

Welcome to Create Custom Map with *QGIS* Print Layout

Questions to think about:

- What is your name?
- What program/department are you from?
- What brought you to the workshop today?
- What do you hope to get out the workshop?

With *QGIS* someone could:

- Create beautiful maps...

And/or

- Conduct spatial analysis...

QGIS has hundreds of tools and possibilities...

This is an Introduction to *QGIS* with creating a custom map



Create Custom Map with *QGIS* Print Layout



2026

As per the instructions when you signed up:
QGIS downloaded on your computer?

If not, please come back to the workshop another time!



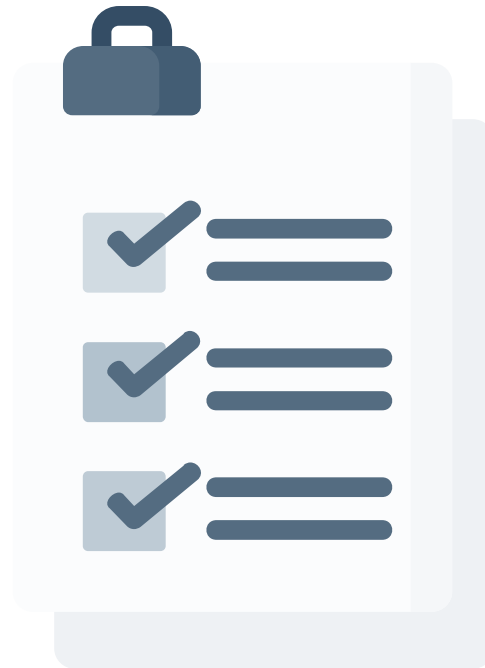
Territorial Acknowledgment

We acknowledge and respect the ləkʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt, and WSÁNEĆ peoples whose historical relationships with the land continue to this day.



Learning Objectives

- **Review** and list differences with some mapping tools
- **Identify** and **navigate** key *Print Layout* elements
- **Distinguish** why *QGIS Print Layout* is necessary for custom map(s)



Outcomes

Using *QGIS*, participants will:

- **Load** (.shp, .csv) files
- **Navigate** main features of *Print Layout*
- **Create** and **export** custom map using *QGIS Print Layout*



What is a Mapping Tool?

- Software/hardware typically designed for specific tasks or functions such as mapping
- Very limited spatial analysis



What is a GIS?

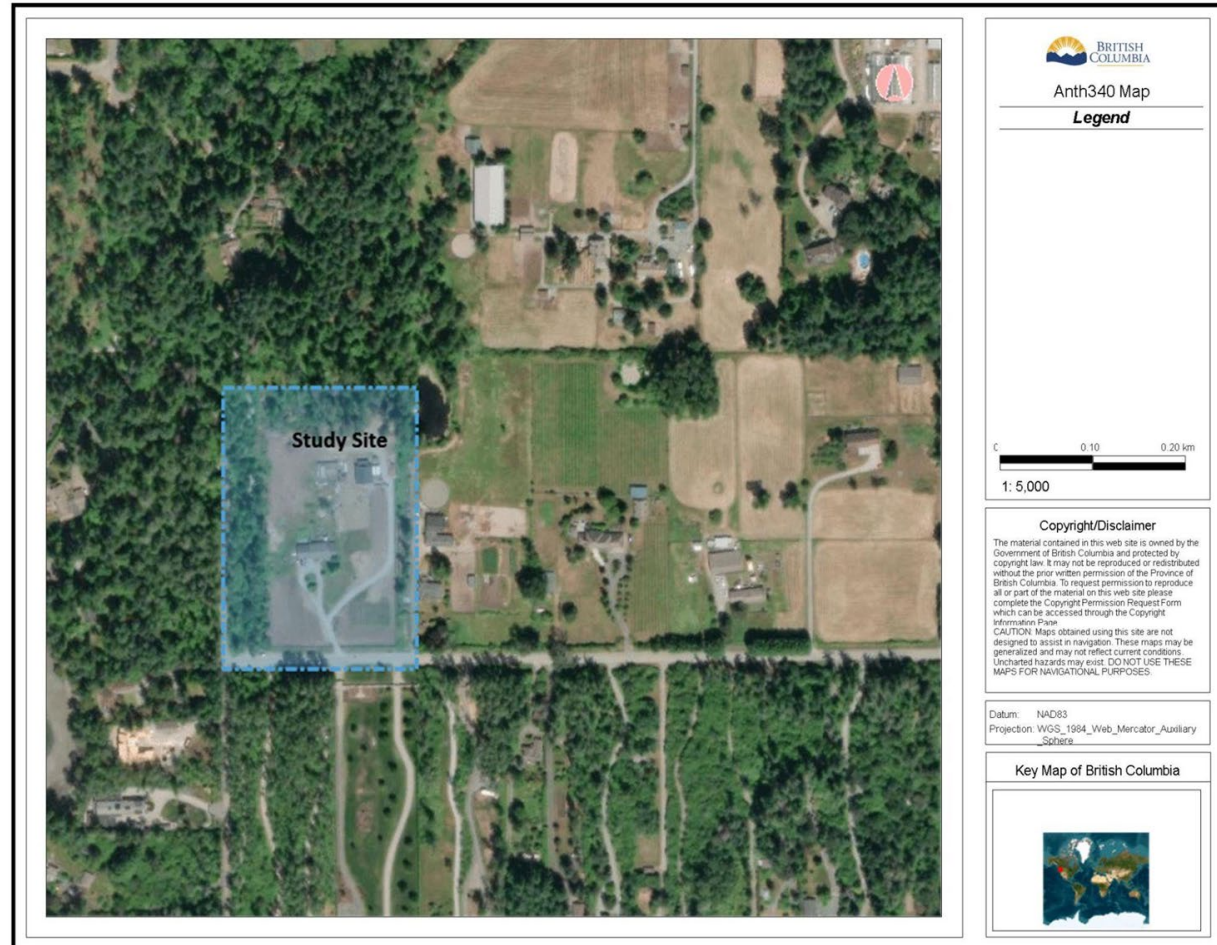
- A comprehensive system which encompasses a range of geospatial tools for spatial modelling and analysis



Not all mapping tools are a GIS!

