

LandSketch (Yagesh 2D CAD)

Comprehensive User Guide & Manual

Welcome to **LandSketch (Yagesh 2D CAD Tool)**. This application is specifically tailored for precise land surveying, plot subdivision (Pokkuvaravu), and automated area calculations. It provides a robust suite of drawing, modifying, and subdivision tools designed to make land drafting intuitive and highly accurate.

1. Drawing & Measurements

The drawing tools allow you to create accurate geometric representations of land plots and boundaries.

- **Line:** Click to start drawing. For exact measurements, type a number on your keyboard (e.g.,) and press . To specify both length and angle, type in the format Length,Angle (e.g.,)
- **Polyline:** Draw continuous multi-segment lines, ideal for irregular plots. To form a complete, closed polygon, simply snap the final point back to the starting point.
- **Rectangle & Circle:** Standard tools for quick, symmetrical geometric shapes.
- **Arc (3-pt):** Create an arc by selecting three distinct points on the canvas.
- **Text:** Add custom labels to your drawings. A prompt will ask for the text string.

2. Modifying the Plot

You can either select an object first and then choose a modify tool, or activate the tool and then click the target object.

- **Move, Copy, Rotate, Scale:** Select the object, click a "Base Point" for reference, and move your cursor to adjust.
- **Offset:** Creates parallel boundaries (e.g., for building setbacks). Enter the exact distance when prompted, move the mouse inward or outward to choose the direction, and click to confirm.
- **Trim:** Cleans up overshooting lines. Select the tool and click the segment you want to remove; it cuts back to the nearest intersection.
- **Extend:** Shoots a line forward to meet another boundary. Click near the end of a line, and it will stretch to the closest intersecting boundary.
- **Join Lines:** Merges individual, connected line segments into a single contiguous polygon.
- **Split Lines (Explode):** Breaks a closed polygon or polyline back down into independent line segments.

3. Plot Subdivision (Splitting Land)

These advanced tools are designed for dividing land (Pokkuvaravu). *Note: Always select a closed polygon using the Select tool before applying subdivision tools.*

Live Split: Freehand splitting. Click a starting point on the boundary and move your mouse across the plot. The tool will display the divided areas in real-time before you confirm.

Parallel Split: Slices a specific exact area parallel to an existing edge. Activate the tool, click the reference edge (it highlights in red), and enter the desired target area.

Equal Split: Automatically divides the plot into equal portions. Pick a parallel reference edge and enter the number of equal plots required.

Road (Centerline): Automatically cuts a road through a plot. Draw the road's center line, specify the total road width, and the tool will offset and trim the plots on both sides.

4. Area & Dimensions

- **Properties Panel:** Select any shape to instantly view its Perimeter and Area in the right-side panel. Areas are displayed simultaneously in Hectares, Cents, and Square Feet.
- **Auto Area / Auto Dim:** Toggle these checkboxes (bottom-left) to persistently display the area inside all closed plots and the length alongside all drawn lines.
- **Unit Toggle:** Use the dropdown in the top-right corner to switch all measurements between **Meters** and **Feet**.

5. Layers & Visibility

Organize your drawing using the Layers tab. You can create multiple layers (e.g., 'Dimensions', 'Annotations'), assign specific colors to them, and toggle their visibility on or off using the eye icon. Assigning objects to different layers makes complex plots easier to manage.

6. Exporting & Saving

- **Save / Open JSON:** Save your working file locally as a JSON document and open it later to resume editing without losing layers or history.

- **Export PNG / SVG:** Export your drawing as an image or scalable vector graphic.
- **Export PDF:** Generates a high-contrast, black-and-white printable document suitable for official documentation and printing.

7. Keyboard Shortcuts

Action	Shortcut Key / Mouse Action
Pan Canvas	Hold Spacebar or Middle-Mouse Button
Zoom In / Out	Scroll Mouse Wheel
Zoom Fit	Z
Toggle Ortho (90° lock)	F2
Toggle Snaps	F3
Toggle Grid	F7
Undo / Redo	Ctrl + Z / Ctrl + Y
Delete Object	Del
Tool Shortcuts	S (Select), L (Line), R (Rectangle), C (Circle), A (Arc), P (Polyline), T (Text)