FiberQ User Guide

Laying and Editing Manholes in QGIS

This guide explains how to place manholes on the map, fill in the required forms, style manhole icons, edit attributes after placement, and logically connect cables and joint closures in a FiberQ project.

Version	1.0
Last updated	2026-01-18
Scope	Manholes (civil), basic attributes, symbology, and connection workflow

What you will learn

1) Choose a manhole type and fill the details form.
2) Place the manhole on the map and verify data.
3) Edit and bulk-correct attributes after placement.
4) Configure symbology and labeling in Layer Properties.
5) Link cables and joint closures to manholes for clean documentation.
6) Preview the upcoming FiberQ Designer Manhole Editor concept.

1. Creating and Placing Manholes

Manholes are civil infrastructure points where ducts and cables pass through. FiberQ stores them as point features with structured attributes. The typical workflow is: choose a type - fill details - place on the map - verify in the attribute table.

1.1 Choose a manhole type

When placing a new manhole, FiberQ prompts you to select a type from a predefined library (standard, octagonal, mini, micro-duct variants, etc.). Choose the closest real-world standard; you can refine dimensions later.

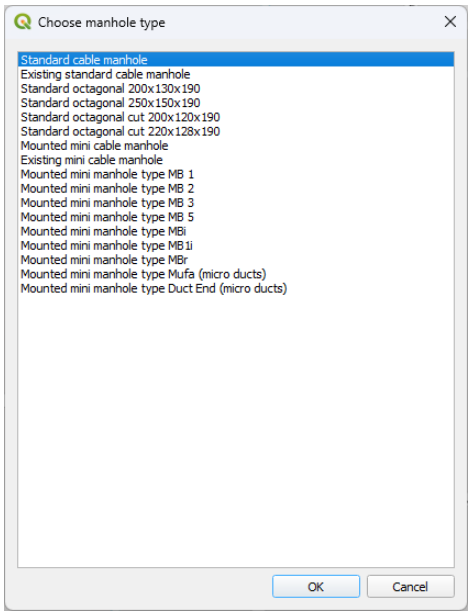

Figure 1. Manhole type selection dialog.

1.2 Fill in manhole details (before placement)

The details form defines the asset metadata that will be saved into the Manholes layer. Use consistent IDs and dropdown values (status/category) so your map styling and reporting remain clean.

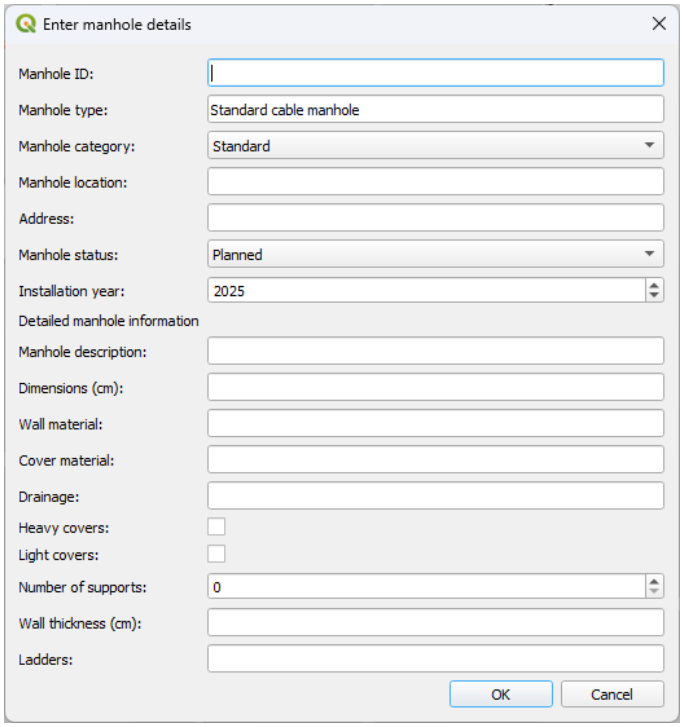

Figure 2. Manhole details form.

Field	Recommendation
Manhole ID	Unique and human-readable (e.g., KO-843, MH-001).
Manhole type / category	Use standardized values to support filtering and styling.
Status	Planned / Installed / As-built (or your local workflow).
Installation year	Optional; keep planned year if unknown.
Dimensions / materials / drainage	Useful for civil design and as-built documentation.
Supports / steps / ladder	Optional fields for construction details.

Tip: Standardize IDs early

A consistent ID convention (area + sequence + optional prefix) makes filtering, labeling, reporting, and later automation much easier.

2. Verifying and Editing After Placement

After clicking OK, place the manhole on the map. The feature is stored in the Manholes layer with all the attributes from the form.