Maps from mapping tools

Some applications can make very basic maps, but lack tools to create customizable, advanced maps like *QGIS*



Map created on *iMapBC*

Maps from mapping tools

Some applications can make very basic maps, but lack tools to create customizable, advanced maps like *QGIS*



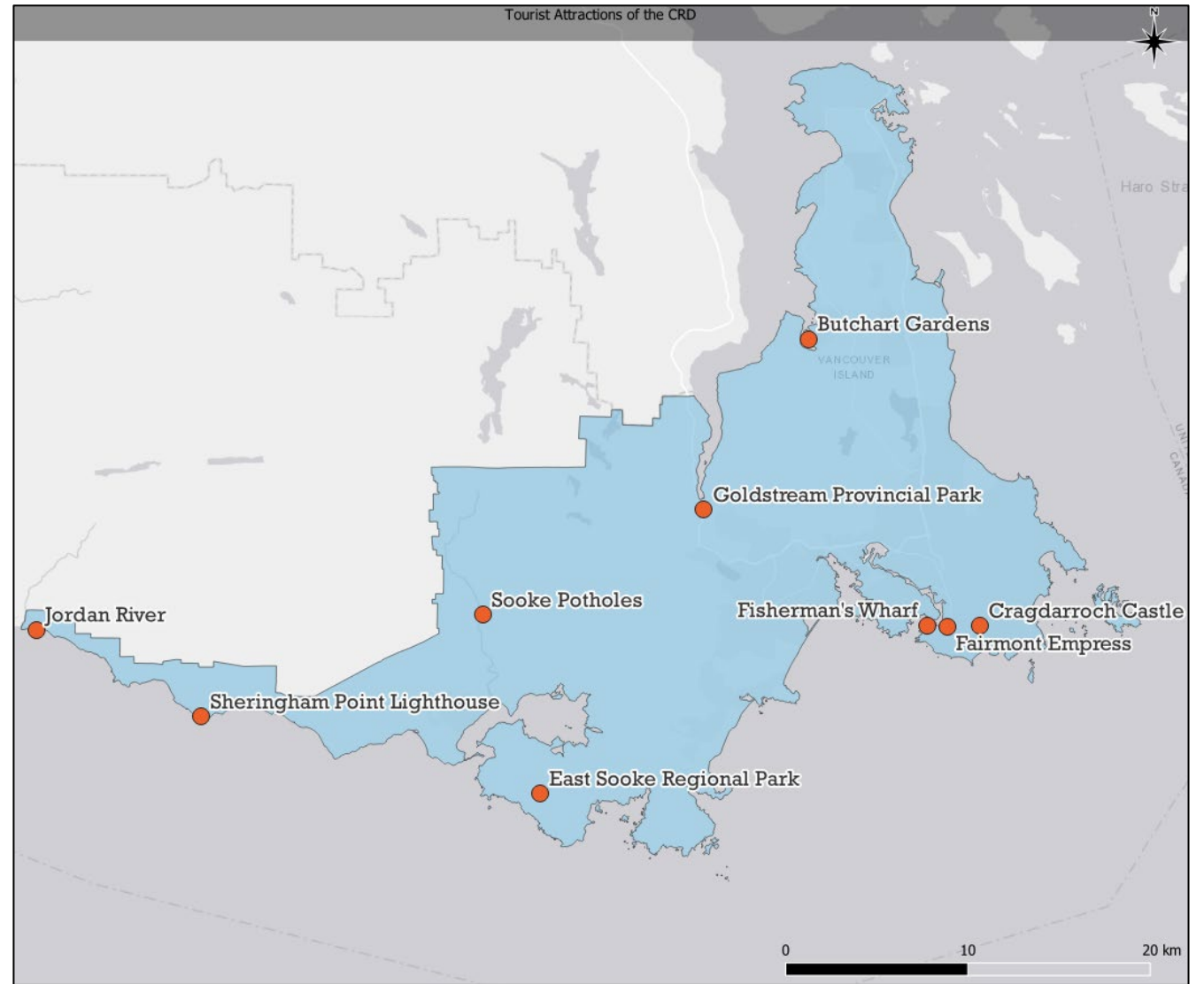
Map created on *Google Earth Pro*

QGIS offers basic map “decorations” on map view:

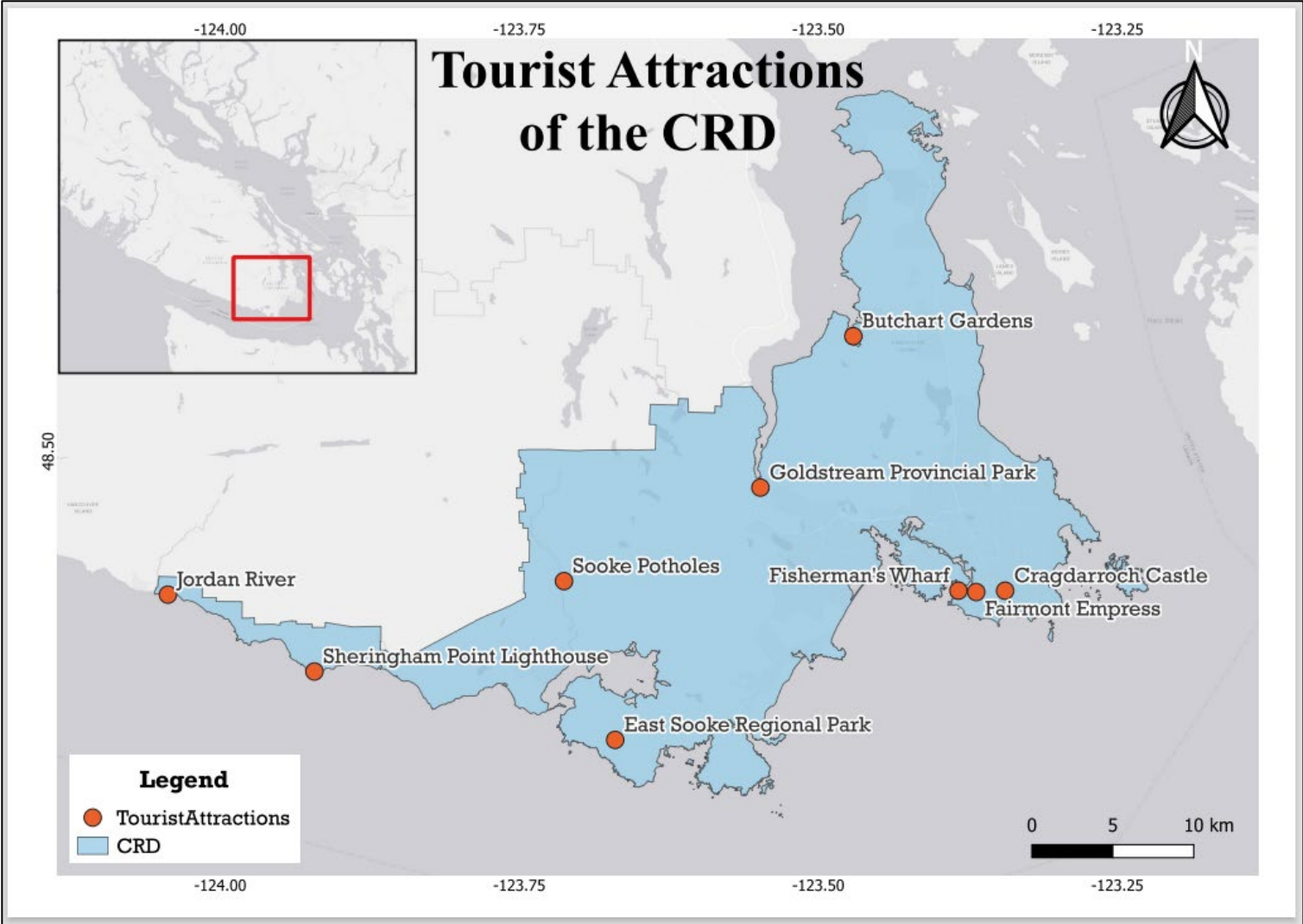
can screenshot or export as PDF or image

