Stepwise Process Flow Details

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- **Step 1:** Overlay the Data Layers
  Start by overlaying the water bodies, rivers, and building data layers on your map in the QGIS software. This involves using the 'Add Layer' feature to import the necessary layers into your map document. Ensuring that all these layers are on the same coordinate system is crucial for achieving accurate results.
- **Step 2**: Conduct Buffer Analysis
  Next, perform a buffer analysis around the water bodies and rivers. Use the 'Buffer' tool within the 'Vector Geometry' section of the 'Processing Toolbox' menu. For water bodies, create a buffer of 30 feet and for rivers, create a buffer of 100 feet. This process essentially draws a boundary around the specified features (in this case, water bodies and rivers) at a set distance.
- **Step 3**: Identify Buildings within Buffer Regions
  Having established your buffer zones, it's now time to identify the buildings within these areas. To do this, use the 'Select by Location' tool. This tool allows you to select features (in this case, buildings) based on their geographic relationship to features within another layer (in this case, the buffer zones). Ensure you select the buildings that fall within the buffer regions that you created in the previous step.
- **Step 4**: Categorize Buildings
  Finally, classify all buildings that have been identified within the buffer regions as 'Water Proximity Buildings'. This can be done by creating a new field in the attribute table of the building layer and assigning these buildings with a specific tag or code.
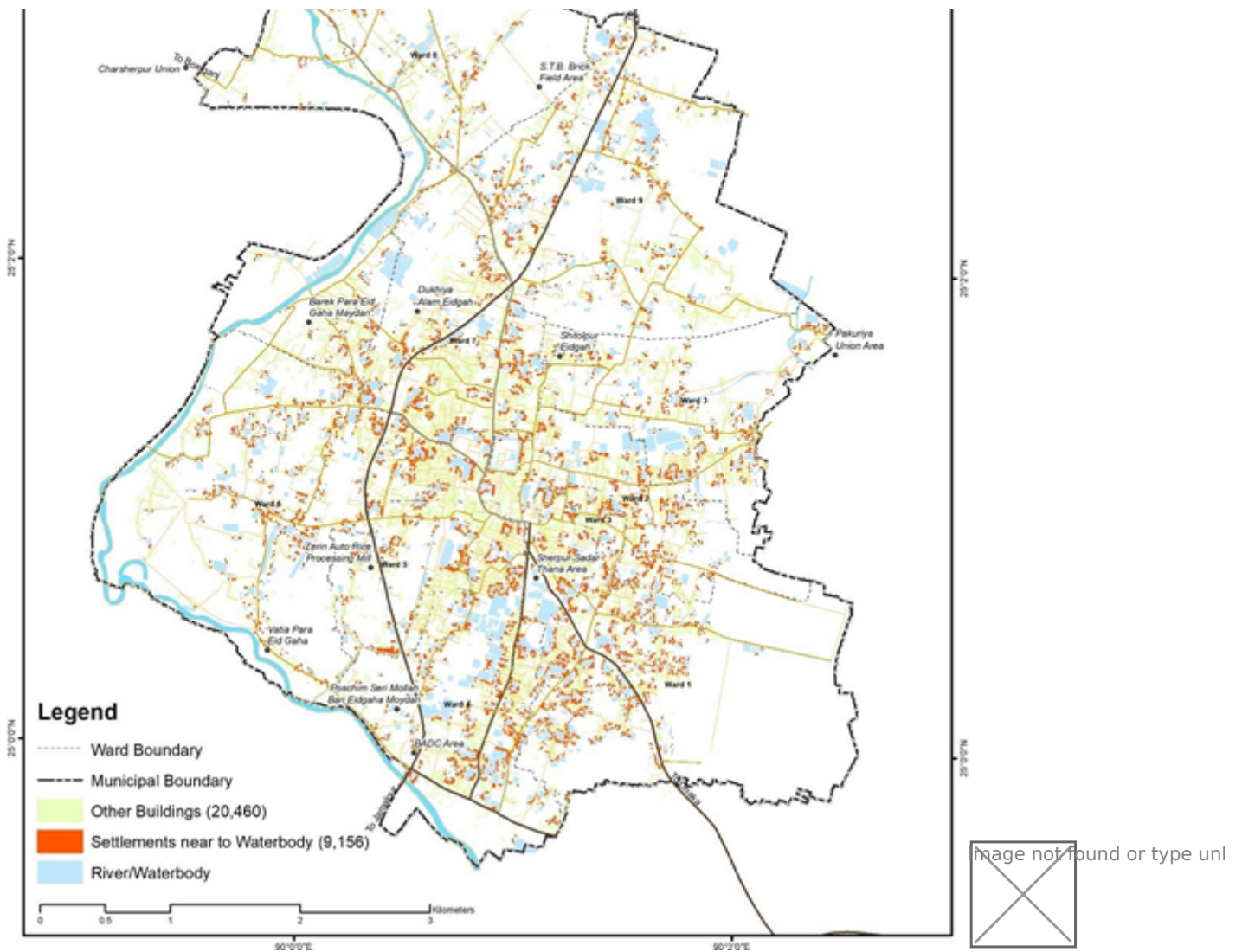
Figure 10 Illustrations for identifying settlements close to water bodies, Sherpur

Source – CWIS spatial analysis , Innpact Solutions and GWSC

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