2.1 Edit via Feature Form and Attribute Table

To verify and correct values, open the Manholes attribute table. Select the new feature to view or edit its fields. This is the fastest place to adjust status, year, dimensions, and notes.

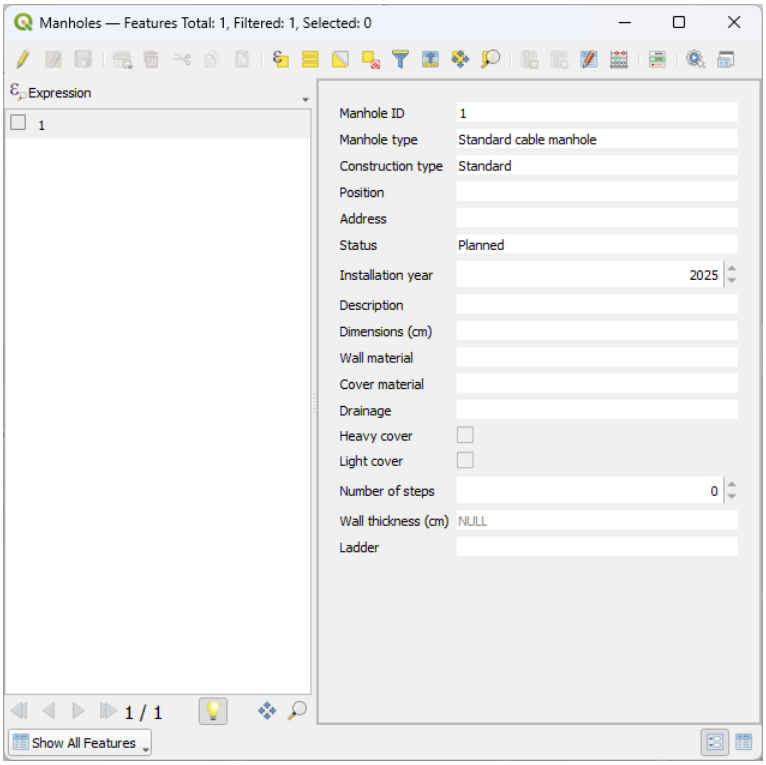

Figure 3. Manholes attribute table and feature form (editing after placement).

2.2 Bulk corrections (recommended)

For multiple manholes, use filters (for example, Status = Planned) and multi-edit or Field Calculator to update many features at once.

3. Styling Manholes on the Map (Layer Properties)

A readable map depends on consistent symbology. In QGIS, styling is managed in Layer Properties. For manholes, symbology and labels are usually the most important.

3.1 Symbology essentials

In Layer Properties - Symbology, adjust marker shape and size. Recommended upgrades: rule-based styling by Status (planned vs installed vs as-built), data-defined size by category or dimensions (mini smaller, standard larger), and optional rotation if you store an orientation field.