But can't add...

- Legend
- Shapes
- Overview inset map



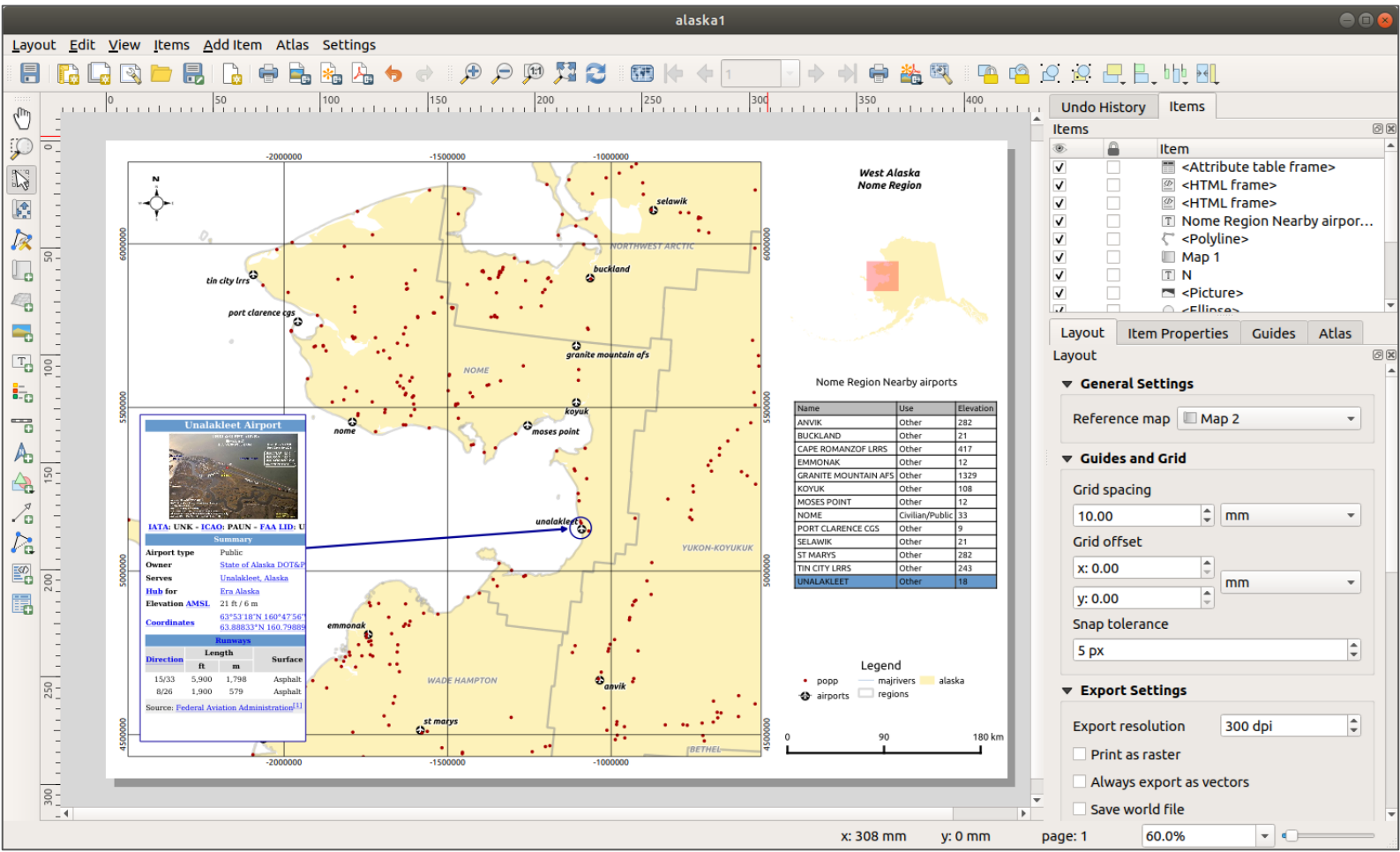
QGIS Print Layout can create advanced custom maps



