovation</b>	✓	Better decisions around land use and stocking, leading to increased production and cost savings.
<b>Increased employment, training or work readiness for the sectors workforce</b>	✓	Better decisions around land use and stocking, leading to increased production will increase employment and training opportunities.
<b>NZ's ability to meet climate change commitments</b>	✓	Improves understanding of both the short term impacts from intensified extreme weather events and long term trends and predicted impacts from climate change. This will help sectors, regional and district councils to understand and manage risks presented to them by climate change.
<b>Maori aspirations for utilising land and other resources and achieving cultural objectives</b>	✓	Assists Maori freehold landowners in making better decisions to help realise economic returns from different land activities.
<b>Additionality</b>	✓	Builds on existing capability, enabling and supporting better, faster, and more confident decision making across a wide range of private and public sector activities.
<b>Connections and alignment with regional priorities</b>	✓	The proposal has received letters of support from regional councils and other stakeholders including Department of Conservation, Earthquake Commission, Civil Aviation Authority, Ministry for Primary Industries (MPI), and Ministry for the Environment (MfE). MPI and MfE have been engaged by LINZ.
<b>Environmental sustainability and/or productivity of natural assets</b>	✓	Model soil erosion, improved management of fertiliser and effluent runoff and supporting pest control.

## Next steps

111. Subject to Ministers agreement to approval of the project, the PDU will undertake the required steps to ensure the funding is provided on the basis set out in paragraphs 121 and 122.