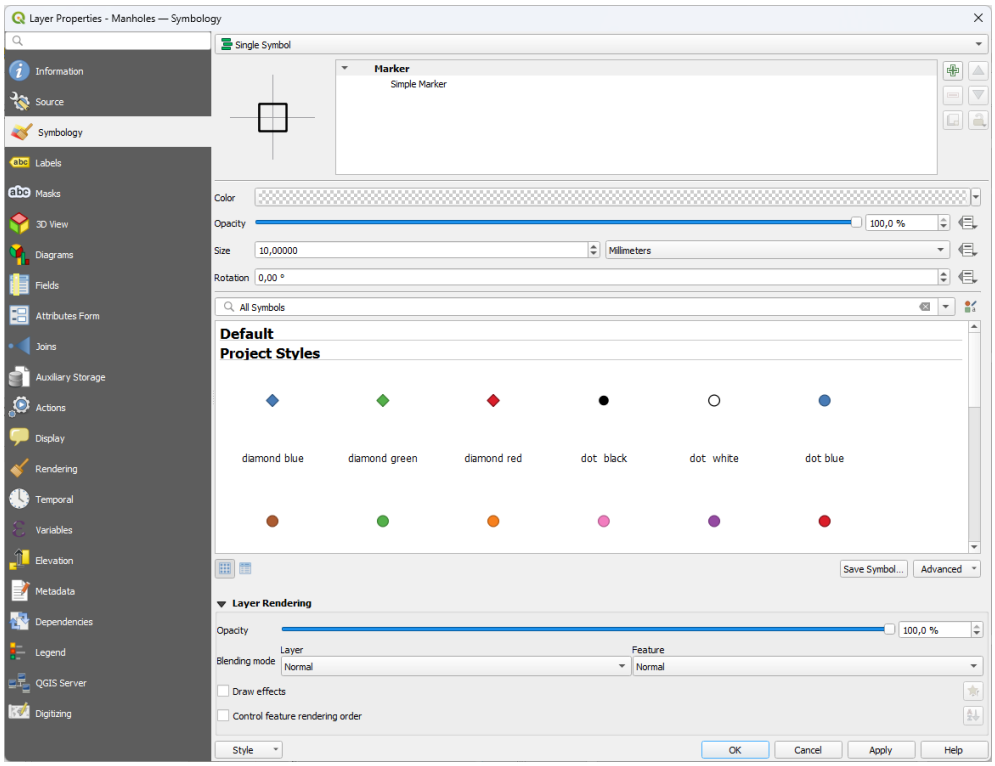

Figure 4. Layer Properties - Symbology for the Manholes layer.

3.2 Labels and form configuration (high value)

Use Labels to show Manhole ID on the map. In Layer Properties - Attributes Form, configure dropdowns (value maps), constraints (required fields, unique IDs), default values (planned year), and group fields into tabs such as General / Construction / Materials / Notes.

Suggestion: improve data quality with constraints

Examples: make Manhole_ID required and unique; restrict Status to a dropdown; restrict Dimensions to numeric values; auto-fill Installation year with the current year when status is Planned.

4. Connecting Cables and Joint Closures Through Manholes

A clean documentation model separates civil containers (manholes) from splice elements (joint closures). Cables pass through manholes, and fibers are spliced in joint closures. The goal is consistent linking via IDs so later you can generate diagrams and reports.

4.1 Recommended linking model

Element	Role	Recommended fields
Manhole	Civil container / pass-through	Manhole_ID, Type, Status
Joint Closure	Splice / connection point	Closure_ID, Manhole_ID (foreign key)
Cable (route segment)	Physical cable section	Cable_ID, From_Element, To_Element (or From_Node, To_Node

4.2 Practical workflow (map-based)

1) Place a Joint Closure point at (or very near) the manhole location.
2) In the Joint Closure attributes, set Manhole_ID to link it to the manhole and give it a unique Closure_ID.
3) For each cable segment entering/exiting, populate From_Element and To_Element (or From_Node and To_Node) using consistent IDs.
4) Use QGIS relations (advanced) to open a manhole and see connected closures and cables in one place.

Tip: Keep IDs consistent across layers

The strongest foundation for automation later (schematics, reports, QA rules) is consistent identifiers shared across manholes, closures, and cables. Even before full automation, this keeps your project readable and auditable.

Appendix A. Upcoming: FiberQ Designer Manhole Editor Concept

FiberQ Designer is planned to include a dedicated Manhole Editor inspired by unfolded side-panels, but redesigned for a modern, interactive workflow. The concept includes a central canvas with chamber and panels, a left project tree, a right inspector with quick actions, occupancy checks, and optional splice tray planning.