Map created on *QGIS Print Layout*

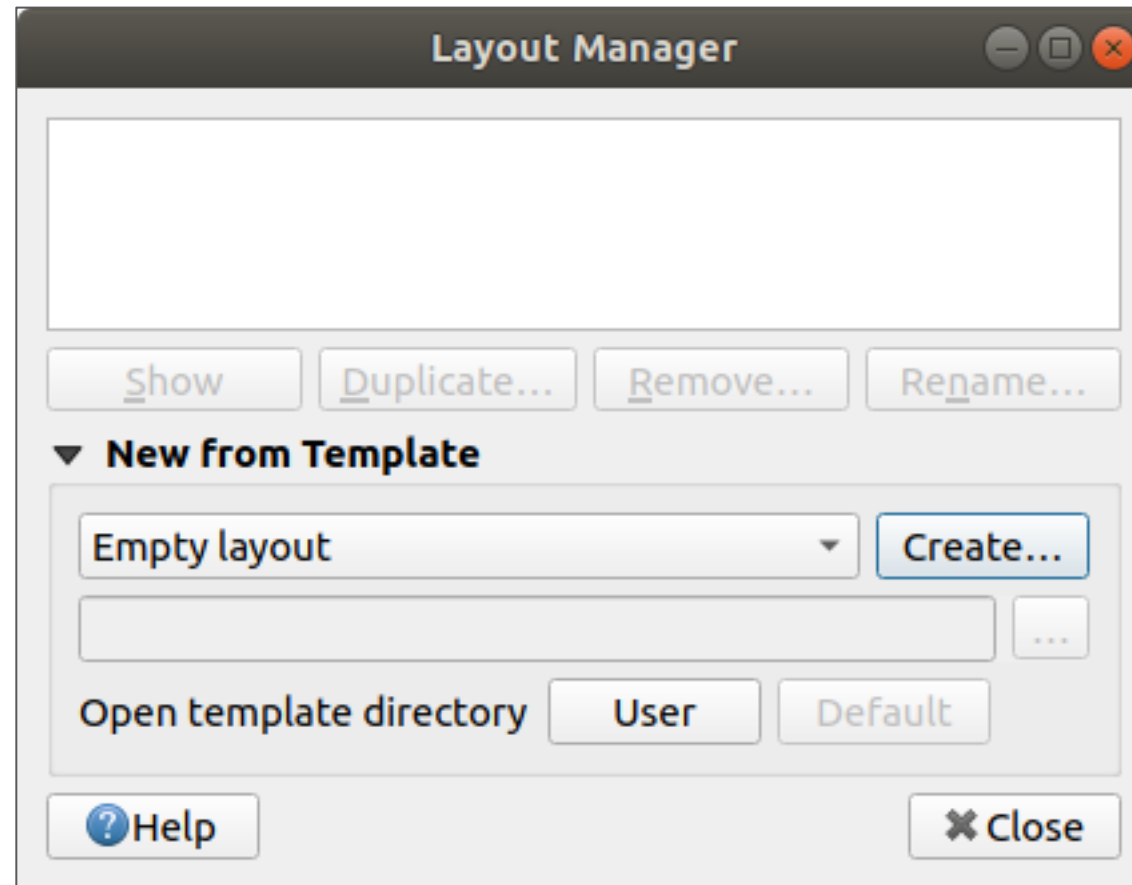
Exporting map on QGIS

- Need to be able to print or export QGIS map
- GIS map file is not an image - has references to all layers, labels, colours, etc.
- Can export map file via *Print Layout*



Why *Print Layout*?

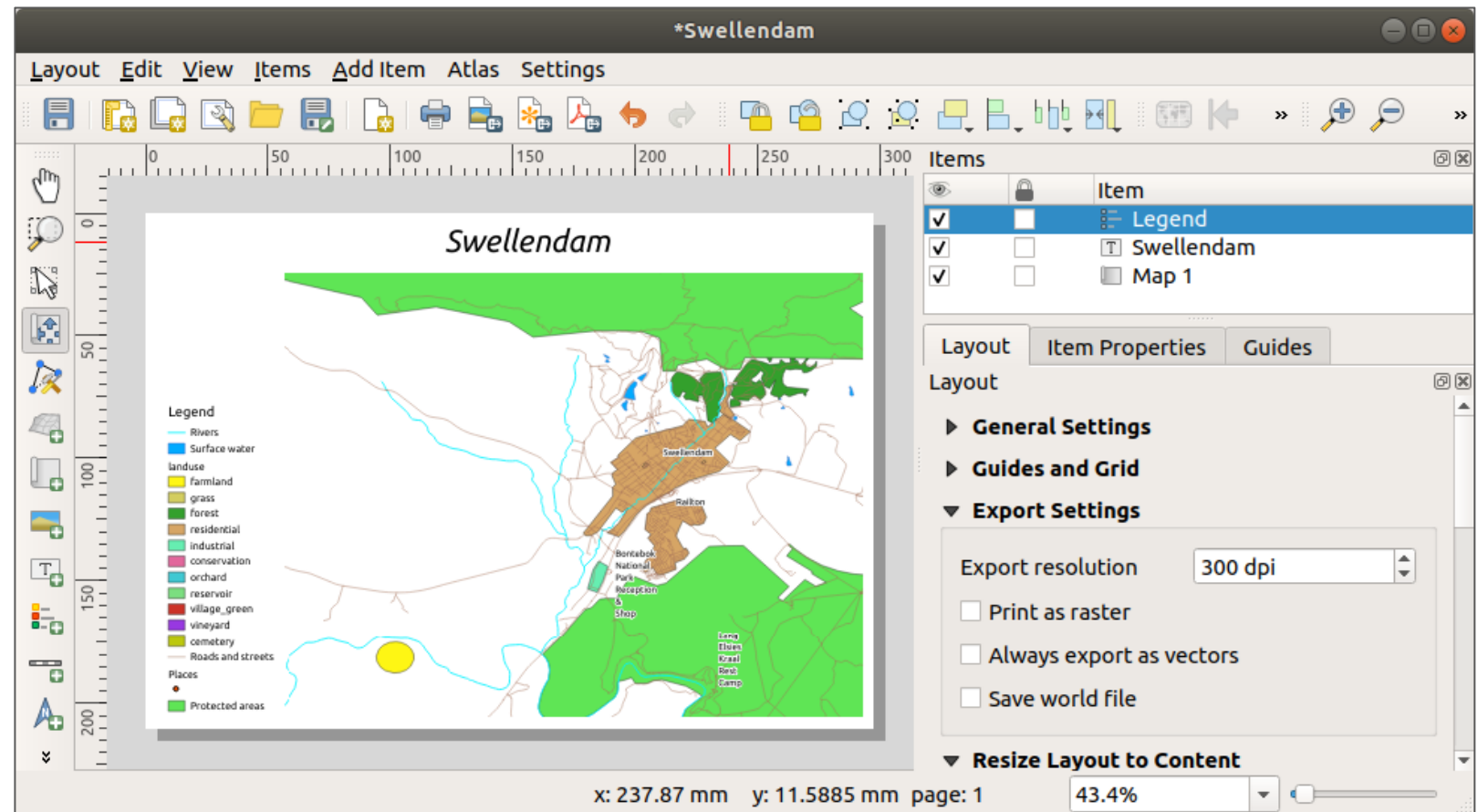
- Can create and export multiple maps for the same *QGIS* map
 - Organize these using *Layout Manager*
- Can create and save templates for future maps



Why *Print Layout*?

