

GIS terminology

CAMS

2026

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Level 1: Functional elements of Geographical Information Systems (GIS):

- **General concepts** such as resolution (spectral and spatial), software, hardware, systems, information systems, GIS, remote sensing, generalisation and abstraction
- **Geographical concepts** such as entity, attribute, spatial objects e.g., points, lines, area/polygon, scales (small vs. large)
- **GIS entity layers** like roads, populations, contours, rainfall, soils.

Level 2: Functional elements of Geographical Information Systems (GIS):

Data management:

- Concepts: data, data management, database, data acquisition. Distinguish between spatial and attribute data.
- Data standardisation, data sharing and security. Primary and secondary data.

Data manipulation and analysis:

- Concept of data manipulation, data integration, querying, conducting statistical analysis.

Spatial analysis:

- Overlaying, buffering and interpretation thereof. Remote sensing (advantages and disadvantages)

Product generation:

- Visual displays, text and graphic displays, digital displays, pre-processing

Level 3: Functional elements of Geographical Information Systems (GIS):

Data management:

- Concepts: data, data management, database. Distinguish between spatial and attribute data.
- Data standardisation, data sharing and security.

Data manipulation and analysis:

- Concept of data manipulation, data integration, querying, conducting statistical analysis.

Spatial analysis:

- Overlaying, buffering and interpretation thereof.

Product generation:

- Visual displays, text and graphic displays, digital displays

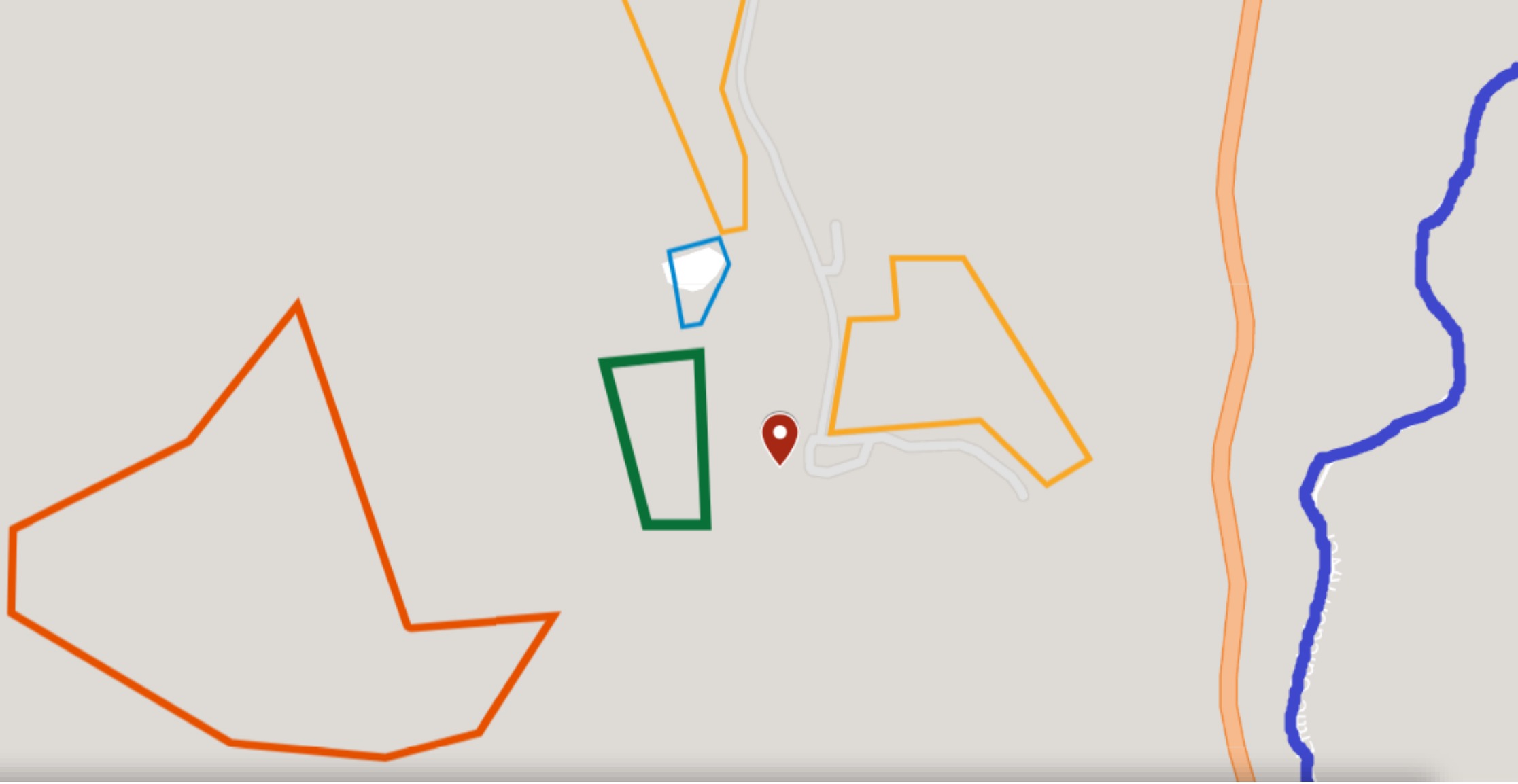
Application:

