



Context information for *Design of New Zealand's 8-km grid based plot network: static master data* (Holdaway, 2017)

This document outlines important context information for the report *Design of New Zealand's 8-km grid based plot network: static master data* (Holdaway, 2017). It is important to read and understand this context information before using information contained in Holdaway, 2017.

For further information please email lucas@mfe.govt.nz.

Background

The 8-km grid is a statistical sampling framework used by New Zealand agencies to monitor carbon, biodiversity, and soil. More information on what the grid is and how it was developed can be found in the report *Design of New Zealand's 8-km grid-based plot network: static master data* (Holdaway, 2017).

The grid is used by the Ministry for the Environment to monitor carbon and biodiversity and by the Department of Conservation and some regional councils to monitor biodiversity. It is also used by Crown research institutes including Landcare Research, Scion, and GNS Science, for research purposes.

The report provides information that will help these agencies coordinate their monitoring and research efforts on the 8-km grid. The target audience for the report is technical staff in central and local government, Crown research institutes, and other private agencies who wish to use the 8-km grid sampling framework for monitoring or research purposes. It is important to read and understand this context information before using the data in the report or using the information in it to undertake monitoring on the grid.

As is explained in the report, there are different pieces of information that will be required to maximise coordination. The report provides the first piece of this information— it assigns a statistically random year of measurement to each monitoring site (known as a plot cycle). The concept behind this is that agencies using the grid for monitoring can use the same plot cycle, thereby creating efficiencies through being able to share the data collected.

The next piece of information that will be important to share between agencies is actual information on which sites have been measured and when. This will need to include which agency undertook the measurement and what data was collected. Work to compile this data and develop a way to it is underway. For more information on this work please contact lucas@mfe.govt.nz.

If you are going to undertake monitoring on the 8-km grid, the Ministry asks that you contact the 8-km Grid Stakeholder Group before doing so. To contact the group please email lucas@mfe.govt.nz.

Accompanying documents

- This document accompanies: Holdaway, Robert J. (2017) Design of New Zealand's 8-km grid-based plot network: static master data. *Contract report prepared for the Ministry for the Environment by Landcare Research*.
- The plot list and widget files referenced in Holdaway (2017) can be obtained by emailing lucas@mfe.govt.nz.

Important points to note in relation to the report

- The plot list **is** a random 'ideal year of measurement' assigned to each 8-km grid point in New Zealand.
- It is **not** a definitive guide to which plots each organisation will measure in a given year (at least not in this stage of its development). The purpose of the list is to provide a random cycle for all 8-km grid points, so multiple organisations using the grid can use the same cycle for measurement. Actual years used by each organisation may differ from the list. There are various logistical reasons for this. For example:
 - For operational reasons (eg, access on private land) measurement may not occur in the planned year.
 - The Ministry for the Environment's planted forests are measured on a different cycle.
- The list is not a comprehensive inventory of which plots each organisation is measuring. For example, the Ministry for the Environment's post-1989 natural forest measurement programme, which is on the 4-km grid, is not reflected in this list but does include some 8-km grid points.
- It has been identified that the 10-year plot cycle may need to be redone. It has been found there could be logistical difficulties implementing the current version. **If the current 10-year cycle is implemented by any organisation then there is a risk this will create further logistical difficulties later.** These would arise if a new version is created and other agencies choose to use this version –any agencies using the old plot cycle version will not be in sync with agencies using the new version.

It is anticipated that the plot list will be developed to include additional information, and that this additional information will include comprehensive details about which organisations have and are measuring which plots.

Important points to note when monitoring on the 8-km grid

With the increased number of organisations using the grid for monitoring, it is important to ensure the integrity of its sites and relationships with private land owners are preserved. A group called the 8-km Grid Stakeholder group exists to ensure this happens. When monitoring on the grid we ask that you:

- Let the 8-km Grid Stakeholder Group know that you are doing this by emailing lucas@mfe.govt.nz.

- Find out whether other organisations are visiting the site. If relevant, coordinate land owner contact between agencies. This way, if the land owner asks about multiple organisations coming in, each organisation can explain that we know it's happening and why it's necessary.
- Treat sites in **planted forests** appropriately. Plots in planted forests need to be treated carefully. This includes:
 1. No tagging of trees, including non-crop trees
 2. Following best practice when marking plots – please contact lucas@mfe.govt.nz for information on best practise.

This will:

- avoid costly damage to forestry machinery, caused by metal objects going through this machinery
- ensure the areas at and around the plot are not treated differently by silviculture teams (eg, during pruning and thinning). This could result in the plots not being a representative sample of the forests, causing bias in New Zealand's national carbon estimates used for international climate change reporting.

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