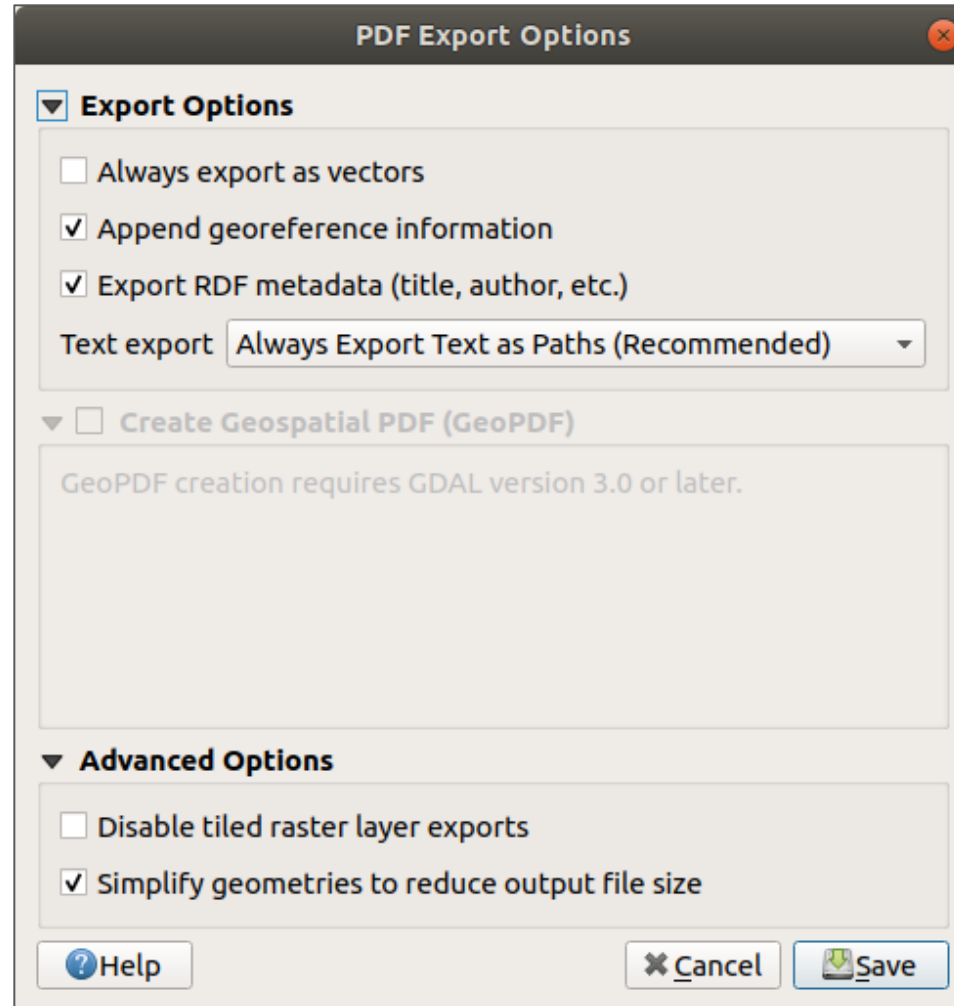
Print Layout allows:

- customizable legends
- text
- images
- overview inset maps
- grids/coordinates
- shapes
- etc.



Why *Print Layout*?

- Can export maps in multiple formats
 - .pdf, .svg, .jpeg, .png, etc.



Understand QGIS interface



*your interface may look different

Menu Bar

Toolbar

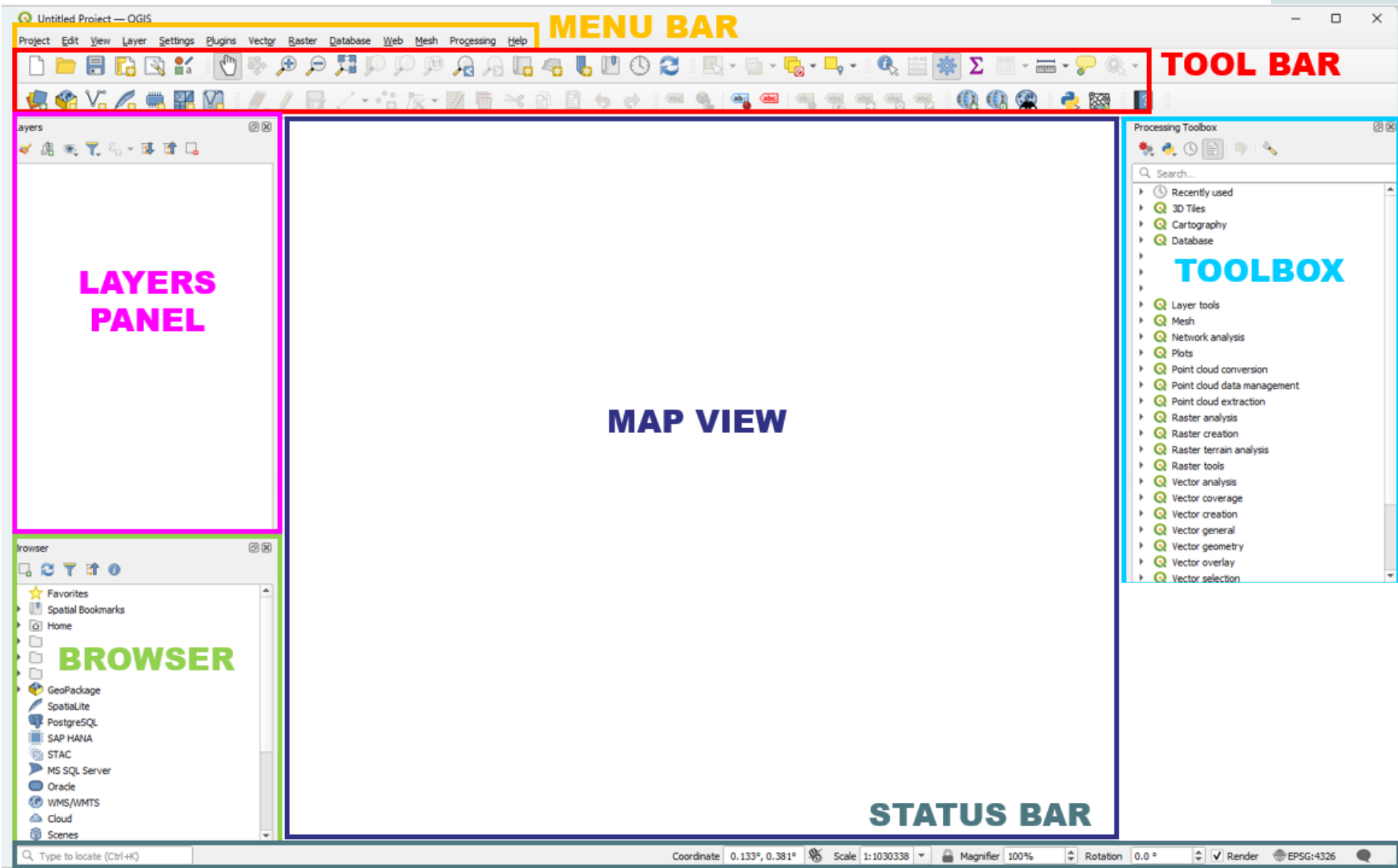
Layers Panel

Browser

Map View

Status Bar

Toolbox



Understand *QGIS* interface

Menu Bar: Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh HCMGIS Processing Help

Horizontal bar at top provides access to various functions and tools

(Project management, Edit, Plugins, Vector & Raster tools, etc.)