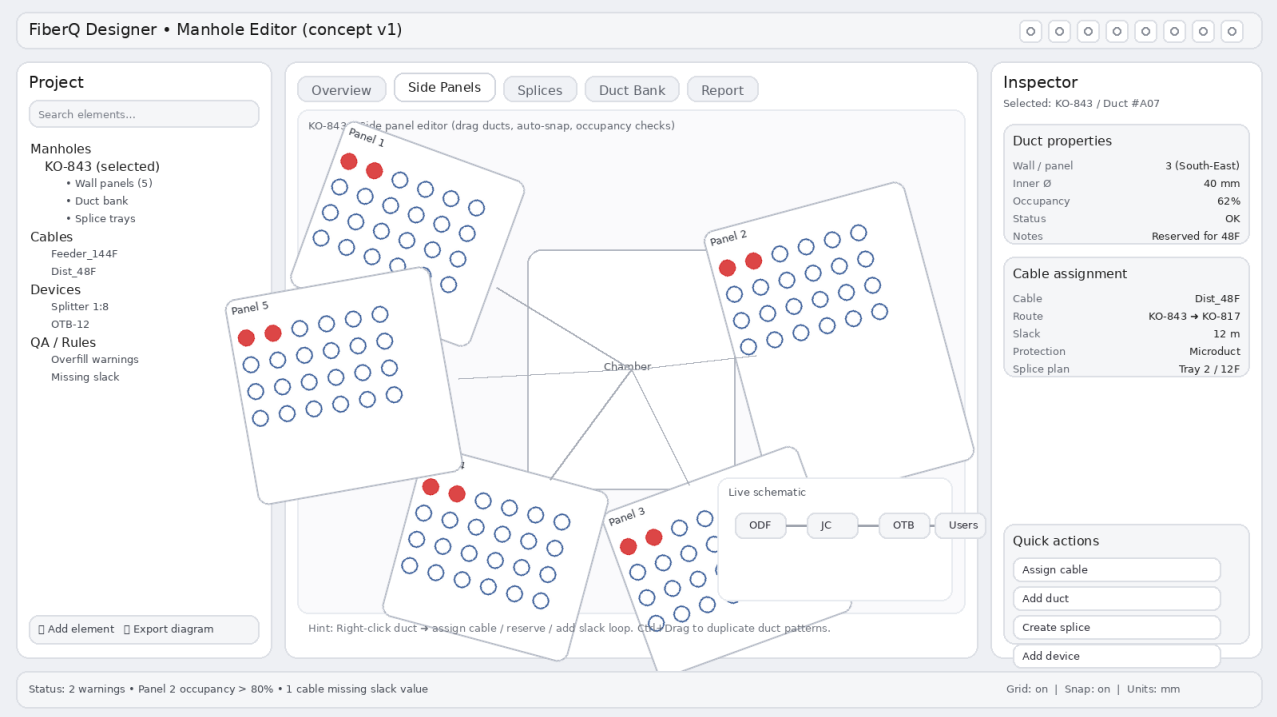

Figure A1. Manhole Editor concept - v1 (clean layout focused on side panels).

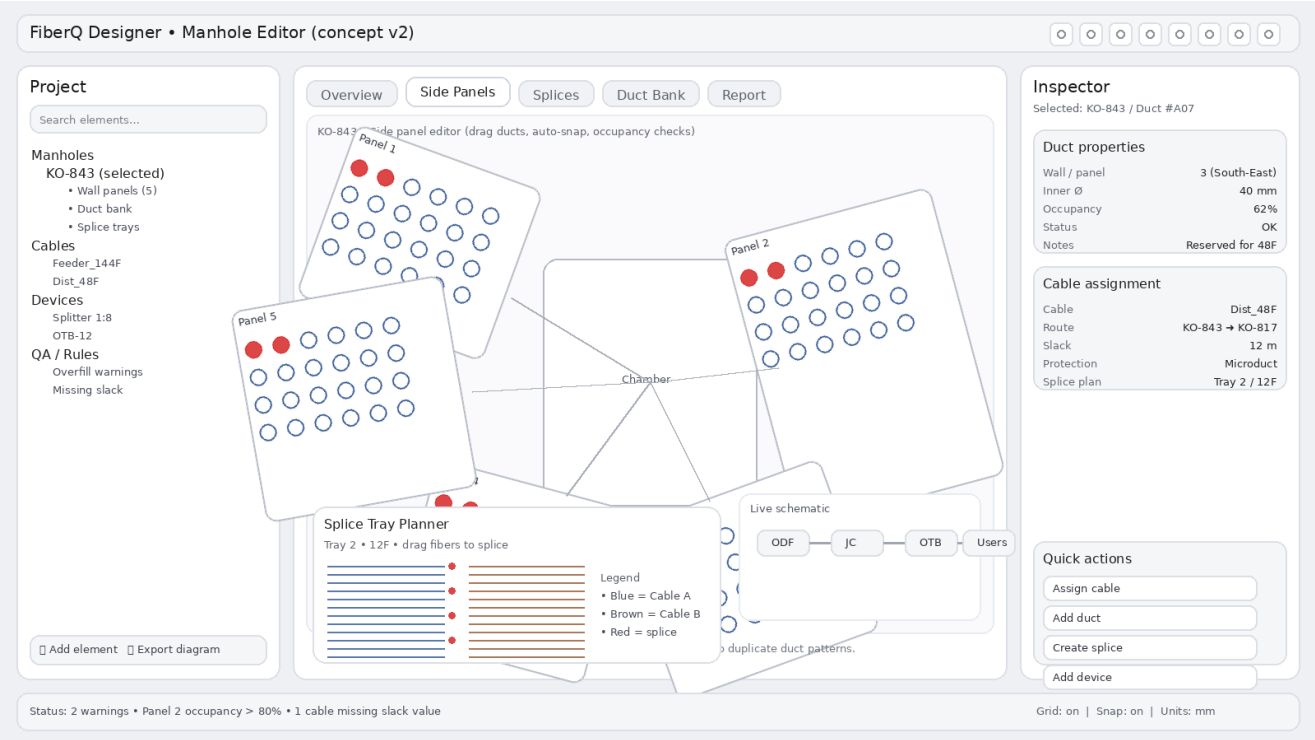

Figure A2. Manhole Editor concept - v2 (includes splice tray planner overlay).