- Government and private sector, possible career opportunities.

Raster data

- Resolution / pixels / data collected from satellite imagery and aerial photography / drone footage
- Spatial data – patterns / features / all have locational attributes





Vector data

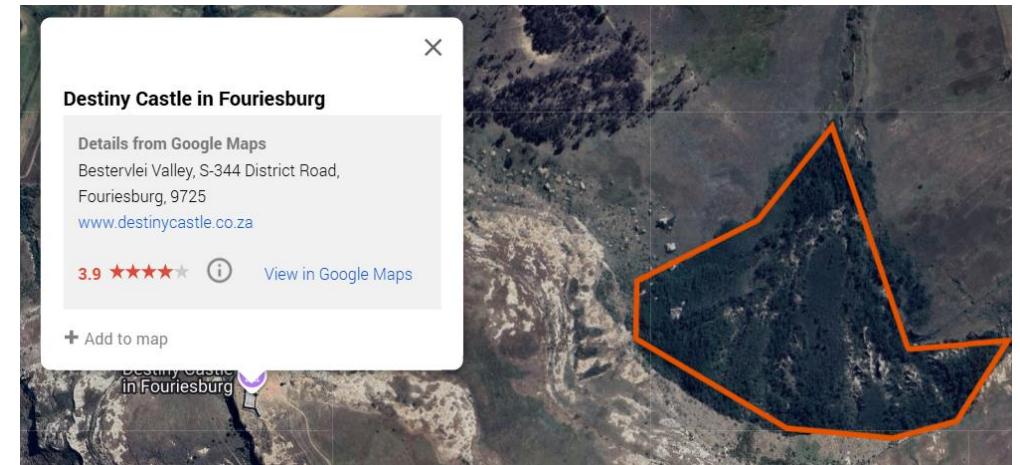
Shape: Points / lines / polygons
Spatial data: all have locational information

Attribute data

- Destiny Castle
- Bestervlei Valley
- Fouriesburg 9725

Also has spatial data

- On a hill (altitude)
- GPS (Lat & Long)