Toolbar: 

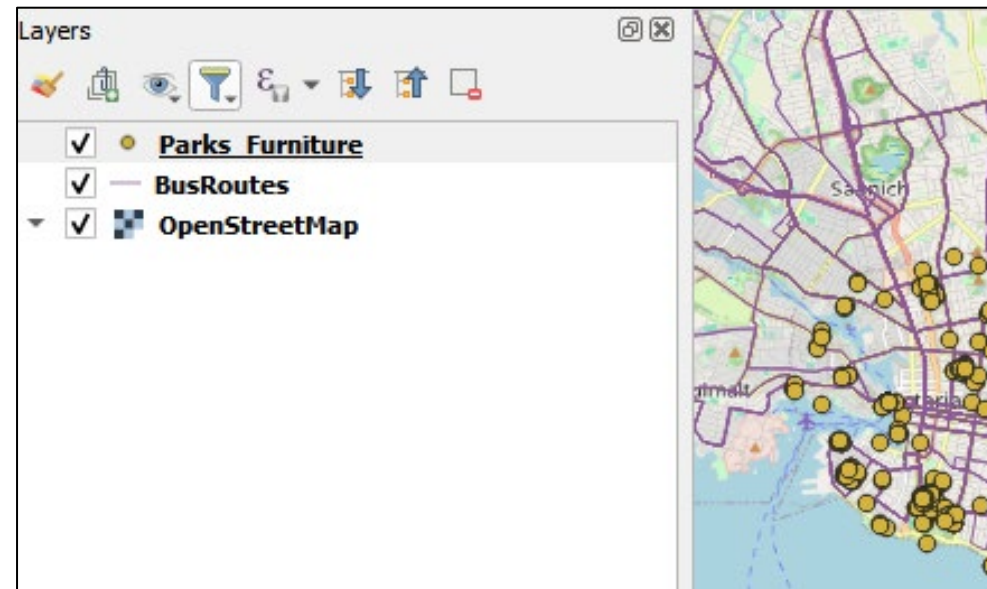
Contains icons for frequently used tools, such as Add Data, Pan, Zoom, Identify, etc.

Quick access to essential operations.

Layers Panel:

Displays all active **Layers** in the project.

Allows users to organize, manage visibility and access properties of layers



Understand *QGIS* interface

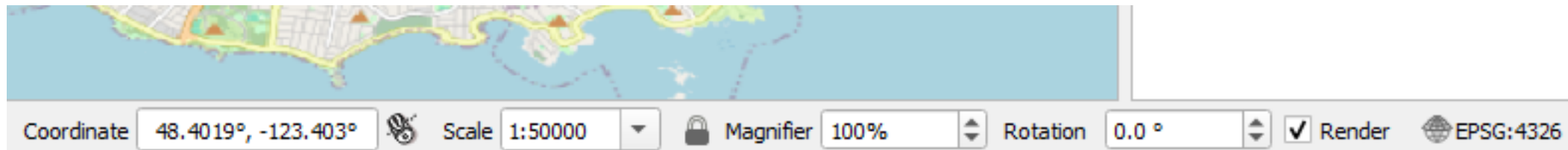
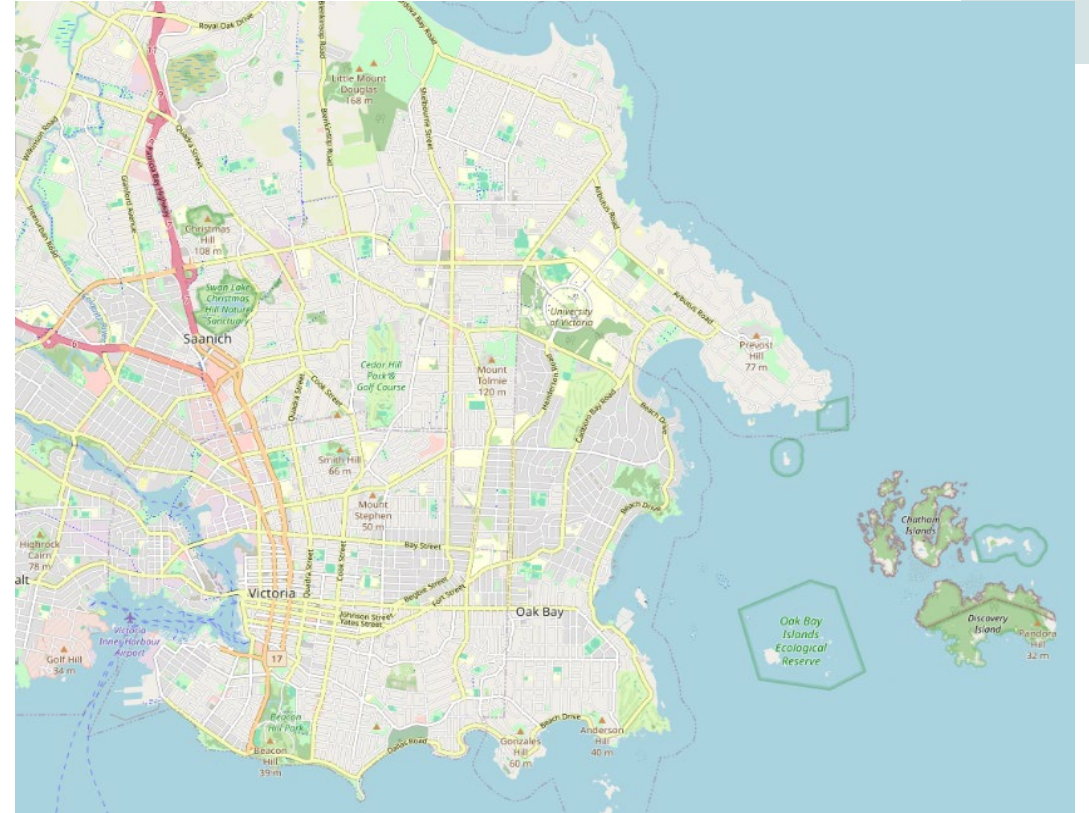
Map View:

The central area where spatial data is displayed.

