Results report for Demo Area

Generated on March 28, 2022

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▼ Forestry Investment Report: Introduction

This report should be used by forestry investors who make decisions about which forests to sell and purchase or a forestry investment analyst assessing future opportunities for purchases and sales.

This report will quickly enable you to gain an understanding of the key forest and land characteristics that influence the profitability of a forestry investment, including some of the constraints to extraction based on slope.

Within the report, you will find detailed information on the forest characteristics to tell you what is there and some of the constraints to extraction related to slope.

The report is:

Best used for: Commercial conifer stands, mature forests of mixed species

Do not use for: Riparian woodlands, very fragmented or sparse woodlands, young trees (younger than 3 years)

The data included in this report was produced in 2021 by Global Surface Intelligence. Results have been assessed against ground reference data, which informs the performance statistics for each result.

If you would like to view the spatial data used to create your report, click here: data-layers.seos.ourecosystem.com

If you would like to assess higher numbers of stands or compartments, contact paula.mcgregor@ecometrica.com.

▼ Forestry Investment Report: Area Location

For context, an image of the area being assessed and its position on the map is shown below:

▼ What is the height of the forest?

Description: The forest height results tell you the average, minimum, maximum and standard deviation in tree-top heights of the stand you are assessing. Height is modelled using satellite imagery in combination with airborne lidar data.

Performance: 79% of tree-top height values are within 5m of reference data.

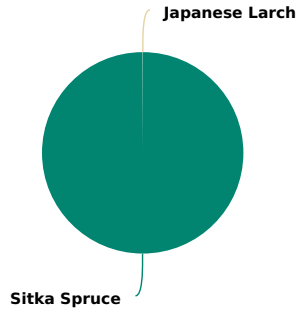|	Average Height		Minimum Height		Maximum Height		Standard Deviation
✳	13.8 m	▬	3.6 m	➕	25.2 m	📊	3.4 m

▼ What are the most dominant species?

Description: The dominant species results tell you which species are most prevalent in your stand, as well as their coverage.

Performance: 90% accurate for Sitka Spruce and Scots Pine.

Japanese Larch

Sitka Spruce

Species		Area [ha]	Coverage [%]
⬤ (tan)	Japanese Larch	0.03	0.04
⬤ (green)	Sitka Spruce	67.21	99.91

Note: Extra details for certain categories are provided below:

- Broadleaves - includes Ash, Birch, Hawthorn, Oak, Sycamore and Willow
- Birch - also includes Downy Birch and Silver Birch
- Native Broadleaves - includes Common Alder, Alder, Western Hemlock, Ash, Aspen, Hazel, Beech, Sycamore, Wild Cherry/gean, Wych Elm, and other broadleaves.
- Oak - also includes Sessile Oak and Pedunculate/common oak
- Other - includes Grand fir, Noble fir, Mountain pine, Western red cedar, other cedar, other firs, Juniper, Serbian spruce and other conifers

▼ What is the breakdown of species?

Description: The species breakdown results give you a more detailed breakdown of the coverage of individual species, including their coverage in stands where they are not the the dominant species.

Performance: 90% accurate for Sitka Spruce and Scots Pine.

	Broadleaves: Average Presence		Broadleaves: Minimum Presence		Broadleaves: Maximum Presence		Broadleaves: Standard Deviation
🍃	0.6 %	⌄⌄	0 %	⌃⌃	26.9 %	📊	1.9 %
🍃	Japanese Larch: Average Presence 1.0 %	⌄⌄	Japanese Larch: Minimum Presence 0 %	⌃⌃	Japanese Larch: Maximum Presence 37.6 %	📊	Japanese Larch: Standard Deviation 2.3 %
🍃	Lodgepole Pine: Average Presence 11.5 %	⌄⌄	Lodgepole Pine: Minimum Presence 0.2 %	⌃⌃	Lodgepole Pine: Maximum Presence 41.9 %	📊	Lodgepole Pine: Standard Deviation 6.3 %

| | Sitka Spruce: Average Presence 86.9 % | | Sitka Spruce: Minimum Presence 33.5 % | | Sitka Spruce: Maximum Presence 99.8 % | | Sitka Spruce: Standard Deviation 7.9 % |

Note: For extra detail on the Broadleaves, Birch, Native Broadleaves, Oak and Other categories please see the note at the bottom of the dominant species section.

▼ What is the potential harvestable material?

Description: The potential harvestable material results provide a breakdown of forest height (average, minimum, maximum and standard deviation) for each of the dominant species present in your stand.

Species	Area [ha]	Coverage [%]	Average Height [m]	Minimum Height [m]	Maximum Height [m]	Standard Deviation [m]
⬤ Japanese Larch	0.03	0.04	7.73	6.83	9.52	1.27
⬤ Sitka Spruce	67.21	99.91	13.77	3.64	25.20	3.37

Note: For extra detail on the Broadleaves, Birch, Native Broadleaves, Oak and Other categories please see the note at the bottom of the dominant species section.

▼ Does slope affect the forest's extractability?

Description: The slope constraints results provide forest height statistics in each slope category within your stand. The slope categories range from Low to Excessive with higher categories representing steeper slopes which make timber harvesting and extraction more difficult and expensive.

Slope Categories: The slope categories below assume a soil bearing capacity (CBR) of 3%, otherwise low ground pressure machines (e.g. using high flotation tyres) are required. They are based on typical operational limits of various forestry methods.

- **Low:** 0-50% slope (0 - 26 degrees)
  - Extraction Requirements: Any ground-based machinery
- **Medium:** 50-60% slope (26-30 degrees)
  - Extraction Requirements: Purpose-built steep terrain machinery
- **High:** 60-100% slope (30-45 degrees)
  - Extraction Requirements: Tethered machinery or chainsaw operator and cable extraction
- **Excessive:** over 100% slope (>45 degrees)
  - Extraction Requirements: Not considered operational

Slope Category	Area [ha]	Coverage [%]	Average Height [m]	Minimum Height [m]	Maximum Height [m]	Standard Deviation [m]
⬤ Low	67.24	99.96	13.76	3.64	25.20	3.38

Note: Slope results are only provided for areas on the slope map which overlap with the forest height map. As a result, the Coverage [%] value will only be 100% if the area in question is fully covered by the forest height map (i.e. 100% forest).

▼ Forestry Investment Report: Source Information