Raster and Vector data



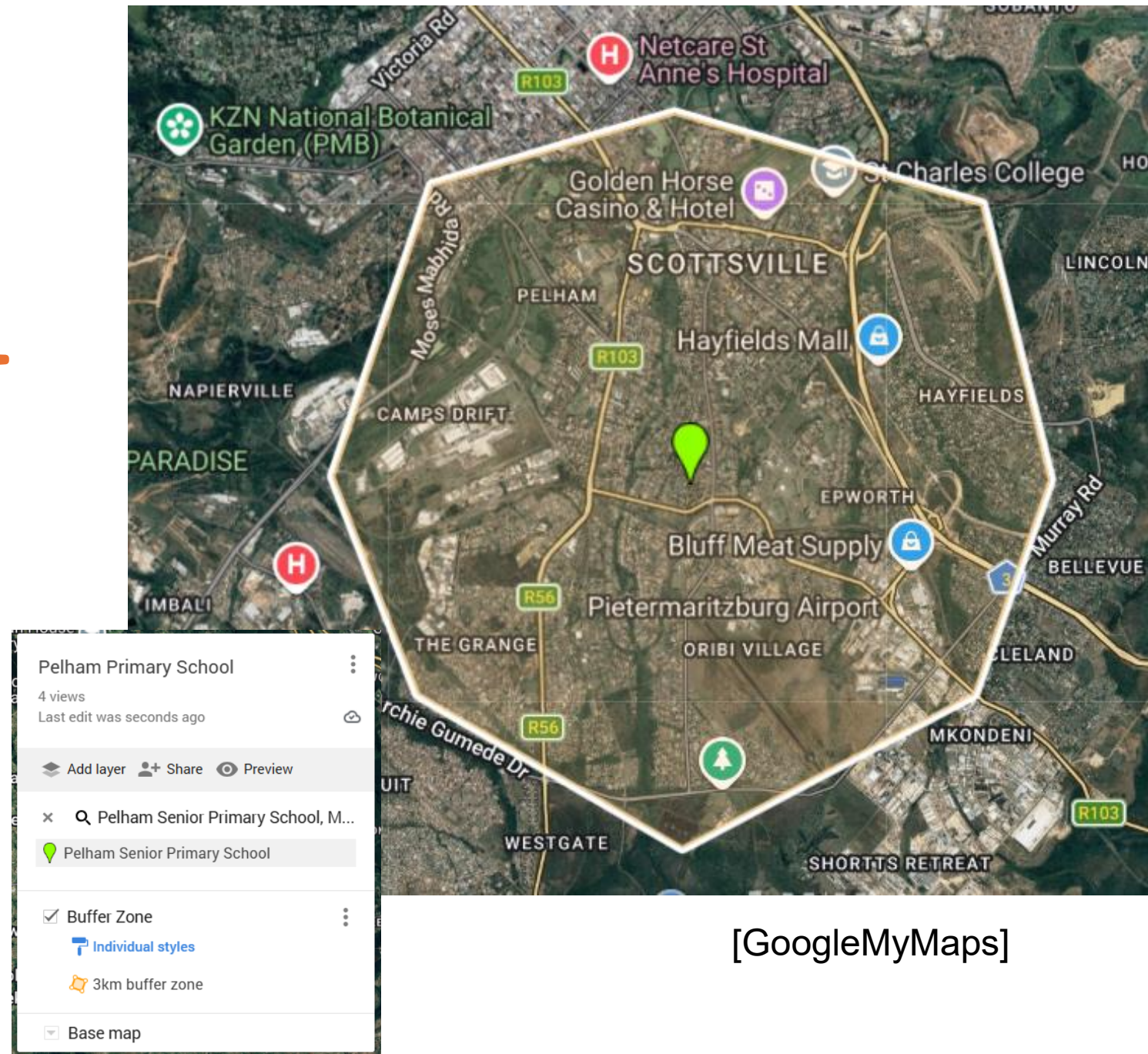
Spatial analysis:

Overlaying, buffering and interpretation thereof.

Product generation: creating a GIS product of layers / themes of information

Buffering

- This is an area that is created around a point or feature of interest. It may be a linear area or a polygon. This is a technique used by GIS practitioners to solve a particular problem, for example: looking at environmental impacts.



[GoogleMyMaps]