Users can interact with the map, visualize layers and analyze spatial relationships.

Status Bar:

Located at the bottom, it provides information about current project: coordinate display, scale and CRS settings.



Toolbar essentials

New project, open, and save

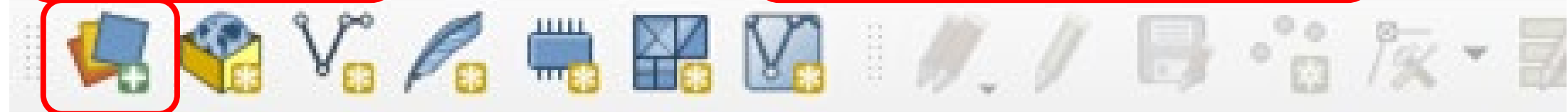


Pan



zoom

“zoom full”



Add data

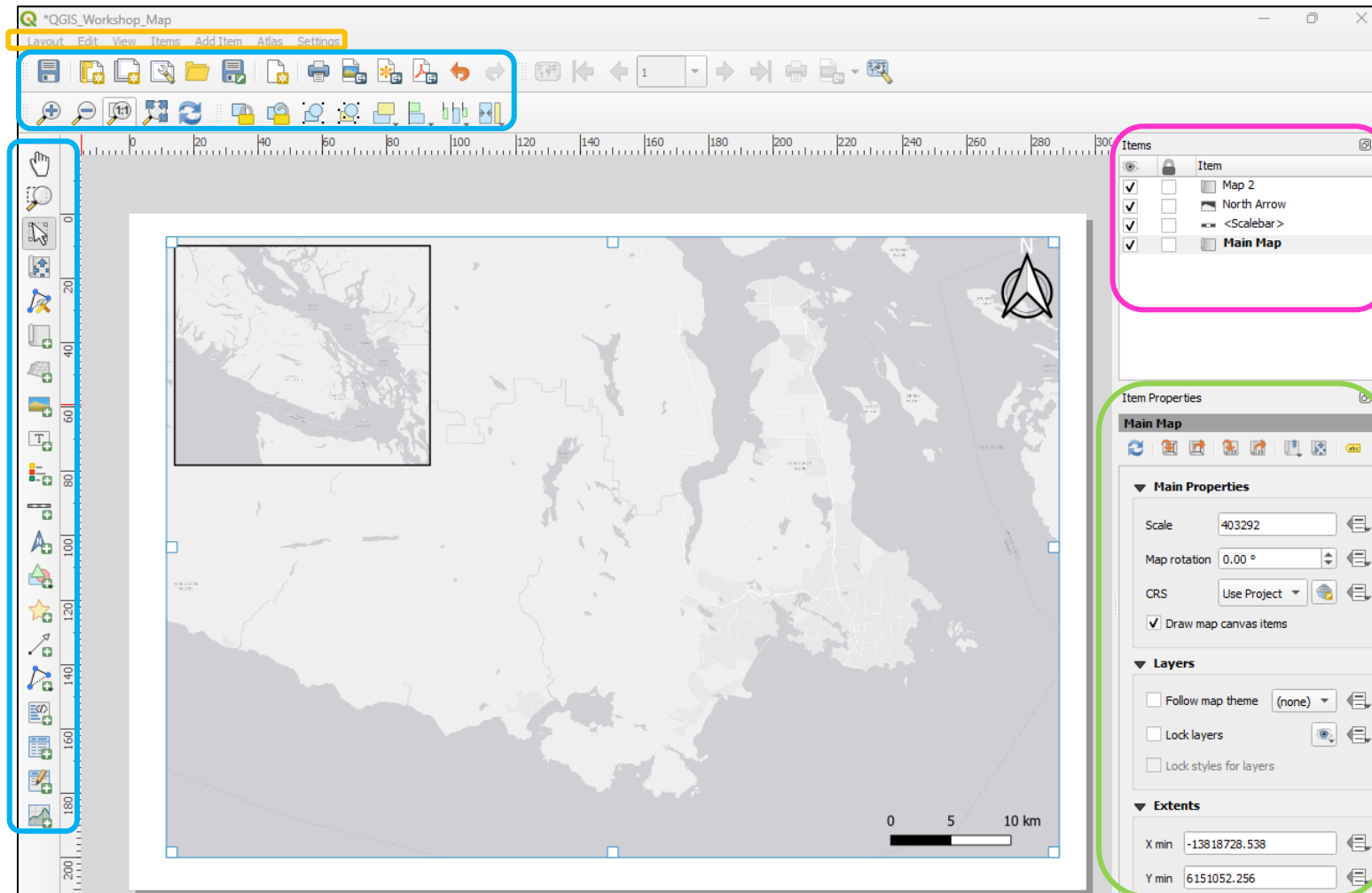
Print Layout interface

Menu Bar: Layout (save, templates, export, etc.), Add Item, Settings, etc.

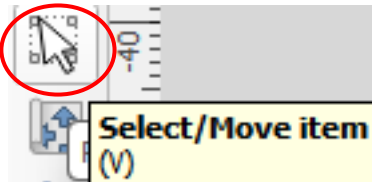
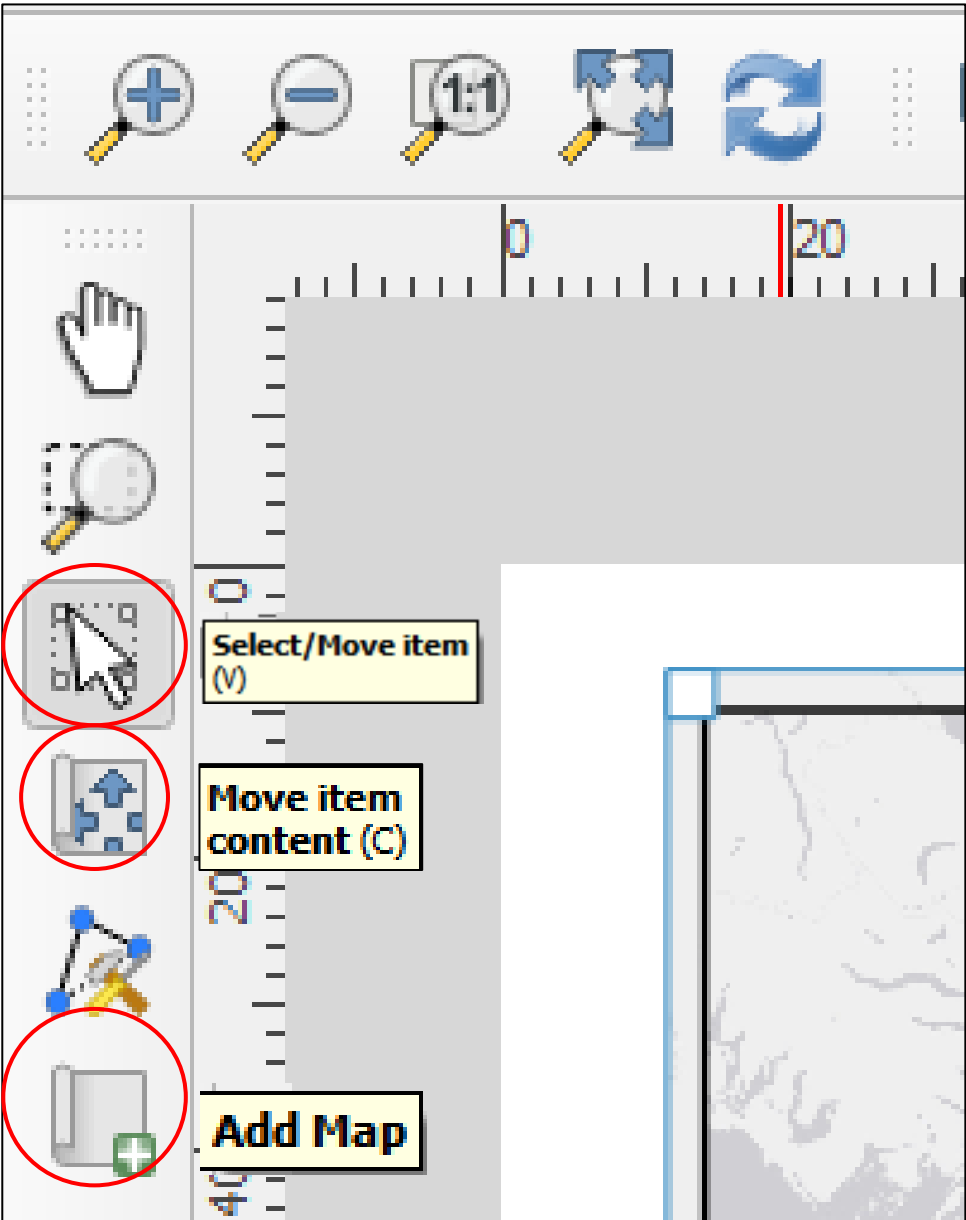
Toolbar(s): essential tools - save, open, export, zoom, add items, select/move item, etc.

Item Panel: items on the map – toggle on and off, lock item, change item name, rearrange items
select item from the *Item Panel* to see its properties

Item Properties: properties of selected item– many options for changing scales, fonts,, borders/frames, units, etc.



Print Layout interface: tools



Select/Move Item: move items in the print layout, opens the selected items' *Item Properties*



Move Item Content: move the map itself



Add map to print layout:
click and drag to draw map on white canvas

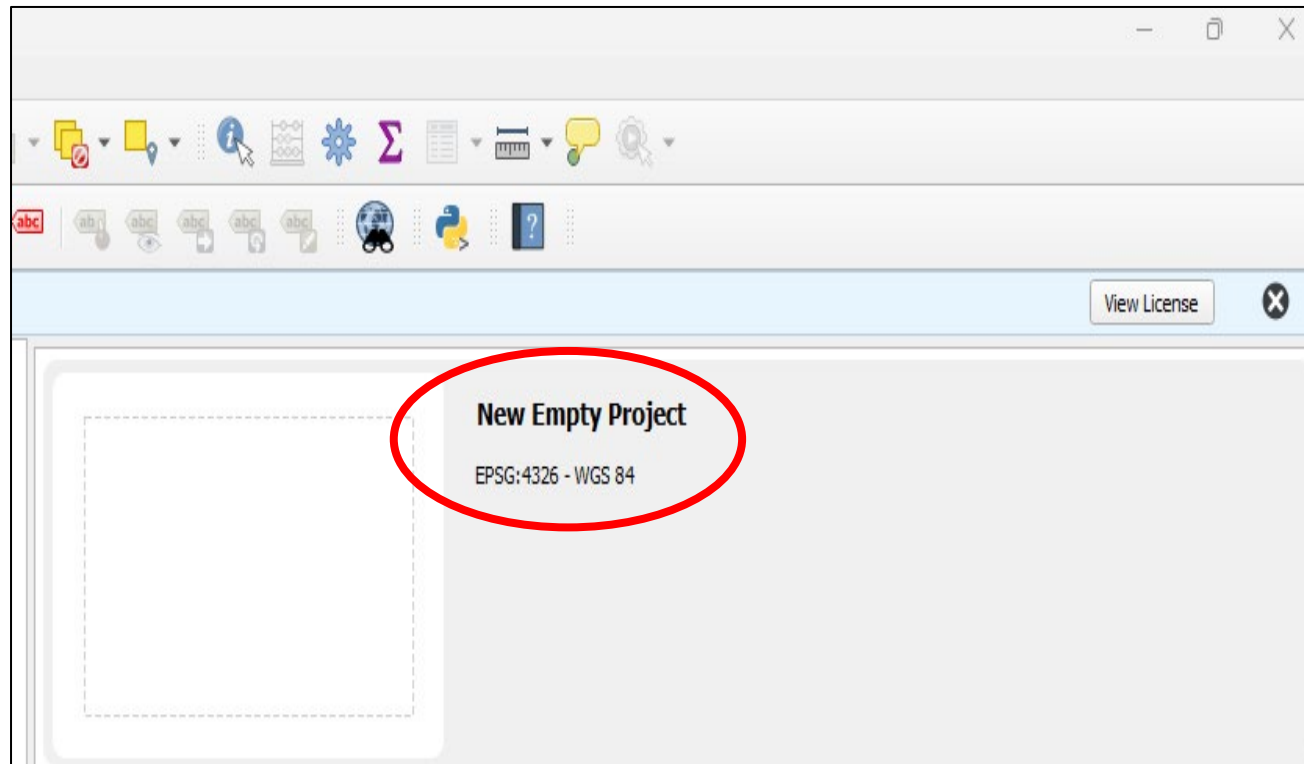
Start *QGIS* (if you haven't already)

Download workshop data

- Extract /unzip the .zip file
- Save it where you can find it...

Open *QGIS* (your version may be different)

- Double click on *New Empty Project*



Note: New *QGIS* projects open with Geographic Coordinate System (GCS) **EPSG:4326**



Continue to *Workshop Exercise*

From this point onwards
everyone works at their own pace

There are **Check-In** slides to **ask** for help
(or **ask** sooner!)